SISYPHUS' BURDEN : CONCEPTS OF PROPERTY

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Abstract

Property is a concept familiar to all. We interact with property and its associated rights on a daily basis, however, as will be explored at its boundaries, what constitutes ‘property’ becomes much less clear. This thesis will engage with the idea of method, methodology, concepts, and concepts of concept, to present reality as multiple and engaged in structures of persuasive enactments. This thesis will take this foundation and consider property at the boundaries through this understanding, treating ‘property’ as a boundary object between different communities of practice and different concepts of property. In doing so, the concept of ‘property’ and its meaning will be explored in a series of different sites. In order to achieve this, ‘property’ will be viewed through the lenses of anthropology, economics, and the law.

This thesis argues that far from a stable conceptual arrangement, ‘property’ and its many expressions exist in a state of flux. By considering judicial reasoning, the importance of the rhetorical power of different understandings of ‘property’, and their role within the frameworks and understanding of the law, property within the law can be viewed as operating remedially. To exemplify the rhetorical use of property, this thesis will explore arguments surrounding remedial constructive trusts, fiduciary duties, trustee de son tort, and proprietary estoppel to show how ‘property’ and its logic are being deployed remedially. This understanding will then be applied to the frontier of property, considering the ‘proprietisation’ of cryptocurrency in light of social, economic, and legal understandings of property.

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The Property Question

The concept of 'property' is one that is familiar to all. [1] We are surrounded by objects of property and interact with property and its associated rights every day. As such an all-pervasive quotidian concept, it would be expected that this would mean it is clearly defined and well delineated. As will be explored, at its boundaries, what constitutes 'property' becomes much less clear. This thesis will consider property at the boundary, exploring the boundaries of existing concepts of property and property at the boundary of different communities of practice. To achieve this, this thesis will adopt a number of lenses through which to consider property, drawing upon anthropological, economic, and traditional legal approaches toward property, and in so doing eroding any singular concept of 'property'. This thesis proposes that existing models of property are insufficient to contain the many legal uses of 'property' and that this becomes increasingly problematic as new forms of property emerge. This presents the lawyer with a Sisyphean task in mobilising these models in ill-suited contexts.

Trajectory of this Thesis

This thesis will explore multiple sites, concepts, and ontologies in order to defend its premise. To this end, this thesis will make the case that the concept of 'property', far from being clearly defined and well delineated, exists in a state of continuous flux. It will begin to build this case by presenting a critique of traditional methodological frameworks and rejecting the limitations of singular 'truth' that they produce, drawing upon work that suggests that method, rather than exposing truth, constructs its own realities. The approach of this thesis will be developed through this critique, reframing how we might think about traditional methods and the 'organisation' of concepts. It will, through philosophic and psychological approaches that detail how concepts, their creation, and their processes of change, argue for an understanding of an 'ontology of persuasion'.

To begin the exploration of 'property', the concept of boundary objects will be considered as a method from anthropology to shape and detail objects of property. In brief, 'boundary objects' are the objects created by the intersection of two or more communities of meaning engaging through a single reference point.,[2] With property's nature as a boundary object

[1] Throughout this thesis 'property' will refer to a general overarching conceptual arrangement, whereas property will refer to specific instances or arrangements of the concept. 'Property' might be thought of the form expressed in the episteme, with property in individual paradigms.
[2] For more information see chapter 2.

established, the relevance of treating property in this manner will be shown through its ability to engage with the limitations of our understandings whilst opening the ability to appreciate how the interplay of different fields might expand these understandings.

II) Property and/as anthropology

Through a consideration of property as a boundary object, it will become necessary to engage more widely with the role and potentialities that exist within property in the context of wider human interaction. Such an endeavour is necessary to evaluate the boundaries of property in its social context, and map property outside the confines of the western metaphysical construction. This will be developed through ethnographies that highlight social property systems and expose a range of elements outside of traditional western concepts of property. The embeddedness of these property systems will then be demonstrated to highlight the multiple layers within which understandings of property operate even within a single state. Finally, the methods of anthropology will be evaluated to highlight the open textured nature of anthropological property and contrast these with the approaches taken in law. In so doing, the broad analytic concepts of social property will be contrasted with the normative legal and economic approaches.

III) Property and/as economics

It is submitted that western anthropological approaches to property are firmly grounded in concepts of 'the market' as presented by economics.[3] To bridge the gap between anthropology and economics, the role of the traditional western concept of property and this relationship with the ideology of capitalism will be explored. This will both influence an understanding of the anthropologic approaches to 'property' and form the foundation of considering the construction of property in economics. Considering this, the economic chapter will argue for an economic understanding that highlights property in transactions, exploring the models that reduce property to a simple consideration of its asset-value, and the ways in which property rights and rules are examined purely through the allocation of monetary benefit.

Exploring the legal understandings of 'property' will begin with the *Numerus Clausus* principle. Its application delineates the kinds of rights available, partially highlighting the interplay between the shape of these rights and their economic uses. In doing so it will consider the nature of possession which will develop a remedial lens through which to view some foundational principles of English law. This chapter will then explore a view of the English law of property at a macro-level before considering how property is most commonly

[3] See chapter 4.

conceptualised through a 'bundle of rights'[4] and through the 'incidents of ownership'.[5] This thesis will challenge whether this conceptualisation provides any meaningful insight into the essence of 'property' beyond shaping its use as a device to solve legal problems. This chapter will then consider the recursive relationship between social and legal approaches to norms and how these drive the kind of activities that the law is required to deal with, highlighting that the law is not simply normative, but a persuasive force by which validity can be added to a norm. The importance of this will be explored in relation to ideas of 'ownership'.

IV) Property and/as law

This chapter maps how law has sought to modulate the competing conceptions of property in the preceding three chapters. This will provide the context through which the thesis develops its claim that lawyers hold a Sisyphean task in mobilising 'property'. It is suggested that law deploys a shifting interplay between all the lenses of property and individual understandings, constantly in motion, despite the claims of these individual arrangements to provide what might be seen as points of stability. To move away from these stable understandings and to recognise that property exists as part of a process of the continual ontological politicking of 'property', this thesis will argue that, in law, we might best understand property as a rhetorical tool to provide a remedy. It does this by arguing that judges use property and its logic at the boundaries in order to 'fix' problems and provide remedies which would not otherwise be available.

This thesis will develop a case for understanding judicial decisions as a process that centres around 'humanising' the role of the judge and acknowledging their bias. This highlights that they are performing roles, over cases constructed in specific ways and by specific rules, with both their own understandings and the narratives presented to them shaped not just by legal understandings but also social and economic dimensions. Where we might want the law to operate mechanically and based on the 'law' alone, it is contended that it will always be touched by external considerations when humans and their discretion are involved.

V) Testing law's limits: remedial property in action

Having submitted that law struggles to modulate the Sisyphean task of mobilising the ''boulder'' of concepts underpinning 'property', the thesis then turns to the instances where

[4] This concept recurs in the work of anthropology, economics, and law with each constructing a slightly different bundle of rights approach. See Sir Henry Sumner Maine, Ancient Law, its connection with the early history of society and its relation to modern ideas (1st ed, John Murray, 186).

[5] A.M. Honoré, 'Ownership' in A.G. Guest (ed) Oxford Essays in Jurisprudence (OUP 1961).

the law may run over its own principles to achieve its ends. Constructive trusts, we are repeatedly told ought not to form a remedial strategy;[6] yet, this thesis will explore how doctrines are being stretched to find proprietary interests that justify 'acceptable' constructive trusts. Hence, even where it is actively denied, property is used as the basis for justifying a remedy. To this end, this thesis will briefly consider unconscionability's role in this process, suggesting tentatively that while it might not represent a formal requirement, unconscionability might be the silent partner that nudges the courts towards finding property. This leaves the question, can law endlessly rely on property as a remedial strategy or are there limits?

VI) "Cryptocurrency": The limitless imaginings of 'property'

This thesis concludes its arguments by identifying a site in which property has been reimagined once more, to help move the boulder onto new terrain: cryptocurrency. This thesis will explore attempts to construct cryptocurrency as property, exploring the ideology that created it and why it might be treated as property by the socio-technical communities that use it. However, through the example of bitcoin, in light of its ideological underpinnings and its nature as a digital asset, the problems with treating cryptocurrency as property in law will be exposed. The use of 'property' in such an ill-suited area further demonstrates this thesis's argument that property can be subject to endless reimagining, each of which may defy the traditional boundaries of property given by the common law.

VII) Assembling the thesis / rolling the boulder.

This PhD defends the thesis that property transcends partial understandings offered in each of the sites mapped above and that a more complete understanding of property lies in its mobilisation over sites of new terrain, analogous to Sisyphus rolling his boulder ever towards the horizon. By investigating the concept of property as a boundary object which reflects certain anthropological understandings which in the UK context, privileges market dynamics as laid out in the western economic approaches. With this understanding achieved, the thesis questions how law is able to modulate and work with this understanding, suggesting the argument that property has 'began to trespass' or 'roll over' its own boundaries, such that contemporary uses of property permit the oft denounced remedial constructive trust. Finally, we consider how contemporary developments have trespassed further still on the common law's boundaries for property, such that new forms of 'property'

[6] Lord Neuberger, 'the remedial constructive trust, fact or fiction' speech at the banking services and finance law association conference, Queenstown, 10 August 2014 and Charlie Webb, 'The myth of the remedial constructive trust' (2016) 69(1) *Current legal problems* 353.

continue to merge. In this respect, the task of 'rolling the boulder' must necessarily consider the hills trajectory, and what is to be found at the top of the mountain.

Chapter 1 - Beyond Methodology

Explaining the approach

The approach in this thesis presents a novel way of addressing method, concepts, and ideas. This chapter presents a 'map not a tracing'.[7] A tracing aims to provide a fixed, stable definition of that which is traced. By contrast, a map provides multiple sites of entry and journey that enables the reader an individualised experience of the material.[8] Thus, this thesis becomes non-linear in nature, presenting analyses that are approachable from and through any of the elements of its chapters. Such a non-linearity requires an alternative approach to method that, itself, enables the reader to focus on interconnectivity between fields, highlighting the enhancements to understanding that can be gained through various elements and structures within reality.[9] The map, however, is not the territory[10].

This chapter is perhaps best conceptualised as an exploratory journey along one of the many paths within the map, leaving the safety and clearly demarcated realms of method and discipline and crossing into the wilderness beyond. The theme of the map and the journey will reoccur throughout this chapter, a literary reminder that while *this* path is laid out, there are many paths and connections between these elements, some better signposted than others,[11] thus reinforcing this thesis's arguments on the fluid nature of property.

Musical concepts – An introductory coda

The journey taken through this chapter might be better understood in terms of a musical coda. Much of the material in this chapter will focus on concepts, the arrangement and encoding of information, and the social structures/practices. How to cohere theses shifting elements, that appear to pull in many different directions? It is suggested that music provides a simple way to understand the themes of dissonance, symmetry, and arrangement that will

[7] Gilles Deleuze and Felix Guattari, *A Thousand plateaus: capitalism and schizophrenia*, (Robert Hurley, Mark Seem and Helen R. Lane trs, University of Minnesota press, 1987), 12-13 hereon ATP.
[8] Ibid.
[9] Ibid.
[10] Alfred Korzybski, *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantic*s (fifth edition, Institute of General Semantics 1995).
[11] This chapter is also broadly structured along the path of a story. See Dan Harmon, 'story structure 101: super basic shit' https://channel101.fandom.com/wiki/Story_Structure_101:_Super_Basic_Shit last accessed 17/03/2023.

be exhibited throughout this consideration of concepts and their relation to methodology. Scales of music act like arrangements of concepts, highlighting areas of coherent elements that can be methodologically composed in workable forms; however, where elements from conflicting scales or conceptual arrangements contrast they perform dissonance. Even to the untrained ear, musical dissonance is readily apparent.

We might think of property as analogous to music: we *know* property when see it or hear of it, but what is the 'correct' next progression? In the beginning there is noise, made up of individual patterns of amplitude, frequency, and wavelength, which we divide and group through 12 tonal notes. They can be played individually or combined together to create an almost infinite number of chords. These are organised within scales and modes that express relationships of notes and chords that work together in harmony. The relational aspect between notes, chords, and their performance in context shape the 'feel' of sound. For a given scale notes 1,[12] 3, and 5[13] represents points of stability with all the other notes wanting to resolve to other stable notes. The movement between these positions, their relative stability, and the 'tensions' resolved provides a context to their performance that changes their 'feel'. To move outside scales and musical relationships creates dissonance, with notes sounding wrong or if played together becoming discordant. Where almost infinite complexity could be wrought from manipulating musical practices, for the present purpose these might be applied to a world of things. Things express different elements, which we label and arrange into concepts to help understand objects and ideas.[14] Our understandings of objects and ideas act as scales, providing the elements and concepts that are harmonious with our understanding of their expression. These understandings have elements and concepts that provide stability, against which other less stable elements and concepts resolve. Expressions of an object and ideas can manifest an endless array of element however it is judged through our understandings, which relies primarily on recognising these 'stable' elements. It is where these expressions in reality exhibit discordant elements that cannot be resolved, those outside the scale of understanding, or are destabilised through their context that we experience the dissonance between our understandings and reality. Where this chapter will not directly return to the world of music, these ideas provide an overtone to the conceptual elements in this chapter and more generally an undertone to the understanding of concepts throughout this thesis.

[12] The 'home' note.
[13] The second most stable note in a scale.
[14] Here idea is used as distinct from concept only for clarity of expression. They are interchangeable as 'ideas' here are ultimately concepts.

Analogising law and music

"If much of reality is ephemeral and elusive, then we cannot expect single answers. If the world is complex and messy, then at least some of the time we're going to have to give up on simplicities"[15]

This thesis will advance the view that property is not a single stable construct, but one that instead represents the confluence of a multiplicity of fluid frameworks which overlap, compete, and cohere into a range of incomplete and ephemeral constructs. Rather than outlining the methodology to be used in this thesis, this chapter will advance a critique of traditional disciplinary-specific methodologies that attempt to create static, singular definitions. This reflects the attempts of the common law to bound property in 'certain' terms. This chapter will begin by considering the usage, limitations, and effects of methodology before considering how it inexorably leads to the creation of static concepts that are, ironically, inherently individual, and unstable. By contrast, this thesis will take the approach that method is not a process for determining the truth of reality, but that reality is constructed through the use of method. These realities are individually specific while sharing enough commonalties to be understood on a range of collective levels.[16] To this end, this chapter will consider the phenomena of constructed reality at a macro level of collective understanding, the meso level of concepts, and the micro level of individual actualisation of concepts in the mind.

Interrogating methodology

Paradoxically, the broad definition of what constitutes a methodology means that any approach whatsoever may be viewed as a 'methodology'. Indeed, even rejecting methodology can be seen as a methodological choice. This chapter makes two claims: i) it contends that a 'traditional' understanding of methodology necessitates the use of practices which are inherently restrictive, and ii) presents a wider view on what methodology could or perhaps should be. In advancing the first criticism, however, we encounter the criticism that a rejection of methodology is simply a reconstruction of method. Rather than attempting to avoid the issue or present this methodology as in some way avoiding the issues behind methodologies, this chapter will remain mindful of its paradoxical nature, accepting that it is subject to the same problems it exposes but, in so doing, hopes the alternative view of methodology it espouses justifies its own existence. This approach will be developed

[15] John law, *After method – mess in social sciences research.* (London: Routledge 2004) 2. Here after 'Method'.
[16] These themselves are not fixed views or groups but represent a way of communicating about a collective in a more effective way.

through the critique and alternative approaches to methods and ideas. This critique will focus on the idea of 'method' present in social sciences, however, in doing this, it will mobilise drawing on ideas outside of traditional social science avenues. This is in no way to suggest that these issues are limited to the social sciences but simply creates a workable scope within which to present this narrative.

This contributes to the development of our thesis: that, far from being stable, 'property' changes depending on the context in which it invoked, and thus is continually being constructed. Arriving at a singular definition is impossible, yet many different dimensions are invoked by persons who work with 'property' to present a partial image of property, providing illusory stability. In other words, property is in a process of being defined and redefined on a case-by-case basis. To this end, existing methods, whilst highlighting individual flows of influence on property (though as will be seen, often containing conflicting elements that pull in different directions) are inadequate to capture all of what property might be in each instance.

Having made the case for an approach beyond methodology, and following the analogy of music that made up the introductory coda, the next section will define this chapter's key terms in order to proceed to their deconstruction.

Defining terms

This chapter uses these terms in the following ways:

Method: A set of culturally recognised practices that generate data according to a predictable pattern.

Methodology: the process for generating arguments leading to conclusions from the data collected.

Subject: the object or idea that data is being gathered about, within a method. The object or idea to which the conclusions drawn by the methodology relates. This could be a 'thing' that exists, a phenomenon to be explained, a concept, or other pure theoretical construct.

Paradigm: representing the collective understanding and practices of a particular group. Paradigms can be broad at the level of discipline or specific to a particular subset of the field or social group. The paradigm operates to reflect a generalised understanding that represents the dominant trends of thought and practice. With broad groupings it presents the dominant views of the generalised group it refers to, in smaller specific subgroupings these can conflict with what might be dominant in the overall field or with other identifiable subgroups within a larger grouping.

Episteme: Representing the collective unconscious conditions of knowledge within a culture. This will be utilised to represent all the possible knowledge that can be considered under all possible paradigms of a time and that which is possible under the current conditions for knowledge.[17]

Key to each of these definitions is a sense in which some practices/ideas/objects/subjects can be captured within the definition and, as importantly, others might be excluded. It is this exclusion and othering that this thesis finds suspicious when applied to the context of property, and which requires further investigation.

Exclusion and othering

'Method' in the social sciences seeks to limit the range of data used to explore an idea, excluding 'contaminating' variables.[18] In this sense it operates as a kind of established order engrained within academic circles of the ways in which we may verify 'truth', at least in an internally coherent sense. When examining 'method' in social science, Perri and Bellamy consider it the generally agreed upon ways to enact the "creation, collection, coding, organisation and analysis of data".[19] Their 'methodology' being the process of drawing warranted inferences from data.[20] This process relies on 'concepts'. Collections of attributes under a word or phrase that represents in, abstract terms, common features of empirical phenomena.[21] The method of method is to capture and control concepts, its methodology one of exclusion, to ensure the concept of validity and replicability. Law argues this approach is important, insofar as it has established many normative practices still in use today, but ultimately limited.[22] Method inheres a reality that is definite, definable, with discoverable truths overlaid on a world that is often ephemeral, ill-defined, and unpredictable.[23] To perform method is to exclude much of what is.

The language of Derrida viscerally highlights why we might understand this to be a problem. To Derrida, the process of exclusion is one of political 'violence'.[24] The process of performing this violence open to creating an 'archive', The physical or metaphysical space

[17] Both Paradigm and episteme will be explored later in "concepts of organisation" This will provide the historical usage of the term and how they relate to each other more closely. This will also highlight the issues that develop with the historical term being exposed to the interconnectivity of the digital age.
[18] Law, method (N.15), 3.
[19] Christine Bellamy and Perri 6, *Principles of methodology: research design in social science,* (sage publications 2012) Ch 1.
[20] Ibid.
[21] Perri (n.19), Ch 9.
[22] Law, method (N.15), 6-8.
[23] Ibid, 3.
[24] Jacques Derrida, *Writing and Difference*, (Alan Bass tr, Chicago: University of Chicago, 1978.) Translator's introduction.

of recording,[25] it is both place and event, a space of privilege, power, and control.[26] Derrida considers the present and living memory through archive experienced imminently,[27] that are "structured by the archive that records it".[28] Events perform archive and create archive, in so doing "the archivist produces more archive, and that is why the archive is never closed. It opens out of the future".[29] Method acts to create a limited and specific archive of what 'is' that feeds into our future understanding of what might be. The social sciences acting as archivist of method, archiving archives, reinforcing that which is included as they are reperformed.

To further complicate matters, Derrida's 'différance'[30] reframes the very notion of exclusion. 'Differance' to Derrida refers at once to both deference of meaning and difference. Deference in the sense that single words are not meaning complete, forced instead to rely on other words for meaning.[31] Difference in the sense that word are defined as much by what they are as by what they are not.[32] Words contain the trace of other words. Then too, concepts must contain the trace of other concepts, their meanings continually deferred and containing the trace of that which they are not.

On the surface, this reinforces the perception we need method to control concepts, yet in doing so limit new knowledge. A particular text will have a range of readings that are "pragmatically determined"[33], there is a "right track"[34] but one that exists only because of the context of its reading. Derrida's most famous quote, "Il n'y a pas d'hors – texte"[35], commonly translated as 'there is nothing outside the text',[36] is often taken to mean there is nothing outside of language. Yet it could be taken to mean that there is no outside view that

[25] Including Writing, Audio/visual, memory, or any other kind of inscription.
[26] Jacques Derrida, *Archive Fever: A Freudian Impression*, (Eric Prenowitz tr, Chicago: University of Chicago Press, 1996).
[27] Ibid.
[28] Mark Doole and Liam Kavanagh, *The philosophy of Derrida*, (Acumen Publishing limited 2006) 100.
[29] Jacques Derrida, Archive Fever: A Freudian Impression (Eric Prenowitz tr, University of Chicago Press 1996).
[30] Derrida first used this term in 1963 in, "cognito et histtorie de la folie" see, Jacques Derrida, *Cogito, and the History of Madness. From Writing and Difference* (Alan bass tr, London & New York: Routledge 1978) 75.
[31] This is in part due to the separation of sign and signifier which will be further explored later. It can be thought of as a chain of signification. See (Pg.22-23).
[32] Derrida's work often considered binary pairs however this is not limited to that understanding. For example we understand 'Dog' as much by its difference to 'Cat', 'Human', or 'Plant' as furry four legged animal with wagging tail.
[33] Jacques Derrida, *Limited Inc* (Samuel Weber tr, Northwestern University Press 2000) 148.
[34] Ibid, 146.
[35] Ibid, 158.
[36] Interestingly this is a mistranslation which misses the cultural context of the original. In doing so it performs the very point that Derrida was trying to make.

allows us to divorce text from context.[37] Indeed, 'D'hors-texte' is a French printing term for non-numbered pages or prints inserted after the binding of the book[38]. A better understanding might be that there is no guide to the context and archive of the writer outside the text.[39] Practically, clear method provides an internal guide to interpretation and helps limit conceptual drift. More generally, academic disciplines, in part by recognising method, methodologies and endorsing concepts, provide something of an outside guide to interpretation. Thus Academics as archivists have a vested interest in whats included. Derrida refers to the desire of identity, completion, and conservatism within academic practice as "archive fever"[40] but perhaps 'method fever' is just as apt. Indeed, it is the contention of this thesis that such an approach omits the value of the othered, when it is precisely this 'othered' which adds so much to what 'property' might be.

To move away from Derrida and pose a metaphor, academics are posited as "standing on the shoulder of giants"[41]. Traditionally, research builds on the foundations of what came before, and intuitively should aspire to climb ever higher. This risks losing sight of the roots and foundations on which its very practices are built. The ground between, that which was initially excluded and made *other* in order to create the 'heights' of knowledge becomes less salient. Method and adherence to the prescription of methodology narrows our view and reinforces inbuilt bias against that which is *othered*. It focuses us on what is accepted and shapes what is acceptable, while it gives us room to grow upwards and outwards from its core. Deleuze and Guattari consider this in terms of arboreal structure.[42] From the seed of a single idea a mighty tree grows organically, as it grows vertically so too does it spread out branches that all link back to its origin. This arborescence, they argue, shapes the paradigm of western knowledge.[43] In contrast, they offer the concept of the rhizome,[44] an organism without beginning or centre, interconnected but without formal form or structure, growing not from a single origin but from everywhere it exists. The rhizome is without hierarchy, all things are interconnected, which can be entered from multiple points. To this way of thinking, all things are part of an interrelated web which all have subtle influence over each other. This, it would appear, better describes the world and processes of human thought, and perhaps by focusing on connecting with these roots we might find different understandings.

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[37] This view is broadly examined in Doole (N.28), 55.
[38] See *Le Petit Robert, Dictionnaire de la Langue Française* (Paris: Le Robert, 1977) or https://www.fineprintnyc.com/glossary-of-printing-terms/hors-texte Last accessed 29/03/23.
[39] Though through doing this they create an archive, it controls only that which it chooses to explain.
[40] Derrida, Archive (N.26).
[41] A quote attributed to a letter written between Sir Issac Newton and rival Robert Hooke in 1676. https://www.phrases.org.uk/meanings/268025.html last accessed 29/03/23.
[42] Deleuze, ATP (N.7).
[43] Ibid.
[44] Ibid.

Paradigm – Social arrangements

Kuhn's paradigm presents a structure for considering the collective understanding of a community of practices. This concept is not a static one but is to be considered in light of the processes of scientific change and in so doing coming to embody two meanings to Kuhn's work:

> On the one hand, it stands for the entire constellations of beliefs, values, techniques, and so on shared by the members of a given community. On the other, it denotes one sort of element in that constellation, the concrete puzzle-solutions which, employed as models or examples, can replace explicit rules as a basis for the solution of the remaining puzzles of normal science.[45]

For Kuhn, normal science is defined by incremental puzzle-solving. Communities organised by research fields[46] or denoted in relation to important scientific papers[47], advance knowledge by deploying accepted methods to not only solve problem but also identify the problems to be solved.[48] The body of puzzle-solutions generated this way act to reinforce the appeal of the paradigm as a method of puzzle solving.[49] In so doing, it reinforces the assumptions that underpin the paradigm as a structure for belief. Paradigms "reflect not only semi-stable collection of ideas but also the stabilising forces that arise from commitment to these "disciplinary matrix".[50]

Paradigm as systems of belief incorporates method and methodology as the acceptable processes for puzzle-solution. Paradigms are first principal methodologies that researchers use to construct meaning embedded in data.[51] Attempts to classify the core elements of paradigm identified epistemology,[52] ontology, methodology and axiology as the key elements.[53] Simplified, paradigms help shape, relationship to knowledge, assumptions about reality, the processes of uncovering knowledge, and the ethical issues that are inherent in the asking. These fit largely within Kuhn's two usages, however, it has been speculated that the epistemological, ontological and axiological underpinnings of a paradigm are likely to drive

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[45] Thomas S. Kuhn, The Structure Of Scientific Revolutions (second edition, enlarged 1970)., 175.
[46] For example, physics as field could be classed as a paradigm. Within which macro and micro physics represents two competing paradigms. This will continue until someone can produce a theory of physics that can unite several apparently fundamental conflicts, often called a Unified field theory.
[47] For example, prior to the adoption of Einstein's theory of relativity, Sir Isaac Newtons, *Philosophia naturalis Principia Mathematica, (1687)* provided the paradigm for much of the field of physics.
[48] Kuhn. (N.45).
[49] Ibid, 35-42.
[50] Kuhn sometimes uses this term interchangeably with paradigm see, Ibid 182.
[51] Norman K. Denzin and Yvonna S. Lincoln (eds), The SAGE Handbook of Qualitative Research (fifth edition, SAGE Publishing 2017) part II.
[52] In the sense of the Greek for knowledge but distinct from Foucault's usage.
[53] Yonna S. Linkon and Egon G. Guba, *Naturalistic Inquiry* (Thousand Oaks: Sage 1985).

researchers that operate within them towards a particular methodology.[54] This creates something of a chicken and egg problem for the concept of a paradigm. Are paradigms defined around methods that require particular beliefs, or are they shared beliefs that point towards particular methods of problem solving?

Kuhn's theory of paradigm shift points towards a method first approach. To Kuhn, paradigm change happens because of the destabilisation of standard science occurring when a sufficient body of pressing problems arises to which the dominant paradigm cannot adequately provide a solution.[55] Kuhn provides no indication as to when a problem will be of sufficient gravity to destabilise a paradigm, the commitment to the disciplinary matrix typically limiting questions of normal science to that which does not challenge its fundamental premise.[56] The paradigm itself is resistant because of its member's commitments to certain beliefs that allow them to ignore otherwise anomalous data and disregard or explain away minor problems.[57] In contrast, Karl Popper's view of scientific change argues that any single replicable problem will falsify a theory.[58] Popper's view relies on an underlying assumption of transcendental truth while Kuhn's theory focuses on the practical utility of the existing concepts. To replace a paradigm, the successor must be sufficient to explain almost everything that was within the problem-solving power of its predecessors, even when this leads to a loss of members, breadth of field or ability to communicate to those outside of the profession.[59] The method of a paradigm and its problem-solving ability may be posited as the primary facet of its organisation, to which its beliefs are secondary. However, only a problem that the community recognises as sufficiently important to their belief, unsolvable with the current paradigm, creates a need for change.

Paradigms are multiple, both reflecting an aggregation of the individual but also operating in parallel with each other. As sociologically defined groups, multiple co-existing paradigms, even when considering the same subject, can exist harmoniously. Even so called 'dominant' paradigms only represent a majority view.[60] 'Outdated' or non-dominant paradigms may find appeal in providing answers more salient to a community or provide puzzle-solutions that are incongruous with the practices of the dominant paradigm. Individually, paradigms

[54] Charles Kivunja and Ahmed Bawa Kuyini, 'Understanding and Applying Research Paradigms in Educational Contexts' (2017) 6 no. 5, International Journal of Higher Education, 26, 38.
[55] Kuhn (n.45) 92-110.
[56] Ibid.
[57] Ibid.
[58] Karl Popper, *The Logic of Scientific Discovery*, (first published 1959, second edition, Routledge Classics 2002) 86-7.
[59] Ibid, 169-172.
[60] Sometimes defined only with reference to a particular community of practice. The dominant paradigm in psychology differs from the dominant paradigm of psycho-analytics, yet are related.

are arborescent and centralising but if considered collectively can represent heterogeneous arrangements of knowledge in a rhizomatic structure.

Paradigms are structures that organise, centralise, and resist change, help to understand the processes that underpin concepts of property. 'Property' conceptually is invoked by different groups, in different contexts, for different reasons, reflecting the commitments of those groups and to solve the problems within those communities. In the same way that Kuhn proposes that science exhibits paradigms and the problem-solving nature that makes it resistant to change, we can understand 'property' as reflecting disciplinary specific uses that reflects an understanding of the utility of 'property' to the problems that these disciplines grapple with. To this end, considering the paradigms of property is necessary to consider what exactly are the forces that interplay when coming to understand the term.

Episteme – Societal arrangements

In *The Order of Things*, Foucault introduces the episteme as the general unconscious structures that underlie the production of scientific knowledge in a particular time and place,[61] "the conditions of possibility of all knowledge, whether expressed in a theory or silently invested in a practice".[62] These are delineated in broad terms by society, with Foucault's focus being on European science.[63] The episteme conceptualises the possibility of knowledge, the a-priori limitations of language and philosophy, that allow the discourse of science. The episteme comprehends changes both social and scientific. To Foucault, the development of science within Europe can be demarcated by three broad eras, constituting the primary assumptions within contemporary thinking that dominated lines of enquiry.[64] Foucault defines the renaissance by 'resemblance',[65] the classical by 'representation',[66] and the modern by 'historicity'.[67] Each posited to produce knowledge that is unrecognisable in other eras, the preconditions for that knowledge being too distinct. These preconditions are as much present in the fields of science as they are in the general zeitgeist of the age. The distinct nature of each era causes problems for understanding the changes through history. Foucault rejects any kind of link between each era and provides no idea as to what causes

[61] Michel Focault, *The order of things.* (2nd ed. Routledge classics, London, England: Routledge, 2001).
[62] Ibid, 183.
[63] Ibid.
[64] Ibid.
[65] In a much-simplified manner, Things that resemble each other are linked and the study of the world should be to find the resemblances between different objects. This is deeply rooted in religious practices.
[66] In a much simplified manner, Classification of the world is now the focus with methods for representing the world in other forms being developed.
[67] Historicity is broadly speaking the recognition that things are rooted in historical existence that has enabled the present condition. This includes schools of thought. Focault (n.61).

change.[68] Piaget finds this rejection, along with a lack of formal methodology, enough to render the episteme worthless, relegating it as an artifact of a pet archaeology of Foucault's own creation. [69] It is hard to understand how an episteme might be applied as to understand changes caused by subsequent developments.[70] For this reason, it is often ignored in favour of paradigm in modern scholarship.[71] It will be submitted in this thesis that favouring understandings of individual paradigms mirrors the approach of the common law, which unsuccessfully attempts to bound property in restrictive notions.[72]

The episteme, as presented by Foucault, might indeed be difficult to apply, however as an organising concept it retains much utility. Taking the view that the episteme represents the overall possibility of knowledge both theoretical and actual that is related to the zeitgeist of society, we can posit the episteme as a sort of metaparadigm. The episteme coming to represent the totality of all extant paradigms, the combined puzzle-solving apparatus, and beliefs of an age. Dominant paradigms come to dominate the episteme. This does not make an episteme a singular totality as, originally conceived, only one episteme could exist within one place and culture.[73] While broad individually, multiple epistemes can coexist along socio-cultural groupings. For example, 'east vs west' approaches might be better thought of as arising from conflicting a-priori cultural assumptions built into their respective episteme. In this way, even the dominance of paradigms might be thought of as culturally contingent, their relevance and stability being in part defined by its interaction with episteme, yet so too are the episteme defined by paradigm.

Advances in technology might require a redefinition of the reach of the contingency of the episteme. In the digital age, the bounding of an episteme along geo-socio-political grounds is challenged in the face of an increasingly interconnected world. The internet allowing access to the vast sums of human knowledge[74] and direct connection to an endless sea of perspective. Perhaps then we have entered a digital episteme defined by 'connectivity' that removes arborescent limits on the a-priori of knowledge, bounded only to the individual by the limitations of experience. This is an idea explored in chapter 6. For now, it is enough to

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[68] Ibid.
[69] Jean Piaget, *Structuralism* (Chaninah Maschler tr from 'Le Structuralisme' 1968, Routledge 1971) 132.
[70] For example, if we have entered a post-modern episteme, or a post post-modern episteme. Could we for example consider perspective to have become the extant theme? Though as Focault rejected being labelled postmodern, such an idea might also be rejected.
[71] Paulo Pirozelli, "the grounds of knowledge: comparison between Kuhns paradigms and Focualts epistemes" (2021) Jan-April, Kriterion 62 (148).
[72] See chapter 4.
[73] Focault (N.61).
[74] This raises two points; First, perhaps this is also limited. Access to information is increasingly mediated through various means. Second, this is well beyond the level of information any one person could hope to engage with.

reach an understanding of the relationship between a digital episteme and 'new' forms of digital territory.

Creating territories between disciplines

The danger in this approach is that by shedding light on the connections one might be blinded only by the most dominant ones. The concepts embedded in a dominant paradigm, in being influential, are likely to present a strong salience along traditional arborescent lines. In being so prominently connected, their influence might become foundational within an episteme and spread its reach throughout the zeitgeist. The dominance of particular concepts and paradigms serving to obscure other potentialities and reinforce otherness while being difficult to up-root and examine themselves. Yet this too is a matter of perspective, with one's position in the space of flows and the influences on one's own conceptual map serving to reinforce the salience of particular paradigmatic dominance.

The territorialising and reterritorialising process of working across disciplines can help to undermine or challenge the dominance of paradigms. By combining and working across fields, sharing both expertise, method and methodology, the boundaries between fields are broken down. That which is 'othered' in one paradigm might find itself central to the data of another and in so doing help to bring to light the importance of otherwise neglected aspects of embedded or *othered* ideas or concepts. This is not a perfect process, relying on each discipline as forged through its own assumptions, biases, and suspicions to come to an understanding. It is thus that even inter-disciplinary methods still perform the power relationships and problems associated within their respective paradigm and the methods of their fields. However, in so doing there is the chance to expose further connectivity and influence that is useful to study. Where ideas provide coherence, then there may be a crosspollination of concepts. Where there is a more fundamental conflict, the boundaries of each field are unlikely to shift unless it truly causes a destabilisation of the paradigm.[75]

These territorialising and reterritorializing practices are captured within Law's work with reference to "mess".[76] Law takes the view that fundamentally the world is very 'messy' in that it is not knowable "in a regular and routinised way."[77] John Law mobilises the language of hygiene to view method as a sanitising force, directed to produce pure clean data with a long shelf life.[78] However, in practice this is sometimes impossible, the manifest

[75] Though importantly this will depend on convincing people that this is the correct way.
[76] John Law, "Making a Mess with Method", Centre for Science Studies, Lancaster University, (2003, Lancaster LA1 4YN, UK,) http://www.comp.lancs.ac.uk/sociology/papers/Law-Making-a-Mess-with-Method.pdf, last accessed 29/03/23.
[77] Ibid.
[78] Ibid.

phenomenon defies expression in terms of a singular approach or method of study. While theory can neatly draw barriers between different concepts and render them discrete, practice can prove this impossible.[79] He argues that the general view underpinning 'clean' methods is that there is something out-there and that it is "independent, prior, definite and singular".[80] In order to create that view, we must engage in excluding that which does not fit, methods must make '*other*' the messy and indeterminate. Much like a child sweeping toys under the bed so the floor appears clear, method must sweep away inconvenient phenomena. In acknowledging 'mess' by highlighting that which has been repressed, we may challenge a paradigm's dominance.

Law posits the desire to repress phenomena is grounded in the belief that authoritative data is 'clean' data, which makes straightforward an otherwise 'messy' world.[81] Yet, if the world is messy, then presenting something 'sanitised' may simply create more mess. Method, in acting to strip away complexities, does not destroy its subject but instead creates something new. The new 'thing' now competing conceptually with the thing it was born from. This is only compounded by a multiplicity of paradigms that 'clean' the subject in different ways. The creation of multiple 'clean views' that are forced to coexist only serves to pollute an already messy world.

Law's approach might be turned to consider that the process of 'cleaning' is itself a dominant paradigm that hides much of the messy reality of research. To Law, the requirements of formal methodology have become implicit and stand largely unchallenged with academic research being actively resistant to change.[82] In practice, method and methodologies are often debated and compared without challenging the underlying presumptions of its necessity.[83]That this is not widely challenged lies in the fact that 'tested' and 'verified' methods are expected to reveal truths.[84] That we can apply method to create data, draw warranted inferences and hold them to be structurally valid; and, that they can then be recognised by others within a field as new knowledge worthy of scholarship is both mentally and professionally rewarding to academics.[85] Method and methodology in many ways form the basis of modern academic structures, the divisions they create being central to academic identity, and a key lens through which academia is seen, and in so doing allows

[79] Law provides an example of setting out to research alcoholic liver disease. Finding that rather than a single disease, a range of alcohol and liver disease related problems were all being drawn out through the work and that they could not easily be distinguished into a coherent picture.
[80] Law, Mess (N.76), 6.
[81] Ibid.
[82] Ibid - John Law provides the example of research councils being resistant to any work that defied the idea that the world is singular and definable.
[83] Ibid, 5.
[84] Ibid.
[85] Perri 6 (N.19).

much mess to be ignored. This thesis contends that this excluded 'mess' may form much of the ephemeral nature of property, and instead, chooses to embrace the multiple.

Language… What a mess…

Many of the problems presented in this chapter centre around the complexities of representing constantly shifting ephemera through language, which give the veneer of stability and itself creates points of centralisation for these concepts. To place this in its context language will be explored.

The foundation of most modern linguistics lies in the arguments of Saussure, that suggests language mediates between the sign, signifier and signified.[86] This is predicated on the notion that nouns representing an object is arbitrary. Nouns are not 'true' things that express an inherent relation to their subjects, instead reflecting a 'sign' built by consensus that relates to their subjects or 'signified'. Signs are constituted by patterns of stimuli, the sound pattern or gesture acting as signal or 'signifier'. The utility of a noun is embodied in the signifier, which has no relation to the signified, except by convention.[87] Sensory stimuli work to act through schema, and it is this that Saussure argued is linked to the underlying concept.[88] Language is used to express ideas, and words must be in some way delineated. Saussure argues that words can only exist in relation to other words that help to define their meaning by delineating the signifier to which they refer. [89]A tree can only be a tree because bushes and flowers are something else, but this also means that 'flat', 'bungalow' and 'house' become more specific because they exist in relation to each other.

Signifiers are present in all forms of stimuli. C.S Peirce considered signs as any stand-in for another idea through various classes of signifiers[90]. He considered 'icon' as physical resemblances to its signified,[91] 'index' as evidence of what's being represented[92] and 'symbol' as something with no resemblance or relation to the signifier beyond learned cultural relationships.[93] Words can then be taken as a reflection of a wide range of understandings and conceptual arrangements that underpin what they signify, that are themselves engaged in chains of signification with other ephemera, words are fundamentally

[86] Ferdinand de Saussure, Course in General Linguistics (Charley Bally, Albert Sechehaye and Albert Riedlinger eds, Wade Baskin tr, first published 1915, The Philosophical Library 1959).
[87] Ibid.
[88] Ibid.
[89] Ibid, 71-75 this likewise links to Derrida's concept of the difference. (N.26).
[90] Charles Sanders Peirce, The Essential Peirce Volume 2 (Peirce Edition Project eds, Indiana University Press 1992).
[91] For example, a painting of a tree does not have to be faithful reproduction for you to understand it is a tree.
[92] For example, we understand an image of a smoke to representative of fire.
[93] For example, a recycling symbol is culturally learned but has little to do with the actual process of recycling.

a multiplicity of understanding reflecting a point of centralisation that is used for communication.[94] At once the function of language as signifier allows for, and belies, much of the mess inherent in a multiplicity. Unpacking these understandings and assumptions, specifically because language mediates underlining concepts and in so doing draws on related ideas, sometimes causes conceptual drift in the processes of understanding that creates further flux in meaning.[95]

Generating and perceiving new concepts

To better understand the 'Flux' of meaning, we can draw from the work of Deleuze and Guattari to provide a vision of 'concepts' in a state of 'Flux'. The pair, in their work 'What is Philosophy', present the work of philosophy as "forming, inventing and fabricating concepts".[96] Likened to an artist, the philosopher paints the picture of concepts, and just as the artist's style and influences are expressed in their brushwork, so too do concepts come to enfold elements of the author.[97] Concepts are particular to their philosopher, sensitive to the contingencies of their creation, as opposed to found from some plane where concepts dwell.[98] Deleuze's 'concept' and Guattari's 'concept' are thus different concepts of 'concept'. Creation of concepts does not only take place in philosophy, so too do art and science act as spaces within which creation can take place.[99] Each space however is taken to produce different things in different 'planes'. Philosophy creates concepts on the plane of imminence, mapping the virtual potentiality of that which a system is capable.[100] Science creates functions that exist on a plane of reference, they track and map the actualisation of the virtual.[101] Functions relate to the systems of the concretely constituted, tracking and predicting patterns of behaviour in the real. Concepts "speak the event",[102] mapping out the possible patterns of behaviour and considering what a thing might 'become'. Art is treated as apart "a bloc of sensation, that is to say, a compound of percepts and affects."[103] While there might be 'concepts of functions' these as much as 'concepts of concepts' are the work of

[94] This idea is also explored in chapter 2 through boundary objects.
[95] Here this problem highlights the complexities created through a multiplicity in method. This also creates problems for concepts of property and for cryptocurrency, because of their meanings in different contexts creating certain expectations.
[96] Gilles Deleuze and Félix Guattari, what is Philosophy? (Hugh Tomlinson and Graham Burchell III tr, Columbia University Press 1996), 3.
[97] As a brushstroke captures the ephemeral, our traditionally messy ideas, such as emotion, illness, or environmental conditions, so too does the trace of the author capture the ephemeral, that which might be 'othered' in traditional methodology. Interestingly unlike concepts, evaluating art's authenticity often involves considering these traces.
[98] Deleuze, What is philosophy (N.96), 5.
[99] Ibid.
[100] Ibid.
[101] Ibid.
[102] Ibid, 21.
[103] Ibid, 164.

philosophy. To the pair, concepts are the domain of philosophy and philosophy alone, however this is not to say that work in other fields cannot create concepts, but in doing so they engage in becoming philosopher.

These concepts do not simply emerge and remain static. Instead, they are constantly in a state of change and flux – i.e., a continual state of becoming. Deleuze and Guattari present concepts as operating on a 'plane of imminence' outside of time where everything operates concurrently. A theoretical construct where everything exists concurrently without clear division. Rather than existing in some supposed perfect form on a plane of imminence, concepts are active participants in shaping themselves, affecting and being affected by a web of other operands on the plane. Concepts are interrelated to all other concepts, each concept reflecting intensities of other concepts. Thus, they are constantly shifting, changing in intensities, and being reshaped. Deleuze and Guattari use the phrase 'becoming' in reference to the changing nature of concepts. Concepts are in constant motion, enfolding from the territories encountered on its trajectory. This is their 'line of flight', the trajectory through which a concept moves. Concepts are in constant motion, never stable but continually becoming, along ever-changing lines of flight. A concept does not act to flash freeze arrangements of intensities, yet expression of concepts are products of specific moments. Everything acting to reshape everything else in a constant state of change and flux, each object becoming new along its line of flight, even expressing the concept of a moment finds itself changed. To approach a conceptual understanding of 'property' therefore we should embrace that it is constantly in motion and open to change.

Envisioning an alternative approach

To embrace this open-textured vision of properly this chapter has argued that it requires an alternative to traditional methodology, such that it can capture something of the ephemeral nature of individual concepts of 'property'. To this end, we can deploy the concept of the 'rhizome'.

Though we can enter the rhizome from any point and follow it through to any other point, we still must come to understand or disentangle parts of the rhizomatic structure. The same connections made in arborescent structures must be present in the rhizome. To understand those as sources of influence that reinforce certain connections rather than disconnecting themselves from the rhizome allows us to mobilise them as concepts to understand the rhizome, with the understanding this does not create the one. Thus, the concepts that organise and structure arboreal understandings can form the basis of engaging with

rhizomatic ones. To this end both Kuhn's theory of the paradigm,[104] Foucault's theory of the episteme,[105] have already been considered and Manuel castells space of flows[106] will be explored to help map an entry point.

Examining the conceptual arrangements of concepts that Kuhn, Foucault, and Castells provides a guide to how the arboreal structures of existing concepts can be envisioned. In turn however, they also provide an outline for the hierarchical, social, and spatial arrangements that provide flows of influence over individual understandings of concepts. They provide a map of 'nodes' that create points of centralising influence that are themselves points of resistance to change. This enables an approach to the thesis that assembles influences, rather than the 'othering' of contaminating variables.

Embracing the multiple

If method acts both to control perception and make implicit particular choices, what choice is enfolded within the dominance of method? To this point, method has been seen to produce singular definable analysis of external reality. This entails a commitment to a singular, definite, independent, and anterior existence of the world and the things within it, that forms the basis of the Euro-American metaphysical tradition.[107] This focus on 'out-theredness' has method making discoveries about things in search of 'truth', the promise of methodology being that the world is full of these truths which can and will be discovered, if only the correct method is found.[108] What if, however, this view of reality is itself a choice that pre-empts our understanding of the world around us, the subject of our inquiry, and method itself? What if reality is 'constructed' by the method of method itself?

Method entails a commitment to a singular, definite, independent, and anterior existence of the world and the things within it, that forms the basis of the Euro-American metaphysical tradition.[109] This focus on 'Out-theredness' has method making discoveries about things in search of 'truth', a commitment to traditional method being that the world is full of these truths that can and will be discovered, a reward to those who find the correct method to apply.[110] What is received is a singular 'definite' 'truth'. As too would be the case if we re-introduced some 'mess' or used a different method to 'clean', which might too be its own singular, 'definite' 'truth'. The focus on 'out-theredness' and 'truth' belies a more fundamental point, that our methods are not just means for understanding the world, but

[104] Kuhn, (N.45)
[105] Michel Foucault, The Order of Things (second edition, Routledge Classics 2001).
[106] Manuel Castells, The Rise of the Network Society (second edition, Wiley-Blackwell 2009).
[107] Law, Method (n.15), 38 explores these assumptions in greater depth.
[108] Ibid.
[109] Law, Method (N.15), 38 explores these assumptions in greater depth.
[110] Ibid.

ways of constructing the very ways we relate and understand reality itself. Method pre-empts our understanding, but each individual understanding and method is different, and what do we do when different 'truths' conflict?

Woolgar and Latour present one such approach where reality is constructed through the processes of science.[111] They consider the process of science as a process of constructing knowledge through the practices they undertake. They consider the creation of 'inscription'; broadly meaning the method of interaction that creates or organises traces that can be meaningfully shared or examined. They also consider 'inscription devices'; objects that allow for the creation of these traces. A simple example of this process might be images (inscription) created using a microscope (inscription device). Inscriptions are treated as having a direct relationship with the subject or 'original substance' usable in its own right as the centre of discussion or further research and substantial evidence of concepts, theories and ideas.[112] Inscriptions embody their own reality, with phenomena not just inscribed but treated as "thoroughly constituted by the material setting of the laboratory".[113] This process can construct new substances or entities constituted by the processes of inscription.[114] The creation of inscription requires relegating the inscription devices, the material process, to mere technical points that can be forgotten upon the production of the inscription.[115] Proper processes of inscription should be rendered invisible allowing its results to be unchallenged so that it might prove useful for writing papers or "literary inscriptions".[116] Literary inscription presents that writing itself creates material realities, the purpose of which is to be persuasive. By extension, however, all inscriptions are tools to persuade. Thinking in this way, we might consider that while inscription creates realities, these realities exist in varying strengths and stabilities and are open to challenge because they are instruments of persuasive force.

Woolgar and Latour further advance that the work of science is to utilise literary inscriptions and the statements they make to affect the strength of other statements. This is lensed through 'modalities'; statements about other statements that undermine the strength of other work, the reputation of the authorship, or to unpack and assail inscription devices. Statements are presented along a scale from type 1 statements operating as pure conjecture or speculation, increasing in certainty to type 5 statements which are effectively taken for

[111] Bruno Latour and Steve Woolgar, Laboratory Life: The Construction of Scientific Facts (Sage Publications 1979).
[112] Ibid, 56.
[113] Ibid, 56.
[114] Ibid.
[115] Ibid, 55.
[116] Ibid, 40.

granted.[117] The creation of all inscriptions posited as driven in part by reducing the modality of related statements by helping reduce their contingency.[118] Indeed Law, in reviewing this work, considered much of science to be a literary process of interrelating statements to generate ones that are authoritative.[119] However, even authoritative statements and inscriptions are susceptible to their context, or rather in certain contexts might be more or less authoritative. Consider the classroom vs the laboratory.[120] In the classroom, well-trodden statements are tested under repeatable conditions while in the laboratory, the same statements are open to reinterpretation and attack. Well regarded facts are ascertained through well-trodden methods and appear to be less contingent. For example, it is well known that gravity causes acceleration of $9.8m/s^2$ and that dropping an apple will allow this to be measured. If this were tested experimentally and did not hold true, in the classroom the underlining statement is unlikely to be challenged. In a laboratory setting, a comparable situation might result in a new theory or an investigation into why the difference occurred.[121] Though perhaps obvious, why would we trust a school child to rewrite the force of gravity? Through this lens, the answer would be because the modalities of the statement do not begin to undermine established statements. The new reality is unpersuasive considering more established ones.

The law primarily subscribes to a vision of property that reflects a stable, testable, 'reality'. Where it does not categorically define what property is, it does treat it as a category that is definite, and in general operates clearly and distinctly. This thesis contends that this is an impossibility, with different invocations of 'property' reflect individual, specific, visions of property, tailored to the contexts of their creation. It is uncontroversial to say that 'property' within the Law of Property Act 1925 is very different to 'property' in the context of theft,[122] with the approach engendered in these two acts create differences in the way a property lawyer and a criminal lawyer approach 'property'.[123] Indeed the case law that derives from these versions of property likewise creates further 'inscriptions' of what property is, which within the structure of the legal system is itself an authoritative and persuasive inscription. In both statutes and judgements there are modalities and contingencies that are hidden by the process of inscription, that are shaped by coherence around rules that govern the form. Existing in the context of legal and political structures that empower these inscriptions, that

[117] Ibid, 67-70.
[118] Ibid.
[119] Law, Mess (N.76).
[120] Bruno Latour, Science in Action: How to Follow Scientists and Engineers Through Society (Harvard University Press, revised edition 1988).
[121] Though perhaps this example does not to work in a laboratory setting so easily, those with a greater knowledge of science might be able to remove the modality here.
[122] Theft Act 1968.
[123] This is considered more in chapter 4.

entail expectations of legitimate methodological practices of the allowable influences on decision maker, the inscriptions in themselves are attempted performance of these 'roles'.[124] Thus 'property' comes to take a range of meanings created through highly contingent means, but represented by inscriptions that obscure their modalities, established within systems that reinforce the persuasive force of those inscriptions.[125] In this way the law creates a range of semi-stable realities that are deployed in different contexts that exemplify different material arrangements of 'property'.

If this idea were to be localised within the community of science, this would return us naturally to the idea of a paradigm. Woolgar and Latour provide insight into this process through what they referred to as 'hinterlands' the context within which new statements are judged.[126] This includes Authoritative relationships that help determine the acceptance of the new ideas along the lines of communities of practice. The hinterland reflects the interlinked understandings and the character of the rhetorical force given to statements, inscriptions and of inscription devices. This repeats the ideas of the paradigm as stabilising collections of idea and belief. The hinterland colours this understanding by highlighting its role in territorialising new statements. Statements draw on their hinterlands for stability to reduce modality and as they are accepted and their modalities further diminished become enmeshed in the hinterlands, this creates a feedback loop, where concepts are generated, refined, and become routine, adding to the hinterland upon which it relies.[127] Hinterlands generate their own consistency, assembling readily usable "packages" of orthodoxy.[128] Just as the paradigm resists change, the hinterland is presented as 'costly'[129] to depart from.[130] We might then consider that the persuasiveness of a reality is tied to its conformity, to an orthodoxy, unless it is convincing enough to undermine existing orthodoxy.[131] The stability of a new reality and its chance of becoming stabilised over time thus looks to be as much due to it relation and acceptance with an orthodoxy as it ability to stand on its merits alone. In its widest context, this highlights why different disciplines defend the paradigmatic approaches they develop and reinforces the idea of discipline and paradigm specific version of property. This thesis contends that relocalised to law, this idea of hinterlands and

[124] The notion of allowable performance on judges is explored in chapter 5.
[125] Where this is traditionally the role of 'stare decisis', the reality is that this is not perfect, because new situations present modalities that necessitate a departure from this.
[126] Latour, (N.120).
[127] Law, Method (N.16), 32-35. In fact, Law refers to this entire process as a process of routinisation rather than refinement or to use the words of Latour and Woolgar rectification.
[128] This could also be read as paradigm.
[129] In this sense it is about the kind of personal and professional cost and the risk to the stability of other ideas.
[130] We might also think of this as a bar that is set in terms of the level of persuasive force required to cause adherents to depart from the idea.
[131] This too repeats the concept of paradigm change.

paradigmatic approaches reoccurs within the rules of precedent and repeats ideas that align closely with judicial decision making,[132] thus highlighting how and why different visions of 'property' entrench themselves across different uses within the law. Indeed, over time, this gives the impression of 'property' as operating concretely within well tested channels. Yet as a whole this is still constantly in motion.

Examining this as ongoing process, Mol presents a vision of constructing reality through continual enactment.[133] Mol focuses on the practice of method, by taking the view that the construction of new realities and its subsequent stabilisation fails to consider that change is a constant. This considers that an object's constructed reality is partially in its practice thus "maintaining the identity of an object is a continuing effort, over time it may change"[134]. This idea is presented through hospital ethnographies, through diseases viewed through multiple understandings both in diagnosis and treatment, challenging a traditional scientific approach towards concrete definitions and list of symptoms. Different material interactions with disease constructing differing ontological diseases, yet are recognisable as having unifying factors that allow them to coalesce under one umbrella. "Despite the differences between them they are connected"[135]. This is not to say these are simply different views dividing a single external reality. The view is that different expressions of the same concept are themselves distinct, in that they exhibit their own unique characteristics. In this way "even if it is multiple, it also hangs together".[136] 'Hanging together' in this manner reflects an ability to coordinate difference into a single workable and definable whole.[137] Together, reflecting a multitude of different outcomes of paths to interactions and interpretations that present different outcomes that need identity. The one made multiple yet defined as one.

Between the work of Woolgar and Latour, and Mol, two alternative approaches are presented that challenge method as a tool to discover and uncover some anterior truth that exists before interaction. They consider method as a means through which realties are enacted, emerging iteratively through interaction, that vary in strength and stability due to their character and contingencies. Rather than being externally true, they instead undergo processes that restructure and reshape their existence and relevance and their connections and connectivity with that which surrounds them. Method consistently distills the singular from the multiple, but does not operate uniformly, yet iterative creations still tend to hang

[132] See chapter 4 and 5.
[133] Annemarie Mol, The Body Multiple: Ontology in Medical Practice (Duke University Press 2002).
[134] Ibid, 43.
[135] Ibid, 55.
[136] Ibid.
[137] This is similar to the coherence theory of truth which has been postulated in multiple forms for example Francis Herbert Bradley, Essays on Truth and Reality (Cambridge University Press 1914) provides a workable formulation of the idea.

together. Constructing reality draws together multiple methods, each of which map messy modality making multiplicities. In so doing it conflicts with the vast hinterland of western philosophy, with its concrete statements, from which it is costly to depart. Mol's position that we enact reality highlights the crux of the issue; distinct expressions are vested in a hinterland that find stability by connection with established ideas. Conformity is appealing as it provides shortcuts and supporting structures for ideas, costly to create something 'new', even where those connections might subtly rewrite the hinterland. There is reason to being multiple, it is easier to be within established concepts, they are more persuasive on reality. The costs to deliberately deviating from, changing, or subverting existing concepts is high, only truly being useful where it is exceptionally persuasive. With this understanding arrayed against the dominant paradigm of methodology, it is easy to see why seeing this might be hard, as to do so means fighting against the very idea of singular answers.

To embrace the multiple, and to accept that in doing so there is conflict and incoherence between different 'singular' understandings drives us towards an understanding of reality that in part is influenced by the forces of the persuasiveness that affect those interactions. This can be viewed through the multiple layers of the paradigm, the episteme, the method, the hinterland, and the discipline, all of which provide understandings that provide a level of rhetoric force to its surrounding ideas. These lenses show why something might remain stable, which is itself a question of the attractiveness of stability in the face of change. To contextualise 'property' we must explore influential versions of 'property' and seek to see how human actors might find uses in its interaction, stabilising individual views in hinterlands, that provide important flows of influence on the general concept of 'property'.

The network society – Territorialising arrangements

To look beyond a purely abstract version of this multiplicity it is important to recognise there are material physical arrangements that influence the conceptual space. Manuel Castells explores how the structure of an interconnected world might be understood through the "network society"[138] and "the space of flows",[139] concepts which in their material arrangements "allow for simultaneity of social practices without territorial contiguity".[140] This approach recognises the links possible through information systems, telecommunications, and physical spaces include transportation links, creating networks of interaction that are themselves networks with specific goals and purpose. For example, a

[138] Manuel Castells, The Rise of the Network Society (second edition, Wiley-Blackwell 2009). (Hereon Rise).
[139] Ibid.
[140] Manuel Castells, 'Grassrooting the Space of Flows' (1999) 20 issue 4, Urban Geography, 294. (Hereon Grassrooting).

network of financial agents and a network operating as a sport team both form specific networks that operate over their own demarked technological and territorial positions. Key locations to the primary purposes of these networks are considered 'nodes' with 'hubs' acting as centres of communication[141] that organises exchanges of all kinds.[142] These are not fixed, reflecting instead their position in a network and their utility in processing the stream of signals of interaction.

While the network might include physical habitats for social actors, for example residential spaces, meeting places, and offices,[143] they also include the territorialisation of virtual spaces that serve equivalent functions. Of particular importance are private spaces that allow specific network interactions to thrive. The space of flows territorialises electronic spaces where interaction and one directional communication occur. Indeed, digital spaces act to connect a disparate network around a single purpose. Central to the concept of a space of flows is a compressing of the time required for social interaction which is contrasted with the space of places which is a practical understanding of localised space where social interaction occurs. This consideration of modern networks and the way they operate and the areas through which they interact helps to provide a new framework for territorialising interaction both actual and virtual. This interaction also contextualises the spread of information in the digital age around the generative networks which can themselves constitute a paradigm.[144] The concept of a network society, in territorialising the interaction of information, helps to chart the pathways of influence on the interconnectivity of a rhizome.[145]

Developing an approach beyond method

The paradigm, episteme, and network society provide useful ways of organising information. They help represent information to different levels, at the level of overall knowledge, the level of groups using and engaging with knowledge, and as ways of territorialising the flows of information, each concept attempts to stabilise the ephemeral nature of thought by cohering around points of stability and yet themselves are open to

[141] These are often represented as centres for transport links but could be expanded to any points of exchange. These are places that increase the interconnectivity of networks through other nodes and can be linked to postal systems or areas that otherwise increase the interconnectivity of systems.
[142] Castells, Grassrooting (N.140).
[143] Ibid.
[144] An obvious example is economic schools of thought being organised around location. With schools such as the Austrian, Chicago and Carnegie schools being named after their locations of development and most prevalent in the departments of their specific institutions.
[145] This idea also highlights why 'property' in different places requires us to understand different conceptual arrangements. Chapter 2 considers how anthropology brings these localised understandings of property to the fore.

change. Individually they function as concepts that embody the norms and normative power of conceptual arrangement and reflect sites that resist large-scale sudden change.[146] Taken together, they exist in flux with one another highlighting the interconnected contingences of a wider heterogeneous system of information. Rhizomatically we consider the episteme to enfold the nodal concepts that express paradigmatic approaches, which are themselves constantly being influenced by an endless sea of connectivity. Individually they produce arborescent structures that highlight the limitations of method, arranged together they expose a map of interconnected influences that provides an entryway into the pathways of a rhizomatic understanding.

Relating this specifically to concepts of property, the paradigm helps us to envision the conceptual arrangements that underpin disciplines, social or theoretical groupings of individuals, and the specific uses of 'property' within particular methods of circumstances. The view of 'property' that the episteme engenders considers the theoretical bounds of what in amalgam 'property' might potentially be, including all of what is contained in individual paradigms and the multiplicity of definition and contradiction that entails. The view of concepts that the space of flows provides, by conceptualising the flow of information and concepts as operating spatially, provides not only its own insight into the concept of 'property' as interwoven with the spatial and hierarchical arrangements of the flow of information and social life, but also as a way of considering how concepts of property at the level of both paradigm and episteme can be mapped onto physical and digital locations.

Assembling the ideas so far

Faced with the mire of multiplicity, swamped by uncertainty, the journey has arrived at a point that requires reflection and reorientation. To this point concepts have been considered through a lens that embraces the idea that method engages in 'creating' its own realities, that these realties are themselves in a state of 'flux' that depends on the persuasiveness of circumstances of their creation, existing within a framework of concepts that are variable and yet exist within the stabilising influences of larger structures that organise and influence the limits of these thoughts and knowledge. These structures are social organisations that themselves rely on engagement and at a very basic level on being persuasive to their membership, which in turn is in part generated by the persuasive force that their methods hold on the problems with which their communities are presented, which is in turn caused by the methods they use and the 'realities' that those methods produce. If all these elements all

[146] For example, paradigms for inclusion and acceptance in academic disciplines, research groups and professions. Episteme by inclusion in the cultural zeitgeist and credibility in the community. Networks of the space of flows by inclusion in workplace hierarchies, online communities, and institutional support.

interact and interplay with each other, especially within the context of an ever changing and increasingly interlinked society, singular and dominant views may retain a sense of stability and permeance, yet the picture is likely to be constantly shifting.

If we apply this to the concept of property, on a collective basis its definition is partly determined by the conceptual space it operates within, constructed in part by both the methodologies used to define it and as a function of those methods of deploying it. These methods themselves can reflect different versions of property, according to the paradigms within which they are used, the wider episteme within which it operates, and influenced by the spatial and social geography within which it is applied. 'Property' must be multiple, it must be a multiplicity within which different strands of singular version of 'property' operate. These must be in part a performance of persuasion that appeal to different groups depending on their needs and uses for it. Some version reflecting stability, some more fluid, and when taken together sometimes conflicting.

To move forward from this juncture, a path will be charted to focus in on individual understandings, embracing a multiplicity of approaches towards concepts, that reflect different methods and elements of understanding, first considering the philosophic approaches to concept creation, then to a psychological approach to concepts as they are expressed through the mind, before finally considering language. Individually they represent different methods of concepts, with their own processes for creating stability and change, which to some will seem to be filled with conflicts. In presenting them together, it is hoped that the reader will find what resonates with them, as a means of highlighting of approach a problem through multiplicity, while also highlighting that we may see these elements of a multiplicity as competing through a process of persuasion.

Forward into the unknown

This chapter has presented a multiplicity of theories that repeat and cohere around similar themes. Concepts for organising information, the archive, the paradigm, the episteme, the network, concepts, schema, and signs also repeat and reproduce similar themes which organise, link, and create meaning in an inherently messy world. They exist as a multiplicity of frameworks for understanding a complex and interwoven sequence of processes that language fails to express. They are methods for encoding and decoding strands of reality, including and excluding variables in order to create workable structures for thought and study. While we might be tempted to treat them as singular, they are interlinked, intertwined and constantly in flux. On an individual level, our understanding is a complex interplay between language, concepts and schema that exist in a state of change and flux. These are enfolded within paradigm, episteme, and networks that both exist as a result of and help

shape the individual experience of and interaction with each of these elements. Organisations of individuals and the power structures and hierarchies that exist within them exert the same prioritising influence on the enfolded concepts, schema, and linguistic expressions. These ideas are singular and multiple, competing and cohering in different intensities unique to the individual, who draws on individual experiences from their personal realities. Action, interaction, and method construct and generate new realities. Schema, concepts, and signs all open to change. This change is at times general and at times territorialised, fracturing into ever more multiplicities. Reality is on multiple levels performative, constructed and constituted by that very same performance. It is a multiplicity, a mess that generates ever more mess and pollution.

Methods beyond method

How then might we approach method in a world that is multiple rather than singular and where the application of a method only serves to create an artifice of truth? What would it look like to embrace a process of change and engage with enacting realities at the fore? This section will consider two versions of 'assemblage' as a view on this process of construction.

In their work, Deleuze and Guattari propose the 'assemblage' as constructive process that arranges and defines solely by the external relation to other things.[147] It involves treating things as events, moments that exist without being dictated by external necessities and that expresses contingent and singular features. It is composed of an 'abstract machine' a 'concrete assemblage' and a 'personae'. The abstract machine is the conditioning relations between elements; it does not 'signify' or 'represent' it is simply the arrangement of the elements. It does not represent real things beyond the material arrangements that connect their elements, named for that unique moment.[148] The 'concrete assemblage' is the embodiment of the assemblage, they are the elements that are arranged by the relationships. The 'persona' are the agents immanent to the arrangement that act to connect elements together. Persona are "needed to relate concepts on the plane, just as the plane itself needs to be laid out".[149] In simplification, the assemblage expresses unique events resulting from arranging conditions, elements and agents combined. The assemblage recognises that it is open to change, it is alive, active, and evolving. They are temporary entanglements or bundles of elements that are constantly shifting. They are political, for politics "precedes being"[150] and to lay out the elements of the assemblage is a political act. We might think of

[147] Deleuze, ATP (N.7).
[148] Proper nouns are usually used to highlight these events, showing they have a unique nature.
[149] Deleuze, What is Philosophy (N.96), Pg.75.
[150] Deleuze, ATP (N.7), Pg.203.

them operating in different sphere and in different arrangements, with territorial,[151] state,[152] capitalist,[153] and nomadic[154] arrangements of elements and agents being exemplars. These however are ideal rather than extant with each arrangement, presenting these elements in different intensities.[155] It has been posited that they are inherently political, operating towards a particular aim on their line of flight.[156] These forms vary and reproduce existing assemblages or creating new assemblages. Trying to espouse them has led them to these categorisations:

> (1) "relative negative" processes that change an assemblage in order to maintain and reproduce an established assemblage;
> (2) "relative positive" processes that do not reproduce an established assemblage, but do not yet contribute to or create a new assemblage—they are ambiguous;
> (3) "absolute negative" processes that do not support any assemblage, but undermine them all; and
> (4) "absolute positive" processes that do not reproduce an established assemblage, but instead create a new one.[157]

The assemblage is a complex interplay of elements, actors, and the very arrangements themselves. While we might consider these factors and approaches, they are as much contingent on the observer as the elements of the arrangement are contingent on the machine. They are tools, amalgamations that are selected by 'social machines' becoming themselves 'machines' of expression.[158] Rather than "what is …"[159] for an assemblage, the questions we should engage with are "How? Where? When? From what viewpoint".[160] We should examine the moment as being constructed and created, our trajectory examining what went to create this moment and what its own trajectory might be.

A second analysis comes from John Law who proposes 'method assemblage' as means of viewing this process. This is considered "the enactment or crafting of a bundle of ramifying

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[151] Arrangements where we think of the elements as bounded by a set of limits, dividing the world into segments of concrete reality. Change in these elements is to one concrete element at a time.
[152] These are arrangements that unify or totalize both concrete elements and agencies in the assemblage.
[153] These are arrangements that strip the qualitative conditions from its elements, forcing elements into Quantitative relationships.
[154] These are arrangements where the elements, agencies and conditions are able to rearrange themselves without limits. These reflect a constant state of motion that while between two points are not directed towards an end beyond the next plotted point.
[155]Thomas Nail, 'What is an Assemblage?' (2017) 46 no. 1 issue 142, SubStance, Pg.2.
[156] Ibid.
[157] Ibid, Pg.34.
[158] Delueze, ATP (n.7).
[159] Ibid.
[160] Shelly E. Taylor and Jennifer Crocker, 'Schematic Bases of Social Information Processing' in E.T. Higgins, C.A. Herman and M.P. Zanna (eds) The Ontario Symposium (vol 1, Routledge 1981), Pg.89.

relations that generate presence, manifest absences and Otherness."[161] This is distinguished from the assemblage by its focus on presence.[162] Composed of "(a) whatever is in-here or present (for instance a representation or an object); (b) whatever is absent but also manifest (that is, it can be seen, is described, is manifestly relevant to presence); and (c) whatever is absent but is Other because, while necessary to presence, it is also hidden, repressed or uninteresting."[163] The method assemblage is concerned with catching the interwoven factors that are brought into being by enactment and therefore too with method. John Law proposes that there are a number of goods that might be generated by the method assemblage.[164] That we can embrace the construction of reality and its differing effect in time and space rather than enforcing otherness allows us to move beyond simply the good of truth.[165] The goods of politics[166] and aesthetics become elements by which we can judge our products rather than truth alone.[167] This centres the performativity of method as processes of enacting realities, which allows us to understand it as a process of choosing to make political arrangements more saliant. Judging these enactments 'politically' by how the realities they enact make these arrangements more or less likely.[168] 'Truth' becomes 'political' only if they are entwined as intersecting goods. Likewise, we can consider aesthetics of realities by the reception. Yet all these judgements are contingent, if there is no external truth there can be no singular good politic, no perfect aesthetic. John Law's argument is that these goods are not universals, they interconnect and interweave in different intensities and moments in different situations. How might we judge the 'good' of a politician's speech? By its beauty, its politics, or its truth? The multiple is likewise not treated as universally desirable.[169] Just as the multiple is contingent so too is its use as frame of understanding, sometimes the singular is more desirable, but this too is a matter of considering a good. Law ultimately concluded that the goal of his investigation is to spark debate, not to propose a new methodological orthodoxy.[170] To proclaim this the singular method would of course be a step in the wrong direction. Likewise, to discard the singular methods[171] of traditional practice is not desirable either. We must think of site-specific outcomes and consider the way they relate to a larger picture and our own overall perception of good. To do so moves away from a singular vision of 'property' but allows us to embrace that in each circumstance

[161] Law, Method (N.11) 42.
[162] Ibid.
[163] Ibid.
[164] Ibid, Pg.148.
[165] Ibid, Pg.148 – Though truth is of course still important.
[166] Politics in the sense of moving towards better social and non-social relationships.
[167] Law, Method (N.11).
[168] Ibid.
[169] Ibid, Pg.149.
[170] Ibid, Pg.154.
[171] Which have been shown to produce a multiplicity of realities as an aside.

there may be a singular vision that is 'correct' to our sensibilities, recognising that this is contingent and specific as to why it is 'correct'.

Ontological politicking

A repeated theme throughout this chapter has been change and the stability of certain structures in the face of change. Indeed, the multiplicity of viewpoints have often overlapped and conflicted as much as cohered. If we are to address these as realities that have been enacted, do we have to choose between them? To this end, there might be the element of the political in the enactment of reality. Mol raises this as a question by presenting this process as ontological politics.[172] Drawing the relations between the 'ontology' of what is posited as 'real' and the world of 'politics'. The word politics is taken to "underline this active mode"[173] and to suggest that multiple realities might be deliberative - that there is choice. If we experience the 'real' largely as singular does that mean we are engaging in these choices constantly? Mol raises a number of questions as to how these possibilities raise problems. Do we constantly risk ramifications of options everywhere, that end up always seeming to be elsewhere? Does the interference between different tensions mean that where something is at stake, so too are countless other issues and realties? Where there is conflict and we separate out realities, does this ignore complex interconnections between them? Finally: who gets to decide?[174] Perhaps these are questions with no singular answer, but to what extent do we engage with this kind of politicking? Are there different levels to which we engage with these questions?

Individual politicking – Resolving dissonance

On the level of the individual, we might consider the cognitive psychology view of the internalisation of this change. It has been proposed that in order to operate in the world, we require a more or less consistent internal psychology.[175] When we hold two or more conflicting beliefs, values or attitudes, there is mental discomfort. Referred to as cognitive dissonance, this is a clash between new information received, or being forced to take action that conflicts with pre-existing ideas, generating a pressing need to resolve the dissonance. Resolving dissonance takes places in several forms:

1) Adopting new beliefs or idea to explain away the conflict,

[172] Annemarie Mol, 'Ontological Politics. A Word and Some Questions' (2014) 47 issue S1, The Sociological Review, 74.
[173] Ibid, 75.
[174] Ibid, 86.
[175] Leon Festinger, *A Theory of cognitive dissonance*, (Stanford University Press 1957).

2) Seeking additional information that supports existing beliefs to outweigh the new beliefs,

3) Reduce the importance of conflicting beliefs,

4) Changing beliefs entirely.

Piaget proposes that the way schema operate and change over time is related to the same processes, generating new schema and accommodating new stimuli into existing ones in much the same manner.[176] Take a theoretical individual who see a book as a physical object, bound in a cover, with writing across many pages. If confronted for the first time with an E-book instead of a book,[177] which differs from the book in its digital form alone, what might the outcome be?

1. This is like a book but not quite, maybe it is something else. – Lo E-book as a schema adopted, dissonance resolved! This thing is not that thing.

2. (A) To the library, reinforcing the idea of what a book is – Lo these are books not that! Additional stimuli to outweigh the conflict.

   (B) To the library, finding out they lend these e-books too – Lo this is a book! Additional information that reinforces the similarity.

3. (A) First and foremost, books are about the writing, content is more important than form – Lo this is a book! Elements of beliefs reduced in importance to create acceptance
   (B) This snazzy e-reader is the physical embodiment and portrays the cover pages on either end of the text! – Lo this is a book! elements of dissonance reduced in importance to cohere.

4. Books are just a type of text – Lo this is a book! Changing the structure of belief entirely, though not always helpfully.

Each potential outcome is linked to the scale of dissonance experienced, this is in part driven by the overall import of the different beliefs or the enfolded elements of belief that require change and how many elements or ideas the new information clashes with.[178] It is unsurprising that a dissonant element that would have ramifications for a larger range of

[176] See, Jean Piaget, *The Origins of Intelligence in Children* (Margaret Cook tr, third printing, Psychology Press 1977) and Jean Piaget, "Piaget's theory", (G. Gellerier and J. Langer, trs) in Carmich Mussen (eds) *Handbook of child psychology*, Vol 1 (John Wiley and sons, 1970).
[177] Note that the use of a different signifier presupposes that this has a different existence.
[178] Festinger, (N.175).

beliefs is more likely to be resisted. Likewise, a simple difference, the kind that is commonly experienced throughout daily life, is likely to unconsciously be resolved. What is dissonant is also part of the individual experience, driven by those experiences, cultural condition, and the individual's own perception of those elements.[179] These processes allow for an individual to create a more or less coherent singular world with which they are comfortable to engage. If we consider this process through enacting reality, it operates to enact a stable reality within which the individual exists while also continually addressing inherent multiplicity in the world by adapting to its enactment. It is proposed that beyond the merely individual, we might consider creating new constructs, seeking information to resolve conflict, reducing the importance or attachment to conflicting elements or changing existing beliefs, to be the process that maps the entire range of changing ideas.

The concepts of organisation considered previously structure ideas, methods, and concepts, bringing together people and power while offering inclusion and identity. In large part they were considered through their centralising force but that too might be seen as forces providing resistance to change. Notions of identity within these structures act to influence internal values and reinforce their immanence. Individuals' commitment to structured identities helps understand the influence to the individual that these organisational concepts have. Yet these identities act as understood by the individual. To be a physicist; a nuclear physicist, not an astrophysicist, entails a specific identity that expresses structural relationships of influences that act on an individual, yet mediated through the individual's understanding of these identities and their commitment to them. When these structures break down they create fracture points for paradigms, where they spilt into multiple competing views. Alternatively, for small and well accepted changes, it coheres into a collective change. In this way we can consider it a process of new assemblages enacting new realities that compete against the stabilising forces of the old assemblage. Networks of flows of information competing in different intensities acting on different concepts, frameworks, and individuals. This presentation of this enactment is but a part of the overall picture, but it draws attention to the enactment of certain points of stability that are themselves constructed realities. They are maps of associations that exert a political pressure, while the enactment of ideas that relate to them also engage in the same kind of politicking. For example, not only does a paradigm represent a conceptual association of individuals that exert a kind of social force, it also creates its own reality that exerts that same force, constructing a stabilising identity to which to conform.

[179] Ibid.

To bring together these threads, the process of enacting reality and the reception of that reality is in part conscious choice and in part unconscious. It is enfolded within webs of connections to other realities, concepts and actors that exert pressure in different intensities based on relationships, perception of relationships and individual prioritising of those importances. Enacting reality is like being caught in a maelstrom of flows, all providing some vector, on a line of flight that are politically charged. There are choices to be made about reality in order to construct it, and perhaps that is a process of creating coherence, but this is a form of individualised coherence. A point of stability on which we can say that the flows are not causing a desire for change. To attempt to revisit some of the questions posed by Mol, it appears that we might continually engage in decisions about the enactment of reality, but that these are not always conscious. What is at stake in our decisions is a constantly unfolding series of realities that are affected by choice, conscious or not.

When thinking about how these realities interact, it is proposed that this is a matter of persuasion. This is persuasion in its broadest sense, rather than the specific form presented by most books on the subject, that aim to teach you to actively influence the world.[180] Rather than attempt to lay out the complex approaches to persuasion that have been developed, or outlaying rhetorical tricks that make up these approaches, instead we will consider the elements of persuasion originally outlined by the Greeks. To the Greeks persuasion was a matter of *Logos, Ethos* and *Pathos*. *Logos* is the logic presented, it is the content, coherence and sense that is invoked. *Ethos* is the emotion, that is conveyed or invoked. *Pathos* is the status, authority and qualities of the person invoking the argument. Even though these appear simple and straightforward we might consider them the essential elements that appear in different intensities in all enactments of reality and the interplay between different individuals relating to those enactments. For example, if we consider the hinterland, it enfolds a particular set of assumptions that provide a logic and path to logic. It involves individuals who are treated with respect and who have established themselves by adding to the knowledge of the hinterland and their status adds to both the strength of the hinterland and the logic it entails.[181] While some may not directly invoke emotion it perhaps does entail a degree of emotional attachment. In this way we might consider it a flow of persuasive

[180] Books are usually directly related to achieving a particular goal. Most famously: Dale Carnegie, *How to Win Friends and Influence People* (first printed 1936, Simon and Schuster 2009) Other examples include Daniel H. Pink, *To Sell is Human: The Surprising Truth About Moving Others* (Riverhead books 2012), Madsen Pirie, *How to win every argument: the use and abuse of logic*. (Bloomsbury publishing 2015) And Jay Heinrichs, *Thank you for arguing: what Aristotle, Lincoln, and homer Simpson teach us about the art of persuasion* (Fourth edition, Crown Publishing group, 2020).

[181] We might consider this a form of mythologising of the individual that operates in trace through all their work. Status is persuasive and their status is as much generated as part of the collective view as part of an enfolded hinterland.

force that creates part of barriers to which a new reality is compared. This will have its own sense of logic, emotion, and personage in different intensities. All these elements are subjective, but they operate in structures and frameworks that are persuasive to how the prioritising should be entailed. For example, we might imagine that the active elements in science are first and foremost about logic, with the researcher second and emotion last. At least that is the expectation that the organisation of science would persuade us towards. An alternative understanding of methodology suggests that this is not definitive, they exist as forces that operate on an individual and they respond in different ways to these structures, elements, and forces. Famous scientists might be more persuasive by virtue of their position. We might consider the enactment of reality through inscription and method as much a process of belief in the narrative of the apparatus that allows their production, enfolded within the narrative of truth constructed within science as a whole. We might consider John Law's proposed goods, by which we might judge realities and their enactment, as persuasive devices that appeal to those who value those goods and the corresponding change but are resisted by those who are more persuaded by simple truth. To revisit the flow of information proposed by Castells,[182] perhaps we might envision this as a flow of persuasive force creating different sites from different networks that act to push us towards different frames and scopes of reality. Perhaps we might consider ontological politics as a process of competing flows of persuasion, the moment of decision, conscious or otherwise, the site of intersecting constructions that persuade us of how to relate this new reality. As a lens, it might tentative be suggested that this could underpin an ontology of persuasion in and of itself.

Revisiting the map

This chapter has taken a novel approach to method, rejecting traditional assumptions, and attempting to draw upon a range of approaches to establish the desirability of a more freeform and unshackled approach to method. It has proposed several ways of viewing the products of method and how they enact realities that might not entirely capture the totality of their subjects but instead create projections, chunks that have their own existence. It proposes that these are constantly reinterpreted and subject to change and that so too is the world. Acting upon the world enacts realities and they act upon those who create them, shifting and changing the very elements that drive our action. In doing so it is hoped that we can reject a singular euro-American metaphysical ontology, though perhaps we can salvage a sliver of external truth, for things can still be true by the processes that are used to determine that truth. In enacting this reality there is some persuasive force to taking an

[182] Castells, Grassrooting (N.140).

approach that relies on the idea that things are contingent. That value can be found in different enactments and judge them by considering not just the truth of the situation but how they might exist as a flow of persuasive force towards some good.

This thesis' primary concern is with 'property' and the legal concepts of property. It recognises that "property" and its various enactments are in a state of flux, with each enactment a confluence of various elements in different intensities that attend to different goals. This leaves any attempt to provide a singular cohesive theory of property or indeed construct matrices that would attempt to "fix" property in some way inappropriate. To develop how we might then portray legal concepts of property, this thesis will engage with the 'margins' of property, the borders over which the tide of concepts flows. It is now proposed to visit upon two territorialisation's of property outside yet linked to the law, that of anthropology and economics. These two sites will highlight some of the dominant conceptions of property which exert influence on the legal while also highlighting the wider scope of what 'property' *might* be.

Chapter 2 - Property and/as anthropology

Introduction

To address property at the boundaries, this chapter will begin by consider the conceptual framework for considering 'boundary objects' as they originate within the field of anthropology. The conceptual apparatus will be used to consider how objects of property and the concepts of property act as boundary objects between various disciplines. In engaging with examples of boundary objects, the embeddedness of property and its conceptual frameworks will be considered. This chapter will then engage with research into the concept of property as a boundary object between law and anthropology in order to highlight where the differences in approach to property create sites of friction. These sites will draw attention to property as a nexus for various understandings, leading to a consideration of the understanding that the work of anthropology brings to property. This chapter will then consider these understanding, through considering the paradigmatic aims of anthropology, its methodology towards property, and the conclusions and insights that feed back into the view that anthropology has about property. The resulting view of property as social relationship will then be considered. This section will conclude by unpacking the view of anthropology and its interplay with law and economics by exploring the limits of the anthropological view of property as deeply embedded within society.

A problem of contingency

This following three chapters aim to provide an overview of the paradigmatic focus present in their respective fields however to this end they can only ever represent a general view. This chapter focusing as it will on views from within the discipline of anthropology, especially those that are self-reflecting on the nature of tradition, the selection and engagement with this material remains reflective of a background first and foremost in a legal tradition. Approaching a 'paradigmatic' view will always be reflective of an engagement with an idealised form of a discipline. These chapter can meaningfully and usefully present only a small subset of the overall position that the tradition with which they engage. Attempting to reach a truly representative view of the paradigm for these chapters, while theoretically possible, is a practical impossibility given the confines of both space and time. Thus, the selection of information can only represent a best-efforts attempt at presenting a limited window through which to view the field. This chapter in particular can only represent an outsider's perspective of the important facets of the anthropological view.

Dividing views into discrete realms of 'anthropologic' views also provides problems in terms of selecting information and creating the risk of oversimplifying complex issues or misstating or exaggerating divisions between schools of thought and practice. For example, to be an 'anthropologist' must one declare oneself an anthropologist? Have completed some recognised training path? Be published in a journal of anthropology? Perform prescribed methods of anthropology? Write or lecture on an anthropological subject to some sufficient degree? In a world with so many different disciplinary categories and interdisciplinary research and practice all creating different influences it seems difficult and arbitrary to draw clear lines between the edges of disciplines. Whist in practice, it can be clear that some views appear to belong to a particular tradition, this is not always the case. Edge cases will always exist that defy explicit classification. To further muddy the waters, one may also speculate as to the rational governing this classification, even in straightforward cases. These classifications are likely due to the territorialisation of idea by paradigms or influential networks or heuristically ascribed by our understandings of these groups.[183]

This issue will be compounded with property as a subject of study as it engages so many fields. With objects of property being ubiquitous in daily life and entailing so many different elements that constitute that existence, an insight into that which is traditionally othered in one's own discipline will likely engage elements central to other disciplines. For example, are the social relations surrounding property the domain of anthropology, sociology, or law?

[183] This follows the logic that hinterlands territorialise similar information, but our understanding of a particular hinterland might be distinct from those within the field.

The answer might vary depending on the paradigm, network, or even on individual that approaches the question. Similarly, might it depend on the content of the engagement? Does a view by a lawyer engaging with social relations like an anthropologist perform anthropology? Does it remain the domain of law as a lawyer brings their own range of preconceptions? Could it be both at once? Does it depend on the observer? Would a lawyer recognise the work published in a law journal as engaging something other than legal research? Would the anthropologist and the sociologist see elements of their own disciplines in what appears to them as legal research? These questions do not necessarily require clear answers, the heuristics involved in practical engagement with ideas often rendering quotidian these complex issues.

The goal in presenting the limitations of this approach and in raising these questions, rather than simply drawing attention to these issues, is to highlight how we might consider the processes of interdisciplinary research and begin to consider the practice of engaging viewpoints across disciplines. In creating this view of property in anthropology, it parallels the processes that a lawyer wanting to engage anthropological answers to the social dimension of solving a legal problem would undertake. It is not an anthropologists view of anthropology but an outsiders attempt to understand the insights of anthropology, focusing on the prevalent and persuasive element that are apparent to an outsiders view of anthropology. The aim of this approach is to highlight the active flow of influence coming from anthropology.

Boundary objects– A methodological coda

First proposed by Star and Greisemer,[184] 'Boundary objects' are a method for understanding sites of cooperation between different social worlds and the issues and solutions that emerge from the need to move between the understandings that they entail. This section will explore the conceptual space and processes that engage boundary objects before considering the identifying elements and proposed forms that they take.

Here 'boundary' is not used in the general sense of the border, edge, or periphery, instead it is used to consider a shared space that creates a point of intersection. To Starr it was "where exactly that sense of here and there are confounded";[185] the shared spaces between different social groups[186] that serves as a nexus for collaboration without clear concessus. They

[184] Susan L. Star and John Griesemer, 'Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals' in Berkeley's Museum of Vertebrate Zoology, 1907-39' (1989) 19 no. 3, Social Studies of Science, 387. (Hereon Translations).
[185] Susan L. Star, 'This is Not a Boundary Object: Reflections on the Origin of a Concept' (2010) 35 Science, Technology and Human Values, 601. (Hereon Not).
[186] Which may be thought of in terms of networks and paradigms operating as a social unit.

should be considered "things of action" [187] where the interplay between different groups require activity involving specific objects. The boundary might be considered in terms of a point requiring 'translation' between different social groups, where "sociocultural difference lead[s] to a discontinuity in action or interaction".[188] Boundary objects operating at the intersection, rather than clear demarcation of different communities.

Here 'object' utilises the term in a very generalised sense. while it does include the concrete objects physical objects it also includes conceptual frameworks, theories, intangibles, and most other things that we might think of as having discernible form. It is broadly speaking 'something people act towards or with. Its materiality derives from action, not from a sense of prefabricated stuff or "thing-ness".[189] For example, the physical object of a car might be a boundary object, but so too might the concept of a car divorced from the physical object. That either car may or may not be a boundary object is not a question of material quality but the way it is engaged with by different communities. The subjects for boundary objects are the nexus for the engagement between social groups rather than any physical pre-existing thing.

'Boundary object' taken together are conceptual and physical apparatus that engage across different categories and meanings. They are taken to "inhabit several communities of practice and satisfy the informational requirements of each of them."[190] In order to provide for the different informational requirements of each group, the boundary object's form is elastic. We might think of the form of the boundary object changing its composition to adapt to local needs and constraints while expressing a more general common identity that operates across multiple sites. Alternatively, this could be considered different forms of the same object that are utilised in different situations, the arrangement of actors with which the engagement takes place defining its context and thus content. Either expression highlights the role of boundary object as the site of intersecting multiplicities and its conceptual arrangement as an inscription device for these interactions.

Boundary objects help to clarify how communities exhibiting specific views cooperate without a shared basis of understanding. Mobilising the language of the paradigm and episteme, where two actors operating in different paradigms with separate conceptual assemblages might move between their own forms and a more general epistemic form of the concept at different points to facilitate the discussion. For example, Lawyers,

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[187] Star Not (N.184), Pg.603.
[188] Sannne F. Akkerman and Arthur Bakker, 'Boundary Crossing and Boundary Objects (2011) 81 no. 2, Review of Boundary Objects, Pg.132.
[189] Star Not (N.184), Pg.603.
[190] Geoffrey C. Bowker and Susan L. Star, *Sorting Things Out: Classification and its Consequences* (MIT Press 1999).

Anthropologists and the passengers of the Clapham omnibus may all be said to have different approaches and concepts as to what property is.[191] That they can engage in meaningful conversation surrounding property because it can be expressed broadly, the general form enfolding all the specific and individual views, shifting between specific and general forms when invoked by each individual in a way that allows for a shared meaning and commonality to be established.[192] In this example language operates to provide a shared basis for understanding, being a general catch all for their approaches, however this too can be the result of practices and the objects that they engage.

In a conceptual space there is a difference between a conceptual 'boundary object', the object that operates as a boundary object and the method assemblage of the boundary object-object moment interaction. Boundary objects in practice are proposed as "durable arrangements among communities of practice"[193] with their creation and management central to maintaining coherence across intersecting social groups.[194] As an artifact of repeated social interaction, that facilitates a type of interaction only possible through its use, it must take on features of its own. The practices that the concept of 'boundary object' seeks to capture requires some durability to function in its proposed role yet are still temporal in nature. As a site of intersection, we might consider that it functions to create a 'pigeon' version with elements taken from each understanding, however it might also take on a entirely new identity as practices emerge unique to this interaction.

Star considers objects and by extension boundary objects as operating on a trajectory towards 'naturalization' whereby the contingencies of an objects creation and its situated nature is stripped away.[195] This a process that requires repeated practice and engagement that progressively allows for its contingencies to be forgotten, with a naturalised object becoming part of unquestioned quotidian practice. This is not guaranteed for every object and achieving naturalisation is not necessarily a permeant state, it is practice activity that makes or keeps it so.[196]

Naturalisation might be considered a process emerging from sites of intersection where coherency of practice is produced through interactions surrounding itself. Boundary objects

[191] Following from the previous chapter it might also be considered that this will be entirely individualistic and down to the expression of a range of extant flows. For the sake of illustration this example will remain simplified.
[192] This might also be considered through a Wittgensteinian language game – See Ludwig Wittgenstein, Philosophical Investigations (first published 1953, G.E.M. Anscombe, P.M.S Hacker and Joachim Schulte tr, fourth edition 2009).
[193] Bowker, (N.190), Pg.307.
[194] Star, Translations (N.184), Pg.393.
[195] Bowker (N.190), Pg.299.
[196] Ibid, Pg.299.

are presented as "working arrangements that resolve anomalies of naturalization without imposing a naturalization of categories from one community or from an outside source".[197] It is a cooperative structure which arises when communities engage without enforcing their own structure. Through repeated cooperative use, the created artifacts of boundary objects may over time generate its own stable identity that becomes integrated within the intersecting communities.[198]

This is contrasted with efforts at 'standardization', where by one of the intersecting communities or an external force attempts to impose and control the movement between different forms of an object, removing the difference between the Ill-structured and well-structured forms.[199] Some authors have argued that standardisation is "integral to the definition of boundary objects". [200] Indeed, the process of naturalisation might be thought of as producing artifacts capable of being used as standardised forms for repeating interaction across different sites. However, integral to the concept of a boundary object is the differential between specific and generalised meaning. Standardisation as a process seems anathema to the continued existence of boundary objects in that in becoming standardised, it becomes something else.

Standardisation might be considered a process emerging from an imposition of power or regulation. As opposed to the generative repeated interaction of naturalisation, standardisation is generally seen as imposed in a top-down manner with one well-structured object creating the standard.[201] In this manner we might consider standardisation as emerging from structures of power even where it replicates naturalised elements and interactions from other boundary objects.

The process of standardisation, however, might create further boundary objects. Star argues that a cycle emerges where standardised systems are imposed.[202]Imposed standardised systems produce residual categories, for example 'not otherwise specified' or 'other please state', causing those who inhabit these places to begin to form the elements of new boundary objects. This in turn will attract the attention of those in power who will impose standardisation and will continue the cycle. Though this might not apply to every situation,

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[197] Ibid, Pg.297.
[198] In considering what this would entail it is also possible that the practice activity generates a stable object, which produces a stable set of practice arrangements, that is nevertheless a different stable arrangement within each of the communities.
[199] Star, Not (N.185), Pg.613-615.
[200] Charlotte P. Lee, 'Boundary Negotiating Artifacts: Unbinding the Routine of Boundary Objects and Embracing Chaos in Collaborative Work' (2007) 16, Computer Supported Cooperative Work, 307, Pg.310.
[201] Star, Not (N.185).
[202] Ibid, Pg.614.

the process of categorisation and the process of othering as creating boundary objects is an important insight.

As a conceptual apparatus, the boundary object operates to highlight the differences between different material arrangements that social groups utilise in practice. It draws attention to the space of interdisciplinary work and provides an insight into how practice develops in such a way that the interaction between different groups can operate without creating friction from a lack of consensus. The previous chapter advanced an approach towards constructing reality, that considered multiple layers from overarching episteme to the level of individual thought, which importantly argued for a contingent understanding and approach to most concepts and apparatus. Taken together we might consider at some small level almost every interaction as engaging boundary objects. While Star argues that the idea is better used on at least an organisational scale, for it tells us little about our subject to engage at such a granular level,[203] it is proposed that it still provides a useful tool for considering our conceptual surroundings. Rather than simply considering how this might be mapped onto areas of friction at the boundary, we might also consider that many quotidian interactions necessitate this kind of movement between forms and operates seamlessly, with our generalised forms of an object existing as the result of a process of naturalisation by these repeated interactions.

Marking boundary objects

Moving beyond the conceptual space within which boundary objects exist, the key elements and some of the most common arrangements of this assemblage will now be considered. To make the previous elements discussed concrete, Star identifies three key elements to the boundary object.

1) The object resides between different social worlds, (or communities of practice) where it is ill structured
2) This is worked on by groups that maintain both a vaguer identity as a common object while having a more specific tailored use within a smaller social world, that reflects non-interdisciplinary work
3) Groups that operate without consensus engage in 'tacking' between both forms.[204]

While the first two elements cover the need for 'interpretative flexibility' between different forms that exist in ill-defined and well-defined states, this is an ongoing process of

[203] Ibid, Pg.613.
[204] Ibid, Pg.604-605.

engagement that crucially must create some movement between these general and specific forms.

This third element is often overlooked in the literature.[205] In part, this appears to be because the concept of 'boundary object' has itself become a boundary object between different forms of practice. For example, some practices argue that in certain instances the contingencies of the creation of a boundary object need to be revealed to make it intelligible to receiving social worlds.[206]The concrete elements proposed above are specific, whereas the conceptual boundary object occupies a less well bounded conceptual space. That which is not a boundary object but engages similar processes are not yet well mapped, leaving 'boundary object' the best expression for this 'space'.

While not providing an exhaustive list, some common forms and arrangements of boundary objects have been proposed.

1) Repositories – 'piles' of objects indexed in a standardised fashion. Examples include libraries or museums. These modular arrangements allow actors to tailor engagement with the elements of specific interest without need to negotiate differences in purpose.
2) Ideal type – an abstract representation that is vague and adaptable without accurately describing any one locality. Often allowing for a means of communicating and cooperating symbolically. An example is the concept of a species, where abstraction allows distance from concrete examples.
3) Coincident boundaries – common objects which have the same boundaries but different internal contents. These arise where different expressions of data share key indicators that allow for different perspectives conducted autonomously to be coordinated through shared referent. Examples include a cross section of maps which share a common boundary but show different details and information that are coordinated by key identifying features.
4) Standardised forms – standardised indices that serve as methods of common communication across dispersed work groups. For example, the big garden bird watch that provides a uniform reporting system for birds in gardens.[207]

[205] Both Star Not (N.185) and Melanie G. Wiber, 'Property as Boundary Object: Normative Versus Analytical Meanings' (2015) 47 issue 3, The Journal of Legal Pluralism and Unofficial Law, 438. Identify this issue.
[206] Kathryn Henderson, *On Line and On Paper- Visual Representations, Visual Culture and Computer Graphics in Design Engineering* (MIT Press 1998).
[207] Star Translations (N.184), Pg.410-411.

Mapping boundary objects

To draw together the conceptual frameworks these will now be considered in practice.

Take for example a dispute between neighbours over a fence.[208] The fence operates to create both a physical boundary and operates as a boundary object. One side perceives that it is in the correct place because it has been an effective demarcation to their concept of their garden since they moved in,[209] the fence represents the garden's boundary and has done with all previous neighbours.[210] The other believes it is in the wrong place as it does not line up with the property boundary so their garden should be bigger, the fence can't represent the gardens boundary as it does not coincide with the property's boundary. Both are invested in different understandings of 'their garden' and the purpose of the fence, and any discussions of fence and boundary moves between these different meanings. To settle the disagreement, they go to the land registry and consult the title plan.[211] The title plans are absolutely no help as they do not provide clear coincident boundaries, the accompanying description is written in legal language. Both sides engage lawyers to examine the land registry.[212] A solution is found, requiring the fence to be moved and standardisation imposed. It cost a fortune, and no one is happy.

This example presents a slightly humorous approach to how we might find boundary objects extant in day-to-day life. In doing so it is important to repeat that boundary objects revolve around interaction and does necessitate physical boundaries or territorialisation. While boundary objects can exist purely conceptually, this instance also considers the interplay between conceptual and physical representations as applied to material reality.

To take another example serious example, we might consider maps as boundary objects. Maps provide an abstract representation of concrete physical territory that allow for tacking between the two forms. Consider a road map, a farmer and camper might engage the 'same'

[208] In this example our fence operates to us as an ideal type. We do not need to know the physical location or specific of the fence to understand why this might be a problem. This footnote serves to provide a more specific understanding of the fence as an ideal type of boundary object rather than the general form creating the issue within the text.
[209] In this case the fence operates as a standardised form, the physical barrier communicating as a generally understood symbol delineating the borders of the property and garden.
[210] In this case this was the understood practice, having become naturalised as the boundary.
[211] In this case acting as a repository for the information that they require. This is a broad approach to organisational structure and a consideration of the register as a kind of territorial space.
[212] The land registry operating as a boundary object between the lawyers and their respective neighbour. Its contents expressing elements of the boundary objects by represents different things to everyone involved who apply their own set of skills to interpretating the information. They can discuss what the register says in a simple way, moving between the well-structured form of lawyers and the ill structured general form.

map, with the farmer seeing the fields, roads, and pathways of the farmlands whilst the camper sees suitable camp sites and hiking routes. Both well-structured forms are facilitated by the ill-structured map and facilitates the giving of direction. A hand drawn map by a local, that is less standardised than the road map,[213] requires a better understanding of the knowledge that underpins its creation. The camper may be unable to navigate to the campsite whereas the farmer with his local knowledge would be able to provide contingent information to allow it to be properly interpreted.

As an assemblage we might think of the object of 'boundary objects' as method assemblages that are created by the moment of interaction between different conceptual flows that retain their identity and integrity. The 'boundary object' is the product of this interaction, however this often overlays physical objects. In both examples, there is an interplay between the conceptual boundary object and physical objects through which it is expressed. As Alfred Korzybski famously remarked "the map is not the territory, the word is not the thing it describes".[214]In the same way, the boundary object is not the object itself but the interaction surrounding that object. That these objects can express a utility as a boundary object and that the boundary object takes on a conceptual form that relates to the object, creating more influences that impact the concept of the object itself.

It is proposed that when considering the concept of 'property', the importance of these kind of boundary object interactions comes to the fore. objects of property are so ubiquitous within everyday life that they generate a multiplicity of interactions, thus giving rise to multiple conceptual and social understandings. This in turn renders them boundary objects between these understandings. Objects of property often act as a translation device between different social worlds and facilitate their interaction. By facilitating an interplay between different conceptual forms of the object of property held by these social worlds, the concept of 'property' itself is moulded towards utility as a boundary object and the generalised understanding that entails.

The concept of property as boundary object

Beyond individual objects of property acting as boundary objects in social interaction, the concepts of property operate as a boundary object between different disciplines and social worlds. As objects of property are so ubiquitous, the conceptual form they take should likewise be considered a boundary object between different communities of practice. To contextualise some of the specific features that can be said to arise with concepts of property

[213] Cartographic representations often following standards while commonly contain guide to its own contingent features. I.e. scale bars and cartographic roses.
[214] Korzybski, (N.10).

as boundary object, this section will consider the work of Melanie Wibers who presents a case for some of the issues arising from treating of property concepts operating as a boundary object.[215]

Wiber's argument stems from the work of Franz von Benda-Beckmann. Beckmann's work is presented as occupying the boundary space that operates between disciplines, with a particular focus on the intersection between legal and anthropological views as they engage various regulatory agencies.[216] In the course of this work, the concept of property became of central use as a boundary object, in particular being used to expose the work it does in "actual ideologies, legal systems, social relations and social practices."[217] At the core of this approach are the analytic frameworks for understanding property proposed by von Benda-Beckmann that engages with each of these elements.[218] In this way, property is proposed as multi-dimensional, to the extent that it must actively be engaged with as a boundary object to completely understand its complexity.[219] By exposing property through this work, we gain an insight into not only how these interactions formed, but also how central the concept of boundary objects are to interdisciplinary engagements.

For Wiber, the interactions surrounding these boundary objects are focused on generating standardisation or enacting future change. In other words, property as boundary object is engaged when considering the 'direction' of property. While Wiber considers a range of different argument across interdisciplinary engagement, overall the argument puts forward that property assumes the position of boundary object when "diverse academic traditions come together to treat some aspect of human-nature interaction as a problem to addressed through normative ordering".[220] Drawing particular attention to decisions surrounding resource management, where intersecting concepts of property clash through their teleological function. This is exemplified through social change, with legislators 'consuming' property theories from a range of disciplines to justify their positions.[221] Concepts of property are presented in terms that can be likened to literary inscription devices that are used as persuasive elements for directing future events and as foundations for underpinning regulation. This approach focuses on concepts of property as the battleground between different ideological approaches, the boundary object created by different influences as to the regulation and management of the material manifestations of property.

[215]Wiber, (N.205).
[216] Ibid.
[217] Ibid.
[218] These will be considered as part of the methods of anthropology in engaging with property.
[219] Wiber, (N.205).
[220] Ibid.
[221] Ibid.

To consider the different views that necessitate tacking between different conceptual forms, Wiber presents the need to consider additional elements to the ill-structured vs well-structured divide. Well-structured concepts of property are posited as being standardised and having more well-structured adherents as compared with ill-structured forms that represent the fringes that resist stabilisation.[222] Alongside this, Wiber draws on ideas of plasticity and coherence to consider the way this process of standardisation is done. Analytic frameworks that engage with empirical diversity are presented as having more plasticity whereas normative frameworks emphasise creating coherence.[223] Plasticity in this instance refers to adapting the form to meet local requirements whereas coherence incorporates as many possible forms of property under a stable identity.[224] Wiber details this approach by considering the 'bundle of rights theory' of property as expressing a high degree of plasticity. [225] This is contrasted by the more 'coherent' classification methods which categorise property into the 'big four' i.e. private property, state property, open access and common property classifications.[226] Arguing that well-structured concepts of property are inherently standardising, impliedly collapsing the boundary object differential, and that leds to a simplified concept of property. Ill-structured forms on the other hand appear to embrace flexibility, creative, and granularity that reflects a wider range of interactions that property can involve, ill-structured property seems to create more specific and individual forms of property. Mapping these to a normative vs analytic dichotomy recasts those interactions through this lens while highlighting the hidden political battle that these interactions entail.

Property concepts as boundary object highlight the central tension between analytic and normative approaches to property. Analytic frameworks are posited as a foil to "property standardization that appear where (usually state-driven) social transformation is envisioned".[227] Implicit within this argument is a divide that emerges between different disciplines, namely that anthropologists engage in a kind of ill-structured resistance in the face of well-structured stabilising influences that are prevalent for example in legal ideas. In treating property as a boundary object, it is proposed that this tension comes to the fore at the expense of proposing new, better, or different forms of standardisation leading to a widening field of engagement for analytic frameworks that produce more differentiated

[222] Ibid.
[223] Ibid.
[224] Ibid, citing Susan lee star, "Cooperation without Consensus in Scientific Problem Solving: Dynamics of Closure in Open Systems." In S. Easterbrook (eds), CSCW: Cooperation or Conflict, (1993, London), 97.
[225] Wiber, (N.205)
[226] Ibid, this is described as following the *Numerus clausus* principle. This is not strictly true see (Pg.103-106).
[227] Ibid.

analysis compared with a narrowing of what is considered an acceptable normative form.[228] In a practical sense, when Wiber argues that there is a "rising tide of property standardisation"[229] in part this is due to dominant western concepts of property. This statement also highlights how this tension is often resolved, with the complexities of analytic property concepts being bulldozed by modern western normative ones. This tension might be recast as a battle between complexity vs simplicity, visibility vs othering, the absolute positive vs the relative negative assemblage, and in doing so we might begin to consider how this process reflects back on our dominant concepts of property.

If our dominant concepts of property result from a growing normative process of standardisation, how does the tacking between different forms of property affect this view? It has been proposed that operating in the boundary spaces puts traditional concepts of property under strain.[230] By tacking between different concepts of property, the normative concepts that help enforce dominant models of property become destabilised. If we consider the dominant conceptions of property as being paradigmatic archives that present only specific arrangements, then by opening engagement with elements othered within those arrangements, these elements create dissonance for that concept. Acting to unpack the modalities of their inscription and reintroducing the mess of reality to a 'sanitised' view. Yet in exposing elements that highlight the weakness and unsuitability of dominant models, will be received well only if what is revealed has some appeal. The stability of existing understandings might be thought of through the 'cost' entailed in moving away from the dominant concepts, which for those heavily engaged with the dominant concepts will often be too high to allow it to be 'destabilised'.

This thesis, in engaging with multiple lenses through which to view 'property', must treat property and its concepts as boundary objects, much in the manner proposed by Wiber, Franz von Benda Beckmann, and those inspired by his work.[231] In exploring the individual ideas of what property might be, examining their elements, considering how they interplay, and inviting tacking between different concepts of property operating in different sites, the stability of the individual approaches to property will be undermined. 'Property' is a boundary object, with individual concepts of property influencing specific understandings of property in different intensities,

[228] Ibid.
[229] Ibid.
[230] Franz von Benda-Beckmann, Keebet von Benda-Beckmann, and Melanie G. Wiber, *Changing Properties of Property*, (Berghahn Books 2009). (Hereon Changing).
[231] Ibid.

Property at the boundary

That there exists a relationship between things and 'property' is hardly controversial. Likewise, it is hardly controversial to say that something approximating that property exists everywhere.[232] We are surrounded by property, we are surrounded by things that embed within them property concepts, we constantly engage with notions of property, and the relationships that spring from them. With property so well embedded in the quotidian, it is worth drawing attention to where we might consider its 'boundaries'.

As has already been considered, objects of property can operate at the boundaries of different conceptions in common social interaction. Commonly, things operate as a very granular level boundary object between different individual conceptions of property. [233] Objects of property can act as a means of expressing these concepts, translating between these concepts, or facilitating interactions that embed these concepts. Different objects of property express different arrangements of these elements (and more) to different individuals. Objects of property operate in the shared space that exists between the 'boundaries' of individual constructions. This can scale up to the level of social groups, networks or paradigms and the flows they produce directing towards particular arrangements. There is a flux between the different concepts that inform these arrangements and interactions that then feeds back into these concepts. Likewise, the identity or arrangements of conceptual elements of 'property' expressed in objects are driven by the overlapping and interplaying understandings of property.

Likewise on a conceptual level, the engagement between different paradigmatic frameworks, networks, or social groups towards concepts of property has been considered. Beyond just anthropology and law, almost every discipline must in some manner engage with objects of property and the concepts that underpin them. By creating different kinds of interactions that conform to the needs of their frameworks and methods they derive theories for property that allow for their goals and needs. These too operate as boundary objects and could be thought of as operating across the shared space of different disciplines. In this manner, we might too come to consider the borders of what is traditionally considered part of a paradigmatic space for a group. For example, we might consider that legal approaches to property exist through a particular paradigmatic arrangement that gives it definable borders, that which is covered by the law being ascertainable but expandable by mechanisms within Law. Likewise, we might consider accounting or banking to operate involving a specific set of lenses to view

[232] Property however is a culturally contingent thing and it might be better to consider it that which is recognisable to the dominant western conceptions of property as being everywhere.
[233] The fence operating as boundary object between neighbours, the train ticket representing travel vs access between passenger and guard, or the map mediating directions between the real and virtual.

property and arrangements that might be naturally territorialised to.[234] This is not to say that they hold exclusive use of these arrangements or over the 'territory' but that these might be considered the 'areas' within which they are commonly found or used.

Considering these collective groups in the manner of a network,[235] we can imagine these understandings of property operating within the space of flows territorialised around the operations and places of these networks. In this manner we might be able to identify 'nodes' from which certain concepts and property arrangements become most prevalent,[236] and 'hubs' which facilitate the use of certain arrangements.[237] These might provide certain lenses to the interaction with property, for example we understand contextually that we can borrow things in a library, buy things in a shop, and create complex arrangements with money in banks. These sites also express property, they are objects of property and embody different conceptual arrangements to different groups and individuals. These sites are property, with defined borders that define spaces of differing interactions and arrangements. Networks operate over the space of flows and the space of places, with physical and conceptual boundaries. Places are property, they create borders, and these borders influence other concepts and objects of property within them.

'Property' is fundamentally territorialised, with the cultural and legal frameworks that operate over it being products of a particular time and space. In the same way different places operate to influence concepts and objects of property, The law of a country operates to influence concepts and objects of property to the extent of its borders.[238] For example, the ownership and subsequent rights to access to rivers differ between England and Scotland. Within England riparian rights to watercourses,[239] are given over to abutting landowners who are treated as owning the watercourse along which their land runs, or until the halfway mark if the watercourse constitutes a boundary of their land.[240] There is generally no right of access to these waterways. While a general public right of navigation has been argued to exist within the common law,[241] this has not been verified or tested by the courts. In Scotland, the ownership of Tidal rivers falls to crown, and the ownership extends to the

[234] For example, we might think of amortised mortgages or interest rate derivative products as existing within these particular fields.
[235] For the terms should be considered interchangeable.
[236] For example, we might consider wall street as a node in financial networks that places centrality on the arrangements surrounding stocks and shares.
[237] For example, ebay or a shopping centre operates as a commercial hub that facilitates transactions.
[238] Though sometimes there is a degree of extra-territoriality.
[239] This does extend only to the bed of the water and not the water itself.
[240] This follows the *ad medium filum* presumption – See Alexander V Challenger and anor [2010] EWHC 2301 (Ch).
[241] See for example http://www.riveraccessforall.co.uk/what_is_the_evidence.php Last accessed – 29/03/2023.

riverbank, beyond this there exists a general right of responsible access to make use of these waterways.[242] In this instance, the relationship between the individual, the river, and the concepts of property it expresses are arranged differently in each space. Beyond this example we might considering how particular 'standardised' arrangements of property operate to shape the concepts of property within them.

Property systems might operate in a discrete manner over clear territories however they also flow into each other where objects move between them. Objects expressing particular property arrangements moved across a border will maintain as much of the elements of the arrangement as possible between systems.[243] For example, whilst rivers might express different arrangements of the concepts of property, the kayakers kit expresses almost identical arrangements, in other words 'ownership', transitioning between the two systems. In this manner, we might consider objects of property taking on conceptual arrangements that maintain a stability across different systems. Likewise, where there is a transition between different systems of property operating temporally, certain elements and arrangements will be retained. For example, the English system of property expresses certain elements of the roman property regime, which evolved from that system and the arrangements its expressed within the same territory. Property systems contain traces of each other, as can perceptions of these systems and of the actual arrangements that objects of property express.

This has inevitably drawn the attention of various academic disciplines, that have all added their own pollution to the concept. This assembled 'baggage' all interconnects, coheres, or conflicts and creates boundaries without clear and distinct demarcation.[244] To begin to address some of the tasks with which property is burdened, we will now begin to consider considering the understandings of anthropology.

The 'why' of Anthropology – A reintroduction

To understand some of the influences that come from the work of anthropology, it is worth considering what territory it expects itself to operate within and the general goals of the field. By considering the 'space' it territorialises and the goals that its actors consider they are enacting through their practices and methods, we might better understand the 'trajectory' of the flows it generates. It is proposed this will help us to understand what it brings to both

[242] The land reform (Scotland) act 2003.
[243] For example, rules on legality might be different crossing borders that raises issues between these relationships.
[244] Beckmann, Changing (N.230) utilises a similar concept by presenting the issue as one of 'freight'.

'property' and where we might best understand its persuasive pressure and ontological power laying.

First, we will consider the territory over which anthropology operates and in so doing see what parts of reality they might consider to be at the fore of their work. Anthropologists have said of their field that it "take[s] upon itself to learn from as wide a range of approaches as it can… to bring to bear, on this problem of how to live, the wisdom and experience of all the world's inhabitants, whatever their backgrounds, livelihoods, circumstances and places of abode".[245] It has been romanticised as

> an adventure. It offers you the opportunity to explore other worlds where lives unfold according to different understandings of the natural order of things. Different, that is, from those that you take for granted.[246]

And defined as

> the comparative study of humans, their societies and their cultural worlds. It simultaneously explores human diversity and what it is that all human beings have in common… which tries to achieve an understanding of culture, society, and humanity through detailed study of local life, made sense of through comparison and contextualisation.[247]

Not only do these provide clues as to what anthropologists see as the territory of their study, these themselves are examples of sites of anthropological study. We might consider these statements as 'ethnographic artefacts' reflecting the culmination of various interlinked phenomena and conceptions in a means-ends relationship.[248] These assemblages portray a view of their work that seeks to engage with the social relationships, interactions and day-to-day operations that make up different societies. These quotes taken together shown an openness to other ideas, that there are differences in approach and understanding that are contextual and contingent and that these differences are the key elements of study. Through the lens of the messy world, we might consider it as embracing the mess, attempting to say what 'is' even when it is multiple, to the extent that the language and method allow.[249]

In approaching an understanding of a society and its social relationships and practices, inevitably a system of law or concepts that approach law will be encountered. These can

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[245] Tim Ingold, *Anthropology: Why It Matters* (Polity Press 2018), 10.
[246] Peter Metcalfe, *Anthropology: The Basics* (Routledge 2005), 1.
[247] Thomas Hylland Eriksen, *What is Anthropology?* (Second edition, Pluto Press 2017), 4.
[248] While this borrows the terms from the field, parallels might be drawn between these artifacts and general the process of the assemblage. See (Pg.34-37).
[249] This will always be a problem where there are two intersecting realties. Seeking to express in a familiar form, translating either though language or concept, will never express the same totality.

take the form of traditional legal systems, cultural practices of Indigenous tribes,[250] and ad-hoc informal structures[251] to present just a few examples. These are treated as a strand of the social construction of the society, allowing them to be detailed on their own terms. Constructing explanations of these arrangements and their elements can help to draw attention to elements that are less pressing in dominant western concepts of property, their legal system, and how social relationships might be understood through them. This allows the exploration of systems and arrangements centred around different values, that nevertheless highlights essential facets of all social relations. Where assemblages of property are present in a system, understanding them allows parallels to be drawn within all systems that encompass social relationships. Equally they highlight ways we might seek to bring to the fore particular values and perspectives through changing rules.

Anthropology in its inscription can be taken to construct meaningful assemblages that consider the operation and organisation of society. For example, the methods of the anthropological paradigm often engage with the law as one of its constituent elements for understanding social relations. In territorialising the law as just one constituent part of social practice it can present a much broader and nuanced understanding than the law's own view might take.[252] In presenting those practices, the law seeks to control those that run parallel to legalistic understanding. Anthropologists can however point to other 'goods', structures of organisations and the actual day-to-day reasoning of individuals as to how they operate their lives and understand the world around them. In doing so the different 'political' aims in those circumstances and communities can be understood. This not only allows us to compare the relationship these elements have with one another in new ways but also helps to understand the on-site decisions made through ontological politics.

The interplay of anthropology and the practices of traditional legal approaches provides further sites of utility. At a meta level, legal anthropology highlights ways of understanding the relationship between anthropology and the law. Anthropological engagement proposes and supports that those within the legal spheres paradigmatically tend towards viewing the law as a means to an end, with case law representing a combination of the means-end relationship.[253] Anthropologists, however, traditionally view this simply as an ends by which

[250] See for example the case studies presented in C.M. Hann (ed), *Property Relations: Renewing the Anthropological Tradition* (second edition, Cambridge University Press 2008).
[251] Abraham Bell and Gideon Parchomovsky, 'Property Lost in Translation' (2013) 80 issue 2, University of Chicago Law Review, Pg.515.
[252] Assuming that the work would be largely normative and engaging with judging the activity by the standard of the law.
[253] Annalise Riles, 'Property as Legal Knowledge: Means and Ends' (2004) 10 no. 4, Journal of the Royal Anthropological Institute, Pg.775.

to determine the means through an understanding of the contributing social factors.[254] In other words, legal thinking generally views the law through the lens of its normative function, whereas anthropologists are concerned with its epistemology. This divide has caused some to comment that there is an inherent contradiction to the prosperous co-operation of the two fields.[255] That legal analysis of the law tends to see it as an instrument for controlling society and directing social change, rather than as a reflection of particular social order.[256] With even doctrinal methods posited as seeking "not to describe the social world as ethnographic descriptions do, but rather to solve social problems".[257] This opposes the goals of anthropology with that of law. However perhaps if we consider this territorially, we might see this as exposing different elements caught in the same social flows. Imagine society as a river, the law concerns itself with controlling and driving its flow. The lawyer walks the bank along its flow, imagining destinations to achieve and how the topography might be shifted to achieve its ends. The anthropologist walks the banks contra flow, towards the rivers source, identifying the eddies, tributaries and dams that determine how the flow is constituted. Both expressing diverging lines of flight, enacting realities to portray different temporal conditions and effects of the same systems.

Anthropology might be described in a nutshell as "*large issues* explored in *small places*".[258] It is about exploring how broad theoretical problems might be better understood through the lens of small communities. It is not producing descriptions for descriptions sake but providing a smaller lens through which to view a much larger issue. It has been said that "anthropologists do not study villages; they study in villages".[259] In understanding the contingent and the local, we might better understand the general. Anthropology aims to treat all societies as equal,[260] in doing so they can expose and explore a wider range of solutions and 'goods' to wider, more universal issues. The 'territory' of anthropology is small, localised, and discrete but applicable widely to humanity and society everywhere. Its aims to detail as much as possible what 'is' and understand how it is enacted. This creates an odd tension in the work of anthropology; on the one hand wanting to acknowledge the contingency of its ethnographies, expressing the specific arrangements of a particular space

[254] Ibid.
[255] Simon Young, 'Law and Anthropology: The Unhappy Marriage?' (2014) 3 issue 3, Property Law Review, Pg.236.
[256] Sally Falk Moore, *Law As Process; An Anthropological Approach* (Routledge and Kegan Paul 1978.
[257] Riles, (N.253).
[258] Thomas Hylland Eriksen and Finn Sivert Nielson, *A History of Anthropology* (second edition, Pluto Press 2013), series preface.
[259] Clifford Greetz, *The Interpretation of Cultures* (Basic Books 1973).
[260] John Monaghan and Peter Just, *Social and Cultural Anthropology: A Very Short Introduction*, (OUP 2000).

and time whilst on the other arguing this is important and relevant because there is a generality to the human condition and the problems it faces.

Property in anthropology

As a concept, property has pre-eminence within the social anthropology field due to its pervasive nature within societies. At times, property has been considered the driving element behind the development of society, and as an integral part of the evolution of human relationships.[261] Irrespective of whether this is true, within every society there appears to exist some concept of property. [262] It has been argued that despite differences in specific form, there are a number of overarching commonalities in the way in which property is organised within societies at similar levels of development, despite there being no clear origin of property.[263]

Anthropology, in adapting to the seeming universality and complexity of property, has shifted from trying to generalise the form of property relationships, to understanding the different forms that property can take in context.[264] This point is particularly important because it acknowledges that there is no general universality for property, but that there is generalised principles of 'property' that can be explored anywhere. These principles for 'property' generally rely upon examining concepts of 'possession' and 'ownership' or more generally grouping the ways in which the allocation and scope of property are constructed.

In making such broad statements, it should be remembered that "*The most serious single source of misunderstanding of the concepts of alien cultures is inadequate mastery of the concepts of one's own culture".*[265] As such we should approach claims of universality of 'property' with a healthy degree of scepticism.

As argued previously, translating property to different cultural contexts, or examining what is meant by property in other languages can cause issues. Even between related European languages and contexts, property and the nuances in related terms like 'own' and 'posses' are difficult to translate, requiring not only an understanding of language but of the

[261] Friedrich Engels, *The Origin of the Family, Private Property and the State: in the Light of the Researches of Lewis H. Morgan* (first published 1884, Books LLC 2013).
[262] For arguments that property is universally present see Bertram Turner, 'The Anthropology of Property' in Michael Graziadei and Lionel Smith (eds) Comparative Property Law: Global Perspectives (Edward Elgar Press 2017), Pg.30.
[263] Luther M. Swygert, 'Origin of Property' (1927) 2 issue 4, Notre Dame Law Review, 127.
[264] Turner, (N.262).
[265] Ruth Finnegan and Robin Horton, *Modes of through in western and non-western societies*, (wipf and stock publishers, first published 1973, 2017), Pg.34.

equivalence of legal concepts.[266] It has also been proposed that there has been a problem of political usage and abuse from ideological and evolutionist discourses that have creeped into concepts of property alongside related issues of "economy, marriage, religion, household and law".[267] As such, the language of western terminology can lead us astray, to the extent that it has been proposed that perhaps concepts of property, rooted in western categories and entailing the ethnocentric bias and distortion that comes with it, should be done away with.[268] Nevertheless, it remains a central term in academic discourse, useful in both its specific western meaning and as a more general analytic category.

As might be expected given the previous consideration of the aims of the anthropological tradition, property is explored as a multiple and contingent entity and as such produces definitions that are suitably broad enough to deal with its need to embrace a multiplicity of approaches. [269] It has been argued that "from an anthropological perspective, property refers to the many ways in which rights and obligations, privileges and restrictions govern the dealings of humans with regard to resources and objects of value".[270] It concerns "the organisation and legitimation of rights and obligations with respect to goods that are regarded as valuable".[271] That "property relations form the myriad ways in which people build up their social identities through holding and using a variety of 'things' in their environment".[272] A recurring theme through anthropological accounts is the social relationships that arise from the objects of property, indeed, To this end Hann points toward E.A. Hobel's definition as a textbook example.[273]

> The essential nature of property is to be found in social relations rather in any inherent attributes of the thing or object that we call *property.* Property, in other words, is not a thing, but a network of social relations that governs the conduct of people with respect to the use and disposition of things.[274]

in essence, we can understand property in anthropology as relationships that exist between people involving 'things' with 'things;' in this sense not necessarily being limited to the physical but to 'objects of value'.

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[266] Hann (N.250), Pg.6. For an example of this principle see Vilelmini Sosoni and John O'Shea, 'Translating Property Law Terms: An Investigation of Greek Notarial Deeds and their English Translations' (2019) 29 issue 2, Perspectives: Studies in Translation Theory and Practice, 184.
[267] Beckmann. Changing (N.230), Pg.36.
[268] Ibid, Pg.2.
[269] This does not totally remove the 'baggage' of the term.
[270] Turner (N.262), Pg.26.
[271] Beckmann, Changing (N.243), Pg.9.
[272] C.M Hann, (N.250), Pg.3.
[273] Ibid, Pg.5.
[274] E.A. Hobel, *Anthropology: the study of man*, (New York, McGraw hill 1966), Pg.285.

‘Objects of value’ here needs to be understood as a contingent entity across different cultures. In its general language meaning, we might understand how this can refer to objects, state benefits,[275] or intangible means of generating wealth like shares or intellectual property rights. This would be entirely unobjectionable to most understandings of property, however this is also largely culturally defined and supported by western assumptions. Anthropologists will recognise these forms however and are likely to expand ‘things’ to include names, reputation and knowledge alongside personal and collective identities.[276] These are things that can be thought of as having value within a culture and might fall under the term property expressing property relationships to an anthropologist, even where it might not traditionally be considered as such.[277] For example, Posey argues that indigenous knowledge in dealing with the environment should be considered intellectual property.[278] In part this recognises the importance of the knowledge to the community, seeking highlight it needs protecting in a more general sense, however it is unclear to the salience of intellectual property for the localised understanding.[279] Capturing ‘objects of value’ in this manner allows anthropology to attempt to capture the elements of value or ‘goods’ that arise in the communities of study.

Anthropology advances a broad analytic approach to property. This is primarily focused on the social relations and the social dimensions of the access and control of things. These ‘things’ are determined by contextual social value and in different settings might be seen to have more or less ‘thingness’. Thus, we might see anthropologists approaching property as “*the distribution of social entitlements”*.[280] This broad analytic focus means that there can be more caution towards the issue of ‘translation’. By embracing the mess of broad conceptual frameworks and acknowledging contingency, the work of anthropology reveals embeds

[275] This example could be considered contentious by some.
[276] CM Hann (N.250), Pg.5.
[277] How we discern value within anthropology has been subject to its own debate. Some treat the issue as objective phenomenon while others have considered it as an ongoing process of enacting value. A third strand considers a mixture of both approaches. For our purposes it is less important to consider how this model of value is obtained, focusing on the fact that value as a concept is open to debate. J. Robbins and J. Sommerschuh, ‘Values’ in F. Stein, S. Lazar, M. Candea, H. Diemberger, J. Robbins, A. Sanchez, and R. Stasch (eds) *The Cambridge Encyclopaedia of Anthropology* (Cambridge University Press, 2016) or Turner (N.262).
[278] Darrell Posey, ‘Intellectual Property Rights: And Just Compensation for Indigenous Knowledge’ (1990) 6 no. 4, Anthropology Today, Pg.13.
[279] This raises ethical concerns both for researchers and about the nature of research in these communities. Researchers should be able to report their findings however territorialising local knowledge in this way is a risky proposition. Should researchers be able to ‘take’ these ideas, especially if it represents some privileged knowledge in a community? To legislators providing compensation in these instances is at best a neutral proposition.
[280] Hann, (N.250), Pg.7.

issues. Whilst there are still issues of representing this broad approach through existing limited language, by putting it in context, some of these issues *may* be avoided.

With a focus on 'social relationships' anthropology allows 'property' to be seen through the interactions that shape property and how property shapes social interactions. It allows for unpacking the embeddedness of property and exploring its enactments in the social dimension. Through this lens we can see what is important in quotidian interactions with property and consider by extension what those interactions means for property itself. Anthropological property, by exploring what 'is' allows for a widening property, outside of normative systems that simplify property, exposing a wider consideration of what 'property' might be and where its value in society might be realised.

Arranging property arrangements.

Part of the problem alluded to in translating property stems from the range of different values that underpin these arrangements. Attempts to paint universal pictures of property have generally focused on the traditional western legal concepts of property with its obsession with exclusive private individual ownership.[281] However, anthropologists argue that societies and cultures express a range of relationships incorporating usufruct, shared access and other forms that do not easily map themselves onto concepts of exclusive private individual property.[282] Within these systems different social dynamic, reflecting different values, and stressing different kinds of relationships, are expressed in their particular arrangements of property.

This is not to say that individual private property does not feature heavily across different cultures. It is hard to argue that the modern concept of property is not heavily influenced by capitalism and that globalism has not created increased pressure to standardised relationships around this model. For example, Turner's work considers the history of property anthropology as being intimately linked to the 'colonial endeavour' that focused on understanding and mapping out the influence of colonial regimes.[283] Indeed, it is possible that enforcing western concepts of property was a core ideological principle of this period. For example John Locke advocated for appropriation based on a very specific form of labour to maximise productive, i.e., the agricultural practices of western settlers.[284] In this manner the western conception of property at the time advocated a direct rejection of non-Christian

[281] Beckman, Changing (N.230), Pg.10.
[282] Turner, (N.282).
[283] Ibid, To the extent that as the project petered out, property anthropology went into decline.
[284] John Locke, Second Treatise on Government (first published 1689 (dated 1690), Watchmaker Publishing 2011).

forms of property relations.[285] Due to a combination of modern and historical factors, even where there is not a direct application of western property forms, there is a certain prevalence across different societies, cultures, and states that reveals its influence.

Equally, this does not mean that property systems require outside interference or influence to come to similar conclusions. The kind of problems that property engages with are universal and solving those problems can only take a limited number of forms. For example, Alan McFarlane noted a convergence within English and Japanese mediaeval feudal systems of property Law.[286] This, he speculates, is partly due to a geographic similarity between the two nations, namely that they are island nations which hinders a credible threat of invasion and partly because of political similarities without extended periods of internal warfare. In producing relational and indivisible concepts of property it has been proposed this also set the stage for industrialisation. As another example, Glickman utilises industrialisation and its requirements as an imperative for organising property systems, considering capitalist industrialised societies versus non-capitalist pre-industrialised societies.[287] This categorisation follows the logic that their certain property arrangements, in particular absolute ownership, facilitate industrialisation. If this is correct, then similarities in property systems might arise because their communities have similar need, require similar problems solved, and promote similar values. likewise changes in society and its values will also likewise signal changes in property relations.[288]

As a recurring theme 'ownership' takes a certain prevalence, especially within western traditions of property, indeed the general language use of property is likely to point towards some form of absolute ownership. For example, when asked to define property, a common response would be that is about owning things.[289] This demonstrates the cultural focus and perception of its legal arrangements that exist within western society. The view of anthropology however calls for us to break away from a focus on ownership, exposing social relations and organisations that present different arrangements of property.

This is not to say that, even within western property, with its intense focus of individual exclusive private property rights, no other property arrangements are widely recognised. For

[285] We can hope that this is no longer the case, however legal incompatibility with certain other arrangements and the crushing expansion of capitalism could raise an argument to the contrary.
[286] Alan McFarlane, 'The Mystery of Property: Inheritance Industrialisation in English and Japan' in C.M. Hann (ed) *Property Relations: Renewing the Anthropological Tradition* (CUP 1998).
[287] Max Gluckman, *The Ideas in Barotse Jurisprudence* (Yale University Press 1965).
[288] We might consider the desire or need to industrialise as a result of western processes of industrialisation and the influence of its property structures. Industrialisation is also facilitated by these property structures.
[289] Hann presents this through experience of asking children in The embeddedness of property, (N.250), Pg.2.

example, use rights or usufruct,[290] and access arrangements to common goods often form part of informal arrangements surrounding property. The lens of ownership often comes into these arrangements and influences these understanding but does not refute the existence of these other relationships. For example, a local park; while we might consider the ability to use these parks as an extension of the ownership of the council and thus free to use, this expresses an arrangement of use rights. Equally, family structures often express similar use rights in quotidian practice, especially in relation to small household objects that while 'owned' by an individual are freely used under an understanding of non-destructive use. Beyond these minor quotidian examples, we will now consider two examples from ethnographic studies that consider alternative property systems arranged around alternative central themes.

Example 1 – Sharing

The first example is the 'sharing-centred' arrangements of the Hazda people. The Hazda people are primarily a hunter-gatherer society that primarily focuses on the notion of sharing in an "immediate-return" system.[291] Within this society a two-tiered structure exists where generally everyone shares and entitlement but there exists a group of 'initiated men' who have a set of privileged exclusive property rights. When a large animal is hunted, certain cuts are shared exclusively with the 'initiated' as a matter of right, while the remainder is considered 'owned' by the hunter. Interestingly, if the hunter is not an 'initiated man' then they have no right to those parts reserved for the initiated. Anything not reserved for the initiated is 'donated' to others in the community through a process of sharing, first at the site of the kill, then at camp and then when it is cooked. This form of 'sharing' is culturally stressed, with it being almost impossible to refuse a request. This process of sharing extends across all objects in the society, applying equally to all foodstuffs, goods, and tools..[292] This process of sharing ensures that everyone has what they need, with those that have an excess beyond their need put under relentless pressure to redistribute.[293] Alongside 'sharing', the only other process of transfer of property is 'gambling'. Through games of chance, items can be staked and passed around the community, acting as a secondary form of sharing, with it being common and expected that winnings which are not useful to the winner are re-staked.[294] The Hazda are seen to value things for their transmissibility or imminent utility,

[290] The right to use property freely but without the ability to damage or destroy the property.
[291] James Woodburn, 'Sharing is not a form of exchange: An Analysis of Property-Sharing in Immediate-Return Hunter-Gatherer Societies' in C.M. Hann (ed) Property Relations: Renewing the Anthropological Tradition (Cambridge University Press 1998).
[292] Ibid.
[293] Ibid.
[294] Ibid.

rather than as means to accumulating longer term 'wealth', with very few objects being excluded from the social pressure to share or being ineligible as a stake for gambling.[295] Only a personal hunting bows, arrow heads for hunting small game, and game pouches are excluded from 'sharing' or 'gambling' and might approach notions of 'personal property'.[296] The practice of the Hazda people ensures a base standard of welfare through a general entitlement to all the goods within the society, with little that can be approximated to traditional ownership relationships.[297]

As a primarily nomadic people the Hazda are identified in relation to the places where they live but do not appear to have any kind of observable rights in the land. Woodburn details that the Hazda people are organised into nomadic camps that are constantly changing in composition, where individuals are often associated with the place either they or their parents lived, there are no general rights to land with any member free to associate with any camp of the Hazda people.[298] Membership in a camp is part of the process of acquiring a share, however it is not a required condition, with visitors simply needing to ask for it.[299] Where sharing is limited by geographic and social concerns, this is more practical than a question of right.

It is interesting that the Hazda sharing method of property resisted outside influence. The Hazda people have limited contact with neighbours and actively resist commodity trade relationships, preferring instead to 'share' or ask for the things they want in unrelated circumstances, the latter of which to outsiders could be perceived as begging.[300] That 'sharing' has resisted external influence is ascribed to be part of the active commitment to a morale framework for the Hazda.[301] Woodburn proposes that in part we might think of this as a way of disengaging the individual from property rights and as a way of preventing dependencies.[302] In contrast 'sharing' in other communities is generally seen limited to familial and kin structures and reinforcing the generosity of the giver.[303] The commitment to

[295] Ibid.
[296] Ibid.
[297] There is a weak argument to be made that the 'essential' items might be equated with private property by giving them no value as a stake and because they are excluded from 'sharing'. The items themselves however only take on this character in relation to personal need. A bow can still be called upon to be shared in instances where it is not the hunter's only bow, while someone with an abundance of arrow heads can have claims made against them by others.
[298] Woodburn, (N.291).
[299] Ibid.
[300] Ibid.
[301] Ibid.
[302] Ibid.
[303] Ibid, Pg.61.

'sharing' with the community resists hierarchies, even those that are based in productivity, while decentring familial structures in the community.

Example 2 – Knowing

The Evenki concept of 'knowing',[304] utilises a status and knowledge-based approach to allowing the appropriation of resources from the environment. In this system property relationships are built around mastery, or at the least demonstrated practical 'competence', acquired by an individual through their work or demonstrated through their skill in circumstances useful to their society. Anderson describes this process as "sentient ecology"[305] that concerns "the proper relationship between people and land".[306] Before exploring what it means to know, it should be acknowledged that that 'knowing' operates in a community of practice that 'owns' the land in a kind of common ownership.

To the Evenki, 'knowing' represents an intersection of both knowledge and appreciation for the knowledge of others in the community which enfolds not only an understanding of the task but a relationship with the tundra itself.[307] The process of knowing acts as both a way of legitimising and justifying the 'taking' of a resource while at the same time can reflect a way of expressing personalised allocations of goods according to suitability and preference.[308] Property in this way comes to be understood as

> not only to be a jural, political and economic relationship in human society but also a 'proper' relationship between humans and other entities, which constantly monitor and adjust themselves to human agency.[309]

For example, to 'know' wood enfolds an understanding of the conditions of the tree, an understanding of what makes it appropriate for the task at hand, and how these relate to the preferences and utility of 'knowings' of other members of the community. Anderson presents the case that wood for carving would not be talked about as 'good' or 'bad' but talked about as being someone else's due the suitability to their own 'knowing'.[310] Through this lens objects of property become not simply about entitlement to access but about

[304] David G. Anderson, 'Property as a way of knowing on Evenki lands in Artic Siberia', in C.M. Hann (ed) Property Relations: Renewing the Anthropological Tradition (Cambridge University Press 1998).
[305] Ibid, Pg.65.
[306] Ibid, Pg.68.
[307] Ibid.
[308] Ibid.
[309] Ibid, Pg.70.
[310] Ibid, Pg.71.

entitlement that is created through genuine understandings of the object and the uses to which it could 'best'[311] be put.[312]

To 'know' something is seen as having a particular skill that is recognised within the community and grants a degree of status. Anderson's presents the case that his own experience of coming to be recognised as 'knowing' the driving of reindeer enabled him to go off on his own and have an individual relationship with the land.[313] This he likens to the process of turning eighteen that enables so many rights in western society.[314] importantly however The dimensions of this 'knowing' are not simply about displaying competence but also about the appropriate understanding of the relationship between the individual and the environment. This is in part practical, ecological, and sociological. For example, a hunter to be allowed to hunt must 'know' the hunt, with understandings of the prey and the conditions that enable the hunt, that enfolds elements of the land, the weather, the skills needed for survival and tracking, the social rites associated with it, and the ecological practices of the community. When Evenki's speak of their relationships to the land in relation to hunting it shows not only an understanding of the hunt, but of how they have mastery of the elements that enable the hunt in that particular space.[315] 'Knowing' represents the intersection of knowledge, entitlement, and status within the community in a way that legitimises and justifies 'takings' of resources from the 'commons' to the community.

The concept of 'knowing' as it enfolds understandings of ecology while enabling 'takings' requires a social understanding of when that appropriation is appropriate. The process of 'taking' encompasses an inevitability that reflects a confluence of understanding, circumstance, and luck.[316] Part of 'knowing' is appreciating these circumstances and the cultural understandings that enable them, so that 'taking' becomes an imperative, yet by the same measure inappropriate 'taking' reflects a lack of proper 'knowing'. For example, the 'taking' of animals must only be done in circumstances where there is at least a pair of animals left in an area.[317] This presents property entitlement through a combination of skill, experience, and circumstance. To 'know' is a status that enables these entitlements that is itself bounded by other 'knowings' in a community and expresses an understanding of the conditions for that entitlement within the community. In turn we might understand

[311] In this sense it is as much a case of communal good as it is a case of matching preferences for good. In some sense we might also think of it in terms of appropriateness to the task at hand.
[312] Arguably this encourages a different sense of relationship with the land itself, if knowing becomes a precondition to appropriation then it too encourages a deepening of the understanding of the relationship with the land.
[313] Anderson, (N.304), Pg.70.
[314] Ibid.
[315] Ibid.
[316] Ibid.
[317] Ibid.

'knowing' as a property relationship that helps define the social relationships in a community as well a relationship to things.

Socially recognised systems of property

These examples expose elements, if not totally 'othered' at least diminished, alongside highlighting a need to consider property systems beyond simple the idea of 'states'. Whilst we might liken being a part of the Hazda or Evenki in the same way we might consider ourselves as members of states, the social organisations that underpin these relationships are not identical. In arguing for a consideration of property outside traditional state lines, Giesler identifies that property systems arise as a response to the needs and requirements of various social, political, and economic organisations, that may or may not be states.[318] Property systems do not require traditional state-based legislature to exist or function effectively. These systems can also exist within the confines of states. For example, the Evenki are located within the borders of the Russian federation and notionally should operate following that legal framework. Within these communities, the localised systems operate as equally pressing within their social groups as any legal framework and draw non-traditional elements to the fore.

The interplay between state and localised property relationships have been identified through various quasi-legal and informal property systems. For example, Bell and Parchimovsky present a range of non-standard property systems existing extra-legally and in parallel with a state's property regime.[319] These localised property regimes exist around closed communities with a particular cultural link. Bell and Parchimovsky's work examined how the relevance of these regimes was affected by the strength and appeal of the cultural group's membership and appeal of their rules through the networking effect.[320] Considering in particular the translatability of localised rules to the 'dominant' property system, highlight that they often needed to mirror standardised property arrangements to be enforceable outside the community.[321]

Two such arrangements that operate in similar ways are the kibbutzim of Israel and the 'intentional communities' operating under different property arrangements internally but

[318] Charles Geisler, 'Ownership in Stateless Places' in Franz von Benda-Beckmann, Keebet von Benda-Beckmann, and Melanie G. Wiber (eds), Changing Properties of Property (Berghahn Books 2009).
[319] Bell, (N.251).
[320] Ibid.
[321] This is perhaps unsurprising, with localised arrangements only being useful in their particular contexts.

recognizing more widely the existence of the state rules in the countries with which they operate.

The kibbutzim are legally recognised agricultural communities, possessing legal personality,[322] that hold property for the common good of all its members. From within, the members hold entitlements set out by the specific arrangements of its charter or by group decision, yet externally are owned solely by the kibbutzim.[323] Blending a unique internal regime with state recognised and supported property rights. This system is slowly being eroded by changing social conditions, economic crises, and a societal shift away from traditional cultural values.[324] Internally this has led to increasing privatisation within its organisation and as between internal members, leading to a more hybrid model for property arrangements.

Similar communities proliferate elsewhere under the umbrella of 'intentional communities'. This term reflects a wide range of different communities who organise themselves largely on ideological grounds, often expressing alternative property arrangements or fundamentally different social relationships.[325] These are often critical of the current socio-economic trends and actively challenge the dominant property narratives.[326] The appeal of these communities is primarily their ideological commitments, however this naturally impacts the social, community and proprietary relationships they generate.

To exemplify this, consider the Twin Oaks community in America, possible the most famous of the intentional communities. This community follows the organisation of a commune, similar to the kibbutzim. Stated as following core values of "cooperation, sharing, egalitarianism, income-sharing, nonviolence and ecological sustainability".[327] It maintains a limited form of private property, with a set of minor objects being capable of personal ownership, especially where it is pre-existing property or a gift.[328] In general, however, there is a collective ownership of property and money within the community. Incomes from outside of the community is to be shared, while work inside the community is compensated by receiving the general provisions and a share in the property of the community. Motivation to engage with work is done through the concept of labour credits that represent hours of

[322] Under the cooperative societies ordinance, (Israel) 1993.
[323] Bell, (N.251).
[324] Melford E. Spiro, 'Utopia and its Discontents: The Kibbutz and its Historical Vicissitudes' (2004) 106 no. 3, American Anthropologist, Pg.556.
[325] A list of intentional communities can be found through the foundation for intentional communities at https://www.ic.org/ For UK alone see, www.diggersanddreamers.org.uk last accessed 29/03/23.
[326] Lucy Sargisson, 'Friends Have All Things in Common: Utopian Property Relations' (2010) 12 issue 1, The British Journal of Politics and International Relations, Pg.22.
[327] See, https://www.twinoaks.org/ last accessed 29/03/23.
[328] https://www.twinoaks.org/policies/property-code last accessed 29/03/23 (Hereon Property code).

contribution either inside or outside the community with minimums set to ensure that vital work is completed.

The community itself does not completely reject western property concepts. For example, in producing goods that are sold outside the community, the proceeds are used to provide further benefit for the community and are held in a communal manner.[329] The society acknowledges and engages with traditional property arrangements outside its borders[330] with property relationships within the community replaced with ideological, egalitarian arrangements that drive communal rights to property. This presents an interesting problem with the interplay between the legal arrangements of the state and the local property arrangements of the community. Upon entering the community, both physically and in becoming a member, that which can't be considered minor personal property is expected to be donated or loaned to the community.[331] Even when it is loaned, the community rights take precedent over actual ownership arrangements until the 'owner' leaves the community. When leaving the community, this loaned property can be taken but there is no entitlement to the general property of the community. Within the community there is an entitlement to the resources but not a 'share' of the community. In this regard it appears that the community leverages state arrangements to allow its community arrangements. The localised arrangements being applied over state apparatus through the social organisation.

The kibbutzim and most 'intentional communities' are generally thought of as being led by their ideological commitments first and foremost. Everything within the community is designed to uphold the fundamental ideologies and thus the central arrangements of the property systems are an expression of these ideological commitments.[332] Interestingly, as they reflect opt-in arrangements,[333] this raises a question of longevity. While it has been argued that the practicalities and practical arrangements of these societies is the key reason for leaving,[334] it has been proposed that these societies endure because of a rotation of new members who are drawn to the ideological commitments.[335] It is proposed that as long as ideology remains appealing, then these communities will continue to exist. While we might

[329] Ibid.
[330] This includes encouraging members to hold property outside the community if they do not wish to put it into communal ownership.
[331] Property code, (N.328).
[332] Barry Shenker, Intentional Communities: Ideology and Alienation in Communal Societies (Routledge 2012).
[333] Some may be born into these arrangements, but so too are they free to leave. Though the difficulty of leaving these arrangements both socially and economically must be considered.
[334] The growing process of privatisation in kibbutzim could also be considered through this lens.
[335] Hilke Kuhlmann, 'The Illusion of Permanence: Work Motivation and Membership Turnover at Twin Oaks Community' (2000) 3, issue 2-3, Critical Review of International Social and Political Philosophy, 151. See also Andreea C. Mardache, 'Intentional Communities in Romania. The Motivation to live in the Community' (2017) 11(60) no. 2, Sociology and Anthropology, Pg.75.

think of this as purely applicable to these opt-in arrangements, it is arguable that the ideological component of a society as well as its property arrangements might be considered part of the stability of communities in the face of increased mobility and interaction between different cultures.

In considering a range of different sites of property as they have been explored in the field of anthropology, it is clear that the concept of property and the social relations that exist surrounding these concepts express arrangements and circumstances that recognise a range of values. From this we might consider the operation of property more generally in society, seeing the success of other arrangements of property and the elements they centre as not only opposition to the dominant western tradition of property but also as a means to explore and understand the elements of that tradition that are often overlooked but central to its social operation.

Anthropological methods of property

Where the preceding exploration has focused on the insights that are generated by understanding the approach of anthropologists, their arguments about the nature of property, and examples of the ethnographic approach that expose alternative arrangements for property, from this point on the conceptual apparatuses that construct property in anthropology will be explored to expose further elements embedded with property.

To explore the social dimensions of property, two of the most common approaches for anthropologists in analysing property will be considered; the 'triangle' and the four-layer approaches. These will be explored together so as to engage with an understanding of the interplay between the two in so doing revealing the way in which social actors are positioned to engage with these structures. The 'bundle of rights' metaphor and its use in anthropology will then be considered and contrasted with its use in law.

The 'Triangle' and the Four Layer Approach

The 'Triangle' Method used within anthropology to analyse the structural foundations of a property regime, providing key insights into the underlying values of the regime and the ideas governing the way in which interactions take place. The 'triangle', as the name suggests, focus on the interplay of 3 core ideas;

1. The social units regarded as having the capacity to hold property relationships
2. The units of the natural and social environment that is seen as being the object of property relationships

3. The rights, duties, privileges, and possibilities that express what property holders may or must not do with property objects[336]

Social units include all entities capable of holding property.[337] The units of natural and social environment relate to the way in which we project the relationships onto reality; this has also been expressed as a recognition of objects of value within a particular society.[338]The third criteria details the specific relationships that exist with property within the systems and the recognition of which particular rights and obligations are considered as being legitimate. By positioning the three elements together and examining the way in which they interact and relate to each other, it is possible to map out complex relationships in a consistent manner, despite the components potentially varying greatly between different communities.[339] These broad categories, combined with the temporal continuum, the natural environment, and the psycho-biological character of man, allows for a sociocultural analysis of conceptions of property that varies in time and space.[340] This approach allows the mapping of the effects on property of social change across different political, economic, and technological factors.

The four-layers method conceptualises property "ideologically, in legal systems, in natural social relationships and in quotidian practices".[341] The first layer examines property ideologically, within its cultural framework, and this is where one sees ideas that justify the existence of property and the core ideas underpinning property. In the second layer, one begins to examine the translation of these ideas into concrete rules within the operative legal framework include the ways in which those rules are enforced.[342] The third layer goes beyond legal framework and examines how the social relationships define property interactions, but also how these interactions reflect on the understanding of property. The fourth level examines the ways in which "the other 3 layers become concrete" through day-to-day interactions.[343]

With each of the four layers expressing property in a way that "cannot be reduced to what property is at another layer".[344] The layers are not distinct, they interact, interrelate, and

[336] Franz von Benda-Beckmann, 'Anthropological Approaches to Property Law and Economics' (1995) 2, European Journal of Law and Economics, 309, Pg.31.
[337] Where these might follow common legal categories, People, companies, etc. These can be things like families, kibbutzim, or clans. It is unclear how stranger 'local' recognition of personality would operate, for example local legends of trees that 'own' themselves.
[338] Turner, (N.262).
[339] Ibid.
[340] Beckmann, Changing (N.230).
[341] Wiber (N.205).
[342] The 'triangle' method allows for expanding on this layer. Though the 'triangle' method can be used for less 'formal' arrangements and understandings.
[343] Turner (N.262).
[344] Beckmann, Changing (N.230), Pg.22.

interfere with each other in many different combinations. This primarily engages two categories of practices 'concrete property relationships'' the relationships that occur through using, transferring or disputing property objects, and 'categorical property' where the law and rights are reproduced or changed to engage with the nature of property law itself.[345] The importance to this approach is that it allows for a consideration of change over time by considering how each of these layers interact and change within society. This approach also allows for a consideration of social units, property objects and the rights and responsibilities that arise from these arrangements and how that filter across different layers of these organisation.

The combined use of both forms of analysis demonstrates that one can examine property on a variety of different levels by still using the same fundamental social approach to property. The approach utilised within the four-layer analysis is distinct from traditional legal approach. legal analysis typically makes use of only the ideological and legal level of analysis in order to impose a normative framework on quotidian practice with minimal consideration of the social practice.[346] However, it is clear from an anthropologist's perspective that it is important to recognise the differences between the normative conceptualisation of property relationships in law on the one hand and the actual constellations and distributions of property relationships between living persons and the material and immaterial world of property objects on the other.[347] Where these methods highlight elements of understanding beyond traditional legal concepts and the need to consider property more widely, the actual content of these relationships are considered through the 'bundle of rights' metaphor, which is influential within the law as well.

The bundle of rights metaphor

First introduced by Maine in 1861, this metaphor presents concepts as a centralised nexus of individual rights and obligations, which later theorists applied, more specifically, to property.[348] The theory was originally framed as an examination of concurrent rights and liabilities in "A universitas juris",[349] which examined the totality of rights and obligations, including "rights of property, rights of way, rights to legacies, duties of specific performance, debts, obligations to compensate wrongs".[350] These are the rights vested within

[345] Ibid.
[346] Though we might consider the role of the law as structing natural social relationships. The extent to which a judge or a lawyer might consider this however is less clear.
[347] Beckmann, Changing (N.230).
[348] Sir Henry Sumner Maine, Ancient Law, *its connection with the early history of society and its relation to modern ideas* (1st ed, John Murray, 1861).
[349] Ibid, Pg.85.
[350] Ibid.

a specific person who is capable of their exercise. The focus on people is key to understanding the bundle of rights metaphor. More recent commentators use it as either a way of indicating that property rights can be viewed as a bundle of more specific forms of property rights or that arrangements such as ownership are themselves a bundle of entitlements.[351] This allows both individual 'strands' of rights to be considered as well as by contrasting comparative assemblages, for example by demonstrating the rights that 'ownership' entails and contrasting that across different arrangements of 'ownership'.

This method examines the nature and range of social relations by looking at the allocation of individual rights over a particular piece of property, with those bundles of rights providing narratives of property. For example, A.M. Honoré presents a conceptualisation of ownership through eleven key incidents representing "the greatest possible interest in a thing recognised by mature legal systems".[352] However where anthropologists explore social systems the idea that it is the 'greatest possible interest' is often used to consider contingent 'ownership' arrangements. In identifying these bundles of rights they can then be used as a signifier of other relationships, i.e., membership of a particular social class or family group that mediates access relationships.[353] One can thus use the bundle of rights approach to examine individual rights allocations and determine the social character relating to property, whilst also examining 'bundles' to determine status and power structures that relate to those bundles.

Whilst bundles of rights provide the ability to understand the narratives of property, they also provide the ability to categorise property in relation to reality. Turner argues that one can examine and apportion the world in terms of the rights vested in parts of it, using the example of rights vested in land that indicate hunting grounds or farming land.[354] To add a banal example, one could pose the question, 'is a bedroom a bedroom if it has no bed?' The allocations of rights to sleep within the space might provide a key indicator of the answer.[355] By the same measure, one can examine the legal constructions of status relating to property as being a particular bundle of rights. This analysis is already used in legal conceptions of property that make heavy use of the bundles of rights. The legal approach, however, has been referred to as an absolutist view of property, focusing primarily on the ability to create

[351] Beckmann, Changing (N.230).
[352] A.M. Honoré, 'Ownership' in A.G. Guest (ed) Oxford Essays in Jurisprudence (OUP 1961)
[353] Turner (N.262).
[354] Ibid, Pg.33.
[355] The position of English law in examining this very question has a definitive answer for the purposes of the bedroom Tax. For a time it appeared that there was a subjective element to bedroom use, however this approach was replaced with an objective test looking at rooms as being capable of use as a bedroom. Secretary of State for Work and Pensions v Hockley [2019] EWCA Civ 1080.

a bundle of rights that represents the totality of property relationships.[356] In attempting to create an exhaustive method of dealing with property however, it is unlikely to truly reflect the realities inherent within the multitude of interactions, property relations are more 'fuzzy'.[357] With English law viewing property in a way that requires "a very specific field of political, social and cultural relations" that are in no way universal.[358]

Conclusions

The methods of anthropology provide a broad and analytic approach towards the concept of 'property' that expose its social dimensions. By exploring the legal, societal, and ideological underpinnings and the quotidian arrangements of property, the property of anthropology transcends singular economic, legal, or political approaches. By considering property at the boundaries of these understandings, influences, and ways of enacting property, not only are societal understandings of property explored but so too the influences on individual understandings of property within communities. Through ethnographies, anthropology draws attention to the 'property systems' that emerge from social communities, which are as real and influential to their members as state systems of law. The work of anthropology highlights the role of property in social relationships and the role of social relationships in shaping property.

By expanding upon approaches to property that highlight the inherent ability to change, we can recognise the power of the law, economics, and politics to enact societal change in relation to property. So too can we recognise that systems of property reflect and enable societal change, with those embracing alternative property arrangements attracted because they represent ideologies and practices that reflect better their view of society.

Perhaps most importantly the social relationships around property highlight alternatives to the traditional western concept of property and how those understandings might shape not only social lives but our relationship to the world around us. Tacking between these understandings shows existing practices in a new light, challenges existing assumptions, and helps explore what values we might enact with property. Indeed the lessons of anthropology shows that in the lives of people, both inside and outside the western world, property is about more than simply ownership.

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[356] Turner, (N.262).
[357] Katherine Verdery, 'Property and Power in Transylvania's Decollectivization' in C.M. Hann (ed) Property Relations: Renewing the Anthropological Tradition (Cambridge University Press 1998).
[358] Ibid.

Chapter 3 - Property and/as economics

The traditional western view of property – An anthropological coda

Much reference has been made to the traditional western concept of property, particularly as it relates to the contrasting views exposed within the literature of anthropology. Before considering how the work of economics constructs its own view of property, it is important to consider the traditional concept of property that is so heavily influenced by economic thought. This section will first consider the features of the traditional western view of property and its relationship with capitalism before relating it to the views of anthropology, this will serve to set the ideological foundations for exploring property in economics.

The traditional western view of property largely focuses upon exclusionary, personal private property rights. This is centred around free individuals within a pluralistic society engaging in commercial enterprise through free trade in competitive markets.[359] This is predicated on individualistic exclusive ownership over objects of property, and the ability to use this to control access to the use or value of an object though exclusion.[360] This is backed by a system that recognises the value of the property and allows both for it to be traded freely and for a price to be arranged to compensate for loss or damage.

The liberal viewpoint is that this promotes freedom and efficiency within the system, by allowing large amounts of autonomy over what people can call their own, thus allowing them to make efficient use of their own property and work to improve their existing property or acquire new property.[361] Objections that this system is often distorted by state regulation and diffuse ownership rights limiting real 'control', or that there are individuals or communities that resist the system,[362] highlight only that, in practice, things are not quite as settled or perfect as the theory suggests. Nevertheless, the liberal reasoning has become increasingly influential, despite varying arguments to its veracity.

[359] Hann (N.250), 1.
[360] See Thomas W. Merrill, 'Property and the Right to Exclude' (1998) 77 issue 4, Nebraska Law Review, 730 and Sibyl Schwarzenbach, 'Locke's Two Conceptions of Property' (1988) 14 issue 2, Social Theory and Practice, 141. Where the overall concept of western view of property is looked at in terms of both exclusive private property and stewardship of goods contrasted to A.M Honore's view of simply exclusive private property.
[361] Hanoch Dagan, *Liberal theory of property*, (CUP, 2021).
[362] Hann (N.250), 2.

The traditional western view of property has become increasingly dominant across the world, and indeed now exists almost universally.[363] Having said that, countless regional variations exist, with varying levels of state regulation or intervention, and indeed as to how individuals or communities relate to their property. Even in circumstances where the traditional view is not the dominate conceptualisation of property, it is almost universally understood. This places the traditional view in a dominant position in a global sense.

In arriving at this position, a great deal of ideological baggage has developed, with the roots of western property theory deeply intwined with the development of capitalism and the ideological considerations of the political economists who helped enact this ideology. Major contributors include Adam Smith, Rousseau, Locke, Hume, Engels, and Marx.[364] These theorists provide a range of views which often conflict as to what property is and what it can and should do. They seek to explain how and where legitimate property arises, how and where property should be distributed, how property mediates the relationship between the state and the individual, and the cases in which the state should intervene in property issues. These philosophical and ideological arguments, either directly or through a slow process of tradition and osmosis, have greatly influenced the development of the concepts of property. For example, Adam Smith argument that an individual's efforts in seeking their own material benefit will have positive social and economic consequences for the wider community is foundational to the core beliefs in the development of capitalism in western societies.[365] Its effects felt upon across all levels of social, political, and economic organisation within western society.

Capitalism under the microscope

Capitalism has particular significance in western society as the dominant ideology that ripples throughout social, political, and economic worlds. Where capitalism can be subdivided into many different forms, unified by a consideration of the importance of 'capital'; a factor of production that recognises the physical embodiment or control over means of productive inputs that generate further production.[366] In broad terms, four key elements are present in all capitalist systems namely; private property rights, contracts

[363] For arguments as to how capitalism and its influence of property came to dominate see Alexander Anievas and Kerem Nişancıoğlu, *How the west came to rule: The Geopolitical Origins of Capitalism*, (Pluto Press 2015).
[364] For arguments to this effect see Beckmann (N.230), 12, and The Cambridge History of Capitalism Volume 1 (Larry Neal and Jeffrey G. Williamson eds, reprint edition, Cambridge University Press 2015).
[365] Adam Smith, An Inquiry into the Nature, and Causes of the Wealth of Nations (first published 1776, UK edition, University of Chicago Press 1877).
[366] History of capitalism (N.364).

enforceable by third parties, markets with responsive prices and supportive governments.[367] In general, capitalism promotes the generation of profits as a motivating factor and mobilises political structures to create the conditions that allow this. To this end the dominant western concept of property is at the heart of enabling capitalism, with both being shaped by the practices that exist within the intersection of these ideas.

This interplay is perhaps best exemplified through shifts in societies towards capitalist ideology. In particular the shift from communism and the embracing of capitalist concepts, necessitates an increasing recognition of the paradigm of western private property.[368] This shift can be seen within European countries that were previously part of the Soviet Union and within Russia itself. Equally whilst China remains a communist country, its success as an industrial country comes from its interaction and exploitation of global markets in a way that embraces fundamental western approaches towards property that blends elements of communism and capitalism.

The systems and concepts of property that have become dominant within the western world are intimately tied with the project of modernity and the ideology of capitalism. The interplay between these ideas being such that they have become almost perfectly intertwined. Arguably this is due to the battle between socialism and capitalism that arose during the last century. This battle created a dichotomous relationship between capitalism and socialism that enfolded together complex issues of national identity, ideological consideration, and the systems of property alongside many other localised issues that embedded and entrenched each of these issues together in various complex arrangements.[369] to this end we might consider that capitalism and its methods are defended as much by the merits of the system as the entrenched social and political systems.

Generally we might think of economic systems as being politically and socially embedded.[370] This is derived from the argument that the individual is primarily a social rather than economic being, yet it is impossible to divorce the economic from the social as it

[367] Ibid.
[368] For case studies highlighting the effects of the difficulties in this transition and what this meant for individuals' relation to property. Katherine Verdery, *What Was Socialism, and What Comes Next? (*Princeton University Press 1996) and Katherine Verdery," Fuzzy Property: Rights, Power, and Identity in Transylvania's Decollectivization*", in.* Transforming Post Communist Political Economies 1998 National Research Council.
[369] Rather than try to detail this interplay, which in practice takes many forms and its effects vary from individual to individual, it is simply worth understanding that this interplay exists and takes on a range of expressions in practice.
[370] Bernard Barber, 'All Economies are "Embedded": The Career of a Concept, and Beyond' (1995) 62 no. 2, Social Research, 387.

necessarily involves the individual and their interaction.[371] It has been argued that economic systems need to maintain a degree of social legitimacy in order to be politically sustainable, indeed this was proposed as one of the core tenants of 'embedded liberalism', the precursor to modern global neoliberalism.[372] Nominally this is because social legitimacy allows it to remain embedded until it obviously becomes unsuitable. The extent to which neoliberalism is socially legitimate is up for debate,[373] and present conditions might indicate that this too has run its course, however the simple fact that it has endured speaks to it enjoying a minimal level of social and political legitimacy.

In part the legitimacy of these forms of capitalism might be understood through an understanding of 'the market'. It has been proposed that the idea of 'the market' is the central embedded concept of capitalism.[374] Economic analysis relies on the existence of 'the market' with its actors engaging with the market in a 'rational' way as defined by certain assumptions of economics and 'the market' itself.[375] This allows economics to present a 'scientific' approach to its analysis that allows the generation of models that seek to explain and predict prevailing economic conditions. The embedding of assumptions into economic analysis and models renders these assumptions difficult to challenge. Where models assume the existence of a 'market' which necessitates specific rational assumptions to operate, these assumptions become standardising to the quotidian behaviour understood to engage with that market.[376] By assuming behaviour in 'the market', that reflects ideological approaches to ideal market behaviour, the work of economics provides ontological pressure to conform with these assumptions and ideology by presenting idealised predictions. Through creating inscriptions that analyse and predict 'the market' it is persuasive on actors to the market while also is persuasive as to the definable nature of 'the market' itself. Through this lens the work of economics can be seen to provide a level of intellectual legitimacy to the ideology of capitalism.

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[371] Karl Polyani, *The Great Transformation: The Political and Economic Origins of Our Time* (second edition, Beacon Press 2002).
[372] Rawi Abdelal and John G. Ruggie, 'The Principles of Embedded Liberalism: Social Legitimacy and Global Capitalism' in David Moss and John Cisternino (eds) *New Perspectives on Regulation* (Tobin Project 2009).
[373] It has also been suggested that neoliberalism is dead and we are simply flogging a dead horse as no one has thought of anything better to do. See Greg Jericho, 'Flogging the dead horse of neoliberalism isn't going to improve the economy' The Guardian (London, 2nd April 2017) available https://www.theguardian.com/business/grogonomics/2017/apr/02/flogging-the-dead-horse-of-neoliberalism-isnt-going-to-improve-the-economy last accessed 29/03/23. See also Abdelal (N.372).
[374] Barber, (N.370).
[375] These are variable and numerous as will be demonstrated later, the unifying feature being they all assume fundamental market conditions.
[376] Barber, (N.370).

Indeed, the narratives of economics, 'the market', and capitalism converge to give legitimacy to each other. Gramsci in advancing a critique of capitalism, explored the idea of 'cultural hegemony', as a means of understanding why capitalism maintained its dominance.[377] Cultural hegemony, considers the power structures that enable dominant groups to maintain consent to that dominance through spreading ideologies and associated beliefs, assumptions, and values. Key to this power is the role of institutions and intellectuals in socialising people into accepting norms, values, and beliefs in support of dominant ideologies. This is perhaps best exemplified through shaping 'common sense', whereby certain ideas become almost instinctual and become central to worldviews. The 'height' of this is where economic and social conditions are viewed as natural and inevitable because of this process of socialisation.[378] If we accept the possibility of this process, then we might understand the work of economics through the lens of enforcing the cultural hegemony of capitalism. Belief in 'the market', which is central to capitalism and economics, might be thought of as actively deployed to justify capitalism and implicitly legitimises economics. Indeed that 'the market' and claims to 'market forces' appear to be a natural explanation for present economic and social conditions implies that this line of thinking has become our 'common sense'. extending this to an understanding of the dominant concept of property, it both serves to influence a 'common sense' approach to property rooted in this ideology and suggests that dominant concept of property might be shaped so as to support capitalism.

Squaring the circle

To this point, this chapter has considered in brief a broad range of different forces that operate on the traditional western concept of property, considering the ways in which it is embedded and interwoven within society and capitalism and a few key elements of this embeddedness. A weakness of the approach might be a certain level of circularity, with each element in part defined by and defining each other. Capitalism defines as much of the dominant western concept of property as the dominant western concept of property comes to define capitalism. However, it is worthwhile noting this this is a feature rather than a bug of the conceptual apparatus that should be used for considering the concepts of property. It is the interplay and interconnectedness of the social, ideological, political, and legal concepts of property that make it what it is.

The insights of anthropology into property put this kind of interconnectivity at the fore, with its broad analytic approaches expressly considering how this interplay is arranged and might

[377] Antonio Gramsci, Selections from the Prison Notebooks of Antonio Gramsci (reprint edition, Lawrence & Wishart Ltd 2005).
[378] Ibid.

be used to oppose the dominant ideas of western property. The examples of the last chapter considering specific sites where alternative ideological underpinnings construct alternative systems and how these are being expressed. That these exist in the face of the dominant western concept, and survives contact with it, means we must reject it as a totalising explanation for 'property'. Equally this integrated approach makes it clear that property is linked to ideology, that become embedded within different economic and property systems. With different overlapping systems and networks operating to provide distinct concepts of property that are intimately linked to the social networks one operates with that influence individual concepts of property.

The economic understanding of property should be considered particularly influential however as it remains so deeply entwined with the dominant capitalist and western ideals of property. In light especially of its embeddedness within quotidian practices, 'common sense' heuristics, taught curriculum, legal frameworks, and interaction with economic institutions. Because of this embeddedness this understanding provides foundational to approaching economic property specifically because even paradigms that challenge these approaches must in part be defined by them. In simply terms, the economic concepts of property are in many ways bound to the dominant concepts of capitalism, specifically because it operates as a baseline for economic interaction that underpins much of the western world.

A bundle of rights refrain – The 'Big Four' of property

Within economic analysis in particular, a narrative has developed around the primacy of the 'big four' arrangements of property.[379] The big four represent the most conceptually important arrangements within western property, the key bundles within the 'bundles of rights' in modern property.[380] this includes state property/public property,[381] private

[379] The concept of the big four relies on certain jural relationships that will be explored in relation to property in the next chapter. Relying in particular on a Hofeldian understanding of the relationships surrounding property and centred around the right to exclusion.
[380] Edella Schlager and Elinor Ostrom, 'Property-Rights Regimes and Natural Resources: A Conceptual Analysis' (1992) 68 no. 3, Land Economics, Pg.249.
[381] The state is posited as having the right to determine the rules of access and use and a general duty to manage it for the benefit of the public. The public is duty bound to obey the rules of access, only gaining a right to the extent these rules allow.

property,[382] common property,[383] and non-property/open access,[384] that are purported to follow traditional Justinian forms of roman property.[385] The original framing of the approach was used to consider resource pools, and was arranged around five district property rights 'in use entry,[386] withdrawal,[387] management,[388] exclusion, [389] and alienation.[390] Importantly, these are not wholly distinct, for example, "to hold some of these rights implies the possession of others. The exercise of withdrawal rights is not meaningful without the right of access; alienation rights depend upon having rights to be transferred".[391] The importance of this arrangement is that it is proposed to reflect actual property arrangements,[392] taking the approach that what operates in practice will work in theory.[393] The 'big four' are easily identifiable as conceptually distinct arrangements that arguably provide a simple model for actual property arrangements.

Problematically, where the 'big four' might simplify property arrangements it does not encompass the totality of property arrangements. Ostrom acknowledges that, even within the roman system, this was not an entirely suitable set of categorisations. With its critics arguing that it oversimplifies the complexity of property, [394] collapsing together too wide a range of different property arrangements under singular concepts.[395] Where Ostrom contends that this retains conceptual utility, it has been suggested that this "reduce[s] complexity in misleading ways and form[s] a poor point of departure for theorising".[396] to put this into context, the

[382] Owners are vested with exclusive rights to use within the limits of the law, with a duty to not use the land for socially unacceptable uses. Nonowners are duty bound to refrain from preventing these uses and the right to compensation for undesirable uses.
[383] Members of the ownership group have the right to access and use in accordance with the access and use arrangements determined by the group, they have a duty not to violate these rules. Individual members have a right to exclude only non-members. Non-members have a duty to not interfere with the resource except where they gain a right by the access and use rules organised by the ownership group.
[384] Everyone has a right of access with no duties to refrain from use or a right to prevent others from access or use.
[385] Daniel Cole and Elinor Ostrom, 'The Variety of Property Systems and Rights in Natural Resources' in Daniel H. Cole and Elinor Ostrom (eds) *Property in Land and Other Resources* (Lincoln Institute of Land Policy 2012).
[386] This does not need to be an unlimited right of entry and can constitute a specific right to use only under certain conditions or mediated through other access arrangements. I.e. paying an entrance fee or presenting a ticket.
[387] A right to harvest or remove resources from a pool or area. This can include licences to extract or limited rights to take only a certain amount. i.e. a Fishing licence.
[388] The right to change the physical structures of the resources pool, i.e. developing infrastructure.
[389] The ability to maintain exclusive use and prevent access.
[390] The right to sell the other rights, collectively or individually permanently or for a limited time.
[391] Ostrom, Conceptual analysis (N.393).
[392] Ibid.
[393] An approach that has been named "Ostroms law" see, Lee Anne Fennell, 'Ostrom's Law: Property Rights in the Commons' (2011) 5 no. 1, International Journal of the Commons, Pg.9.
[394] Wiber (N.205).
[395] Beckman, Changing (N.230).
[396] Ibid, Pg.29.

roman categorisation was specifically a legal one that centred around understanding the jural relationships with property, serving a normative purpose. By contrast much of the critics of this simplification comes from the field of anthropology where analytic fidelity to observable reality comes to the fore. In economics however the primacy of the 'big four' allows for a degree of conceptual simplicity that observes much of the activity that is important to the economy, reflecting the normative interactions of central to the economic view.

Property in economics – Reintroduction

With this foundation established it is now time to turn to the ways in which the concept of property is constructed through the methods of economics. This section will begin by considering key themes for property in economics before considering economic models through the lens of Coase's influential work on transaction costs.[397] An examination will then be made of the way in which property becomes a substitute for monetary value in the field of economics. This section will then consider how the economic perspective interreacts with other areas of property theory.

Key themes in property

Providing a key overview of property rights as understood through the literature of the field of economics, Denison and Klinger-Vidra summarise property rights as "the right of control over an asset and the returns it may generate".[398] Defining property right as

> the set of institutions which determine the extent to, and the conditions under which individuals, households and communities can make productive use of their assets and appropriate the returns.[399]

They claim that on a macro level, protecting property and property rights are about driving investments by ensuring appropriate returns, reducing risk, and protecting the expectations of investors.[400] On a micro level, property is about improving household welfare through secure property rights,[401] with a particular emphasis on land and the ability to mobilise these assets in time of need.[402]

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[397] Ronald Coase, 'The Problem of Social Cost' (1960) 3, The Journal of Law and Economics, 1. (hereon social cost).
[398] Mike Denison and Robyn Klinger-Vidra, 'Annotated bibliography for rapid review of property rights, LSE enterprise' (EPS peaks, LSE Enterprise, 2012).
[399] Ibid.
[400] Ibid, Pg.2.
[401] Welfare in the context of economics can refer to a range of calculations that express a value for well-being.
[402] Denison, (N.398).

In presenting a summary of the literature, it highlights four key features of property rights operating within the economic conception.

1) Property rights provide the ability of individuals to see their claim to assets recognised.
2) Property rights provide limits on the state ability to expropriate assets.
3) Property rights provide the ability of individuals to transact with assets and provide the basis for enforceable contracts.
4) Property rights provide the ability of individuals to use their assets productively and allow the governing of those rights.[403]

Read together, one can draw out the key themes that underpin the operation of property rights in economics. In broad terms, property rights operate as a way of viewing and protecting value and as a method for achieving future value through correct management and decision-making. There is a focus on property rights as a means of increasing welfare, with property considered through the use and control of assets.[404] Specific property rights are examined through an individuals' ability to claim, control and profit from those assets, transacting with them however they wish.

This overview highlights the role of a 'property right' as a tool, both to the individual and on a state level. It has been proposed that the role of 'property rights' in economics is to consider these institutional arrangements and compare them for their maximising behaviours, in doing so rendering them tools or parameters for use in economic policy.[405] The identified key features can be viewed as individual tools that allow an individual to access and engage with the economy whilst being protected from state interference. The definition of rights used implies a role as a conscious tool to be used to generate improvements to individual welfare. The implication of these features at the state level is that property rights represent a set of 'institutions' or rules that have been selected that allow for these interactions. This gives a view of property rights as exercisable tools on the micro level granted by policy at the macro-level, that can themselves be considered as tools selected for its maximising behaviour within a system.

[403] Ibid, Pg.2-3.
[404] The centrality of property rights in modern economics is discussed in Gerald P. O'Dricoll Jr. and Lee Hoskins, 'Property Rights, the Key to Economic Development' (2003) 482, Policy Analysis, 1.
[405] Michael Veseth, "The economics of property rights and human rights" (1982) The American journal of economics and sociology, 41(2), Pg.169.

Economic property rights – Coase and beyond

Ronald Coase's body of work is extremely influential to the modern economics concept of 'property rights' and more generally the 'economics of property rights'.[406] This represents the foundational approach towards property rights within economics, which while not unchallenged, remains the theoretical basis for much of the work of economics.[407] As such the approach from within Coase's work, its offshoots, and its primary challenger in the Hartian construction of property rights will be considered.

The first issue that arises from this approach comes from the lack of definition of property. While Coase's work '*the problem of social costs'* is considered a foundational work on property rights, it does not contain a definition for 'property' or 'property rights'. [408] Indeed, there is no clear definition of these terms anywhere within his writing.[409] Central to his approach is a consideration that it was the purpose of the legal system "to establish that clear delimitations of rights on the basis of which the transfer and recombination of rights can take place through the market".[410] Interestingly Coase's work heavily featured integration of institutional frameworks into economic theory,[411] with the effect that there was little consideration of property rights operating outside of a legal framework. In this manner it appears that, at least to Coase, property rights are supposed to follow legal arrangements with a particular focus on use rights.[412]

Subsequent authors did not consider themselves bound by this constraint, expanding their work to include circumstances outside of traditional state legal systems and attempting to define property rights in their own ways. Some utilised classical roman definitions, following usus, fructus, and abusus, or use, income rights, and alienation rights.[413] Some authors felt the need to break from purely legal definitions, Barzel in particular felt the need to distinguish between economic property rights and legal property rights.[414] Economic property rights in this context being the ability to enjoy a piece of property and existing as

[406] Explored in, Geoffrey M. Hodgson, 'Much of the 'Economics of Property Rights' Devalues Property and Legal Rights' (2015) 11 issue 4, Journal of Institutional Economics, 683.
[407] Explored in Kirsten Foss and Nicolai Foss, 'Coasian and Modern Property Rights Economics' (2014) 11 issue 2, Journal of Institutional Economics, 391.
[408] Coase, (N.397).
[409] This conclusion is shared with Hodgson, Much of property (N.406).
[410] Ronald Coase, 'The Federal Communications Commission' (1959) 2, The Journal of Law and Economics, Pg.1.
[411] Lynne Kiesling, *The Essential Ronald Coase* (Fraser Institute, 2021).
[412] This raises some interesting conceptual questions about the operation of his theory to property rights. Does this operate with equal validity in less formalised property systems?
[413] Harold Demsetz, 'The Exchange and Enforcement of Property Rights' (1964) 7, The Journal of Law and Economics, 11 and Armen A. Alchian, 'Some Economics of Property Rights' (1965) 30 no. 4, Politico, 816.
[414] Yoram Barzel, *Economic Analysis of Property Rights* (second edition, Cambridge University Press 2012).

the end result of the state assigning legal property rights to achieve that end. In part, this is due to a belief that economic property rights reflect a different valuation of the expected ability to consume directly or indirectly through trade an asset, that is reduced by the lack of a security in that asset.[415] the key word here is ability: the definition is concerned not with what people are legally entitled to do but with what they believe they can do. Allen expands upon this and takes a much more general approach, arguing that economic property rights are "the ability to freely exercise a choice".[416] Throughout these definitions it is clear that there is no consensus within the field of economics as to what the precise definition of property rights might be, and yet might be mobilised to serve a range of functions outside of purely legal approaches.

In this light, property rights become about exercising effective control. Hodgson argues this approach invites economics to treat a thief as they would treat an owner as they both render effective control.[417] Indeed, it has been argued that this creates a trend in mainstream economics to render property as an understanding of the rights of possession rather than ownership.[418] Ultimately meaning that "these approaches cannot accommodate a concept of property that is anything more than possession".[419]

Foss and Foss argue that the view of ownership derived from the body of literature stemming from Coase's work is simply of a set of delineated rights, in part legal and in part defined by the ability to exclude others.[420] These rights are not unlimited and infinitely divisible but a particular bundle of certain uses of an asset.[421] Considering that at best, ownership can be derived from an understanding of certain use right, with most theorists utilising opportunistic construction that embrace different arrangements of the concept of ownership that varies depending on its presentation.[422] They propose that the unifying feature of these approaches are the ability to exclude and in doing so protect use and income rights, rendering ownership contingent on the social and legal context that enables exclusion.[423]

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[415] Yoram Barzel, 'The Capture of Wealth by Monopolists and the Protection of Property Rights' (1994) 14 issue 4, International Review of Law and Economics, Pg.393.
[416] Douglas W. Allen, 'The Coase Theorem: Coherent, Logical, and Not Disproved' (2015) 11, Journal of Institutional Economics, Pg.379.
[417]Geoffrey M. Hodgson, 'Editorial Introduction to 'Ownership' by A.M. Honoré (1961)' (2013) 9 issue 2, Journal of International Economics, Pg.223.
[418] Hodgson, (N.406)
[419] Ibid, Pg.707.
[420] Foss, (N.407).
[421] Coase's approach includes an assumption of perfect information, included within this is a well-defined and clearly delineated list of these rights. There is no indication of what these might be outside this model.
[422] Foss, (N.407).
[423] Ibid.

In contrast, the Hartian approach places ownership front and centre, with ownership determined following the legally defined and enforced rights to possession that decide the usages of an asset in circumstances without explicit contracts.[424] Central to hart's approach is the consideration of property through contracting, but the significance of ownership comes in circumstances where there is a need to deal with unallocated rights and determining where those are allocated.[425] This view in particular emphasis the right to sell an asset through contract as being core to the ownership relationship. this is rooted again in the ideas of a legal system that supports these rights of ownership and can provide a model for understanding both property rights and ownership. This relies on a perfect assumption of being able to unambiguously determine the rightful owner, without explaining how this might be done. The implication of this approach is that contracting provides an unbroken chain by which we can consider legitimate the ideas of ownership. Critics argue that hart's view requires a dramatic oversimplification of ownership to be sustained. With Demsetz questioning the extent to which simplifying ownership is appropriate or indeed possible, not least because ownership represents an ambiguous concept within economics.[426] Hart's approach fundamentally relies on an ownership being unambiguous and enforceable without difficulty, that renders it extremely problematic for considering real world applications. Hart's simplification while enabling modelling, leads to a loss in explanatory scope and realism in comparison with a more traditional Cosian approach.[427]

Between these two main approaches to property rights in economics and the issue of ownership, both fail to explain what property rights are. However, perhaps these issues bely a more fundamental point that property rights in economics are about something very different. It has been proposed that "mainstream economics' focus is on individuals making choices over the allocation of objects or activities".[428] It Is about considering maximising behaviours and understanding how choices might be modelled and understood. To this end, both approaches to property are appealing because they enable specific models to be created. The limitations, shortcomings, and deliberate exclusions do not necessarily matter within economics because the focus is simply on the heuristic propositions that are enabled by the models.

[424] Oliver Hart, 'An Economist's View of Authority' (1996) 8 issue 4, Rationality and Society, 371.
[425] Ibid.
[426] Harold Demsetz, 'Review: Oliver Hart, Firms, Contracts' (1998) 106 issue 2, Journal of Political Economy, Pg.446.
[427] Foss, (N.407).
[428] Hodgson (N.406).

Modelling property relationships

The approach of economists is usually to treat property from the point of view of the bundle of rights theory, allowing property to be divided into various parts that can be dealt with individually.[429] This sometimes take the arrangement of the 'big four' bundles of rights or focused on individual rights to property. The appeal of this approach, especially within situational modelling, is that it allows for an in-depth study of individual strands of 'property rights' that can be individuated appropriately to the situation that is being modelled. Problematically, this does not necessarily follow any extant 'property right', instead acting as a proxy for the allocation of a purported right in the model. This has led to criticism that the bundle of rights theory has been taken to such an extreme as to make the descriptor of property largely redundant. With 'property rights' being used to describe any claim to resources[430] and property being used "to describe virtually every device—public or private, common-law, or regulatory, contractual or governmental, formal or informal—by which divergences between private and social costs or benefits are reduced".[431] This is as much a consequence as a cause of the lack of consensus on what 'property rights' are.

The key model for understanding 'property rights' in economics is Coase's seminal work on the problem of social costs.[432] This presented a way of modelling property relationships by examining the costs of particular property interactions, under the conditions without transactions cost. This allowed property rules to be examined not just by considering the value of particular property interactions but by adjusting the fundamental rules governing their relationships, and examining the ways in which property rules might affect those interactions. This is done by attributing quantitative values to the elements and outcomes of different property relationships, and then comparing the quantitative values of different situations. This in theory allows the rules surrounding property and the interaction between property owners to be assessed, and rules suggested to maximise welfare, providing models useful not just in property law but also contract and tort.

The key argument of Coase's theorem is that the most efficient outcome to conflicts of property rights, in ideal economic circumstances, can be resolved by accurately bargaining and negotiating for the full cost of those rights. In reverse, this also means that problems of

[429] Thomas W. Merrill and Henry E. Smith, 'What Happened to Property in Law and Economics?' (2001), 111 no. 2, Yale Law Journal, Pg.357.
[430] Ibid.
[431] Richard A Posner, Economic Analysis of Law (fifth edition, Aspen Publishers 1998), Pg.53.
[432] Coase, Social cost (N.397).

negative externalities[433] can be solved by issuing property rights. For example, consider a factory polluting a river with a fishery downstream;

> The factory 'makes' £100 by not disposing of the pollutants properly, whilst the fishery see its profits fall from £150 for its healthy fish compared with £25 when the fish become sick. The most 'efficient' outcome is for the fishery to pay £100 to prevent the pollution of the river, in effect bribing the factory to change its activity and netting a £25 overall benefit[434]. This is the theoretically best resolution on the economics of the situation and remains true in circumstances where the factory holds the right to pollute. Conversely, where the fishery holds the right, the factory would be expected to compensate the £125 loss due to its actions and therefore would choose instead to pay £100 and not pollute.

By changing the values or rules relating to liability, we can fundamentally change the equation and its outcome. This relies on a fundamental assumption that no transaction costs exist, and all costs can be perfectly allocated to one party or another through the market.

Coase's work highlights several important points both in the conclusions reached and the assumptions of the model itself. Coase's main conclusion is that, in the absence of transaction costs,[435] negotiation will always take place to ensure the optimal arrangement of property relationship regardless of initial liability. In a situation in which transaction costs do apply, the initial allocation of rules relating to entitlements will dictate the outcome. In theory, the allocation is most efficient if the property right is given to those who would require the least payment to resolve the issue, however it is also impossible to do this before ex-ante analysis.

It is also possible that the most efficient arrangement of property rights is not always to place the burden on the one infringing the other's entitlement. Coase's work also looks at the fact that government intervention is not always the best course of action when there is an inefficiency, as government is also inefficient, rendering intervention the logical choice only when the cost of government intervention is less than the cost of letting the market operate

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[433] This is an indirect cost generated by the difference between a private cost of an action and the social cost.
[434] This is referred to as pareto improving – where one side is better off without any party being worse off as a result.
[435] These are costs associated with the transaction itself, though this is open to specific definition that varies from model to model. It has been argued that 'transaction costs' should be considered the costs of defining and maintaining a particular property right and this unifies many of the approaches. See Douglas W. Allen, 'The Coase Theorem: Coherent, Logical, and Not Disproved' (2015) 11, Journal of Institutional Economics, Pg.379.

inefficiently.[436] This may lead some to consider that the role of government should be to reduce transaction costs to allow more of the market to operate freely.

This provides an interesting insight into the goals of property within economics; it seeks to find a best solution to the governance of interaction that is devoid from any legal or moral considerations of punishment. Indeed it highlights that the central goal of economics in addressing the rules of property is simply that of 'efficiency'. To this end the role of the state is also questioned specifically because it might not provide the most 'efficient' outcome.

Coase's work relies implicitly on an assumption of perfect knowledge of absolute value within the scenario, and that everything can be reduced primarily to monetary concerns. In his work, he acknowledges that the situation he describes is not always possible to achieve, and where he makes assumptions of market prices, he acknowledges that market prices are not the only way to evaluate the cost of a particular action.[437] Referencing an earlier work,[438] Coase details an alternative method for arriving at a conclusion on price, based on internal firm accounting, that provide equally applicable to utility of his model. Expanding on his work, suggestions have been made that an efficient property system relies on three core principles, namely;

1) Universality – Every resource has property rights ascribed to it and they are all owned.
2) Exclusivity – Every property right allows the ability to exclude but it does not have to be universally applicable to everyone.
3) Transferability – All property rights must be capable of being the subject of a transfer allowing property to shift towards more valuable property use.[439]

These elements highlight that, in Coase's work, there is a reliance on absolute definition of property rights, with perfect delineation of both right and entitlement.[440] As already noted, this is incredibly ill-defined in both Coase's work and in the opinions of those who follow in his footsteps, indeed rendering the definition of 'property rights' something closer to particular use rights in possession. Likewise, the practical arrangements presented in examples are often not true 'property rights,' but specific expressions of use rights that mirror the problem that is being engaged with.

[436] Coase, social costs (N.397)
[437] Ibid.
[438] Ronald Coase, "Nature of the firm", (1937). 4 Economica, New Series. (Hereon Firm)
[439] Posner, (N.431).
[440] Steven N.S. Cheung, The Myth of Social Cost (The Institute of Economic Affairs 1978).

Coase's theorem and the work from which it stems is credited with being both highly influential and a turning point in the economics of property rights.[441] In creating this view of property, we are presented with a 'property right' that is definable specifically by the circumstances in which we find our analysis, perfectly shaped, delineated and valued in a world of perfect information and without costs. The complexity of property relations rendered down to unproblematic distributions of entitlements thrown into analytic problems of transacting.[442] The outline of this model should be thought of as limited to situations where transaction costs are low or non-existent and within situations where strong legal institutions frame the 'property rights' themselves. It is debatable as to what extent this model is actually useful for understanding real property relationships, but it has nevertheless become influential in modelling idealised property relationships in economics.

The problem with its use as a model is perhaps a more fundamental issue within economics as a whole. Coase's approach was to move beyond the model to highlight the importance of legal and other institutions within economics, arguing that models should be based in their real world context and not be abstract.[443] However, this element was fundamentally misunderstood, with the 'toy model' that he created being understood to be the main thrust of his work.[444] The reception of Coase's work has focused largely on the abstract and theoretic model and replicating its use, which invariably has led to critics that fundamentally misunderstand the point.[445] Coase's approach if replicated correct would consider property problems as part of wider social arrangements[446]. however in practice many economists limit themselves to understanding the abstract property arrangements that occur in the absence of transactions costs, where economics would likely better be served by considering the motivations of human beings beyond simply maximising value.[447] Sadly, in Coases' work, rather than finding an attack on limited analysis and the isolation of the purely economic approach, economist found a tool to further isolate 'property rights' and reduce them down to their supposed value.

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[441] See for examples Mary M. Shirley, Ning Wang, Claude Ménard, 'Ronald Coase's Impact on Economics' (2014) 11 issue 2, Journal of Institutional Economics, Pg.227.
[442] This is more generally applicable across all forms of economic analysis. See Benito Arrunñada, Institutional Foundations of Impersonal Exchange: Theory and Policy of Contractual Registries (University of Chicago Press 2012).
[443] Ronald Coase, *The Firm, the Market, and the Law*, (Chicago, IL: University of Chicago Press. 1988).
[444] At least this Is what Coase believed see https://www.coase.org/coaseinterview.htm last accessed 29/03/23.
[445] Brett M. Frischmann and Alain Marciano, 'Understanding the Problem of Social Cost' (2015) 11 issue 2, Journal of Institutional Economics, Pg.329.
[446] Ibid.
[447] For example there is 'value' to be attached to obeying the law and the motivations that come from society. See Hodgson, (N.406).

Price

Within the field of economics there have been many ways of attributing value and price to a particular object, or idea, which considers different factors to arrive at a value. Firstly, it is important to distinguish between price and value. Starting from a foundational principle in economics, that all voluntary transactions are entered into because each party believes they will be better off from the transaction,[448] we can create a divide between the price involved in the trade, and the value each party believes they will receive from the trade.

Price is set by an individually seller and therefore can thereby vary widely according to the seller's wishes. In a market setting, however, we can estimate what a 'fair' price might be based on similar goods or market trends. While to provide a full explanation goes beyond the scope of this chapter,[449] it is enough to consider that this is a variable, according to the situation and market specifics, based on the theory of supply and demand. When economists refer to market price, in general they are looking for an average price in a situation without extreme fluctuations outside of that which is considered 'normal'. On an individual level, price can be seen as purely subjective, but when other actors are involved, constraints are placed upon price by the competition provided by their subjective price-setting. This leads to a situation where price can be both irrational and unpredictable, whilst being, on average, empirically predictable.

Value

Value is an inherent quality within the good that provides it with a monetary value as apart from the price it was sold at in the market. It has been argued that value theory is central to economics and that because of this centrality to economics, whenever a new school of thought arises within economics, its first target is always the preceding theory of value.[450] Possibly because of this, there are so many competing ideas as to what constitutes value.

Adam Smith described value as the "natural price",[451] which is constituted by price paid for labour, an amount for profit, and any rent, with rent in this case including any price paid for materials.[452] This was determined to be the value of a good. It was not, however, made clear how to determine these values within his work.

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[448] Smith, (N.365).
[449] For more information however see David D. Friedman, *Price Theory: An Intermediate Text*, Published by South-Western Publishing Co, 1990.
[450] Wilfred Dolfsma (1997) "The social construction of value: value theories and John Locke's framework of qualities", Journal of the History of Economic Thought, 4:3, 400, 400.
[451] Smith (N.365) Chapter 6.
[452] Ibid.

David Ricardo in *the principles of political economy and taxation*,[453] determined that "the value of a commodity, or the quantity of any commodity for which it will exchange, depends on the relative quantity of labour which is necessary for its production".[454] In this, however, he discounted the use of rents as being inclusive as part of the price of production and concluded that value was determinable by the demand for the product.

Marginalist theory utilises the idea of decision-making on the margins by looking at value as a function of having one extra of a particular good. [455] This takes a subjective view of the theory of value, rejecting the cost of labour and the cost involved in production and favouring a subjective determination of the best use a single person can make of one further unit of the object in question than they presently have.

Beyond this there are many more theories of value that could be addressed however whilst all methods fundamentally reduce property to a monetary value, there is no clear consensus on how that should take place. Putting aside any arguments that the assumptions are incorrect, or values might not be correctly accounted for within the model, there is no clear model for establishing what is the correct 'value' to ascribe to any property within economics.

In practical terms, we require values and prices to be arrived at to effectively make use of economic modelling. Coase's model, for instance, discusses two methods of arriving at a value. Though both largely arbitrary, the first makes use of an assumption of value as the money gained within the market for the sale of the object while the second attributes value simply as a matter of accounting within a firm's internal structure.[456] Both are simply functional values arrived at arbitrarily for the model, yet if used consistently, will remain workable.

Returning to the idea that all transactions are entered into voluntarily and with an expectation of being better off post-transaction,[457] only marginalist theory provides a hint as to how this might be achieved through the inclusion of utility to the individual. Other theories of value tend to view utility as secondary and not explicitly included in the model. In theory, a model for price can consider other factors because it is entirely subjective,

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[453] David Ricardo, On the Principles of Political Economy and Taxation (first published 1817, Dover Publications Inc. 2004).
[454] Ibid, Ch.1 S.1.
[455] Developed contemporaneously by William Stanley Jevons, "brief account of a general mathematical theory of political economy", (1862) McMaster University Archive for the History of Economic Thought, vol. 29, 282. Carl Menger, *Principles of economics*, (James Dingwall and Bert F Hoselitz (trs), first published 1871, Cambridge university press 2007) and Leon Walras, *Elements of pure economics*, (William Jaffe tr, first published 1874, Routledge 2003).
[456] Coase, Social cost (N.397).
[457] Smith (N.365).

however this is not necessarily the case. This provides some conceptual dissonance as we are to expect the balance of values within a trade to be positive for both parties, which outside of marginalist theory, would be impossible with the static calculations of value.

Behavioural economists and cultural economists attempt to answer this particular dilemma by expanding the idea of value to include less concrete factors, these include individual preferences[458] and cultural values.[459] This in turn, however, is problematically reduced to a monetary value which can be used as part of static calculation.[460] It is incredibly difficult in many cases to determine exactly how these other values should be translated into monetary costs and, in viewing economics in this way, "cannot account for a great deal of human interactions".[461]

From this small foray into the world of price and value, it is clearly see that there is difficulty in treating property as a source of monetary value or through exchange because it very difficult to determine exactly what makes up the value of property.[462] Price and value, both remain contingent, subjective, and the result of social constructions that attempt to define these problems. In trying to create a concrete definition, we must invariably simplify the subject with which we are dealing. In reality, money does not and cannot tell the whole picture as any abstraction denies the full utility and worth of the object that underlies the model. This problem led one economist to conclude that "as the mythological King Midas tells us, having everything we touch turn into gold makes life unbearable."[463]

Pricing property rules

Following a Coase like approach, the work of Calabresi and Melamed provides an insight into how property rules themselves might operate through value and how different arrangements both create and protect value in different arrangements.[464]

[458] See Kenneth J. Arrow, 'Utilities, Attitudes, Choices: A Review Note' (1958) 26 no. 1, Econometrica, Pg.1.
[459] See David Throsby, *Economics and Culture* (Cambridge University Press 2008) And Arjo Klamer, 'A Pragmatic View on the Values in Economics' (2003) 10 issue 2, Journal of Economic Methodology, Pg.191.
[460] Klamer, (N.459).
[461] Ibid.
[462] Ex ante analysis might provide a figure but even with this it very difficult to dissect the elements that make up these arrangements.
[463] Klamer, (N.459).
[464] Guido Calabresi and A. Douglas Melamed, 'Property Rules, Liability, and Inalienability: One View of the Cathedral' (1872) 85 no. 6, Harvard Law Review, Pg.1089.

This is done by viewing property as a set of entitlements which contain initial allocation of rights over objects.[465] Taking, for example an entitlement to roam freely across land verses an entitlement to prevent access through your land, one side will be favoured and become the default position. After this initial entitlement, there is a decision made on how to protect the entitlement if it should be traded away. They identify three types of rules associated with different situations used to enable or protect entitlements.

1) The property rule is what they argue is most commonly considered private property. The entitlement cannot be taken by another party unless the holder willingly transacts to transfer the entitlement at a price to which they subjectively value the property. With the seller having the ability to choose the price, in theory, this should always be a kind of transaction where every party is satisfied with the outcome, as to enter these transactions voluntarily, everybody feels they should be benefiting from the transaction. In situations where the potential seller refuses to sell at a marketable price, either because they value their preferences too highly for the market to bear, or because they are leveraging their ability to refuse to transact in order to derive a premium, this highlights a problem with market value as an efficient way of determining value.
2) The liability rule is the type of rule most commonly found in tort law, relying on an imposed value for the breach of the rule or a specifically decided valuation for a forced purchase of the entitlement. This allows for quicker restitution in cases of accidents or compulsory purchases, where there can be a fixed value against which compensation can be paid, or damages can be awarded. The imposed value can be externally fixed, leaving no scope for subjective valuations as would be found in property rules and can ignore the true value of an entitlement to an individual.
3) The inalienable rule is where the law has determined both where the initial entitlement lies, but also provides prohibitions on its sale or transfer with a fixed price to compensate for any harm to the entitlement. This is the same imposed costs as under a liability rule, while also prescribing either situations where a transfer may take place or forbid transactions altogether.[466]

Examining when is the best time to use these different rules, Calabrese and Melamed, look towards economic efficiency, with their version of economic efficiency coming down to the

[465] Utilising an approach much the same as the bundle of rights theory. This approach is more theoretical in that it does not directly assume a set of rights instead examining the very idea of the rules themselves.
[466] Calabresi, (N.464).

administrative costs of enforcement.[467] In a large part this is due to the view that, ultimately, these rules are designed in order to reduce the administrative costs of enforcement, and that when deciding between two conflicting entitlements, it is the one that causes the least cost which should be preferred. They also include the idea of Pareto optimality, whereby any further change would not improve the condition of those who gained, to the point where it compensates for the value the others have lost. In many circumstances, however, it is difficult to determine Pareto optimality when there is starting inequality in the wealth of the parties, as different distributions of wealth imply their own Pareto-optimal allocation of resources.[468] For instance, when market price can produce the most efficient way of enforcing rights, then property rules should be used. When the costs of negotiation are prohibitive, the negotiation process would lead to efficiency problems, or where there are problems with holdouts and freeloaders, liability rules should be preferred for their efficiency on distributive results. For inalienability rules, the efficiency gained from using the rule is in the costs that would usually come from third party externalities that arise if the rule were not in place or if free transacting would be allowed. The problem with considering these rules and allocating them to different circumstances again comes down to a more fundamental problem of information and the ability to use values without ex-ante analysis.

It is possible however that considerations outside of value can be used to underscore the rational of inalienability rules that makes this more of a useful model. For example, inalienability rules are highlighted as serving moral purposes by preventing transactions that would be considered otherwise immoral.[469] It is not clear what value the pair place on moralism, but acknowledge that fundamental distributional problems might create undue pressure which inalienability rules might overcome.[470] For example, a poor family might face undue pressure to sell a baby to a richer family. Inalienability rules allow for an underscoring of moral issues that would otherwise be considered legitimate through other economic models.[471]

This model, in attempting to present the different types of 'rules' by which 'property rights' can be protected, seems to engage with property beyond simply the realm of the economic. In theory, it does present 'property rights' beyond simply economic considerations, with all three of the rule categories applicable in equal measure to different arrangements of

[467] This can be considered a reflection of Coase's models and the role of transaction costs. By reducing these transaction costs in theory this should result in a more efficient allocation of property rights.
[468] Calabresi, (N.464).
[469] Ibid.
[470] Ibid.
[471] This point is made with a with a certain hesitancy as it is likely that much of economic analysis is fundamentally moral, but may sometimes point towards 'immoral' outcomes.

entitlements to property. That, however, some are 'property rules', namely the ones which allow for free trade and for people to determine their own price for objects, drives home the key point of economic property. Property is there to be traded and that there is a pre-eminence on value for sale in understanding property. The other rules are there to protect and facilitate this role and ensure quick and simple resolution of issues that threaten this use. This leads to a model that, rather than considering the role of the law, appears to present how simply the law can protect the needs of the economy.

The tragedy of the commons

One final point to consider in the role of property rights in economics relates to problems that are theorised to arise in situations without property rights. The so called 'tragedy of the commons'[472] is a theoretical problem that arises in 'common property'[473] where individuals making decisions based on their personal needs overuse a collective resource,[474] highlighting the need for well-structured property arrangements.

Where individuals are assumed to be rational and operating to maximise their own utility, they will make use of the common resource pool. With many people continuing to do so, this might result in overuse of the common land rendering its use unsustainable.[475] Hardin, following along from the example of overgrazing of herds attributed to Forster, summarised the tragedy as

> Each man locked into a system that compels him to increase his herd without limit – in a world that is limited. Ruin is the destination towards which all men rush, each pursuing his own best interest in a society that believes in freedom of the commons.[476]

This model presents the path to destruction as paved by individual self-interest, rationally choosing to sacrifice long term sustainability at the expense of the rest of the community.[477] In theory, the problem remains one of free-will operating in circumstances of limited resources.[478]

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[472] Garrett Hardin, 'The Tragedy of the Commons' (1968) 162 no. 3859, New Series, Pg.1243.
[473] This is a very broad usage of the term, while it can apply to 'common property' between its owners, it might be more accurate to consider this in terms of 'non-property' or open-access arrangements rather than the view of 'common property'.
[474] The original conceptual formulation is attributed to William Forster Lloyd, *Untitled pamphlet*, Pg.1833.
[475] Especially in circumstances when rational actors realise this problem and decide to overuse before others render them unable to do so.
[476] Hardin, (N.472)
[477] The long-term consequences are also rationalised as being worse than the short-term gain.
[478] This in theory makes it applicable to most circumstances involving humans operating within a limited world.

The proposed solution to the tragedy of the commons is to enforce management roles onto the 'commons'. Hardin's primary suggestion is the imposition of private or state property arrangements to control and protect access to resources and prevent its overuse.[479] Karpoff argues that this problem, focusing on non-exclusive use rights, and the solution, well defined private use-rights, was already well established in pre-existing economic literature and was in part the driving force behind economic property theories.[480] Noting in particular that Coase's work and the work of Demsetz[481] indicate that property rights systems are themselves costly to implement and will arise where the cost of imposing the system is less than the cost of allowing the 'tragedy of the commons'.[482]

The tragedy of the commons acts as something of a conceptual boogieman. The fear of overuse, destruction, and loss of value acts as a justification for property rights, in particular in private property. It has a strong rhetorical element to advocate for the dominant conception of property because of its focus on private property. It implies that part of a system of property is curtailing a rational and self-rationalising[483] activity that enforces a longer term and more sustainable[484] engagement with the world. Perhaps however, 'tragedy' has a tendency towards the catastrophic. While perhaps always a risk in circumstances with common property or with open access, sometimes it is just not enough of a problem to worry about.[485]

Property in economics and anthropology

Comparing the anthropological and economic views, we arrive at two disparate approaches to property. For anthropology, the value is in social interactions, utility, and its significance to the individual while economics reduces it to monetary value and looks only to interactions to maximise that monetary value. Anthropology focuses on what is being done and how, where economics focuses on what should be done and why. Economics focuses on

[479] Hardin, (N.472)
[480] Jonathan M. Karpoff, "the tragedy of 'the tragedy of the commons' – Hardin vs. the property rights theory". (2021) Forthcoming, The journal of law and economics, Working paper No 750/2021, Pg.23.
[481] Harold Demsetz, 'The Exchange and Enforcement of Property Rights' (1964) 7, The Journal of Law and Economics, Pg.11.
[482] As an additional point Karpoff notes that there is a tendency in the absence of well-defined property rights an effort to privatise the resource and stake claims in ownership. This also has a cost that in theory renders the entire resource less valuable. See Karpoff (N.480).
[483] In the sense of economic rationality at least.
[484] At least in terms of society if not actually environmentally.
[485] It is a problem that much of the research on which this is based assumes a fundamentally western view of property. For example, to what extent does 'knowing' engage with the tragedy of the commons? 'Knowing' would appear to draw its 'property rights' specifically to address the tragedy of the commons for the community. The 'tragedy of the commons' also assumes rationality, with the rationality deeply rooted in notions of capitalism. This is perhaps appropriate within societies that commit themselves to the western concepts of property and are heavily influenced by capitalism however it again ignores that there are other factors that could change this behaviour.

abstraction, while anthropology focuses on reality. It is within these distinctions that we find the significance to legal thinking, as the law must operate to govern activity, providing abstract normative structures to overlay onto real interactions. In doing this it must manage the complexity of real human interactions within a system that simply views its components through simplifying values operating in a theoretical market.

To highlight the difference of approach between anthropologists and economists, we can examine a case study considering the origins of property. Harold Demsetz[486] looked to combine economics with anthropology by reviewing the earlier work of Leacock[487] on the development of a property system within native American Indians. That the latter concluded was tied to the influence of the burgeoning new world fur trade. Demsetz argues that property systems emerged as a result of the need to protect property, as its value increased due to growing trade with the European powers. This increased the need to regulate a scarce resource to prevent overhunting, which increased the awareness of externalities to the native hunters. He argues that property systems will arise when the cost of creating and regulating a system of property is less than the externalities faced by not implementing the system. In short, Demsetz's argument is that it is economically more efficient to use a property system when the economic cost of that system is less that the economic cost of not having a system, or, in other words, having the system is more efficient.[488] Leacock concludes that there were efficiencies in having a single family assigned property rights over an area to trap exclusively. [489] Where Leacock is content to observe, Demsetz creates a model to overlay, examining this as a decision over which economic considerations are at the fore. There is no evidence, however, that this was the reason for the evolution of property rights in the example; it is simply one argument as to why the evolution happened in the way it did. This ultimately assumes and imposes a modern structure of value and framework of economic thinking, the kind of thinking that it is not clear is appropriate to attribute to the actors at the time.

Conclusions

This chapter has explored a very particular view of property that emerges from economics, with the flow of economics presented as a capitalist assemblage, reducing property to monetary value, and utilising it to model maximising behaviour. It simplifies and abstracts, reducing complexities while homogenising its subjects. It presents itself as rational and

[486] Harold Demsetz, 'Toward a Theory of Property Rights' (1967) 57 no. 2, The American Economic Review, 347.
[487] Eleanor Burke Leacock, The Montagnais "hunting territory" and the fur trade, (Menasha; American Anthropological Association 1954).
[488] Demsetz (N.486).
[489] Leacock, (N.587).

rationalising, with certain representative and predictive features that allow it to be used as a basis for choice. It supports ideological positions and presupposes certain capitalist goals and behaviours; it justifies while constructing that self-same view. In taking on these elements, it becomes useful to the paradigm of economics, serving to allow the construction of economic narratives that are convincing and 'scientific.'

For the purposes of this view, the prime elements of property are control of assets, allowing for exchange, having, and holding value, and protecting the economic function of assets from interference. This view relies on assumptions of 'the market' and optimally facilitated with clearly defined rules that are easily enforceable. This belies much of the complexity of actual property relationships, again operating to simplify and in many ways idealise the systems that operate surrounding property away from 'blackboard economics'. However, even in operating in this simplicity, it functions perfectly well for many of the transactions that prove central to day-to-day life and a lot of large corporate thinking that economics serves to consider. In this manner it makes sense to consider it as influencing the 'dominant' western concept of property and being dominated by its exemplary forms of interactions.

There is a central tension in this approach to property, the fight between simplicity and complexity and its utility in economics. Pointing again to Coase's argument that property relationships need to be understood through the institutions and social organisations that go beyond abstract economic analysis, it is clear that for the purposes of modern economics, simplicity is all that is necessary.[490] Ignoring complexities has allowed for an expansion of models and modelling, increasing its apparent utility and in doing so strengthened its position through increasing repetition.[491] The simplicity of models are persuasive, they operate as boundary objects mapping real problems, allowing different disciplines to come together around the accessible numerical representations. Models allow for a presentation of the 'scientific', a method to construct a methodologically valid 'truth'. This is not just persuasive but persuasive to the role of economists. In this manner, simplicity appears to win, no matter the externalities this imposes on the concepts it simplifies.

Perhaps the key point from the work of economics is a reduction of property to value. No matter the way it is done, property or individual property rights can be replaced simply by value. This might disregard much of what makes a particular object significant or important, shaking off the complexities of personal and social significance, or reducing these to yet

[490] Coase, Social costs (N.397).
[491] This follows the idea that as a paradigmatic exemplar problem solution, repetition reinforces the strength of the method.

another number. Economics persuades you that property is valuable, relying on the appeal of money, but only the value that is recognisable to economics.

Chapter 4 - Property and/as law

***Numerus Clausus* – An economic coda**

Throughout the discussion of property in economics, the theme of 'strong', well-defined, and clearly delineated property rights recurs. In particular, some approaches to property rights looked to the law to provide these definitions and mirror its delineation of rights. Within English law exists, at least in theory, a list of well-recognised and well-defined rights that both serve to classify the rights to property whilst also acting as a pseudo-limit on the types of rights available as property rights. These rights take on a special character as compared to the more general rights available in contract. Generally referred to as the 'numerus clausus' principle, this provides a framework for understanding the boundary of 'property rights'. Before diving fully into the conceptual apparatus of the operation of the law of property, this section will consider the topography of property in law. By necessity, this section will consider to what extent this forms a foundation from which to consider legal property rights, its stability in operation, and where the justifications are both for its operation and utility.

In theory, the '*Numerus Clausus*'[492] principle provides clear, delineated categories of rights that are capable of being enforced as property rights. As a product of the operation of the common law, it is not so much an explicitly stated rule, rather expressing itself through judicial reticence to create other types of property rights. Perhaps best expressed by Lord Brougham, "it must not be supported that incidents of a novel kind can be devised and attached to property at the fancy and caprice of any owner".[493] This general approach was exemplified in Hill v Tupper, where an 'exclusive contractual licence' to hire boats was given within a lease.[494] When this 'right' was infringed, it was held that the contract was not capable of creating such a property right in Law.[495] Whilst potentially this could have been justified as an easement, an easement could not be found, as any potential easement could

[492] Literally closed number, but generally closed list.
[493] Keppell v Bailey [1834] EWHC Ch J77, 39 ER 1042.
[494] Hill v Tupper [1863] 159 ER 51.
[495] Though technically it may have been enforceable as a contractual right as against the lessor.

have only been for the benefit of a rental business,[496] with Pollock C.B. stating, "a new species of incorporeal hereditament cannot be created at the will and pleasure of the owner of property; but he must be content to accept the estate and right to dispose of it subject to the law as settled by decisions or controlled by act of parliament".[497]

These two early statements on the limited nature of the types of rights resonate throughout modern legal practice. Merrill and Smith in particular note that within the Anglo-American legal tradition, while the principle is not often directly named or addressed, the limited nature of property rights is observable throughout legal practice, with little practical deviation from a doctrine of fixed estates,[498] except in very fringe areas.[499] The practical consequence of this is that the courts are generally unwilling to be convinced of new forms of property rights outside well-established rights, leaving it as a matter for legislation to create or remove forms from this list.

Within English law, the most clearly delineated rights are those that are capable of existing over land. There are fourteen rights that are considered as capable of existing over land.[500] 'Land' in this case refers to the ground, buildings, crops and other vegetations, goods that have become affixed to the land alongside the tenure of the estate that exists over it.[501]

1) Absolute ownership / fee simple absolute in possession[502] / freehold Title
2) Leasehold / term of years absolute.[503]
3) Easements
4) Restrictive covenants
5) Mortgages
6) Rights under a trust
7) Licences coupled with an interest / a licence coupled with a grant[504]

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[496] Hill, (N.494) citing Ackroyd v Smith (1850) 10 C.B. 164 on the principle that easements must be for the enjoyment of the land and be annex to that same land.
[497] Ibid.
[498] The clearest explanation of this is under section 1 of the law of property act 1925.
[499] Thomas W. Merrill and Henry E. Smith 'Optimal Standarization in the Law of Property: The Numerus Clausus Principle' (2000) 110 no. 1, Yale Law Journal, 1.
[500] These are represented in some form in most textbooks on the subject of land, See Barbara Bogusz and Roger Sexton, *Complete Land Law* (Oxford University Press 2019) table 1.1, Martin George and Antonia Layard, *Thompson's Modern Land Law* (seventh edition Oxford University Press 2019) and Simon Gardner and Emily MacKenzie, *An Introduction to Land Law* (fourth revised edition, Hart Publishing 2015).
[501] For a further definition see the law of property act 1925 section 205(1)(IX).
[502] An estate that continues its existence for as long as some can inherit it, that is without condition, that is current.
[503] Must grant exclusive possession and be for a definitive length of time, either periodic or fixed term – see Street v Mountford [1985] UKHL 4.
[504] There is some debate surrounding this rights' existence. This type of right arises in relation to another right over land, for example granting a profit a prendre or a lease over an enclosed plot of

8) Profits a prendre
9) Rent charges[505]
10) Rights of entry
11) Estate contracts
12) Options and rights of pre-emption [506]
13) Equity by estoppel / mere equities [507]
14) Home rights [508]

By contrast, rights to chattel and personal property relies on much broader categories. Personal property law represents an exceptionally wide territory, covering "the law governing wealth and resources, save that one important category of resources [namely land] is carved out. Personal property is therefore a residual category".[509] somewhat paradoxical for a supposed 'closed list', anything that is not land falls within its scope.[510] Importantly to allow for the variance between the different subjects of property, there is a divide into two overarching categories of property. Turning to Blackstone's commentaries "Property in chattels personal may be either in possession; which is where a man hath not only the right to enjoy, but hath the actual enjoyment of, the thing; or else it is in action; where a man hath

land comes with it an implied licence to pass through the surrounding land. This can also arise for example with a sale of chattel situated on another's land which comes with an implied right to access the land to claim it. Where a licence would be freely revokable and purely personal, this has a different character and enjoys some degree of proprietary protection. This *might* better be understood as a form of easement, though that too is somewhat unsatisfactory regarding the chattel example. See Gardener, (N.500). S.17.4.

[505] Parliament limited the application of this right with the Rentcharges Act 1977 rendering it relatively rare in practice.

[506] Rights of pre-emption are property rights only in the context of registered land – Land registration act 2002 ss 115.

[507] Ibid, ss 116 (b) – the proprietary nature of mere equities has been called into question; it may be an equitable right that operates in personam rather than a right in rem which would limit its proprietary nature. The ability to be enforced against third parties it has been argued is a consequence of a chain of affected consciences. See Jack Wells, What is a Mere Equity? An Investigation of the Nature and Function of So-Called 'Mere-Equities' (PhD thesis, University of York, 2019).

[508] The list of rights presented are generally understood as the key property rights, however they are mostly concerned with an understanding of how property rights to land operate. The reality of this is that property rights are in general understood through the lens of land with the vast majority of academic approaches considering this issue. This is as much a historical problem as it is a contemporaneous one with Blackstone stating "Our antient law-books, which are founded on feodal provisions, do not often condescend to regulate this species of property. There is not a chapter in Britton or the mirroir, that can fairly be referred to this head; and the little that can be found in Glanvill, Bracton and Fleta, seems principally borrowed from the civilians." From Bl Comm, 1st edn (1765–1769) (University of Chicago reprint edn, 1979) II 386: For a further discussion of this problem see Michael Bridge, Louise Gullifer, Kelvin Low, Gerard Mcmeel (ed), The law of personal property 3rd edition, (2021, Sweet and Maxwell) S.1(D).

[509] Bridge, (N.508) 1-014.

[510] Though this is not absolute with a number of limitations, people and body parts are generally excluded from ownership for example. A further example of Information will also be considered below.

only a bare right, without any occupation or enjoyment."[511] Modern definitions have further subdivided this classification to highlight peculiarities of particular arrangements,[512] while reinforcing the distinctions between tangible and intangible forms of personal property.[513] Intangible property present two oddities, firstly, that patents and patent application are not things in action and yet are still personal property,[514] secondly, carbon emissions allowances have been treated as property outside the traditional binary.[515] in spite of these curios, the most concrete statement of the law remains Fry LJ's dictum that "all personal things are either in possession or in action. The law knows no tertium quid between the two".[516]

The property of possession

Where rights over land create a clearly delineated list of interests,[517] The law of personal property depends on deploying a smaller catalogue of broad rights that are stretched to fit a wide range of circumstances.[518] Sheehan argues that personal property is capable of being held in three ways, total ownership, under a trust, or as a security interest,[519] providing a reasonably well structured conceptual arrangement of property, with legal title, beneficial title, and a clear list of types of security interests across legal and equitable forms. Possession somewhat challenges that these are the only rights available,[520] as it is clear that that possession in certain circumstances operates as a property right.[521] Conceptually it has been proposed that factual possession might give either a qualified protective right to property, an alienable property right as if an owner, or provide a legal presumption to ownership.[522] While personal property might seem to be limited in ways similar to land, this

[511] Bl Comm, II 389.
[512] Sheehan for example identifies two types of intangible property, choses in action and documentary intangibles, choses in action that embody a physical presence. Duncan Sheehan, *The Principles of Personal Property Law* (second edition, Hart Publishing 2017)
[513] Ibid, 2. This appears to resolve the patent problem below, see also Bridge (N.508) ss. 1(B) - interestingly documentary intangibles represent a combination of both forms of property expressed in a single good. With the importance being stressed on the intangible right yet still mediated through rights to physical possession.
[514] The patents act 1977, s.30(1).
[515]Armstrong DLW GmbH v Winnington Networks Ltd [2012] EWHC 10 (Ch), [2013] Ch 156.
[516] Colonial Bank v Whinney [1885] 30 ChD 261.
[517] Helped by the limitations created within the Law of Property Act 1925.
[518] See Stephen Munzer, 'the commons and anticommons in the law and theory of property' in Martin P. Golding and William Edmundson (eds), *the Blackwell guide to philosophy of law and legal theory* (2005, Blackwell), Pg.156.
[519] This includes both non-possessory securities including mortgages and fixed and floating charges or possessory security such as the contractual lien and the pledge. See Sheehan (N.512).
[520] As the name 'choses' in possession' indicate there is a certain element to which the possession remains central to the proprietary interest. See Jonathan Hill, 'Chapter 2: The Proprietary Character of Possession' in Elizabeth Cooke (ed) Modern Studies in Property Law Volume 1 (Hart Publishing 2001).
[521]Frederick Pollock, An Essay on Possession in the Common Law (first published 1888, part 3 by Robert Samuel Wright, Forgotten Books 2018), Pg.22.
[522] Luke Rostill, *Possession, relative title, and ownership in English law*, (OUP 2021).

is muddied because of the range of objects that the rights must cover and complicated by the quotidian arrangements like possession that it must contend with.

Possession is at best conceptually unclear, with it being said that 'in truth the English law has never worked out a completely logical and exhaustive definition of "possession".[523] The term possession, stretches across a range of circumstances, with some arguing that it lumps together too many distinct circumstances.[524] Bridge et al. identifies three core uses of 'possession', the interest of possession itself, distinct from ownership but potentially linked by operation of law or contract.[525] 'vindicatory possession' that provides the rights that protect property through tort, usually through interference of property claims.[526] Finally, possession as a form of acquisition where transfers are perfected upon delivery, with possession symbolising the transfer of title.[527] Sheehan instead classifies types of possession considering de facto possession,[528] legal possession,[529] and constructive possession[530] that he argues create a relative title to an asset and a rebuttable presumption of ownership.[531] Where title to an assets it generally seen as a property right itself, Rostill argues that possession is merely a condition to acquiring a claim to ownership, with ownership being the property right.[532] Swadling on the other hand argues that ownership is impossible in systems with relativity of title,[533] and that possession cannot act to presume a proprietary interest, with presumptions only being as to fact and not law.[534] In amongst this mess the courts appear to accept a link between possession and ownership, with the best relative title appearing to be cast as ownership.[535] Accepting this at face value, legal ownership might simply be an extension of the strongest case for possession which as a concept encompasses a range of different factual arrangements of varying strengths.

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[523] Frederick Pollock, *An Essay on Possession in the Common Law*, (first published 1888, part 3 by Robert Samuel Wright, Forgotten Books 2018).
[524] Bridge, (N.508), Ch 11.
[525] Ibid.
[526] Ibid.
[527] Ibid.
[528] The layperson's version of possession, requiring both factual possession (*Corpus possessionis*) and the intent to possess (*animus possidendi).*
[529] This gives control over the factual use of an asset. This requires only control and not actual possession.
[530] Where a right exists to have physical control delivered immediately. This extends to control of documents like bills of lading that grant this instant right to possession. This can also be qualified with rights that are conditional.
[531] Sheehan, (N.512).
[532] Luke Rostill, 'Relative Title and Deemed Ownership in English Personal Property Law' (2015) 35 no. 1, Oxford Journal of Legal Studies, 31.
[533] William swaddling, 'Rescission, Property and the Common law' (2005) 121 LQR, 123, 133.
[534] William swaddling, 'Property: General Principles' In Andrew burrows (ed.) *English private law* (3rd edition, OUP, 2013).
[535] Yearworth v North Bristol NHS Trust [2009] EWCA Civ 76, [2010] QB 1.

This however is still problematic for understanding exactly what factually possession is. Actually having possession might not amount to 'de facto possession' where there is no intent to possess, rendering the holder as mere 'custodians'.[536] For example, objects held in the course of employment are to be considered in some instances to be possessed by the company with employee acting as custodian.[537] Sheehan examines this point using the example of dinner party guests holding knives and forks, arguing without the *animus possidendi,* they are simply custodians.[538] We might thus consider that even choses in possession, actually possessed may not lead to *possession*. That possession is "essentially factual and indivisible in the sense that at any given time only one person is actually… in possession"[539] is only true as far as it applies to adverse claimants to possession. Any number of factual claims to possession and associated relative title might exist, however between specific parties, only one will be treated as 'in possession' depending on the strength of their circumstance. [540] Where to the laypeople possession might appear factually obvious, conceptual arrangements like custodianship are needed to deal with the complexities the law faces in engaging with the dissonance between fact and necessary legal fiction.[541]

The question of the proprietary nature of possession is perhaps best exemplified by the status of bailment, generally regarded the largest subcategory of the interest of possession.[542] Conceptually, bailments are temporary arrangements by which possession of goods is transferred from a bailor who retains superior title to a bailee who is granted a lesser legal title.[543] This is legal relationship that arises independent of any contract, though in practical terms often arises through contract that sets it conditions.[544] Practically speaking, the core duty of a bailee is to return the goods unto the bailor under the conditions specified.[545] In these instances, the legal relationship is such that both parties retain a legal title and an

[536] Pollock, (N.521). pg.26–27.
[537] Meux v Great Northern Railway [1895] 2 QB 387.
[538] Sheehan (N.512), Ch.1.
[539] Ibid, 10.
[540] If we accept this position, then where there is an 'owner' more generally, as between specific parties it might explain why the one with the best claim to possession can be treated as though they are the 'owner'.
[541] More broadly this could also be a policy decision to conveniently ignore particular parties for liability.
[542] Bridge (N.508) s.12-001, Sheehan (N.512), Ch.10.
[543] Coggs v Bernard (1703) 2 Ld Raym 909, 92 ER 107.
[544] Volcafe Ltd v Compania Sud Americana De Vapores SA [2018] UKSC 61, [2019] AC 358.
[545] TRM Copy Centres (UK) Ltd v Lanwall Services Ltd [2009] UKHL 35, [2010] 1 All ER (Comm) 1098.

interest in the property.[546] Early authors argued that this creates "a temporary qualified property",[547] however in general this might be seen as a form of possessory title.

Property rights in possession are not necessarily clear cut. Historically, Swaddling makes the case that there is no proprietary effect in cases of leases of chattel.[548] McMeel highlights that as bailment straddles the law of obligations and tort and thus issues arising from bailment are usually resolved by contractual or tort principles alone.[549] This has led to a number of cases where the proprietary nature of leased goods has come into question simply because it is not directly necessary or addressed.[550] Where possession in bailment relationship can in general be understood through a specific subset of contract and tort rules,[551] this does not necessarily explain the ability of bailee's to enforce their rights against third parties.[552] It seems likely that, were a court to be pressed, they would consider any form of bailment, and by extension all possessory titles, as a proprietary interest and therefore a property right in and of itself.

On the face of it the concept of possession seems to function as though it is a proprietary right, however this might instead be because it provides a vehicle by which the rights of ownership can be imposed as between parties. Following the logic that in adversarial situations, possession is a question of the strength of relative title, and that this provides 'deemed ownership' where ownership is the best possible claim to possession. [553] Despite arguments that because protection is mediated through possession '[t]here is no concept of "ownership" in English law with regard to goods',[554] This in turn might be explained by considering that any general legal 'ownership' is practically the superior claim to possession. In adversarial situations, the general 'owner' will have a superior claim to possession whereas between different claims to possession the superior will be treated as though they

[546] Again the nature of this right is up for debate, especially in relation to the Bailor. it is clear at least that at will bailment gives rise to an absolute right of reversion that the bailor can always exercise.
[547] William Jones, *An Essay on the Law of Bailments* (first published 1796, HardPress Publishing 2012), 80.
[548] William Swadling, 'The Proprietary Effect of a Hire of Goods' in Norman Palmer and Ewan McKendrick (eds) *Interests in Goods* (second edition, LLP 1998).
[549] Gerald McMeel, 'On the Redundancy of the Concept of Bailment' in Alistair Hudson (ed) *New Perspectives on Property Law, Obligations and Restitution* (Routledge 2003), 265.
[550]On-demand information plc v Michael Gerson (Finance) plc and Others [2002] UKHL 13, [2003] 1 AC 368, appears to have confirmed that financial leases at least do have a proprietary character. Though a problem in this instance is there is no mention of bailment and appears to be done purely through other principles.
[551] Sheehan (N.512). In general, this is a fair way of considering the protection of most property interests.
[552] Ibid – It has been suggested that this might be an operation of the Sine qua non for Locus standi in tort arising from the specific nature of the situation.
[553] Rostill, Relative title (N.532).
[554] Sjef van Erp and Bram Akkermans (eds), Cases, Materials and Text on Property Law (Bloomsbury, 2012).

have the rights to 'ownership'. It has been suggested that possession might provide a precondition for a claim to ownership,[555] however perhaps it might better be thought of as a justification for the courts to apply the rights of ownership as between parties. As to the *Numerus Clausus* principle, possession is not a right itself but a lens through which we might see the right to ownership deployed.

A map of property's territory

As a so called 'residual' category, covering both physical and intangible goods, we might consider the law of personal property as applying to almost everything that is not land, this however is not the case. At this juncture it is pertinent to highlight the examples of human bodies and information as areas over which property is traditionally excluded. The importance of these areas is to highlight territories that been conceptually excluded from property, large for policy reasons, and where within those territories the tide of property has washed in such a way as to necessitate the finding of property. A further example of cryptocurrency, in keeping with the themes in this section, will be explored in more detail in its own chapter.

As a rule, the common law has taken an understandable abhorrence towards property rights existing in individuals, bodies, body parts, and bodily products. Originating as a prohibition against property rights in corpses,[556] living body parts and products are similarly regarded as untouched by property rights.[557] Exceptions to this have been created by statute, notably in the human tissue act[558] and the Human Fertilisation and Embryology Act[559] to facilitate advances in medical technology, research, and to preserve human fertility.[560] Arguably, the decision in Yearworth may have changed the position, where sperm that had been damaged by a failure in storage equipment was considered to be property, and held on bailment by

[555] Rostill, Relative title (N.532).
[556] R v Sharpe [1857] Dears and B 160 "Our law recognises no property in a corpse, and the protection of the grave at common law as contradistinguished from ecclesiastic protection to consecrated ground depends on this form of indictment", indeed early lines of reasoning on this issue often stemmed from religious objections.
[557] Yearworth v North Bristol NHS Trust [2009] EWCA Civ 76, [2010] QB 1at 30, See also R v Bentham [2005] UKHL 18, [2005] 2 Where it was held that a living hand could not be possessed and therefore the defendant could not be in possession of it as an imitation firearm.
[558] 2004.
[559] 1990, as amended by the human fertilization and embryology act 2008. Though technically speaking it does not advance a traditional proprietary approach, utilising instead a consent-based system. This neatly sidesteps any problematic questions of who gains a proprietary right.
[560] This in itself is problematic. There is no clear indication of how these property rights arise except that they arise surrounding "Material which is the subject of property because of the application of human skill" S.31(9). This as a general principle has been suggested to be the case in Australian law in Doodeward v spence (1908) 6 CLR 406 and appears to have been confirmed as the position in English law in R v Kelly & Anor [1999] QB 621. This considered where a corpse had taken on different attributes, in this case by being preserved for display and teaching purposes, work and skill had made it capable of being property. At least to satisfy the requirements of theft.

North Bristol NHS trust for the claimants.[561] This decision seemed predicated on the purpose to which the bodily product was put, namely that it was to be stored specifically for the benefit of the claimants.[562] Problematically, no principled proprietary base was established over this issue; without this foundation it is unclear exactly when a property right might arise or indeed how far this change might extend.[563] The general rule remains that human body parts or products are not property. Property rights however might be found through the application of skill, for medical purposes, or potentially as part of special reasoning relating to the circumstances surrounding its 'creation'.[564] A generous view of the situation may suggest that ideological objections prevent a process of 'propertisation' or commercialisation of human bodies. A more cynical view is that judges are simply responding to the circumstances to find a fitting solution without directly attempting to create a clearly principled precedent to apply.

Information, as a rule, is also generally not widely regarded as property by law. Excluding, for the sake of brevity, the regime of statutory intellectual property rights, noting only that they are by statute taken to be part of the personal property[565] that encompass a range of rights of which some are clearly proprietary.[566] Outside those circumstances where "information may give rise to intellectual property rights… the law has been reluctant to treat information itself as property".[567] Boardman v Phipps[568] is the key case considering the potential of information as property. Whilst the nature of information was not a deciding factor in the case, its consideration is still illuminating.[569] Lords Hodson, Guest, and Viscount Dilhorne (in dissent) accepted in principle that information could be considered

[561] Yearworth v North Bristol NHS Trust [2009] EWCA Civ 76, [2010] QB 1.
[562] Ibid.
[563] Shawn H.E. Harmon and Graeme T. Laurie, 'Yearworth v North Bristol NHS Trust: Property, Principles, Precedents and Paradigms' (2010) 69 no. 3, The Cambridge Law Journal, 476.
[564] Perhaps this should better be considered division or separation? Following a broad analogy with Yearworth it seems arguable at least that the removal of a hair for the purposes of later making a wig for oneself (if it is capable of being stored for long enough) would likely entail the creation of a property right in the hair.
[565] The Patents Act 1977 S30 renders patents personal property but not a thing in action. With parliament acting to generate a suis generis form of personal property in this manner.
The Copyright, Design, and Patents Act 1988, s.90 provides that copyright is personal property and a thing in action. The Registered Design Act 1949 s.15C provides that registered designs and applications are personal property. The Trade Marks Act 1994 s.22 and 27 do the same for Trade Marks. Between the Copyright, Design and Patents Act 1988 and the Copyright and Rights in Database Regulations 1997 databases are classified as personal property.
[566] See for a discussion of the scope of rights Bridge (N.521), Ch 9. In simple terms the range of protection offered by intellectual property are different from what might traditionally be expected from proprietary rights. See also Emily Hudson, 'Phillips v Mulcaire [2012]: A Property Paradox?' in Simon Douglas, Robin Hickey, and Emma Waring (eds) *Landmark Cases in Property Law* (Bloomsbury 2015).
[567]Your Response Ltd v Datateam Business Media Ltd [2014] EWCA Civ 281, [2015] QB 41, [42].
[568] Boardman v Phipps [1967] 2 AC 46.
[569] Later cases went so far as to refuse to answer this question, see Satnam Investments Ltd v Dunlop Heywood [1999] 3 All ER 652.

property in certain circumstances, while Lord Upjohn (in dissent) and Lord Cohen agreed that information cannot be property. Though in dissent, Lord Upjohn's view has received the most judicial recognition,[570] noting "in general, information is not property at all. It is normally open to all who have eyes to read and ears to hear."[571] Though "equity will restrain its transmission to another in breach of some confidential relationship",[572] this does not mean that confidential information is property,[573] Merely that equity might intervene to impose an obligation of confidence.[574] Where information is not property this has not stopped the language of property being deployed surrounding issues regarding information.[575] As a territory, information remains slightly uncertain. Whilst it might simply be resolved by understanding information as the domain of intellectual property,[576] this does not necessarily neatly cover every relevant aspect of information.[577] The statutory creation of a range of rights to information through the intellectual property regime, by stating it is a certain type of property, prevents problems of analysing where information can be property.[578] Nevertheless, the courts are frequently faced with circumstances that at least touch upon this issue and information remains a notable exclusion from what can be intangible property.[579]

In contrast with the idea that personal property is a residual class, the limitations as to what might be considered personal property serves to challenge the idea that it can simply be applied to any situation which is unclear. Between the domains of land and intellectual

[570] OBG limited and others V Allan [2007] UKHL 21 at [277].
[571] Boardman v Phipps [1967] 2 AC 46, Pg.127–128.
[572] Ibid.
[573] See for example, Oxford v Moss (1979) 68 Cr App Rep 183 and OBG V Allen [2007] UKHL 21
[574] Vestergaard Frandsen A/S v Bestnet Europe Ltd and Others [2013] UKSC 31, [2013] 4 All ER, [25], and more generally Malone v Metropolitan Police Commissioner [1979] Ch 344, 361. Douglas v Hello! Ltd [2005] EWCA Civ 595 provides an odd case in that contractual relations were treated to impose exclusivity arrangements on third-parties, however principally this was an outlier.
[575] Tanya Aplin, 'Confidential Information as Property' (2013) 24 issue 2, King's Law Journal, 172.
[576] Though the exact borders of what counts as intellectual property is still shifting. Perhaps there is a class of information that is intellectual property but not 'property' which leads to understandable confusion in language. See Hudson, (N.566).
[577] For example, software and information stored digitally that do not fall under copyright. Video games also raise interesting problems. Under the Copyright, Design and Patents Act 1988, individual parts of a video game are protected by copyright, including its art and code, rendering that which makes up a virtual world capable of being owned. In the cases of massively multiplayer online games there exists real systems of social relations and virtual economic systems operating between individuals around the world. While any rights to ownership to in game assets is generally excluded by the terms of service, there still exists a general promotion of the real world value of virtual objects, objects which in theory could be the subject of a legal case surrounding property rights.
[578] For more discussion on the subject see Paul Kohler and Norman Palmer, 'Information as Property' in Norman Palmer and Ewan McKendrick (eds) *Interests in Goods* (second edition, LLP 1998).
[579] Most often utilising an analogy with property to justify their reasoning. Even where information is not property, the spectre of property and the implicit assumptions that are entailed within the structure of property often inform the decisions. Exemplified in Boardman v Phipps [1967] 2 AC 46, [1966] 3 All ER 721.

property, relatively ill-defined personal property is left to fill in the gaps, however personal property is itself limited does leave some conceptual space which is not covered. Raising questions as to what should fill those spaces.[580] The preceding examples show how statutory intervention has resolved similar problems with the regime of intellectual property[581] and the human body, largely in response to changing needs of society.[582] Likewise, changing social and technological circumstances have seen certain objects dematerialised but maintain a consistent identity within property.[583] Taking a generous view, it might be that the rules for personal property are the most appropriate to apply to unconventional assets as they arise. A more cynical view is perhaps that it is a convenient tool to reach for, even when this seems unprincipled or problematic for the concept of property, in order to reach a satisfactory conclusion.

Where statutory intervention has extended existing property forms to new circumstances, judicial recognition of property rights unsurprisingly has taken a case-by-case approach. As a general test for when a right will be capable of being a property right, Lord Wilberforce's statements in National Provincial Bank ltd v Ainsworth[584] provide the key requirements;

> Before a right or interest can be admitted into the category of property, or of a right affecting property, it must be definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability.[585]

In this case, the court was required to consider the nature of a deserted wife's right to reside in a matrimonial home, where it was found that this was a personal right as against the

[580] Cryptocurrency as an example of this problem will be explored in chapter 6 and 7.
[581] In this instance taking about the very rights of intellectual property rather than information more generally. The general reticence towards recognising information as property as noted previously might come from its non-rivalrous nature, further as a general matter of practicality it is often difficult to identify the source of information. Intellectual property rights comparatively are specific rights arising from information, being potentially rivalrous with clear ways of identifying who should possess a right. It is these specific rights that are granted the status of personal property.
[582] In particular this might have relevant to resolving some of the issues exposed with cryptocurrency, however, as will be explored this model might not work.
[583] For example, shares under S.541 Companies Act 2006 are personal property. Both physical and dematerialised shares share the same status in terms of property, with the statute ensuring this continuity. Perhaps as a general point it does not seem odd to maintain this continuity, however would the concept of shares if it were to arise today as a purely digital assets be so naturally considered personal property within the law?
[584] National Provincial Bank Ltd v Ainsworth [1965] A.C. 1175.
[585] Ibid, Pg.1247–1248.

husband,[586] not an equitable entitlement that was capable of attaching itself to the home.[587] This was set against a background where a 'deserted wife's equity' had historically been recognised as against the husband, however it did not satisfy any of these requirements as against third parties in the opinion of the courts. This test has subsequently been used to recognise property in difficult circumstances including carbon emission allowances[588] and cryptocurrency[589] both of which were found to satisfy these requirements. As a general point, the reticence to find for a deserted wife might reflect a hesitancy to expand on the statutory rights over land, [590] and to burden marital homes specifically. [591] In contrast, finding rights akin to personal property is merely expanding the category of objects over which those rights apply. In each case, it is the ability to transact and maintain economic value that is being protected.

Closing the *Numerus Clausus* principle

In theory, the operation of the *Numerus Clausus* principal limits what might be considered 'property rights', the importance of which is in their ability to be enforced against the world. These rights, in classical Roman formulation '*in Rem*' rights, are rights that inhere themselves of the object to which they are ascribed and in doing so are enforceable against third parties. These contrast with personal rights, or '*in personam*' rights that are enforceable only as against an individual. These are generally the domain of the law of obligations and often specifically governed by the rules of contract. With freedom of contract a central tenant of the English legal system, almost any right can be created as a matter of contract.[592] Likewise, the doctrine of privity generally provides that only those party to the contract can be bound by it. The interplay between these positions is such that whilst a contract cannot create a new novel property right, a right that operates over 'property' within a contract can still take effect as against the person who created it. In theory, the *Numerus Clausus*

[586] Per lord Wilberforce, there was a semi-recognised doctrine of 'deserted wife's equity' that prevented a husband from removing the wife. The nature of this right was generally considered a an 'equity' 'licence' or 'status of irremovability' prior to this case, which did not help to clarify the nature of the right.
[587] Finding a proprietary interest in this case would have allowed it to operate as an overriding interest under what is now section 27 and schedule 3 of the land registration act 2002 (née section 70 Land registration act 1925). Combined with her actual occupation this would have allowed her to resist the bank's attempt to possess the property.
[588] Armstrong DLW GmbH v Winnington Networks Ltd [2012] EWHC 10 (Ch).
[589] AA v Persons Unknown [2019] EWHC 3556 (Comm) – This will be considered further in chapter 6, at this juncture it is worth noting that this did not lead to a general finding of property but of a specific contingent proprietary nature pursuant to a particular limited function.
[590] Namely the law of property act 1925.
[591] This might also be complicated factually, for a deserted wife's equity would have necessitated understanding when and where a wife truly becomes deserted. A more general wife's equity in her husband's property was also rejected as it would not act *in rem*.
[592] Though as a matter of public policy certain arrangements will not be enforceable. Those that have an illegal purpose being the most striking example.

principle determines when the right should be proprietary and allows for a basis from which contract can operate over those rights.

The justification for the *Numerus Clausus* principle is generally argued from the perspective of increasing the transactability of property and an overall economic perspective. As a starting point, Foëx argues that property rights having effect against the world necessitates that they are known to the world to justify their existence.[593] Rudden argues that limiting the list of rights helps provide notice of the rights; consent to the type of rights[594] prevents endless burdening of successors in title and reflects the absence of demand for further rights.[595] Merrill and Smith present this issue in the light of optimal standardisation; by having a fixed list of rights and interests, it reduces information costs for transactions whilst still allowing a defined set of collections of rights that can be traded efficiently.[596] Allowing for endless customisation would create a burden on third parties to understand the rights that bind them, while too restrictive an approach would serve to frustrate legitimate goals that do not comply with simpler all-encompassing rights.[597] This creates a view of the numerus clausus principle that acts to standardise property interactions through a limited set of rights that help facilitate ease of transacting. This provides the well-defined rights that are needed within an economic view, which in turn being about transactions and marketability, helps justify the limiting of property rights in general.

To serve these functions, the list must also be relatively stable and consistent. Merrill and Smith argue that there is a channelling function of the principle towards the legislature.[598] This creates stability over time by centralising change to larger scale reforms that are more costly to generate and implement whilst also operating as a forum for ensuring changes are well broadcasted. Judicial decisions on the other hand are less well publicised and are more likely to generate smaller, piecemeal changes that are more variable in policy from decision to decision.[599] It is perhaps difficult to understand the extent to which this impact judicial decision making, however the general reticence of the courts to create new property rights may well reflect this reasoning.

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[593] Bram Akkermans, Citing Bénédict Foëx, 'Le numerus clausus des droits réels en matière mobilière' Lausanne: Payot 1987. In "the numerus clausus of property rights", Maastricht private law institute, Working paper no.2015/10.
[594] Though this argument fails unless one takes a social contractarian view of society.
[595] This raises a question of 'Who's demand?' If society in general, then perhaps we would expect to see more judicial rather than parliamentary movement on this issue.
[596] Merrill, (N.499).
[597] Ibid, Pg.69.
[598] Ibid, Pg.63,69.
[599] Ibid, Pg.63-64.

It is submitted that the economic justification of the *Numerus Clausus* principle explains the well-defined areas of property without being undermined by those areas that appear less well defined. It is trite to say that a lot of wealth is tied into land, with transactions surrounding real property having importance both to individuals and throughout the commercial world. Likewise, it is trite to say that land and its associated rights are important within economics and to the economy. To ease transaction we would expect to find clearly defined rights and indeed, in respect of real property, there are clear rights with a clear scope. This is supported by a system of registration that helps to reduce the information costs needed to engage with the system.[600] This position is largely based in the reforms in the 1925 Law of Property Act that had as its aim the simplification of the conveyance of land in part achieved by way of simplification of the range of rights that operate over land.[601] The rights most clearly associated with enabling transactions are simple and well defined, with more complex arrangements being those that do not obviously enable transactions.[602] Land's value is well served by stable rights and realising that value in turns acts to help provide stability to the forms of property that enable that value.

The law of personal property is comparative less clearly defined and functions less concretely, however, this lack of stability facilitates its economic function. Compared to land, less value is wrapped up in personal property and functionally it is possessable or actionable in much less complex arrangements, with fewer circumstances where a third party would require an interest that needs to operate over it; thus, the rights that operate over them can be less complex and less well defined in response. As key rights, ownership, beneficial ownership, and a range of security interests fulfil the need to monetise personal property, where possession protects the monetary value of the thing itself. Where the right to possession and use of an object of property is necessary within economics, the actual legal arrangements by which this takes place are largely irrelevant.[603] The economic utility of property is ultimately served by a simpler and more flexible approach to rights, even where they are less legally certain or well defined.

Real property law has been portrayed as having concrete forms of rights, however there are some cracks in this stability. Where it cannot clearly be said that new rights have been

[600] Though this is not by any means a perfect system. S.29 and schedule 3 of the land registration act 2002 details overriding interests that defy a system of perfect registration. Schedule 3 serves to limit the range of possible rights that can apply without registration however they still represent a complicating factor for transactions and undermine a register that facilitates transactions.
[601] S.1 LPA 1925.
[602] Compare for example *profits a prendre* and mere equities. The former being clearly defined and transactable, the latter being ill defined and an extension of the jurisdiction of the courts.
[603] In terms of information costs, do I have the right to possess is perhaps the only question that one might have to ask themselves in relation to personal property.

established by the courts in relation to land, there has been a certain amount of redefinition and expansion of the activities that can be contained in an easement. As a general proposition, easements were considered to have four key characteristics (1) separate ownership of (2) a servient and dominant tenement (3) the former accommodating the latter in respect of (4) a right that is capable of being granted.[604] These were generally understood not to burden the servient owner with obligations to maintain facilitates and were not capable of being granted in respect of purely sporting or recreational rights.[605] The recent case of Regency Villas Title Ltd and others v Diamond Resorts (Europe) ltd[606] however opened the door to purely recreational easements. In this case, the dominant tenement was granted an entitlement to free access to recreational facilitates situated on the servient tenements. By allowing for purely recreational easements to be created specially in contexts where the relationship between the tenements is one that is itself recreational, it has " undoubtedly broke[n] new ground within the context of easements".[607] In the case it was recognised that in part, this change was in recognition of changing social attitudes, specifically towards sporting activity and that the "common law should support structures which promote and encourage it, rather than treat it as devoid of practical utility or benefit".[608] While this might historically have been relegated to a merely personal contractual licence to utilise facilitates, the expansion of the remit of easements in recognition of changing social dynamics raises questions as to the extent to which the social realties regarding property can and should give rise to new rights.[609]

Perhaps we should reframe this picture for a moment, presenting it not as a tension between well-defined and ill-defined areas of law but as a force for standardisation. The law of real property imposes standardisation, it projects this standardisation across the realms of the economic and the social. There is a need to conform, to collapse the differential that exists within different social worlds into the forms of the legal and economic world. The law registers, recognises, and records these limited forms to standardised property, the rights in it, and the interactions surrounding it and in doing so takes rights in soil, bricks and mortar and makes it concrete. That which is not standardised to it is either modified or interpreted so that the standardisation is super imposed or is rejected. The law of personal property standardises too, yet, rather than standardising, it provides a standard. It makes things

[604] Re Ellenborough Park [1956] Ch 131.
[605] Ibid.
[606] [2018] UKSC 57.
[607] Ibid, per Lord Briggs, Pg.74.
[608] Ibid, Pg. 76,81.
[609] See Yun-Chien Chang and Henry E. Smith, 'The Numerus Clausus Principle, Property Customs, and the Emergence of New Property Forms' (2015) 11, Iowa Law Review, 2275 which argues that Taiwan has often shown willingness to adopt localised property customs when the practices have low information costs but create a great deal of value.

'property', imbuing them with a broad existence, with ill-defined rights, providing a base from which to engage with the social and economic but projecting less into their worlds. There are standard economic and social interactions with property, recognised rather than restrained by this broad approach. It takes social and economic interaction and finds a way to recognise its salient features, though not always extending to make legal property everything the social and economic world might expect.

Again, there is a tension with social understandings, as it sometimes misunderstands the economic and the legal dimensions of 'property'. Economic approaches centre on transactions, the law on defined rights with respect to things, whereas the social engages in transactions with things that might not necessarily map themselves to the legal and economic understandings. In engaging in transactions with those things it believes to be property, as though the category of property applies, the law is expected to understand, protect, and recognise this as property. Quotidian activity is unbound by the forms and constrains of the law,[610] though most of it neatly falls within its scope by design, there exists times where it escapes the boundaries of legal property.[611] The law, faced with fitting the complexity of human interactions and relationships within the small boxes, translates the narratives of people into its language, grammar, and structures, with courts judging not just outcomes but the nature of the question. The *Numerus Clausus* principle is, to the law of England, perhaps a silent partner, that is nevertheless a castle standing upon shifting sands.

English law and property

Property rights are a ubiquitous aspect of daily life. The relationships we hold, both with the objects that surround us and in the land we live upon, performs a vast range of legal structures and processes, a fraction of which is readily appreciated in quotidian practice. This oft hidden world of legal structures and processes both define and are defined by the activity that it seeks to categorise and control. From cars to cups, footballs to fences, all kinds of tangible and intangible things are in part defined by the rights we have in them. Property law also dictates the kinds of relationships we have with each other in respect to

[610] Sometimes borrowing the ontological force that is associated with the law. Though not a key focus of the case, within Regency villa, how was the proposed easement understood by those who bought the timeshare? If it was presented as part of any agreement, would it not have had at least the appearance of a legal right? While ignorance is no defence, and without it there was no failure of consideration or any indication it was an essential part of the barging, should a layperson be expected to understand upon reading in a legal document the impossibility of a particular right?

[611] As will be explored in chapter 6, Cryptocurrency is in a limbo state and yet it appears as property to the layperson. An alternative example, while creating rights over real property is generally formalistic and rarely created inadvertently, social interactions, and relationships that fall short of the legal requirements but still replicate forms of property rights are sometimes recognised elsewhere in law. Sometimes these are caught by contract, sometimes equity, other times they do not progress beyond the merely social arrangements.

things. Property defines the rights that we have in things that can be enforced against each other and state. Some of these rights are readily recognisable, can be simply understood like the right of ownership or the right to sell. Whereas others, like the arrangements for beneficiaries within a trust remain unfortunately opaque to the layperson. Consequences of being property also stretch throughout the operation of the law, for example, within criminal law theft relies on property,[612] within tort law certain protections rely on being property,[613] within contract so often the subject is property and property rights. Property is an essential part of many areas of the law, is intrinsically linked with social and cultural norms and an essential part of understanding quotidian practice. This chapter will now consider beyond simply what and where property might be found but what the conceptual arrangements for property are when they are found. It will begin by examining at a distance overarching themes in English property law and the history of the area before considering the dominant approaches to the concept of property. This chapter will then consider the stability of any notion of property before concluding that there may well be a need to move beyond stable constructions of property.

English law from a safe distance

To begin considering the conceptual arrangements of English property law, it is worth considering as broad a picture as possible, zooming out to consider two Australian cases, tasked with exploring the idea of property within English Law. Australia was colonised by the British in 1788, superimposing English law over the rights and lands of the Indigenous population. The significance of this for the purpose at hand is that the legal system of Australia is deeply entwined with the English legal system and derives its present property rights from those created and justified by the English legal system. During the latter part of the 20th century, it increasingly began to diverge from English law,[614] viewing English law with an intimate appreciation of its traditions and norms whilst still being able to develop and act in its own interests.[615] This allows English law to be viewed from the outside, revealing a broad picture, that exposes the values within the precedents of English law beyond simply their utility.

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[612] Section 4 of the theft act 1968 for its purposes defines 'property' as including money and all other property, real or personal, both things in action and other intangible property.
[613] The Torts (Interference with Goods) Act 1977 provides a starting point to this issue but as previously considered is largely concerned with possession.
[614] Officially the separation of the legal system took place in the paired acts referred to in the short form as the Australia Act 1986. With an Act passed by the federal Australian Parliament and the other within the UK, in order to effect a severing of the two systems meaning the UK can no longer legislate within Australia and the Australian appeal courts no longer have reference to English courts.
[615] Australian Consolidated Press Ltd v Thomas Uren [1967] UKPC 19, [1969] 1 AC 590 affirmed this very principle.

The first case to be examined is Marbo v Queensland (No. 2),[616] which considered how Indigenous rights to land may be recognised in Australia courts, addressing directly English colonialism and the impact of the imposition of the English legal system. To consider what rights where superimposed by English colonisation, they were forced to review what these rights consisted of. examining the issue through medieval ideas of rights deriving title from the absolute ownership of the land by the crown,[617] they considered the imposition of colonial rule as the crown adopting the land as part of the Royal demesnes. The English system of real property is fundamentally derived from the tenure system;

> In English legal theory, every parcel of land in England is held either mediately or immediately of the King who is the Lord Paramount; the term "tenure" is used to signify the relationship between tenant and lord.[618]

This is a relationship between the individual and the sovereign rather than a relationship between the individual and the land.[619] The courts go on to observe this is something of a legal fiction, citing Blackstone's commentaries on the law;

> it became a fundamental maxim, and necessary principle (though in reality a mere fiction) of our English tenures, 'that the king is the universal lord and original proprietor of all the lands in his kingdom.[620]

A number of theories were proposed within the case to explain why or how this might have come to be in Australia,[621] however for the purpose of the case it was conceded that it did not matter which it was and merely that the idea that the sovereign was the source of these rights was well enough established that no other alternative system of acquisition of land could be considered.[622] To deny this, would require judges to reground property in a new theory, or worse, leave a question mark hanging over the origins of Australian real property, which risks undermining the perceived historicity of existing property relationships.

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[616] Mabo v Queensland (No 2) [1992] HCA 23 (1992) 175 CLR 1.
[617] Ibid, Citing Randwick Corporation v. Rutledge (10) [1959] HCA 63; (1959) 102 CLR 54, at p 71 as definitive of this proposition.
[618] Ibid, citing Attorney-General of Ontario v. Mercer (1883) LR 8 App Cas 767, at pp 771-772.
[619] Ibid.
[620] Ibid, citing BL II, ch.4, 50-51.
[621] One of particular significance is that Australia was treated as '*terra nullius*' unowned space within which there was no property rights assigned to the local population. Even within the context of colonial Britain this was something of an outlier, with the comparable situation with north America *officially* rejecting the idea, and the subsequent colonisation of New Zealand specifically signing a declaration that acknowledged Māori ownership. Commentators suggest that this arrangement was a particular choice arising in response to anthropological misunderstandings of the local aborigine population, a choice which once it had been put in motion was almost impossible to reverse, simply because it would reverberate across the legal and social world that had been created on that foundation. Stuart Banner, 'Why Terra Nullius? Anthropology and Property Law in Early Australia' (2005) 23 no. 1, Law, and History Review, 95.
[622] Mabo (N.616) 89-91.

The justification for property within the Australian system the imposition of the English system based in a grant by the sovereign. Even as a fiction it provides a necessary justification that explains existing arrangements, a point from Australian property systems can be legitimised. In highlighting this historicity of systems of property, we might look for the same in English legal system but might question from when they might begin.[623]

A second key observation from Mabo is the recognition of the limited nature of property rights. Discussion was given to the structure of the indigenous society and the primarily community-focused usufruct rights they appear to exhibit.[624] The case comments on the tendency of English law to be reductionist in the type of rights that should be understood, referencing the idea that there is "a tendency, operating at times unconsciously, to render (native title to land) conceptually in terms which are appropriate only to systems which have grown up under English law".[625] This repeats the idea of the *Numerus Clausus* principle as a standardising force, while also highlighting that in practice this lead to tension with local arrangements for property.[626]

The second case of interest provides a simple view of what is largely accepted as the orthodoxy with English property law. Yanner v Eaton summarises the nature of rights in English law by stating that rights are specifically those relationships between people to things. [627] This case considered Indigenous rights to hunt animals considering the Fauna Act 1974. Identifying that "property is a notional concept describing a legal interest or legal relationship, the content and intensity of which varies greatly according to context".[628] The key question here was what rights the Crown had acquired in fauna within Australia. The rights in question had to be consistent with a statute that created a system of licencing for hunting and the common law position that wild animals are generally incapable of being owned absolutely.[629] If the crown was vested with absolute ownership, this would have negative ramifications for the ability of third parties to engage with animals, while also in effect ending rights to Native title.[630] In the circumstances, they decided that the rights of the crown within the Fauna Act were specifically those that enabled the Crown to limit what

[623] Though another legal fiction helps sidestep this problem. While the land, the people and the need for property rights (though not ones that might be recognisable in modern terms) have existed long before written record, legal memory was capped for property rights by the first act of Westminster (1275) to the 6th July 1189.
[624] Mabo (N.616)
[625]Amodu Tijani v Secretary, Southern Nigeria [1921] 2 AC 399, 403.
[626] Highlighting issues of 'translation' of property. see Pg.55-57.
[627] [1999] HCA 53, [17].
[628] Ibid.
[629] Citing bl comm II at 14, 391, 395 for the proposition that there exists only a qualified property in living animals. This approach was recently affirmed in Borwick Development Solutions Ltd v Clear Water Fisheries Ltd [2020] EWCA Civ 578, [2021] Ch 153.
[630] Granted under the native title act 1993 that itself was built upon Mabo v Queensland (no 2).

might be taken through a protective licencing scheme. To the majority, understanding property rights requires viewing them in context with that context shaped in part by the legal understanding of property being applied.

Questioning the bundle of rights – A second refrain

Foremost of the theories surrounding the nature and content of property rights in law is the 'bundle of rights' theory, a combination of Wesley Hohfeld's analysis of the jural relationships surrounding rights[631] and Tony Honoré's 'incidents of ownership'.[632] This approach considers property as an abstract set of relations that are held vis-à-vis other people. On the surface, there is an inherent appeal to the customisability and divisibility of the bundle of rights theory that has made it popular, however, the incompatibilities of its two constituent viewpoints and their supposed relations to 'things' undermine its value as an explanatory theory.

Hohfeld's project was to provide an analytic framework with which to consider fundamental rights between individuals through a set of key relationships structured around eight core forms of rights dived into four pairs of jural correlatives. These four relationships represent the 'positions' held by two parties, with each side 'holding' one half of a correlative pair.

1) Rights (or claim rights) - A right or a claim right exists where A has a claim that B does X if and when B has a duty to perform X.
2) Privileges - A privilege to do X is possible only where A has no duty not to do X or alternatively B does not have a right to prevent X. This might also be thought of as a liberty to do X.
3) Power - A has a power if and only if they have the power to alter the relations of a Hohfeldian incident. This is the ability to change a form of legal relationship, where B in this instance would hold a liability to A's power.
4) Immunities - A has an immunity where B has no power to alter the legal relationship. It is a protection from a change in legal relationship or an ability to maintain the status quo. B in this instance, holds a disability in relation to A.

FIGURE 1 – HOHFELDIAN RIGHTS RELATIONSHIPS

Form of 'right'	Claim	Privilege	Power	Immunity
Correlative	Duty	No Right	Liability	Disability
Opposite	No right	Duty	Disability	Liability

[631] Wesley N. Hohfeld, 'Fundamental Legal Conceptions as Applied in Judicial Reasoning' (1917) 26 no. 8, Yale Law Journal, Pg.710.
[632] Honoré, (N.5).

In understanding this framework of jural relationships, it is important to realise that these are posited as operating between exactly two individuals. Each right is specifically not free-standing, operating in tandem with their respective correlative. These correlatives are symmetrical with both elements of the relationship mirroring each other perfectly; for example, the content of a claim for X to be done is directly matched by another's duty to perform exactly X. In theory, this framework can be applied in any dispute by considering the factual circumstances of each party and determining the most relevant relationship between the claimants. These relationships and their content then operating as the relevant legal issue within a dispute.

This picture of rights, operating as between individuals, raises questions as to how *'in rem'* rights operate. One distinctive feature of a property right is that it applies against the world, effective against every individual rather than any specific persons. To generate a Hohfeldian view of these rights, the right holder must have an individual relationship with every person in existence in respect of the object. In Hohfeld's words, '*in rem rights'* is a misleading way to describe "a large class of fundamentally similar yet separate rights, actual and potential, residing in a single person (or single group of persons) but availing respectively against persons constituting a very large and indefinite class of people".[633] These interpersonal relationships cover each right, privilege, power, and immunity that are held in respect of a particular thing. These relationships do not specifically involve the thing itself, indeed their only defining trait is that they operate alongside many identical rights as against a whole class of people. The Hohfeldian view of *in rem* rights views them as a cascade of individual rights that takes effect between each and every person (or at least a majority) and the 'owner'.[634]

In a world that perfectly follows Hohfeldian relationships, the notional absolute owner[635] of property would need to possess an almost infinite number of claim-rights, privileges, powers, and immunities operating as against every other person.[636] Not only would they hold every possible right and privilege but the power to change the legal relationship with every other individual as its own separate power-liability relationship. The shape of such rights and powers would be almost infinitely malleable, with an absolute right to property giving

[633] Hohfeld, (N.631).
[634] In simplest terms this would be the notional owner of an object. This picture is very similar to those who 'own' a particular relationship with an object, for example a leaseholder would hold the same rights as against the world as the true owner, with only the relationship between being different.
[635] For this purpose, consider them an absolute owner without any kind of legal or regulatory fetter.
[636] Perhaps powers and immunities are at odds in these circumstances, as unlimited immunity would interfere with one's own power and *vice-versa*. It is also important to note that the conditions for this kind of 'unlimited' form of any rights is likely impossible. The necessity of the operation of a governing legal system likely presenting a limitation in some manner on the forms of rights, privileges, powers and immunities that are capable of existing.

rise to infinitely divisible 'rights' of endlessly variable 'shape'.[637] For example, what might be expressed as a right to 'use' entails a series of rights that cover each of its possible uses. These rights are divisible and remain at the behest of powers to divide, create, or assign them. It is within this context of interacting with others and their relationships with these objects as expressed through these rights, that the divisibility and 'shape' of a particular right takes on its salience. Where the right to 'use' might be sufficient to describe an owner's right to 'use' an object, the rights granted to another person to 'use' an object might be considerably more limited. Where the owner of a lawnmower has the right to mow their lawn whenever, a neighbour might be granted a right to use it only on their front garden every third Sunday. To support this, there must be a 'right' that allows for this activity and separately a 'right' that allows for the creation/assignment/division of this right. This has the effect that, in a perfectly Hohfeldian world, to speak of a 'right' is to express an amalgam of other rights that cluster together to express that 'right'.

Moving away from a 'perfect' Hohfeldian world to its application within actual legal systems, the rights and relationships that are capable of existing will be limited by those that are capable of existing within that legal framework. The 'shape' of a particular right will need to conform with the confines of what is 'legal'.[638] Even a notional 'absolute' owner will only possess the rights that are capable of existing within the legal framework, and will remain liable to the rights, privileges, powers, and immunities of the state and that are granted to others by virtue of the applicable legal frameworks. A 'right' is still almost infinitely divisible with those enfolded rights being almost infinitely malleable, practically infinite but also limited in scope and form.

In attempting to bring the Hofeldian viewpoint into actual legal systems we also must bear in mind the application of relevant legal concepts. Penner contends that the view of property created by Hohfeld, and his understanding of the jural relationships that arise by law, does not adequately account for legal concepts like possession.[639] This centres around the argument that fundamentally possession relies on the relationships held with an object. Hohfeld's work helps consider interpersonal rights that arise in an analytic sense, however it does little to help determine what rights and obligations exist. where we can use this to

[637] In this instance meaning the form of right and its specific content.
[638] The application of the numerous clausus principle highlights a subset of where the rights are limited. In a Hofeldian model however they represent broad 'rights' that express a range of other integrated rights, we might consider them instead classes of fundamental relationships that are capable of existing with property that effect relationships between people. Taking the list of property rights in land as an example, they are simply expressions of collections of rights that are well understood to the law.
[639] J. E. Penner, *Property Rights: A Re-Examination* (Oxford Legal Philosophy 2020) CH.1. (Hereon Re-examination)

understand what arises from factual possession is does not easily deal with possession as a relationship to a thing. theoretically, this deals an indefensible blow to Hohfeld's position as possession is undeniably a core concept in relation to property rights. In practice however the relevance of this problem might be obscured specifically because disputes are interpersonal, even when the dispute might be thought of as an extension of relationships to 'things'.

By shifting away from relationships to things, and towards disputing interests that regard control over valuable good, there is a shift towards more policy centric disputes. Singer summarises Hohfeld's argument as having the practical effect that property protection is rendered down to "(1) identifying the interests for which individuals seek legal protection and (2) using policy analysis to adjudicate conflicts among those interests and to determine the appropriate extent of legal protection for each interest."[640] In seeking to accommodate more wide-ranging policy arguments, in theory there is a move away from formulistic approaches to property while inviting consideration of the specific social contexts, relationships, and relevant values that apply to the dispute. Formalistic elements such as property and possession in this view simply serve as a means of obfuscation for underlying policy choices. The effect of this might to many seem warranted, moving towards a more individuated and nuanced approach towards property that rejects overly simple notions for resolving disputes seems inherently appealing. However, the force of this argument only works in the context of moving towards a view of property that is dominated entirely by interpersonal relationships.

The conclusion that property rights are fundamentally interpersonal is perhaps an inevitability of the nature of Hohfeldian analysis as an analytic tool for considering disputes. It is trite to say that disputes arise interpersonally, with even the most complex legal cases involving a panoply of parties fundamentally expressing conflicts between 'people'.[641] This in itself raises questions as to what extent any analytic tool that considers disputes becomes biased towards interpersonal construction of rights. In very general terms, the content of the right that gave rise to the dispute are the subject of analysis for Hohfeldian jural relationships, with the most appropriate relationship superimposed over the actions of the parties. In analytic terms however, the situation does not fully need to be understood in terms of Hohfeldian relationships, only the rights that are in dispute.[642] Outside of the rights in dispute, Hofeldian rights do not need to be detailed, assuming not only their character but

[640] Joseph William Singer, *Entitlement – The Paradoxes of Property* (Yale University Press 2000),75.
[641] Even criminal cases are nominally an interpersonal affair, with the crown acting as the personification of the law.
[642] For example, outside of cases of capacity or ultra vires, the power that enables a particular right-duty relationship to be created is unlikely to be of any relevance to a particular dispute.

that this situation has been arrived at correctly. This allows the appearance of interpersonal disputes, arising in interpersonal terms, that is legitimated by assuming it has arisen by similar interpersonal relationships.

The reason legal concepts and relationships to property can be so easily swept away from the picture of rights that Hohfeld advocates, relies on treating all 'rights' as fundamentally the same. Rights are treated as identical regardless of the source of those rights and the reason(s) by which they arise. In considering property rights, he highlights this point by affirming that the contrast between different sources of rights is simply the bundle of rights that is held.

> Since all legal interests are "incorporeal"-consisting of as they do, of more or less limited aggregates of abstract legal relations… the legal interests of the fee simple owner of land and the comparative interest of the owner of a "right of way" over such land are alike so far as "incorporeality" is concerned; the true contrasts consists, of course, primarily in the fact that the fee simple owner's aggregate of legal relations is far more extensive than the aggregate of the easement owner.[643]

All rights, and the jural relationships that arise from them, are treated in the same manner; there is to be no distinction between a right arising by contract, arising from relationship with property, or by operation of the law. To this view, the distinguishing feature is that of the arrangements and extent of rights possessed. From here we might see that the source is not important, but the 'bundle' of rights is central. In this manner, concepts of property, that in practice operate to allocate the burden of proof or in much simpler terms allocate rights, can be glossed over in ex-ante analysis.

Attempting to draw attention to the deficit of Hohfeld's rights in relation to property is marred somewhat by the popularity and applicability that the view appears to have. Hohfeld's approach seems effective; creating simple and clear understanding that is directly applicable in a range of circumstances. In most instances it is entirely unobjectionable, providing strong and persuasive narrative for property as interpersonal relationships, that detail practical property arrangements. For these reasons it has been embraced within the modern concept of the bundle of rights, it's broadly applicable analytic approach allowing interpersonal relations to become dominant in modern concepts of property.

This is not to say that this position remains unchallenged by the academic community. As strongly put by Grey, removing the link between property rights and things and moving towards a picture of property as interpersonal, economic driven, bundles of rights will

[643] Hohfeld, (N.631), Pg.24.

inevitably render the category of property meaningless.[644] Whilst there is certainly a strong rhetorical force to Grey's argument,[645] it is safe to say that in the subsequent forty years since that article was published, property as a meaningful category still retains a cohesion and utility that ensures its relevance. Perhaps this alone could refute Grey's argument, coupled with the fact that relationships to things appear to remain important. It is submitted that this remains a possibility as to one 'end' point to property, however it is not an inevitability. The reason property remains a viable and meaningful category perhaps lies in flaws with Hohfeldian analysis and the bundle of rights theory of property.

Penner advances an argument that, whilst Hohfeld's arguments may have caused a 'revolution' in property theory, it is better thought of as the "revolution that wasn't".[646] Penner asserts that there is a dualism between the Bundle of rights discourse with those in support taking it 'seriously but not literally' while those against it taking it 'literally but not seriously'.[647] If taken literally, he argues that the bundle of rights based on a Hohfeldian view point provides no novel or innovative insights into property and worse still that it can provide misleading ideas about the nature of property itself because it removes any and all relationship to actual things. If taken seriously, in order to marry the incompatibilities of Hohfeld's scheme of rights and the arrangement of rights presented by Tony Honoré, there needs to be serious work to reconfigure both elements to ensure compatibility.

It is submitted that the key problems for Hohfeldian views, and by extension the bundle of rights theory of property, must lay with the removal of relationships between people and property. Taking Grey's arguments seriously that a purely interpersonal approach would lead to the disintegration of property, Penner's argument that the bundle of rights approach is not applied literally, and that concepts such as possession, and more broadly ownership, do not easily integrate into Hohfeld's viewpoint except in ex-ante analysis, the continuing relevance of the category of property is likely because the conceptual arrangements that tie people to property are simply too much of a barrier to overcome. This 'barrier' is not a simple one of legal understanding, but one that operates on every level of society. Whilst Hohfeld and the bundle of rights theory provides a specialist and technical approach to property, it does not reflect the average understanding of property, or indeed the relationships that people have with things. Notions such as ownership and possession are deeply powerful in modern discourse and serve as a rhetorical centre point for the

[644] Thomas C. Grey, 'The Disintegration of Property' (1980) 22, Property, Pg.69.
[645] Considering the expansion of neoliberalism and its associated approaches towards property, a modern reformulation might be even more strongly stated.
[646] Penner, Re-examination (N.639), ss. 6.6.
[647] Ibid, Pg.3.

presumptions on the operation of property.[648] Indeed, the focus of public discourse on 'ownership' of property, even when rights are distributed or where rightsholders represent lesser rights than full ownership, focuses upon ownership of particular rights.[649] The public's interaction with property is mediated through these ideas that are ultimately about relationships with objects and the expectations that arise in relation to those relationships. In turn, the operation of legal doctrines utilise ownership, possession, and similar concepts[650] as assumptions of the burden of proof or as complete arguments that require very specific circumstances to overcome.[651] The very notion of property itself entails assumptions about the ability to have relationships with objects and engage in the benefits of the relationships with those objects as they are generally understood to exist, whilst in legal terms the notion of property entails the allocation of a burden of proof through those same relationships. It is in the context of these understandings and relationships that the law operates, even if there were a serious attempt to remove any and all relationships with objects from legal doctrines and presumptions, the activities and relationships that the law must engage with in society would still have relationships with objects. The law of property is fundamentally concerned with things, even if it also is concerned with the relationships between people as to things. Relationships with property are inescapable, operating in the background and exerting subtle influence even in legal circles on the surface following Hohfeldian views.

Norms – legal and social

In raising this challenge to the dominant theories of property, a tension arises between the social and legal understandings of 'property'. Where the methods of anthropology consider that the legal institutional layer as it relates to the social arrangements of property helping inform quotidian practice,[652] this takes the law as a more or less static entity that concretises ideological approaches to property.[653] In presenting legal notions of property as influenced by, and in a way constrained by, the quotidian practices of social relationships that arise from the perception of 'legal' concepts, the power of the legal institutional layer is called into question. This raises two important points to be explored. First, how dominant concepts of the role of the law relate with the social. Second, how these concepts become concretised within social relationship and practice in a way that resists legal concepts.

[648] Singer (N.640), Pg.76.
[649] Ibid.
[650] Even where these differ from the common usage of the term, they mirror relationships that are widely understood to be held with objects.
[651] Singer, (N.640) Pg.76.
[652] See (Pg.57-60).
[653] At least as regards changes to social perception of the legal institutional layer as it relates to its effect on quotidian practice. This approach takes changes in the law in step-change approach, with changes in the law representing steps rather than a state of flux.

While an in-depth consideration of exactly what the role of the law is in society is well beyond the scope of this chapter, A more limited picture can be built in relation to at least one way in which we might be able to consider property rules and the systems they create.

Taking the view of rules presented by Melamed and Calabresi in the previous chapter as a starting point,[654] property rules serve the purposes of creating rights, protections, or limitations that reinforce different ideological considerations in a manner that enforces structure and shape on social interactions by directing, in part, the systems that allow for those relationships. In other words, 'rules' might be conceptualised as norms that pave the way for the operation of society by providing standards by which the operation of society is held. Raz makes the case that the law is concerned with norms that should be viewed as reasons for action. [655] Norms operate to influence action and impact day to day reasoning by providing first-order norms that guide actions and second-order norms that exclude certain other actions.[656] These reasons for action are driven by the structures of the law to either legitimise or punish certain courses of action. Taking transfer of property for example, it contains both positive rules, with rules relating to transfer of land in particular featuring extensive legal norms that legitimise certain interactions in the eyes of law whilst on the other hand containing exclusionary norms, such as prohibitions against theft, allowing for punishment for that action. Exclusionary norms discourage the action more generally whilst also protect against true transfers by denying a legal legitimacy to the action. Taking this at face value, the legal institutional layer and the legal system and rules that it constitutes appears to conform to the role and function that it serves in the anthropological approach, namely guiding society by providing a view of how society 'should' operate.

To ensure that the rules and norms created at the level of the legal institutional layer operate as intended, they must be empowered to exert some influence over the social where these 'realities' diverge. While it might seem obvious that breaking a law would lead to a punishment or that a contract that is improperly made would not have the force of law, these are still necessary preconditions of an effective, normative system. This is necessary as, in order to have a practical effect on reason, rules and norms must be enforceable and be perceived as having a chance at being enforced, otherwise they could be readily ignored and the law would fail to serve a normative purpose.[657] The corollary of this is that, where the actual practices diverge from what 'should' have happened according to the law, the privileging of the legal version of events and its power to enforce it make it the 'correct'

[654] See (Pg.96-99).
[655] Joseph Raz, *Practical Reason and Norms* (second edition, OUP, 1999).
[656] Ibid, ch.1.
[657] Ibid.

version of events. Arguably, the dissonance between actual practice and the best practice of the law creates two versions of reality that diverge, with the 'legal reality' considering the position according to its strict normative framework.[658] Importantly, this is not to say that the power of enforcement that is given to the courts is truly one that is 'corrective' in the sense that it allows for the dissonance between the legal version of events and the actual version of events to be resolved. Simply that there is an attempt to address the problems that arose in relation to the divergence from what 'should' have happened, with the legal view of taking on the role of the 'correct' version of events.[659]

The combined power of constructing a series of norms for correct action and privileging legal institutions that provide a normative framework for hierarchies of realities exerts its own normative force. This in turn has the power to operate a rhetorical concept that exerts yet another normative force. By creating a system of norms which privileges certain narratives in certain circumstances, we can consider the 'law' and the 'legal' way of doings things as having a certain rhetorical force simply because they should be considered the 'correct' way of doing things. In the same way that Raz presents norms as being reasons for action,[660] the very notion of a course of action being the 'legal' course of action takes on a similar normative force.

While theoretically a normative system should always point towards the correct outcome, this is stymied by the realities of this rhetorical scheme and the lack of perfect information. The 'legal' course of action or the possible interpretations that represent a 'legal reality' are not necessarily simple and clear-cut in a manner that allows for simple decision making. [661] The influence of the 'law' acts merely as an element that weights towards particular decisions, but only to the extent that this is correctly identified or identifiable in the circumstances. This also relies on the notion that information about the applicable norms is both widely available and widely understood.[662] Worse still, the rhetorical nature of the normative force of the 'legal' can lend itself to empower misconceptions about the law. In this manner, misconceptions about the law, or entirely fictional norms that come to be

[658] For example, a failure of transfer of title in relation to the sale of land as it does not conform to the formalities of sale.
[659] It is important to note that there is not simply a single version of events. the notion of a legal 'reality' that is constructed utilising the rules and norms as they 'should' be can only exist as a theoretical perfect interpretation. In practice we might consider the power of judges as being able to create a 'legal reality' by virtue of their role as adjudicator of fact and law in relation to a particular circumstance.
[660] Raz, (N.655).
[661] This is not to say that there are not instances where the 'legal' course of action will be clear and well understood and in effect exerting its correct normative force.
[662] While ignorance of the law is no defence, how well-publicised are legal changes that affect normative frameworks in wider society?

widely considered 'legal,' exert a normative force in a similar way to norms created by the law.[663] Likewise, misunderstandings, both unintentional and deliberate, can leverage rhetorical force simply by mistaken association with legal legitimacy. Therefore, it is possible that the rhetorical force of the 'legal' can concretise norms that differ from express legal rules, guiding the approach of quotidian practice specifically because it comes to be understood as a societal norm that is perceived as within the scope of legal legitimacy.

The construction of property, and its related concepts within both law and society, then can offer differing 'realities'; concepts, and structures of norms that effect quotidian practice in different circumstances. The legal notion of property, assuming for a moment a dominant interpersonal/bundle of rights approach, is specifically an approach of a limited community of practice that reflects a more specialist understanding of property. While the legal approach may be more influential in circumstances which are privileged to reflect the 'correct' understanding, its ability to impact the normative understanding of property is correspondingly limited to communities to which that understanding is influential and/or becomes important to practice. The practical reasoning that takes place in relation to quotidian practice, representing the important normative influences on that understanding, is more likely to reflect cultural and social understandings. These social and cultural understandings are in turn more likely to be influenced by a general appeal to the rhetorical power of the 'legal' and the resulting social understandings (or misunderstandings) of relevant legal and social norms rather than the legal reality of the norms themselves.

Considering the bundle of rights from the perspective of a paradigm, we might also consider how previous paradigms for property and the influence of that normative understanding might have embedded notions within approaches to property. A 'traditional' approach to property can be characterised by the importance of relationships with things, notably 'ownership' as absolute power over a particular place or object. Singer neatly summarises the key points of this view, with its focus on relationships with property as consisting of:

[663] A single 'rule' might come to create a cascade of different norms in different communities and groups of practice based on different interpretations. In different contexts different practices that derive themselves from 'legal' norms that represent the interpretation of a community of practice exert their own normative force in those contexts. These practices do not necessarily conform to legal rule norms but can claim a legal legitimacy. As these practices become concretised within a community of practice this can exert an influence equivalent to legal norms and be treated as rules. A practical example of this is doctrine of terms implied by custom and practice, whereby customary practice can be implied as a legal norm into a contract where it does not conflict with any other legal rule and can be proven to have sufficient normative force within that community of practice. See Turner v Royal Bank of Scotland plc [1999] 2 All E.R. (Comm) 644, Reynolds v smith (1893) 9 T.L.R 494, for a restatement of the modern position of implied terms see Attorney-General of Belize v Belize Telecom Ltd [2009] UKPC 10, [2009] 1 WLR 1988.

(a) Consolidated rights;

(b) a single, identifiable "owner" of that bundle of rights;

(c) who is identifiable by formal title rather than informal relations or moral claims;

(d) rigid, permanent rights

(e) of absolute control

(f) conceptualized in terms of boundaries which protects property owners from non-owners by granting the owner absolute power to exclude; and

(g) full power of the owner to transfer those rights completely or partially on such terms as the owner may choose.[664]

Central to notions of ownership are the perception of an almost unlimited power to control property. The importance of this to the general public perception of property has historically been commented on by Blackstone;

> there is nothing which so generally strikes the imagination and engages the affections of mankind, as the right to property; or that sole and despotic dominion which one man claims and exercises over the external things of the world, in totally exclusion of the right of any other individual in the universe.[665]

This presents social understandings of property as predicated on strong relationships between individuals and property.[666] This presentation, however represents a vastly oversimplified model of property that does not accurately convey the intricacies of its relationships or the complex uses to which the concept of property is put, which together serve to obscure important characteristics of the disputes that arise in relation to property. Where it is a construction of property that serves the needs of a social understanding of property, this does not reflect the understandings necessary for the operation of the law. The continual importance of 'ownership', its perception in society and in quotidian practice in contrast with the legal view, speaks to a continual influence of this 'traditional' paradigm for property on modern social constructions of property.

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[664] Singer, (N.640), Pg.71.

[665] BL Comm ii.

[666] The expression 'an Englishman's home is his castle' perhaps best encapsulates the social perception of ownership. This particularly has roots from the early 16th century notably, Henri Estienne, the stage of popish toyes; conteining both trajicall and comicall partes, (1581) "your house is your castell". The meaning is typically taken to refer to the right at least since the 17th century to exclude without invitation individuals from property. See Sir Edward coke, In the Instiutes of the Laws of England, 1628. Where the phrase was also recorded as having entered within to the language of the common law " for a man's house is his castle, *Et domus sua cuique est tutissimum refugium* [and each man's home is his safest refuge]". The roots of this statement perhaps coming from the latin "quid enim sanctius, quid omni religione munitius, quam domus unusquisque civium [what more sacred, what more strongly guarded by every holy feeling, than a man's own home]" attributed to cicero.

Whilst this section has largely treated the views to which it has referred as monolithic views that exist in conflict with one another, these might better be understood as paradigmatic views that exert influence on individual understandings of different presentations of property in different circumstances and contexts. Property should also not be treated as a monolithic entity, spanning as it does a wide range of interest across real and personal property.

To add one final complexity to this view, Radin presents a theory of property that considers the role of personhood in property that might help contextualise potential territorialisation's of these influences.[667] This theory argues that "control over resources in the external environment"[668] is important in the construction of personhood. To this end, certain property relationships are proposed to take on a special importance as an extension of identity and personal autonomy. Radin argues for an understanding that some 'personal' property interests should be recognised as privileged by virtue of the object's role in personal and social life.[669] In contrast, there is an argument that some interest in property are more economically focused and represent 'fungible' property interests. Where there is a conflict between 'personal' property interests and 'fungible' property interests, Radin argues that personal property interests should be to some extent protected from conflicting fungible property interests.[670] Importantly, Radin does not advocate that these 'personal property' interests act as some trump card against those that represent 'fungible' interests but that there should be some consideration of the social dimensions that underpin property relationships. It is within these instances that Radin's 'personal property' arguments on the relevance of social norms and reality and the importance to the actual relationships to property should come to the fore.

Ownership – Bundling the sticks.

To complete the critique of the modern bundle of rights concept of property, attention must now turn to the Tony Honoré contribution in the form of the 'incidents of ownership'. This account builds on the concept of ownership as "the greatest possible interest in a thing which a mature system of law recognizes" by detailing the elements that make up that 'ownership'.[671] Rather than trying to equate ownership with each and every one of the incidents, it presents those elements that might be present in different arrangements of 'ownership'. In doing so, this elaborates on the possible interests that are represented within

[667] Margaret J. Radin, 'Property and Personhood' (1982) 34 no. 5, Stanford Law Review, 957.
[668] Ibid, Pg.957.
[669] Ibid, Pg.1015.
[670] Ibid.
[671] Honoré, (N.5).

other relationships with things, with different arrangements of these interests detailing relationships that are capable of being created and derived from that total ownership.[672]

In contrast to Hohfeld's interpersonal relationships, Honoré's framing of the incidents of ownership necessitates 'things' and the relationship between the 'owner' and things. These incidents are not portrayed as, nor do they necessarily align themselves with, jural relationships and are instead a concerned with showing a universal collection of rights that do not "vary from system to system in the erratic, unpredictable way implied by some writers but, on the contrary have a tendency to remain constant from place to place and age to age".[673] The resulting list of incidents, to this end, is not framed in a manner that reflects legal rights, focusing instead on the advantages that are entailed within 'ownership'.[674]

On the surface, these incidents align to provide something approaching a universal conception of 'ownership'. This universal application relies on the notion that all of the incidents are not necessary but that a number of them held together might be sufficient to inhere the holder of the designation of ownership.[675] These are presented as

> necessary ingredients in the notion of ownership, in the sense that if a system did not admit them, and did not provide for them to be united in a single person, we would conclude that it did not know the liberal concept of ownership, though It might still have a modified version of ownership, either of a primitive or sophisticated sort.[676]

In aligning itself in this way with the liberal concept of ownership, and indeed the dominant concept of ownership within western society, it is perhaps difficult to see how this could not present something of a 'universal' approach to ownership simply because of the audience to which it speaks.[677] To further this point, Penner makes the claim that "Honoré regarded his

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[672] Ibid, Pg.107. The incidents proposed by Honoré apply equally to full ownership as to more limited forms that might attract that label in certain circumstances.
[673] Ibid, Pg.109.
[674] James Penner, The "Bundle of Rights" Picture of Property' (1995-96) 43 UCLA L Rev 711, 732.
[675]Honoré, (n.5) Pg.112-13.
[676] Ibid.
[677] One small note is that the where the systems of property presented in chapter 2 do not necessarily inhere themselves of these notions of ownership or their incidents, drawing on work that is in English and attempts to convey those systems in a manner that is understandable within those networks invariable led to similar terms that draw on these concepts. It is difficult for any account to accurately disentangle the effect of these concepts and the language within which it is embedded on either the reporting or perception of those concepts. Where we might look to account for the degree of universality simply from the dominance of the western conception of property, it maybe that this universality is in fact imposed specifically because where we understand practice involving property, we seek to find the incidents of what we consider ownership and draw parallels to these concepts. Perhaps The archives created of differing cultural systems perform a kind of universalising of the experience of property specifically because to be property and to be owned and understood as such requires forcing it into contrast with these liberal notions.

list of incidents as criteria for the correct application of the term "owner" in law",[678] regarding this not as a guide to what ownership is, but a guide to where we might apply ownership because of its features.

The incidents of ownership are identified as:

> 1) The right to possess - the right to exclusive physical control or control in the sense the nature of the property allows.
> 2) The right to use - covering immediate personal use and the wider notion of the ability to control and generate income.
> 3) The right to manage - the right to decide on how, where, when and by whom a thing may be used. This includes the right to create contracts over/with/for etc. and generally direct the resources of the thing in question.
> 4) The right to income - fruits, rents, and profits directly related to use and the forgoing of personal use.
> 5) The right to capital – the right to alienate, consume or destroy, whole or in part, and garner the benefits of its economic aspects.
> 6) The right to security - the right to continued enjoyment of ownership and protection from expropriation. In effect, ensuring that transmission is consensual.
> 7) The incident of transmissibility - the ability to transfer as to their choosing in a manner that allows for total transfer ad. infinitum.
> 8) The incident of absence of term - that ability of the right to be held in its form indefinitely. though practically, the mortal nature of its holders necessitates a conjoining with the right of transmissibility.
> 9) The prohibition of harmful use - the limitation of the liberty to use and manage as restricted within a legal system.
> 10) Liability to execution – the liability of the owner's interests to be taken by judgement or insolvency.
> 11) Residuary character - where 'lesser' rights expire, the corresponding rights return to the owner.[679]

These incidents are in no way discrete notions that allow them to operate as separable strands, with many overlapping in scope, relying on one or more of its fellows for its existence, or reflecting wider legal concepts that apply regardless of actual ownership. Where they may be understood as functional understandings of what ownership can entail, the incidents themselves do not provide much clarity as to the legal understandings of

[678] Penner, (N.674), Pg.737.
[679] Honoré, (N.5)

property or ownership. Indeed, some of these incidents themselves do not directly conform to legal understanding; for example, the right to use is generally not considered, prima facie, a right that exists within the common law. While the right to possession might be linked to a right to exclusive use as a consequence of its operation, use is not a right in and of itself and would inevitably be linked back to possession. Alternatively, the rights to manage income and capital are not legal rights but economic rights,[680] that reflect a range of powers that are legally distinct and a function of the ability to contract with property.[681] In short, though this might assist when deciding where we might legally consider ownership to rest, it provides little by way of illumination as to what the legal implications of ownership truly are.[682]

The problem with this for the bundle of rights theory of property, as has previously been hinted at, is that these incidents do not find themselves readily amenable to the view presented by Hohfeld's conception of rights. Though certain incidents of Honoré's model may be expressed such that they include jural relations of the kind presented within Hohfeld's scheme,[683] they are of a fundamentally different character, concerned as they are with relationships to things. There is a key tension between the interpersonal analytics of the Hohfeldian and functional, practical, and economic relationships of Honoré centring around the importance of 'things'.[684] While both individually have little practical value for understand what property is, read together the picture only becomes more confused. Where we may be able to bundle together different rights and incidents of ownership, considering their content, giving them value, and generating detail in circumstances that seems illuminating, the effect of this might be to obscure further what property is.[685]

[680] Penner, Re-examination (N.639) Ch.1.
[681] Honoré, (N.5), 116.
[682] It is suggested that there is an interplay here between different conceptions of ownership. Honore's incidents crosses the line between the economic, social, and legal elements presented as a consequence of the legal circumstances that surround 'ownership'. The consequence of this seems to be a picture of property that fails to truly be useful as a legal concept of ownership specifically because it has elements that fall outside of the domain of the law. A reconfiguration of these incidents could be made in terms that better reflect the legal underpinning of each of the elements however to do so would likely also require quite a radical shift in the boundaries between incidents. This is likely not a useful endeavour.
[683] For example, the economic incidents are perhaps best understood as clusters of powers that allow for the management, control, and realisation of the economic value.
[684] See Penner, Re-examination, (N.639) Ch 1, and James Penner, *The idea of property in law*, (OUP, 2000) Ch 2.
[685] It is not to be said that Hofeldian analysis is completely pointless, as a problem-solving methodology it provides workable solutions. If it helps solve problems, and provides favorable answers to some party, it will continue to be a useful methodology. The detail that can gleaned by application of this methodology therefore can be said to be illuminating, just not for a deep dive into what property rights are.

Property and stability

This chapter has covered a lot of ground considering the state of flux at the boundaries of the *Numerus Clausus* principle, the salient features of English property law from the outside, a range of criticisms for the dominant concepts of property in law and how the practice and theory of property in law do not align to provide an informative conceptual view of property. More widely, this thesis has considered a range of conceptual approaches to property that exist in different circumstances and arrangements in different fields of practice. It has considered how 'property' operates as a boundary object or nexus point between the social, economic, and legal understandings that these communities embody and in considering them has explored the intertwined and interlinked nature of each that makes them difficult to disentangle conceptually from one another. The narratives surrounding property each provide different approaches to what the label of property means or where the label of property should apply. However, in each version there is an implicit assumption of stability in some wider notion of 'property'.[686] The insight of 'younger' legal systems is that, in part, the notion of property as a legal concept is one that arises from the application of that same legal system. However, in the same manner we might consider that all notions of property are the consequence of applications of systems to apply property to reality.

From very first principles there exists something outside systems of human practice and experience. It would be too far to say that 'things' exist outside these systems as this pre-supposes a series of delineations that are themselves the result of human creation.[687] Wilson, in approaching property, considers the operation of property in three levels to detail these systems that takes it from first principles.[688] At a micro-level of operation is biological

[686] Anthropological approaches to property for instance assume that property as a label can be applied to the social relations between people to things and stabilises those notions through an appeal to stable property rules applied through legal institutions. These legal institutions in comparison to the English legal concept of property might not be interchangeable in the same way, for instance a comparable localisation of 'property rights' might apply only to particular objects or things. 'Property' to anthropologists still captures those other relationships and normative structures apply outside those structures. Comparatively, the *numerus clausus* principle assumes stable relations between real, personal, and intellectual property that scopes its application. This assumption also assumes that these are real categories that are meaningfully distinct and distinguishable in reality over actual 'things'. Where this implicit othering can be applied to all these versions of property, for brevity it is taken that these two suffice. The reason for this may be found in the methodology each applies to its consideration of 'property' and the limited version of property it seeks to explore.

[687] This is not to say that there is not a 'natural' delineation between things, simply that the experience of those differences and the division between them is itself a consequence of the applications of systems.

[688] Bart J. Wilson, *The Property Species: Mine, Yours, and the Human Mind* (Oxford University press 2020).

experience, the organism that experiences and perceives the physical world through its body. At the meso-level, the community develops the customs and morals that dictate the way the organism relates to the world. At the macro-level, the institutions unite different communities through democratic understandings of rights. This line of reasoning follows that there is something inherently natural in notions of property, suggesting that it arises in human culture because of our complex usage and relationship with tools, rooting through elements of cognition and social interaction a 'thingness' to objects that become property, that eventually develops culturally into something with moral force.[689] This narrative presents what is morally 'right', leading to the development of property rather than property setting what is 'right'. In short, individuals experience 'things', the 'things' and relationships are organised by communities and then directed by institutions towards particular ends through the intervention of rules. While this might not necessarily accurately represent the development of systems of property,[690] the different levels of understanding for property are a useful way of developing from first principles a view of the systems of property that generate the practical notions of property.

The different levels at which systems operate to generate property cannot be thought of as purely linear or discreet. As has already been considered, cognition and the experience of reality exists as a complex result of factors that are largely individual and influenced by both the cultural and legal concepts of property. Where the meso-level might readily map onto the 'anthropological' view of property, Wilson seems to reserve the legal institutions to the macro-level.[691] However, the social level draws on elements of law or alternatively something akin to legal rules/norms. The macro-level is proposed as the level of legal and economic decision making, at once this is presented as allowed by the micro and meso levels whilst also seeking to control those elements and sweep them under the rug of the macro level.[692] Individuating each level helps to create a clear path that shows a process of 'building' property that gives the impression of a stable foundation. However, rather than operating as individual systems, these are interlinked systems that continually impact and influence each other to generate property.

The approach throughout these chapters in presenting individual concepts of property has invariably tended towards portraying the links between them as individual concepts of

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[689] Ibid.
[690] Robert C. Palmer, 'The Origins of Property In England' (1985) 3 no. 1, Law and History Review, 1 argues that this is not a linear development, that while early development of the law did take elements of social mores into early legal concepts of property, it quickly took on its own relevance to social life and that many social changes arose in response to legal acts that diverged from these norms.
[691] Wilson, (N.688).
[692] Ibid.

property. However, they are individuated and in doing so create fixed points within the system which exert an influence of stability. Indeed, any theory of property seeking to develop any view engages in processes of 'othering' that renders those elements fixed points. For example, the bundle of rights, in recasting relationships to things as interpersonal relationships, relies on the thing to operate as a stable external construct. This legal-macro view of property rights implicitly accepts and relies upon a social understanding of the relationships with objects of property as a fixed point. In the same manner, where anthropology considers the legal institutional power as helping construct the social practices of property, it does so by treating the legal concept of property as a fixed point.[693] Where the insight of a multilevel interconnected approach would indicate that the overall arrangements of these elements are in a constant state of flux, as each element influences each other, the view of property on the individual level that operates on a fraction of these elements would likewise too need to be considered in a state of flux. Rather than considering the methods, approaches, and concepts of property as operating as 'stable', it might be better to speak of them as stabilising as to the practices that generate property.

Property is everywhere, it is a ubiquitous part of modern life and deeply engrained in almost every element of it. Where we might provide an argument for the origins of English legal property,[694] tracking the development of the modern concept of property is well beyond the scope of this thesis. It seems banal to say that the modern notion of property developed by the constant interplay between changing social, economic, and legal practices that continually reshaped each other, however putting it in this context is important. The modern system of property and the quotidian understanding of it, is not something that arose spontaneously, it is deeply ingrained because of a process of continual change. Over this period, concrete ideas of what property is and what property should have continually acted as points of stability, justifying, and supporting the systems and practices of the time. Largely, we assume that property is justified in its context, that the modern state of property is a consequence of the 'correct' operation of systems of property.[695] To this end, modern

[693] Even where we might consider the law as changing, this goes from a stable interpretation to another stable interpretation and the method would be able to concretise the change in a stable way.
[694] Palmer, (N.690). This is a convincing argument for the creation of a uniform concept of property across England which satisfies an origin for the legal practices of property. It is unclear from this paper however how the social mores that developed into the early legal rules reflected merely social arrangements or if certain areas had localised rules that are more akin to localised legal frameworks.
[695] Consider for a moment land, as something that existed before any nominal start to systems of property. we might consider any ownership as existing as a sequence of owners that derives its legitimacy from the original creation of that series of rights. Within the law this has been replaced with the advent of registered land by providing an assumption that the register is correct. To this end section 44 of the law of property act 1925 Limits the need to prove an unbroken chain of fifteen years to assert a good root to title in unregistered land.
Alternatively consider the law protecting possession rather than ownership of chattel. This appears to

concepts of property largely operate in media res, examining the state of property that is a product of these different social, legal, and economic understandings that are each exerting a stabilising force. Individual concepts of property might in this way understand themselves to be stable because it deals with what appears a stabilised system.[696] In reality however, property must continually be in motion, responding to the flux in its constituent elements or between the draw of different points of stability as they ebb and flow in rhetorical power and contextual relevance.

Conclusion – Away from a stable foundation

This chapter has concerned itself primarily with where and how property has been understood within the law, however it is also clear that this a herculean endeavour and to that end has covered only a small fraction of all the possible elements of property. It has argued that there are areas in which there is a necessity for a stable and clear application of the idea of property but by the same measure there are areas where stability and clarity give way to the practical needs of the utility of the objects and their uses within society. It has considered key points of the English law approach to property and where and why that might filter into an overall understanding of property. It has attacked the stability and theoretical coherency of the dominant concept of property yet acknowledged it is nonetheless a useful framework in practice. It has argued that property and the law itself might not be thought of as a stable construct but one that incorporates elements of stability that intersects with other constructions outside the legal field.

Throughout all this, one might be left wondering 'so what exactly is property?'. We know roughly where to find it, though perhaps at the periphery things become unclear. We know roughly what it means to have property, that we have a multiplicity of rights over it and can arrange them in different ways. The mechanisms for this are well practiced and conceptually stable enough to form the basis of much of economy, even if theoretically there are issues with this understanding. Where we might question the origins of property theoretically, it is largely moot, with so much already owned and the systems by which it is owned entrenched within society. So, what underneath it all is the essence of property?

It is the contention of this thesis that there needs to be a move away from a stable understanding of property. That property is a term applicable and actionable in so many

legitimise possession as 'ownership' except in circumstances where 'ownership' might provide a stronger relative claim.

[696] As has already been argued, the bundle of rights theory implicitly provides the powers requires to justify modern arrangements of property. For lack of a better phrase, it can be used to legitimise any 'state of play' and from that basis assume that it is has been correctly arrived at unless directly challenged.

instances that by necessity involves and invokes so many elements across so many different levels of understanding that any concrete expressions of property is but a shallow reflection of 'property'. Different areas of practice involving property are continually in a state of flux and so too must be the conceptual arrangements that support them. Rather than trying to come to a stable and permanent essence for property within the law, it would be better to try and embrace a more flexible and fluid identity for property, that is responsive to its circumstance. 'Property' as a concept is already deeply rooted in society and the law and has numerous theories surrounding it that explain, justify, and make use of the notion of property. Rather than simply claiming they are wrong, it is suggested that we acknowledge that they exist within a framework of rhetoric that help enact the decisions surrounding property. Different theories, understandings, and practices surrounding property inevitably conflict and contradict each other when considered in totality but each provides a useful rhetorical tool that can be deployed as a means to an end. It Is proposed that the concept of property in law should be understood as something rhetorical, that property operates remedially, deployed specifically because it is well understood, serves a particular teleological purpose, and in doing so often providing a complete narrative on its own.

Chapter 5 - Testing law's limits: remedial property in action

Judicial reasoning – A conceptual crescendo

This chapter will consider instances in which property and the logic of property is being deployed remedially either directly or indirectly. In order to consider how this might come about the role of judges in constructing property, combining the issues raised from the preceding chapters, will be explored. To this end, it will present a case for questioning how judicial decision making is done in practice, utilising Fuller's Speluncean Explorers.[697] Rather than attempting to speculate on real events and reverse engineer real circumstances, this case will serve as a substitute that is consistent with legal practice.[698] To this end, the case will be treated as though it were entirely real and operating within a consistent, though

[697] Lon L. Fuller, 'The Case of the Speluncean Explorers' (1949) 62 no. 4, Harvard Law Review, 616.
[698] While the facts presented in the case are a literary contrivance in order to elucidate the principles that the author wished to bring to light, this in itself draws parrels with the construction of a narrative involving the facts of cases as they appear before all courts. Where these events are entirely fictional, the presentation of facts within a case follow a similar principle of drawing attention to the salient features necessary for the judgement.

fictional, world with a jurisdiction that is equivalent to that of the English legal system, and following the basic assumptions of the real world.[699]

The key legal issue revolves around the interpretation of the following statue. "Whosoever shall wilfully take the life of another shall be put to death".[700]

Where this statute appears relatively straightforward, following a simple 'if this than that' structure, it is easier to apply in theory than in practice. Perhaps the greatest impediment to simple application is the inclusion of the *Mens-rea* element that the taking of a life be 'wilful'. As will be explored, much of the discourse in this case highlights the dissonance in applying this statute to the facts, drawing salience to issues with what we might term 'the mechanical operation' of the law. Mechanical operation here being the assumption that the law operates automatically without intervention from the courts.[701]

If we treat this statute perfectly mechanically, reframing this around the label 'murderer', a murderer is made the moment they have taken a life and must themselves be put to death.[702] Applying this strictly, the point at which somebody takes a life wilfully they become a murderer and their life is forfeit.[703] The problem with this statue for mechanical application is that it includes the mens-rea requirement that the taking of the life be of 'wilful' which opens up problems of 'correct' application.[704] A mechanical application presumes perfect information in every situation, or that the law somehow operates contemporaneously to effect a change of state or relationship that is universally accepted.[705] Without this we are

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[699] In other words the case will be treated as hyper real. Jean Baudrillard, *Simulacra and Simulation* (Sheila Faria Glaser tr, University of Michigan Press, 1994).
[700] Fuller, (N.697).
[701] We might consider contracts arise automatically once the criteria for its formation are met, and in theory should be treated as such. The courts however consider this in retrospect and are bounded by the rules of evidence and the cases of the party as to when it arose and what the terms were.
[702] One slight problem is that any execution under this statute also make murderers of the executioner. If this were applied and enforced mechanically then everybody would eventually have to be executed. We might also ask ourselves if the judge wilfully took a life by ordering the execution? Could a judge ever decide that they did if posed with this question?
[703] This is the position of chief justice truepenny in the case, the statue is unambiguous and must be strictly applied.
[704] This might resolve the previous problem, perhaps a concept of wilfulness does not include instances where it fulfils a legal obligation. This however raises further questions of how entry into legal obligations might ever be 'wilful'. While this might seem like nitpicking and adding complexity to the example used to simplify and contain an examination of the complexity of legal practice, these are the same issues that lie at the heart of every enactment of the law. There is no surety of application specifically because everything requires a degree of interpretation.
[705] The example of murder raises a strange intersection between law and perception. At the point at which a murder happens nominally the perpetrator becomes a 'murderer'. Where this might have legal consequences, this does not take effect until it has been decided upon in a court of law, you do not become a murderer in the eyes of the court until it is proved that you are one. While it is not to say that such an act might not have an impact on the individual, there is nothing in the performance of the act that in any way changes the person into a 'murderer' at law until it has been proven in a court of law.

left to interpret events after the fact in order to determine both what happened and from that basis determine how that fits into what is effectively a 'script' to which the legal narrative must either conform or defy.

These facts are summarised from the judgement of Chief Justice Truepenny, however, though they are presented as the facts of the case, can they be thought of as 'fact'? To begin, a sequence of events occurred that engaged the members of both the exploring and rescue party. Every person involved will have a perspective of the events as they remember them which will have been recounted to others after the rescue, to legal representation and then again in evidence at the first trial. In other words, the events will be filtered through a range of individual perceptions, schema, and conceptual frames. Retelling the story will be done through language which will capture only part of the experience to each individual and might spark different interpretations in the listener. Each retelling not only influences others and constructs more slight variations of events but also might slightly shift the recollection of events. The role of legal representees from both sides will be to draw together these strands of recollections and construct from them a narrative mediated by their respective roles in the legal process, encompassing the various expectations of legal hinterlands, obligations to the court, rules of evidence and codes of practice. The presentation of these 'facts' is at best a relevant distillation and at worst the allowable fiction dictated by rules of what is legally 'true'.

This also reframes how we might consider this 'truth' being created. Evidence can be thought of as an archive to which both sides of the case will present an interpretation, the respective 'best reading'. As an appeal, the first instance trial can be thought of as an archive from which we draw upon, that itself was created through a process of ontological politicking. For example, that Whetmore proposed the casting of lots and that he did not object to the fairness of the roll even after the others decided to roll on his behalf, is presented through defendant testimony that is accepted by the jury, crystalising it as 'true'. The narratives, evidence, and decisions of the first instance trial are all a sequence of the events that create their own sequence of abstractions that then forms the basis of the appeal case. Likewise, when Truepenny summarises the facts, these are the facts as he believes them to be, through the lens of what he considers relevant. The relevance of these 'facts' shape the decisions he makes, but likewise the points of decision making he perceives himself to have shape the relevance of 'fact'. It is interesting that only one judge provides a summary of fact. Does this reflect the facts as all the judges see them? Could a difference in presentation of the facts effect the outcome? The journey from a sequence of events to the trial that seeks to consider those events involves various stages of remembrance,

interpretation and abstraction that raises questions as to how far they reflect anything approaching the 'truth'.

The relationship with 'truth' contained within a judgement might not be as important within the context of the adversarial system, which instead relies on deciding between the cases presented by opposing parties. Taking a simple example of two parties presenting opposing accounts, the role of the judge is to decide between them. On the surface, simply choosing between two accounts is ontological politics in action. The case presented by each side enacts a reality that contains the trace of the original events, utilising the perspectives and evidence mixed with legal concepts to construct a narrative to support their respective goals. The processes of constructing these narratives will be shaped by the kind of 'script' that their understanding of legal practice and the applicable law entails. The law providing a kind of exemplar problem solution to the organisation of reality itself. For example, "whosoever shall wilfully take the life of another shall be put to death", follows a simple 'if this then that' structure that makes a 'murderer'. To then make a 'murderer' in law, the narrative constructed by the lawyers must then draw saliency between the representation of facts and the legal framework. This becomes a clash over not just which version best reflects 'reality', but also is the version to be preferred in the present case.

These narratives likely draw on the historicity of legal practice and its relations within this. Cases do not exist in a vacuum and rules akin to *stare decisis* are assumed to operate in Newgarth. While the Speluncean Explorers does not reveal the case's cited in argument, Justice Foster makes reference to Commonwealth v Staymore and Fehler v Neegas and relies on a generally accepted line of argument that implies self-defence is a well-established excuse for murder. He draws on elements of these to allow for his version of interpretation, grounding it in relation to historical facts. This presents a form of intertextuality between the narrative presented and the texts that are invoked to substantiate it. It enfolds elements and interpretations of those elements into the presentation of the current narrative and engages with the saliency between the two. Cases can be thought of as literary inscriptions to be deployed, enacted through their respective judgements, and enfolding all the elements presented in different intensities. These are problem solving exemplars within themselves and as the elements are redeployed and reinterpreted, they can become paradigmatic for the approach to problems in their area of Law. This is not necessarily a singular process. The rule of *stare decisis* on the one hand is theoretically binding on all other cases, however, it must both be known and accepted as applicable. Justice Tatting for example raises Commonwealth v Parry, an apparently overlooked case that supports interpretations that go against widely accepted definitions of self-defence, supporting some of the other judges' interpretations. That it is 'overlooked' implies that it has not been overruled directly but

simply rarely applied. This creates a branching structure to the law where both remain equally applicable and there must therefore be a decision made by the judges not just on the realities of the case but also on the realities enacted by the branching judgements of the law itself.

This has framed much of the processes of judging through decisions, however some of these choices will be less obvious and the result of subconscious processes while some will be conscious, deliberate choices. Taking the example of 'murderer' and the 'those who wilfully take the life of another must be put to death'. These will both be understood in a general and legal context, driven by individual experience and there is an interplay between the general and legal context as it acts on the case. For example, Justice Handy highlights the stark contrast between the judicial treatment and public opinion. In doing so, he proposes that the court follow public opinion and use a more common-sense approach even if this goes against a more complex and nuanced legalistic approach. Though this appeals for 'common sense', similarly called for by Truepenny and Tatting in different forms, he acknowledges that taking into account "emotional and capricious"[706] public opinion is likely to be unpopular with his judicial colleagues. This view points towards a division between a legalistic and general understanding that might prove slightly more problematic in practice. If there are multiple branching versions of the law, which can we say is the correct legal understanding? What is the impact of a non-legal understanding opposed to a legal one? Where does the line of legal reasoning begin? The answer to these is likely to be a matter of context and individual experience. Though Justice Handy's embracing of this might seem strange in a legal context, can it be said that the processes are wrong and do not apply? Or, is it that the effects are often more subtly embedded in decisions that less openly admit to them? Handy's judgement also references that there is a real belief that there is to be no clemency for the explorers, based on his personal relationship with the Chief Executive. Within the scope of the judgement, this raises questions about how appropriate it is to bring in such information. However, it also reinforces that judges are real people who engage in things outside the law. The implication of Handy's judgement is that the judges' real lives and public opinion reflect different frames that are traditionally supposedly kept separate. We can perhaps separate the legal definition of 'murderer' and the 'general life' definition of the term, however, can it be said that they have no influence on each other?

Where judges are real people with a private life, it is also important to understand that they are acting in a professional capacity in performing their roles. Being a judge is a job just as any other and as such entails a series of expectations, social relations, and hierarchies. If a

[706] Fuller (N.697), Pg.640.

judge in Newgarth is appointed and promoted based on merit, with conditions in which they might be removed or censured as compared against social and professional expectations, these will provide a stabilising pressure on how they might make their decisions. These expectations will entail a series of codified and uncodified expectations that exist both from within the network of judges and as part of society at large. To exemplify this, Chief Justice Truepenny's position is that there is no room for interpretation in the statute and thus must be applied literally, meaning he expects that the first instance court could do nothing else. Instead, he recommended that clemency be requested as he believes that this would act in 'mitigating the rigors of the law'.[707] Likewise, Justice Keen sets out what he believes is the correct role of the judges, namely that of enacting law, with executive clemency being something that he can only engage with outside his role as a judge. On the other side, Justice Foster initially argues that the events took place in a state of nature, implicitly arguing that this was outside their legal jurisdiction. Both Foster and Handy consider a more purposive approach to interpretation, considering that exceptions can be found to the law and that it should consider its relationship with the public and public opinion. The importance of this is not just to highlight that the judges had different opinions regarding the law, but also that it reflects differing opinions about the role of judges in relation to the law and how they view the constrains and demands of their own jobs. Judges are not just interpreting law in making decisions, they are performing their interpretation of their own role and the effects that has on their decisions.

Just as real events would require perfect information to accurately assess in a court of law, assessing the decision-making process of judges would also require perfect information. Where the Speluncean Explorers is designed to highlight different approaches to the law with judgements that reflect broad theoretical and philosophical differences within practice, actual cases do not clearly express these differences. Likewise, judges are not generally so clearly exemplars of theoretical approaches to the law, their decisions reflecting a complex arrangement of theoretical influences, consistency with their own decision making, and it is hoped well-reasoned responses to persuasive arguments placed before them. Drawing attention to these elements is not to propose that this could be developed into some kind of framework for analysing judicial decision making, for the simple reason that it would also have to be done in retrospect and would involve abstracting from the actual decision making in ways that could obscure any kind of value it might have. Instead, it is proposed that in highlighting this, it demonstrates that many elements of the law are persuaded into existence from the ontological politicking of judges. While points of stability and centralisation arise in relation to statues and case law, the 'law' to the extent that it can be said to represent a

[707] Ibid, Pg.619.

singular entity and not a range of different understandings, expresses and reflects complex constellations of understandings of these nominally stable points. These points reflect understandings and influences from a range of elements that are not obviously discernible from the judgements themselves but leave their traces in different intensities. The application of the law to events is not a mechanical process but a very human one, that applies in retrospect a constructed legal 'reality' reflective of a legal interpretation of events.

To summarise, we might consider the role of judges with a frame of an ontology of persuasion, making ontological decisions between different narratives that are constructed according to what is allowable within the rules of evidence, court etiquette, and professional standards. These narratives attempt to engage what is proven or provable and shape the narrative in light of blueprints or scripts by which different legal acts might be set out. These narratives are abstracted from actual events by the layers of interpretation that goes into their creation. By the same measure, judges are attempting to bring their interpretation of how these narratives fit into the scripts provided by legal rules. This is done considering their own understanding of the law and their understanding of their role within it alongside the various influences on their conceptual understandings of the constituent elements that go into these decisions. This will be personal to every judge, with both understanding of these elements and the relative weight or rhetorical power of those elements being truly individual.

Case law by extension is a literary inscription that contains the traces of the elements and understandings that go into their creation. In much the same way that removing the modalities from a scientific text allows it to be increasingly persuasive, we understand case law as being a statement of the law that exists in a web of other cases that inform its modalities.[708] The interpretation of existing case law informs decisions, which leads to new texts that repeat this process, becoming increasingly persuasive as cases reoccur.[709] Through this process the boundaries of the law are constantly shifting and new points to which the understandings of the law are being pulled.

Following this reasoning, the relevance of a social, economic, and legal understanding of property, as it intersects with the activities that spawned legal cases, the individuals informing and shaping the narratives in a case, and the judges deciding on the ontological politics of a case, constructs specific contingent understandings of property that are captured in those cases. Within the law, property and its logic is multiple, applied in different ways through different cases, statutes, and legal 'scripts', often not the central issue but still

[708] Compare to the inscription devices (Pg.25-28)
[709] See anthropological understandings of law (Pg.59-60)

effected by the judgements surrounding it. In this way property is subject to continual change both explicitly and implicitly.

Property through a remedial lens

This chapter will begin by presenting the case that notionally the creation or imposition of proprietary interests goes beyond the standard remit of the courts, examining the narratives that emerge surrounding remedial constructive trusts. In doing so, a seemingly stable and logical framework for the circumstances by which both constructive trusts and fiduciary relationships arise will be re-examined. This will then be contrasted with circumstances in which these foundations are stretched in order to justify the use of proprietary relationships and implicitly the creation of proprietary interests that facilitate the use of the constructive trust format. This chapter will then consider the development of the doctrine of trustees de son tort that provides a formalized parallel to these cases in circumstances that allow for an equitable proprietary interest to be implied. This chapter will finish by considering the doctrine of proprietary estoppel, whereby proprietary interests are directly inserted into a situation to justify a particular allocation of property. Taken together, these will present a case for interests in property being implied into circumstances to justify remedial outcomes, in part facilitated by the notionally stable proprietary interests and rights that in truth they undermine.

Against creating proprietary interest – The lens of the remedial trusts

The key doctrine that considers the imposition of proprietary interests into situations is that of constructive trust. In very simple terms, the imposition of a constructive trust severs the equitable interest from the hands of a legal owner and revests that beneficial interest in the hands of another. What at first blush appears to be an absolute legal owner is instead found or forced to hold it for the interest of another. Constructive trusts are a tool utilised to safeguard property where it "has been identified as being in the hands of someone who is not beneficially entitled to it."[710] The effect of the constructive trust is to give priority to the beneficiary above any other creditors and claimants whilst also imposing fiduciary duties to ensure that the benefit of control of property is directed properly towards the beneficiary. As will be explored, in theory the constructive trust arises in specific circumstances by the operation of law. However, the circumstances that give rise to a constructive trust are at the mercy of the courts and are arguably imposed after the fact to justify a particular remedy or to provide a particular solution achievable most efficiently by the trust format. The battle between these opposing views is a subtle battle in which divides are created within the area

[710] Sue Farran and Katharine Davies, *Equity and Trusts* (Hall and Scott Publishing 2016).

of constructive trusts between 'institutional' and 'remedial' constructive trust. The definition and application of these terms creating a tug of war as to which circumstances fall within the realms of the permissible and serves to obscure debate as to the remedial nature of the proprietary interests created by constructive trusts.

Where it might be said that all constructive trusts are fundamentally remedial, serving as a tool that allows for a specific remedy, the debate surrounding remedial trusts has been somewhat misdirected by the language surrounding their deployment. The key problem emerges from Maudsley's well-recognised divide between 'institutional' trusts and 'remedial' trusts.[711] Whilst both forms of constructive trust defy explicit definition,[712] their differences stem from the apparent use of judicial discretion and the supposed time at which they come into existence. As the generally accepted method for categorising constructive trusts,[713] 'remedial' constructive trusts are generally those understood to be outside the scope of acceptable constructive trusts. To understand a trust as 'remedial' implicitly brings with it an association to the unprincipled or illegitimate.

The actual division between 'institutional' and 'remedial' constructive trusts is vague at best. Perhaps the clearest statement on the nature of the divide is to be found in Lord Browne-Wilkinson's judgement in Westdeutsche Landesbank Girozentrale v Islington LBC:[714]

> Under an institutional constructive trust, the trust arises by operation of law as from the date of the circumstances which give rise to it: the function of the court is merely to declare that such trust has arisen in the past. The consequences that flow from such trust having arisen (including the possibly unfair consequences to third parties who in the interim have received the trust property) are also determined by rules of law, not under a discretion. A remedial constructive trust, as I understand it, is different. It is a judicial remedy giving rise to an enforceable equitable obligation: the extent to which it operates retrospectively to the prejudice of third parties lies in the discretion of the court.[715]

However, whilst this statement attempted to provide a succinct summary, it does little to clarify the point of divergence between the two categories. Taking this definition at face

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[711] Rh Maudsley, 'Proprietary remedies for the recovery of money' (1959) 75 LQR 234, 237.
[712] Indeed this originated in the distinction between substantive and remedial trusts utilized by Roscoe Pound, 'The Progress of the Law, 1918-1919 Equity' (1920) 33 no. 3, Harvard Law Review, 429. Where the specific divide was rejected as being irrelevant, all constructive trusts are fundamentally remedial.
[713] Ibid, see also Westdeutsche Landesbank Girozentrale v Islington LBC [1996] UKHL 12, [1996] AC 669, and LJ Millet, 'Equity- The Road Ahead' (1995) 6, Kings College Law Journal, 1.
[714] [1996] UKHL 12
[715] Ibid, Pg.38.

value, the difference between the two seems to arise along an axis of discretion, as polarising approaches which implies 'institutional' trusts involve no discretion while 'remedial' trusts are exclusively discretionary. This is perhaps unhelpful as if one approaches judicial decision making through the lens of ontological politics, this definition of a 'remedial' trust simply refers to all constructive trusts. Beyond simply identifying discretion as a problem, it does not explain at what point discretion becomes a problem or over what issues this discretion becomes problematic.

Both types of trusts are bound by the fact that at some point there must be some discretion in interpreting facts, the law, and how the two interact. As has already been considered, there are many layers to both individual understanding[716] and decision making[717] that make it a deeply personal exercise in multi-layered discretion and interpretation. Whereas the duality between categories of trusts presents discretion as a binary choice, in reality it must exist in shades of grey. Indeed, Liew makes the case that for this reason, discretion and its exercise or lack thereof cannot form the basis of a distinction between institutional and constructive trusts.[718] Going so far as to note that there can "be discretion even in the hammering of a nail".[719] Where conceptually there is a difference between institutional and remedial trust, it is not clear that the difference is in 'discretion'. Without being clearly distinct, it is unclear how the distinction can be applied in practice. Not only might judges differ as to when a trust is appropriate, they may also differ as to where the line is drawn between institutional and discretionary trusts. Where an institutional constructive trust might be discretionary as to the application to the facts, a remedial constructive trust might also be discretionary as to when they apply, the latter having to contend with deciding to prejudice third parties.

Taking forward the idea that 'institutional' trusts do not involve discretion, they are portrayed as a fixed concept that will be known when they are seen. These kinds of trusts are generally taken to arise "by operation of law as a result of the conduct of the parties. It arises automatically in defined circumstances and in accordance with settled principle".[720] These are considered, perhaps unhelpfully, to "arise whenever the circumstances are such that it would be unconscionable for the owner of the legal title to assert his own beneficial interest and deny the beneficial interest of another".[721] While these can arise in a range of circumstances, of particular note is that it arises in response to breaches of fiduciary duty.[722]

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[716] See (Pg.24-34).
[717] See (Pg.34-43).
[718] Ying Khai Liew, *Rationalising Constructive Trusts* (Hart Publishing 2017).
[719] Carty v London Borough of Croydon [2005] EWCA Civ 19, [2005] 1 WLR 2312.
[720] Millet, (N.713), 18.
[721] Paragon Finance Plc v D B Thackerar & Co [1999] 1 All E.R. 400.
[722] Lord Neuberger, 'the remedial constructive trust, fact or fiction' speech at the banking services and finance law association conference, Queenstown, 10 August 2014.

Indeed, it is the circumstances that are taken to create the trust, with the trust being taken to exist from the moment the circumstances for constituting it arose. The role of the court in this situation is "merely to declare that such trust has arisen in the past".[723] This presents a case for institutional constructive trusts operating mechanically over circumstances with the law interceding to act as referee pointing out established rules rather than actively imposing any kind of 'remedy'.[724]

Indeed, it may be that the focus on discretion is really about ensuring the trusts do not give the appearance of providing a 'remedy'. As Liew points out, "a significant factor which influences one's definition of 'institutional' and 'remedial' constructive trusts is one's understanding of what remedy entails",[725] arguing that there is a range of definitions both within judgements and within the wider academic discourse which provide no coherence to identify what a remedial constructive trust might entail.[726] Lord Browne-Wilkinsons's approach in Westdeutsche appears to follow a definition that accepts that only remedial trusts provides a judicial remedy, with the implication being that any remedial function stemming from the institutional trust is incidental to its automatic application by law.[727] Bryan argues that this relies on approaching constructive trusts as "'construed' from the circumstances of the case, rather than 'constructed' by court order".[728] Taken together, this points towards judicial discretion being acceptable where it is used to interpret the circumstances in a way that justify the 'finding' of a well-recognised application of the constructive trust, In other words, 'institutional' constructive trusts are not based on a general principle[729] but simply utilise discretion to apply well-established mechanisms.[730]

[723]Westdeutsche, (N.713).
[724] Even where these might have previously been hidden from those involved.
[725] Liew, (N.731) pp. 11.1.3.
[726] Ibid, this can be taken to the extreme, that a remedial constructive trust might simply be remedial and no trust at all.
[727] Westdeutsche, (N.713).
[728] Michael Bryan, 'Constructive Trusts: Understanding Remedialism' in Jamie Glister and Pauline Ridge (eds) Fault Lines in Equity (Hart Publishing 2012)220, This also cites the approach towards 'construed' rather than 'constructed' as originating in Austin Wakeman Scott and William F. Fratcher, The Law of Trusts (fourth edition, Little Brown Publishing 1987) noting that Scott's view would have found many institutional trusts under this definition as being remedial trusts.
[729] Though some commentators have attempted to justify remedial constructive trusts based on unjust enrichment. See for example D.W.M Waters, The Constructive Trust: The Case for a New Approach in English Law (The Athlone Press 1964) This does not in itself help to determine when that will be held to be acceptable.
[730] Charlie Webb, 'The Myth of the Remedial Constructive Trust' (2016) 69 issue 1, Current Legal Problems, 353, places this in terms of discretion fettered by rules. Following this language, we might consider the well-established cases of allowable constructive trusts to provide a script by which the discretion to find a trust might be exercisable.

Common circumstances or situations where the constructive trust can be found are justified within common intention constructive trusts,[731] co-ownership of property,[732] secret trusts,[733] mutual wills,[734] specifically enforceable contracts and the perfection of imperfect transactions.[735] It would be simple to say that where these elements are present, it will always lead to the imposition of a constructive trust. However, the fact that the case law is constantly filled with contradictions on when the facts of the case justify a finding that these elements apply, means that it is impossible to truly say when a constructive trust could operate automatically. For example, where a breach of fiduciary duty in circumstances involving joint property ownership might uncontroversially lead to a constructive trust, the courts still need to recognise the existence of the conditions that enable a constructive trust.

An important consequence of this in terms of the decision-making process is that it allows the focus of the decision to be made as concurrent with the circumstances that lead to its creation. Where the institutional constructive trust is taken to act as having arisen at the time at which the circumstance that justifies its creation, it allows the judicial decision to be done on terms that are not specifically remedial. For example, where the finding of a constructive trust is potentially detrimental to third parties, these are "merely side effects of the trusts existence".[736] This allows judgements to be couched in terms that are non-prejudicial and operates contemporaneously. This absolves judges of making difficult decisions in relation to the relative merits of the parties and in having the law take action retrospectively.[737] By focusing the scope of judicial discretion to applying categories of well-established rules by finding them in the 'facts' of the case, the remedial facet of a constructive trust can be treated as consequential rather than central to the judgement. In a real way, the institutional

[731] Lloyds Bank v Rosset [1991] 1 AC 107, Stack v Dowden [2007] UKHL 17.
[732] Gissing v Gissing [1971] AC 881.
[733] Secret trusts can by their very nature be difficult to factually establish. Arising in relation to wills and existing either as half secret trusts where the trust is apparent from the will without clear beneficiaries or truly secret trusts that arise under some secret instructions. These vary in formality from those set out in Dehors, secret documents outside the will, to those in which the trust has not fully been committed to writing. The latter of which can be exceptionally hard to evidence, none the less these can be construed as formulating a constructive trust. See for example Ottaway v Norman [1972] Ch 698. A fully secret trust can also be interpreted as an express trust that is constituted by the transfer to the trustee pursuant to the Will.
[734] These arise in circumstances where wills are drafted pursuant to a legally binding agreement that obligates the parties to make their wills in a particular way. This is made with the intention that they would not be changed without notice or mutual agreement. This has the effect of signing away testamentary freedom at the point of death of one of the parties. The enduring equitable obligation taking effect in equity in a form of constructive trust. See Legg & Anor v Burton & Ors [2017] EWHC 2088 (Ch), [2017] 4 WLR 186. This can also be treated as a form of proprietary estoppel.
[735] As a general rule this follows the equitable maxim that equity will look on that as done which ought to have been done or that equity imputes an intention to fulfil an obligation. Constructive trusts are often used to fulfil a void in activity to ensure that these obligations are completed.
[736] Liew, (N.718), 240.
[737] This is not to say that all judges ignore this completely. To openly argue for such a course of action however is likely to lead to a trust being found purely remedial.

constructive trust is the finding of a proprietary interest and following it to its natural conclusion using the normal remedial logic of property.

By contrast, remedial constructive trusts are understood to be entirely at the discretion of the judge with "its critical features of judicial discretion and retrospectivity".[738] The remedial trust, generally accepted not to be possible in English law,[739] must be one that cannot claim currently legitimacy by reference to established case law or by the facts justifying its imposition.[740] It has been said that if a remedial trust were to exist it would:

> only come into existence once a court is satisfied that (i) a plaintiff has a claim for equitable compensation (or even possibly common law damages) from a defendant, which does not give rise to an institutional constructive trust or other proprietary interest, and (ii) the court in its discretion, having considered all the circumstances, considers that justice would be done by imposing a trust in favour of the plaintiff.[741]

This proposed remedial trust would only arise "when it is just",[742] in effect rendering its creation a matter of case-by-case assessment. On the face of it, such trusts could lead the law to operate in an unpredictable, unprincipled manner, with the ability to determine whether a constructive trust will arise being solely a gift of the courts. In this manner, were a court to determine that in fact a constructive trust would have arisen, this would mean that it was entirely retrospective and only came into existence as it was imposed by the courts.[743] It is clear to this point that the English courts do not consider the existence of a remedial trust acceptable, even though it forms a part of other common law jurisdiction.

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[738] Crossco (no 4) Unlimited v Jolan Ltd & Ors [2011] EWCA Civ 1619.

[739] Exceptions can be found in arguments in Metropolitan Bank v Heiron (1880) 5 Ex D 319,324, and Hovenden v Lord Annesley (1806) 2 Sch and Lef 607. In both cases, obiter comments implied that a remedial constructive trust are possible. In Thorner v Major [2009] UKHL18, para 14, Lord Scott acknowledged that he would have based his judgement on principles of remedial constructive trust if allowed. These cases do not clearly provide a definition to the remedial trusts they thought possible however or under what circumstances. In more concrete terms Stack v Dowden [2007] UKHL 17 can be interpreted in such a manner that it supports the case of remedial constructive trusts on the basis that it imposed a kind of discretionary distribution of property operating in a retrospective manner. Problematically for an approach exclusively based in remedial trusts it could also be interpreted as a resulting trust and justified under similar principles.

[740] If unconscionability was considered a trigger for a remedial constructive trust, it might be possible to develop through case law a stable set of parameters for its operation, though this seems unlikely.

[741] Neuberger, (N.6), [10]

[742] Ibid, [28].

[743] On an international footing, this seems perfectly acceptable to many other common law jurisdictions with the remedial trust being available in Australia, New Zealand, Canada, Ireland, and America. Indeed, notably the effects of the remedial trust in these jurisdictions are also said to be at the discretion of the courts with judges having the ability to determine whether they take effect retrospectively or prospectively. Indeed, it appears that this is in order to ensure that things remain as 'just' as possible. See for example Muschinski v Dodds [1985] HCA 78 (1985) 160 CLR 583, (Australia) and Lac Minerals Ltd v International Corona Resources Ltd (1989) CanLII 34 (SCC), [1989] 2 SCR 574.

The objections to a remedial constructive trust are not necessarily that a remedial constructive trust would serve no function in English law but rather that to do so would undermine fundamental principles of the way the English legal system operates. Liew puts forth the case that in rejecting remedial constructive trusts "judges are not simply saying that English law approaches the award of constructive trust differently from most other Commonwealth jurisdictions",[744] instead that it is something inherent within the award of a remedial constructive trust that remains unacceptable to English jurisprudence.[745] Where there is certainly a case to be made that recognition of remedial trusts would create unwarranted uncertainty in the law and unpredictability in the courts that would impact the attractiveness of English law,[746] the key objection to allowing a remedial trust appears related in its potential to undermine existing property interests.[747]

Foskett v McKeown illustrates well the perception of judges as to remedial constructive trusts.[748] The facts of the case involved monies taken in a breach of trust being utilised to pay for premiums on a life insurance policy, with the beneficiaries of the trust seeking to claim an entitlement to the proceeds of said policy. Of particular importance was the quantification of any potential remedy with some payments of the premium being paid with 'clean' money and some being paid with trust money. This case considered both an approach founded in unjust enrichment[749] and a process of tracing[750] into the policy predicated on the continuing existence of proprietary interest as routes to providing a remedy. The majority finding in favour of asserting an equitable proprietary interest which entitle the claimants to

[744] Liew, (N.718).
[745] Ibid.
[746] Neuberger, (N.6).
[747] The fact that this is not obviously true for Australia and New Zealand perhaps raises questions as to how the historicity of property rights in those jurisdictions and the much clearer origin of those rights might have reduced the opposition to this idea. It cannot be said that the remedial constructive trust is without controversy in those jurisdictions or indeed that it is relatively commonplace, often being utilised only in exceptional circumstances, however that the courts feel able to impose retrospectively a proprietary interest when it is couched in those terms is perhaps notable for their understanding of property rights.
[748] [2001] 1 AC 102.
[749] Associated with the law of restitution that views constructive trusts through a remedial lens. As a cause of action unjust enrichment may give rise to a constructive trust, however this is a deeply unsettled area of law and in general it appears that this is only possible in exceptional circumstances. The relationship between the law of trusts, the law of restitution and the law of unjust enrichment is complicated by the lack of clear definition of each element. As a relatively new area of law, unjust enrichment is at best loosely principled, with the principles that are attributed as giving rise to a claim for unjust enrichment being incredibly broad. While these can prove useful for examining historical cases and resolving otherwise fringe cases within established doctrines, the cases cited to provide evidence of constructive trusts in unjust enrichment appears to follow simply the logic provided by the law of property and trusts. See Charles Mitchell, Paul Mitchell and Stephen Watterson (eds) "Goff and jones The law of unjust enrichment" (8th edition, sweet and maxwell, 2011). For judicial discussion on the elements of unjust enrichment see Banque Financière De La Cité v. Parc (Battersea) Ltd and Others [1998] UKHL 7.
[750] See Appendix A for a consideration of proprietary interests in tracing. (Pg.204)

a pro-rata share of the policy. Of note are the comments of the judges that reinforce a preference for both a remedial approach grounded in the strength and logic of proprietary interests and a rejection of a discretionary approach to providing a remedy.

Lord Browne-Wilkinson stated:

> The rules establishing equitable proprietary interests and their enforceability against certain parties have been developed over the centuries and are an integral part of the property law of England. It is a fundamental error to think that because certain property rights are equitable rather than legal, such rights are in some way discretionary. This case does not depend on whether it is fair, just, and reasonable to give the purchasers an interest as a result of which the court in its discretion provides a remedy. It is a case of hard-nosed property rights.[751]

Equally Lord Millet's position relied on an equally strong concept of property rights.

> There is no 'unjust factor' to justify restitution (unless 'want of title' be one, which makes the point). The claimant succeeds if at all by virtue of his own title, not to reverse unjust enrichment. Property rights are determined by fixed rules and settled principles. They are not discretionary. They do not depend upon ideas of what is 'fair, just and reasonable.' Such concepts, which in reality mask decisions of legal policy, have no place in the law of property.[752]

Beyond simply rejecting unjust enrichment as grounds for providing a remedy in this case, this presents the basis for deploying constructive trust as a remedy by centering it around an existing equitable proprietary right. The strength of property rights is presented as allowing no room for discretion as to its existence, with a remedy following on as a logical consequence of the equitable interest rather than as a matter of discretion for a judge in the face of this interest.[753] Considering these arguments as a basis for justifying institutional constructive trusts, it is easy to see how the logic of property and equitable proprietary interests, once found, can be used to construct a narrative that justifies its operation without discretion. The finding of an equitable interest can always lead to a remedy.[754]

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[751] Foskett, (N.748).
[752] Ibid.
[753] At least to the extent that the judges do not have a discretion over the initial proprietary interest. Claimants can be provided with discretion as to the remedy they are awarded. In this case choosing between, the option to pursue either a person claiming against the trustee for the amount of the misapplied money, an equitable lien over the property to the value of the misapplied money, or a proportional share of the property. The latter two, being different proprietary interests, could be seen as the courts creating what is in effect a discretionary interest in property rather than explicitly following clearly established interests.
[754] Though there are instances in which the equitable interest can be defeated.

By contrast, the narrative that emerges surrounding the strength of property rights can be deployed as voraciously against the remedial constructive trust. Whereas property rights justify providing a remedy by their existence, to provide a remedy without using them as a basis involves interfering with existing interests retrospectively. Lord Justice Nourse provides a useful summary of this argument in Re Polly Peck (no 2):

> the remedial constructive trust gives the court discretion to vary property rights. You cannot grant a proprietary right to A, who has not had one beforehand, without taking some proprietary right away from B. No English court has ever had the power to do that, except with the authority of Parliament.[755]

By its very nature, a remedial constructive trust would have to vary existing property rights. In finding a remedial trust, the court would retrospectively be creating an equitable interest that has the effect of prejudicing one property rights in favour of the newly created right. From this emerges the narrative that to allow a remedial constructive trust not only undermines the stability of existing property rights but also undermines the conceptual strength of property rights. To do that simply on the basis of judicial discretion theoretically goes well beyond the power of the courts.

The small hiccup in presenting this approach towards constructive trusts is that it presents the issue as operating as a series of binary choice informed by the distinction between institutional and remedial constructive trusts. This approach is useful for understanding judicial decision in respect of constructive trusts, where these strong arguments against the remedial trust not only make it clear why judges have refused to allow 'remedial' trusts but also why the constructive trusts that are imposed need to avoid the appearance of acting remedially. Doing this conflates remedial vs institutional as acceptable vs unacceptable uses of trust formula, and confuses remedies as processes vs outcomes. Indeed, it has been suggested that there are instances where constructive trusts are no trust at all and are "nothing more than a formula for equitable relief".[756] This is indicative of the conceptual slippage between the constructive trust as a process by which a remedy is provided and one in which it is itself a remedy. The finding of an equitable interest, by virtue of the fact it exists, allows for a constructive trust to be imposed. An institutional constructive trust is notionally construed by finding circumstances that justify the creation of a constructive trust as a vehicle for that equitable interest. While these are taken to be found rather than created, they can only exist because the court finds them. Where an institutional trust is dressed up to appear as a process to provide a remedy, this can only happen in circumstances when judges

[755] Re Polly Peck (no 2) [1998] 3 All E.R. 812.
[756] Paragon Finance Plc v D B Thackerar & Co [1999] 1 All E.R. 400.

look to justify providing a remedy. Where a remedial constructive trust would be justified by providing a remedy, it is unclear how this differs from justifying an institutional trust in order to justify providing a remedy. As a matter of the ontological politics involved in being a judge, it is clear to see why deploying an institutional constructive trust which is nominally well justified, has strong precedent, and reflects strong proprietary interests is preferable to the unjustified, nominally unprincipled, and potentially conceptually damaging remedial constructive trust. Ultimately, through either an institutional or a remedial constructive trust the courts does the same thing, however only through the institutional path can it be justified, and only because the courts decide that it is legitimate to do so.

The previous chapter considered some of the perspectives on the nature of property, importantly touching on the idea that it exists as a continuous chain and that these proprietary interests are perceived as fundamentally stable. The removal of discretion from remedial trusts, at least in theory, allows it to be harmonious with the idea that "whether a proprietary interest exists or not is a matter of property law, and is not a matter of discretion".[757] In finding any kind of constructive trust, there must at some point be a change made to the continuous chain of ownership or variation of existing property rights, that takes effect retrospectively and that is created at the point of judgement. A charitable interpretation might see the institutional constructive trust as giving effect to the path of the proprietary interests that operate in the 'legal reality' taken to have arisen by the conduct of the parties but gone unnoticed. Charitably, we might also consider that institutional trusts tend towards fixing what ought to have been done if only the parties realised.[758] By contrast, without the 'hook' of a proprietary interest found in the circumstances of the parties, a remedial constructive trust would take effect in retrospect by constructing that same interest as if a trust had arisen at some point in the past.[759] This binary approach at first appears to work as, if there is no uncertainty as to the circumstances that give rise to an institutional constructive trust, there is no uncertainty at the point in which a constructive trust becomes one or the other on the scale between constructive and remedial trusts, and there truly is no

[757] FHR European Ventures LLP and Others v Cedar Capital Partners LLC [2014] UKSC 45, [2015] AC 250.
[758] Birks and Swaddling advance an approach that all constructive trust are fictious, existing only in the eyes of the court. With Swaddling developing the idea that the fiction is merely a method by which to disguise and effect a claim for money or a transfer of rights. Peter Birks, 'Property, Unjust Enrichment, And Tracing' (2001) 54 issue 1, Current Legal Problems, 231, 242 and William Swaddling, 'the fiction of the constructive trust' 64 CLP 1, 399.
[759] While this is speculative and the mechanics by which a remedial trust would operate are unclear. It is likely that in order to give effect to a remedially imposed constructive trust it would have to be treated as having arisen in the Past rather than from the point of the judgement.

discretion in applying an institutional constructive trust.[760] Even if we accept that unconscionability were to form the basis of justifying institutional constructive trusts, it is unclear that this distinction could remain conceptually stable. Especially where this might render remedial constructive trusts dealing with unconscionability of the actions of the parties, but also the conscionability of doing so in light of the rights of third parties. If this was accepted as a basis for constructive trusts, we might be more conceptually clear about this distinction. Even if this were the case however continued adherence to the veneer of simplicity of the binary choice likely serves only to undermine the concepts that uphold such a distinction.

Whereas in a traditional approach, the model views remedial vs institutional as defined by the trace of discretion, instead it might be better thought of as a divide as to where discretion lies. Institutional constructive trusts utilise discretion to interpret facts to fit the narrative of the form whereas remedial constructive trusts are ones in which discretion is instead openly espoused. In considering constructive trusts in this manner, judicial reticence towards 'remedial constructive trusts' as 'discretionary' trusts might also apply to circumstances in which the 'institutional constructive trusts' form is used as a framework to read a constructive trust into circumstances that merely appears consistent with an 'institutional' constructive trust. If judges are applying notionally 'institutional' constructive trusts purely because in their discretion a trust should exist, its scope is expanded, and the underlining principles become vulnerable in much the same way as to allow truly remedial constructive trusts.

Fiduciary duties – A stable foundation?

To exemplify the undermining of conceptual stability caused by deploying the institutional constructive trust remedially it is necessary to consider at a more granular level the effect of 'finding' the circumstances that justify the imposition of that same constructive trust. The first problem raised is that there is no clear definition as to when a constructive trust should be found, indeed it has been said that

[760] On this point Swaddling, considering that constructive trusts are a mere fiction, arguing that the divide between institutional and remedial constructive trusts must be a false distinction, with all constructive trusts being 'remedial'. In doing so he also acknowledges that there are no cases of the so called 'institutional' constructive trusts, at least to his mind, have been wrongly decided. The binary approach while to many different approaches appearing false, still appears to be workable if not theoretically sound from a range of different approaches. Swaddling, Fiction of the constructive trust, (N.758).

> English law provides no clear and all-embracing definition of a constructive trust. Its boundaries have been left perhaps deliberately vague so as not to restrict the court in technicalities in deciding what the justice of a particular case might demand.[761]

It has been proposed as a general principle that proprietary constructive trusts will be imposed in circumstances where the conscience of the legal owner is affected.[762] Per Lord Millet, in circumstances where "it would be unconscionable for the owners of property (usually but not necessarily the legal estate) to assert his own beneficial interest in the property and deny the beneficial interest of another".[763] This however does not explain all the recognized categories under which constructive trusts arise.[764] On a view of constructive trust as operating simply by operation of the law, the lack of consensus on how exactly when and where constructive trusts arise, raises questions as to what the law being applied is. Even allowing for the 'edges' of the doctrine to expand to meet the need to meet the demands of 'justice of a particular case',[765] accepting either unconscionability as a cornerstone for the doctrine,[766] or simply expansion by analogy, does not adequately provide a stable foundation for its imposition. Rather than delve deeply into the range of circumstances where constructive trust arises, noting that they are somewhat uncertain, it is proposed instead to focus on the second area that raises problems, the relationship between fiduciary relationships, duties and constructive trusts.

Fiduciary duties, the relevant relationships, and constructive trusts exist in an awkward flux.[767] Each element contains a relatively stable 'core', however at the borders they are constantly shifting, with the ill-definition of each element helping to reshape each other. For

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[761] Carl Zeiss Stiftung v Herbert Smith (no 2) [1969] 2 WLR 427.
[762] Westdeustche Landesbank Girzozentrale V Islington LBC [1996] AC 669. Indeed Lord Browne-Wilkinson comments do suggest that unconscionability is the trigger for many constructive trusts.
[763] Paragon finance, (N.756).
[764] Graham Virgo, The Principles of Equity and Trusts (fourth edition, Oxford University Press 2020), pp 9.1.2.
[765] While we might consider that the facts of a particular case invite by analogy the expansion of the doctrine of the constructive trust, the notion that a particular case would require a constructive trust to provide justice where it might not obviously be found invites the argument that this does in fact refer to a remedial expansion of 'institutional' constructive trusts.
[766] At best unconscionability is uncertain and incredibly case specific. Though constructive trusts have been imposed predicated on unconscionability, see Pennington v Waine [2002] EWCA Civ 227, and it has been proposed as a potential unifying principle for areas of equity, see Mark Pawloski, 'Unconscionability as a Unifying Concept in Equity' (2001) 16 no. 1, The Denning Law Journal, 79. The inherent uncertainty of the term has generally held it back from being employed as a basis for a doctrine.
[767] The simplest example is that of a trustee being also being a fiduciary and thus a breach of trust can lead to a constructive trust. The creation of a constructive trust however makes the defendant a trustee and therefore a fiduciary regard to that trust. This picture should not be confused with individuals who are treated as constructive trustee by virtue of association with a trust and obtain a personal lability to account. Trustees of a constructive trust are simply Trustees, differing only in the specific content of their fiduciary obligations as compared to those trustees of express trusts. See further Lionel Smith, 'Constructive Trusts and Constructive Trustees' (1999) 58 no. 2, The Cambridge Law Journal, 294.

the constructive trust, there is inherent within it the idea that there is a beneficial interests that exists over which a claimant can assert their entitlement and an assumption that there exists some special relationship between the individual, the property and the legal holder.[768] Indeed, the most common and perhaps least controversial circumstance in which a constructive trust can be imposed is for breach of fiduciary duty on the basis of unconscionable dealing with a preexisting proprietary interest. This creates a situation where breach of fiduciary duty uncontroversially leads to constructive trusts, however it also follows that justifying finding a constructive trust can be done by finding a breached fiduciary duty. It is at least possible that to avoid appearing to provide a 'remedial' constructive trust, a fiduciary duty might be found in order to justify a trust that is needed to meet the 'justice of a particular case'.[769] If this were to be the case, then the stability of what it means to be a fiduciary would certainly be undermined.

On the face of it there are a number of relationships within which a range of fiduciary duties are commonplace, beyond this however it becomes considerably more difficult to create a unified theory or concrete approach by which certainty as to where the boundary of when fiduciary duties might arise.[770] The exemplary fiduciary relationship is that of a trustee to their beneficiary[771] with Edelman noting that both trustee-beneficiary and company directors-company/shareholders represent an early 'status-based' approach to fiduciary duties that include a clear proprietary connection.[772] Beyond those cases with a clear proprietary connection, fiduciary duties have been found between : guardian-ward, lawyer-client,[773] agent-principle[774] , partner-partner,[775] executors-legatees, liquidators-companies, amongst a range of other relationships. While it is possible to attempt to unify these cases,

[768] This last element is not necessarily true, for example a thief who takes property can be said to hold it on constructive trust, though how they hold this property as 'legal' owner is somewhat elusive. In part the problem arises from a lack of a general right to vindication of the legal title to property allowing only a claim for a monetary sum, whereas a beneficial entitlement allows a proprietary claim and an action for vindication of that right. It is likely that in practice the limits on legal entitlement are ignored as the specific legal nature of each claim are irrelevant to delivering justice in a case. Further if at common law an objects value is determined at £10 and a claim is made against it and instead the original object is returned then the £10 value is settled. That this is a practical solution and is likely one that happens in practice further blurs the lines between the entitlement and how a judge might order a settlement in a future case.

[769] Carl Zeiss Stiftung v Herbert Smith (no 2) [1969] 2 WLR 427.

[770] For an in depth exploration of a range of theories for when fiduciary duties arise see J.C Shepard "towards a unified concept of fiduciary duties" (1987) 97 LQR 51 D. Gordon Smith, "The Critical Resource Theory of Fiduciary Duty", (2002) 55 Vanderbilt Law Review 1399 and P.B Miller " the fiduciary relationship" in A.S gold and P.B Miller *philosophical foundations of fiduciary law* (Oxford university press 2014).

[771] Peter Birks, 'The Content of the Fiduciary Obligation' (2000) 34, Israel Law Review, 3.

[772] James J. Edelman, 'When Do Fiduciary Duties Arise?' (2010) 126, Law Quarterly Review, 302.

[773] Maguire v Makaronis [1997] HCA 23, (1997) 188 CLR 499.

[774] Bailey v Angove's Pty Ltd [2016] UKSC 47.

[775] Hellmore v smith (1886) 35 CH D 436 CA.

Edelman presents the case that these are all circumstances in which there has been a voluntary undertaking in which fiduciary duties might be implied as a term of the relationship.[776] This however does not adequately explain the boundaries of fiduciary relationships, Worthington highlights this problem by asking why is a solicitor but not a plumber a fiduciary?[777] When they undertake to act for us, exercise discretion on our behalf and are trusted with decisions which affect both our finances and welfare, why would it be acceptable to hold a lawyer to account as fiduciary but not a plumber?[778] It is in citing Lord Millet, "As usual, we [the English] have tried to muddle through without attempting a definition, believing that anyone can recognise a fiduciary when he sees one"[779] that it becomes clear that while the 'core' fiduciary relationships might be apparent, there is no definition that allows it to be clearly said when other relationships will contain fiduciary obligations.

In seeking an answer to the boundaries of fiduciary relationships, it is clear that it is not simply a case of relationships at least to an analytic standpoint. Miller argues that the dominant view of academics is that fiduciary duties are indefinable, and that case law "suggests that fiduciary duties are responsive to something in the nature of the fiduciary relationship".[780] This leaves academics generally unable to find an analytically satisfying unifying theory, where judges treat the relationships as a conceptually stable precondition to fiduciary liability.[781] Indeed perhaps it is that the law surrounding fiduciaries is developed by analogy not principle, with judges needing to find justifications for fiduciary liability, to provide the appearance of a conceptually stable relationship.

Perhaps then the answer to the question of when fiduciary relationships exist might be illuminated by what distinguishes the fiduciary relationship? The key obligation of a fiduciary relationship is that of unwavering loyalty, with the principle being

> entitled to the single-minded loyalty of the fiduciary… [who] must act in good faith; he must not make a profit out of his trust; he must not place himself in a position where his duty and his interest may conflict; he many not act for his own benefit or the benefit of a third party without the informed consent of his principle.[782]

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[776] Edelman, (n.772).
[777] Sarah Worthington 'Four Questions on Fiduciaries' (2016) 2 issue 2, Canadian Journal of Comparative and Contemporary Law, 723.
[778] Ibid.
[779] Ibid citing, Sir Peter Millet, "equity's place in the law of commerce" (1998) 114 LQR 214, 426.
[780] Miller, (N.770).
[781] Ibid, While Miller suggests that fiduciary relationships are definable and we should strive towards a definition given its importance to its role in fiduciary law, it is possible that the role it serves in fiduciary law is to be flexible to respond to judicial needs.
[782] Mothew v Bristol & West Building Society [1998] EWCA Civ 533.

Indeed, this approach appeared to underpin the Law Commission's report when proposing the key test for a fiduciary as "whether there is a *legitimate expectation* that one party will act in another's interest".[783] Worthington points out this essentially repeats the question of 'when is there a legitimate expectation?' providing little to indicate when the law will legitimise that expectation.[784] Where the plumber and the lawyer are both contractually obligated to provide their services, the loyalty of the plumber extends to the letter of the contract, while more is expected of the lawyer. Beyond cultural expectation, influenced by the prevailing legal climate, it is unclear why we should expect loyalty that binds the party's autonomy in one circumstance and not the other. The fiduciary obligation of loyalty might inform what we expect of those in a fiduciary relationship; merely expecting loyalty is not enough for imposing a fiduciary relationship or fiduciary obligations, it is an actual obligation of loyalty that appears to be the definitive issue.

There is some debate as to if an obligation arises out of a relationship or if the relationship arises because of the obligation. Finn argued that "he is not subject to fiduciary obligations because he is a fiduciary; it is because he is subject to them that he is a fiduciary."[785] This treats 'fiduciary' as a title that exists as the result of an obligation of loyalty. Indeed, Conaglen and Edelmon treat the obligation as separate from any kind of fiduciary relationship.[786] Importantly, this view is predicated on the idea that the fiduciary relationship's only significance is in the fiduciary obligation. Where a fiduciary may owe a range of fiduciary and non-fiduciary obligations, they are separate obligations and being a fiduciary does little to affect the non-fiduciary obligations. It is also not simply that fiduciary obligations are identical within the same position, with professionals being held to a higher standard than non-professionals in certain roles.[787] While there is much to be said for considering in depth the obligation, it is clear that the approach of the courts is to ground obligations in fiduciary relationships even if there is disagreement on the reasons for this.[788] While perhaps there is little technical relevance to finding a fiduciary relationship over the obligation, perhaps the mere fact that there is a justificatory function to a fiduciary relationship justifies its necessity to the courts.

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[783] Law Commission, Fiduciary Duties of Investment Intermediaries (Law Com no. 350, 2014)
[784] Worthington, (N.777).
[785] Paul Finn, Fiduciary Obligations (first published 1977, 40th anniversary republication, Federation press 2017).
[786]Matthew Conaglen, 'The Nature and Function of Fiduciary Loyalty' (2005) 121 issue 3, Law Quarterly Review, 452, and Edelman, (N.785).
[787] Professional trustees for example will be held to a higher standard than those thrown into the role by virtue of circumstance.
[788] Miller, (N.770).

There is something of a chicken and egg problem to fiduciary relationships and obligations. Sir Anthony Mason described fiduciary law as "a concept in search of a principle".[789] There is no clear starting point from which to truly develop a unifying principle, largely being a circular argument, with courts and academics alike constantly chasing a definition and finding it to be just over the next horizon. Whilst there is an area of stability in the agreed upon categories of fiduciary relationships, beyond this it is not clear why or when such relationships exist. There categories do not help predict future fiduciary relationships except perhaps by analogy and this is still dependant on a favorable exercise of judicial discretion. It has been said "there is no class of case in which one ought more carefully to bear in mind the fact of the case".[790] It is perhaps slightly heretical to suggest that this is not because the area is particularly complex, indeed perhaps the problem is considerably simpler than we would like to admit. It is arguable that in some cases courts find fiduciary relationships and obligations as a means to justify fiduciary liability. Allowing judges to provide remedies where such remedies would otherwise be unavailable to them in order to serve an equitable outcome.

There is a dissonance between academic, analytical approaches and the function that fiduciary duties are put to by judges. They are in fact different conceptual arrangements of 'fiduciary duties'. This would seem to explain why there is a lack of unifying principle in fiduciary duties for academics, judges in refusing to tightly define fiduciary duties and follow a generally principled view can find them when they are deemed needed. By finding fiduciary duties, we can justify constructive trusts in a manner that appears justified to the courts. The remedial can be disguised in a veil of legitimacy because it is uncontroversial to find a constructive trust arising from a fiduciary relationship. If discretion cannot be used as a basis for a remedial constructive trust, it can be used to find a fiduciary relationship to provide one instead. Perhaps it is policy not principle, towards equity's own version of justice, that is driving this area of law and in doing so has made it analytically and conceptually uncertain.

Example 1 – Hong Kong v Reid

The novel fiduciary relationship in Attorney-General of Hong Kong v Reid[791] perhaps best highlights how fiduciary relationships might sometimes be implied into circumstances to provide a remedy. In this case, Reid was employed as crown prosecutor and acting director of public prosecutions but was taking bribes to subvert the course of justice and utilised it to

[789] Anthony Mason, "themes and prospects" in P.D Finn (ed) *Essays in Equity* (law book co 1985), 242.
[790] Re Coomber [1911] 1 CH 723 CA, 728.
[791] [1993] UKPC 2.

invest in land in New Zealand. The land was distributed between himself, immediate family members and a solicitor. The Hong Kong government argued that the land was rightfully held on trust for them. There was no clearly recognised class of fiduciary relationship in which to ground liability, indeed there was no need to even find an analogy to other fiduciary relationships.[792] If the money paid as a bribe was not held on trust, then there was simply an obligation to account for money had and received, which prior to this decision was the prevailing legal position following Lister and Co. v Stubbs.[793] If this were to have been followed, then only the value of the bribe itself could be accounted for and could not be traced into the value of the land obtained. It was instead determined that there was a constructive trust as, in the course of a fiduciary duty, the bribe should have been paid over to the state (acting as principle) as soon as the bribe was made and that equity will treat as done what ought to be done. This allowed the maximum amount to be recovered for the state and ensures that the fiduciary obtains no benefit from their wrong. Indeed, there was a particular stress on the idea that bribery and corruption represent such moral wrongs that there should be no way for Reid to retain any benefit. Where the nature of the fiduciary duty is largely unquestioned in this case, it is also worth noting that the finding of a fiduciary obligation goes hand in hand with understanding the money paid over as a bribe and the justification for removing those proceeds from Reid.

In simple terms, there is clearly a strong case to be made for the proceeds of a bribe being removed from those who receive them, not least to discourage those who might be tempted to do so. If we are to treat seriously the idea that a fiduciary obligation is one of upmost stringency,[794] then a fiduciary must not obtain any benefit from their misdealing's. This seems to underpin this decision with Lord Templeman stating, "bribery is an evil practice which threatens the foundations of any civilised society. In particular, bribery of policemen and prosecutors brings the administration of justice into disrepute."[795]

The use of a constructive trust and allowing a proprietary remedy ensures that no benefit can be obtained by Reid. The finding that there is a fiduciary obligation justifies this approach, however what beyond the policy that he should not obtain the benefit justifies this relationship? Allan argues that where generally a proprietary base should be recognised, Reid does this on the basis of the maxim 'equity regards that as done which ought to be

[792] This view is shared with Alastair Hudson, Equity and Trusts (ninth edition, Routledge 2016), 621.
[793] (1890 LR 45 Ch D 1. This case focuses on the need for a proprietary base for a constructive trust. If this were to be followed it would be necessary to show that a constructive trust arises in relation to misuse of a property held on trust or some other proprietary connection to the property being claimed.
[794] See Boardman v Phipps [1967] 2 A.C. 46. Highlighting the seriousness of equity in deterring breaches of fiduciary duty.
[795] Hong Kong v Reid [1994] 1 A.C. 324, 331.

done'.[796] Perhaps the imposition of a constructive trust and its justification on the basis of this maxim is best seen simply by considering the alternatives.

1. Follow Lister v Stubbs and potentially allow a fiduciary to retain some profits, a clearly unacceptable outcome in light of Lord Templeman's sentiments above.
2. Find a constructive trust, potentially prejudicing third party creditors, ignoring the possibility of other appropriate remedies. The approach that was taken.
3. Use a remedial trust and retain the flexibility that still allows for other remedies where appropriate.[797] This is generally unacceptable as discussed above because it would require recognising remedial constructive trusts and undermine the idea that constructive trusts are a substantive institution.

It is the distinction between the last two that raises some eyebrows. Where the presentation in Reid is that there is no discretion being utilised and that this process is automatic, by relying on the principles of equity to justify the constructive trust, it is unclear how this differs from a remedial constructive trust except in form.

Example 2 – Reading v Attorney-General

Similarly, Reading v Attorney-General[798] may also demonstrate a reading of fiduciary duties into circumstances in order to justify a remedial outcome. In this case, Mr. Reading, a serving army sergeant, was paid by smugglers totalling £19,325 4s, to ride in their lorry whilst in uniform. As a serving army officer in uniform, the intent was that it would discourage searches. It was contended by the crown that these sums represented bribes, and that Reading was in a fiduciary position to the crown. The decision of the court makes it clear that there was indeed a fiduciary relationship between a soldier and the crown, with specific reference to the use of uniform and the status of a commissioned officer as being key elements as to why the money should be handed over to the crown. This was predicated on an analogy with the master-servant relationship and the relatively well-settled principle that a secret profit, commission or bribe would be recovered if it was done in the course of his employment.[799] While this seems relatively unobjectionable, this rests on two qualifications:

1) That the sum was obtained in the course of employment.
2) There must exist a fiduciary relationship between employer and employee.

[796] Thomas Allen "Bribes and constructive trusts: A-G of Hong Kong v Reid" The Modern Law Review Jan 1995 vol 58 no 1.
[797] Ibid.
[798] [1951] UKHL 1.
[799] Ibid.

The first of these issues seems to be determined by reference to the use of the uniform, of note is that it is unclear when and where a serving officer in uniform might not be thought to be 'in the course of employment'. To deal with the second issue, Lord Porter admits

> the words "fiduciary relationship" in this setting are used in a wide and loose sense and include *inter alios* a case where the servant gains from his employment a position of authority which enables him to obtain the sum which he receives.[800]

After this case, the position would appear to be that soldiers are fiduciaries for the crown from the moment they enlist. Would this apply if they were not in uniform or only presented army ID?? Would a conscripted solider, who have not in any way voluntarily entered the position, be held to the same standard? Would this apply if someone was wearing a uniform had never been in the army? There is at least a suggestion in this case that there is a loosening of fiduciary relationships in order to allow a remedy and that a proprietary basis somewhat unconvincingly founded on the use of uniform might have been a way to simply find a justification for imposing a constructive trust.

The cases and discussions above have shown that there is much uncertainty surrounding the boundaries of fiduciary relationships and obligations. There is no unifying theory that would allow us to understand when and where they can be found. It is clear that judges do not regard this as much of an impediment however. It would be folly to suggest that this chaos is indisputably a result of judges acting to justify providing a remedy that might overwise be thought of as a remedial constructive trust by endeavouring to read into circumstances a fiduciary relationship that appears to justify its imposition, notably because it would be a rare judge that would openly admit to it. However, it is impossible to discount the possibility that some fiduciary relationships are sought or implicitly accepted without question specifically because there is some greater policy need to provide a remedy justified by that relationship. Extending fiduciary duties, notably in cases where there are bribes, in order to provide a proprietary rather than personal remedy appears to do exactly this.

This has to some extent been presented as a negative, this however is only done through the lens of judicial objections to remedial trusts and the reflection this has on the conceptual certainty of these elements and on property rights themselves. While there is perhaps a paradox between an objection to remedial trusts and a foundational principle of an institutional trust being an ill-defined relationship that is subject to justification by reference to a multitude of approaches that allow for a wide range of discretion, it does not appear that this provides any impediment to its practice beyond baffling academics. Judges at least

[800] Ibid, 4.

appear content that in the flexibility they find the ability to justify their actions in a way that underpins the acceptable narratives of their jobs. Even where this might conceptually undermine those very same justifications.

Trustees de son tort - Formalising finding trustees

Where the expansion of fiduciary relationships by judicial discretion could be considered an unspoken and unofficial way to justify proprietary remedies where they are needed for policy reasons, the doctrine of trustee de son tort reflects the formalisation of the imposition of fiduciary duties in circumstances where a 'stranger' to a trust has interceded in a manner that requires them to be treated as a trustee. The doctrine is taken to apply in three key circumstances.

1) Where there is a failure to properly appoint a trustee and the actor nevertheless assumes the role

2) Where there is interference with the assets of a trust in a manner consistent with assuming the role of a trustee

3) Where an individual is knowingly in receipt of trust property.[801]

In these circumstances, the courts have seen fit to consider that the 'trustee de son tort' is subject to the same fiduciary duties and liabilities as though they were a 'true' trustee.[802] This is not an unlimited liability however, notably taken to be extended only to the property

[801] This particular head of liability can be contentious and has in other works been classified as separate to trustee de son tort. See Lyton tucker, Nicholas le Poidevin, James Brightwell. *Lewin on trusts*, (20th ed, Sweet and Maxwell ltd, 2020) Ch.42. The basis for this approach is usually to treat liability as in some way being distinct from the liability founded in breach of trust and justified either on the basis of receipt of proprietary interest alone, some level of dishonest knowledge, or under the broad heading of unjust enrichment. The courts in engaging with this issue have gone through a range of tests that appears to have settled on an approach that requires the respondent received property which was subject to an existing beneficial interest in order to provide a proprietary base and that at that time they were aware of the breach of trust. See Byers v Saudia national bank [2022] EWCA CIV 43. The courts in attempting to determine what constitute awareness utilise an approach that considers if there was knowledge that makes it unconscionable for them to the retain the benefit of receipt. See BCCI v Akindele [2001] CH 437. It is proposed however that this liability might also be thought of as simply the liability of a trustee for breach of trust. This is consistent with them stepping into the role as a trustee de son tort upon receipt of the asset when they have awareness of the trust or the circumstances that gave rise to it. The use of a knowledge standard in effect serves to determine whether someone should be treated as a true trustee of the property they hold, A trustee de son tort rather than a separate form of liability. This approach is consistent with earlier trustee de son tort cases that combine the reasoning of improperly appointed trustees being made liable on receipt of property because of knowledge that effected their conscious. See Pearce v Pearce (1856) 52. E.R. 1103 and compare Barnes v Addy (1873) LR 9 CH app 244.

[802] Henchley & Ors v Thompson [2017] EWHC 225 (Ch), [2017] WTLR 1289

that they have received[803] or to the property to which they have directly interfered.[804] This does not have the effect of granting them the powers of a 'true' trustee but simply obligates them to the beneficiary.[805] This creates a specific liability that has the effect of expanding existing trustee responsibilities to new individuals, rather than creating new liabilities from whole cloth.[806]

When extending liability in this area, the central justification appears to be that the trustee de son tort should not be in any better position than had they been a true trustee. This is based on the general principle that "a man who assumes without excuse to be a trustee ought not to be in a better position than if he were what he pretends".[807] Implicit within this is a standard by which the trustee de son tort will be judged. This allows the courts to avoid a strict interpretation that might otherwise allow improperly appointed trustees to avoid liability by dint of a technicality. By putting them in the position of a true trustee many of the essential responsibilities in relation to the administration of the trust and responsibility to the beneficiary will be imputed and used to judge their conduct.[808] As a balance to this however, in circumstances where an improperly appointed trustee has nonetheless maintained a good faith attempt to administer a trust, even where technically their use of a power is invalid, the courts retain a discretion to relieve them from personal liability.[809] There appears as a central tension the need to find a level of culpability in the eyes of the court that circumvents the

[803] See Pearce v Pearce (1856) 22 beav. 248, Cunningham v Cunningham {2010] JRC 124.
[804] Exemplified by discussions in Re barney [1892] 2 CH. 265. Indicating that trustee responsibility should follow that "he should have trust property either actually vested in him, or so far under his control that he has nothing to do but require that, perhaps by one process, perhaps by another, it should be bested in him". Expanding on this it appears logical that they are also responsible for any loss that flows from them acting in a manner consistent with this. From this it is taken that being in receipt of part of the property should not expand liability to cover the entirety of the trust. This does not mean however that not being in receipt of property, or the actions taken to interfere with the property that cause loss, if incurring liability to properly appointed trustees, will prevent liability as a trustee de son tort.
[805] Lewin (N.801) Ch 24 s6, considers the distinction of 'ministerial acts' which are argued to provide no 'practical problem' specifically because they are firmly within the terms of the trust and rely only on the trustee acting in an administrative role. Contra the position with express powers not usually drafted in such a way to include constructive trustees, meaning it is likely that any exercise of discretion pursuant to a power or its exercise is unlikely to valid. This provides some scope for 'invalid' actions of a trustee de son tort to remain unchallenged simply because they follow to the letter the terms of the trust.
[806] In circumstances where a sole trustee is improperly appointed, yet still received 'trust' property, to the effect of holding it on resulting trust for the settlor, is unclear if this might have the effect of binding the trustee to the terms of the purported trust (less the powers) or otherwise modify the duties expected of the resulting trustee.
[807] Soar v Ashwell [1893] 2 Q.B. 390, see also Boardman (N.794), 1018.
[808] Following the slightly circuitous argument that a true trustee will be assumed to acquaint themselves with their responsibilities and duties as both a fiduciary and to administer the trust and in taking the position trustee de son tort can be held to no lower standard.
[809] Section 61 of the trustee act 1925 provides the courts with the power to relieve a trustee from personal liability when acting honestly, reasonably and in a manner that ought fairly to be excused in the eyes of the court.

strict application of these rules. A technicality does not defeat culpability for breaching the role of a true trustee but also should not damn you for in good faith performing that same role.

It appears mostly unobjectionable that those who take it upon themselves to act as trustees should be liable even if they are not properly appointed, [810] however that other conduct could nonetheless be taken as evidence for acting as a constructive trustee has the potential to allow unchecked imposition of liability. In the words of Lord Selborne L.C.

> Strangers are not to be made constructive trustees merely because they act as agents of trustees in transactions within their legal powers, transactions, perhaps of which the court of equity disapprove, unless those agents receive and become chargeable with some part of the trust property.[811]

This approach follows that any type of 'interference' is not simply actions with which the courts disagree or indeed acts that cause loss, but something that directly impacts the trust property. This is generally taken to have a proprietary basis, either taking possession or effective control, with the ability to effectively vest oneself in the property being used to justify liability.[812] This creates difficulties for those acting in agent relationships involving the trust often focusing on the relationship between the trustee and the agent in resolving where liability will fall.[813] In focusing on the passing and control of trust property, the scope for making strangers trustees de son tort appears founded in a justifiable and consistent basis.

That the trustee de son tort relationship is justifiable on the basis of an identifiable proprietary interest is contrasted however when the doctrine is utilised for policy reasons. It has been said that this area has

> gone to the very verge of justice in making good to cestuis que trust the consequences of the breaches of trust… at the expense of persons perfectly honest, but who have been, in some more or less degree, injudicious[814]

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[810] As a general principle those who assume to act in a manner consistent with a grant of authority, are treated by the courts as though having that authority. See for a general discussion of this Lord Denning comments in boardman (N.807), 1017. For an example of its application to agent relationships see English v Dedham Vale Properties [1978] 1 All E.R. 382

[811] Barnes v Addy (N.801).

[812] Re Barney [1892] 2 ch 265, Notably in this case there was not a sufficient degree of control where strangers to the trust acted as advisors.

[813] Contrast the positions in Mara v Browne [1896] 1 Ch 199 with Blyth v Fladgate [1891] 1 Ch 337 both involving solicitors. In the former acting on the authority of the trustee was enough to prevent liability, the latter after the death of the original trustee meant that the trusteeship was imposed upon the solicitor.

[814] Barnes v Addy (N.801).

Indeed, the utility that expanding trustee liability through trustee de son tort is of particular importance as it allows claims that would otherwise be time-barred[815] or in circumstances where there is a need to expand liability to ensure that recovery can be made.[816] It is in the light that we consider that trustee de son tort allows a court to intervene in circumstances where alternative claims will fail to provide any remedy.[817] Ignoring these limitations is conceptually justified by the strength of the law's view of proprietary interest and the need to protect fiduciary relationships, however this relationship is also justified by that same proprietary interest. A trustee de son tort, literally a trustee of their own wrong, far from being about 'wrongs', seems more concerned with finding a proprietary base on which to hang that wrong.

Proprietary estoppel – Creating proprietary interests

Proprietary estoppel, a form of estoppel that covers situations in which a person has relied on an expectation to receive a proprietary interest in land to their determent, is often taken to be a strange relative of the constructive trust,[818] that openly creates a proprietary interest to justify a remedial outcome. As compared with a constructive trust, an estoppel has the advantage of being able to be used remedially, however practically this means that the courts have the power to act retrospectively to create a proprietary interest from whole cloth.[819] In order to demonstrate briefly this doctrine, it is proposed to consider the seminal case of Thorner v Major.[820]

Peter Thorner, a Somerset farmer of a particularly taciturn disposition, had indicated to the claimant that they might inherit his farm. To maintain the farm, the claimant had worked for fifteen years receiving no pay, over which time through repeated oblique comments they were led to expect that they would inherit the farm upon Peter's death. A will was made leaving £225,000 and the residue of the farm to the claimant, however this was subsequently destroyed after a row with one of Peter's other legatees and no new will was made. The farm

[815] Mara v Browne (N.813), focused on trustee de son tort in particular within a background that would otherwise have left the decision time barred. Soar v Ashwell [1893] 2 Q.B. 390 likewise considers a similar issue and deals in depth with the considerations as to when and how the time limits might be avoided.
[816] Blyth v Fladgate (N.813), Involved a number of parties including the estate of the solicitor who was deemed to act trustee de son tort with the solicitor firm also party by virtue of the partnership. Thus allowing further avenues to ensure that the trust was reconstituted.
[817] That a maxim of equity is that equity will not suffer a wrong to be without a remedy, based on the broader principle *ubi jus, ibi remedium* or where there is a right there is a remedy, can be taken to mean that equity has a jurisdiction to find a solution in difficult legal situations. To what extent however should equity be able to create the rights that it then provides remedies for? If the judges are positioned such that they have that power, is a remedy emerging from a right or a right justifying the remedy that is believed necessary?
[818] Though this relationship remains unclear. See Liew, (N.718).
[819] Compare the situation stated for constructive trusts.
[820] Thorner v Major (N.739)

passed on Peter's death to his children rather than the claimant. The House of Lords held that proprietary estoppel would impose on Peter, and by extension his estate, to transfer to the claimant the farm and relevant assets.

The crux of a claim of proprietary estoppel consists of three elements that, rather than acting to concurrently leading a proprietary interest to arise, can instead be viewed as having created a proprietary interest in retrospect. Per Lord Walker, it requires "a representation or assurance made to the claimant, reliance on it by the claimant, and a detriment to the claimant in consequences of his reasonable reliance".[821] These requirements, taken strictly and as sequential elements building to the implication of a proprietary interest, present a factual nightmare as to how and when to determine a clear assurance has arisen or at what point exactly it becomes an assurance that should be treated as unequivocable. As demonstrated in Thorner v Major, there was particular difficulty in establishing a clear representation or assurance, based on the nature of communication between "taciturn and undemonstrative men".[822] At first instance, assurances and the passing of a bonus notice were taken to be enough to constitute a binding assurance, however the Court of Appeal opposed the imposition of a proprietary remedy on the basis of any form of implicit statements.

The House of Lords took the view that context should be considered "retrospectively to determine where in the circumstances it would have been unconscionable for the promise not to be kept".[823] In reviewing the Court of Appeal's decision, much consideration was given to how a promise, subsequent reliance, and detriment could not be treated separately, becoming factually interwoven over time. This avoids the complexities of having to specify a specific moment over which a proprietary interest is formed, instead allowing for it to be created with the benefit of hindsight in situations the courts deem appropriate.[824] On the one hand, this might be seen as the court loosening the requirements to avoid an overly formalistic application of the rules whereas on the other, it might represent a true undermining of these elements by introducing unconscionability as an overarching principle.

Fundamentally, it is possible that the underlying justification for proprietary estoppel might instead be unconscionability. This might broadly follow the argument put forward by Oliver J in Taylors Fashion ltd. v Liverpool Victoria Trustee Company ltd.[825] that it should be

[821] Ibid.
[822] Ibid.
[823] Ibid, [57] citing Walton v Walton [1994] CA transcript no 479.
[824] In this case arguments against this 'opening the floodgates' are dealt with by consideration that judges are invariable tasked with being sceptical as to outlandish claims and interrogate the facts of the case.
[825] [1982] QB 133 (Ch) 151–2.

deployed where "it would be unconscionable for a party to be permitted to deny that which, knowingly or unknowingly, he has allowed or encouraged another to assume to his detriment".[826] Macfarlane, in objecting to unconscionability as a source of proprietary estoppel, highlights that it not only provides little actual guidance as to when and how it might operate, but that unconscionable behaviour is it itself the conclusion and not the basis for that conclusion.[827] His contention is that there are identifiable strands of proprietary estoppel which lead to a conclusion of unconscionability, it is unconscionable because of these elements not simply an estoppel by unconscionability. This approach is supported by Cobbe v Yeoman's Row Management ltd,[828] where unconscionable behaviour was not enough to create a proprietary estoppel, summarised well by Lord Scott obiter remarks that "unconscionability of conduct may well lead to a remedy, but in my opinion, proprietary estoppel cannot be the route to it unless the ingredients for a proprietary estoppel are themselves present".[829] In light of the approach in Thorner v Major however, we might instead consider that unconscionability at least in a broader sense of affecting the conscience of the courts might help to 'finesse' the interpretation of circumstances to 'find' the elements of proprietary estoppel.

Interestingly, Lord Scott of Foscote in Thorner v Major, whilst agreeing with the majority decision saw this as comparable to a remedial constructive trust. While he fundamentally agreed that a proprietary remedy should be given, he would

> prefer to confine a proprietary estoppel to cases where the representation, whether express or implied, on which the claimant has acted is unconditional, and to address the cases where the representations are of future benefits, and subject to qualification on account of unforeseen future events, via the principles of remedial constructive trusts.[830]

Interestingly, not only did this view accept that remedial constructive trusts were viable within English law, but that in many cases are substitutable for proprietary estoppel. This is not to suggest that this represents any real headway for a general acceptance of remedial constructive trust. However, we might more generally consider that there might principally be a divide within proprietary estoppel cases that mirrors the institutional vs remedial constructive trust divide. In cases like Thorner v Major we might consider that there is a remedial construing of the elements of proprietary estoppel that leans more heavily on

[826] Ibid.
[827] Ben McFarlane, *The Law of Proprietary Estoppel* (second edition, Oxford University Press 2020), pp.1.30-1.31, CH.5. (Hereon Proprietary estoppel).
[828] Yeoman's Row Management Ltd and Another v Cobbe [2008] UKHL 55, [2008] 1 WLR 1752.
[829] Ibid.
[830] Thorner v Major (N.739).

judges' discretion to create proprietary interests in retrospect. By the same manner, we might consider that in circumstances which might otherwise be considered 'remedial' constructive trusts, proprietary estoppel might be a safe harbour for a judge to justify awarding a remedy.

Unconscionability – the unifying factor?

It has been suggested that unconscionability could form an underlining principle that touches across a range of equitable doctrines that, if amalgamated, could provide its own principled doctrine for equitable intervention.[831] Indeed, throughout this chapter there has been frequent reference to unconscionability across various different doctrines and it something frequently invoked by judgements. Equity, both in modern cases and in its origins stopping conduct contrary to good conscience, finds itself inescapably intertwined with unconscionability.[832] Instinctively, there is an appeal to stating that the courts' role is to act against unconscionable things with its power deriving from this role. The problem however is that it is unclear exactly what unconscionability could mean or the form that it would take.[833]

Detractors to unconscionability are quick to point out that there is an inherent uncertainty to unconscionability, rendering it unpredictable with little guidance for when it would be applied.[834] Even its defenders point to the fact that it is notably widely defined, suggesting that;

> at its heart… unconscionability deals with an exploitation of a position of authority and power, whether that power is in the form of economic superiority, spiritual influence, legal entitlements, a fiduciary position, or something else. Equity expects everyone to act fairly, compassionately, and not to unnecessarily assert any influence, power, or superiority.[835]

This however seems too broad. Would this be a doctrine of fairness? A doctrine that responds to wrongs? Or, as McFarlane and Liew suggest, does unconscionability exist simply as shorthand for the conclusion that other requirements for a wrongdoing are satisfied?[836] Is this a general collective unconscious understanding of good conscious? Of an episteme? A community of practice? Of the individual judges? Again, its defenders argue

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[831] Mark Pawloski, 'Unconscionability in Modern Trust Law' (2018) 24 issue 9, Trusts and Trustees, 842.
[832] Royal Brunei Airlines Sdn Bhd v Tan [1995] 2 AC 378.
[833] Though it should be noted that attempts to create an objective notion of conscience on which to base a discussion of its role in the law has been attempted. See Richard Hedlund, Conscience and Unconscionability in English Equity (PhD thesis, University of York, 2016).
[834] Mcfarlane, Proprietary estoppel (N.827).
[835] Hedlund, (N.833), 302.
[836] See Mcfarlane, Proprietary estoppel (N.827), and Ying Khai Liew, "'unconscionability' and the case against lumping: three case studies" Melbourne legal studies research paper series no 928.

that in developing a distinct doctrine of unconscionability, this would become clear, with precedent laying down specific guidelines to determine its application.[837] That there is some underlining objectivity that can unify our understanding of conscious.[838] However, the risk of this is that unconscionability might become a way for judges to avoid proper exposition of the reasons for their judgement.[839] It is clear from the examples explored that unconscionability alone is not enough, that the courts have not to this point and are unlikely in the future to make unconscionability a unified doctrine, it is simply not enough to make of its own wrong.

Perhaps however, far from being a unifying principle for equity, it is instead a catalysing one? This chapter has highlighted some of the key doctrines surrounding the remedial use of proprietary interests and the imposition of fiduciary relationships. It has reinforced the strength of the proprietary interest and the utility to the courts in justifying their decision in relation to those proprietary interests. It is relatively uncontroversial to say that the courts prefer the safety of justifying their judgements through well-established formulae and through reference to proprietary interests. It is also uncontroversial that open discretion and unconscionability alone are rejected. It is perhaps more contentious to say that in order to justify their decisions, the courts might try and deliver remedial outcomes by 'reading in' the proprietary interest they need to justify their approach by expanding a related doctrine. Why though might we find in circumstances the need to expand fiduciary duties to justify 'finding' that constructive trust? Why do we find a trustee de son tort because of a proprietary connection? Why do we allow proprietary estoppel to empower the court to retrospectively grant a proprietary interest? Perhaps, it is what gave the courts the flexibility to find from a complex set of circumstances a clear promise, because to do otherwise would be unconscionable.

Chapter 6 - 'Cryptocurrency': The limitless imaginings of 'property'

Introduction

In 2008, a white paper written under the pseudonym Satoshi Nakamoto, by person or persons unknown, introduced to the wider world an actionable proposal for a decentralised

[837] Pawlowski (N.831).
[838] Hedlund, (N.833).
[839] Liew, 'Unconscionability' (N.836).

entirely digital currency.[840] Bitcoin, the first cryptocurrency built on this framework followed shortly in 2009 and in the intervening years has seen a meteoric rise in terms of both value and recognition. As the first mover, Bitcoin has enjoyed a degree of pre-eminence in the cryptocurrency sphere but has been joined by an ever-increasing number of competitors underpinned by the same blockchain technology,[841] which have often advanced the underlining technology, changed protocols, or fulfilled a different purpose. This has also led to a proliferation of associated concepts entering public discourse and consciousness for example NFTs, DeFI, ICOs, DAO, Mining, Wallets, and smart contracts.[842] Unsurprisingly, with the increasing visibility of the blockchain and cryptocurrencies and their growing acceptance within society and the possibility they provide within the commercial and investment spheres, it has become an area of increasing regulatory scrutiny. Equally unsurprisingly, whilst there is a general trend towards the acceptance of cryptocurrency,[843] the role of the blockchain in society, the ramifications of its acceptance and the practicalities of regulating and integrating existing systems with this plucky newcomer need to be explored before blundering blindly into an array of unintended consequences.

This chapter's focus will be on exploring the propertisation of cryptocurrency in English law, highlighting some of the difficulties in its acceptance and what that acceptance might mean for both notions of property and the role of the courts in this process. This chapter will begin by considering some of the key social and technological points that underpin the development of Bitcoin to reinforce the key conceptual themes that set the foundations for cryptocurrencies generally and to examine the social context of its 'property-ness'. This chapter will then outline some of the key technical features that explain the key difficulties with understanding cryptocurrency as property. This chapter will then examine the judicial response to the problem and how cryptocurrency is becoming property by increments and the proposals for how we might deal with cryptocurrency before finally considering how this might further destabilise notions of property in law and raise questions of what exactly it means to protect 'property'.

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[840] Satoshi Nakamoto, *Bitcoin: A peer-to-peer electronic cash system*, (2008 available on wee.bitcoin.org).

[841] The exact number of cryptocurrencies is difficult to estimate, with an ever-increasing number of projects coming into existence while others cease development and being actively traded. Market estimates at the beginning of 2023 put the number above 22,000. See www.coinmarketcap.com However alternative data sets consider the amount of active cryptocurrencies to be much lower at around 9000. See Raynor de best, "number of cryptocurrencies worldwide from 2013 to 2023" www.statista.com last accessed 29/03/23.

[842] For readers unfamiliar with this terminology please consult Appendix B for a guide to useful crypto terms and ideas (Pg.207).

[843] Though certain countries have been exceptionally open to the innovation of cryptocurrencies. With both El Salvador and the Central African Republic making it legal tender within their countries.

Before beginning, it is worth stating that this chapter will utilise Bitcoin as an exemplar for a range of different cryptocurrencies. Bitcoin is no longer synonymous with cryptocurrency[844] as other large or well-known projects such as Ethereum, Cardano, XRP, Thether, Polkadot, Solana, Binance coin, and the 'memecoin' Dogecoin have come to establish themselves as permanent contenders within the space. The proliferation of cryptocurrencies with different technical aspects and functions makes providing an accurate technical summary covering every eventuality a practical impossibility. In practical terms, these technical elements are likely to provide additional complexity for regulators and decision makers with different types of tokens potentially warranting different regulatory and legal responses. Nevertheless, in order to provide a generalised understanding to highlight these difficulties, Bitcoin serves as a useful jumping off point as the largest and most well-known cryptocurrency and its development highlights the broad conceptual problems and possible solutions that form the basis of many of the practical problems identified at the end of this chapter.

One final note is that while there are enough similarities to present a general case for cryptocurrencies, the differences in the technology used, types of coins and purposes, and the specifics of accessing cryptocurrencies through wallets, custodial or not, create a practical factual nightmare. The multiplicity of options running through the crypto-world and the need to engage with the minutia of the complex factual variance, within which legal practitioners and crypto enthusiasts alike will draw out elements of potential legal significance, will likely see this area require very careful handling on a case-by-case basis. That there is such complexity in this area that might not be fully appreciated by those utilising cryptocurrency and that the technical nature of this complexity may not be readily accessible to judges is worth bearing in mind.

The origins of the Bitcoin - Blockchain and society

The origins of blockchain technology lie within Satoshi Nakamoto's white paper *Bitcoin: a peer to peer electronic cash system* with the stated purpose of a "purely peer-to-peer version of electronic cash [which] would allow online payments to be sent directly from one party to another without going through a financial institution".[845] The paper was originally circulated within a closed mailing list of the cypherpunk community. The cypherpunk movement, who's first manifesto was published in 1993, is particularly concerned with issues of privacy

[844] Ingolf G. A. Pernice and Brett Scott, Cryptocurrency, (2021) Internet Policy Review, 10(2). explores the development of the term and consider that the term itself is unstable considering the diverse systems it represents. Unified perhaps only be being mediums of exchange that replaces trust with cryptography by various means.
[845] Nakamoto, (N.840).

and establishing systems that allow them to take privacy back for themselves.[846] This was to be done through the use of codes that allow for privacy but not secrecy, deployed by the people as part of a 'social contract' to enable widespread privacy. To this end, it would transcend national boundaries and use widespread dispersed systems that can't be shut down or readily controlled. With these goals, Bitcoin, sought to incorporate these ideals into a payment system and digital currency designed to operate with anonymity outside of traditional financial institutions.

The white paper highlights two problems with the implementation of a payment system in this way, which become integral to the core design of the blockchain. The first is the trust problem, whereby transactions undertaken at a distance over the internet require a certain degree of trust between the parties. If there exists a possibility that transactions are reversible, parties need to trust the other will not pursue this route. This theoretically leads to an increase in the information exchange required by buyer and seller to reinforce that trust. In traditional financial systems, financial institutions invariably find themselves mediating these kind of disputes, the cost of which is passed on in transaction costs or otherwise necessitates restrictions on the type of payments.[847] The second related problem it identifies is the 'double spend problem' whereby in a peer-to-peer system there may be an issue with the same money being used twice.[848] The blockchain solution is to utilise cryptographic sequences to record transactions that are independently verifiable and secure across a number of nodes that ensure authenticity and maintain systemic security. This renders double spending impossible and is designed so that trust need only be placed in the system and community rather than in the other party to a transaction. This system also ensures that transactions are irreversible by design.

To maintain the integrity of this system, Satoshi also identifies some key security features that protect its integrity and ensure that it can be trusted. The system itself is secured from interference by the complexity of the hashes and the append-only nature make it difficult to hack or hijack ongoing transactions.[849] The use of a community of databases hosting the ledger that operates simultaneously to verify and store the transactional history of the chain mean that any change would have to effect over 51% of the system simultaneously.[850]

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[846] Eric Hughes, "A Cypherpunk's manifesto", available at https://www.activism.net/cypherpunk/manifesto.html Last accessed 29/03/23.
[847] Nakamoto, (N.840).
[848] Ibid.
[849] Ibid.
[850] This problem has also been explored in game theory under the name "the byzantine generals problems" where it is proposed that to constantly ensure the 'correct' result a system requires a minimum of M+1 legitimate actors where M = the number of 'traitors'. Leslie Lamport, Robert Shostak and Marshall Peasem 'The Byzantine Generals Problems' (1982) 4 issue 3, ACM Transactions on Programming Languages and Systems, 382.

Crucially for the trust in the system, the database is openly visible to anyone in the community. To further dissuade hostile action, the system utilises an incentive structure that encourages cooperation with the system by rewarding the lending of computational power to the system in the form of 'mining'. This creates a socio-cultural defence in which the technology itself is secured by raising the barrier for the computational power required to overcome the defences of the system in proportion to the size of the community whilst also encouraging those who could potentially attack the system to decide to instead actively participate. In theory, it should always be more profitable to work with the system than against it.

In this way, we might consider Bitcoin as the marriage between social and technical communities. Blockchain provides an underlying protocol for creating trust that the Bitcoin community can deploy to actively constitute the Bitcoin payment system. Theoretically, this allows for those operating within it to move away from centralised authority and towards decentralised and depersonalised transactions abstracted from social relations. Early adopters seemed to have been drawn from ideological movements, particularly the cypherpunk movement, techno-anarchists and those of libertarian views.[851] It is worthwhile noting that this was a perceived move towards eroding the monopolisation of the state as the creator and controller of money and diminishing control over the economy.[852] Indeed, the idea that Bitcoin disintermediates itself from both banks and the state is closely related to its appeal.[853] However, that it can ever disintermediate itself from social relations is a point of contention. Indeed, there is a high degree of social cohesion needed to constitute the socio-technical assemblage that is the Bitcoin.[854] Dodd proposes this as a central paradox within Bitcoin; its social nature is at odds with its ideology if it were to succeed as money.[855] Interestingly, as there is no unified theory for what money is, it is arguable that it is not money at all,[856] though it is clear that it is valuable and can be used as a medium of exchange in limited communities.[857] By contrast, Hayes argues that the importance of 'money' to the original founding of Bitcoin was limited, never being intended as money as understood by other fields of practice, focused instead on solving technical problems posed in relation to

[851] Primavera de Filippi, "Bitcoin a regulatory nightmare to a libertarian dream", (2014) Internet policy review, 3(2).
[852] Ibid.
[853] Nigel Dodd, 'The Social Life of Bitcoin' (2018) 35 issue 3, Theory, Culture and Society, 35.
[854] Ibid.
[855] Ibid.
[856] Ole Bjerg, 'How is Bitcoin Money?' (2015) 33 issue 1, Theory, Culture and Society, 53, explores this issue and considers that bitcoin presents a challenge to money as it exposes the fundamental problems with state authorized credit money.
[857] Dodds, (N.866) highlights that this performs asymmetries of wealth and power structures that mirror traditional financial systems. In this way at least cryptocurrency performs 'money'.

notionally digital money.[858] To support this, Bitcoin is actually relatively poor as money. As further technical discussion will reveal, it is limited in terms of the volume of possible transactions and incurs relatively high transaction costs. Nonetheless, it fulfils a limited and contingent understanding of 'money' pursuant to the needs of a system that can enable its use as a payment system within a group.

Bitcoin, and the blockchain more generally, must be understood as techno-social assemblages. The strength of the technology lies in its adoption by the community, whereas the strength of its ideological use or the value of its utility to a community lies in part in its technological power and in part in the strength of its existing network.[859] Where the utility of Bitcoin centres around creating a method of payment and tokens of value, Hayes argues that rather than in 'moneyness',[860] cryptocurrency might more generally be understood through three uses to its communities, "as systems of accounting, as organisational forms, and as institutions in their own right".[861] As a system of accounting, the blockchain functions as a ledger and facilitates transfers between individuals. To Bitcoin, this serves to facilitate transactions involving tokens and its use as a payment mechanism, beyond this it could serve as registers of ownership more generally and facilitate a wide range of transactions or even as a record of voting in an immutable tamper-proof manner. As an organisational form, blockchains allow for the use of so called 'smart' contracts that allow self-executing contracts to be created from code that in theory can reduce transactions costs by removing inefficiencies of oversight.[862] These can be combined and layered to the effect of creating DAO's capable of undertaking complex activities automatically, directed by a codebase executing hierarchical structures of smart contracts.[863] In relation to Bitcoin, this can be used to create structures that can interface with its tokens, expanding the potential utility and value of the token itself. Beyond Bitcoin, these elements allow for a preponderance of uses for blockchain that can facilitate various social organisational functions within a community that can also interface with cryptocurrencies to expand their use. Imagined in the space of flows, this allows communities of practice to create additional interlinking social structures

[858]Adam Hayes, 'The Socio-Technological Lives of Bitcoin' (2019) 36 issue 4, Theory, Culture and Society, 49.
[859] This is classically referred to in economic circles as the network effect. See Carl Shaprio, *Information rules : a strategic guide to the network economy* (Harvard Business School press,1999).
[860] This use is not discounted however and it is clear that there is the potential for a blockchain based currency to exist, though existing cryptocurrencies are usually limited in terms of their volume of transactions, to the extent they function poorly.
[861] Hayes, (N.858).
[862] Ibid.
[863] Ibid.

in the virtual, which allows for greater networking, in turn increasing its perceived 'value' and potentially attracting more nodes to expand its virtual territorialisation.[864]

In light of these uses we might consider Hayes third use, that of 'blockchain as an institution'. This case is predicated on utilising a definition of institutions as "systems of established and prevalent rules that structure social interactions and expectations – that both constrain and enable certain behaviour."[865] There is a strong case to be made that blockchains create "credible (social) commitments through technology"[866] that can mirror existing traditional institutions and in setting out a protocol that shapes the expectations and rules of engagement of participants fulfils this definition of institution. The system of rules that underpin Bitcoin then "structures the 'policy' affecting the socio-economic system of its blockchain as well as shaping the micro-structures, norms and interactions of the actors partaking in it".[867] Bitcoin and other cryptocurrencies might then be thought of as individual institutional frameworks.

This raises an interesting question when considering how Bitcoin operates within a wider social context. If it is to be an institution, what is it an institution of? Bitcoin as a ledger records a system for the creation, movement, and control of tokens. Hayes implicitly considers that this as an institution concerned with property rights, arguing that "institutions allow credible commitments that enforce property rights".[868] Putting aside the wider questions of cryptocurrency as legal property that might challenge this approach, how might we understand the territory of this institution? As a matter internal to the community of practice, it should be relatively uncontroversial to accept that this represents a property right that reflects the contingent understanding that underpins property within that community, operating in accordance with the rules of that system. It is in trying to incorporate this understanding into the wider context that sees it operate within differing legal systems and in light of different social norms, that understandings of those property rights might begin to create problems for accepting this as a property right. Bitcoin is designed to disintermediate itself from wider concerns, satisfying ideological goals, that are technologically resistant to outside influence. To the community of practice, the 'property-ness' of their property rights are likely not an important distinction. Internally, the understanding may be that it represents an order of socially recognised property rights, that as these digital entitlements have been

[864] A practical example is the creation of the NFT marketplace that interfaces with existing cryptocurrency networks attracting interest to both and attracting interest to both.
[865] Geoffrey Hodgson "Economics and institutions" (1988) Journal of Economic Issues 40(1): 1–25.
[866] Hayes, (N.858).
[867] Ibid.
[868] Ibid, citing DC north, 'Institutions and credible commitment' (1993) Journal of Institutional and Theoretical Economics.

recognised as having wider economic value, means that they can be understood in terms of economic property rights. It is clear at least to certain communities of practice that cryptocurrencies are recognised as property.[869]

Bitcoin, the blockchain, and by extension all cryptocurrencies were born and grew in the context of social movements proposing ideologically charged solutions to technical problems. As a code-back institution that orders social interaction, its strength and appeal is based in the community that commits itself to that institution. Where the code enshrined ideals of decentralisation, transparency and immutability, internally the community can rely on it to replace trust and enforce its rules to facilitate its use, however any utility will ultimately be constrained by the limitations of the code.[870] Cryptocurrencies are purely information, information given shape and structure by technology, mobilised to perform a function underpinned by the community that constitutes its creation. Arguably, once a community reaches sufficient 'mass',[871] its institutional function comes to the fore and its utility can become more widely applicable. Bitcoin, upon becoming well established, stable, and gaining increasing public awareness saw an explosion in acceptance and value beginning in 2014 which heralded it being increasingly accepted commercially with its integration into wider markets.[872] The risk there however is that its use as an institution becomes open to co-option, territorialisation and influence by those outside its internal community, potentially upsetting that use and its ideological underpinning. Bitcoin has seen increasing use in traditional finance and as speculative assets,[873] in part drawn by its nominal value and possibly erroneous public perception, that appears to be at odds with the ideologies that nominally underpin it.

Technological underpinnings – Cryptographic resistance

This section will consider some of the principle technical points that underpin cryptocurrency so as to highlight technical features that resist intervention and some that might provide practical problems for legal intervention and definition starting with the basic

[869] Perhaps a problem with this is that even a contingent definition of property relies on intensional logic that draws comparisons with wider structures for engaging with property. as a matter of ontological politics, the 'property-ness' is likely a combination of internal social understandings and definitions combined with its ability to perform elements of 'property' as understood in a wider context.
[870] The proliferation of different kinds of cryptocurrency might be seen as a reaction to this. The blockchain allows for new institutional structures to be created and deployed quickly, allowing new projects to arise and find an audience relatively quickly.
[871] In the case of Bitcoin, with sufficient computation power and active ledgers contributed to the system to allow it to operate in its intended fashion without fear of challenge.
[872] Usman W. Chohan, "A history of bitcoin", (2022). Available at SSRN: https://ssrn.com/abstract=3047875 Last accessed 29/03/23.
[873] Ibid.

building blocks of cryptography that enable security on the blockchain and make it resistant to outside inference. This presents a practical problem for the law's ability to involve itself with changing data on a blockchain in any form.

Cryptographic hash function – These are mathematical functions that transform any digital input string, regardless of size, into an output string with a fixed number of characters. Each input string leads to a different output, however, each input will constantly output the same string. These are generally one-way processes that allow for verifying consistent inputs in a manner that is efficient to compute.[874] Cryptographic hashes specifically require three further core principles, namely collision resistance, hiding and puzzle friendliness.[875]

Collision resistant – Collision resistance is a measure of how unlikely it is for two inputs to have the same output. While it is not possible for an unlimited sequence of strings to never have repeated outcome of a fixed length,[876] it is possible to make it so mathematically unlikely that this situation is very difficult to arise in practice.[877] Practically, this relies on using systems where it is infeasible to find two values for X and Y being such that $X \neq Y \; yet \; H(X) = H(Y)$.[878] As hash functions are built on complex mathematical problems, it becomes a case of designing a system where it is incredibly difficult to solve these mathematical problems. To do this, the output sequences must be sufficiently long to require brute forcing the computations to find the solution infeasible. This is limited by the birthday paradox. The birthday paradox, in practice leveraged in 'birthday attacks' utilise the fixed nature of permutations to launch concurrent attempts randomly to solve the system.[879] As a mathematical system, it is also susceptible to new mathematical formula that allow alternative ways to solve the problem which may be faster to achieve than the brute force methods.

Collision resistance is not a clearly defined metric. The protocols that underpin it have a finite limit on how secure they are and exist in an odd situation in which they are secure

[874] Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller and Steven Goldfeder, Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction (illustrated edition, Princeton University Press 2016).
[875] Ibid.
[876] This phenomenon is known as the 'pigeonhole principle'. Benoît Rittaud and Albrecht Heeffer, 'The Pigeonhole Principle, Two Centuries Before Dirichlet' (2014) 36 issue 2, Mathematical Intelligencer, 27.
[877] Narayanan, (N.874).
[878] Ibid.
[879] It is more of a concern for smart contracts whereby a single hash function could be used for both a "good" contract or a "bad" contract whereby the single identifier of the two could allow an unscrupulous party to substitute the "bad" contract and claim it was digitally signed based on the verified hash.

until proven unsecure.[880] This can be done either through brute force methods or complex mathematical sequencing reducing the complexity of the problem. This is however a question of computational power over time, an 'unsecure' sequence might still be incredibly complex and theoretically take a large amount of processing power over time to compute.[881] While this might seem an insurmountable hurdle to overcome, banks of computers can significantly reduce the amount of time to solve a cryptographic problem as work can be parsed out. As computation power increases or new mathematical approaches are created, the security of the cryptographic systems will likewise be reduced. Quantum computers in particular pose a unique risk as it might potentially render some cryptographic sequences useless by becoming trivial to overcome.[882]

Hiding – The hashing function must only allow a one-way transformation of the input to the output, with the input being impossible to determine from the output. This however can only be achieved under conditions where there is a high number of inputs that are equally unlikely. This is often considered in terms of min-entropy, a measure of the probability distribution, such that for a random sample of inputs there is an infinitesimally small chance of returning a particular output.[883]

Puzzle friendliness - Closely related to collision resistance and the difficulty in solving the hash function, puzzle friendliness ensures that where a particular output is selected, there is no way to find the input value without simply investing the time required to randomly try values for the input. This must also be readily verifiable by the system. This feature will also have increased relevance when considering how Bitcoin is 'mined'.

Read together, utilising a cryptographic hash function creates a system where inputs can constantly and quickly be verified in a manner that prevents tampering without determining the input from any selected output.[884] This ensures the need for massive computation power in order to overcome the security features, which while it is theoretically possible, is at

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[880] As has happened for MD5 See Xiaoyun Wang and Hongbo Yu, "How to Break MD5 and Other Hash Functions" (2005) Lecture notes in computer science 3494:561.
[881] https://shattered.io/ reports that the Shar network successful attacks still required theoretically at least 6500 years' worth of processing for a single CPU or 110 Years worth of processing from a single GPU Last accessed 29/03/23.
[882] For a growing list of articles on the subject see https://santanderglobaltech.com/en/impact-of-quantum-computing-on-blockchain-%F0%9F%91%A8%E2%80%8D%F0%9F%92%BB/#:~:text=Quantum%20computing%20will%20have%20a,expected%20to%20be%20there%20forever. The core message is that true Quantum computing could cause problems for cryptographic sequencing. Overall, they suggest that complex sequences might take hours rather than years to complete with quantum computing.
[883] Narayanan (N.874).
[884] As an added point, even if an input could be changed in such a way to return the same output, the chance of the input being useful is infinitesimally small.

present practically so difficult as to give sufficient levels of security.[885] It is proposed that in the absence of a centralised authority controlling a cryptocurrency this provides a major impediment to changing it by 'force'.

Mining – Prove your work

The process of 'mining' a Bitcoin involves committing processing power to help verify existing transactions and add blocks to the chain in exchange for the chance to earn new tokens. This process is referred to as 'proof of work'. In order to make a transaction on the blockchain, they are broadcast to all nodes on the network that collect these transactions into a 'block'. These are limited in size and can only record a limited number of transactions.[886] Each node works to find the solution to an algorithmic hash that has been committed. When a node finds the solution, it is allowed then to add its block to the chain if all transactions in it are valid.[887] This process repeats with each solved block's hash forming the basis of the next block. Engaging in the process and controlling the node that 'strikes' the hash and creates a block generates a block reward for the miner[888] and allows them to collect transaction fees from the transactions. This operates as the incentive for cooperation with the system and provides the necessary security to operate the system.

The Blockchain – All hashed together

The blockchain is a specific form of data structure that allows for secure tamper evident[889] structures to be created that constantly verify their integrity. Standard data structures rely on pointer functions that create links to the address of other pieces of information. Blockchains replace pointers with hash pointers, containing both the location and the hash function of the other piece of data, ensuring that the value remains constant. A change to any of the previous blocks disrupts the hash pointer chain rendering the whole sequence invalid. While it is feasible that an entire chain could be altered, not only does this magnify the amount of work that needs to be done, but the most recent hash pointer will also be able to immediately detect the changes to the system.[890]

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[885] Henning Diedrich, Ethereum: Blockchains, Digital Assets, Smart Contracts, Decentralized Autonomous Organizations (Wildfire Publishing 2016).
[886] Nakamoto, (N.840).
[887] Ibid.
[888] If one were to look for a justification for property rights in cryptocurrency, this process arguably mirrors Lockean ideals of a labour theory of appropriation. John Locke, Second Treatise on Government (first published 1689 (dated 1690), Watchmaker Publishing 2011).
[889] While in practice the systems create tamperproof systems this relies on the function of the block chain being tamper evident rather than truly tamperproof.
[890] Narayana (N.874), Pg.12-14.

Blockchains are often organised in what is called a Merkle tree. Merkle trees create sequences in which every block except the current block[891] is paired with another so that they both connect to the next block in the chain. This makes it as tamperproof as a standard block chain with the advantage of being more readily searchable, allowing for more efficient verification of information.[892] Merkle trees are not necessary for small blockchains stored in a single location but as they grow more complex and are stored in more than one place or are used in a decentralised network, it becomes increasingly important for the blockchain to be organised in this manner for efficient use.

The Merkle tree structure allows for readily available proof of the identity of a block and its membership status. Paired blocks allow for a data structure that means rather than having to determine all the data within the block structure, the section in which the block is said to take place is the only one that is necessary for verification. Paired blocks provide all the verification necessary, replacing the need to query the entire branch. This means that a block can be quickly verified as not being a member of a particular Merkle tree, by determining that the branches that would surround the block in question are instead directly linked. This reduces overall computational requirements and makes the system more efficient. Where the blockchain allows trust to be placed in the system, the Merkle tree verifies that trust in a quick and easily accessible way. Where the blockchain provides for transparency and immutability, the Merkle tree allows it to be managed in a decentralised manner efficiently.

As a system, the blockchain is at its most basic a way of managing chains of information, with each new 'state' simply being appended to the chain in a verifiable manner. A Bitcoin's existence is only an entry on this ledger with no external existence beyond this entry and potentially no continuity between entities as each new 'state' is at least arguably its own entity of which its existence is materially different.[893] This raises questions as to how we understand 'owning' a Bitcoin. Is it a matter of control within the system? What is it that is being 'owned', if anything? If information has not traditionally been considered property, can we be dealing with property rights?[894] If it were to be property, can it be a chose in possession incapable of being possessed? Or a chose in action that appears to have no right

[891] Referred to as a Merkle Root.
[892] https://selfkey.org/what-is-a-merkle-tree-and-how-does-it-affect-blockchain-technology/ Last accessed 29/03/23.
[893] If a bitcoin incorporates all its previous transactions into its existence then each transaction causes a new data object that is unique. A transaction irrevocably and indelibly changes its character. This would present an argument that it is a unique object rather than a fungible one. This might also raise the need for tracing through substitute goods in order to realise a potential proprietary interest.
[894] See (Pg.110-114).

to action? How might an entitlement to Bitcoin be understood? Without property rights what is being transferred? can the rules of tracing apply?

Mediating identity

In a decentralised and anonymous system, the issue of identity and corresponding entitlement to cryptocurrency become problematic. Traditional digital spaces frequently use accounts governed by a term of service and protected by a password to ensure identity that constituted through contract with the account itself managed by the service as centralised authority.[895] In contrast, there is no central authority with which to create an account or indeed to contract with to a terms of service when dealing with a decentralised cryptocurrency. In order to get around this issue, interfacing with a blockchain is done through the use of digital signatures linked to a public and private key pairing. Though often referred to as a 'wallet', this simply means a combination of public and private keys that enables the signature of blockchain messages.[896] The use of a paired public and private key allows for actors to have 'identities' or 'addresses' within the blockchain system that allows them to receive or authorise transactions.[897]

Interacting with the blockchain, in the case of Bitcoin making transactions, requires the use of a valid digital signature. These signatures are generated algorithmically from a private key,[898] which produces a public key that can then be used as the identity within the system.[899] In essence, a public key acts much like a see through box, with the private key allowing access to it. In order to transact, one must only broadcast a specific amount to a public address which creates a transactional hash that can only be read with the recipient's private key. This is then signed by the sender's private key which is authenticated by the system and becomes recorded on the ledger. This process is irreversible without the agreement of the receiving party.[900] This means that in essence, according to the internal rules of the Bitcoin, a transaction is valid if it is signed by the private key and there is no

[895] As a matter of licence and contract there is no evidence to suggest that accounts themselves are property. Though this does not stop them being treated as such in certain circumstances. See https://www.kasparlugay.com/blog/who-gets-to-keep-the-netflix-account-in-your-divorce/ Last accessed 29/03/23.
[896] These wallets can in and of themselves be accounts held with third parties that mediate this process or through software that manages them locally.
[897] One actor might have multiple wallets or identities within the system, equally there might be more than one controller of a wallet or account.
[898] For bitcoin these are 256-bit alphanumeric strings.
[899] These utilise mathematical functions like a hash function to ensure that they are extremely difficult to reverse engineer.
[900] This is open to human error, though there is some delay in the acceptance of transactions on some protocols that might allow them to be spotted and reversed.

scope for any party to interfere to reverse it.[901] The private key is likewise the only way of accessing a particular public address's contents with no scope to recover a private key or gain alternative access to a public one. In effect, access to a private key gives effective control of a wallet with no other means of interfering with it.

This process of verification also makes it difficult to ascertain the identities making use of those keys. A public and private key are linked only with one another without reference to any real identity. Someone who holds many private keys can represent in the virtual space a number of public keys and different identities while any use of private keys would only be detectable through the actions that are taken through the corresponding public key. The transparency built into the ledger ensures that these transactions are visible and public keys are identifiable, thus making Bitcoin traceable but only within the system. There exists however an airgap between the public keys, the use of private keys and actual identities.[902] Where the mediation of access through a wallet might hold some more identifying information depending on the type of wallet used,[903] in general the system is unconcerned with actual identity. For the courts, this is particularly problematic for identifying wrongdoers and presents a number of practical barriers for both initiating legal action and enforcing it.

The disintermediation of identity, the lack of 'authorising' force, and the difficulties this poses to identifying parties raise a number of questions about how the courts should approach this area. Should the courts concern themselves with private keys or with the tokens themselves?[904] Are transactions valid if they are done correctly by the rules of the protocol or by the law of the land?[905] Is the law concerned with ownership or control? Can we identify parties to transactions? Can we enforce against them? Should jurisdiction over virtual space be assumed or is it tied to access points to the virtual or the parties themselves?

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[901] This creates problems as to what crime might be committed by removing bitcoin from an account utilising a private key. For it to be theft, cryptocurrency would have to be property for the purposes of the Theft Act 1968. For it to be hacking there would have to be 'unauthorised' access under the computer misuse act 1990. It is at least arguable that this access would be authorised as the systems only requires presenting the private key. To recognise some form of authorising power in a notional 'owner' of the private key would mean making property of the key or wallet themselves.

[902] Nakamoto, (N.840).

[903] Centralised wallets to provide access will need to mediate this through accounts or other methods of personal identification which in theory could hold information that would help identification.

[904] This is also a question of making information property more generally, with both existing as information. Private keys are 'pure' information, and tokens exist in a constrained and structured state, both are equally concerning to the logic of property.

[905] This is equally important to both transfers made on chain without potential 'legal' authority as it is to so called 'off-chain' transactions. The lightning network provides one example of a protocol that acts as an addendum to bitcoin and operates a system of off-chain entitlements that can then be resolved onto the main bitcoin blockchain. See http://lightning.network last accessed 29/03/23.

Will this require harmonisation with other jurisdictions and their approaches? What remedies can actually be provided?[906]

Decentralisation vs centralisation

It is worth noting that while the focus has been on Bitcoin and its structure, some cryptocurrencies and other digital assets are centralised. Centralised blockchains are ones that are created and managed by an actor or actors that are often capable of interfering with or editing the blockchain. This might allow an avenue through which to gain information that identifies parties and potentially could be compelled to provide a remedy through the chain. However, this does not necessarily answer the problems raised in this section. The ability to influence and compel these organisations will vary greatly depending on their location and how willing an organisation will be to comply is unclear. Privacy and immutability are core elements of the space and how the community, and the value placed in a currency, might be impacted is likely to be of real concern to organisations in this space.

This chapter has raised several problems the law faces when dealing with cryptocurrency and far from all being impossibly complex or disruptive, some already have answers.[907] That there are many more problems that could be raised and questions that should be answered is almost certain. The intention here is not to seek out every possible question or even directly answer those that have been asked but instead to highlight that the complexities in dealing with cryptocurrency are nontrivial. It is not necessarily that the questions themselves are difficult to answer, but that the answer to these questions matter.

Is cryptocurrency property?

This thesis has explored the concept of property socially, economically, and legally with each of these areas contributing a different but linked understanding of property. It has attempted to present some 'core' elements and understandings in each that enact property in their respective area. At the boundaries of these concepts there is constant flux, with the use and reinterpretation of the concepts, elements, labels, and language both mentally and actualised through application and interaction changing their territory. This sends out ripples which turn into a cascade of change. The question of 'what is property', is and should be understood as a contingent one, open to change depending on the circumstance and context, who is understanding that property and the purposes to which that property is being put, and the wider context of each case all affecting the political ontology of the answer. The

[906] Recovery or control of a private key is a potential remedy while other proprietary remedies would require the use of a private key.
[907] Ion science v persons unknown [2020] For example determined the court's jurisdiction could be based off where the person who owns the asset is domiciled.

question of property is as much about its ability to persuade us of its 'property-ness' in a manner that is acceptable to the individual's moment of property, as it is to some inherent character of the thing to which we relate it. The question is both imminent to the intensional logic of the thing and extensional to concepts to be applied, themselves balanced according to our weighting. The answer can be implicit in an instant or pondered for perpetuity and in coming to an answer, so too the thing is changed. In light of this 'is cryptocurrency property?' becomes not a question of what it is, but *why* it might be and why that matters.

The law, in making the decision that cryptocurrency is property, is in the unenviable position of playing catch up. Cryptocurrencies are already out in the world and are being used in a manner consistent with other objects of property. In a social sense, the entitlements to cryptocurrency and their role in different communities of practice, especially with the increasing reach of those communities and the integration of its institutions to wider society make a persuasive case for an anthropologic understanding of cryptocurrency as property. That in doing this, its role is often as a store of value, a means of payment, or to represent other assets it is likely that to an economic approach cryptocurrency is persuasively property. While this might be persuasive to an understanding of something as legal property, that this convinces people something is property exerts additional pressure. The use of cryptocurrency is consistent with broader and less technical understandings of property that to most are indistinguishable from 'legal' property and are used to do things that are consistent with the expression of property, ownership, and property rights. The law is faced with the problem that 'things' are generally property; most 'things' are property or intellectual property and the exceptions to this are both limited and largely unknown.[908] Arguably, this creates an expectation of property which extends to an expectation it will be protected as if it were property. In light of this, the law is faced with deciding if something that is already understood as property, that is being used as if it were property, is by the courts also going to be treated as property. Within the law, there are various areas that rely on the term property that govern "succession on death, the vesting of property in personal bankruptcy, the rights of liquidators in corporate insolvency, tracing in case of fraud, theft or breach of trust".[909] It is not simply that being property enables these to apply but that when the need to apply them arises it would be advantageous to be property. Where academically there is a range of problems with cryptocurrency as property, practically to resolve a problem, being property is expeditious.

[908] See (Pg.110-114)
[909] UK Jurisdiction Taskforce, Legal Statement on Cryptoassets and Smart Contracts (2019). (Hereon UKJTC)

Where this chapter has raised some questions in relation to cryptocurrency that are problematic for a proprietary understanding and might cause a rethink of proprietary theory if cryptocurrency was to become property, the case has been made that to become property might solve many of the issues with the emergence of cryptocurrency. At present there are two key overviews of this area, the UK Jurisdiction Taskforce's (UKJT) *legal statement on crypto assets and smart contracts*[910] and the forthcoming Law Commission's consultation on digital assets.[911] In both instances, the understanding of property is predicated on the Ainsworth test, with property given a loose wide interpretation as "definable, identifiable by third parties, capable in its nature of assumption by third parties, and… some degree of permanence or stability.'[912] The Law Commission further endorses an approach rooted in treating property as a power-relationship in respect of socially valued assets.[913] The UKJT makes the case that the novel elements of cryptocurrency should not disqualify it as property even in the face of the limitations of property as being pure information and neither things in possession or action.[914] By contrast, The Law Commission provisionally concludes there is a need for a range of changes to our understanding of property, notably the addition of 'data objects' as a third category of personal property that would cover objects that exist as code independent of persons and legal systems, that in order to be distinct from pure information is rivalrous.[915] This, it is suggested, would necessitate the recognition of a concept of control rather than possession for data objects alongside a number of smaller changes and clarifications across a range of different uses of property. In both reports there is a degree of flexibility in interpretation in order to justify the inclusion of cryptocurrency as property. This in itself appears to be done in order to utilise and deploy the logic of property. That The Law Commission provisionally concludes it would require major accommodations for cryptocurrency to be property, speaks to the current legal paradigm of property incompatible with cryptocurrency as property. If this conclusion were to be followed, and digital assets were accommodated, this would position it as factually distinct from other forms of property and potentially allow it to develop its own body of remedies as necessary.[916] However, contrasting this approach with the one of the UKJTC, we might consider that the recognition

[910] Law Commission, Digital Assets (consultation paper, Law Com no. 256, 2022), 256. (Hereon Consult)
[911] Ibid.
[912] National Provincial Bank Ltd v Ainsworth [1965] UKHL 1.
[913] Consult, (N.910), citing Gray v Global Energy Horizons Corp [2020] EWCA Civ 1668, [460]-[461].
[914] UKJTC (N.909).
[915] Consult, (N.910).
[916] Ibid, the report considers how expanding the tort of conversion might be appropriate with respect to digital assets however stops short of making the recommendation this should undertake. The implication being to do so might have unintended consequences for other instances of property.

of cryptocurrency as property by the courts in a limited capacity in order to engineer a solution might already have created conceptual problems for property.

The courts have largely recognised the conceptual difficulties posed by cryptocurrency but have nonetheless made various moves towards awarding a remedy utilising some kind of proprietary base. The problem here, however, is that there are no consistent principles being applied. Interestingly, early cases involving cryptocurrency did not directly address the problem of the nature of cryptocurrency. In interlocutory judgements, the courts ordered a freezing order[917] and asset preservation order [918] over cryptocurrency that implicitly appeared to accept cryptocurrency as property. This was followed in AA v Persons Unknown[919] in which the reasoning of the UKJTC and its approach to defining property was accepted and consequentially it rejected the proposition that only choses in action and choses in possession were capable of existing in law. The judge in this instance was "satisfied for the purpose of granting an interim injunction in the form of an interim proprietary injunction that cryptocurrencies are a form of property capable of being the subject of a proprietary injunction".[920] In a parallel judgment, Fetch AI.[921] reached a similar conclusion on the basis that cryptocurrency could be considered a chose in action, with potential claims founded in unjust enrichment or the application of a constructive trust. More recently, this approach has been expanded to allow NFTs to be viewed in a similar manner.[922] Taken together, it is clear that the courts are prepared to treat crypto assets as property and are going to great lengths to be flexible in finding ways to achieve this, it is worth nothing however that there do not appear to be any clear trends on how this is justified conceptually. One point of note is that these cases are primarily for obtaining injunctive relief against persons unknown and so have been heard ex parte. Indeed, there does not appear to be reported cases where the status of cryptocurrency as property has been seriously challenged or directly contested. Nevertheless, it is clear the courts are going to great lengths to intervene and find a basis on which to act.

Perhaps the biggest question emerging from these cases is how these injunctions are going to be enforced, in all the cases previously mentioned the courts have been asked to order against centralised wallets and trading platforms third party disclosure orders, Norwich pharmaceutical orders, or bankers orders in to ascertain the identities of those involved in

[917] Vorotyntseva v Money-4 Ltd (T/A Nebus.com and Ors [2018] EWHC 2596 (Ch).
[918]Robertson v Persons Unknown (2019) unreported, 16 July 2019, Commercial Court.
[919] AA v persons unknown [2019] EWHC 3556 (comm).
[920] Ibid.
[921] Fetch.AI LRD and Anor v Persons Unknown Category A & Ors [2021] EWHC 2254 (Comm), (2021) 24 ITELR 566.
[922] D'Aloia v Person Unknown & Ors [2022] EWHC 1723 (Ch), [2022] 6 WLUK 545.

wrongdoing. Considering the inbuilt privacy features of the blockchain, it is unclear to what extent this is successful or how likely the recovery of the assets is. The Law Commission report suggests that it foresees no problem in enforcement, however it is unclear on what this is based.[923] Without the ability to gain access to or control of a private key, a proprietary remedy is functionally impossible without the cooperation of the other party. That they are difficult to identify is part of the design of the system and arguably, in attempting to violate that, even in accordance with legal compulsion, damages the ideological underpinnings and the community from which much of the value of the asset derives. Arguably, all attempts at regulation attack the values of the community; if wallets find themselves frequently disclosing information, then they risk falling out of favour and being replaced by other services of methods that are 'safer'. It is perhaps interesting that in finding proprietary remedies and attempting to enforce them, this attacks some of the foundation principles of what gives that property value. This raises yet more questions, if we can't gain control of private keys but can identify a party, will tracing into other 'real' assets be allowed? How far will the courts go to allow recovery? If we can't vindicate a property right, what are we chasing? Is property about rights or value, and should we chase a right if it destroys that value?

Chapter 7 - Assembling the thesis / Rolling the boulder.

This thesis has presented the case that 'property', far from being a single, stable, definable 'thing', should instead be viewed as something that is continually enacted. Conceptually, the limits of property are constantly changing and expanding. Though while it can be approached through a range of different methods, and thus understood to have a number of meanings, all expressions of property operate at the boundaries of these meanings. The question conceptually of what property is, is something entirely contingent, with every individual's concept expressing a different arrangement of elements in different intensities that is determined by their own understandings, needs, and the constellations of persuasive forces which act upon them in that moment. To paint a clearer picture of this process, this thesis has explored what might be understood socially, economically, and legally as property with each of these areas contributing a different but linked understanding of property. It has presented some 'core' elements and understandings in each that enact property in the study of that particular discipline, but, at the same time, has highlighted a need to understand the subjects they study and the conclusions they reach as overlapping and influencing one

[923] Consult (N.910).

another. The boundaries of each of these concepts are in constant flux, with the use and reinterpretation of the concepts, elements, labels, and language actualised through application and interaction thereby changing their territory. The search for new concepts of property is an endless one. No matter how many times you try, the boulder will always roll down the hill, and every time something will change. The face worn smoother, it has gathered more moss, there is a new hold to try.[924]

To construct this view of property, this thesis approached method as a means by which realities are being constructed.[925] It has explored the philosophic creation of concepts,[926] the potentiality of language and schema as operating as a model of concepts to the individual,[927] how collective understandings of concepts might be organised and expressed conceptually,[928] and their influence mapped spatially,[929] arguing that each creates a specific and contingent reality,[930] within rhizomatic patterns of influence.[931] Importantly, these ideas are not presented as stable, acknowledging various processes by which they can change, yet acting as stabilising forces in those processes of change. Particular importance is given to the ideas of dissonance and political ontology and its resolution,[932] that this thesis argues should be viewed through a process of persuasion, that interlinks all the forces of the different conceptualisations of concepts.[933] It suggests hat the concepts of individuals are constantly developing along a line of flight through enactments that are influenced by the persuasive forces of those constellations of constructed realities, the forces ordered by the concepts the individual holds in relation to those influences. Where this thesis considers that this is part of a processes of ontologically politicking, it argues that it might also be recognised as an ontology of persuasion.[934] This framework, or ontology of persuasion, is specifically deployed to consider the role of judges and the processes of judicial reasoning,[935] while more generally calling for an understanding of individual concepts of property that might influence the concept of property in specific instances.

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[924] Maybe kick a few rocks out the way, get a bit fitter, become a bit of a tourist attraction. In time we might even come to miss it. Terry Pratchett, Faust Eric (first published 1990, Vista edition, Vista 1996).
[925] See, (Pg.24-34).
[926] See, (Pg.27-29).
[927] See, (Pg 29-32).
[928] See, (Pg.16-21).
[929] See, (Pg.30-32).
[930] See, (Pg.25-30).
[931] See, (Pg.15, 23-26).
[932] See, (Pg.37-41).
[933] See, (Pg.38-42).
[934] Ibid.
[935] See, (Pg.141-148).

To this end, exemplifying the concept of property as a boundary object,[936] this thesis mapped out constructions of property in anthropology, economics, and the law. At each site it highlighted the construction of the multiplicities of property within each field, the interplay between these fields, and the 'values' beyond simply truth that might be gleaned from such interactions.[937] Through the concept of boundary objects, 'property' can be understood not only as operating between these fields, but that objects of property too operate in between these fields, different networks, and as between individuals in a way that constantly involves the interaction, translation, and tacking, between different concepts of property.[938] Indeed, even within a singular field operating between different specific concepts of property.

Through an anthropological lens, we can understand the social dimensions of 'property'. This approach shows us how concepts, values and systems of property are used and engaged with by communities. Anthropology draws attention to 'property' as universally present, but shows that concepts of property are not universal, and by no means easily translatable.[939] It argues for an understanding of property as social relationship, and through social relationships.[940] It challenges the assumption of the dominant concept of western property,[941] presenting alternative systems of property that centre different values.[942] It presents the interplay between the legal, economic, and social understandings as it impacts the social conditions of property,[943] but that this too can lead to the creation of systems of property that arranges itself outside of legal systems, and to express values other than the purely economic.[944] Where we might consider the dominant western concept of property,[945] and its legal underpinning,[946] focused largely on capitalistic and economic ideas,[947] as lensing property through particular social arrangements, this does not prevent the social arrangements that are expressed more clearly in other systems of property. Where we might consider systems of property arising out of a social or economic need, this does not have to take place through the law but instead might arise within social systems in spite of the law.[948] Conceptually, understanding social property helps us broaden the horizons of 'property', understand more of what 'property' might do or be, the values and realities that

[936] See, (Pg.44-58).
[937] See, (Pg.59,65-70).
[938] See, (Pg.49-54).
[939] See, (Pg.61-64).
[940] See, (Pg.58-66,70-77).
[941] See, (Pg.78-82).
[942] See, (Pg.66-73).
[943] See, (Pg.73-78).
[944] See, (Pg.36,66-73,128-133).
[945] See, (Pg.64-69).
[946] See, (Pg.70-71,89-101).
[947] See, (Pg.78-85).
[948] See, (66-73,128-133).

can be constructed through property, while also acknowledging that legal and economic concepts of property help define the realm of the social. In making a study of the quotidian, the social, and theirexpression through property, the work of anthropology provides an insight into how property law, property ideology, and social relationships are actualised in interactions surrounding property.[949] To the law, at a macro level, it uncontroversially posits its role a driver of social change. At a micro level, it posits an approach to understanding the quotidian practices that the law is forced to engage with in dealing with property problems, and helps present the social elements and the social 'realities' of the legal, ideological, and economic understandings that influence judges and the public.

Through an economic lens, we can see a value-based approach to property. Indeed, it is this view that largely underpins the dominant western concept of property.[950] This calls for an understanding of property based on allocating and protecting value, and a more mathematical perspective that that of anthropology.[951] Conceptually, economics considers property rights through things of value,[952] and the rules of property to allocate and protect that value.[953] In this way it reduces property to simply value.[954] At a macro-level it helps to shape the idea of property in law by reinforcing the 'stability' and simplicity that is required of property rights.[955] On a micro level, economic understandings of property and its centrality to the dominant concept of property, drives much of the activity of property while providing an expectation that valuables will be treated with similar protection.

Through the legal lens, we can consider the 'shape' of property in law, the structure and delineation of the rules that apply to it,[956] and how this affects actual objects of property. It provides an understanding of the exclusions, and reasons why they might be excluded ideologically,[957] that in turn highlights the ideals of property. It provides an understanding of the power and nature of rights, and the ways in which we can use and trade them.[958] It uses property through the lens of a problem solving tool, providing analysis of problems with which the law is faced.[959] Where we might think that the law 'sets' rather than argues for a particular understanding, this is incrementally constructed, and is as much about generating 'understandings' of the law that draw on the influence and power of the law, as it is about

[949] See, (Pg.73-77).
[950] See, (Pg.78-83).
[951] See, (Pg.87-99).
[952] See, (Pg.94-96)
[953] See, (Pg.96-99).
[954] See, (Pg.94-96,100-103).
[955] See, (Pg.83-85,99-102).
[956] See, (Pg.103-118).
[957] See, (Pg.94-98).
[958] See, (Pg.132-136,154-156).
[959] See, (Pg.122-133).

the law itself.[960] Conceptually, it provides the legal standard of property, and the scripts through which it is engaged. In theory at least this should also provide a strong force to shape and order the activities of the quotidian.

Individually, each of these understandings are multiple, pulling conceptually in different vectors, but in amalgam provide points of overarching stability to enact their own understandings. The concept of 'property' exhibits the influence from all these understandings of property and these understandings in turn influence the understandings of individuals and the expression of property in individual objects. They are at best snapshots of understandings of moment, ephemeral and constantly open to change. Conceptually, shaping our concept of 'property' through concepts of property, that themselves express the salient features of understandings of property to individuals. Coming together to construct 'property' through expressing the constructions of property.

To this approach, the question of 'is this thing property?' is as much about understanding the ability of the thing to persuade us of its 'property-ness' in those circumstances as it is anything about the thing itself. Property is both imminent to the intensional logic of the thing and extensional to a conceptual understanding, balanced by how and when we might perceive these arrangements. We see property in a thing as much as we see the thing as being property and, as we do, we enact it so. There is no perfect plane from which to pull 'property', no elements to build a concrete foundation, no finite list.[961] Property is instead found in the things that we do with it, the meaning we give to it, and the rules we territorialise to it.[962] In many ways, being property doesn't matter, within anthropology and economics at least, it is simply a label to quickly communicate a general idea of a thing, the role it plays, or the practices it involved with. The law by contrast has an 'active' concept of 'property.' Concepts of property underpin much of the internal logic of the law, being central to a range of doctrines, and underpinning a range of the rules relationships that govern how an object operates in practice. Many economic and social structures around property are shaped by the legal idea of property and the different functions it performs, but in turn the social understanding of that legal idea of property is as important in those practices as the law itself. This allows 'property' to fulfil a number of functions. The law requires property to be multiple but treats it as one.

This thesis has put forward the case that we might understand the concept of property in law rhetorically. It has argued that academic understandings, notably the bundle of rights theory

[960] See, (Pg.128-133).
[961] See, (Pg.25-30).
[962] Deleuze (N.5).

of property,[963] far from creating explanatory theories of property might better be understood as rationalisations justifying a particular legal approach or remedy.[964] It has also presented that judicially there is a strong case for understanding property rights as being strong, stable, and sacrosanct.[965] Yet this same perception, when applied in cases where there is a 'difficult' decision to be made, allows property and its surrounding relationships to act as the justification for solving the problem with which the court are presented.[966] In applying this understanding to constructive trusts, it has been suggested that the opposition to remedial constructive trusts stems in part from a strong opposition to the court holding the power to interfere with property rights and thus undermine their strength.[967] Yet to avoid this means that the boundaries of 'acceptable' constructive trusts have been expanded by reading property interests and fiduciary duties into circumstances as a means of solving the problem faced by the courts.[968] As a matter of theory, the institutional and remedial constructive trust are distinct, and the distinction can be justified conceptually.[969] The distinction however does not readily lend itself to neat application when faced with complex circumstances. Further, the courts accept they have the power to retrospectively change property rights when called to do so in cases of proprietary estoppel which, but for the opposition to the concept, could be understood as a remedial constructive trust.[970] Uncontroversially there is a narrative and logic to property that appears to justify common doctrinal approaches, even where these utilise similar justifications to very different ends. More controversial, however, are the complex cases and the problems that they pose being resolved by deploying these same narratives and logic through 'finding' property, which goes some way to explain much of the complexity observed when trying to explain constructive trusts through a conceptually stable lens.[971] If we accept that property has utility as a tool for resolving difficult factual problems and as a justification for providing a remedy, we might begin to question what occurs in difficult cases. Is it that judges need a legal solution to solve a problem and often the one we reach for is property or is it that judges are deciding to provide a remedy and property provides a well-established justification?

This thesis has gently suggested that this judicial 'finding' of property might be the courts response to perceived unconscionability. Where it might be suggested that 'unconscionability' represents some unifying force for the doctrines of equity, perhaps with

[963] See, (Pg.75-77,83-86,122-128).
[964] See, (Pg.137-140).
[965] See, (Pg.155-158).
[966] See, (Pg.137-141,148-174).
[967] See, (Pg.148-158).
[968] See, (Pg.158-174)
[969] See, (Pg.149-152).
[970] See, (Pg.170-173).
[971] See, (Pg.173-174).

time and through a series of judgements coming to have some discernible conceptual stability.[972] It still seems apparent that alone, at least, unconscionability is too uncertain a term to build a doctrine around. Not necessarily because it would not work, the greatest risk perhaps being that it would allow judges to avoid proper elucidation of their judgments, but simply because it is the kind of uncertainty that both judges and the legal community more generally tends to want to avoid.[973] Yet, there is something to unconscionability, it has been suggested that unconscionability is shorthand for the conclusion that the other elements of a doctrine have been satisfied.[974] To go one step further, this thesis suggests that in unclear circumstances, it might be that because the courts are convinced that the circumstances are unconscionable, that the facts can be finessed to the fit the 'script' in order to appear to conceptually satisfy all the of the elements. If we accept that equity will not suffer a wrong to be without remedy, then sometimes it must dress up the remedy in the clothes of a 'wrong'.

Through cryptocurrency we can see the courts engaging actively in a process of finding 'property' despite the factual and conceptual difficulties this entails. At present, the courts appear to be building incrementally the acceptance of cryptocurrency as property, through specific judgements providing proprietary remedies. This is set against the background of a socio-economic environment that is already treating cryptocurrency as though it were property, meaning that the courts are playing catch-up, and must do so against facts that draw parallels with established property relationships and problems. The courts in general appear to be following the suggestion of the UKJTC,[975] that the technological features of cryptocurrency should not discount it from being property despite its conceptual difficulties, which thus allows courts to utilise existing property frameworks pragmatically. Furthermore, the courts are demonstrating a willingness to be creative and flexible in overcoming the practical problems of dealing with cryptocurrency, through ex-parte hearings, through disclosure orders, and by allowing service of court orders by NFT.[976] The case however is not necessarily clear cut with the existing body of precedent being of questionable value, being largely composed of ex-parte and interlocutory hearings, with no case to date seeing a contested consideration of cryptocurrency as property. Indeed, this perhaps highlights the key point in relation to the development of the law thus far: the courts have been called upon to deal with problems in a vacuum without serious opposition and debate. To further highlight this point, what is the alternative to cryptocurrency being property? If the concept

[972] Pawloski, (N.831).
[973] See, (Pg.173-174).
[974] McFarlane, Proprietary estoppel (N.827), and Liew (N.836).
[975] UKJTC (N.922).
[976] D'Aloia v Person Unknown & Ors (N.922).

is not engaged, there is no clear parallel which could be drawn upon. The courts would be left with a problem, that they have no method to solve, left with a wrong without an established remedy. Without property, we would need something new, likely something akin to property, that would need to do much of the work already mapped out to property. Surely, in this light we can see why a judge might simply go with what is well understood, justified, and does the things that are needed. We might allow equity its flexibility and accept that judges use property to solve the problem they face.

Though to accept cryptocurrency as property is not necessarily so simple conceptually. As The Law Commission's suggestions highlight,[977] we would need to go to great lengths to accommodate digital assets within property, in essence necessitating a whole new category of property that uproots a number of existing principles. The traditional concepts of property simply do not map themselves onto cryptocurrencies and other digital assets well, and if we are to accept that the courts find them to be property, then what exactly do they *see* property as conceptually? Indeed, as cryptocurrency goes on a process of becoming property, what is property becoming? If we maintain that conceptually property is to follow a stable arrangement of elements, then the courts need either define them in light of cryptocurrency,[978] or we require statutory intervention akin to what The Law Commission suggests. If we follow that property is a tool by which legal problems might be solved, that this is happing within cryptocurrency and historically in relation to constructive trusts, then stable concepts of property are undermined, and we might begin to rethink our opposition to remedial constructive trusts. if we accept that property is sometimes used as a justification to provide a remedy, then perhaps again it does so when it would be unconscionable not to?

A related issue that perhaps recasts the internal problems of cryptocurrency as property, yet goes outside the courts, is the problem of enforceability. The courts seem amenable to providing help to victims of fraud and other crimes in relation to cryptocurrency and the commission seem to regard there is little problem to enforcement.[979] In light of the lack of an ability to rectify the blockchain,[980] the difficulties in identifying parties, the need for cooperation from exchanges and wallet services (which are not necessarily involved), the ease with which the assets can be dissipated or hidden, the need for a potentially global reach for enforcement and the costs involved with these processes, while not making it completely impossible to enforce do present a range of practical impediments. It is unclear at present how many judgements (or if any of the ones considered) in relation to

[977] Consult (N.910).
[978] If we accept that the courts have this power and that this explains what they have already done.
[979] Consult, (N.910).
[980] See Fowler V Fowler (1859) 45 ER 97 for the general legal right to rectify. This is likely impossible outside centralised exchanges.

cryptocurrency have led to either a successful recovery of the assets or other payment in kind. From the socio-technical standpoint it would appear that enforceability of a remedy will come down to the ability to find and control the private key in one of its various forms.[981] The ability to freeze the assets will depend either on the cooperation of the defendant or the engagement with centralised wallets and exchanges, with the latter also being key in orders for disclosure which relies on them actually holding information[982] about the 'owner' of a private key.[983] It is possible that off-chain enforcement, charging the debt to physical assets, might enable enforcement in some instances. However, all of these elements depend on the factual circumstance of the case beyond those that establish the need for a remedy, and which will largely depend on who and what the courts coercive power can reach, if any can be identified at all. Where there are instances of cryptocurrency being 'recovered',[984] this has generally been through criminal cases, with the return of crypto currency being incidental, and enabled by the seizure of physical wallets or hard drives.[985] Much of the potential problem of enforcement stems from the interplay of the digital and the physical, with the defendants circumstances, means of storage, and activity with the asset being so integral to its resolution. Where this might generally be a problem for enforceability in other areas of digital crime and indeed even in physical crimes, cryptocurrency by design serves to exacerbate these problems, making it easier to commit crime in undetectable or untraceable ways. This might simply mean that, despite the best efforts of the court, and regardless of the desire to provide a remedy, the environment within which cryptocurrencies operate makes it impossible to enforce consistently. This is not to say that the courts are not right to try and provide a remedy, but it raises the question if property and the arsenal of remedies that come with it are indeed appropriate? If an unenforceable remedy is no remedy at all, and in some instances being property does nothing to actually enable enforcing that remedy, then it might be that treating cryptocurrency as property obscures the necessity of finding a framework or regulation that tackles the problem of enforcement. Though perhaps

[981] This is not impossible, and it has been suggested that the maxim 'equity acts in personam' might allow for equity to find creative remedies to seize private keys. See Kelvi F.k Low, "Confronting Cryptomania: Can equity tame the blockchain?" (2020) Journal of equity 240.
[982] Which is by no means a given considering the various regulatory landscapes within which these services operate.
[983] Equally if that information is found, proving that they are in control of the account or the cryptocurrency at present becomes an issue.
[984] Though in some instances this has simply meant the seizure of the assets for the government See https://www.justice.gov/usao-sdny/pr/us-attorney-announces-historic-336-billion-cryptocurrency-seizure-and-conviction last accessed 29/03/23.
[985] Ibid, see also, https://www.bitdefender.co.uk/blog/hotforsecurity/uk-police-recover-millions-of-pounds-worth-of-stolen-cryptocurrency/, https://www.cps.gov.uk/cps/news/sentence-update-fraudsters-sentenced-ps21m-loss-cryptocurrency and Fariha Karim, "Oxford student jailed for £2m crypto theft after PhD blunder" *The times, (London, January 30th 2023)* < *https://www.thetimes.co.uk/article/oxford-student-jailed-for-2m-crypto-theft-after-phd-blunder-ftmdj9tmp*> last accessed 29/03/23.

this is not a problem for the courts. It might be that the courts do not fully understand cryptocurrency as property but instead use their understanding of what to do with property because it is the best understanding they have got.

To not be able to protect rights in cryptocurrency however strikes not just to the heart of the legal concept of property but also the social and economic understandings. The concept of cryptocurrency is caught between its code-based rules and the rules of states, its socio-technical communities, and its use as an established economic institution, its on-chain utility and off-chain value. These express a balance between a social and economic understand of cryptocurrency. By necessity, early specialist networks had a more anthropological understanding weighted towards understanding cryptocurrency by its own rules, the groups it was used in, and for the utility it served. As cryptocurrency became established and found itself increasingly connected to the mainstream, its external value, its economic uses, and the perception of the rules that should be applied to it come to the fore. Different individuals, communities of practice, and networks approach cryptocurrency with different understandings of these elements, expressing different weightings on the scale between social and economic understandings. implicit within a social and economic understanding is that there is some kind of rules framework that organises it and allows it to be protected. An understanding of cryptocurrency that draws on social or economic understandings of property or that likens cryptocurrency to property because it shares some elements or uses with other expressions of legal property, raises an expectation of legal protection akin to property. If the law treats cryptocurrency as property but cannot meet the expectations of protection property provides, might it not undermine the concept of property? The rationalist might try to reformulate the legal frameworks and tests for property to capture these understandings, however this thesis suggests that this would only ever provide a snapshot of what property is, and might not resolve the problems of the expansion of social and economic understandings of property. If we acknowledge the social understandings of cryptocurrency, we might perceive a dissonance between the communities that embrace its ideological underpinning and specific uses, and the communities that recognise it as an economic institution. The former would likely reject state interference and rely upon the technical property-like rules of the code, whereas the latter would likely welcome the nominal protection to their investment property provides. Yet, if this property cannot easily be enforced, recognising cryptocurrency as property might provide a false sense of security to investors. The former argues for recognising the legitimacy of the techno-social property system beyond state control, the latter the territorialising of state property to overwrite this property system. If we acknowledge that cryptocurrency should be treated as legal property, and central to that is providing a remedy, enabling enforcement consistently might require

regulatory frameworks or the centralising of cryptocurrency that goes against the current socio-technical arrangement of cryptocurrency. Yet specifically because of its nature, cryptocurrency as we currently know it would likely continue specifically because as a system it can avoid state regulation, and there are reasons to join those communities for those values.[986]

This thesis has deliberately avoided considering in depth theories of value for cryptocurrency. The approach of this thesis would suggest that rather than following some economic formula or specific ideological theory of value instead utilises these concepts as persuasive as to what it might be worth. Ultimately, it would suggest that its value is simply what people are willing to pay for it for whatever reason they believe it is valuable. Cryptocurrency, perhaps more than anything else, is valuable because society believes it's valuable,[987] volatile because its value is enacted through its understandings with few points of stability. Its value is constructed in news stories, theories about its use, hopes for the future and many other concepts that influence what people are willing to pay for it. The social understanding (or misunderstanding) of cryptocurrency as property plays a role in driving this value.[988] If anything, a capitalist and economic understanding is perfect for cryptocurrency because it is largely about value. This thesis has suggested that treating cryptocurrency as property will influence this value, but beyond the scope of this thesis is the question should the law concern itself with this? And if so, are we concerned with protecting a right, if it comes at the expense of its value?[989]

To zoom out further, if we consider the courts as having reacted to the use and abuse of cryptocurrency in the social and economic spheres through deploying the concept of property, is property appropriate? The law has the capacity to shape social and economic understandings of property and in so doing change individual understandings of and engagements with cryptocurrency. This thesis has suggested that protecting cryptocurrency through property might not be easy, that its value is in part defined by being property and the expectations of property that brings, that cryptocurrency being property misrepresents investors as to the security that property brings. To treat cryptocurrency as property will either be incomplete or involve difficult decisions to change our legal concepts of property, or the nature of cryptocurrency itself. These are not absolute positions however but decisions

[986] Compare Intentional communities (Pg.70-73).
[987] For comparable situations see, Charles Mackay, *Extraordinary popular delusions, and the madness of crowds*, (Wordsworth reference, 1995).
[988] And perhaps more generally as 'money'.
[989] This is not to suggest that this will be the case. However perhaps this is more a question of how this might be achieved? Especially in light of the social systems of property that already exist around cryptocurrency.

that will influence the understanding of cryptocurrency and the concepts of property. Even if the law does change its concept of property, that might not change cryptocurrency in communities that resist these changes. Beyond the understandings and uses of cryptocurrency within communities and the potential economic institutions that influence individual understandings of cryptocurrency, this thesis has not considered the use of cryptocurrency more generally. It has not engaged with if cryptocurrency might be 'good' or that it might serve some wider utility. Where this thesis has engaged with an ontology of persuasion that helps us understand the construction of cryptocurrency as property, these political problems are questions that should drive the political ontology of should cryptocurrency be property. This goes well beyond the traditional role of the courts. In a perfect world, the law would be ahead of these issues and have set a path for society to follow, yet the implications of technology can be difficult to understand and predict. Without this kind of guidance, the courts have in some ways begin to implicitly answer these questions through the concept of property, but only because they are forced to deploy it remedially.

The concept of property helps inform understandings in our day to day lives, our relationships with others, and our relationships to things. Moving forwards, it will likely form the foundation of our ability to engage with new technologies and new developments in a rapidly changing world. This thesis has presented a case for where we are and some of the lines of flight for where we are going. If the concept of property is to continue to change, what do we want to see enacted? To return to the world of music, the courts are conducting the noise of the modern world with the concept of property, is it time to reconsider the sheet music?

Appendix A – Tracing proprietary interests

Tracing is not a remedy in and of itself but simply a process to identify substitute assets that gives an ongoing identity to a proprietary interest and allows for it to be claimed in place of the original asset. This might be thought of as a proprietary interest moving between different assets as they come to represent it or as a process of creating interests in new objects as the previous interest is extinguished. Where of limited practical concern, exploring the theoretical underpinnings reveals interesting points about the nature of proprietary interests.

The defence of a bona fide purchaser for value without notice, effectively ending the ability to trace into new hands, allows for tracing into the value used to pay for that purchase.[990] This approach seems to favour a process of creating interests, with the courts acting to create a new interest in substitute property rather than maintaining a continued identity.

Where improvements to land are made treated as having become impossible to disentangle from the land and therefore impossible to trace into.[991] This case rejected the imposition of a charge as inequitable and considered that improvements might not directly lead to a noticeable change in value that can be traced into. While this implies a kind of continued existence and distinctness to the identity of proprietary interest this could also be justified on policy grounds. Where this principle is usually framed through tracing monetary interests, it is unclear how a proprietary interest in a non-monetary assets might be treated and if their identity could in some way be disentangled?

Where the money is dissipated, for example being used on living expenses or utilised for an overdraft, tracing is impossible with no property that can be seen to represent the money or where an interest could be created.[992]

In very limited circumstances there is the possibility of backwards tracing, where coordination is established between the creation of a debt and the subsequent breach of trusts that discharges a debt, it is possible for an interest to be vested in an asset acquired before the breach of trusts.[993] This approach seems to imply that there is scope for the creation of a new interest to be justified in exchange for extinguishing a prior interest.

[990] See Pilcher v Rawlins (1871) L.R. 8 CH pp. 259 for an elucidation of the principle.
[991] Re Diplock [1951] AC 251.
[992] Bishopgate Investment Management v Homan [1995] EWCA CIV 33.
[993] The Federal Republic of Brazil v Durant International corporation, [2015] UKPC 35.

The process of tracing through a mixed fund further complicates this picture.

The starting presumption is that the defendant will have used their own money before using the money misappropriated from a trust.[994] Where this approach would lead to tracing into transactions that would dissipate the interests of the claimant, instead the defendants own money is taken to be dissipated.[995] Where the tracing claim involves only the interests of the claimant and defendant it is possible to allow the claimant to 'cherry pick' transactions, allowing them to decide how their money is spread over a range of transactions. The exception to this are in circumstances where there are sufficient funds remaining in an account to satisfy the claim and to allow this would prejudice other claims or allow for double recovery.[996]

In essence these approaches render the fiduciaries interests subordinate to the claimant as a matter of policy. In building these policy considerations and exceptions however the vehicle by which this is delivered becomes unclear. Where the approach In Re Hallet's estate marries a need to protect the claimant with a presumption that makes clear where the interests reside. By departing from this presumption, even for sensible policy reasons, the courts are in effect making a holistic judgement of the circumstances of the case to determine where the property interests reside in retrospect. Empowering a claimant to 'cherry pick' transactions shares with them a power to retrospectively allocate their own proprietary interests. In either case where a presumption allows for an unimpeded understanding of the legal reality, the courts departing from this means they are creating or imposing proprietary interests in retrospect.

While these examples do little to paint a cohesive picture of how proprietary interests might operate under the tracing rules, its relevance to the practical outcome of the tracing process being limited at best. This still raises questions as to what exactly the court is doing. If it is believed that there are instances in which the court operates to create interests by implying them retrospectively following a process of tracing into an asset, indeed perhaps even extending that power to the claimant, then we might begin to understand that the court is free to create proprietary interests in a range of circumstances. Even when they might not want to readily admit that is what they are doing.

[994] Re Hallets estate (1880) 13 Ch D 696.
[995] Re Oatway [1903] 2 Ch 356.
[996] See Turner v Jacobs [2006] EWHC 1317 (Ch).

Appendix B – Explanatory information for ‘crypto’

A glossary of crypto terms

Cold storage – means of storing cryptocurrencies in and offline environment. Utilising a storage medium not connected to the internet for example a hardware wallet or paper wallet. This is also sometimes referred to as ‘air gapping’.

DAOs – Decentralised Autonomous Organisations – a structure without a central governing body or control. Made up of likeminded individuals who all own ‘tokens’ that enable their participation in voting or decision making.

Dapps – decentralised apps. Programs utilising blockchain to run an application on a decentralised network.

DeFI - Decentralised Finance – an alternative financial architecture that moves away from centralised intermediation by banks.

Exchange platform – ‘Exchanges’ - marketplaces used for the trade and sale of cryptocurrencies and other digital assets.

Fork - where a blockchain diverges into two potential pathways, alternatively where two or more blocks exist at the same stage. This can occur in cases where there are concurrent strikes acknowledged in different parts of the network. Usually resolved by one fork being developed further faster, which makes it the dominant folk in the chain.

Fork (software) – A fork can also occur when there is a change within the rules set on which a cryptocurrency is based. ‘hard’ forks refer to instances where the new protocol is not backwards-compatible and splits the network into two separate versions. ‘soft’ forks refer to instances where there is backward compatibility that often mean only miners are forced to upgrade.

Genesis block – The original block in a chain and the notional starting point that justifies the existence of all other blocks.

Hardware wallets – Physical devices that store public and private keys and can be used to validate transactions. Specifically the terms emerges from thumb-drive like devices that are plugged into USB, however It has more generally been used to refer to detachable hard drives that are used to store the key.

ICOs – Initial Coin Offerings – the initial release and/or sale of coins often used to establish value within the market, fund additional development or cover initial set up costs. In theory this is comparable to an initial stock offering however its regulation is equally variable.

Lighting network – a off chain method of transacting that reduces the processing speed of transactions on a blockchain network. Utilising P2P networks to process and amalgamate transactions before broadcasting only the end positions. Allows for small transactions to be done quickly and efficiently in a group that do not necessarily have to be resolved until one party decides to leave.

Miner – Either the people involved in running mining operations or computers used exclusively for this purpose.

Mining – The process of committing computing resources to solve complex computational problems posed by blockchains. Mining more specifically refers to this activity when there is a chance for a reward of cryptocurrency.

Mining pool – groups of individual miners working together, sharing in the funds received.

NFTs – Non-fungible tokens – Blockchain technology applied to digital images to verify 'ownership'. Ownership in this context being primarily but not exclusively ownership of the NFT version of the image and not the associated intellectual property rights.

Online wallets – services or websites that mediates access to public and private keys. Usually involving their own account and password systems.

Paper wallets - Public and private keys physically written down. While it can usually be on paper, this also refers to any physical inscription of the keys. This only helps record the keys and does not provide any help to accessing the address or transact on the blockchain.

Privacy wallets – wallets that mix together and exchange cryptocurrency in an untraceable manner.

Private key - Paired with the public key, provides control of the related public address and is used in authenticating transactions. Might be thought of as a digital signature.

Proof of stake – a method of verification by which a user's 'stake' or amount of tokens are have relevance to the process of mining. The more tokens, the more influence on the chain and which might be relevant to determining when new blocks are added.

Proof of work – a method of verification by which the amount of computational work done helps determine who is capable of making a new block.

Public key – An address that Is intended to be shared and seen by other parties on the blockchain. Used for conducting transactions on-chain and provides a way of identifying where tokens are. Comparable to a username.

Smart contracts - Contracts written in code onto a blockchain. These are self-executing and automate specific actions. as opposed to 'traditional' contracts they do not use legal language or plain language terms, instead making up series of code often containing functions, if/then statements, and modules that allow for the integration of other information.

Software wallets – desktop or mobile apps that mediates access to public and private keys. Usually involving their own account and password systems.

Strike – A success in the process of mining produce a new block and generally generating the opportunity to obtain a bounty of cryptocurrency.

Transaction fee – an incentive offered by those wishing to see their transactions included in the next block. Taken by the successful miner when the transaction is included in a block.

Tumbler/mixing service – a service that pools cryptocurrency from a number of sources and then distributes them to selected address in a way that randomise the outputs. This makes it difficult to trace these coins, meaning it is useful for money laundering.

Wallets – Mediums for the storage of public and private key pairings that provide easy access to crypto balances. These do not store currency themselves but provide access to the information that allows transactions to be undertaken on the blockchain.

Types of cryptocurrencies

Algorithmic stablecoins – Tokens that maintain a value by means of mathematical process. Usually operating through a pair of tokens, one stable coin and one 'backing' coin. Parity with the underlining currency is maintained by algorithms allowing users to burn one coins 1:1 for the other and thus allow it to control supply and demand.

Asset backed tokens – tokens that allow a claim on a physical asset or trading based on that claim. Often closely related to security tokens.

Exchange token – Tokens used exclusively on the exchange platform that provides them. Primarily used as a stable medium of exchange between different types of coin within an exchange.

Meme coin – A token that is created to be in some way humorous or relevant to popular culture.

Non-fungible tokens – see above, much like real world art is treated like an asset in its own right.

Payment token – synonymous with cryptocurrencies, generally used for making payments. Bitcoin is a payment token.

Privacy tokens - Tokens that include an additional layer of anonymity as compared with bitcoin. This can also refer to methods that ensure greater transactional privacy.

Security token - Tokens tied to real world assets. These are comparable to Digital representations of stocks and shares. As these fall under the definition of transferable securities under Directive 2014/65/EU (MiFID II) these fall within the purview of the FCA and face greater regulatory control.

Stablecoin – Tokens that's maintain a stable value relative to another currency. These are often collateralised by a reserve of the relevant currency. This can either be from centralised organisations that hold collateral assets or by means of decentralised systems usually deposited on smart contracts.

Utility token – tokens providing access to a particular utility associated with their provider. Giving access to features of a decentralised ecosystem and is central to that systems economy.

Further details on cryptographic, computing, and mathematical problems

Pigeonhole principle – $if\ N > M. to\ place\ M\ in\ N\ the\ at\ least\ one\ M\ cotains > 1.$ Generally named the pigeonhole principle due to its common example. With five pigeons and four holes, someone is going to have to share. The same fundamental principle underpins the idea that an infinite number of monkeys if provided with typewriters will eventually produce hamlet.

The birthday problem – Related to the pigeon principle. whereby for a set of number of people the probability of two sharing a birthday seems improbably high. To achieve a 50% chance of two people sharing a birthday only 23 people are needed.

Two general problem – A thought problem that highlights some fundamental problems in computing. Two armies are preparing to attack a city. The generals even though they have agreed they will attack, have not set a date and time, and rely on each other to attack in order to be successful. The only way to communicate is by sending a messenger through a valley filled with the city defenders, thus there is a chance any given messenger sent through the valley will be captured. The problem considers that because there is a chance any message will be captured it becomes impossible to know with certainty that it can correctly be

concluded that both sides will attack at the agreed upon time. No matter how often a message is sent or confirmation made, there is no way to be a certain the other side has got the last message and will attack. That it is impossible forms the basis of the idea in computing that you cannot guarantee consistency between endpoints in a communication network with imperfect methods of communication as there is no algorithmic way to ensure it.[997]

The Byzantine general problem - This is a thought problem highlighting the difficulty in having decentralised systems reaching consensus. Much like the Two generals problem, there are a number of generals who need to coordinate an attack to take the city. Each general must vote either attack or retreat. The key is that there is agreement on a common plan, for either a coordinated attack or retreat is preferable to a confused mix of both. Again the only way of communicating is through messengers that might be captured. To further complicate the problem there is a chance there are traitorous generals who are conspiring with the defenders to choose a suboptimal choice, and some of the messengers might forge false votes. In theory consensus can be achieved if the loyal generals can reach a majority, with a default vote being cast for missing messengers, and a default plan in place where there is less than a majority vote. In general, the solution can be achieved consistently where a third or less of the generals are traitors, however in circumstances where there is an available method of verifying messages in a public manner as long as the loyalists outnumber the traitors can consensus be reached.[998] This problem is a key one in dealing with block chain consensus.

[997] Jim Gray, "notes on data base operating systems", in Operating Systems An Advanced Course, (1973 Heidelberg, Germany:Springer-Verlag), 393.
[998] Lamport L, Shostak R, Peasem M, 'The Byzantine Generals Problems' (1982) 4 issue 3, ACM Transactions on Programming Languages and Systems, 382.

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