

Sunbeam Braid: Verbal Solidarity and Quantitative Approaches to Comics Theory and Criticism

By Alex Turton

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Dedicated to my Mum, Dad and sister, Alice, for their continued and unwavering support.

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Introduction

Project Design and Hybridisation

This project offers contributions to scholarship in both the areas of Comics Studies and Digital Humanities. Each of these fields, particularly in Britain, currently occupies a relatively marginal space in academia as evidenced by the low number of undergraduate and postgraduate programmes dedicated to either discipline. Given this scholarly context, and given that they are not areas of inquiry that very frequently overlap, it is worth opening this thesis with a statement about the project's design and hybridising of Comics Studies and Digital Humanities.

The crux of the relationship between Comics Studies theory and the Digital Humanities methods that are used in this study is the strong resonance between the panel and one of the formative technologies of Digital Humanities, the concordance. This technology was employed by one of the figures that Digital Humanities scholars point to as the earliest proponent of Digital Humanities work, Father Roberto Busa, for whom the Roberto Busa Prize is named. This is the award given out every three years at the discipline-leading Alliance of Digital Humanities Organisations conference to “recognise outstanding lifetime achievements in the application of information and communications technologies to humanities research”.¹

I identify this indexing impulse in Digital Humanities methods as strongly suited to address the uniquely structured, rhetorical artefact that is the comic book. Concordancing practices and literary theory since Roland Barthes's *S/Z* share,² I believe, a common challenge: determining a meaningful unit of analysis. Barthes resorts to “lexias”, units of reading that are

¹ ADHO, 2021. *Roberto Busa Prize / ADHO*. [online] Adho.org. Available at: <<https://adho.org/awards/roberto-busa-prize>>.

² Roland Barthes, *S/Z*, trans. by Richard Miller (Oxford: Blackwell, 1990).

“arbitrary in the extreme”,³ whereas most concordancers and Key Word in Context programs – such as Voyant Tools,⁴ AntConc,⁵ or the Natural Language Toolkit in Python –⁶ ask the user to determine how many characters either side of their search term they want displayed. What the comic offers these two theoretical practices is the panel, a discrete unit that assembles signifiers in a way that is both meaningful and purposeful.

What Digital Humanities methods can reciprocally offer Comics Studies is the prostheticised memory of the database. The very richness of the comics artefact renders analysing the system of a comic, or carrying out Barthes’s rhizomatic reading mode, impractical for human readers. Indeed, when Thierry Groensteen promoted Barthesian theory as a way of understanding the meaning-making mechanism of comics,⁷ scholars such as Neil Cohn rejected the theory on the grounds that such a method exceeded the limits of human memory.⁸ This project seeks to resolve these complementary challenges by introducing the discrete sites of the comics form to the indexing principles of concordances and databases, and by introducing the digital memory of computers to the complexity and richness of the comics form.

The Central Question and Argument

The question from which this project began was: what would happen if a scholar were to try and map the system of a comic by storing its signifiers, and their discrete sites of occurrence, in a relational database? How might doing that advance our understanding of the theory of comics? And how might doing that advance the practice of analysing specific comics? As such,

³ Barthes, p. 13.

⁴ Stéfán Sinclair and Geoffrey Rockwell, 2016. *Voyant Tools*. Web. <http://voyant-tools.org/>.

⁵ Laurence Anthony, 2021. *Laurence Anthony's AntConc*. [online] Laurenceanthony.net. Available at: <<https://www.laurenceanthony.net/software/antconc/>> [Accessed 2 August 2021].

⁶ Nltk.org. 2021. *Natural Language Toolkit – NLTK 3.6.2 documentation*. [online] Available at: <<https://www.nltk.org/>> [Accessed 5 August 2021].

⁷ Thierry Groensteen, *The System of Comics*. trans. by Bart Beaty and Nick Nguyen (Jackson: University Press of Mississippi, 2007).

⁸ Neil Cohn, *The Visual Language of Comics* (London: Bloomsbury, 2013). p. 68.

it takes inspiration from Roland Barthes's work in *S/Z*, especially as it is folded into Thierry Groensteen's work in *The System of Comics*. It pushes these theoretical ideas forward by enacting them, by making them tangible (albeit digitally), with a digital methodology which I consider necessary to achieving this end.

Therefore, I do not conceive of this as a Digital Humanities project that uses a specific comic, Alison Bechdel's *Fun Home*,⁹ as a case study, but nor is it intended to be *Fun Home* scholarship that uses Digital Humanities as a method. Whilst there are much larger – and much better funded – projects which apply Digital Humanities methods to comics corpora, at the time of this project's conception there were very few digital studies being visibly carried out on comics by individual scholars.¹⁰ As such, there were very few methodologies being devised and used by scholars which required a low level – or indeed an entry-level – of technical training or time investment. It is in this space where I would position my work. What I produce here is a project with theoretical interventions relevant to all comics scholars, but more importantly it offers a mode of analysing comics – a digital methodology – which I believe can be useful for quantitative approaches to comics by existing and new digital scholars. It is at once designed to offer insight for comics theory, and a Digital Humanities method for analysing comics which other scholars can use as a blueprint and a starting point for further reckoning with comics as a signifying system. In this sense, I think of the primary readers of this work as comics scholars who have an, as yet unacted on, inclination towards digital methods, although it also serves to contribute to discussions being had in the existing work being done in Digital Humanities approaches to comics.

⁹ Alison Bechdel, *Fun Home* (London: Jonathan Cape, 2006).

¹⁰ To my knowledge, the largest grouping of scholars working on such Digital Humanities approaches gathered in Bremen in 2017 for 'The Empirical Study of Comics' conference. The website for which can be found here: [Fb10.uni-bremen.de](http://www.fb10.uni-bremen.de). 2021. *Conference: The Empirical Study of Comics / Bremer Institut für transmediale Textualitätsforschung*. [online] Available at: <http://www.fb10.uni-bremen.de/bitt/vortrage-vortragsreihen/tagung-the-empirical-study-of-comics/> [Accessed 5 August 2021].

Rationale and Original Contribution

This thesis takes as its starting point the complexity of the comics form, and its unique affordances for rhetorical and structural ends. Existing Comics Studies theory, particularly the work of Thierry Groensteen, captures many of the mechanisms of this form, but this thesis demonstrates the value of prostheticising memory, to a relational database, for building on this analogue work. Whilst several Digital Humanities projects have taken comics as their subject in the last five years, including What Were Comics?, The Hybrid Narrativity Group and John Walsh's TEI extension Comicbook Markup Language, their analyses focus on corpus-oriented questions.¹¹ This project looks closely at a single comic, Alison Bechdel's *Fun Home*, both to better understand the medium's mechanics, and to explore what digital methods can add to close reading comics. The recent emergence of digital and empirical approach to comics reflects an understanding that the volume of information found in a comic's panels exceeds the capacity of human memory and, therefore, benefits from being modelled into digital memory if scholars are to progress from, and in some cases even apply, non-digital criticism and theory of the system or language of comics.¹²

A key facet for digital approaches to comics, and an almost unique opportunity in terms of distant reading literature,¹³ is the medium's mode of articulating time, the panel. Panels assemble signifiers at a discrete site, giving creators minute control over what – both in terms of content (words; characters; objects; themes) and container (headers; speech; inset captions) – is

¹¹ By corpus, I mean a collection of more than one text.

Bart Beaty, 2021. *About – What Were Comics?*. [online] What Were Comics?. Available at: <<http://www.whatwerecomics.com/about>> [Accessed 5 August 2021].

Alexander Dunst, Rita Hartel, Sven Hohenstein, Jochen Laubrock, *Corpus Analyses of Multimodal Narrative: The Example of Graphic Narrative* (2016) <https://blogs.uni-paderborn.de/graphic-literature/files/2016/07/Dunst.Laubrock.DH-2016.Corpus_Analyses_of_Multimodal_Narrative_150.pdf> [accessed 19 October 2016]

John Walsh, 'Comic Book Markup Language: An Introduction and Rationale', *Digital Humanities Quarterly*, 6.1, (2012), n.p., in <<http://www.digitalhumanities.org/dhq/vol/6/1/000117/000117.html>> [accessed 26 January 2017]

¹² Thierry Groensteen, *The System of Comics*. trans. by Bart Beaty and Nick Nguyen (Jackson: University Press of Mississippi, 2007).

Neil Cohn, *The Visual Language of Comics* (London: Bloomsbury, 2013).

¹³ Franco Moretti, *Conjectures on World Literature*, pp. 57-58

present for, and therefore co-locates with, each disclosure of narrative information, each event, each phase of a scene. This means that themes and references can be rhetorically woven into the diegesis. In *Fun Home*, for example, Bechdel's father was killed by a Sunbeam bread truck, and loaves of this particular brand are scattered through the text at otherwise seemingly innocuous moments, inextricably linking them to that pivotal scene.

Each of the different kinds of organising logics in comics, or lines along which the text can be folded, operate on a comic's content, its words and its images; they are in relationship with them. Further, the combination of words and images found in comics means that one narrative track, often the words, can be used to anchor the narrative, allowing the other track to move around freely, and without extra-diegetic explanation, in time, space, or subject; the medium exists in a state of almost perpetual montage and this produces a richer and more networked rhetorical texture. As well as choosing what is present for the disclosure of information, the author has precise control over the pacing of their narrative and can rhetorically interweave different chronologies and different sources of information.

By 'sources of information' I particularly mean archival documentation. Whilst drawing on archival 'evidence' is a feature of most graphic memoirs,¹⁴ particular attention and acclaim has been directed towards its usage in the scholarly and popular reception of Bechdel's memoir.¹⁵ Indeed, over the course of the memoir, Bechdel draws on photos, maps, diaries, letters, dictionaries, tape recordings, annotated copies of family books, and newspapers. I posit that these instances of intra-pictorial text combine with the objects of the background, such as

¹⁴ Ann Cvetkovich, 'Drawing the Archive in Alison Bechdel's *Fun Home*', *Women's Studies Quarterly*, 36.1/2, (2008)

Elisabeth El Refaie, *Autobiographical Comics; Life Writing in Pictures* (Jackson: University of Mississippi, 2012)
 Hillary Chute, *Graphic Women: Life Narrative and Contemporary Comics* (New York: Columbia University Press, 2010)

¹⁵ Chute.

Valerie Rohy, 'In the Queer Archive', *GLQ*, 16.3, (2010).

Helene Tison, 'Loss, revision, translation: Re-membering the father's fragmented self in Alison Bechdel's graphic memoir *Fun Home: A Family Tragicomic*', *Studies in the Novel*, 47.3, (2015)

the loaves of Sunbeam bread, offer particular connective tissue between panels, drawing them into conversation with one another, and offering structuring refrains to the narrative. If critics such as Neil Cohn have objected to such promiscuous transitions between panels when the mode was limited to pictorial information,¹⁶ as it is in Groensteen's *System of Comics*, it is understandable that comics theory has for the most part downplayed the verbal component of comics since this further complicates, but I would argue also enriches, the model of how comics make meaning. This thesis demonstrates the value of modelling comics texts into relational database to better understand both the individual text and the form more broadly.

Fun Home

I chose Alison Bechdel's first memoir, *Fun Home*, as the case study for this project. In this book the author relates her struggle to reconceptualise her relationship to her father. The book was written in response to discovering a picture he had taken, in an old box of family photographs, of one of his teenaged lovers. Through the piece, Bechdel processes how the revelation of her father's affairs with such boys alters how she views his suicide, her childhood, and her own queerness.

What *Fun Home* offers as a case study is a highly wrought, intricate piece of comics writing, with a non-chronological trajectory, as well as a complex and dense set of interrelations between a relatively small core of characters. Further, being a memoir, it seems entirely appropriate to focus not on what is told, but on its telling, not on what happens, but on the rhetorical choices made in its articulation. Indeed, Bechdel herself has discussed how, in writing it, she was not interested in the drama of the events themselves, but rather her thoughts about those events, stating that a chronological structure would not have allowed her to say

¹⁶ Neil Cohn, *The Visual Language of Comics* (London: Bloomsbury, 2013). p. 68.

everything she wanted to say about each event depicted.¹⁷ This led her to a thematic structure with an intricate layering of meaning and memory which at first disorients the reader, but slowly begins accreting information with each cycle. Rather than invest in more conventional ‘drama’, Bechdel works through her own thoughts, queering and reclaiming the events as her own, producing in her book a material artefact of her trauma and its working through. She does this both directly, in the headers that narrate the book, but also in her placing of events and ideas in relation to one another, taking advantage of the comics medium’s syntax both to move around suddenly either temporally or spatially, but also in deploying braids between panels, Groensteen’s ‘promiscuous transitions’.¹⁸ Speaking of the structure, Bechdel has furnished us with rather a charming image; she says “everything [...] is so carefully linked to everything else, that removing one word would be like pulling on a thread that unravels the whole sweater”.¹⁹ She adds that in producing the book she went “over and over and over it, constantly tweaking the connections between what had happened already and what was still coming”.²⁰

The combination of her deliberateness about making connections across her text and the transparency of her compositional method offer a useful case study for this project. Further, Bechdel’s verbosity and breadth of language furnished my verbal designs on comics with a strong base from which to work. Finally, *Fun Home* offers this study both an extensive critical response against which to judge its findings, and several future avenues for research since the success of the book has led to multiple translations and a musical adaptation.

¹⁷ Alison Bechdel, *Alison Bechdel Q&A - Seattle, WA (for Are You My Mother?: A Comic Drama)* (2012) <<https://www.youtube.com/watch?v=0ayXbaTWzY>> [accessed 9 February 2017].

¹⁸ Groensteen, *The System of Comics*.

¹⁹ Chute, *An Interview*, p. 1008.

²⁰ Ibid.

It should be pointed out, however, that *Fun Home* is far from a typical graphic narrative. In what many consider to be a predominantly visual medium,²¹ Bechdel's style is unusually verbose and literary. My choice of her book is designed to support the arguments I make about comics, and particularly their verbal content, by using one of the most extreme examples of verbal content. What this gave me, as an investigator, was a large dataset from which to quickly assemble a system, and one with unambiguous data points, because words are more straightforward to store in a database than images. Whilst this thesis focuses on verbal material in comics, and the high verbal content of *Fun Home* facilitated this, it is still relevant to pictorial analyses. I foreground Verbal Solidarity because it addresses an important gap in the theorisation of comics, and because it enriches what critics ought to understand as the system of a comic.

The Blueprint

Although I will address in more detail the database that I created for this project in my chapter entitled *Braiding a Digital Methodology Between Comics and Feminist Approaches to Data*, it will be beneficial to provide here some specifics about the quantitative processes underpinning this thesis. To set that in context, it is instructive to dwell first on the hybridity of qualitative Comics Studies analyses and quantitative Digital Humanities methods. This thesis was initially conceived in response to the both the complexity and volume of signifiers in comics. As such, it started with a qualitative reading of comics and theory about comics. From here, I identified a digital prostheticisation of memory as the required antidote to a gap I was finding in these qualitative studies, both theoretical and analytical. This required modelling my qualitative readings of the medium's mechanism of signification, into a quantitative proxy. Understanding comics as a relational, rhizomatic form – as I detail in *Comics Scholarship and Verbal Solidarity* – I chose to create a relational database, rather than use a hierarchical model such as

²¹ For more on this, see the Comics Scholarship chapter.

XML – as I detail in *Braiding a Digital Methodology Between Comics and Feminist Approaches to Data*.²² For this task I used Microsoft Excel, though other database management systems would certainly also have sufficed. Wanting this methodology to be easily reproducible, I used Excel because of its wide availability and my own familiarity with it. Once I had created the database, the process of which I will detail in a moment, I moved back to a qualitative mode, analysing the data I had created with three specific benefits over an analogue mode: completeness of dataset; speed of discovery; and increased complexity – as I detail in my first Analysis chapter.

Although the process of building my database and analysing its data was cyclical and iterative, for clarity I will here lay out a linear blueprint for how another researcher might replicate my method for their own text:

- Step 1: Research and formalise your understanding of your research object, here comics. Although the process of creating a digital proxy will itself change how you think about this object, it is important to think through any fundamental opinions you have about how that object, and also the medium as a whole, functions. In this study the fundamental aspects of comics that I wanted my model to capture were the rhizomatic, not hierarchical, mode of signification, and the importance of verbal signifiers for creating connections between panels.
- Step Two: I mentioned in Step One that the process of creating a digital proxy will change your understanding of your object of study, even before you start using your database; this is because of what Willard McCarty calls computational thinking.²³ Whilst I will counter the positivist, binary thinking that this often entails in my section on

²² W3.org. 2021. *Extensible Markup Language (XML)*. [online] Available at: <<https://www.w3.org/XML/>> [Accessed 5 August 2021].

²³ Willard McCarty, 'Knowing ... : Modeling in Literary Studies', in *A Companion to Digital Literary Studies*, ed. by Susan Schreibman and Ray Siemens (Oxford: Blackwell, 2008), Web.

Feminist Approaches to Pictorial Data Creation, the process of having to formalise your understanding of each and every facet of your object of study demands a challenging but very productive rigour. Understanding models as arguments about the modelled object requires unambiguous and consistent conceptualisations which can test Humanities heuristics of knowledge, but they test them productively. Staying agile and willing to rethink theoretical viewpoints we bring from qualitative methods constitutes an important and iterative step of quantitative work.

- Step Three: This was the first stage of what might be considered the building component of the project. It entailed purchasing a physical copy of my text, *Fun Home*, and labelling every panel in sequence. In fact it is likely that through this thesis you will notice that many of images of *Fun Home* include a number written in red ink; this is the panel number.
- Step Four: Having counted the number of panels, I created a row for each of the 946 panels in a spreadsheet. Each panel used its position in the sequence of the book's panels as a unique identifier.
- Step Five: In order to be able to carry out work looking at subsets of the verbal data, I repeated steps three and four for each container of text in *Fun Home* in a new sheet. This included header text, inset captions, labels with arrows, and speech balloons. Each instance of enunciation was assigned a source. This value either captured the type of narratorial text – header, caption, label – or the speaker(s) of the speech balloon. A further sheet was created for intra-pictorial text, the words in the images which the characters can see, such as signposts, words on food packaging and images of text, such as diaries or novels. This made it possible to add a further facet to my readings of verbal signifiers because I could consider the variance in usage by character. Further, it makes it possible to separate out the text of Bechdel the author, and Alison Bechdel

the character, to look for differences in usage. Again, each of these instances got a unique identifier tied to their linear order in the text.

- Step Six: For each of these containers I manually transcribed their verbal contents, and checked them over twice. It probably goes without saying that this took a lot of time, especially given the importance of eliminating errors. Unfortunately, at the time I began this process, *Fun Home* did not have a digital surrogate. Further, because *Fun Home*, like many comics, is written in an idiosyncratic font, Optical Character Recognition technology does not adequately transcribe it. In order to facilitate the matching and counting formulas later on, each word received its own cell in the row which detailed both its panel number, and its enunciation instance number. This created a record in the sheet which I will show in Braiding a Digital Methodology.
- Step Seven: From this point it was possible to query the database using matching statements. Full details of this are given in the Braiding a Digital Methodology Between Comics and Feminist Approaches to Data section, but what is happening in that query is that the user can select a word from the text that they want to research, for example “father”, and the matching statement would find every instance of that verbal signifier, and return which panels included that word. To make this process easier, however, I created a new sheet from my existing version of the panel rows. For this sheet I moved all the cells into a single column and removed the duplicate values using Excel’s Data – > Remove Duplicates function. This gave me a list of every verbal signifier in *Fun Home*. I then used the a matching statement to reconstitute the sheet I had created in Step Six, but replacing the panel number and enunciation instance number as the unique identifiers with the words. This created a sheet, therefore, which listed every word with a record of every panel it was used in. I repeated this matching statement

process with enunciation instance numbers, too, to have access to that information as well.

- Step Eight: At this stage of the database's development it was possible to choose either a panel, an enunciation, or a word as a starting point and discover what other panels, enunciations or words they were connected to by one of the other values. This was important to enable me as a researcher to think through connections and connectedness, and would be sufficient to support a scholar who already knew which panel or which word they wanted to analyse and discover more about. What I wanted to add to this was a functionality that would facilitate analysis where the object of discovery, the meaningful connection, was not already known by the researcher. In order to make that possible I created three matrices, one for the panels, one for the enunciation instances, and one for the words. Along the x and y axes of these new sheets I listed each unique identifier from the relevant set, and used the below matching statement such that at each intersection of values from the x and y axes the number of attributes held in common was displayed. This made it possible to think through the most frequently connected panels, and the most frequently co-locating words. As such, I could see how many times "father" co-located with "Sunbeam", or use a =(MAX) expression to find which panels were connected by the most words, and which panel each panel was connected to most strongly*.
- Step Nine: I have asterisked strongly at the end of the previous step because it was at this stage of the building that I started to reconsider that term. This was a result of the readings I was producing using the matrices. It became apparent that my thinking about braiding was being changed by my results – which is the subject of my second Analysis Chapter. The number of connections between panels, and between words, was being overly-determined by the some very frequent words, and these words were not

frequent because they were particularly meaningful in *Fun Home*, but because they were the connective tissue of the English language, the “the”s, “a”s and “is”s. To counter this imbalance I created new versions of each of my spreadsheets by creating copies and editing them in two ways.

- a) I removed all the words that were distorting my analyses. To do this I chose a list of stop words from MySQL – a common structured query language – and removed those values.²⁴
 - b) I increased the overlap between the relatively under-represented words by reducing them to their stems and lemmas. As the Stanford Natural Language Processing Lab explain, “the goal of both stemming and lemmatization is to reduce inflectional forms and sometimes derivationally related forms of a word to a common base form”.²⁵ To do this I used both a Snowball Stemmer and a Porter Stemmer on my list of words and then manually checked these values against one another,²⁶ and against the original word forms. The effect of these collapsed word forms was that there was an increased volume of connections between panels.
- Step Ten: Although I will address the particulars of my pictorial information in more detail later in the thesis, it bears adding some information about that stage here, too. At this point in the building, as I have alluded to above, it was possible to query just the speech instances of particular characters, or of the narrator, by filtering by the source attribute. This was useful for analysing the vocabulary of a particular character, but I

²⁴ Dev.mysql.com. 2021. *MySQL :: MySQL 8.0 Reference Manual :: 12.10.4 Full-Text Stopwords*. [online] Available at: <<https://dev.mysql.com/doc/refman/8.0/en/fulltext-stopwords.html>> [Accessed 5 August 2021].

²⁵ Nlp.stanford.edu. 2021. *Stemming and lemmatization*. [online] Available at: <<https://nlp.stanford.edu/IR-book/html/htmledition/stemming-and-lemmatization-1.html>> [Accessed 5 August 2021].

²⁶ Snowball.tartarus.org. 2021. *Snowball*. [online] Available at: <<http://snowball.tartarus.org/>> [Accessed 5 August 2021].

Martin Porter, 2021. *Porter Stemming Algorithm*. [online] Tartarus.org. Available at: <<https://tartarus.org/martin/PorterStemmer/>> [Accessed 5 August 2021].

also wanted to consider what words got said in collocation with which characters. As Lisa El Refaie puts it, “we all adopt multiple roles depending on the social contexts in which we find ourselves”.²⁷ To make it possible to address this I repeated Steps Six and Seven but replaced the verbal signifiers with which characters were present in that panel.

- Step Eleven: In order to create more overlap between these braids I used an If-Else expression to determine and record what relationships characters had to one another in each panel.²⁸ The way this worked was that if Alison and Bruce, her father, were both present in a panel, the expression would find this and write to a new sheet that it also included a daughter and a father, and a child and a parent. I then repeated Step Eight and created a matrix using these values.
- Step Twelve: The final stage of my building resulted from a desire to further mediate my results, and to add nuance to the idea of the braid – this is mainly addressed in my second Analysis chapter. Even after removing the stop words from my dataset – Step Nine a – the results that the matrices returned were still heavily influenced by the new most common words and characters. While removing stop words improved my analyses of *Fun Home*’s network, in the matrices it is easy to see how “father” occurring one hundred and forty times can effectively erase verbal signifiers that only occur twice. In such a non-chronological narrative as *Fun Home* this is best demonstrated with an example of the character data created in Step Ten. I suggest it is beneficial, therefore, to be able to think through connectedness in the following way: each panel is less defined by, and therefore less meaningfully connect through, the presence of Alison, who occurs 648 times, than through a character who only occurs twenty times, such as Roy. Roy’s scarcity in the dataset, and in *Fun Home*, renders him a stronger identifier of a

²⁷ El Refaie, p. 138.

²⁸ I will explain this in more detail in my Methodology section.

panel and therefore a more meaningful connection, or braid, between panels. To investigate this different type of connectedness, I experimented with weighted connections. To do this I used my table that recorded how many instances of each word there was, and divided the total number of words by this number to create a crude weighting of strength of connection based on rarity.

Thesis Structure

The body of this thesis is composed of six chapters. It begins with the Comics Scholarship and Verbal Solidarity chapter. This chapter unpacks what comics were, what they are, how they have been studied, and more recent developments in the field. It pays particular attention to their complexity, which demonstrates the potential benefit of a digital mode of analysis, and their verbal component. This is in response to what I identify as a particular picto-centrism – an over-privileging of the pictorial – in comics studies. It is useful for me to establish this context both as a theoretical intervention for comics theory, and because my methodology and database leverage a lot of verbal signifiers. It is important to assert at this early stage, however, that it is not my intention in this section to provide a complete history of comics or the scholarship that discusses them. I will provide references through this section to scholars better placed to revise those histories, but it will be sufficient for me to focus on the scholarship most closely aligned to my aims. That is, an identification of picto-centrism, and a discussion of critics who have dealt with the networked notion of comics.

The second chapter is *Braiding a Digital Methodology Between Comics and Feminist Approaches to Data*. It lays out the background of Digital Humanities projects, their conditions and assumptions, but also their affordances for dealing with the complexity of and high volume of signifiers in comics. This unpacks the created-ness of digital technologies and data itself, explaining the processes through which I took *Fun Home* to make it legible to a database. To explain these concepts the chapter looks at tool theory from Digital Humanities as well as

existing and ongoing projects that focus on sequential narratives including the Hybrid Narrativity Group, John Walsh's Comicbook Markup Language, and What Were Comics?. These projects provide instructive illustrations of the theories I discuss, but I also address how the questions they ask and answer are different to my own questions, and how this requires a different methodology, before laying out the heuristic through which I worked.

Chapters three through five each examine an important facet of comics theory, split into three sections. These are the chapters that my database underpins. They each begin from the theoretical and critical landscape around the chosen comics theory term. Then they relay how I modelled the relevant parts of *Fun Home* to evaluate or investigate certain aspects of these theoretical concepts, before engaging in a digitally-enabled analysis of the relevant topic demonstrating the benefit of digital methodologies for analysing individual comics, and addressing gaps in the critical theorisation of comics. In each chapter I also discuss the negative results in the research, and potential routes forward from these analyses.

In Chapter Three, I propose the term 'verbal solidarity', building off Groensteen's 'iconic solidarity' as a framework for understanding comics. This addresses the picto-centrism of Comics Studies and argues for the rhetorical and structural affordances of words in comics. Chapter Four takes the idea of the braid – both pictorial and verbal – and complicates it. Particularly, this means unpacking the different modes by which braids can function, but also looking at their relative strengths. By strength, I mean the inverse relationship between the rarity of a particular braid and its power to connect panels together. Further, this allows me to discuss the relative connectedness of panels, including which ones are central to the text, and how this changes how we think of comics structure. Chapter Five closes this analysis section by taking a wider view of braiding and comics, setting the findings of Chapters Three and Four in the context of word frequency tables, and exploring future avenues of research along these

lines. Chapter Six documents more of the modelling that I have undertaken, by which did not feature in any of the analyses.

Comics Scholarship and Verbal Solidarity Chapter

Introduction

The System of Comics, *The Visual Language of Comics*, *The Lexicon of Comicana*.²⁹ The titles of these texts about comics are indicative of the approaches to and challenges of naming, defining, and understanding comics which scholars face. Of course, these facets are highly interconnected; a comic's mechanism for making meaning, from another angle, is its defining characteristic. If you cannot explain how a comic functions, how can you point to an object and call it 'comic'? But if you cannot point to a group of texts and call them comics, how is one meant to interrogate them for similarities and differences, and ultimately define how a comic functions? What are the unique and essential features of comics? In this section I will introduce a brief history of the comic and the interwoven history of comics scholarship. It is not my aim, here, to engage in grand debates or to overhaul comics historiography – there are critics far better placed to do that – only to lay out the context of my own project, and the landscape against which it sits. After outlining this history, I relate more recent developments in the field of Comics Studies, and the relative boom of scholarly work addressing comics within academia. The purpose of this is to draw attention to the strengths of the field, what it is doing and doing well, but also to identify a particular gap in the formalist analysis of the medium, the gap which this thesis attempts to fill, and the importance of doing that for critics' understanding and analysis of comics.

²⁹ Groensteen.
Cohn.

Mort Walker. *The Lexicon of Comicana*. Lincoln: iUniverse, 2000. Print.

A Brief History of Early Comics

To trace the history of comics is to become immediately embroiled in an active debate about what a comic is. French critic Thierry Groensteen refers to this as “The Elusive Specificity” in his article of the same name (‘L’Introuvable Spécificité’ in the original French) and similar sentiments are found across Western academe. Eckart Sackmann states that “The history of the definitions of comics shows that the same thing can be interpreted differently at different periods. This will probably continue to be the case”, to which, half a world away, Scott McCloud writes that “Our attempts to define comics are an on-going process which won’t end anytime soon”.³⁰ As Sackmann points out, the challenge of defining comics, and therefore of knowing how to write their history, comes from reading the history of art and literature through a contemporary lens. McCloud is not alone in his inclination to find the earliest history of comics in Trajan’s Column, The Bayeux Tapestry or Pre-Columbian picture manuscripts.³¹ Many critics join him in considering whether William Hogarth’s *A Harlot’s Progress* (1731) and the work of Rudolphe Töpffer in the mid-1800s are early comics,³² with each ‘History of Comics’ chapter author adding their own examples from art history.³³ The key component in defining what is a comic is, for me, an intentionality: what is a comic? That which is made as a comic by a comic creator. Comics are made as comics, knowing of what cadre they are a part. These earlier examples are, I would suggest, better consigned to what can be termed “proto-

³⁰ Qtd. in ‘Definitions’, Groensteen, p.93.
Understanding Comics, p.23.

³¹ Op. Cit. p.10.

³² See also: Kunzle, David. *Father of the Comic Strip; Rodolphe Topffer*. Jackson: University Press of Mississippi, 2007.

³³ For more discussion of this, consider: Baetens, Jan, and Hugo Frey. *The Graphic Novel: An Introduction*. Cambridge University Press, 2014.;
Eisner, Will. *Comics and Sequential Art*. Tamarac: Poorhouse, 1985.;
Hatfield, Charles. *Alternative Comics: An Emerging Literature*. Jackson: University Press of Mississippi, 2005.;
Mazur, Dan, and Alexander Danner. *Comics: A Global History, 1968 to the Present*. London: Thames and Hudson, 2014.;
Sabin, Roger. *Adult Comics: An Introduction*. London and New York: Routledge, 1993.;
Tabachnick, Stephen E., editor. *The Cambridge Companion to the Graphic Novel*. Cambridge University Press, 2017.

comics”, interesting precursors to and even influences on a medium of spatialized mixed forms, but not comics as such.

Indeed, in their role as precursor to comics, Töpffer’s satirical picture stories drew a very similar criticism to that which comics still receive; of them Goethe wrote: “If for the future he [Töpffer] would choose a less frivolous subject and restrict himself a little, he would produce things beyond all conception”.³⁴ McCloud relates a very similar opinion on comics when looking back to when he “knew **exactly** what comics were” when he was a child:³⁵ they were “those bright, colorful magazines filled with bad art, stupid stories and guys in tights”, further “comic books were usually crude, poorly-drawn, semiliterate cheap, disposable kiddie fare”.³⁶ Since many people’s main interaction with cartooning and comics is either in newspaper and magazine strips, or early memories of collections of such strips in weekly comics such as *Mad* (established 1952), *The Beano* (established 1938), *The Dandy* (established 1937) or any of the various syndications available from Marvel Comics (established 1939 as Timely Comics) or DC (established 1934 as National Allied Publications), such denigrating language as McCloud outlines is understandable. The erroneous conflation of comic books with children’s picture books further contributes to a perceived juvenility of the form, one which various booksellers and publishing houses have tried to address with their neologism, the ‘graphic novel’. Benjamin Woo goes so far as to call this nomenclatural shift comics’ “rehabilitation” and one which “translated into a new confidence in their ‘plausibility’ as objects of scholarly attention”.³⁷

Pausing at this point, it is worth reflecting both on the nature of the proto-comics and on the popular reception of comics aimed at children. In David Gedin’s survey of the debate

³⁴ Qtd. in *Understanding Comics*, p.17.

³⁵ McCloud p.2.

³⁶ Op. Cit. pp 2-3

³⁷ Woo, p. 5.

on how to define comics, he reduces the consensus to two central tenets, the “understanding of the medium as ‘sequential art’ [...and...] the understanding of comics as primarily a visual art form”.³⁸ Certainly there is a sequentiality common across these early examples, but that primacy of the visual is something which I want to flag as problematic. Whilst some, although not all, of these examples of proto-comics do not feature words at all, a history that can be traced through Trajan’s Column, via Adolphe Willette’s and Theophile-Alexandre Steinlein’s comics in the French magazine *Chat Noire* in the 1800s,³⁹ and Lynd Ward’s woodcut novels such as *God’s Man* (1929), all the way through to Shaun Tan’s *The Arrival* (2006). Words are by no means a prerequisite for comics but their early history, combined with the denigrated literary perception of humour cartoons and comics aimed at children, unfairly decentres the verbal component of comics and their history, a component that, after all, has actually been present in many of these precursors and early iterations of the form.

To resume the history, then: Before featuring in standalone publications, comics such as Charles Ross’s *Ally Sloper* (first appearing in 1867), Richard F. Outcault’s *The Yellow Kid* (first appearing in 1895–8) and George Herriman’s *Krazy Kat* (1913–44) were featured in newspapers.⁴⁰ It is notable for our history’s trajectory that Thierry Smolderen situates Outcault’s work as “part of Hogarth’s [...] legacy”.⁴¹ Indeed, it was *Ally Sloper* who first made the move from *Judy* magazine to its own comics magazine in *Ally Sloper’s Half Holiday* (1884–1916). Karin Kukkonen identifies *Ally Sloper* and *The Yellow Kid* as “important hinge points between the earlier cartoon with their individual images and separate texts, conventions familiar

³⁸ Gedin, David, *Format Codings in Comics—The Elusive Art of Punctuation*, Inks: The Journal of the Comics Studies Society, Volume 3, Issue 3, Fall 2019, pp. 298-314, p.299

³⁹ Ibid.

⁴⁰ For more information on this see: Blackbeard, Bill and Martin Williams. *The Smithsonian Collection of Newspaper Comics*. Washington, DC: Smithsonian Institution Press, 1977.

⁴¹ Smolderen, Thierry. trans. by Bart Beaty and Nick Nguyen. *The Origins of Comics; From William Hogarth to Winsor McCay*. Jackson: University Press of Mississippi, 2014. p. 5.

from editorial cartoons, and comics as we know them today”.⁴² She goes on to cite Winsor McCay’s series *Little Nemo in Slumberland* (1905–14) as further “expand[ing] the possibilities of panel arrangement and page layout” – a lineage also endorsed by Smolderen –⁴³ explaining that the “large format of the Sunday papers [gave] McCay’s gorgeous and detailed drawings much room to explore what could be done with panel-sizes, cadres and their arrangement on the page”.⁴⁴

It was from these newspaper and magazine supplements that comic books found their avenue. From being mere “promotional give-away[s]”, in the 1930s, “publishers realized that these comic books could be sold as a commodity in their own right”.⁴⁵ Kukkonen elaborates that in these early comic books “genres and commercial practices from pulp magazines were adopted”, with some characters such as Conan the Barbarian (1932–36) and the Shadow (1931–49) being adopted into this emerging publishing trend.⁴⁶ It was at this point, in 1938, when the first superhero comic book emerged, Superman, who in turn ushered in Batman (1939), Wonder Woman (1941) and The Flash (1940) in what gets termed the “Golden Age”. Alongside this trend of superheroes, it is important to note for reference later that M. Keith Booker points also to a trend in comics to “retell entire novels in one issue, in condensed form”. He cites particularly how:

Walter Scott’s *Ivanhoe* was retold in *New Fun Comics / More Fun Comics* (National/DC Comics), one of the very first examples of modern comic books, from 1935 to 1937. *The Three Musketeers*, based on the series of novels by Alexandre

⁴² Kukkonen, p.104

⁴³ Smolderen, p.5.

⁴⁴ Kukkonen, p.104.

For more discussion on the work of McCay and his role in early comics history see: Roeder, Katherine. *Wide Awake in Slumberland; Fantasy, Mass Culture, and Modernism in the Art of Winsor McCay*. Jackson: University Press of Mississippi, 2014.

⁴⁵ Kukkonen, p. 106

⁴⁶ Ibid.

Dumas, quickly followed, also in More Fun Comics. Action Comics (National/DC Comics) and Jumbo Comics (Fiction House) also published adaptations in 1937–1938, including *The Count of Monte Cristo*, drawn by a young Jack Kirby Under the pseudonym ‘Jack Curtiss.’⁴⁷

By this point comics had become financially successful, and between 1940 and 1953 average monthly circulation rose from 17 million to 70–100 million, and targeted both (although often separately) boys and girls.⁴⁸

Whilst many of these superhero texts may fall short, again, of what many might call ‘literary’, and whilst Kukkonen and Smolderen are right to emphasize the developments being made in the more structural side of comics composition, there was soon to be a rupture in the comics landscape, and one which would be felt differently based not on the visual component of the comics in question, but on their literariness. In 1953 “about 90 percent of boys and girls in the United [States] read comics”.⁴⁹ This all changed in 1954 with the introduction of the Comics Code.⁵⁰ Whilst this tends to be traced back to the American psychiatrist Frederic Wertham’s *The Seduction of the Innocent* (1954) (a polemic against the alleged “juvenile delinquency and (seemingly) rampant moral deterioration of the younger generation” caused by, as he saw it, “comics and their unsavoury stories”⁵¹), his book was merely symptomatic of

⁴⁷ *Comics Through Time: a History of Icons, Idols, and Ideas [4 Volumes] : A History of Icons, Idols, and Ideas*, edited by M. Keith Booker, ABC-CLIO, LLC, 2014. *ProQuest Ebook Central*, <http://ebookcentral.proquest.com/lib/uea/detail.action?docID=1865596>. [accessed 2021-08-01]

⁴⁸ Kukkonen, p.107.

For an more extensive chronology of comics up to this point consider: *Comics Through Time: a History of Icons, Idols, and Ideas [4 Volumes] : A History of Icons, Idols, and Ideas*, edited by M. Keith Booker, ABC-CLIO, LLC, 2014. *ProQuest Ebook Central*, <https://ebookcentral.proquest.com/lib/uea/detail.action?docID=1865596>. p.xxxix-xliii

⁴⁹ Kukkonen, p. 104.

⁵⁰ See: Beaty, Bart. *Frederic Wertham and the Critique of Mass Culture*. Jackson: University Press of Mississippi, 2005.

See also: Nyberg, Amy Kiste. *Seal of Approval: The History of the Comics Code*. Jackson: University Press of Mississippi, 1998.

⁵¹ Kukkonen, p. 110.

“[[larger social currents like the parents’ aim to control emergent youth culture”.⁵² Indeed, Bart Beaty explains that comics publishers “had lost the battle for public opinion in the 1950s largely because comics were successfully positioned as a part of an allegedly degrading postwar mass culture”.⁵³ It was Wertham, though, who appeared at the Senate hearings about comic books, and it is indicative of his fame at the time that Beaty writes, “[b]y 1957, Frederic Wertham’s critique of comic books was well enough known that he was the specific target of *Mad*, a legendary American satire magazine”.⁵⁴ And, although a “strong enough link between comics and juvenile delinquency was not proven for the government to establish official censorship on comics”, the industry itself “considered itself to have entered troubled waters, and in order to regain the trust of the public and to save their industry, the CMAA, the Comics Magazine Association of America, decided to install self-censorship in September 1954”.⁵⁵ This resulted in The Comics Code, and a Comics Code Authority, a set of standards with which all comics had to comply. It specified that “comics should be without sexually suggestive imagery, blood, gore and violence, and without any escape from justice for criminals” leading to popular publishing houses and titles such as EC having to “stop publishing its horror titles, because distributors and news vendors would no longer accept [them] for sale”.⁵⁶ Tellingly, “[w]ithout the stamp of the CCA, no news vendor wanted these comic books on his or her stand. And without anyone to sell their comics, EC was nearly shut down”.⁵⁷

This response from news vendors is the critical detail from this early history for my project. It is highly instructive for considering the importance of the verbal content of comics. Resuming the friction between high and low culture, it is notable that whilst Wertham was also

⁵² Ibid.

See also the reprinting of Wertham’s work: Wertham, Frederic. *The Circle of Guilt*. Jackson: University Press of Mississippi, 2007

⁵³ Beaty, p. 105.

⁵⁴ Op. Cit. p. 104.

⁵⁵ Kukkonen, p. 111.

⁵⁶ Ibid.

⁵⁷ Ibid.

critical of the comics adaptations of literary classics, cited above and as published by houses such as Dell and Gilberton, these publishers “did not suffer as much from opting out from the Comics Code, even though they published stories like Robert Louis Stevenson’s *Dr. Jekyll and Mr Hyde*, Bram Stoker’s *Dracula* and Mary Shelley’s *Frankenstein*. These literary classics broke several rules of the Comics Code by including monsters, vampires, and human depravity” since the same vendors who would not stock horror titles,⁵⁸ or would not have stocked superhero titles had they not accorded with the CCA, “had no qualms distributing a Classics Illustrated version of *Frankenstein* because the novel was considered *high culture* and the series stressed its fidelity to the literary classic”.⁵⁹

Ultimately, however, the Comics Code forced the major publishing houses to limit the purview of their releases, forcing more subversive stories underground, to independent comics, and a culture of self-publishing. As Kukkonen explains, “Underground comics [...] relied on self-publication and self-distribution”, the benefit of this, however was that these creators “did not have to submit their comics for inspection to the Comics Code Authority”.⁶⁰ This ushered in more personalized drawing styles, and an autobiographical bent to comics along with more “idiosyncratic narrative voices” which some critics trace as the forerunners of today’s popular autobiographical comics, which dominate not only comics studies syllabi in higher education, but are placed on bestseller lists, win Pulitzer Prizes and garner MacArthur “Genius” Grants for their authors, as Art Spiegelman’s *Maus* (1991) and Alison Bechdel’s *Fun Home* (2004) did.

I will shortly return to more examples of the comics which occupied this transition, but for now it is more productive to shift to how this earlier period of comics was received in scholarly communities. The intention of this section, after all, is to focus this study’s analysis of

⁵⁸ Kukkonen, p. 104.

⁵⁹ Op. Cit. p. 115.

Emphasis mine.

⁶⁰ Op. Cit. p. 117.

the picto-centrism of comics analyses, despite the fact that, as in the case of literary adaptations, the verbal component has been pivotal to how comics are received.

A Brief History of Early Comics Scholarship

As Charles Hatfield has put it, despite continuous reinventions of the wheel in Comics Studies, it “is not innocent of history. A great deal of work had already been done in the field before the upsurge of the past 20 years. It’s just that the work was scattered, under-recognized, and often unread”.⁶¹ “Scattered” is not wrong. The study of comics has been formally undertaken since the 1940s, but rather than couched in the English literature and American studies departments in which it is for the most part currently found, “[t]he earliest academic research on comics in the English language was [...] conducted [...] by psychologists, educationalists, and mass communications scholars”.⁶²

Consistent with the inbound Comics Code, discussed above, the academic journal articles and dissertations being written in the 1940s and ‘50s were written “in response to the greater controversy, or moral panic, inspired by comic books” and how they “supposedly interfere with or retard literacy education”.⁶³ This then targeted “the alleged psychological or social *effects* of comic books”.⁶⁴ This theory is corroborated by Benjamin Woo who argues that at this stage “scholars were largely working within a ‘social problem’ framework, in keeping with much research on emerging media in the early to mid-twentieth century” which he evidences with the oldest dissertation he was able to find on the discipline,⁶⁵ Florence Heisler’s study of the impact of comic books, radio serials, and movies on children’s educational achievement, IQ, personality, and reading ability [...] in 1944” which continues the idea of and

⁶¹ Charles Hatfield, *Alternative Comics: An Emerging Literature*, UP of Mississippi, (2005), xi.

⁶² Benjamin Woo, ‘What Kind of Studies is Comics Studies?’, *The Oxford Handbook of Comicbook Studies*, ed. Aldama, Frederick. (2019).

⁶³ Hatfield, xii.

⁶⁴ Ibid.

Emphasis mine.

⁶⁵ Woo, p.3

concern about juvenility in comics,⁶⁶ and “Etta Karp’s dissertation on the ‘role preferences’ of boys who read crime comics [...] a decade later” along with “W. Paul Blakely’s analysis of comic-book readers following the industry ‘clean-up’ of the early 1950s [...] in 1957”.⁶⁷ He goes on to suggest that, since the 1950s are “remembered for the anticomics moral panic” that may have produced an environment that was “perhaps tainting psychological and mass communication approaches whose introduction to comics came through the generations of fandom that followed it”, but cites that there was, in fact, “a lively debate throughout the period among scholars and public intellectuals about comic books’ impact on young people, with figures such as sociologist Harvey Zorbaugh and psychiatrist Lauretta Bender on one side and psychiatrist Frederic Wertham famously heading up the other.”⁶⁸ Comics were being written about in this period, studied even, but this work was oriented towards their supposed deleterious effects, the moral panic which they epitomised then just as video games and the Internet are villainised now. As Charles Hatfield puts it, these early pieces on comics did not “theorize about the comics form or about the process of reading comics” and they offered “no recognition of the possibility of artistic autonomy or the struggle for autonomy among comics creators and no recognition that comics might speak to important questions about word and image, writing and art”.⁶⁹ Comics were an affront to society, not texts worthy of study, though it is worth noting, again, how those perceived to be of higher literary value, even if entirely due to their canonical source texts, survived this repression.

As the “the comic book retreated to a strictly policed, and marginal corner of American culture” after the Code, so went the academy’s interest, that is, until the 1970s as independent

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Hatfield, xiii.

comics started thwarting the Code.⁷⁰ It is important to understand though, that while the academic front had gone quiet, “the comics hobby, meaning fandom and collectordom, transformed the comic book into an object of intense nostalgia”, resulting in fanzines and specialist comic shops, which in turn led to the first comic book conventions, in New York in 1964–5 and Detroit in 1965.⁷¹ Comics, of course, is no stranger to enthused, literally fan-atical attention, and at this point comics scholarship was “mostly popular rather than academic”.⁷² Indeed, Dick Lupoff and Don Thompson’s introduction to *The Comic-Book Book*, notes academic research on comics being contemporarily undertaken at Bowling Green University, but label this research “pedantic” and “complain that these ‘self-consciously scholarly publications...lose sight of the fact that [comics are] intended to be entertaining’”.⁷³

Such a “tense relationship between academic and fan-based ways of knowing” still echoes through scholarship today,⁷⁴ but this friction between fans and the academy must always be partly blurred, given the fan-status of scholars who write about comics as texts (as opposed to those who write/wrote of them as social calamity). Given limited infrastructural investment at the university level, “comics scholars have almost always become comics scholars by dint of self-directed independent study [...] a field generated not by institutional mandate but by the eager scurrying of independent actors, opportunistically seeking niches here and there in which they can study this neglected art form and its culture”.⁷⁵ Hatfield typifies this early work in the 1970s and ‘80s as “neither narrowly fannish nor strictly academic, but written by enthusiasts with a broad frame of reference”,⁷⁶ but despite this writes that “faultlines appeared early on

⁷⁰ Op. Cit. xiii.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Quoted in Hatfield, xv

⁷⁴ Ibid.

⁷⁵ Hatfield, xi.

⁷⁶ Op. Cit. xvii.

between populist studies and the so-called pedantic of allegedly joyless academic studies”.⁷⁷

Indeed this “fear that academic study would ‘lose sight’ of the joy of comics and an insistence that Comics Studies take place in an environment friendly to fans and creators as well as career scholars has strongly influenced the growth of Comics Studies ever since”.⁷⁸ This concern is also described by Woo who relates that “there are some creators and fans of the art form who would prefer that academics and theoreticians left well enough alone”.⁷⁹ Such a fracture is, as I will show below, often borne out in Comics Studies writing, particularly at the level of textual analysis.

Woo’s addition of “creators”, to the concerned group can be read in two ways. Either there are creators who do and creators who do not want to be theorised, or creators are so concerned with being spoken for that they have taken up space in the discourse themselves, given how cartoonists themselves have taken on what John Thornton Caldwell calls a “self-theorizing discourse”.⁸⁰ Adding to this, Woo cites how “[c]reators such as Jules Feiffer and Jim Steranko did much to consolidate the broad historical narratives that inform common-sense understandings of American comic-book publishing, while Mort Walker, Will Eisner, and, perhaps most notably, Scott McCloud developed more or less theoretically informed vocabularies for describing the formal elements that make up comics and how they work together to produce the aesthetic experience of reading”, adding how more recently “accomplished cartoonists such as Jessica Abel, Lynda Barry, Ivan Brunetti, Matt Madden, and Nick Sousanis have enriched understandings of the practice of making comics and its relationship with visual literacy and cognition through their respective teaching practices and

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ Woo, p.2

⁸⁰ Qtd. in Woo, p. 3.

pedagogical reflections”,⁸¹ indeed citing that one of the earliest known master’s theses on comics was written by a former *Superman* artist, Ricca.⁸²

More Recent Developments in the Field and Their Application

Returning to the idea that Hatfield proposed, above, that Comics Studies is continually re-inventing the wheel, and acting as if it were a new discipline, despite its history,⁸³ Woo cites “a broader tendency for comics scholars not to relate their arguments to prior work in the field” and relates how the investigative team for the ‘What Were Comics?’ project found that one central trope of theoretical writings on comics – and they were consulting specifically the works of Thierry Groensteen, Benoît Peeters, Joseph Witek, and Barbara Postema – is that theories “don’t engage with other theories [...] the theories are presented as if they have been constructed entirely from first principles”.⁸⁴

Given their respective primacies as two of the most recognisable and cited theorists in Anglophone and Francophone comics studies, it is appropriate the Gedin supports this assertion with quotations from Scott McCloud that comics are “‘juxtaposed pictorial and other images ...’, and establishes at the same time that “‘it doesn’t *have* to contain words to be comics. ...” While Groensteen writes, for example, ‘I plead for the recognition of image as preeminent in status ... Its predominance within the system attaches to what is essential to the production of the meaning that is made through it’”.⁸⁵ The effect of these contributions across Comics Studies is clear. Whilst every theory is apparently arrived at ‘from first principles’, all bear the primacy of the image, except Gedin’s which arrives at a definition and conceptualisation based more on the “format codings”, the apparatus of the comic. The fact that, as McCloud states, and as both the history and current state of comics publishing attest to, comics can exist without

⁸¹ Op. Cit. pp. 3-4.

⁸² Sousanis, Nick. *Unflattening*. Cambridge, Mass: Harvard University Press, 2015. Print.

⁸³ Hatfield, xvii.

⁸⁴ Woo, p. 8.

⁸⁵ Quoted in Gedin, p. 299.

words has led to their being jettisoned from serious formal consideration in Comics Studies. Perhaps this is a reflex against the current placing of Comics Studies in Literature departments, a need to stress the difference not the similarity, or a desire to respond explicitly to the form of comics, the panels and page composition, but neither of these are mutually exclusive from an intense concentration on words. It is worth returning briefly at this point to what Woo identifies as the “second major tradition of research and writing” directed at comics, that which comes from the “organized comics fandom and fan-scholars who used [and still use] fanzines, amateur press associations, fan conventions, and eventually email listservs and discussion boards as forums for sustained critical discourse on comics”.⁸⁶ For whilst these critics are expert in their analyses and knowledge, that predilection against ‘pedantry’ reinforces event-led, rather than diction-led analysis. Further, returning to the “eager scurrying of independent actors” which Hatfield discusses, this orientation can, I believe, be felt in some comics scholarship, since many authors of papers are not located within Comics Studies departments – necessarily given how few of these there are – nor even have Comics Studies as a dominant research interest, touching perhaps once or twice on the form, brought to the text not through its medium, but through its topic. This can be seen, for example, in the types of journals in which scholarship about *Fun Home* appears.

The Work of Barthes and Groensteen, and Verbal Solidarity’s place in between

The key departure that my project makes from existing formal analyses of graphic narratives is that it steps into that analysis and tries to make it function for an entire long-form text. Whilst the shorter strips that Thierry Groensteen uses to illustrate his arguments in *The System of Comics* are useful didactic aides, actually creating a system wherein such useful concepts as “arthrology”, “braiding” and “iconic solidarity” can be applied to a long-form comic is far more challenging than Groensteen might suggest originally. His work, and particularly his stated aim

⁸⁶ Woo, p. 4.

of a “networked reading” are worthy concepts, ones which motivated this study, but they are ones which even Groensteen admitted remain challenging to implement, as he relays in the introduction to his follow-up book, *Comics and Narration*. Perhaps the best evidence of this, though, is his much-anticipated book of analyses, *The Expanding Art of Comics: Ten Modern Masterpieces* and its, frankly anticlimactic, arthrological study of, amongst others, *Fun Home*.

While I will expand on his theory in due course, the most concise articulation of Groensteen’s *System* and its central idea of ‘promiscuous transition’ is that “every panel exists, potentially if not actually, in relation with each of the others”.⁸⁷ Reading Groensteen’s treatise on this is a seductive and intoxicating revelation about the comics form and its unique potential and mechanism for creating layered meanings. By importing Roland Barthes’s idea of “the braid” into a comics context, one where the sites of a text, rather than Barthes’s “arbitrary” “lexias”, are gridded out concretely on each page, an archival record, discrete units of diegesis spatialised on the page, Groensteen hits on an incredibly powerful formulation, but also a very effort-intensive one for would-be critics. This, indeed, becomes the principle criticism of Groensteen’s argument, and I would contest the ultimate reason for its limited implementation in the scholarly analysis of comics; as Neil Cohn puts it, “Such unrestrained transitions between panels [...] overload the working-memory of the human mind”.⁸⁸ Of course, the human mind need not be the only way in which we try to make readings, nor the only way in which to test and apply formalist theories in comics. Indeed, it is actually the end goal of my project, and the end to which this thesis offers a proof of concept and significant stepping stone, to leverage such forms and structures against one another in a conceptualisation of comics far more rich than Groensteen’s “networked reading”, or more generously, that carries his, and Barthes’s ideas in *S/Z* to their natural conclusion, to a true “system” of comics. At this stage, then, I

⁸⁷ Groensteen, p. 146.

⁸⁸ Neil Cohn, *The Visual Language of Comics* (London: Bloomsbury, 2013). p. 68.

believe it will be useful to investigate what Groensteen, and his strong influence Barthes, say about text and form. This will demonstrate the utility of their ideas, despite their ultimate misapplication, as well as open up what my term “*verbal solidarity*” offers conceptually to comics scholars. Further than shedding light and testing Groensteen’s work, this project productively extends it and provides researchers not only with new proofs and modifications, but a new set of tools with which to approach the form.

What Groensteen’s *System* offers comics scholars currently is an idea to think with, rather than one with which to *work*. His “networked reading” enables comics scholars to see comics anew.⁸⁹ The idea that “images that the breakdown holds at a distance, physically and contextually independent, are suddenly revealed as communicating closely, in debt to one another”⁹⁰ is an important introduction of Roland Barthes’s work on “the braid” into comics scholarship, for how scholars conceptualise comics, but *not* for how they can actually write about them as a whole. Groensteen damningly declares the three previous decades of comics scholarship “myopic” before this intervention,⁹¹ an intervention which, to him, is “the ultimate level of interpretative pertinence”.⁹² For all his bluster, however, a tool to think with is very different to a tool to work with; few (as Groensteen acknowledges) have actually deployed his analytical technique. Further, not even Groensteen, in his *Ten Modern Masterpieces*, carries out anything approaching what he claims his theory promises.

Going through Groensteen’s work on ‘braiding’ and ‘arthrology’ a clear picto-centrism emerges. He defines reading comics as a practice where “one must recognize the relational play of a plurality of interdependent images”.⁹³ It is, again, “images that the breakdown holds at a

⁸⁹ Groensteen, p. 141.

⁹⁰ Op. Cit. p. 158.

⁹¹ Op. Cit. p.1.

⁹² Op. Cit. p. 12.

⁹³ Op. Cit. p. 17.

distance, physically and contextually independent” and,⁹⁴ once more, when speaking of the unique affordance of what a networked reading allows, it is “the image [which is then able] to deploy all of its significations and resonances”.⁹⁵ Groensteen is not coy about this bias, either, defining comics as a “preponderantly visual language in which text plays a subordinate (though far from superfluous) role”.⁹⁶ It should be noted that this is a slightly incongruous point of view. Groensteen champions the network, the interconnectedness of comics, its status as network, and yet belittles the content (as in words and images) of the containers (nodes) that makes the most connections (edges) between nodes (the panels). It is this bias which I will rectify with my introduction of “verbal solidarity”.

Critical to both of these ideas is the centrality of the panel to the definition and mechanism of comics and their making of meaning. It is the panel which bestows on the medium its rhetorical potential, its signifier power, its mode of creating meaning. This brings us to where Groensteen started, Barthes’s idea of the “braid” which he lifts, curiously without credit, into *System*. After all, when Groensteen states that “[t]he meaning of each of the occurrences of [a] theme can only emerge in full measure when the reader links each one to the others”,⁹⁷ are not words equal, if not greater, indicators of theme than images? This seems particularly prevalent to the comics medium when, as Robyn Warhol notes, the images can show one thing (either a winking or an evidentiary picture) whilst the text states another. It is the *words* that set the meaning of the image in a relationship that can almost be characterised as deictic.

Before moving to the utility of the braid, then, the mode by which arthrology functions, its unit, and the token of iconic solidarity, it is useful to interrogate the original usage of how

⁹⁴ Op. Cit. p. 158.

⁹⁵ Op. Cit. p. 127.

⁹⁶ Op. Cit. viii.

⁹⁷ Op. Cit. p.141.

such a technique works. It is worth, here, recalling, too, Bechdel's own image of her text as a sweater, where the pulling of any thread (and it is fair to think of these threads as words as well as images) would unravel the entire garment, the collapse of the network. What Barthes offers us is Groensteen's theory unpacked into the historical creation of Valenciennes lace where the braid is not only something which merely connects two points, but one which creates a whole garment, Bechdel's sweater. For clarity it is worth considering Barthes's passage in its completeness:

"At this point in the narrative (it could be at another) several actions are still underway at the same time...suspended and interwoven. The text, while it is being produced, is like a piece of Valenciennes lace created before us under the lacemaker's fingers: each sequence undertaken hangs like the temporarily inactive bobbin waiting while its neighbour works; then, when its turn comes, the hand takes up the thread again, brings it back to the frame; and as the pattern is filled out, the progress of each thread is marked with a pin which holds it and is gradually moved forward: thus the terms of the sequence: they are positions held and then left behind in the course of a gradual invasion of meaning. The process is valid for the entire text. The grouping of codes, as they enter into the work, into the movement of the reading, constitute a braid (*text*, *fabric*, *braid*: the same thing); each thread, each code, is a voice; these braided – or braiding – voices form the writing; when it is alone, the voice does no labor, transforms nothing: it *expresses*; but as soon as the hand intervenes to gather and intertwine the inert threads, there is labour, there is transformation".⁹⁸

⁹⁸ Barthes, p. 160.

Which he then goes on to somewhat ruin with the following: "We know the symbolism of the braid: Freud, considering the origin of weaving, saw it as the labor of a woman braiding her pubic hairs to form the absent penis. The text, in short, is a fetish; and to reduce it to the unity of meaning, by a deceptively univocal reading, is to *cut the braid*, to sketch the castrating gesture". Ibid. This is clearly highly inappropriate in discussing Bechdel, a lesbian cartoonist (who states a clear preference for Donald Winnicott).

The central difference, here, from Groensteen's model is Barthes's non-sequential perspective. This is useful to think about with the idea of connotation and agglomeration, another concept Groensteen silently but heavily draws on. Here, Barthes argues that connotation is "determined by two spaces: a sequential space, a series of orders, a space subject to the successivity of sentences, in which meaning proliferates by layering; and an agglomerative space, certain areas of the text correlating other meanings outside the material text and, with them, forming 'nebulae' of signifieds".⁹⁹ This can certainly be seen in comics, in fact, more manageably so with the medium's discrete units of panels. The agglomeration can be neatly packaged, it can be sited, in the sense that it has a clear site of occurrence. This is the key facet of comics onto which Barthes's theory can latch; the discrete units of the panel offer clear locations for events (as in words and images) to occur. As opposed to Barthes's "lexias", his "units of reading" which are "arbitrary in the extreme",¹⁰⁰ the comics medium deploys the panel. Whilst for Barthes, "[t]he text, in its mass, is comparable to a sky, at once flat and smooth, deep, without edges and without landmarks; like the soothsayer drawing on it with the tip of his staff an imaginary rectangle wherein to consult, according to certain principles, the flight of birds, the commentator traces through the text certain zones of reading, in order to observe therein the migration of meanings, the outcropping of codes, the passage of citations",¹⁰¹ this smoothness is undone by the composition, the rhetorical affordance of the panel which offers the comics creator a rhetorical nuance to create their own 'lexia', a site at which they assemble signifiers, and thereby connect panels, using such a braiding technique.

Further, Groensteen then takes on this idea from Barthes when Barthes argues: "If we want to make banality speak, we must compare this 'Door' to the one we have already

⁹⁹ Op. Cit. p.8.

¹⁰⁰ Op. Cit. p. 13.

¹⁰¹ Op. Cit. p.14.

encountered”.¹⁰² This likely is Groensteen’s source of iconic solidarity, then. But Barthes, here, hits on the affordance of the comic once more, with its variable backgrounds. Remarking on the phrase “*The door opened*”, Barthes comments:

“No more banal (expected) or seemingly more useless proairetism can be imagined; from the anecdotal viewpoint, the story would have been equally readerly had the discourse stated: *She led the Frenchman to a mansion and, having entered it, led him to a room . . .* The operative structure of the story would have remained intact” before asking, “So what does the Door add? semantics itself: first, because every door is an object of some vague symbolism (a whole complex of death, pleasure, limit, secret, is bound up in it); and next, because this door opens (without a subject) connotes an atmosphere of mystery; last, because the open door and the end of the route still remain uncertain, the suspense is prolonged, in other words heightened”.¹⁰³

This question is key: why mention the door? If “all art is composition”,¹⁰⁴ then again the affordance of comics is that it can compose each unit of diegesis individually. Whilst adaptation theorists discuss that film has no choice but to show everything whereas novels can choose which details to specify, it would be incorrect to think of comics as having to do the same as the film, despite it also being also a visual medium. The key here is the creator’s ability to show everything as many or as few times as they wish, as I will show with my analysis of *Sunbeam* bread. The angle of the shot can be changed to remove certain associations, certain braids, from minutely chosen parts of conversations, or included all together. This assemblage is key to the understanding of the comic as the network of association (and this network really requires a quantitative intervention when we really extrapolate) is so wide.

¹⁰² Op. Cit. p. 133.

¹⁰³ Op. Cit. p. 137.

¹⁰⁴ Gilles Deleuze and Felix Guattari, *What is Philosophy?* p. 180.

It is worth remarking, here, what Groensteen states on the point of proairetism because I think it is incongruous with what he is trying to advocate for, or at least misses out an important sense of a networked reading. In this quotation he is discussing information that the reader already knows is there (here “characters not central to the action”) and, having been shown, is no longer included in subsequent frames in the sequence (this is actually a key question for how braiding works): “everything that need not be repeated is shown only once; and this unique occurrence is like a general factoring for the entire sequence”.¹⁰⁵ Through this mechanism, Groensteen supposes, “the reader ‘conserves’ all this useful information for the intelligibility of the narrative situation...without the successive images needing to repeat it”.¹⁰⁶ This is antithetical to how I (and I think Barthes too) understand ‘braiding’, but is an interesting perspective on what is significant about it for each of us, and also perhaps why he is so insistent on iconic, rather than verbal, solidarity. Groensteen’s braiding, then, seems to focus on a few important connections, rather than all of the connections that are made. What I mean by this is that his discussion of ‘conserving’ space, seems not to encompass the idea that this inclusion or exclusion of seemingly meaningless or decorative details is a rhetorical decision, rather one of economy. I think this sells the affordances of the medium short, and hurts the potential readings we can, and perhaps should, make.

Meaning-Making in Comics

Introduction

In this section, I will explain my understanding of what comics are and how the medium of comics functions. An instance of reading, one person’s experience of all or part of a text, occurs at the nexus of reader and read; they interact in their respective individuality, their particularity, to create a meaning. The former exists as fluid in time, the latter is static. That is

¹⁰⁵ Groensteen, p. 119.

¹⁰⁶ Ibid.

to say, any socio-cultural or historical change occurs on the side of the reader, not the text. Because it is the constant in this encounter, the variable that recurs in every iteration of its reading, it is the text which will be the more useful subject for my research resource, the object of study that will contribute most to scholarly practice. It is crucial to this project that I outline a conceptualisation of how comics functions before beginning any design or building of digital resources. This is because digital tools and resources will reproduce the assumptions and conceptualisations of their creator in the work of anybody who uses them. A cogent and defensible analysis of what will be modelled – comics – is, therefore, necessary. The digital humanists Stephen Ramsay and Geoffrey Rockwell explain that “digital...tools are theories in the very highest tradition of what it is to theorize in the humanities, because they show us the world differently”.¹⁰⁷ Although digital artefacts have different rhetorical affordances to verbal critical theory,¹⁰⁸ this chapter will undertake the work of expositing my theory in verbal form in order to defend the digital form it will ultimately take.

Looking at the examples of comics panels in Figure One, it is clear that comics can be made up of various interactions of two different mechanisms for making meaning, words and images, arranged in space.

¹⁰⁷Stephen Ramsay and Geoffrey Rockwell, 'Developing Things: Notes toward an Epistemology of Building in the Digital Humanities', in *Debates in the Digital Humanities*, ed. by Matthew K. Gold (Minneapolis: University of Minnesota Press, 2012), n.p..

¹⁰⁸For more on this, see Ian Bogost, *Persuasive Games* (Cambridge: MIT Press, 2010). and Ramsay and Rockwell.

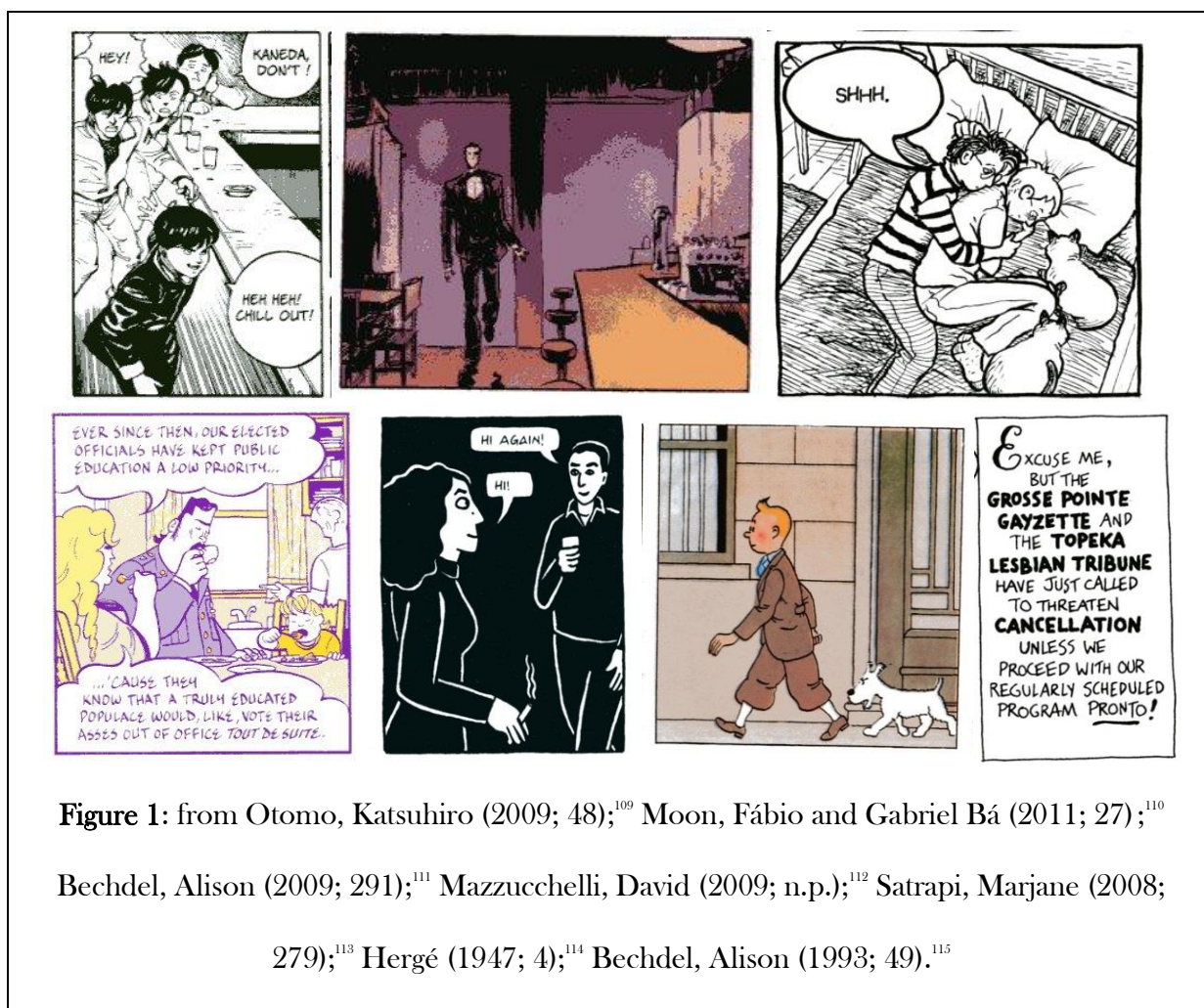


Figure 1: from Otomo, Katsuhiro (2009; 48);¹⁰⁹ Moon, Fábio and Gabriel Bá (2011; 27);¹¹⁰

Bechdel, Alison (2009; 291);¹¹¹ Mazzucchelli, David (2009; n.p.);¹¹² Satrapi, Marjane (2008;

279);¹¹³ Hergé (1947; 4);¹¹⁴ Bechdel, Alison (1993; 49).¹¹⁵

Just as the interaction of reader and read creates meaning, so it is the various interactions of these two modes of signification which produces meaning. As these few examples show, though, comics is a broad, heterogeneous field which varies both within and between geographic milieus, even between a single creator's panels.¹¹⁶ Whilst the definition of what,

¹⁰⁹ Katsuhiro Otomo, *Akira I*, ed. by Naoto Yasunaga, Takeshi Katsurada, trans. by Yoko Umezawa, Linda M. York, Jo Duffy (New York: Kodansha Comics, 2009), p. 48.

¹¹⁰ Fábio Moon and Gabriel Bá, *daytripper* (New York: Vertigo, 2011), p. 27.

¹¹¹ Alison Bechdel, *The Essential Dykes to Watch Out For* (London: Jonathan Cape, 2009), p. 291.

¹¹² David Mazzucchelli, *Asterios Polyp* (New York: Pantheon Books, 2009), n.p..

¹¹³ Marjane Satrapi, Marjane, *Persepolis*, trans. by Anjali Singh (London: Vintage Books, 2008), p. 279.

¹¹⁴ Hergé, *Tintin; Le Sceptre d'Ottokar* (Paris: Casterman, 1947), p. 4.

¹¹⁵ Alison Bechdel, *Spawn of Dykes to Watch Out For* (Ithaca: Firebrand Books, 1993), p. 49.

¹¹⁶ For reference, here is a record of provenance for the images in this Figure: Katsuhiro Otomo is Japanese; Fábio Moon and Gabriel Bá are Brazilian but work in the United States; Alison Bechdel is American; David Mazzucchelli is American; Marjane Satrapi is Iranian but works in France; Hergé was Belgian.

precisely, is and is not a comic is much in discussion,¹¹⁷ this chapter, rather, will examine how the principle of making meaning which unites them – although it is not limited to comics – transcends these cultural and geographic differences. This principle is recombination. The philosophers Gilles Deleuze and Felix Guattari state, “composition is the sole definition of art”,¹¹⁸ and what is composition if not the various rearrangements of finite, component parts?

Since comics proceeds by panels, that is, since narrative time (if not always diegetic chronology) progresses spatially, from panel to panel, it is through the recombination of these component parts, throughout a volume of comics,¹¹⁹ that meaning is produced. For reference, I have added arrows to a page from Marjane Satrapi’s *Persepolis* to show the reading order of panels in comics.¹²⁰

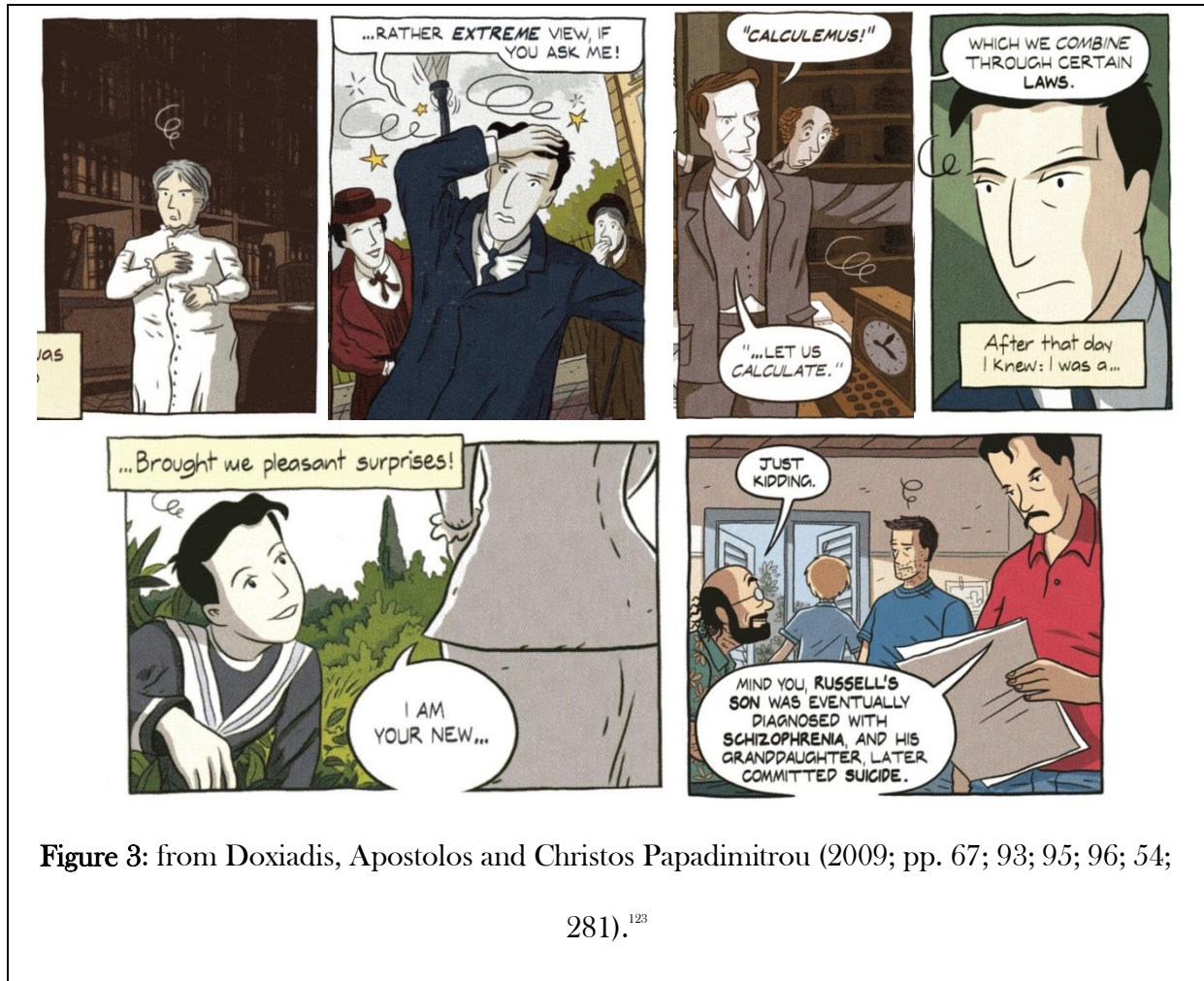
¹¹⁷ See Thierry Groensteen, ‘The Impossible Definition’, in *A Comics Studies Reader* ed. by Jeet Heer and Kent Worcester (Jackson: University Press of Mississippi, 2009), pp. 124-131. for the difficulty of defining comics and Neil Cohn, *The Visual Language of Comics* (London: Bloomsbury, 2013)., Thierry Groensteen, *The System of Comics*, trans. by Bart Beaty and Nick Nguyen (Jackson: University Press of Mississippi, 2007)., and Scott McCloud, *Understanding Comics* (New York: HarperCollins, 1993). for just three approaches to a definition.

¹¹⁸ Gilles Deleuze and Felix Guattari, *What is Philosophy?*, trans. by Graham Burchell and Hugh Tomlinson (New York: Columbia Press, 1994), p. 191.

¹¹⁹ I use ‘volume of comics’, here, to indicate a complete narrative without needing to specify its genre or the tradition from which it comes and without feeling the need to engage in the comic vs graphic novel taxonomy debate (See: Barry Kavanagh and Alan Moore, *The Alan Moore Interview* (2000) <http://www.blather.net/projects/alan-moore-interview/northhampton-graphic-novel/> [accessed 11 May 2016], n.p.; and Will Eisner, *The Contract With God Trilogy* (New York: W. W. Norton and Company, 2006), pp. xii-xx.)

¹²⁰ For a much more rigorous approach which deals with more complex panel-to-panel transitions see Cohn, pp. 67-106.

N.B. Manga, Japanese comics, are printed right to left and therefore the reading order is reversed accordingly.



As these signifiers weave their way through the pages of the volume, they draw together disparate panels and place them in relation to one another. This, of course, is also how characters operate in a text; when a reader finds Bertrand Russell, *Logicomix*'s protagonist, in panels set, variously, in a library in Cambridge, a garden at Hampton Court, and on a train between Jena and Halle in Germany, they understand that, despite the changes in scenery and supporting characters, they are looking at the same entity as earlier in the volume; it is by this process of locating a character, or any element, in each of their iterations that a reader can discern narrative arcs and create meaning out of a volume of comics. This, then, speaks to my principle of recombination, for it is by the various assemblages of entities in panels by which meaning is produced.

¹²³ Apostolos Doxiadis and Christos H. Papadimitriou, *Logicomix; An Epic Search For Truth* (London: Bloomsbury Publishing, 2009), pp. 67; 93; 95; 96; 54; 281.



Figure 4: from Doxiadis, Apostolos and Christos Papadimitrou (2009; pp. 81; 125; 101).¹²⁴

Everything in a volume of comics means something, and uses a particular mechanism to indicate it, so there are no a-signifying images, words, or spatialisations; everything that has been included has been so in order to create an effect. I do not intend to address authorial intention in any depth here, but I want to clarify that, in accordance with the work of William

¹²⁴ Doxiadis and Papadimitrou, pp. 81; 125; 101.

Wimsatt & Monroe Beardsley,¹²⁵ and Roland Barthes,¹²⁶ I do not place any weight on what an author ‘intended’. It would be better, then, to phrase this point that everything in a volume of comics is part of the text and is, therefore, potentially significant, potentially bearing meaning. Although, as with any medium, comics has its limitations to accompany its affordances, it is a medium of selection, not bound, particularly, by spatial limits excepting its ultimate length. The comics creator is not Homer selecting Odysseus’s epithets from how many remaining syllables were required by the structure of the line,¹²⁷ or a nineteenth century newspaper editor cutting or adding to his exchange papers to fill a page completely;¹²⁸ this is a medium where the way space is used can be far more fluid given the scalability of almost all of its composite parts – words, images, and the panels themselves – as can be seen in Figure Two where the panels and their contents vary in size according to spatial or rhetorical requirement.

Literature scholars who work on verbal or spatial concordances seek to reveal new meaning in a text by reorganising it along particular lines,¹²⁹ by focussing on particular types of elements in a text and reading it through that prism, folding it along those lines. While both of these facets of texts should be attended to in comics studies, and are productive sites of meaning-making, the combination of pictorial and verbal information offers comics readers far more such lines along which to fold a text. When the comics semiotician Neil Cohn responded to Groensteen’s ideas on panel transition, quoted above, he wrote that “[s]uch unrestrained transitions between panels could overload the working-memory of the human mind”.¹³⁰ What

¹²⁵ William K. Wimsatt and Monroe C. Beardsley. ‘The Intentional Fallacy.’ *Sewanee Review*, vol. 54, (1946), pp. 468-488.

¹²⁶ Roland Barthes, ‘The Death of the Author’, *Aspen*, 5+6, (1967).

¹²⁷ See Janet Murray, *Hamlet on the Holodeck: the future of narrative in cyberspace* (London: The MIT Press, 1998), pp. 187-213.

¹²⁸ See Ryan Cordell, *Going Viral in Nineteenth Century Newspapers* (2015) <http://ryancordell.org/research/going-viral-in-nineteenth-century-newspapers/> [accessed 2 May 2016], n.p..

¹²⁹ See John Bradley, ‘Text Tools’, in *A Companion to Digital Humanities*, ed. by Susan Schreibman, Ray Siemens, John Unsworth (Oxford: Blackwell, 2004), n.p..

See Eric Bulson, *Novels, Maps, Modernity; The Spatial Imagination, 1850-2000* (London: Routledge, 2010). and Franco Moretti, *Graphs, Maps, Trees: Abstract Models for a Literary History* (London: Verso, 2005).

¹²⁹ Cohn, p.68.

¹³⁰ Cohn, p.68.

Cohn is concerned about, here, is not only the volume of different potential folds which Groensteen's idea suggests, but also quite how many individual panel relations this would imply are contained in a single volume of comics. There are, however, two limitations to Cohn's argument which I want to address. Firstly, the insufficiency of human memory to record something in its entirety is not a compelling argument against how that thing produces meaning; just because a reader cannot remember everything in a text does not indicate that the text is not actually composed of everything in it. This leads into my second point: human readers remember the same events from a text differently rather than capturing an essential 'meaning'. That is, not only are their interpretations different because the readers are different, recalling the nexus I mentioned above, but because, as any classroom or book group can attest to, people record the same thing in different ways and to different degrees. These two points expose what I think is Cohn's mistake on predicating meaning-making on memory; if readers do not even remember the same, limited facets of a text, how can memory be the premise on which to base an argument about comics' meaning-mechanism? Cohn's point, however, remains: human memory cannot retain every detail of a volume of comics. It is worth recalling, again, the nexus of which I wrote at the beginning in order to emphasise that this human inability does not alter the object of reading, only its interpretation. To understand a comics volume as a system of meaning-making in its entirety, along all of its lines, it is necessary, therefore, to supplement human memory with a digital prosthetic, the database. I will return, in Chapter Two, to the topics of human memory and my choice of digital technology, but for now, suffice it to say that by externalising the former with the latter, all the potential signifiers in a volume of comics become visible and can be mobilised for analysis.

As I outlined above, the central principle of my conceptualisation of how comics make meaning is through the recombination of constituent parts. Since the exact nature of these parts will be dealt with in Chapter Two, it remains, in this chapter, to explore this idea of

recombination in more depth. In order to do this, it will be beneficial, first, to establish a more complete understanding of the similarities and differences between, and the affordances of, the two largest super-sets of meaning-makers in comics, words and images.

Words and images

Convention and economy

Both words and images are abstractions of what we, as people, perceive in the physical world; writing and drawing both constitute a method of taking things we find in the world and representing them on a planar surface, whether that is paper, a canvas, or the screen of an e-reader. It has been suggested, in fact, that the motivation to create the first-ever picturebook, Comenius's *Orbis Pictus* (1657), was the result of the author's understanding that "while a perfect God created the things of the world, it was fallible mankind that was given the responsibility of naming them".¹³¹ Comenius recognised that names are merely abstract signs produced by humans and he believed that the things they represented were pure in their divinity; only convention gives language any potency, whereas what these signs represent is 'real' and unmediated. What Comenius seemingly did not realise, however, was that the pictures he used to try to circumvent this issue are also conventionalised signs. When we perceive the world, or a representation of it, our perception is filtered through our cultural schemata, the ways in which we have previously learned to see the world; we fit our perceptions into our pre-existing, pre-established categories. This leads Perry Nodelman, a children's literature and picturebook scholar, to suggest that "[a]ll perception...including the perception of pictures, might actually be an act of verbalization – a linguistic skill rather than an automatic act".¹³²

¹³¹ Perry Nodelman, *Words about Pictures* (London: University of Georgia Press, 1988), p.19. referencing Svetlana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago: University of Chicago Press, 1983).

¹³² Nodelman, p. 8.

Words, then, direct and structure perception by creating the categories into which the phenomena we observe must fit or, at least, be defined against.

This schematization actually occurs at both ends of the creator–reader relationship. Neil Cohn explains how, when people draw, their practice is filtered through “the human mind, which stores its building blocks as schematic patterns”.¹³³ He draws on psychological work by Brent Wilson to support this claim and summarises how Wilson’s studies showed that “drawing involves the transmission of culture-specific schemas, not drawing from perception”¹³⁴ and that “people store hundreds to thousands of these mental models in their long-term memory and then combine these parts to create what on the whole appears to be a novel representation”.¹³⁵ The fact that images are as culturally-specific as words can most clearly be seen when very different cultures engage with one another’s drawings. One such example can be found in the work of the anthropologists H.F. Duncan, N. Gourlay and Wm Hudson who reported that white South African “details of musculature in the drawings of a human torso were seen as incisions by the witch doctor” by the Bantu group they were studying, and that “[l]ines intended to indicate wrinkles were also seen as cuts in the face”.¹³⁶ That the same lines can be interpreted in such different ways indicates how conventionalised they are within each culture. Further, the fact that both of these Westernised examples deployed the same detail, lines on a human, to indicate different attributes, muscles and wrinkles, further demonstrates how what we see is partly produced by what we expect to see, what we are used to seeing, and what we have been exposed to. How many Westerners, for example, would look at these two

¹³³ Cohn, p. 23.

¹³⁴ See Brent Wilson, ‘The artistic tower of babel: Inextricable links between culture and graphic development’, in *Discerning art: Concepts and issues*, ed. by G.W. Hardiman and T. Zernich (Champaign: Stipes Publishing Company, 1988). and Brent Wilson and Marjorie Wilson, ‘An iconoclastic view of the imagery sources in the drawings of young people’, *Art Education*, 30.1, (1977), 4-12.

Cohn, p. 28.

¹³⁵ *ibid.*

¹³⁶ H. F. Duncan, N. Gourlay, and Wm Hudson. *A Study of Pictorial Perception among Bantu and White Primary School Children in South Africa*. Human Sciences Research Council Publication Series, 31 (Johannesburg: Witwatersrand University Press, 1973), p. 9.

NB. This is how Cohn records their names.

panels from *Desolation Jones: Made in England* (2006) and think what muscular faces these two men have?

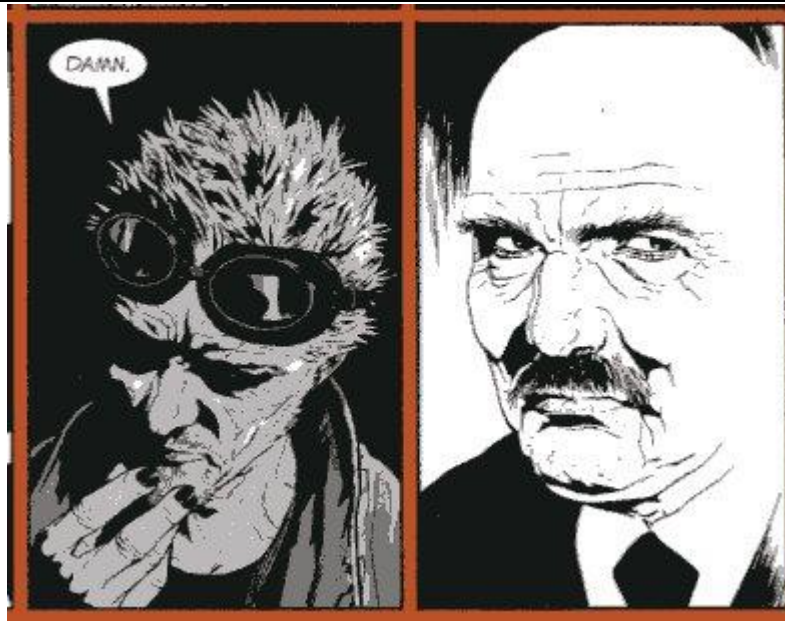


Figure 5: from Ellis, Warren and J.H. Williams (2006; 83).¹³⁷

For an example of this schematisation, however, it is not necessary to compare Westernised and Bantu cultures. As Cohn points out, motion lines, lines used in comics to represent movement, “often differ in their surface depiction depending on which country they are from”.¹³⁸ Schematization in the production of images can, therefore, also be seen in the examples of motion lines, below, from the Japanese *Akira* (2009), the Belgian *Tintin: Le Sceptre D’Ottokar* (1947), and the American *Batman and the Outsiders* (2007).

Figure 6: from Otomo, Katsuhiro (2009; 133);¹³⁹ Hergé (1947; 8);¹⁴⁰ Barr, Mike (2007, 47).¹⁴¹

Both words and images, then, are conventionalised signs. This is significant because it means that, rather than the images merely being a neutral reproduction of perception, decisions had to be made in their creation. To re-clarify, however, it is not important what the

¹³⁷ Warren Ellis and J.H. Williams III, *Desolation Jones: Made in England* (La Jolla: WildStorm, 2006), p. 83.

¹³⁸ Cohn, p. 39.

¹³⁹ Otomo, p. 133.

¹⁴⁰ Hergé, p. 8.

¹⁴¹ Mike W. Barr, *Batman and the Outsiders: Volume One* (New York: DC Comics, 2007), p. 47.

author intended their decision to mean, only that an image can bear meaning in how it is presented as opposed to in its mere presence. Words and images also both function economically. By schematically structuring our perception, they impose a simplification on the state of things that we cannot escape. The word ‘dog’, for example, clearly lacks specification and, however detailed an image might be, in remediating a three-dimensional animal into the two dimensions of a page, decisions will have had to have been made about presentation thereby limiting, reducing, the depicted animal. Signs, whether they are verbal or pictorial, are necessarily reductive and homogenising. It is this very reduction which makes them useful for communication. This is, however, not to say that this reduction is in any way innocent or insignificant; the decisions made in representation will always be meaningful as they make an argument about their subject. In his discussion of proper nouns, Roland Barthes explores this “economic nature of the Name”, explaining that it “allows the substitution of a nominal unit for a collection of characteristics by establishing an equivalent relationship between sign and signifier”.¹⁴² Gilles Deleuze and Felix Guattari’s metaphor for this economisation sheds more light on the matter; they suggest that whatever form a linguistic sign takes, verbal or pictorial, the sign functions like an envelope for the concept it represents. It is a container that covers the true form of what it acts as a vessel for. These ‘envelopes’ thereby allow concepts – which would otherwise elude form – to be in conversation with one another, to interact, through their co-presence, through combination.¹⁴³ Considering this in relation to Groensteen’s promiscuous panel transitions, this conceptualisation of sign as envelope, as an abstract container enabling interaction, will be useful going forward in my analysis of recombination.

The fact that we use words every day, however, can somewhat blind us to the fact that they only attain meaning through convention and exposure. It is probably easier, therefore, to

¹⁴² Roland Barthes, *S/Z*, trans. by Richard Miller (Oxford: Blackwell, 1990), pp. 94-5.

¹⁴³ Gilles Deleuze and Felix Guattari. *A Thousand Plateaus*, trans. by Brian Massumi. (London: Continuum, 1987), p. 297.

see signs in this way by looking at less naturalised signs, or, at least, ones with which most readers are less familiar and use less frequently. Some conventionalisations particular to comics can, then, offer a useful illustration of this. Although a litany of such symbols can be found in Mort Walker's parodic *Lexicon of Comicana* (2000), by focusing on a few examples from *Logicomix*, what I mean will become clearer. Figure Seven shows a young Bertrand Russell puzzling over and deciphering Euclidean geometry before a moment of comprehension. The signs, here, are clearly functioning economically, but readers may not be certain about what each of them means precisely. As my marking up of the image shows, amongst the conventionalisations here are cogs, movement lines, emanata, squeans and spurls; each of these signs, to differing extents, has become conventionalised within Western comics; some of them make sense metaphorically – although probably only through drawing on existing verbal idioms – and some are entirely abstract.

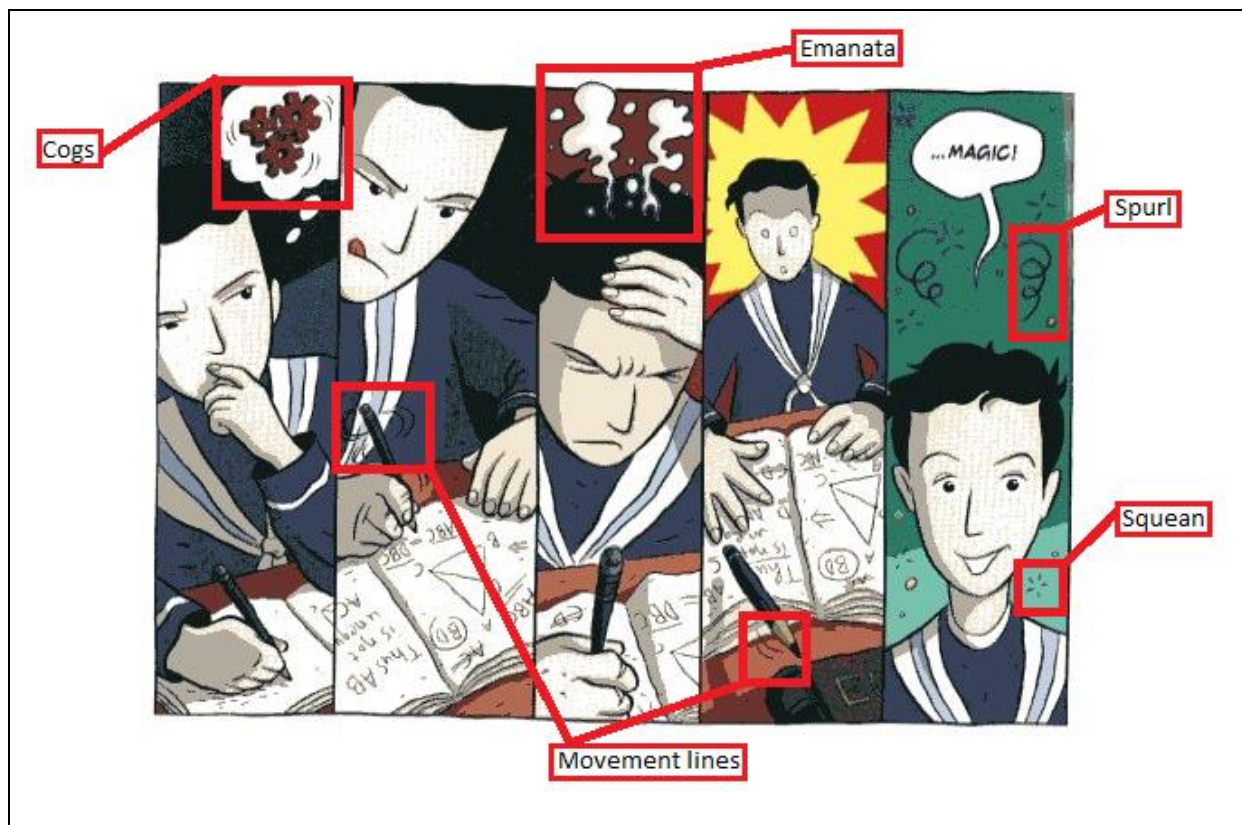


Figure 7: from Doxiadis, Apostolos and Christos Papadimitrou (2009; 56).¹⁴⁴

By way of contrast, consider Cohn's inventory of facial expressions in Manga, in Figure Eight. Once again, some of them can be understood, or at least rationalised after finding out their meaning, but are clearly culture-specific, comprehensible mainly through a naturalisation borne of exposure and convention. This can be further demonstrated by the fact that the speech balloon in the Figure Seven was probably not so readily identified as a conventionalisation by a number of readers, given its almost complete naturalisation into our lexicon.



Figure 8: from Cohn (2013; 157).¹⁴⁵

Conventionalisation, however, occurs *within* a volume of comics as well as throughout all comics in a tradition. Considering the cogs in Figure Seven, when a reader finds another instance of cogs, such as the ones in Figure Nine, they have something to refer them against; their cogs schema has been altered. This enables cogs, in this instance, to attain a more particular meaning and function like more conventionalised signs or even like a character, as we saw in Figure Four.

¹⁴⁴ Doxiadis and Papadimitrou, p. 56.

¹⁴⁵ Cohn, p. 157.



Figure 9: from Doxiadis, Apostolos and Christos Papadimitrou (2009; 167).¹⁴⁶

This attainment of a particular meaning through repeated use can also be seen in the book's use of panels to indicate which diegetic timeline is being presented. In *Logicomix*, Bertrand Russell gives a lecture in which he recounts "the story of logic . . . / [...] through the tale of one of its most ardent fans./ . . . [Him]self".¹⁴⁷ This narrative framing requires moving between two timelines, one in which Russell is in the lecture theatre, the other in which he acts in his autobiographical lecture. This is indicated by changing the appearance of the panels, as shown in Figure Ten. For the lecture theatre timeline rounded corners are used, for lecture time, rectangular ones. It is through this internal reuse and conventionalisation that readers can deduce in which narrative timeline the events in the panel are occurring. This technique becomes increasingly useful as the Russell of the story approaches the age of the Russell telling the story.

¹⁴⁶ Doxiadis and Papadimitrou, p. 167.

¹⁴⁷ Op. cit., p. 33.



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Figure 10: from Doxiadis, Apostolos and Christos Papadimitrou (2009; 111).¹⁴⁸

These internal panel conventions, however, are exactly that: *internal* conventions. None of the panel examples I have shown thus far are flashbacks or lectures and yet they have straight edges. Nor do all these comics creators use squeans or cogs in the same, already ununified, ways as in Figures Three, Seven and Nine. Just as diction is an inevitable part of authoring a verbal text, so is the deployment of conventionalised signs in comics. This highlights a similarity between the relatively naturalised signs in Figure Seven, and the pictorial metaphors a comics creator invents to show abstract emotions. Take, for example, the front cover of Philippe Dupuy and Charles Berbérien's *Journal D'un Album* (1994) in Figure Eleven.

¹⁴⁸ Op. cit., p. 111.



Figure 11: Dupuy, Philippe and Guy Berbérien (1994).¹⁴⁹

Dupuy and Berbérien suggest the alienation, the Othering, they feel when they tell people that they make bandes-dessinées, comics in the Franco-Belgian tradition,¹⁵⁰ by showing themselves as aliens. Referencing this volume, Groensteen points out that, although there are differences between such a visual metaphor and more conventionalised signs, such as the cogs above or the speech balloon, “[o]ne could easily imagine in a different context (assuming that the convention had been repeatedly reused by one or two influential artists) that the figure of the alien could have become a conventional pictogram expressing the sense of being an outsider”.¹⁵¹ As Groensteen implies, there is a continuum of conventionalisation between Dupuy and Berbérien’s aliens and the speech balloon. Whilst I agree that it is the intersection of convention and reuse that establishes meaning and elevates a sign into a lexicon, Groensteen’s argument is unnecessarily predicated on the signs being used by influential figures. As I showed with *Logicomix*’s various panel depictions, a sign can attain this type of meaning not only

¹⁴⁹ Philippe Dupuy and Charles Berberian, *Journal d'un album* (Paris: L'Association, 1994).

¹⁵⁰ Hergé, as seen in Figures One and Six, is an example of a creator in this tradition.

¹⁵¹ Thierry Groensteen, *Comics and Narration*. trans. by Ann Miller (Jackson: University Press of Mississippi, 2013), p. 124.

between texts or within a genre or culture, but within a single volume; signification can become internally conventionalised within the discrete bounds of a comics volume. To understand a text, then, it is as important to understand how it uses and reuses signifiers, its idiolect, as it is to understand the language it uses, the wider lexicon in which it sits. For a signifier to attain a particular meaning it does not require an intimate knowledge of a particular genre or culture, or for influential figures to have reused it, in fact, it does not even require intention on the part of the author; it is inevitable, both in the sense that it will always happen and in the sense that it is unavoidable. The very use of language redefines that language; its very deployment alters a reader's schemata by contributing to them. Scott McCloud's suggestion that "visual vocabulary has an unlimited potential for growth",¹⁵² therefore, should be understood not just across texts, but within each one. It should also be reasserted that this is not only how conventionalised comics language operates, but words and images too.

Different types of information

Although words and images are both conventionalised signs, and both act economically, that is not to say that they function in the same way or that they carry the same type of information. Although a word's meaning is affected by its usage, the word itself represents a relatively stable unit of meaning, it designates something particular. The word 'dog', to return to that example, clearly designates a particular subspecies of animal, even if it also has other, metaphorical, associations. Pictorial signs, on the other hand, are less unified and less homogeneous; there are many ways that 'dog' can be depicted – as shown in the images in Figure Twelve from *daytripper*, *Logicomix*, *Good-bye, Chunky Rice* (2009), *tales from outer suburbia* (2009), and *The Essential Dykes to Watch Out For* – but no definitive one.

¹⁵² McCloud, p. 131.



Figure 12: from Moon, Fábio and Gabriel Bá (2011; 16);¹⁵³ Doxiadis, Apostolos and Christos Papadimitrou (2009; 16);¹⁵⁴ Thompson, Craig (1999; 111);¹⁵⁵ Tan, Shaun (2009; 81);¹⁵⁶ Bechdel, Allison (2009; 297).¹⁵⁷

Although the depicted dogs may be different breeds, the ways in which they have been drawn also differ greatly. This shows how it is not only the case that the dogs look different because they refer to different dogs, but that the same dog could be drawn in different ways. Both of these reasons for the difference in depiction, however, point to the fact that there is not, and could not be, a unique, unified, pictorial sign that functions in the same way as does the word 'dog'. Words generalise where pictures specify. Even though different breeds of dogs have their own names which could potentially correspond to these images (or, at least, to most of them),

¹⁵³ Moon and Bá, p. 16.

¹⁵⁴ Doxiadis and Papadimitrou, p. 304.

¹⁵⁵ Craig Thompson, *Good-bye, Chunky Rice* (Marietta: Top Shelf Productions, 1999), p.111.

¹⁵⁶ Shaun Tan, *tales from outer suburbia* (Dorking: Templar Publishing, 2009), p. 81.

¹⁵⁷ Alison Bechdel, *Essential*, p. 275.

the word ‘labrador’, say, still generalises labradors in way that a picture does not, in a way that a picture *cannot*.

Words and images, actually, each have their own type of specificity, an affordance for presenting particular types of information. Perry Nodelman and Mavis Reimer’s statement that “pictures are attempts to communicate visual information”¹⁵⁸ may appear obvious but it is probably not something a lot of people reflect on, so naturalised and uncritical are we of images in our daily lives.¹⁵⁹ We, like Comenius, probably do not think in much depth about the affordances of the picture or that, like words, they remediate objects we find in the world schematically. Nodelman and Reimer’s statement, however, identifies a salient difference between the two: pictures can show in a way that words can only tell. This is particularly the case for spatial relations; imagine trying to describe the exact positions of the actors in the example from *Dykes to Watch Out For*, in Figure Twelve. As film adaptations of books and adaptation theorists testify,¹⁶⁰ there can be no perfect translation or equivalence between words and images.

The respective information which words and images carry is predicated on their respective method of organising that information. The words of sentences are organised linearly and meaning is produced by the procession of words in order. Conversely, the parts of pictures are organised spatially within a holistic whole. Although there are important differences between children’s picturebooks and comics,¹⁶¹ Nodelman’s argument that readers of mixed-media texts engage in “constant switches between two different ways of seeing – from

¹⁵⁸ Perry Nodelman and Mavis Reimer *The Pleasures of Children's Literature* (Boston: Allyn and Bacon, 2003), p. 297.

¹⁵⁹ Although Nodelman and Reimer work on children’s literature, it is still appropriate for me to use their research in this project because both of our respective subjects, comics and picturebooks, use the interaction of words and images to produce meaning. That is, however, not to say that they are the same. For more information on the differences between the media see Nodelman and Reimer, p. 274.

¹⁶⁰ For more information see Seymour Chatman, ‘What Novels Can Do That Films Can't (And Vice Versa)’ *Critical Inquiry* 7.1 (1980): 121-40. and Thomas M. Leitch, ‘Twelve Fallacies in Contemporary Adaptation Theory’, *Criticism* 45.2 (2003): 149-71.

¹⁶¹ Again, see Nodelman and Reimer, p. 274.

a pattern of left-to-right and top-to-bottom scanning to a much less regulated consciousness of holistic form”¹⁶² is still applicable to this analysis. This elucidates the fact that a sentence creates meaning from the ordered accumulation and succession of its parts, whereas an image’s parts only really become visible individually after a perception of the whole; recall, for example, the lines from Duncan, Gourlay, and Hudson’s study which variously indicated muscles and wrinkles. It was only once the whole had been perceived that the meaning of the parts could be deciphered.

In terms of the different types of information that a picture can convey that a word cannot, it is worth acknowledging that a reader does not need to know the actual word for something, a word does not even need to exist, for a picture to be understood. Even though words and images are both conventionalised – rather than images being produced from perception, as some people might think – words rely on their readers knowing them beforehand in a way that images do not. Whilst technical terms may exist for particular parts of a picture, readers do not need to know them to understand what that picture means. In fact, if these words were used instead of pictures it is likely that most readers would experience a decrease in their level of comprehension. As Nodelman explains, although it may “take the technical jargon of a hairdresser to express the exact nature of a woman’s upswept curls, and a seamstress to describe the cut of her dress or the point of her sleeves...we can understand from the picture what even very exact words could not tell us”.¹⁶³ Further, these ‘very exact words’ may occlude their meaning from us if we do not know them whereas an image would, at least, give us a sense of what was being referred to; as ‘envelopes’, unknown words can offer as little as no information, whereas pictures will at least offer a general idea. One of the images of a dog, above, could be a specific breed; if we do not know the name of that breed, the word will offer us no information where the picture would, at least, designate ‘dog’. Images, unlike words,

¹⁶² Nodelman, p. 242.

¹⁶³ Op. cit., p. 206.

do not require their readers to have pre-existing knowledge or to have engaged with specialised terminology to evoke their meaning.

On the other hand, what images struggle to do is *not* specify. That is, their capacity to be precise in their specification can also be understood as an inability to be unspecific or to select what details they want to specify. A verbal creator includes only the details that they choose to; the only details in their narratives are the ones they explicitly include. As Nodelman argues, if “the shape of a woman’s nose is important to the meaning of a story, then the words in the story about her will mention the shape of her nose”.¹⁶⁴ If her nose is unimportant, it can, of course, remain unmentioned. For a visual creator, however, a nose must be represented each time the character is shown, whether or not it is important to the story. To not show a nose would, most likely, be counterproductive; pictorially there is no neutral nose. The affordance of the verbal, then, is that its authors can select what to draw attention to and when. As Nodelman mischievously puts it, “[t]he characters in novels frequently do not have noses, or elbows, or clothes”.¹⁶⁵

Nodelman’s analysis, however, becomes less convincing when he asserts that “because an illustrator has to give every character a nose whether that nose is important or not...a picture contains information that might not necessarily be relevant to our understanding of the story as a whole”.¹⁶⁶ This falls into the trap of authorial intention. It is how creators work with and against their medium which creates the narrative, not the fact that it is in a particular medium, otherwise the same analysis would have to be reproduced in every analysis of work in pictorial media which would be neither interesting nor productive. Taking Nodelman’s example, noses must still be considered as being important and conveying meaning; a decision must be made about their various representations which cannot be insignificant, cannot avoid making meaning

¹⁶⁴ Op. cit., p. 198.

¹⁶⁵ Op. cit., p. 212.

¹⁶⁶ *ibid.*

or be neutral. Had, say, Alison Bechdel, in the *Dykes to Watch Out For* example in Figure Twelve, not wanted to specify what breed of dog Samia had, that would be impossible to achieve unless the dog was never depicted pictorially; the fact that *a* breed had to be selected does not negate a potential reading which someone might want to make about Samia, say, which includes reference to the dog she owns. Regardless of what Nodelman's reluctant nose-drawer originally wanted to emphasise or evoke, noses remain a productive site for meaning-making in their narrative. The closest to such an a-signifying depiction decision would be a consistent one; since meaning is made through recombination, a lack of change would be the least meaningful presentation, although, as with Samia's dog, that decision alone can still bear meaning.

I have already mentioned that whilst words tell, images show their information. Since our eyes can perceive multiple attributes of objects, images can rely on accumulating meaning in a multifaceted way as opposed to the word's single method of designation. In different terms: a picture's adjectives are already bound up in it intrinsically whereas a word's adjectives must be supplementary, extrinsic. This is, again, the image's inability to be unspecific. Take, for example, this panel from *daytripper*. The image of the coffee cup has a clear placement on the table, relative to the other entities in the image, a colour, a shape, various colour saturations, and other visual properties. Comparatively, the corresponding verbal signifier, 'coffee cup', would have to be described to attain any particular properties.



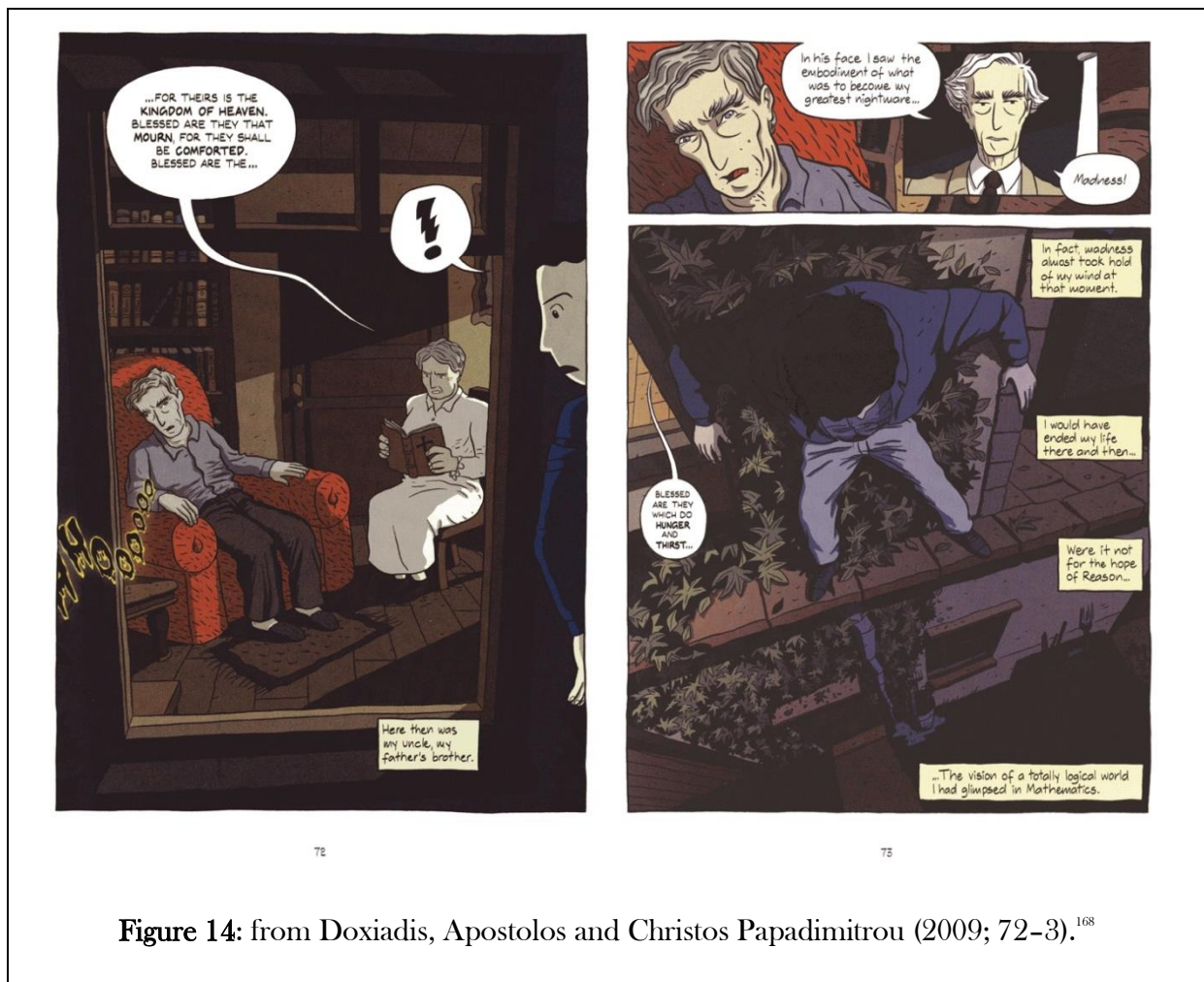
Figure 13: from Moon, Fábio and Gabriel Bá (2011; 237).¹⁶⁷

How they combine

What comics can do, then, by employing these two types of meaning-producers, is deploy both types of specificity together and create meaning through the interaction of their heterogeneous meaning-mechanisms. Words and images co-occur in the panels of comics volumes, but they do so not as parallel lines, but rather as lines intersecting with one another; it is through their interaction, not their mere co-occurrence, that they make meaning. Whilst each has different affordances, they do not simply mean *alongside* one another, but through their relationship *with* one another. Each is changed by the presence of the other. Words can offer the focus, the attention, that pictures struggle to; pictures can describe physical properties and relations in ways that would be, at best, cumbersome verbally. The idea of their co-occurrence, this shared site, however, is still important. As words function linearly and pictures function holistically, their combination requires a cyclical practice of reading where each

¹⁶⁷ Moon and Bá, p. 237.

rotation builds on the existing interpretation, outside of either mode's organisation principle, without a pre-determined, formalised order of reading since the two cannot be perceived at the same time. Although different relationships can exist between them – either one, or neither, can dominate the meaning-making, and how much information is repeated across the two modes, their redundancy, can vary – neither can be said to be inherently apprehended first or last. The order of first reading is more likely to be specified spatially, read in the Z-path outlined, in Figure Two. Consider the examples in Figure One that include both words and images and think about how you variously read these panels. Likewise, monitor your reading practice for this double-page spread from *Logicomix*.



¹⁶⁸ Doxiadis and Papadimitrou, p. 72-3.

This reading practice supports a model of the comics volume where meaning is produced through the interaction and accumulation of various heterogeneous strands. In his semiotic approach to comics, Neil Cohn suggests that panels should be thought of as examples of what linguists would call a synthetic, rather than an analytic, language. Analytic languages, such as English, “use consistent word forms at the grammatical level [and therefore] often place a smaller role on the internal structure of those units”.¹⁶⁹ In synthetic languages, like Turkish and West Greenlandic, however, “[t]he systematic pieces...are smaller than whole words, and these meaningful pieces combine productively in *novel* ways to create grammatical units. The smaller pieces alone cannot operate as grammatical units – they *must* combine”.¹⁷⁰ Cohn’s conceptualisation is useful for understanding how, by combining the verbal and pictorial parts of a panel, synthetically, the panel gains its meaning. It also draws attention to the importance of these component parts which must, through a volume of comics, recombine in order to create the narrative. Returning to the linguistic terminology, comics employ the synthetic “method of organising information into workable units” rather than the analytic method of “letting meaningful information stand alone as units unto themselves”;¹⁷¹ the component parts combine to form a connected whole, a network within a panel, which constitutes its own, original, unit of meaning.

Morphemes and graphemes

The systematic units which constitute the panel in this synthetic model are not, however, complete sentences and images, nor even words and figures, but the recombining parts of each of these, the ‘building blocks’ to which Cohn referred, above. This is where it is important that images, like words, are produced schematically; if they were simply rendered from perception, their recombining parts could not be considered so meaningful, they would

¹⁶⁹ Cohn, p. 21.

¹⁷⁰ Ibid.

¹⁷¹ *ibid.*

instead have to be considered as wholes. Cohn explains that images are produced using “schemas that are stored in memory and then combined using rule systems broadly analogous to morphology and phonology in speech”.¹⁷² Correspondingly, these units are called “graphemes”,¹⁷³ and, together with morphemes, they form the smallest building blocks of the comics panel. In Figure Fifteen, then, the lady’s face can be said to be made up of a chin grapheme, a mouth grapheme, a nose grapheme and so on. But we can also consider there to be a face grapheme and a hair grapheme which combine to create a head grapheme. These graphemes are nested, scalable and recombining, and create the new units of meaning – such as particular faces – in this synthetic system. The verbal content, by way of comparison, uses more consistent word forms, as I discussed above. If we consider that this lady’s nose, say, could have been drawn differently, that a different nose grapheme could have been combined with the other facial graphemes, this could not be said for the addition of the verbal morpheme ‘-s’ to indicate the plural in its combinations, respectively, with the morphemes ‘judge’ and ‘generation’. That is not to say that morphemes are less productive as meaning-makers, but that they function differently; Regina’s sentence, of course, could be expressed differently, using different morphemes, and this difference would be as significant in producing meaning as a variation in the pictorial graphemes but it would require the changing of many morphemes, as opposed to a single grapheme. These two modes of meaning production, however, recombine synthetically at the site that is the panel which, organised spatially like a picture, can be considered synthetic.

¹⁷² Op. cit., p. 33.

¹⁷³ Op. cit., p. 28.



Figure 15: from Modan, Rutu (2013; 16).¹⁷⁴

Cohn's conceptualisation of visual language as synthetic, then, reflects the idea that comics function through the recombination of component parts of varying sizes, which assemble in the panels of a comics volume. The fact that both words and images function in this way is useful for being able to analyse them in the same way and as part of the same system, rather than operating separately, parallel to one another.

Iconicity and graphiation

These synthetic parts, however, words and images, morphemes and graphemes, function at a further level of granularity. In my discussion, above, of conventionalisation and economisation I mentioned that Deleuze and Guattari's comparison of envelopes to the forms that signifiers take was a productive conceptualisation. These envelopes allow the concepts they represent to communicate with one another, and this constitutes these signifiers' 'iconic' function, their power to designate. Comics theorist Scott McCloud defines an icon as "any

¹⁷⁴ Rutu Modan, *The Property*, trans. by Jessica Cohen (London: Jonathan Cape, 2013), p. 16.

image used to represent a person, place, thing or idea”,¹⁷⁵ be that verbal or pictorial. He does, however, separate pictorial and non-pictorial icons, as seen in the panels below:

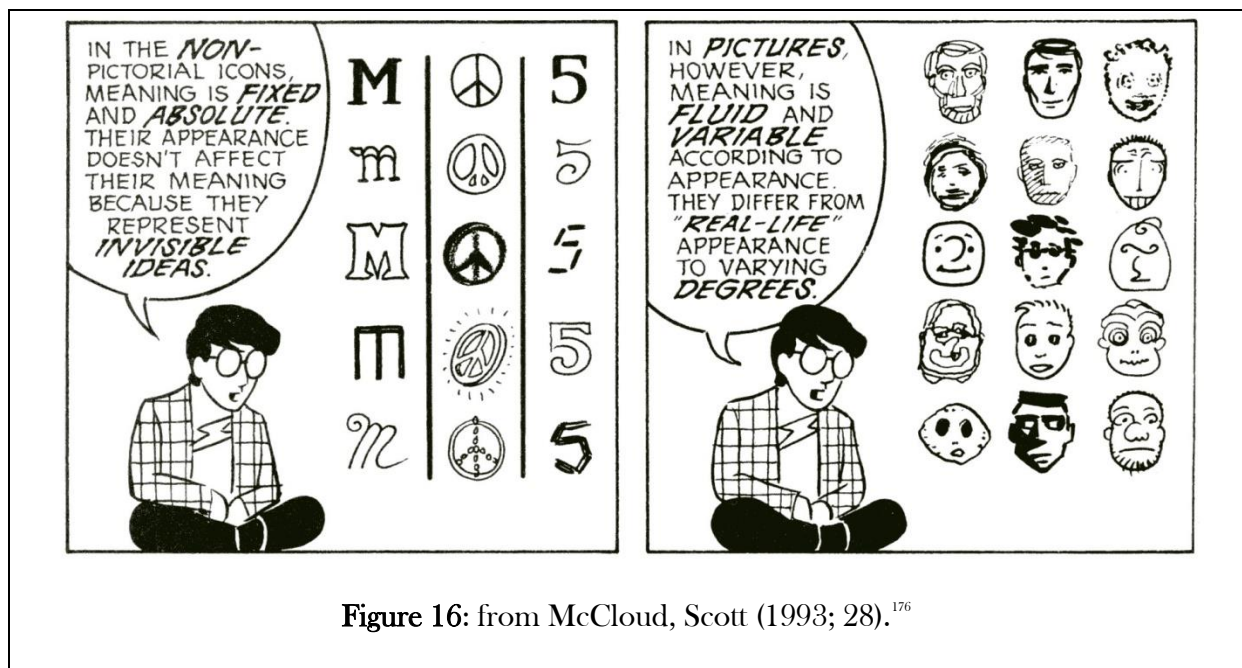


Figure 16: from McCloud, Scott (1993; 28).¹⁷⁶

McCloud's argument is problematic but, by understanding why, the difference between the 'iconic' status of signs and their 'graphic' status can be explained. I will address this 'graphic' status in more detail soon, however, for now, suffice it to say that the iconic is the *what* of representation, and the graphic the *how*.

In McCloud's left-hand panel, then, although the iconic value, what is referred to through the envelope of form, has not changed, the way it is depicted, its graphic value, has. Although McCloud argues that this only changes the meaning of the images in the right-hand panel, that is not the case; the images in both panels are changed by their respective 'graphiations'. Whilst the form, or envelope, functions to indicate to the reader the concept that is being presented, how that concept is being presented is also significant. Taking the third '5' down as an example, it clearly enters into different networks of usage, implies different meanings, than do any of the other '5's. Although they all share an iconic value, the base

¹⁷⁵ McCloud, p. 27.

¹⁷⁶ Op. cit., p.28.

concept represented by the envelope ‘5’, their various presentations function differently and therefore they *mean* differently. Pictorial and non-pictorial signs, of course, can designate the same concept iconically; the verbal envelope ‘five’ here would achieve this, as do the various presentations of Bertrand Russell in *Logicomix* as he is both depicted and referred to by name. These different ways of presenting the same base concept clearly mean differently, as addressed above; they constitute different envelopes for presenting the same base concept. So it is with the different graphic appearances of McCloud’s 5s.

The fact that McCloud juxtaposes and equates these two panels, and yet presents different faces, explains his mistake. He is suggesting an equivalence between *the* number ‘5’ with *a* face, rather than *the* face of a particular person which would, *iconically*, function in the same way as the numbers. This subtle shift in focus, this inconsistency, is significant because it exposes the flaw in McCloud’s argument. By changing the face that is depicted, McCloud suggests that what each of these faces refers to, their base concept, is ‘face’ not ‘the face of someone particular’. As I explained with reference to the word ‘dog’ and the different graphiations of dogs in Figure Twelve, images struggle to function in such a non-specific way. Otherwise he would be arguing that what the ‘5’s or ‘M’s designate are ‘number’ and ‘letter’, not specific numbers and letters. The meaning of *the* number 5, that is, the concept behind this icon, this envelope, does not change with its graphiation, its appearance, but the meaning of *this* 5 does. Just as a signifier attains a specific meaning within a volume of comics, as I discussed with relation to *Logicomix*’s panels, so do the graphic variations of each iteration suggest something significant in that particular recombination. As I argued earlier, it is in the nature of icons, be they verbal or pictorial, to be selective in what they represent, and this selection should be regarded as highly significant. Despite the truth of McCloud’s argument that, “[b]y de-emphasising the appearance of the physical world in favor of the idea of form,

the cartoon places itself in the world of concepts”,¹⁷⁷ this should not be understood as meaning that ‘cartoons’ function only as concepts, only iconically. It is crucial to the understanding of comics, and to the composition of their internal networks, that these concepts are also understood graphically.

Thus far, I have been using the term ‘graphiation’ mainly as a counterpoint to the iconic values of icons but, given its importance, I will now explain what I understand by the term in a little more detail. Groensteen uses this term, which he traces to Phillipe Marion, to differentiate between iconic and graphic values, the two sides of an icon’s meaning-making. He develops my explanation, above, of the iconic as the *what* and the graphic as the *how*, when he states, “[m]onstration [which is the iconic value, what is shown] is transitive, directed towards figuration, whereas graphiation is reflexive, directed towards the graphic act”.¹⁷⁸ He denigrates graphiation, however, as being “nothing more than the unavoidable presence of style...in any drawn narrative”.¹⁷⁹ This unavoidability, however, should not be confused with insignificance. As I argued above about Nodelman’s noses, the necessity to depict *something*, or to have to do so in a *specific* way, due to the impossibility of an a-signifying depiction decision, does not reduce the significance of that decision. However inevitable a graphic style is, the decisions that must be made within graphic representation, the artist’s negotiation of their medium, is highly significant and an important area of meaning-making. Thinking back to the motion lines from different traditions in Figure Six, even though their “surface depiction”¹⁸⁰ changed, their base concept did not. If, however, at some point in *Batman*, the types of motion lines used in *Akira* were deployed, this would clearly be a significant, in both senses of the word, depiction decision, a significant graphiation, even though the base concept, motion lines’ iconicity, would remain unchanged. Signifiers attain their meaning from both their iconic and their graphic

¹⁷⁷ Op. cit., p. 41.

¹⁷⁸ Groensteen, *Comics and Narration*, p. 85.

¹⁷⁹ *ibid.*

¹⁸⁰ Cohn, p. 39.

values. We might also think of Dupuy and Berbérien's aliens here. Although the envelope, alien, is different to how they are presented in the rest of the volume, as humans, the icons they refer to, Dupuy and Berbérien, are unchanged; the representation decision means something, and something important.

Abstract comics and graphic adventures

Although the majority of comics are mainly representational, there exists a subset of comics which are abstract.¹⁸¹ When the French comics publishers Atrabile launched their abstract comics feature in 'Bile Noire' in Spring 2003, they did so with the prohibition of "the representation of any concrete 'object' (i.e., one with an unambiguous meaning) other than those belonging to the semantics of the medium itself, in other words speech balloons and panels".¹⁸² Surprisingly, despite his denigration of graphiation, Groensteen argues that Lewis Trondheim's abstract work, "had the particular virtue of proving that the play of abstract forms should not be taken to imply an absence of meaning".¹⁸³ If the graphic can produce meaning alone, it is clear that it can do so in conjunction with the iconic, without being dependent on the iconic. Groensteen's explanation of abstract comics' meaning-mechanism, in fact, explains not only how abstract comics, but how all comics function both graphically and iconically: "'images' [which we should take as any signifier] interact with each other. They establish relationships of position, contiguity, intensity, repetition, variation, or contrast, as well as dynamic relationships of rhythm, interwovenness, etc.". ¹⁸⁴ Once more, the principle of recombination and component parts in synthesis can be seen as driving meaning production in comics.

¹⁸¹ See Andrei Molotiu, *Abstract Comics* (2016) <<http://abstractcomics.blogspot.co.uk/>> [accessed 23 March 2016].

¹⁸² Quoted in Groensteen, *Comics and Narration*, p. 10.

¹⁸³ Groensteen, *Comics and Narration*, p. 10.

¹⁸⁴ Op. cit., p. 11.

Groensteen goes on to question whether “it is feasible for a line, a shape, a color, or any graphic entity, to have ‘adventures’ in its own right”,¹⁸⁵ but why should adventures, as he calls them, be restricted to the iconic side of signs, and not extended to the graphic? This is not only feasible but inevitable. The reason that we are less accustomed to thinking of them in this way, however, is likely because, once more, of the limits of human working-memory which direct our perception, evolutionarily motivated as it is, anthropocentrically.¹⁸⁶ In order to capture the entire meaning-mechanism of comics, however, it is necessary to investigate this sort of interaction and to make discoverable these facets of comics which are no less present, no less meaningful, for the relative inattention they are paid. This is the case, remember, not only for words and images, but for the morphemes and graphemes that comprise them, too.

Verbal graphiation

Thus far, I have predominantly addressed pictorial content. Graphiation, however, also occurs in the representation of words, as suggested in my analysis of McCloud, above. In fact, returning to McCloud’s panels, if we consider the way he emboldens and italicises certain words in order to set up comparisons, “**FIXED** AND **ABSOLUTE**” on the left vs “**FLUID** AND **VARIABLE**” (bold and italics original) on the right¹⁸⁷ for example, we can see what cognitive comics theorist Karen Kukkonen calls words’ “onomatopoeic effect”,¹⁸⁸ the graphic facet of words in comics. The reason that we might not usually consider words as having a graphic status is because we are culturally accustomed to seeing them printed in an unchangeable, static form, particularly in analogue publications such as books and newspapers. This is why the form of a book like N. Katherine Hayles’s *Writing Machines* (2002), where

¹⁸⁵ Op. cit., p. 12.

¹⁸⁶ Elizabeth Landau, *So you're a cyborg -- now what?* (2012) <<http://edition.cnn.com/2012/05/07/health/memory-computers-brain/index.html>> [accessed 2 May 2016].

¹⁸⁷ McCloud, p. 28.

¹⁸⁸ Karen Kukkonen, *Studying Comics and Graphic Novels* (Oxford: Wiley Blackwell, 2013), p. 174.

different fonts are used for different types of writing,¹⁸⁹ is so surprising. This onomatopoeic effect can also be seen in the example below from David Mazzucchelli's *Asterios Polyp* (2009).



Figure 17: from Mazzucchelli, David (2009; n.p.).¹⁹⁰

Each of these different characters – Willy, Asterios, and Hana, in order of speech – has a different font used for their enunciations which constitutes part of their graphiation. Although Mazzucchelli retains these fonts throughout, and there would, therefore, be no fluctuation to analyse, the fact that fonts can be used rhetorically and meaningfully is still demonstrated here. Fonts are one of several typographic qualities to bear meaning in comics in a way that is rare, though not unheard of, in traditional literature. In Figure Eighteen, we can see, for example, how Rutu Modan has used capitalisation to indicate the language in which utterances are spoken. Since comics is less bound by convention, typographic elements such as this can be mobilised rhetorically rather than existing only in accordance with grammar and syntax.

¹⁸⁹ The book uses “the typeface Cree Sans for the personal and Egyptienne for the theoretical” and an amalgam, “Creegyptienne [for] the synthesized voice of the personal-theoretical” (N. Katherine Hayles, *Writing Machines* (Cambridge: The MIT Press, 2002), p. 141.).

¹⁹⁰ Mazzucchelli, n.p..

Further, back in Figure Seventeen, it is possible to see, in the top right-hand panel, that Asterios's "THAT" not only has the slanted character of an italicised word but is markedly larger than all of the other words in the sequence. A similar graphiation can also be seen in Figure Fifteen.

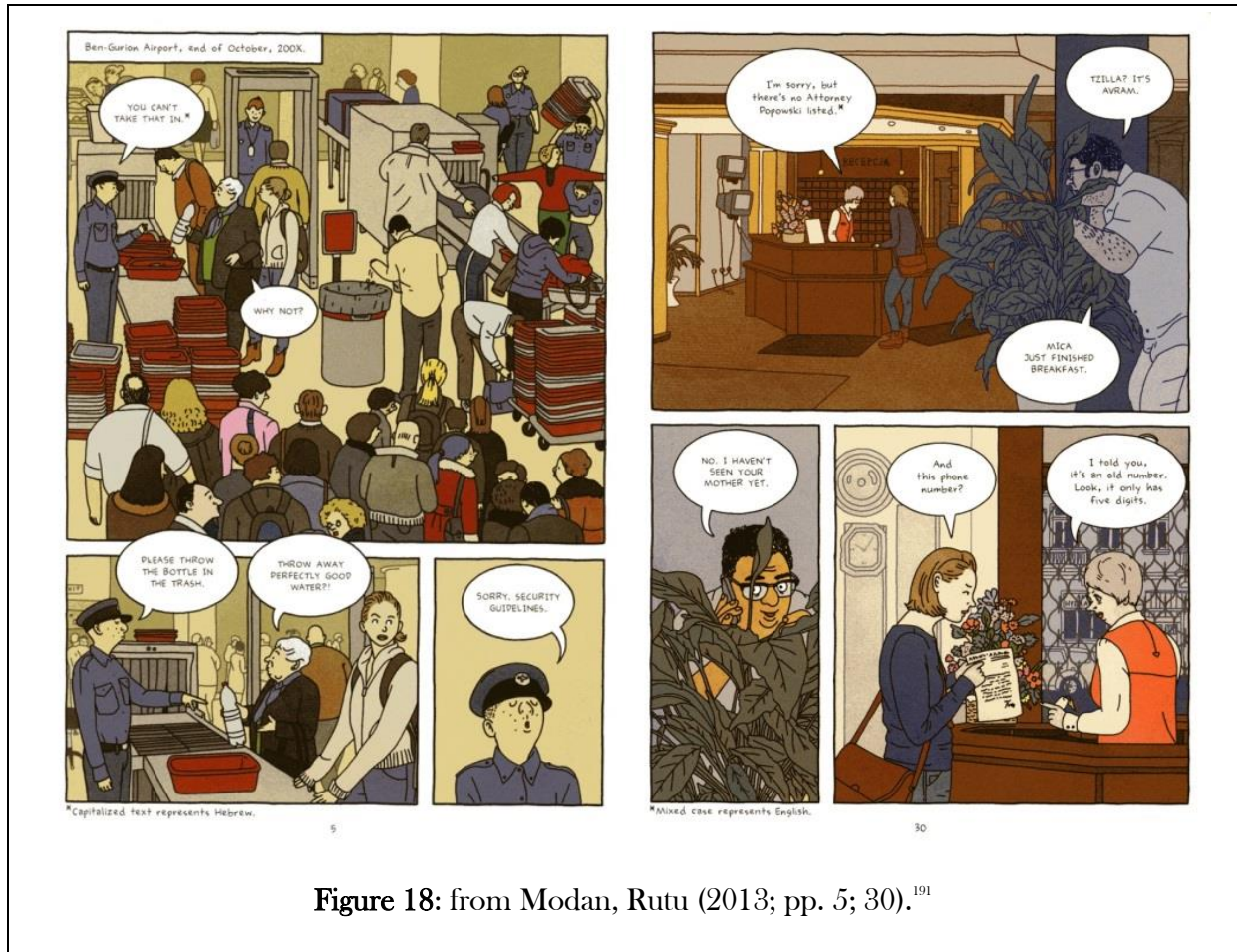


Figure 18: from Modan, Rutu (2013; pp. 5; 30).¹⁹¹

As Kukkonen explains, “the letters in speech bubbles have onomatopoeic qualities [...] their size and boldness correspond to the volume at which they are spoken and the emphasis which is laid onto them”.¹⁹² There is, however, no reason to limit this effect to speech bubbles as can be seen in Figure Nineteen, where the title and caption mobilise typography for rhetorical ends. This graphic dimension to the verbal is, appropriately, found most frequently in instances of diegetic onomatopoeia, but exists as a facet of all words in comics and, indeed, potentially for

¹⁹¹ Modan, pp. 5; 30.

¹⁹² Kukkonen, p. 9.

smaller, phonetic or morphological units as shown in the phonetic example below from *Marbles: Mania, Depression, Michelangelo and Me* (2013) in Figure Twenty. A reason that it may remain less visible than it might is because not all comics creators mobilise this affordance of their medium; the lack of fluctuation being, as I argued above, the least significant, the least signifying, depiction decision possible.

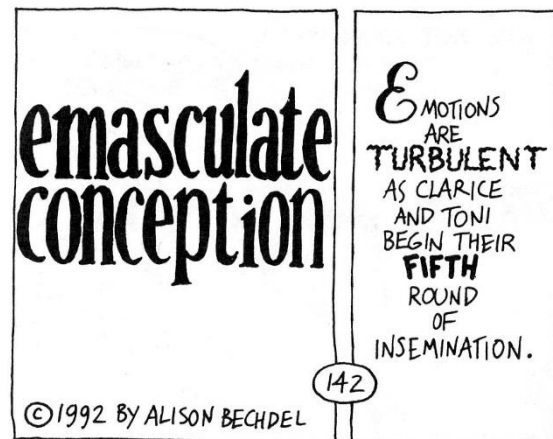


Figure 19: from Bechdel, Alison (1993; 40).¹⁹³

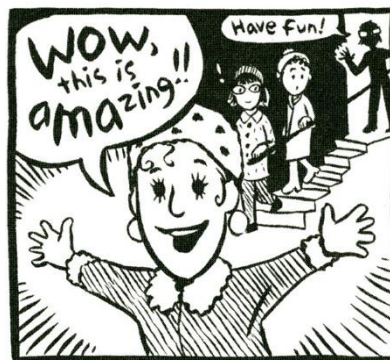


Figure 20: from Forney, Ellen (2013; 67).¹⁹⁴

¹⁹³ Bechdel, *Spawn*, p. 40.

¹⁹⁴ Ellen Forney, *Marbles: Mania, Depression, Michelangelo and Me* (London: Robinson, 2013), p. 67.

Words and images conclusion

Although Groensteen argues that the panel is the smallest productive unit in comics when he states that “it does not seem profitable to me to approach the study of comics beginning from units smaller than the panel”,¹⁹⁵ it is clear, rather, that not only are comics comprised of smaller productive units, the morphemes and graphemes that assemble synthetically at panels, but that each of these units functions both iconically and graphically. Further, these various elements should be considered as protagonists, as agents, as much as the human characters of a comic; they constitute different lines along which the text can be folded. It is only through an understanding of these interweaving networks that a comics volume’s meaning can be discovered; it is through their interactions and recombinations that meaning is produced. As the collective of Belgian semioticians, Groupe Mu, describe: “A work of visual art can be examined from the point of view of forms, from the point of view of colours, from the point of view of textures, and from that of the whole formed by all of these together. It should also be noted that these visual data are co-present, so that the image is, from the outset, always potentially tabular”.¹⁹⁶ Any of these facets can go on ‘adventures’, can be considered as meaningful agents, and it is their network that produces a volume of comics’ meaning.

The comic as rhizome

The synthetic component parts of panels, then, with their various affordances, function both graphically and iconically with meaning produced through their various recombinations throughout a volume of comics. The reason that the panel is the primary structuring unit in this analysis is not due to any superiority over the other structuring units of a comic – its rows, pages, and double-page spreads – but because each of these, when they exist, are made up of

¹⁹⁵ Groensteen, *System*, p. 24.

¹⁹⁶ Groupe Mu, *Traité du signe visuel* (Paris: Seuil, 1992), p. 189.

panels. I write ‘when they exist’ because not all volumes use the simple structure shown in Figure Twenty-One.

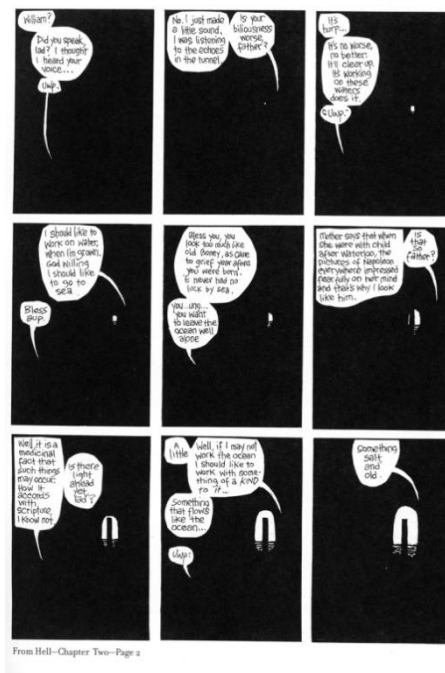


Figure 21: from Moore, Alan and Eddie Campbell (2006; Ch. 2, p. 2).¹⁹⁷

There are many ways in which a comics page can be laid out – consider Figures Two, Ten, Fourteen, Seventeen, Eighteen, Twenty-One and Twenty-Two for just a few options – but what is important, here, is that any page layout can be considered a site at which meaning occurs.

¹⁹⁷ Alan Moore and Eddie Campbell, *From Hell* (London: Knockabout Limited, 2006), Ch. 2, p. 2.

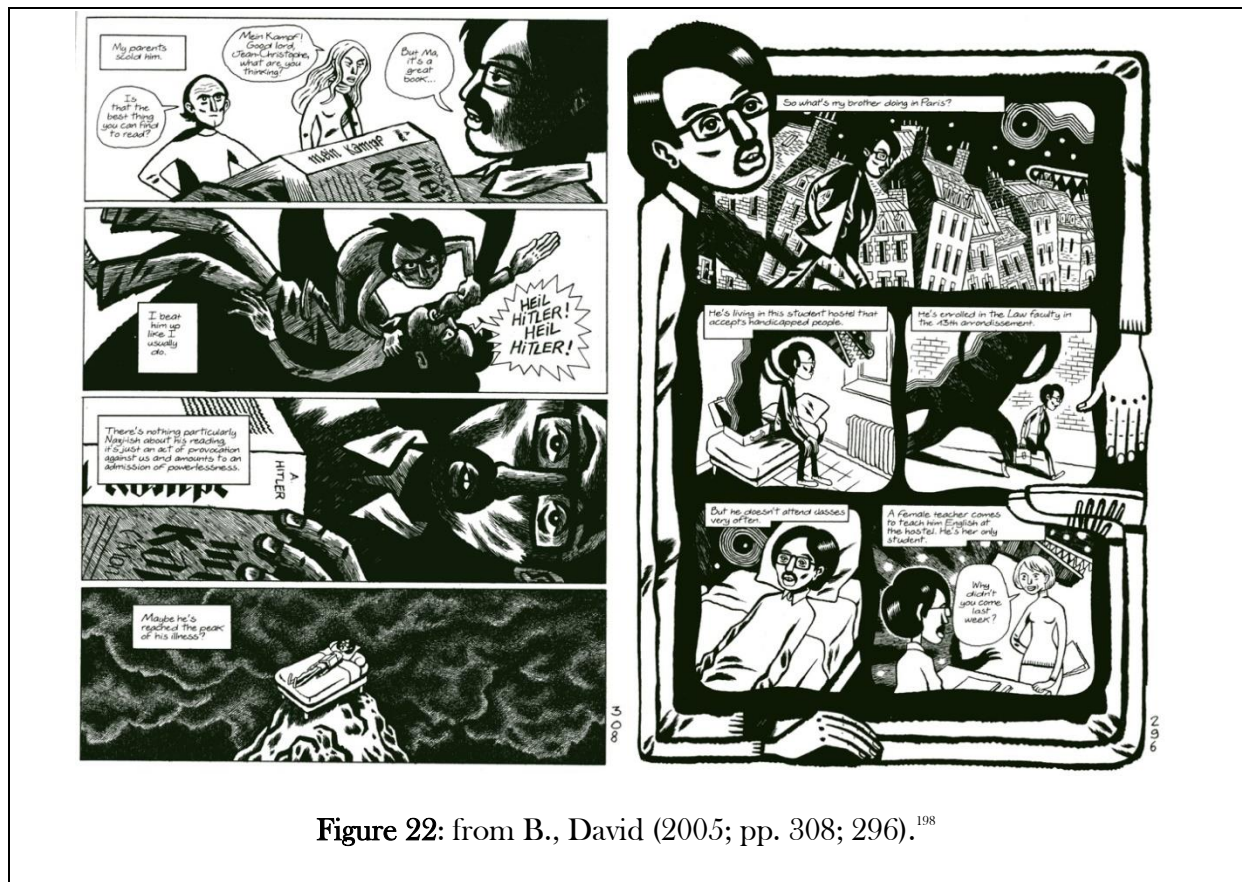


Figure 22: from B., David (2005; pp. 308; 296).¹⁹⁸

It is through the progression of panels in space that a narrative proceeds. How these panels interact on the page, and on the double-page, should be considered as functioning synthetically, too, as functioning in the same way as the component parts of the panel. Because of this, I will focus on the panel but bearing in mind, all the while, that it is analogous to the whole of a volume's meaning-mechanism, at all of its structural nests. With my understanding of comics as a networked machine, I will now address how these panels, once they have been synthetically produced, interact with one another.

Comics theorists Jan Baetens and Pascal Lefèvre's theory seems to resonate with this synthetic, networked conceptualisation of comics when they write that, "far from presenting itself as a chain of panels, the comic demands a reading capable of searching, beyond linear relations, to the aspects or fragments of other panels".¹⁹⁹ Conceptualising the synthetic parts of

¹⁹⁸ David B., *Epileptic*, trans. by Kim Thompson (London: Jonathan Cape, 2005), pp. 308; 296.

¹⁹⁹ Jan Baetens and Pascal Lefèvre, *Pour une lecture modern de la bande dessinée* (Bruxelles, CBBB, 1993), p. 72.

panels as fragments is a useful way for thinking through how these component parts function; whilst they are part of various panels they also exist in their own right. Groensteen takes this idea of ‘fragment’ further when he explains that “comics is not only an art of fragments, of scattering, of distribution; it is also an art of conjunction, of repetition, of linking together”.²⁰⁰

These synthetic parts should be considered as strands running through a volume, they constitute a part of a panel (which they compose by their relations with other strands), but they also pull particular panels together, bring them into relation. Through this conceptualisation of the synthetic components as strands, we can approach Groensteen’s idea that “images that the breakdown holds at a distance, physically and contextually independent, are suddenly revealed as communicating closely, in debt to one another”.²⁰¹ This notion of debt, I think, is Groensteen’s way of expressing the idea I mentioned above, that entities, these strands, attain a particular meaning within a volume of comics; this ‘debt’ is an acknowledgment that a panel’s meaning is produced, in part, by its synthetic fragments’ various usages throughout the volume.

This image of elements – a term I am using to designate any synthetic part of a comic, graphic or iconic – as strands within the network structuration of a volume of comics recalls Deleuze and Guattari’s thinking about the rhizome. They use this root system, shown below, to explain how everything is structured, how ‘Being’ functions.²⁰²

²⁰⁰ Groensteen, *System*, p. 22.

²⁰¹ Op. cit., p. 158.

²⁰² It should be noted that Nick Sousanis usefully discusses this interaction between Deleuze and Guattari and Groensteen’s work in *Unflattening*.

Nick Sousanis. *Unflattening*. Cambridge, Mass: Harvard University Press, 2015. Print. p. 62.

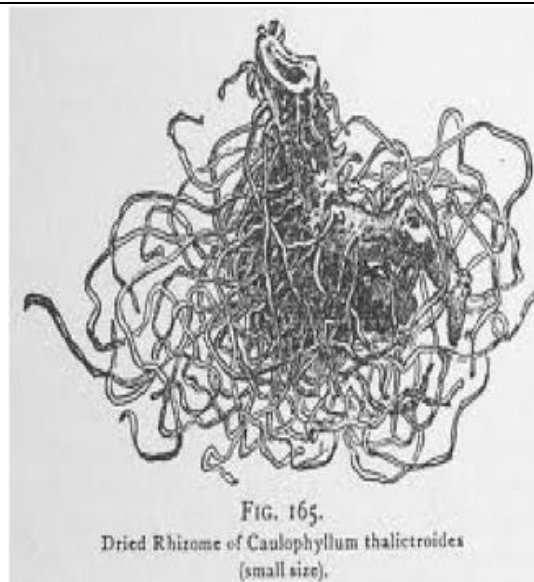


Figure 23: from Jeffery, Scott (2016; n.p.).²⁰³

They define it against the root system of trees which, conversely, is binary and hierarchical and, they argue, is the basis of the flawed conceptualisations of the world used by capitalism and psychoanalysis. As opposed to this, as this image shows, “any point of a rhizome can be connected to any other”.²⁰⁴ This networked structure, where every strand is in potential conversation with every other, clearly resonates with the structure that I am building here and with Groensteen’s ideas. As such, Deleuze and Guattari’s thought serves as a useful philosophical scaffolding for this analysis.

Considering comics in this way implies a non-linear, non-chronological conceptualisation of the medium’s meaning-mechanism. This type of conceptualisation can be found in Roland Barthes’s discussion of ‘rereading’ in *S/Z* (1990) where he argues, “there is no *first* reading, even if the text is concerned to give us that illusion by several operations of *suspense*” (emphases original).²⁰⁵ Barthes’s thought implores us to understand texts as plural, as multiple, rather than containing a singular, discoverable ‘Truth’. It encourages a way of reading

²⁰³ Scott Jeffery, *Nth Mind* (2016) <<https://nthmind.files.wordpress.com/2013/02/rhizome.jpg>> [accessed 8 April 2016].

²⁰⁴ Deleuze and Guattari, *A Thousand Plateaus*, p. 7.

²⁰⁵ Roland Barthes, *S/Z*, trans. by Richard Miller (Oxford: Blackwell, 1990), p. 16.

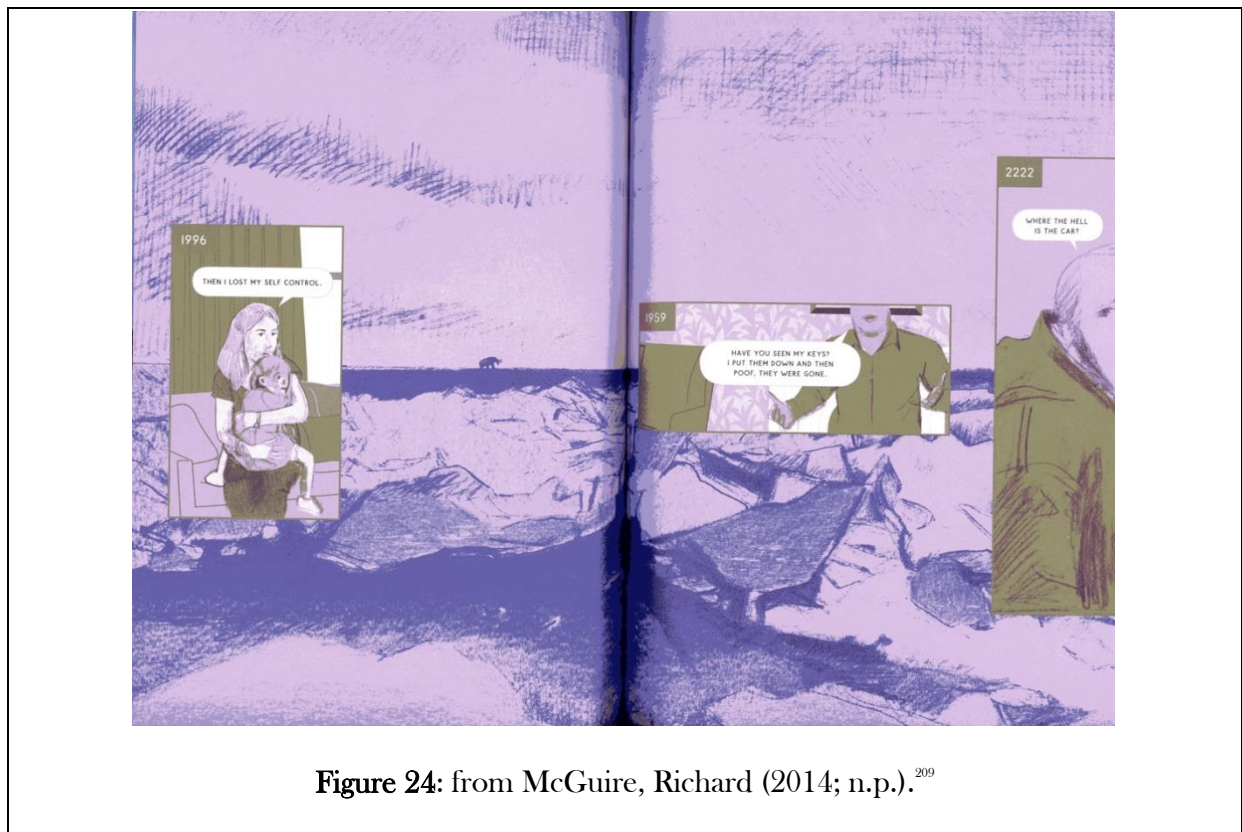
that “draws the text out of its internal chronology (‘this happens *before* or *after* that’)” in an attempt to recapture “a mythic time (without *before* or *after*)”.²⁰⁶ Considering a text separately from its chronology, it is easier to perceive it as a network of interweaving strands. This, I believe, is the most productive and fertile method for understanding comics’s meaning-mechanism. I should clarify that this is not to say that narrative time is insignificant, as that would contradict my premise that everything in a comics volume is meaningful; the order in which events occur does, of course, bear meaning. In my discussion of abstract comics I mentioned how lines, colours, any graphic element in fact, should be considered as much as agents as the characters themselves, that they are lines along which a text can be folded; narrative time, too, is one of these folds, another dimension of the text. That is to say, it is *only one* of these folds, *one* way of orienting or organising a text. As it was with colours and characters, though, it is not a case of bringing narrative time down to the level of colours or locations, but of elevating every other element of a comic to the status of time such that they, too, can be considered as potentially nuclear principles by which the whole text can be organised. This recalls the unhierarchical structure of the rhizome and what Barthes describes as the “ideal text” where “the networks are many and interact, without any one of them being able to surpass the rest; the text is a galaxy of signifiers, not a structure of signifieds; it has no beginning; it is reversible; we gain access to it by several entrances, none of which can be authoritatively declared to be the main one”.²⁰⁷ This is the structure by which the panels of the comics volume are organised.

The lack of hierarchy here is important. Even if human readers prioritise human subjects – or, at least, anthropomorphic subjects – that is not to say that they inherently bear more meaning or are, indeed, the ‘subjects’ of the book. This misplaced anthropocentrism can be seen in Groensteen’s comment that “without exception, the characters are revealed as more

²⁰⁶ *ibid.*

²⁰⁷ *Op. cit.*, p. 5.

meaningful than the décor”.²⁰⁸ A comics volume such as Richard McGuire’s *Here* (2014) serves as a counterpoint to this idea. In McGuire’s piece, the same geographic location – the title’s ‘here’ – is seen from a fixed point through tens of thousands of years, often with many presented at once. Humans, as well as civilisation, come and go but the location – which is predominantly a sitting room in a house – remains. This location is undoubtedly as much the subject of the piece as any human actor.



It is not that characters are inherently more meaningful – I have already argued that any element in a panel can be considered a character – only that, when something is reproduced more times, when it takes part in more interactions, in more recombinations then, of course, it will have a greater bearing on the narrative. Groensteen has his formulation back to front. It is not that characters are more meaningful but that the things we find as being more meaningful we call characters; recall, for example, the abstract comics above. The rhizome’s lack of

²⁰⁸ Groensteen, *System*, p. 121.

²⁰⁹ Richard McGuire, *Here* (London: Hamish Hamilton, 2014), n.p..

hierarchy, however, should also not be misinterpreted. All this does not mean that humans should not be subjects of studies, only that they are not as predominant as we perceive them to be in a volume's meaning-mechanism. Rather, it is only through understanding such subjects – although it would be true of non-human subjects too – in their various relations to, and recombinations with, everything else that they can be fully comprehended. Just as we perceive colours differently dependent on their context (see Figure Twenty-Five where the squares A, B and C are all the same colour), the other colours they are placed in relation with, so we perceive these strands differently, dependent on the relations they are entered into. By considering other strands of the comics medium as potentially significant organising principles, more light can be shed on the more traditional subjects of study and richer analyses be made.

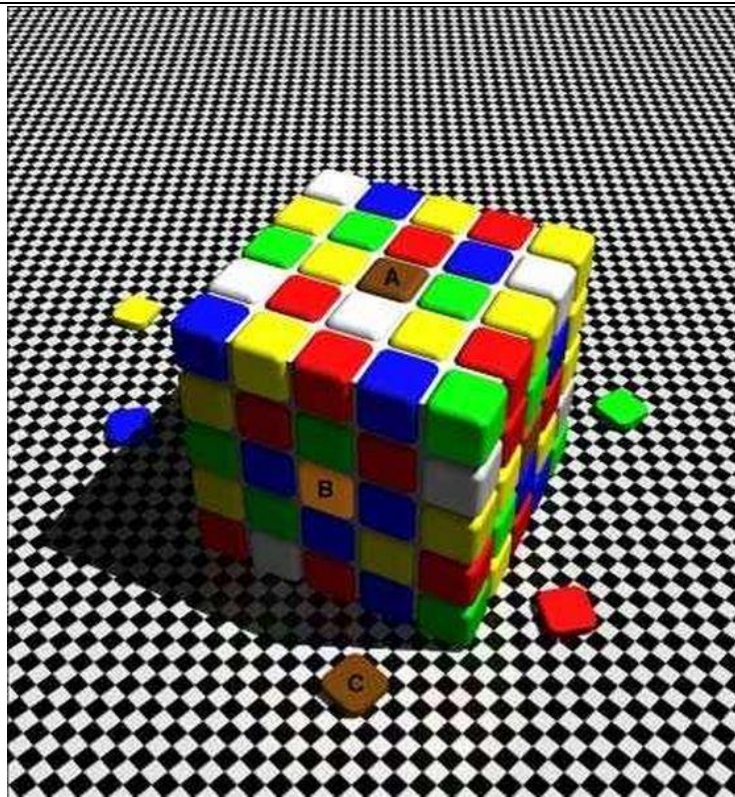


Figure 25: Adamovic, Jan (2012).²¹⁰

²¹⁰ Jan Adamovic, *Color Illusions* (2012) <<http://brainden.com/images/color-cube-big.jpg>> [accessed 18 May 2016].

Plateaux

Using the rhizome, then, as a model for a comics volume's structure is useful for unpacking its meaning. What, then, makes up the rhizome? Deleuze and Guattari call this unit the "plateau",²¹¹ a term they borrow from the anthropologist Gregory Bateson who, they explain, uses it to "designate something very special: a continuous, self-vibrating region of intensities whose development avoids any orientation toward a culmination point or external end".²¹² This is the site at which various elements combine; the site is created by their combination, their combination is all that a plateau *is*. It is the name given to the combination of various elements. If we consider elements to be threads, or as Deleuze and Guattari have it, 'lines', and plateaux to be their point of intersection, we can understand what Deleuze means when he argues that 'things', points, do not exist,²¹³ that "points are nothing but inflections of lines".²¹⁴ In this subsection, I want to mobilise this term, 'plateau', to capture how two, related, mechanisms in comics function; I will use it as a model for the panel and as a model for the component parts of the panel. Being able to use the same model at both levels of nesting reinforces the idea that every level of structure in comics functions in the same way and reinforces my premise that comics are built on recombination.

Panels as plateaux

Given that a plateau is what is created when various lines intersect, each panel should be considered a plateau; as I have explained, the panel is the site at which morphemes and graphemes combine and synthesise. In any and all of the panels I have used so far, it is possible to see the interaction of morphemes and graphemes, parts and wholes, in their various dimensions, their iconicity and their graphiation. This interaction is the panel's meaning-

²¹¹ Deleuze and Guattari, *A Thousand Plateaus*, p. 24.

²¹² *ibid.*

²¹³ Gilles Deleuze, *Negotiations*. trans. by Martin Joughin. (New York: Columbia University Press, 1995), p. 160.

²¹⁴ *Op. Cit.*, p. 161.

mechanism; it assembles parts synthetically to create its novel and unique meaning. Its discrete nature, its boundedness, binds these heterogeneous signifiers together, uniting these transitory signifiers in a moment in space. This idea can be reinforced by recalling that these entities are only represented by their forms, their envelopes, as opposed to being ‘present’ in some unmediated way. It is through the various arrangements of these component parts, at various panels, that meaning is created. It is easy to see how this also applies to the row, the page, the double-page and even a whole volume. The plateau functions, as the panel does, in the mode of what Deleuze and Guattari would call an ‘assemblage’; an assemblage is “a multiplicity which is made up of many heterogeneous terms and which establishes liaisons, relations between them... the assemblage's only unity is that of co-functioning: it is a symbiosis, a 'sympathy'”.²¹⁵ This is as accurate a definition of a whole book – as Deleuze and Guattari claim²¹⁶ – as it is of a single panel. The syntheticity and scalability of comics’s meaning-mechanism can, therefore, be seen once more.

Deleuze and Guattari explain that, in order to understand an assemblage, one must do so “in connection with other assemblages...never ask what [it] means...ask what it functions with, in connection with what other things it does or does not transmit intensities, in which other multiplicities its own are inserted and metamorphosed...[I]t is a little machine”.²¹⁷ This explains that, in order to understand a panel, one must do so in its relations to all other panels, to compare their various arrangements and the relationships they place these in, their recombination of component parts. When we realise that by ‘multiplicities’ they mean individual component parts (they use this term because they consider all ‘things’ to be plural, not singular) the idea of recombination becomes even clearer, and the conceptualisation of synthetic parts as strands, woven through a text, entering panels into communication with each

²¹⁵ Gilles Deleuze and Claire Parnet, *Dialogues*. trans. by Hugh Tomlinson and Barbara Habberjam. (London: Athlone, 1987), p. 52.

²¹⁶ Deleuze and Guattari, *A Thousand Plateaus*, p. 4.

²¹⁷ *ibid.*

other, is strengthened. By taking each panel as an assemblage, then, the principle of recombination can once again be seen as being central to comics's meaning-making. Likewise, considering the structuring units of the row, the page, or the double-page, new networks, new assemblages can be perceived, entering each element into further recombinations. As panels are, ontologically, the network of the elements that compose them, so too is the volume of comics the network of its panels. To understand a volume of comics, therefore, it is necessary to map its recombinations and the various assemblages of these recombinations at different panels of the volume.

Panel populators as plateaux

If it is the rhizomatic intersection of elements which makes meaning in panels, these elements themselves are also created rhizomatically, they also constitute plateaux. Deleuze and Guattari write that the rhizome “is composed not of units but of dimensions, or rather directions in motion”.²¹⁸ The first half of this quotation resonates with the idea of graphiation/iconicity since its focus allows for a less object-oriented, and more facet-oriented, composition; it allows a discussion of parts – dimensions – rather than insisting on wholes – units. The second half of the quotation acknowledges the fluidity of even these, less complete, components. I discussed, above, how a term can be conventionalised, can attain a meaning within a single volume of comics, in fact, that every term is partly redefined by its particular usage within a volume. If we map this onto the idea of a plateau and recall that all icons are envelopes, we can see these envelopes functioning like plateaux; by constituting a site at which meaning accumulates, signifiers mean through the accumulation of their iterations. Just as words and images cannot be perceived at once and thus require cyclical perception, so too is it with the various plateaux of panels and the plateaux that make up panels. This is Barthes's

²¹⁸ Op cit., p. 23.

impossibility of a first reading, a mythic time without before or after, where instead there is only relation, interaction and recombination.

Returning to *S/Z* and Barthes's conceptualisation of words as economic units, a parallel can be identified with the idea of the plateau, this 'thing' which is merely the inflection of lines. Barthes argues that that which we call a character is created when the same descriptors "traverse the same proper name several times and appear to settle upon it [...] [t]hus the character is a product of combinations".²¹⁹ Barthes shows how a character – although, as I have discussed, any element should be considered as potentially a character – *is*, ontologically, the intersection of lines, the product of recombination. That is, not only are they composed synthetically – like the panel – but that this composition takes place throughout the text's network, through each of their iterations. Invoking Barthes's a-chronological 'time', then, any and every entity *is* its various iterations in their various recombinations. That is, when we discuss Hana, from *Asterios Polyp*, we do so holistically, as an aggregate, or better, an accumulation of each of her iterations throughout the volume. Any icon used to designate Hana (the concept behind the envelope), be it her name or an image of her, is done so economically but, in their totality, they compose her very 'Being' in the volume. As Barthes writes of Sarrasine, the eponymous protagonist of the short story he analyses in *S/Z*, "what we are talking about is his *figure* (an impersonal network of symbols combined under the proper name 'Sarrasine') [...] we are not searching for the truth of Sarrasine, but for the systematics of a (transitory) site of the text: we mark this site (under the name Sarrasine) so it will take its place [...] in the indeterminable network of meanings, in the plurality of codes".²²⁰ Where Barthes writes 'site', it is possible to think 'plateau'. The economy that Barthes describes, here, these envelopes, is, of course, how every concept, every entity, is entered into a text, not only human characters. Everything, therefore, gains its significance in this way, in the sum of its iterations.

²¹⁹ Barthes, *S/Z*, p. 68.

²²⁰ Op cit., pp. 94-5.

Geographic location offers an example of this that is useful in its accessibility. It is easy to consider a place as existing beyond its name or any images of it that we encounter, in other words, to see it as the concept behind its envelopes. Considering this spatial site as a metaphor for Barthes's 'site', for the plateau, it is clear how a particular place, say the moon Wreath from *Saga* (2014), textually *is* the sum of everything that happens there; it is defined by its presence at certain events. A spatial palimpsest gets built up as it did with *Here*; the location is over-written every time something occurs there. By reversing the idea that events occur at a place – when I wrote that the place was present at events – I meant to highlight how the presence of any entity can be considered meaningful, even causal, in the same way that space is. This is how all plateaux – be they panels or envelopes – function; they are rewritten, or rather, written over again and again in each of their iterations, accumulating, while changing, their meaning with each occurrence. And just as space is ever-divisible, so too can the synthetic parts of a comics volume, from the double-page to the component parts of panels, morphemes and graphemes, be divided, too, to enable more nuanced readings.

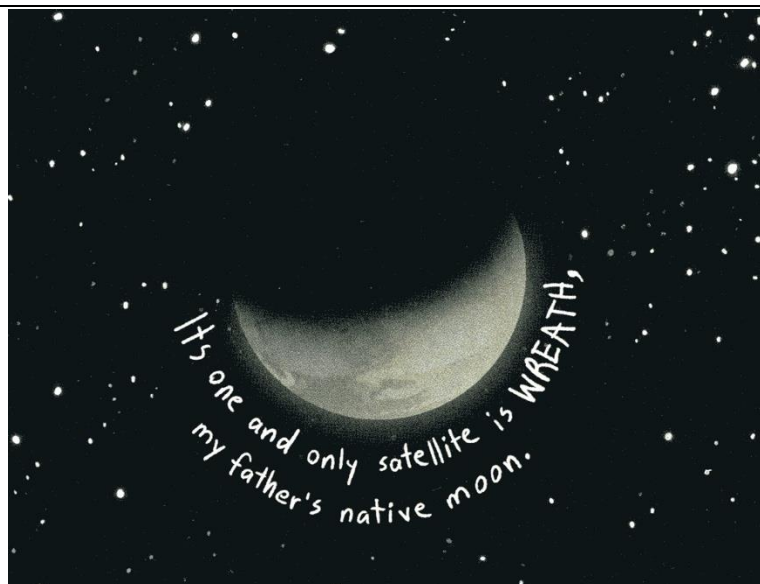


Figure 26. Wreath from Vaughan, Brian K. and Fiona Staples (2014; n.p.).²²¹

²²¹Brian K. Vaughan and Fiona Staples, *Saga: Volume 1* (Berkeley: Image Comics, 2014), n.p..

This synthetic production of an element in narrative time, as well as how a panel is composed in codex space by its assemblage of its component parts, helps in understanding Deleuze's injunction to think "of things as sets of lines to be unravelled but also to be made to intersect".²²² Any and all elements, graphic, iconic, grapheme, whole word, colour, font, can be made to intersect, to interact with other panels, just as *Logicomix*'s cogs and panel graphiations did above. It is, as Deleuze and Guattari state, in this context that "the elements in play find their individuation in the assemblage of which they are a part, independent of the form of their concept and the subjectivity of their person".²²³ This individuation occurs at the plateau that is the panel and the plateau of the envelope, but it should also be noted that it occurs for a single element in a single panel. This small detail can only be understood in relation to all of its assemblages, in its relation to the other threads of the panel, and in all of their relations to the other panels. Whilst an analysis of details is needed to understand the whole of a volume, the whole of the volume is needed to understand a single detail in its individuation.

Meaning, then, can be interpreted through the variation of variables, by looking at which collocations, co-occurrences, assemble to create meaning. If spatial or verbal concordances can uncover certain readings, this fully mobilised medium, with synthetic parts, and their graphic and iconic halves, can do so much more. As Deleuze puts it, "it's not a matter of bringing all sorts of things together under one concept, but rather of relating each concept to variables that explain its mutations".²²⁴ Meaning can be explained through the analysis of the presence of variables, variables defined, indeed, by their various presences. By prostheticising human memory with the database, any variable, not just space, can be mobilised to explain events and the meaning of a volume explored. Taking all levels of structuration as sites of

²²² Deleuze, *Negotiations*, pp. 160-1.

²²³ Deleuze and Guattari, *A Thousand Plateaus*, p. 291.

²²⁴ Deleuze, *Negotiations*, p. 31.

meaning-making, and predicating this meaning-making on recombination, the differences between different genres and traditions of comics can be transcended.

Braiding a Digital Methodology Between Comics and Feminist Approaches to Data

Introduction

This chapter addresses the Digital Humanities framework in which my project sits, as well as how Digital Humanities has been chosen for the study. As well as explaining what Digital Humanities technologies were chosen, how they were chosen and why they were included, the chapter is oriented towards the overarching heuristic of my work, and the fields and projects which informed it. Since each of my analysis chapters, respectively, addresses the particular critical and methodological contexts of Verbal Solidarity, the strength of the braid, and the system of comics, this chapter is freed to discuss the broader principles of Digital Humanities technologies and their application to this study. It is useful to note at this stage that, alongside the original insights the project offers to Comics Studies, it also lays the foundations for future work towards a systematising of the rhetorical structure of comics, which I expand on in my third analysis chapter. As such, although much of the focus of the analysis chapters is concerned with the verbal component of sequential narratives, this chapter also addresses the modelling of pictorial signifiers. The modes by which I approach modelling are intended to operate across the systems of a comic, and the pictorial grounds on which I initially designed this heuristic are an important part of not only of this work's future development – which I address in my final chapter – but of its intellectual biography.

To explain Digital Humanities' deployment in my study, this chapter will go through the following questions, proceeding from Digital Humanities' more generalised relevance through to its more specific application:

1. What is Digital Humanities and how can quantitative methods address some of the gaps in Comics Studies?
2. What are the conditions and assumptions embedded in Digital Humanities work?
3. What existing quantitative approaches are there for the study of comics, and what about their methods are insufficient for the work that I have undertaken?
4. Where do I position my work amongst these different voices?

The first two sections explain, for those not yet accustomed, what Digital Humanities is, what its foundational assumptions are, and some key concepts around its work that are necessary for understanding the rest of the chapter. They focus particularly on the idea of making the source text legible to a computer, the constructed-ness of data, and the notion of 'thinking computationally'.

Having set out these concepts and explained the challenges facing digital approaches to comics, I analyse three existing projects' methodologies for the quantitative analysis of comics. These projects are Alex Dunst et al.'s Hybrid Narrativity Group, Bart Beaty's 'What Were Comics?', and John Walsh's Comic Book Markup Language. All of these approaches, however, are designed for, and indeed rely on, dealing with a large corpus of texts. Whilst this is appropriate for answering the broader, generic questions each project sets out to research, it means that there is an unexplored avenue in the digital analysis of individual comics. I go on, then, to explain how the methodologies which these projects must employ for their genre-oriented and historiographical ends overly constrain a digital approach for individual comics, as well as often necessitating reductive, positivist classification systems. Having established this context I close the chapter by explaining the approach to classification that I have taken in my

digitally-enabled analysis of the single text, *Fun Home*, and how my method is not only a more defensibly humanistic approach to classification but an investigative and generative mode of inquiry. First of all, though, it will be instructive to consider the specific affordances of the comics medium for this type of project. This, I believe, will lead us neatly into the relevance of Digital Humanities for this study.

The Specificity of Comics for Digital Humanities Research

As I demonstrated in the previous chapter, the medium of comics is quite unique in its mode of making meaning. In order to show the relevance of Digital Humanities for this study it will behoove us to linger here on some specific affordances of comics, and the kind of object they present Digital Humanities researchers with. Whilst I will later – in the first analysis chapter – discuss how this object explains Groensteen’s elision of the verbal in his theory, the analysis here will elucidate the difference for Digital Humanities practitioners between textual analysis conducted within a comics context and textual analysis conducted outside of a comics context. This difference turns on the implications of comics’ use of the panel, both the stability of page structure that it creates, and its malleability as a syntactical unit.

Unlike most prose texts, the publishing conventions of long-form graphic narratives are such that they are always printed in the same page structure. That is, whilst the pagination of most prose texts is dependent on, and therefore liable to change with, the printing conventions of the publisher, *Fun Home*’s narrative, for example, will always occupy the same 232 pages, laid out as Bechdel decided, regardless of publisher or even translation, as a result of its integral panel structure. Because the pages, rows and panels of a graphic narrative have a rhetorical significance, they can no more be changed in republication than can sentence structure. Whilst some authors have split their exclusively verbal texts into a high number of chapters, or chapter-like units – I am thinking here of Ivan Vladislavic’s *Portrait with Keys* (divided into 137 chapters), Marc Saporta’s *Composition No. 1* (composed of 155 unbound pages to be

read in any order), and hypertext narratives such as Shelley Jackson's *my body - a Wunderkammer* – this remains highly unusual.²²⁵ This is to say that comics is a medium that fixes its signifiers at specific sites on the page. Because the pages, rows and panels of a graphic narrative have a rhetorical significance, they cannot be moved across pages in the same way that a linear line of text – albeit divided by sentences and paragraphs – can be.

This stability of enunciation has implications for comics creators. The fixed nature of the panel is also more malleable than the units used by purely verbal authors. The grammar of comics is not governed by a standardised syntax in the same way that sentences and paragraphs of text in purely verbal texts are. Whilst most verbal texts follow grammatical rules as to sentence length and paragraphing, comics has a more idiolectical usage. The flexibility that a comics creator has to design a panel's size, shape or zoom offers a more nuanced control over which signifiers are present at any given panel that enables a greater degree of rhetorical potential for clustering signifiers at a specific site, and omitting others. What is more, a comics creator can also allocate as many or as few words as they wish in a panel, even splitting sentences over multiple panels. This is also possible with details in the background of a comics image, which the author can decide to exclude for rhetorical effect. As such, the panel is a more significant, a more signifying, unit than are the grammatical units afforded to verbal authors. Indeed, Barthes references this insufficiency in exclusively verbal texts with his invention of "lexias" – arbitrary units of reading – at which he situates his readings. The flexibility of unit, and consequent intentionality, which the panel affords the comics medium results in a greater rhetorical burden being shouldered by the creator, and the sites of co-location are therefore more self-evidently meaningful than the sentences and paragraphs of exclusively verbal texts.

²²⁵ Other such examples might include Mark Danielewski's *House of Leaves* and *Only Revolutions* and Jonathan Safran Foer's *Tree of Codes*.

Because the units of comics are unavoidably idiolectical, and therefore hold rhetorical potential, and because they are stable units, comics offers Digital Humanities scholars an object that can be more easily, and much more profitably, indexed than would be the case with a verbal novel (although I think much of this study's findings could meaningfully be applied to the highly striated work of Vladislavic, Saporta, Jackson and their ilk). This indexical principle strikes at an adjacent technology worthy of discussion: the concordance.

The concordance offers useful insight into the value of braiding discrete sites together for analysis, particularly when it's brought into conversation with the functionality of the panel. Concordances are and have been generally used in two main ways: as a search and find mechanism; and as a mode of accessing the meaning of certain units of vocabulary, particularly in theological and classical discussions. Both of these are instructive for how braiding is useful to comics scholars. The increased speed at which a database facilitates search and find functionality is also complemented by the completeness that such a resource offers, addressing Cohn's concern about the impossibility of promiscuous transition within a human context. As a mode of clarifying certain units of vocabulary, the edge of the braid can be analysed idiolectically, taken to contain a specific reference and a specific meaning within a single text as I discussed above in relation to *Logicomix's* cogs. Further, the panel offers a specific site against which to plot the relative frequency – and co-occurrence – of signifiers/braids against narrative chronology; it offers a discrete and intentional unit for such a plotting, and for the kind of Key Word In Context analysis that some concordancing tools facilitate.

Comics in general, and *Fun Home* particularly, are structured both hierarchically and rhizomatically, through internal and external panel composition, and within and between pictorial and verbal tracks of signification. Bechdel herself has likened the process of learning

to write long-form comics as learning a new ‘syntax’.²²⁶ The formal, syntactical structuring apparatuses of comics assemble signifiers synthetically but also hold their own rhetorical affordances. Both structure and content attain idiolectical, nuanced significance through their intratextual usage as well as serving to rhizomatically weave the text together. Not only, then, is a syntactical site, such as a panel, defined by the signifiers that assemble on it, but each of those signifiers brings their individual network to bear on that site. Since these syntactical structuring sites, however, bear a rhetorical significance of their own, and one that is also created accumulatively through intra-textual usage, as well as operating within a larger, nested syntactical structure (panel; row; page; double page; chapter), the internal composition’s significance is also operated on by the external composition. The nature of the object of inquiry now being established, let us return to the four questions with which I opened this chapter.

What is Digital Humanities and How Can Quantitative Methods Address Some of the Gaps in Comics Studies?

What is Digital Humanities?

“We know DH [Digital Humanities] in large part because it names itself, yet what it names seems increasingly malleable and at times difficult to grasp” – Gold and Klein.²²⁷

‘What is Digital Humanities?’ is a notoriously persistent question within the field – as well as outside of it – which involves several sub-debates, axes on which, for some, the definition balances. Do you have to be building something digital rather than just writing about it?²²⁸

²²⁶ Chute, *Graphic Women*, p. 175.

²²⁷ Matthew K. Gold and Lauren F. Klein, ‘Digital Humanities: The Expanded Field’, in *Debates in the Digital Humanities*, ed. by Matthew K. Gold and Lauren F. Klein (Minneapolis: University of Minnesota Press, 2016), n.p..

²²⁸ Bethany Nowviskie, *On the origin of 'hack' and 'yack'* (2014) <<http://nowviskie.org/2014/on-the-origin-of-hack-and-yack/>> [accessed 26 January 2017].

Should the field be more or less inclusive; is it a ‘big tent’ or a ‘small tent’?²²⁹ Is it merely a ‘tactical term’ directed at institutions and funding bodies to leverage more money and staff positions for projects?²³⁰ Each of these questions can inform an understanding of the field, but ultimately Klein and Gold’s definition by self-identification is the most useful starting point for explanation.

Each year, on the ‘Day of DH’, self-identifying ‘DHers’ take to blogging platforms to offer a glimpse into the digital work that they are undertaking. A condition of participating, however, has been to provide a response to the ‘How do you define DH?’ question.²³¹ This requirement gestures to the ongoing debate around the term, and the reflexivity of the field, but it is the accumulated documentation of participants’ work itself which better defines the field. The reason for this, and the reason that a widely-agreed on definition is so elusive and in need of constant revisiting, is because the digital technologies available to researchers in the Humanities, and therefore the projects that are possible, are constantly changing. This, however, hits on a core concept for Digital Humanities: when reduced to its most basic premise, what all Digital Humanities projects have in common is a conviction that the relative affordances of the computer over the human mind change what scholars can say about Humanities artefacts in a sufficiently rewarding way to be worth integrating into our research practice. Whilst there are many activities which computers cannot, yet, carry out satisfactorily, their ability to store and process large quantities of information, and the often complex relationships between these pieces of information, exceeds what an unaided human is capable

²²⁹ Melissa Terras, *Peering Inside the Big Tent: Digital Humanities and the Crisis of Inclusion* (2011) <<http://melissaterras.blogspot.co.uk/2011/07/peering-inside-big-tent-digital.html>> [accessed 26 January 2017].

²³⁰ Matthew Kirschenbaum, ‘Digital Humanities As/Is a Tactical Term’, in *Debates in the Digital Humanities*, ed. by Matthew K. Gold (Minneapolis: University of Minnesota Press, 2012), n.p.

²³¹ dayofdh2016.linhd.es, *Day of DH: About* (2016) <<http://dayofdh2016.linhd.es/about/>> [accessed 26 January 2017].

Indeed, Jason Heppler has created a website that, each time it is refreshed, displays a different erstwhile participant’s definition. It can be found at <http://whatisdigitalhumanities.com/>.

of. As Jim Egan puts it: “the human mind can do many things a computer cannot, but processing enormous bodies of data isn’t one of those things”.²³²

In this sense, the computer is being used in Margaret Masterson’s understanding of it as a “telescope for the mind”, something which expands the scope of what can be perceived.²³³ This is in evidence in projects such as Franco Moretti’s ‘distant reading’ of British novelistic genres between 1740 and 1900,²³⁴ Lev Manovich’s processing of one million manga images’,²³⁵ and Key Words in Context (KWIC) concordancing tools, such as Voyant Tools, which can almost instantly ‘read’ and model whole corpora.²³⁶ As the team behind The William Blake Archive attest, “[c]omputers excel at sifting and sorting large quantities of structured data [...] Tasks that might formerly have taken a researcher days or weeks will now require just minutes”.²³⁷ This assessment is echoed in Tom Scheinfeldt’s statement that, “what’s game-changing about digital technology is the way it allows us ‘to make and remake’ texts in order ‘to produce meaning after meaning’”.²³⁸ Digital Humanities projects, then, are united by the premise that, by increasing the scope and complexity of the information handled, the computer can be a useful tool for supporting and advancing Humanities research.

What are the Conditions and Assumptions of Digital Humanities Work? Given the volume of information in a comic, and the complex mode and structural apparatus within which it

²³² Jim Egan, 'Literary Data Mining: A review of Matthew Jockers, *Macroanalysis: Digital Methods and Literary History* (Urbana: University of Illinois Press, 2013).', *Digital Humanities Quarterly*, 10.3, (2016), n.p., in <<http://digitalhumanities.org/dhq/vol/10/3/000266/000266.html>> [accessed 26 January 2017].

²³³ Stephen Ramsay and Geoffrey Rockwell, 'Developing Things: Notes toward an Epistemology of Building in the Digital Humanities', in *Debates in the Digital Humanities*, ed. by Matthew K. Gold (Minneapolis: University of Minnesota Press, 2012).

²³⁴ Franco Moretti, *Graphs Maps Trees* (New York: Verso, 2005).

²³⁵ Lev Manovich, Jeremy Douglass and Tara Zepel, *How to Compare One Million Images?* (2011) <<http://manovich.net/index.php/projects/how-to-compare>> [accessed 26 January 2017].

²³⁶ Stéfan Sinclair, *Geoffrey Rockwell and the Voyant Tools Team. 2012. Voyant Tools (web application).*

²³⁷ The William Blake Archive, *The William Blake Archive Tour* (2016)

<<http://www.blakearchive.org/blake/public/about/tour/tour.html>> [accessed 29 November 2016].

²³⁸ Mark Sample, *Notes towards a Deformed Humanities* (2012) <<http://www.samplereality.com/2012/05/02/notes-towards-a-deformed-humanities/>> [accessed 2 October 2017].

organises this information, it is clear that this digital capacity could benefit the study of comics.²³⁹

It is not only, however, the volume of signifiers in comics, nor their rhizomatic, ‘braided’, mode of organisation and signification, which can be addressed by digital methods, but the fact that such a significant portion of the medium’s meaning-mechanism is pictorial. As I explained in the previous chapter, the way that pictorial signifiers operate differs from how verbal signifiers convey meaning; words are indexical whereas images are iconic. Because images hold so much information, it is useful to employ digital methods to capture their signification. This, however, poses more of a challenge when it comes to remediating them for digital processing.

This is significant because it is a condition of Digital Humanities work that the source text or artefact be made ‘legible’ to the computer. William Thomas explains that, “[m]ost projects in digital humanities begin as a digital archive”;²⁴⁰ this is because “[s]tructuring data is crucial to machine processing”.²⁴¹ The artefact that the researcher wants to study must be made meaningful to a computer by articulating its information in such a way that it can store it for retrieval, make it operational. For methods that rely on word frequency, such as n-grams (of which Google’s is the most famous, though not the least problematic),²⁴² this can be as simple as formalising to the computer that it should count the number of times words occur in a document, or corpus, and possibly where. The word, in this context, can be expressed as any string of text between instances of punctuation. This, however, is only a relatively simple

²³⁹ See the next chapter for the gaps that a merely analogue reading leaves.

²⁴⁰ William Thomas, ‘What We Think We Will Build and What We Build in Digital Humanities’, *Journal of Digital Humanities*, 1.1, (2011), n.p., in <[http://journalofdigitalhumanities.org/1-1/what-we-think-we-will-build-and-what-we-build-in-digital-humanities-by-will-thomas-n-2](http://journalofdigitalhumanities.org/1-1/what-we-think-we-will-build-and-what-we-build-in-digital-humanities-by-will-thomas/#what-we-think-we-will-build-and-what-we-build-in-digital-humanities-by-will-thomas-n-2)> [accessed 26 January 2017].

²⁴¹ Johanna Drucker, *Classification Systems* (2013) <http://dh101.humanities.ucla.edu/?page_id=33> [accessed 26 January 2017].

²⁴² Eitan Adam Pechenick, Christopher M. Danforth, Peter Sheridan Dodds, ‘Characterizing the Google Books Corpus: Strong Limits to Inferences of Socio-Cultural and Linguistic Evolution’, *Public Library of Science*, , (2015), n.p., in <<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0137041>> [accessed 26 January 2017].

example of an operation to automate the creation of data points on which the computer will execute its processes.

This process of data creation enables an analogue artefact to be queried computationally. Willard McCarty explains this as the “use of a likeness to gain knowledge of its original”.²⁴³ This stage of remediation is crucial to the success of a Digital Humanities project because, as McCarty’s statement suggests, it is ultimately the likeness, the proxy, by which researchers access their studied artefact. It is the data they have created that they query, rather than the artefact or text itself. Julia Flanders and Fotis Jannidis underline the importance of good data creation when they state that “the formalized model determines which aspects of the subject will be computable and in what form”.²⁴⁴ Returning to Masterson’s idea of the telescope, Dennis Tenen warns of a situation where “hypothetical scientists cannot tell if these stars actually exist or whether they are merely an artifact of a faulty telescope”.²⁴⁵ What Tenen is drawing attention to is that, not only does the digital model of a source determine what a researcher can look for, but it also determines what they find. That is, a faulty proxy leads to faulty results.²⁴⁶ Everything that the computer can do is carried out on, and therefore relies on, the quality of, the data created. Even if, to the uninitiated, computers and data may connote objectivity, they are predicated on the decisions of subjective humans, and reflect their creator’s biases and assumptions.

I will return to this in due course, but it is illustrative, here, to think through how remediating the content of pictorial media into data is less straightforward than is verbal remediation. Images, or synthetic parts of images, cannot practically stand for themselves – they

²⁴³ Willard McCarty, 'Knowing ... : Modeling in Literary Studies', in *A Companion to Digital Literary Studies*, ed. by Susan Schreibman and Ray Siemens (Oxford: Blackwell, 2008), Web.

²⁴⁴ Julia Flanders and Fotis Jannidis, 'Data Modeling' in Susan Schreibman, Ray Siemens and John Unsworth, *A New Companion To Digital Humanities* (Chichester: Wiley, 2016), p.280.

²⁴⁵ Dennis Tenen, 'Blunt Instrumentalism: On Tools and Methods', in *Debates in the Digital Humanities*, ed. by Matthew K. Gold and Lauren F. Klein (Minneapolis: University of Minnesota Press, 2016), n.p..

²⁴⁶ This is sometimes referred to as 'Gigo': Garbage in, garbage out.

can be neither a unit nor a value – in a database in the way that a word or number can. The nature of pictorial signification, especially in hand-drawn content, is such that there would be very few, if any, recurring values in such a dataset. Since quantitative methods rely on recurring values to establish patterns, it would not make sense to use images in conjunction with digital methods in this way. Whereas a word is a discrete, reproducible unit which can, therefore, be easily indexed, even very similar images – such as images of the same face on the same background but from slightly different angles – differ, and are therefore not indexical.²⁴⁷ Further, because images internalise their adjectives in a way that words externalise them,²⁴⁸ an image, or even part of an image, cannot be considered as holding only one piece of information. Additionally, the fact that different icons can be used to express the same concept also renders the remediation of pictorial signifiers into data more challenging.²⁴⁹ This is why, even if it did become possible to satisfactorily query a database by image, it would only be useful in very particular circumstances and only on digitally-drawn comics. Since what computers can track are countable entities, the inconsistent form of pictorial signifiers means that a classification scheme is necessary to create semantic data from images. Such a classification scheme, however, would still have to negotiate how pictorial signifiers operate.

Digital Humanities, however, is not just about doing Humanities work digitally, but about doing digital work humanistically.²⁵⁰ The example of image annotation points to a wider

²⁴⁷ Not to mention how indexically-similar images can be iconically divergent.

²⁴⁸ See previous chapter.

²⁴⁹ See the images of dogs in the previous chapter.

²⁵⁰ It is worth, briefly, clarifying the difference between this issue and the automation of capturing verbal content, described above, to avoid confusion. The word is a formalised unit, it is the indication, to a computer, that something needs to be captured, rather than indicating to the computer, as automatic image-captioning does, in what way something should be captured. Although image-matching is used in projects such as Broadside Ballads Online to speed up and corroborate their manual annotation, image-clustering should not be seen as a method of classifying images in and of itself. Digital Humanities should not only be a use of computers in the Humanities, but a use of computers *of* the Humanities. That is, a project is not ‘Digital Humanities’ merely because it uses computational approaches on Humanities material. A critical, self-reflexive engagement with the method is a fundamental part of the field. For this reason, data-mining Google Books on the N-gram viewer or digitising a museum catalogue are not, necessarily, Digital Humanities just because their data points are of interest to Humanities scholars. It is how these methods are used, and created, that is important.

issue for Digital Humanities projects about the nature of classification. Or rather, not an issue, but a condition. Stephen Ramsay describes the two “kinds of conversation” and “ethical frameworks” which Digital Humanists commit themselves to.²⁵¹ For Ramsay this means not only an adherence to ‘good practice’ in technological activities but still operating within “[t]he ethics of humanistic inquiry”.²⁵² Ramsay’s call that DH projects must respect the complexity of human culture by “treat[ing] our questions as always being fundamentally rhetorical in nature” resonates with Johanna Drucker’s rhetorical question, “How will digital scholarship be humanistic without [theory]”?²⁵³ The issue at stake here, and it is an issue caused by the difference between where tools used in DH have come from and how DH uses those tools, is that the act of classification is an interpretive one; it instantiates an argument.

Julia Flanders and Fotis Jannidis explain that “the tools for data modelling in the humanities have come to us largely unchanged from the sciences”.²⁵⁴ This provenance can also be seen in arguments by Drucker, Tanya Clement, and Miriam Posner each of who explain the risk of uncritically accepting methods from “disciplines whose epistemological foundations and fundamental values are at odds with, or even hostile to, the humanities”,²⁵⁵ and have as their goal, their ideal outcome, “predictable outcomes and repeatable results”.²⁵⁶ This division can be shown by the fact that, within Computer Science, “most practitioners regard data modelling as a description of a real and objective world...while only a minority views it as a design process”.²⁵⁷

²⁵¹ Stephen Ramsay, ‘Humane Computation’ in *Debates in the Digital Humanities*, ed. by Matthew K. Gold and Lauren F. Klein (Minneapolis: University of Minnesota Press, 2016), n.p..

²⁵² Ibid..

²⁵³ Johanna Drucker, ‘Humanistic Theory and Digital Scholarship’, in *Debates in the Digital Humanities*, ed. by Matthew K. Gold (Minneapolis: University of Minnesota Press, 2012), n.p..

²⁵⁴ Flanders and Jannidis, p. 285.

²⁵⁵ Drucker, ‘Humanistic Theory’.

Tanya Clement, ‘Where Is Methodology in Digital Humanities?’, in *Debates in the Digital Humanities*, ed. by Matthew K. Gold and Lauren F. Klein (Minneapolis: University of Minnesota Press, 2016) n.p..

Miriam Posner, *The radical potential of the Digital Humanities: The most challenging computing problem is the interrogation of power* (2015) <<http://blogs.lse.ac.uk/impactofsocialsciences/2015/08/12/the-radical-unrealized-potential-of-digital-humanities/>> [accessed 15 September 2016].

²⁵⁶ Posner.

²⁵⁷ Flanders and Jannidis, p. 285.

As Clement argues, a blind acceptance of such methods in DH risks a practice that is actually “displaced from the epistemic culture of the humanities”.²⁵⁸ Unlike computer scientists, then, it is important to understand – as Flanders and Jannidis suggest most Digital Humanists do – that a data model is an interpretation, an argument.²⁵⁹ Given that all Digital Humanities projects rely on remediation, on creating data for the computer to operate on from the artefacts to be analysed, it will be worth allocating some space here to explain the constructedness of data and some of the implications that that has for classification schemes for Humanities artefacts.

Michael Sperberg-McQueen explains that a class is “a collection (formally, a set) of objects which share some property”.²⁶⁰ The act of classification, however, requires “perfect knowledge of the object”²⁶¹ as well as perfect knowledge of the class. That is, to classify a character as ‘female’ would not only require a perfect understanding of ‘female’ as a concept, but of that character’s particular articulation of that concept too. Sperberg-McQueen continues that the ideal conditions for classification are when “the characteristic can be readily and reliably evaluated, and the values it can take are discrete”.²⁶² The tension here is that we need a classification to function for our research purpose, and end up sacrificing a level of complexity to achieve that. Sperberg-McQueen’s condition, of course, is not satisfiable for a lot of Humanities information, nor is it how the Humanities conceptualises information. Drucker argues that Humanities data is “not a form of atomistic information waiting to be counted and sorted like cells in a swab or cats on a highway”,²⁶³ an argument taken further by Donna Haraway who argues that the “codes of the world are not still, waiting only to be read”.²⁶⁴

²⁵⁸ Clement.

²⁵⁹ Flanders and Jannidis, p.285.

²⁶⁰ C. M. Sperberg-McQueen, ‘Classification and its Structures’ in Susan Schreibman, Ray Siemens and John Unsworth, *A New Companion To Digital Humanities* (Chichester: Wiley, 2016). p.447.

²⁶¹ Op. Cit. p. 448.

²⁶² Op. Cit. p. 449.

²⁶³ Johanna Drucker, *Data and Databases* (2013) <http://dh101.humanities.ucla.edu/?page_id=93> [accessed 27 January 2017].

²⁶⁴ Haraway, p. 593.

Michael Christie specifies that the relationship between language and information does not function in such a way that language “cuts nature at its joints” as if the world were “already objectively structured”.²⁶⁵ Instead, he explains, the datasets we produce “carry within them particular culturally and historically contingent assumptions about the nature of the world, and the nature of knowledge”;²⁶⁶ databases cut nature according to their creators’ understanding and interpretation of the world and, in so doing, instantiate that interpretation, they bear “the ideological imprint of their production”.²⁶⁷ In this sense it is more appropriate to conceptualise data as ‘capta’. Drucker usefully unpacks how ‘data’ “derives from the Greek word *datum*, which means *given*” (emphases original) and suggests that, in order to highlight the “active ‘capture’ and creation or construction” that ‘capta’ is more appropriate.²⁶⁸ By foregrounding “the process of creating quantitative information” and “acknowledging the ‘madness’ of the information” it is easier to see how data (capta) is always interpretative.²⁶⁹

Data models, or classifications, however, are not only models of the world, but arguments about it. In “mak[ing] explicit a particular view concerning the nature of the objects being classified”²⁷⁰ we can see that marking up or encoding “is a form of both reading and writing”,²⁷¹ a “formalized expression of interpretation”²⁷² which ought to be understood as scholarly acts themselves. A classification system such as Iconclass’s mode of dividing the subjects of images, its initial sorting into ten categories, and what those categories are, for

²⁶⁵ Michael Christie, *Computer Databases and Aboriginal Knowledge* (2004) <<http://cdu.edu.au/centres/ik/pdf/CompDatAbKnow.pdf>> [accessed 27 January 2017]. p. 5.

²⁶⁶ Ibid..

²⁶⁷ Drucker, *Classification Systems*.

²⁶⁸ Drucker, *Data and Databases*.

²⁶⁹ Ibid..

²⁷⁰ Sperberg-McQueen, p. 447.

²⁷¹ John Walsh, ‘Comic Book Markup Language: An Introduction and Rationale’, *Digital Humanities Quarterly*, 6.1, (2012), n.p., in <<http://www.digitalhumanities.org/dhq/vol/6/1/000117/000117.html>> [accessed 26 January 2017], para. 1.

²⁷² Johanna Drucker, *Text Encoding: Mark-up and TEI* (2013) <http://dh101.humanities.ucla.edu/?page_id=60> [accessed 27 January 2017].

example, makes an argument about the subjects of images and about the history of art.²⁷³ Julia Flanders understands markup “as a way of expressing perspectival understandings of the text: not as a way of capturing what is timeless and essential, but as a way of inscribing our own changeable will on the text – in other words, as a form of reading”.²⁷⁴ Taking this argument further, Stephen Ramsay and Geoffrey Rockwell cite Galey and Ruecker who argue that “digital artifacts themselves – not just their surrogate project reports – should stand as peer-reviewable forms of research, worthy of professional credit and contestable as forms of argument”,²⁷⁵ an argument echoed by Davis Baird who even questions “the privilege accorded to the discursive...accusing us of ignoring the communicative power of the instrumental”.²⁷⁶

Within this context, however, it is easy to become concerned about the validity of using digital surrogates to analyse texts. If sources can only be accessed through their digital surrogates, and those surrogates are nothing but arguments about the source in the first place, do digital methods not simply end up in tautology, pre-projecting their own findings? Although the possibility of a feedback loop²⁷⁷ is certainly a valid concern, partiality is a condition of remediation. In fact, the impossible ‘objective’ remediation should not actually be considered as desirable. The authors Jorge Luis Borges, Lewis Carroll, and Neil Gaiman, among others, have each satirised the idea that it would be desirable to have a map – which is, of course, a kind of model – that involved no information loss, one that would be scaled one-to-one.²⁷⁸

²⁷³ An art and iconography classification system that can be found here: www.iconclass.nl

²⁷⁴ Julia Flanders, ‘Digital Humanities and the Politics of Scholarly Work’, p. 60-1. qtd. in Walsh.

²⁷⁵ Alan Galey Stan Ruecker, and the INKE team. “How a Prototype Argues.” *Literary and Linguistic Computing* 25, no. 4 (2010): p. 407.

²⁷⁶ in Ramsay and Rockwell.

²⁷⁷ D. Sculley and Brad Pasanek, *Meaning and Mining: the Impact of Implicit Assumptions in Data Mining for the Humanities* (2007) <<https://pdfs.semanticscholar.org/37d8/ea0e70ad9aa7e4e95712054994f27674059d.pdf>> [accessed 27 January 2017].

²⁷⁸ Jorge Luis Borges, ‘On Exactitude in Science’, in *Universal History of Infamy* (Penguin Books, New York, 1972).

Lewis Carroll, *Sylvie and Bruno Concluded (Illustrated)* (New York: Macmillan and Co., 1894).

Neil Gaiman, *Fragile Things* (London: Hachette UK, 2007).

Gaiman writes that such a map “would be perfectly accurate and perfectly useless”.²⁷⁹ Carroll’s Mein Herr, a character in *Sylvie and Bruno Concluded*, while explaining that they had never been allowed to roll out their full-size map, states “we now use the country itself, as its own map, and I assure you it does nearly as well”.²⁸⁰ Although comical in tone, these narratives highlight an important point about using one system to represent another; the uselessness which Gaiman alludes to is predicated on the fact that this map would be no more useful than the original, an original which still exists. Mapping, or any remediation of a source of information into a different medium, has as its object the transformation of data points into a new data structure to enable a view, or an understanding, of that data which would otherwise have been inaccessible.

The partiality of remediation should not be judged on a good/bad or an appropriate/inappropriate spectrum against the source artefact, but rather against the research question or digitisation agenda of the project. Within the bounds of a comics project, for example, a researcher could variously categorise panels either as part of a specific gridded structure which recorded the panel structure with double-pages, pages, rows, and panels, or they could simply enumerate each panel sequentially from start to end. Neither would be ‘right’ or ‘wrong’, they would just have different research affordances, different ends which had been designed by the researcher. Each record would implicitly make an argument about the significance of rows, pages and double-pages within the meaning-mechanism of comics. Therefore, it is not that one classification is better than another but that they are more or less appropriate for the specific purpose to which the classification system has been designed, recalling how it is the model that determines what it is possible to query and in what way.

²⁷⁹ Op. cit., p. v.

²⁸⁰ Carroll, p.169.

Making a source text legible to a computer is always carried out with a particular purpose in mind and it is only with reference to that purpose that a classification can be understood and evaluated.²⁸¹ A classification's purpose does not have to be radically transformative, it can be as simple as wanting the archive the researcher is creating to be as searchable – under certain conceptualisations of the data – as possible, but it will always carry in it implicit assumptions and assertions about its contents.

Existing Quantitative Approaches to Comics

In order to situate my project's work within the wider milieu of digital and quantitative approaches to comics, I will now address the existing projects in this area. It is important to note beforehand, however, that, as I discussed above, the appropriateness of the digital methodology selected is relative not to a good/bad spectrum, but to the appropriateness for the research question. As such, it is worth remembering that these projects have as their ends something very different to my project. Put very briefly, Walsh and Dunst et al. have more genre-based and historiographical questions, and my project seeks to interrogate the mechanism of a single comic. The creation of TEI standards that these projects have gone through is crucial work, so when I explain below why I am not using them in this study, it is not because these are not appropriate for the digital study of comics, but because this method did not fit my research needs.

The reasons for that fall into two categories: practical and philosophical. Whilst I will expand on these below, it bears keeping them both in mind as I go through these projects since they are not unrelated. I will be focusing predominantly on the differences between these methods and my project's. As such, whilst there are strengths that their methods can bring, I will apportion less space to those strengths that I also find in my own method, which I detail at

²⁸¹ Sperberg-McQueen, p. 455.

the end of this chapter. These projects are each, however, very worthy for consideration for future scholars, and what I discuss below as a weakness for my research questions is a strength for theirs, and I hope that my work here can serve to complement their work for future scholars.

Starting with practicalities, then, we must consider an unavoidable facet of research: time constraint. For a scholar not yet familiar with TEI and its extensions, as I was at the outset of this project and, I am sure, as are many early career researchers and new adopters of Digital Humanities methods, learning, applying and proofing TEI requires a relatively high investment of time. This, of course, is a context for all types of projects, digital and analogue, but it serves reiterating here that time is a resource against which to balance the benefits of any methodology. Briefly, then, the benefits of TEI are its transferability, its ability to operate across a large corpus of texts, and its affordances for sharing research. As I will show below, this presented a challenge when it came to justifying its inclusion in my project because my research looked at a single text and therefore did not need to be transferable, nor needed to operate across multiple texts, and because my project was focused on a text firmly within copyright restrictions thereby rendering it much more difficult to share.

Turning to the philosophical arguments against using TEI, let us recall Ramsay and Rockwell's argument, quoted earlier in this chapter, that tools and models are arguments; they are instantiations of theoretical positions. As is made very clear by the TEI Consortium, "XML [on which TEI is based,] employs a strongly hierarchical document model".²⁸² As I argued in my chapter on comics scholarship, I conceptualise comics making meaning rhizomatically, rather than hierarchically. As such, it both serves my research question and instantiates my understanding of the medium to model comics in a relational database, rather than in the

²⁸² <https://www.tei-c.org/release/doc/tei-p5-doc/en/html/NH.html>

hierarchical XML tree structure. This is to say that whilst TEI is appropriate for the corpus-driven questions Dunst et al., Beaty et al. and Walsh are asking, the time investment, combined with the model of comics implicitly argued for by markup schemas, did not offer sufficient benefit to my research ends for me to invest the time to learn and implement TEI. Further, I wish to encourage other scholars, with my methodology and the accompanying code, to employ such a low-tech – or perhaps better: sufficient tech – approach to digital projects, especially when their projects are undertaken on objects of study that are restricted by copyright.

Finally, before going any further, it is important to outline what I will expand on in the sub-heading Conceptual Appropriateness. Given my project’s inclination towards the under-theorised *verbal* component of comics, my need for markup is somewhat different. Whilst I believe that this work serves an important role for thinking through image annotation, and I would certainly be open to expanding the project’s verbal component to think through creating semantic or thematic markup, its main deliverable at this stage is its analysis of words. As I explained in the previous chapter, words are indexical, and as such they can stand for themselves in a database. That is, they do not need to be marked up in TEI because they are already available to be captured in their original form. Recalling the idea, from the previous chapter, that any synthetic part of a comic can ‘go on an adventure’, my conceptualisation of comics as a medium braided together by small synthetic units like words, and taking those signifiers as the base unit of the network, TEI markup, as seen below operating on much larger, sentence-based, lexias does not add sufficient value.

<p><ab></p> <p><seg n="3">Windless, warm, the sky without a cloud. Only the blue was veiled with a haze of light gold, as it is sometimes in early summer.</seg></p> <p><interp n="3">The day is “windless”; this contrasts with <ptr target="#48">L48</ptr> where “little faint winds were playing chase.” Since gold is usually a sign of wealth, this color word helps to paint the upper class</p>
--

setting of the story better than a word like “yellow.” The daisies on Laura's hat in <ptr target="#137">L137</ptr> are also gold.

<desc>wind</desc>

<desc>colors</desc>

<desc>blue</desc>

<desc>light</desc>

<desc>silver-gold</desc>

<desc>class</desc>

</interp>

</ab>

<ab>

<seg n="4">The gardener had been up since dawn, mowing the lawns and sweeping them, until the grass and the dark flat rosettes where the daisy plants had been seemed to shine.</seg>

<interp n="4">Like the cook, the gardener is not named, but takes the name of his occupation (see also <ptr target="#75">L75</ptr>). Since “rosette” in this sense is a flower-shaped area, we see that there has been a transformation from the living flowers of the daisies to the dead (“dark”) patch of grass that bears only the shadow of a flower. The etymology of “rosette” further suggests a metaphorical transformation from daisies (perhaps associated with life in the symbolic economy of the hat in <ptr target="#137">L137</ptr>) to roses, “the only flowers that impress people,” according to <ptr target="#5">L5</ptr>.

<desc>flora</desc>

<desc>green</desc>

<desc>hats</desc>

</interp>

</ab>

Figure 27.²⁸³

That is to say, since I knew I wanted words to be the primary structuring unit in my analysis, but also since I did not know which ones would be instructive (and I will come to the importance of this), the <desc> tags used above neither added value to my database and its operability, nor left open the ability to do more than track specific values that I had already decided on.

In order to better understand the differences between my approach and the approach taken by the existing digital and quantitative projects it is useful to think with Julia Flanders and Fotis Jannidis's division of 'research-driven' and 'curation-driven' classification schemes. Setting these two types of scheme in opposition to one another is instructive for understanding how the necessarily broad schemes of XML used on corpora are not as useful for my project, and therefore why I chose not to use them even in my image annotation, which, given my explanation above as treating words as their own values, is the most pertinent comparison, here.

Flanders and Jannidis divide classification schemes into two types: 'research-driven' and 'curation-driven'. The former employs models "whose function is to express specific research ideas for individual scholars and projects", while the latter must decide "what features...are of interest for most users and in most use cases".²⁸⁴ For my project it is the investigation-directed modelling of the former which is most relevant. This is a particular advantage to the single text purview of my project; since *Fun Home* is readily available in book

²⁸³ Jonathan Reeve. 2021. *corpus-mansfield-garden-party-TEI/garden-party.xml at master · JonathanReeve/corpus-mansfield-garden-party-TEI*. [online] GitHub. Available at: <<https://github.com/JonathanReeve/corpus-mansfield-garden-party-TEI/blob/master/garden-party.xml>> [Accessed 5 August 2021].

²⁸⁴ Flanders and Jannidis, p. 285.

stores and libraries my project does not need to bear an archival burden. That is to say that since I and any other researcher could pick up *Fun Home* and perform an analogue reading of it, my modelling is freed to deform, to model intentionally, to classify argumentatively. Recalling Mein Herr, above, the ‘country’ I wish to map, is small enough that I can walk around it, and use the map to record different features for analysis.

Although the existing digital approaches to comics position themselves within a research framework, and an explicitly Digital Humanities one at that, in this next sub-section I will explain how, and why, they lean closer to what Flanders and Jannidis term curation-driven, rather than research-driven, modelling before explaining in what way my projects departs from this. In this section I map Flanders and Jannidis’s division of research- and curation-driven modelling, onto approaches to classification which are more generic and more specific, and explain the particular advantages of each. John Walsh’s CBML and the work undertaken by the Hybrid Narrativity Group are examples of this more generic modelling.

Since both CBML and GNML use TEI – a widely used standard within DH –²⁸⁵ as their base, it is worth investigating the nature of work undertaken in such a framework. Jerome McGann explains that TEI “defines what it marks not only *as* objective, but as objective in exactly the unambiguous terms of the system’s *a priori* categories”.²⁸⁶ I will return to the positivism which McGann hints at later in this chapter, but want to focus, now, on why the *a priori* categories of TEI and its derivatives can be problematic for a study such as mine. Such a system “can reduce (rather than enhance) the possibility for establishing connections”²⁸⁷ because it necessitates fitting new sources into a pre-established system which may not deal with the new data in a way that is appropriate. That is not to say that such a standard is fixed

²⁸⁵ Flanders and Jannidis, p. 282.

²⁸⁶ Jerome McGann, ‘Marking Texts of Many Dimensions’ in Susan Schreibman, Ray Siemens and John Unsworth, *A New Companion To Digital Humanities* (Chichester: Wiley, 2016). p. 431.

²⁸⁷ Christie, p. 6.

and could not change when needed, but that it would take substantial time and effort to effect such a change, and therefore hinders the ability to react in an iterative and agile manner to what the researcher is discovering. Further, for a system to be designed such that it can process a wide and heterogeneous corpus of source texts, it tends to preclude reflecting the individuality of each of those sources; to be widely applied, it must generalise with broader categories than does a system needing only to capture a single text. Therefore, in an ongoing project like ‘What Were Comics’, which samples comics between the years 1934 and 2014,²⁸⁸ the classification systems have to be able to describe the page layouts and panel compositions in a unified way, and as a result they lose some of the specificity that would be possible in the study of a single comic. This is formalised by McGann when he explains “the pragmatic goal of such a markup code: to store objects[...] so that they can be quickly accessed and searched for their informational content”.²⁸⁹

Such a curatorial focus is, however, appropriate for projects that want to answer genre-based and historiography-based questions, as do The Hybrid Narrativity Group and ‘What Were Comics?’, respectively. It is, indeed, a condition of such projects that they use a pre-established cross-corpus standard. Standards exist for the purpose of “help[ing] projects communicate with each other and share data”²⁹⁰ and enabling a “more direct comparison with materials prepared by others than would otherwise be possible”.²⁹¹ It is the limitations, in the form of aggregations and generalisations, of standards which also confer their capacity to be used for “archival purposes” and “types of comparative analysis”.²⁹² What this means for John Walsh’s ComicBook Markup Language, for example, is that different and dispersed researchers can mark-up texts that they are interested in, but are not in the existing corpus, in

²⁸⁸ <http://www.whatwerecomics.com/about>

²⁸⁹ McGann, p. 431.

²⁹⁰ Drucker, Classification Systems.

²⁹¹ Sperberg-McQueen, p. 459.

²⁹² McGann, p. 431.

order to better understand them in relation to that corpus, along the lines which the corpus has been developed. Equally, if the Hybrid Narrativity Group decided that they wanted to incorporate Francophone comics into their corpus, and analyse them along the same lines, or add complexity or a touchstone to their existing work, that would be possible because of the use of a single standard. Standardised classification schemes or markup languages are, in this sense, extensible, so long as the researcher believes their new source text conforms to the argument about the medium that the existing classification instantiates and wants to ask the types of questions which the original classifiers had in mind.

For a classification scheme to be operational, “information has to be structured in a consistent and standardized manner, and it has to make use of standard vocabularies”.²⁹³ Within a system such as The William Blake Archive, for example, this can be tailored to the dataset and be made to give the level of detail desired for the questions the group are asking; the standardization may not have to gloss over very much diversity. In a system intended to deal with all painting or all comic books, however, standardisation requires more generalisation and therefore the loss of more information. As a general rule, the broader the body of works being brought together under a single classification scheme, the less specific, the less responsive to the sources, that scheme will be.

This loss of specificity is relevant, however, not only in Humanities- or heritage-based projects, but in any use of generalised ontologies. Ramesh Srinivasan and Jessica Wallack report – from their work on developmental infrastructure – that the “gap between community [that is, localised] and meta [global] ontologies...[is] often a symptom of the fundamental difficulty of incorporating local, contextualised knowledge into large scale, comparable-across-

²⁹³ Johanna Drucker, *Ontologies and Metadata* (2013) <http://dh101.humanities.ucla.edu/?page_id=35> [accessed 27 January 2017].

all-time-and-place datasets”.²⁹⁴ Although this example comes from a very different field, the restriction that a general ontology places on individual communities is indicative of the effect a generalised ontology has on individual texts. Srinivasan and Wallack conclude that the aggregation and generalisation necessary in their ontologies “leads to information loss, not just in terms of overlooked entities but more importantly in overlooked or misjudged semantic relationships between these entities”.²⁹⁵ In the context of Humanities sources, this means not only that individualities of a text get overlooked – because they did not fit into a more generalised conceptualisation of ‘text’ as instantiated in the classification system – but also that how each text variously, individually used the generalised categories would also be lost. Whilst in inter-city infrastructure it is understood that “states must be able to compare and aggregate across communities so that resources can be allocated, scalable policies can be developed, and effectiveness of any interventions evaluated”²⁹⁶ – in short, that addressing local needs is organised and made possible by distant, generalised forces – this is not the case, or at least does not have to be the case, for analysing texts. Texts can be studied in this way, and profitably, but the limitations of such an approach are not the only way in which digital methods can be used on comics, particularly when it comes to the study of individual comics.

Sperberg-McQueen explains that “schemes with broad coverage may often provide insufficient depth for the purposes of specialized research”.²⁹⁷ For a project such as mine, then, which aims to better understand the systematics of a particular individual text, the breadth (as opposed to depth) of a classification scheme such as Walsh’s ComicBook Markup Language or the Hybrid Narrativity Group’s Graphic Novel Markup Language limits what can be accomplished and precludes certain questions from being asked. The trade-off for a more

²⁹⁴ Ramesh Srinivasan and Jessica Wallack, “Local-Global: Reconciling Mismatched Ontologies,” HICSS, 2009. [<http://rameshsrinivasan.org/wordpress/wp-content/uploads/2013/07/18-WallackSrinivasanHICSS.pdf>].

²⁹⁵ Ibid..

²⁹⁶ Ibid..

²⁹⁷ Sperberg-McQueen, p. 459.

research-driven classification is that its data is less “portable” – it does not have the transferability of a more general scheme – but “in its intended environment it works better than a more generalizable model”.²⁹⁸ That is, the loss of transferability is a condition of more nuanced, localised analysis. This critique, that the classification scheme used limits what can be accomplished, is also, of course, applicable to the classifications I undertook (and relate in each Analysis section); the important factor is that each is appropriate for the object of study in hand. Standards operate by constraining diversity; this enables the genre-based and comparative questions that Walsh and the Hybrid Narrativity Group want to answer, but, in its silencing of non-generic information, in its removal of the particularities of texts, it undermines the analysis of individual texts. Julia Flanders contrasts large digital library projects – whose workflow, she argues, has “come to resemble an industrial operation [... with] an emphasis, in the output, on uniformity and quantity” – with smaller, perspectival readings which reflect the individuality of smaller sets of texts. The latter, however, can only be found in “the small projects designed by individual faculty [...] to create digital versions of individual texts which serve as readings: often idiosyncratic, unscalable, representing private insight”.²⁹⁹ The contrast between these projects which “function more like an article than an archive”³⁰⁰ and the large projects which “limit their theoretical assumptions to those in which most expected users can be expected to assent”³⁰¹ is stark, but, again, is a response to the types of questions that they want to answer.

Lev Manovich argues that, within the worldview of a database, that is, the worldview it instantiates, everything is “reduced to two kinds of software objects which are complementary to each other: data structures and algorithms”.³⁰² For Manovich, the algorithm is “[a]ny process or task”, and the data structure is “any object in the world”; together they are “two halves of the

²⁹⁸ Flanders and Jannidis, p. 285.

²⁹⁹ Flanders, para. 2.

³⁰⁰ Ibid.

³⁰¹ Sperberg-McQueen, p. 448.

³⁰² Lev Manovich, ‘Database as a Symbolic Form’, *Millennium Film Journal*, 34, (1999), n.p..

world according to a computer”.³⁰³ A comparable division of process and data – a way of something happening and a particular occurrence of that way – can be found in Espen Aarseth’s division of texts as being comprised of their ‘practice’, “a structure or ritual of use”, and their ‘script’, “its visible words and spaces”.³⁰⁴ When we bring these digital and analogue conceptualisations of narrative form to bear on the methods employed in broad analyses such as GNML, CBML, and even Franco Moretti’s distant reading, it is clear that what these approaches do is maintain the way something happens, its ritual or algorithm – that is, how a particular medium or genre operates – and vary the particular instances, the script or data. This occurs when they choose a genre or medium to analyse and draw multiple examples from it. The medium remains constant but the instances of that medium, the texts, vary. This, then, enables them to aggregate and compare the instances of the medium to better understand the medium itself. This is how large-scale projects achieve an understanding of generic questions. What happens far less frequently – even though as traditional Humanities scholars we are used to lots of analogue arguments being brought together in scholarship – is a changing of the algorithm, the mode of representing something, the argument the classification makes about it and retaining a single script or text. This, however, is the mode in which my project proceeds in its pictorial annotation. Whilst Walsh, the Hybrid Narrativity Group, ‘What Were Comics’ and Moretti’s projects use the computer’s capacity to process a large quantity of information by creating a broad corpus, in my project I have tried to use this capacity to go deep by employing multiple classifications which can be compared and contrasted. This is appropriate for the study of comics not only because it can respond to the complexity of images’ signification, but because of the large quantity of signifiers in a comic. Just as a broadly applied standard is

³⁰³ Ibid.

³⁰⁴ Espen J Aarseth. "Nonlinearity and Literary Theory." in *Hyper/Text/Theory*. ed. by George P. Landow (Baltimore: The Johns Hopkins UP, 1994). p. 54.

befitting of projects with generic research questions, very specific, tailored classifications are appropriate for the analysis of an individual comic.

Before explaining the advantages this affords my approach, however, it will be instructive to briefly reflect again on how the specific context of my project enables such an approach. This approach ties in particularly with the affordances of a smaller project. By limiting the scope of my corpus I am, as Tenen argues, in the ideal position for Digital Humanities projects, “better poised to remain agile, to tinker, and to experiment”.³⁰⁵ In addition to requiring a single taxonomy across their texts, projects with large corpora can also only allocate time to a single encoding of each data point; by dramatically reducing the size of my corpus, I have been able to spend time encoding the same text multiple times. Further, working with comics individually means that, unlike the Hybrid Narrativity Group’s two hundred graphic novel corpus, it is possible to human-read – as opposed to only ‘distant’ reading – the object of study, meaning that all results, as well as all classifications can be verified manually. That is not to say that a computer is not necessary to deal with the complexity of the information, only that the results it creates can be checked against the source text. Having the source text widely, and relatively inexpensively, available also means that it is easy for external parties to check my results and, indeed, my classifications. Therefore, having a human-readable corpus enables me to deviate from the “limit[ed ...] theoretical assumptions” of projects that deal with a larger corpus because I can be held accountable.³⁰⁶ Whilst a project that looks at two hundred texts, or even “a random sample of comic books representing two per cent of all publications produced in the United States each year from 1934 to 2014”,³⁰⁷ is certainly interesting and useful, corroborating their results by hand is far more challenging.

³⁰⁵ Tenen.

³⁰⁶ Sperberg-McQueen, p. 448.

³⁰⁷ <http://www.whatwerecomics.com/about>

Having addressed the broader elements of projects using TEI, and the reasons why I decided that was not suitable for my research, let us turn to the existing digital approaches to comics more closely. As I have discussed above, then, Comic Book Markup Language and the Hybrid Narrativity Group both use eXtensible Markup Language (XML) as delivered by the Text Encoding Initiative (TEI) as the basis for their encoding. This responds appropriately to the intended objects of study and the research agendas of each approach. Further, the broad applicability of what John Walsh wanted to achieve with ComicBook Markup Language is apparent when he states that he intends his markup scheme to be applicable to “twentieth- and twenty-first-century comics books, daily comic strips, longer narratives or ‘graphic novels,’ and Web comics”.³⁰⁸ Such a wide scope suggests that he views all of these forms, across time and space, as operating in sufficiently similar ways to be worth equivocating. That is, the extensible nature of XML, in his particular iteration of it, provides enough overlap to justify a schema which is capable of describing and making comparable this variety of textual objects. Such a broad purview, therefore, also determines what he is able to record about his objects of study. To impose one classification structure across multiple genres, or sub-media, requires increasingly generalised markup to categories that are common across every text in order to retain comparability. In fact, this scope is not the limit of his breadth; he indicates his “desire to explore more generally the modeling and representation of the broader class of documents that tightly integrate pictorial images and text”, which he sees as extending to works as diverse as “Hogarth’s narrative picture series, the Bayeux Tapestry, and pre-Columbian picture writing as found in the Codex Zouche-Nuttall”.³⁰⁹

This indicates that his interest is as much tied to mixed-media genres as it is to comics in particular, and glosses over the fact that different media – not forgetting different comics in

³⁰⁸ Walsh, para. 13.

³⁰⁹ Ibid..

time and space – use the interaction of words and images to produce meaning differently.³¹⁰

Although this raises questions about the appropriateness of a system which implicitly argues that images and words operate in the same way regardless of their medium, this is not the space to get into that debate. He does, however, support his decision to “base CBML on TEI” on the latter’s capacity to deal with the paratextual materials found in some comics publications such as fan mail and advertisements.³¹¹ This indicates the curatorial focus of CBML especially when combined with the fact that, rather than develop a system for pictorial classification, CBML “[f]ocuses primarily on overall structure of the document, textual content and metadata [publication history]”.³¹² What is important to highlight here, though, is not that this is a weakness for what Walsh is trying to enable, transferability and corpus creation, but that it is a weakness for the analysis of an individual comic.

Despite this focus, however, Walsh does offer a solution for users who do want to append pictorial annotation. He suggests that the <note> elements of TEI could be used “to provide detailed descriptions of the pictorial dimensions of the document”.³¹³ The issue for using this for my project, here, however, is the same as marking up a wide variety of media; using one system across a broad range of sources means not only that entities can only be marked up if they can be measured across the heterogeneous corpus, but that the temporal and spatial differences of how they function is silenced. One can think, here, of how the meaning of words are time- and location-dependent and, therefore, how tracking the use-frequency of such a word over century-long periods can only offer insight about the use of that string of letters, that envelope, rather than the concept it indicates. The annotation he offers as a

³¹⁰ Consider, for example, the comparison of comics and illustrated books in the previous chapter.

³¹¹ Walsh, para. 46.

³¹² Op. Cit. para. 62.

³¹³ Op. Cit. para. 49.

workaround to the pictorial classification challenge, then, offers supplementary details about the panel rather than enabling new analysis.

Despite his stated aim to deal with a wide variety of source texts, it is instructive to note that the examples Walsh uses in his paper are drawn exclusively from superhero comics. This is in keeping with his desire to capture fan mail and advertisements, and it also explains his focus on the more generic, formal, properties of comics. He cites his intention to allow scholars to “search for the appearance of particular characters, or search for works by particular writers and artists”.³¹⁴ This would be a very limited, and not particularly useful, method in a single-author project such as mine, but such a bibliographic approach is appropriate in a superhero comics context where the extended narratives “often unfold over decades in thousands or tens of thousands of individual documents by hundreds of creators”³¹⁵ and where there is a lot of inter-comic, not to mention inter-publisher, bridging appearances (such as Marvel’s Spiderman and DC’s Superman being brought together in 1976).^{316, 317} Classifying comics to track characters or creators responds to the serialized nature of Walsh’s examples. In this context it is appropriate that characters get encoded whilst other pictorial information does not; they operate as a kind of extension of the formal apparatus of the comic.

Walsh’s focus on enabling computational analysis based on the “structural, aesthetic, and informational and documentary features”³¹⁸ of comics can be contrasted with another existing approach to comics, the MultiModal Markup Editor from the Hybrid Narrativity Group. Like CBML, however, their research is directed at comics as a genre. By creating “a

³¹⁴ Op. Cit. para. 11.

³¹⁵ Op. Cit. para. 17.

³¹⁶ Op. Cit. para. 12.

³¹⁷ For further information on this publishing complexity see paras. 12 and 57-9, Walsh.

³¹⁸ Walsh, para. 11.

corpus of 200 full-length graphic narratives”³¹⁹ this group intends to produce an “empirical description of the genre of the graphic novel from historical and comparative perspectives”³²⁰ and to create “empirically founded narratological concepts” and a “[q]uantitative cultural history of English-language graphic narrative”.³²¹ Given that the project is ongoing it is difficult to investigate very far beyond these stated aims, although it is significant to note that they “have developed the XML-language GNML [Graphic Novel Markup Language], which builds on TEI and previous efforts by John Walsh (2012), to describe all textual and visual properties of graphic novels”.³²² This project clearly builds upwards from Walsh’s work both in terms of its scope – they are actually creating their corpus to do analysis on, rather than merely calling for and enabling one – and in its response to the pictorial facets of comics. They do, however, also approach comics as just one amongst many other media which deploy both words and images, thereby glossing over specific modes of comics signification, as can be seen when they state that they will be “[a]nalyzing the specific narrativity of [the graphic novel] and other multimodal cultural forms (including illustrated books and magazines, theater, film, television and computer games”.³²³ It is unclear at this stage, however, if that will be a separate part of their project although some indication can be offered by the name of the markup editor they have created, the *MultiModal* Markup Editor.

Both projects’ use of XML, however, is indicative of their wider purposes. To enable the types of analyses that they each state is their goal will require a consistent use of these

³¹⁹ Alexander Dunst, Rita Hartel, Sven Hohenstein, Jochen Laubrock, *Corpus Analyses of Multimodal Narrative: The Example of Graphic Narrative* (2016) <https://blogs.uni-paderborn.de/graphic-literature/files/2016/07/Dunst.Laubrock.DH-2016.Corpus_Analyses_of_Multimodal_Narrative_150.pdf> [accessed 19 October 2016]. Slide 53.

³²⁰ Hybrid Narrativity Group, *Project Description* (2016) <<https://blogs.uni-paderborn.de/graphic-literature/projekt-2/#uk>> [accessed 19 October 2016].

³²¹ Alexander Dunst, Rita Hartel, Sven Hohenstein, Jochen Laubrock, Slide 3.

³²² A. Dunst, R. Hartel, S. Hohenstein, J. Laubrock (2016). *Corpus Analyses of Multimodal Narrative: The Example of Graphic Novels*. In *Digital Humanities 2016: Conference Abstracts*. Jagiellonian University & Pedagogical University, Kraków, pp. 178-180.

³²³ Ibid..

markup languages across all the texts that they encode. This, remember, is the condition of broader analysis and transferability. It is important, once more, to clarify that this is not to say that their methods are wrong, or weak, but that they are suited to their genre-centric ends. The same can be argued of the ongoing modelling being undertaken in ‘What Were Comics?’ and their wide corpus. Within such a context – and it is a context comparable to ‘distant reading’ creator Franco Moretti’s *Conjectures on World Literature* which advocates a reading “where distance...is a condition of knowledge: it allows you to focus on units that are much smaller or much larger than the text: devices, themes, tropes – or genres and systems”³²⁴ – individual comics can still be analysed, but always in a comparative way, relative to other texts or the general trajectory of the genre. Comparison, however, can only occur against the values which can be entered for all texts, dealing with the same concepts equally across all texts, as Beaty relates in a comment to a blog post entitled ‘Is *The Spirit* a Comic Book?’, discussing that eponymous question, remarking: “what we’re considering is exactly where to draw an arbitrary line. We’ll be certain to note the arbitrariness, but at a certain point we need to say ‘these works are in the pool as potential samples, these other ones are out’”.³²⁵ Whilst this presents as consistent, and therefore positive, it does elide all difference between texts and how they use or conceptualise certain concepts differently. Such a classification scheme would be severely limited, and limiting, in the context of a non-comparative analysis of an individual text, and as such is not necessary, and indeed limiting, for my ends. Responding to a broad spectrum not only limits the specificity of a classification scheme but also the depth it can go into; as Sperberg-McQueen remarks, “the thousand basic categories of the Dewey Decimal system will seldom provide a useful framework for a bibliography of secondary literature on a single major

³²⁴ in Walsh, para. 16.

³²⁵ <http://www.whatwerecomics.com/blog/2015/4/7/is-the-spirit-a-comic-book#commentsWrapper=>

work or author”.³²⁶ This demonstrates how generalist schemes struggle to offer nuance on specialised areas, or at least as much nuance as a subject-specific classification would.

Feminist Approaches to Pictorial Data Creation; Where I Situate My Project Amongst These Voices

This section offers an original synthesis of the challenges of remediating pictorial information into data with Donna Haraway’s feminist understanding of objectivity as partial and situated.³²⁷ It explains my methodology for classifying images, as well as other non-indexical signifiers in comics such as scenes and page layouts, which will feature in the future applications of this project. The aim of this methodology is to offer more investigatively productive analyses of individual comics as well as being more appropriate for the type of information included in such texts. It engages with, and offers new insight on, the developing sub-field of Feminist Infrastructure, which calls for more humanistic approaches to digital work, decrying the positivist and pseudo-objective conceptualisations of data embodied in so many Digital Humanities projects. Using Haraway’s partiality and situatedness as theoretical support I offer my own method of using multiple encodings, classifying the source text several times. This not only adheres to a more humanistic conceptualisation of data, but is more suitable for asking and answering questions about individual comics and offers new insight through an original methodology.

Conceptual appropriateness

There are two main issues, then, with using a broad methodology to analyse individual texts. By understanding where these limitations lie, it is possible to further explain why multiple encodings of individual texts are not only the most appropriate but the most effective method

³²⁶ Sperberg-McQueen, p. 459.

³²⁷ Donna Haraway, ‘Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective’. *Feminist Studies*, 14(3) (1988).

for comics analysis. As was seen in the arguments of Flanders and Jannidis, Sperberg-McQueen, and Srinivasan and Wallack, the capacity to generalise across texts is made possible exactly because of a reductive taxonomy. This is the trade-off they make, but it is not one that I have to make, focussing as I do on a single text that, remember, can still be read by a human, unlike the impressively assembled corpora of these other projects. By taking units that every comic will have and dealing with them in the same way, that is, by equivocating how different authors use formal features, it is possible to make generic or medium-specific analyses. In the process, however, each text's individuality is effaced. The second main issue that I want to foreground is that, almost by necessity in projects with a wide scope, this not only means marking up every text according only to *a priori* categories, but that each text will only be marked up only once, that each signifier will only be represented by a single value. This, as I have suggested above, is particularly problematic for pictorial signifiers. In this sub-section, then, will demonstrate the affordances of keeping the object of study small. These are predicated on multiply encoding the source text.

These two issues operate, and are problematic, in a comparable way. Just as the use of a single classification system across a corpus jettisons the individuality of texts, the singular tagging of entities and attributes jettisons the Humanistic commitment to complexity and plurality. Stephen Ramsay discusses how, in the Humanities, we teach our students “to think of things as being this *and* this”.³²⁸ As soon as we reach the digital domain, however, many projects get sucked into the positivist and reductive nature of data classification. Drucker relates how, in the creation of early digital editions and text repositories such as the William Blake, Walt Whitman and Women's Writers archives, “humanists came into those conversations as relativists and left as positivists out of pragmatic recognition that certain tenets of critical theory

³²⁸ Ramsay.

could not be sustained in that environment”.³²⁹ She cites, particularly, the difficulty of introducing ambiguity into those projects as a major stumbling block.

It is worth noting that all of these projects operated across a large quantity of sources and, therefore, encountered many of the issues that existing quantitative approaches to comics do. The challenge that such projects have is that each text within a corpus is, of course, individual in its own way and therefore making that individuality comparable, beyond formal or structural analyses, poses a substantial challenge. Projects of this ilk are forced to approach their sources with an understanding that they, and therefore the values that can be applied to them, are singular and discoverable rather than plural and situated. Within the context of a project that studies individual texts, however, this does not have to be a problem, and it is possible to respond to the calls in Digital Humanities for projects to return to an understanding of data more in keeping with the Humanities understanding of ‘Truth’ claims. Flanders and Jannidis, for example, argue that “[s]ome of the most fertile and urgent areas of digital humanities research involve the question of how to develop data modelling approaches that accommodate both the self-reflexivity required by humanities research and the actionability and computational clarity required by the digital domain”.³³⁰ Drucker extends this, returning to the issue of the provenance of Digital Humanities methods, arguing that many such approaches, “preclude humanistic methods from their operations because of the very assumptions on which they are designed: that objects of knowledge can be understood as self-identical, self-evident, ahistorical, and autonomous” as well as being “reductive and literal”.³³¹ This critique resonates with the existing approaches to image classification that I analysed above and is the catalyst for my intervention in this debate. It will bear, however, problematizing the

³²⁹ Drucker, *Humanistic Theory*.

³³⁰ Flanders and Jannidis, p. 288.

³³¹ *Ibid.*.

mechanics of the existing approaches further in order to demonstrate why a shift in approach was necessary for my project as well as the theoretical context my approach resides in.

A different way of understanding the positivism of existing pictorial markup classification systems is that their mode of creating data is imperialist and patriarchal. As I have explained, Digital Humanities projects rely on the creation of data, the remediation of an analogue source into digital data points, but, as Christie suggests, “the process of writing metadata is a kind of naming”.³³² This ‘naming’ can be understood in relation to the patriarchal ur-naming, Adam’s naming of the animals. This demonstrates how naming is an act of domination, of colonisation; to name is to impose mastery over, to impose totalising, generalising worldviews which sublimate and erase heterogeneity and difference. This idea can be supported by arguments from the comparable field of translation studies; Luise von Flotow discusses how the act of translation is immediately one of potential imperialism,³³³ and Gayatri Spivak problematizes the relationship between, and blurring of, re-presentation and representation.³³⁴

Although naming is a necessary part of all DH projects, it does not have to be patriarchal. It is possible to take a feminist approach to data creation rather than allow the “structures of power and privilege [to] be reproduced in computational systems”.³³⁵ Jacqueline Wernimont argues, even, that “if computational tools are wielded in ways that continue old patriarchal privileges of expertise and authority...then we miss an opportunity to leverage digital

³³² Christie, p. 5.

³³³ Luise von Flotow, 'Response by von Flotow to "Betraying Empire: Translation and the Ideology of Conquest"', *Translation Studies*, 8.1, (2015), 98-102, in <<http://www.tandfonline.com/doi/full/10.1080/14781700.2014.949293?src=recsys>> [accessed 9 January 2017]. p. 98.

³³⁴ Gayatri Spivak, 'Can the subaltern speak?' *Marxism and the Interpretation of Culture* (1988): 271–313.

³³⁵ Elizabeth Losh, Jacqueline Wernimont, Laura Wexler, Hong-An Wu, 'Putting the Human Back into the Digital Humanities: Feminism, Generosity, and Mess' in *Debates in the Digital Humanities*, ed. by Matthew K. Gold and Lauren F. Klein (Minneapolis: University of Minnesota Press, 2016), n.p..

tools to transform literary scholarship in meaningful ways”.³³⁶ There is, in fact, a great deal of debate around, and advocacy for, approaches to Humanities encoding and classification which embraces Humanities approaches to, and understandings of, knowledge. Lisa Marie Rhody, for example, asks “How might the feminist literary critic approach text analysis without succumbing to the positivistic claims of objectivity that such methods so often encourage?”³³⁷ Tanya Clement, too, within the context of race and gender discussions, argues that “Digital humanities scholarship that does not engage with theory risks being perceived as unconcerned with interpretive, situated, and subjective knowledge production, and therefore displaced from the epistemic culture of the humanities”.³³⁸ A similar concern can also be found in McGann’s call for “tools that foreground the subjectivity of any measurements that are taken and displayed”.³³⁹ I believe that, by grounding my encoding in the understanding that knowledge is situated and partial, and therefore that a more complex view can be gained by the parallax offered by multiple viewpoints, I offer a response to this call.

This desire for subjectivity and plurality resonates with the developing sub-field of ‘feminist infrastructure’ in Digital Humanities which, to take a question from the DH2016 panel that bore this name, asks “How can digital infrastructure...support complex, non-binary understanding?”³⁴⁰ Although this panel covered a wide understanding of ‘infrastructure’, from the modes by which we classify, link and store our project data to institutional hierarchy, it is the former which I will be addressing here. Jacqueline Wernimont has written an important

³³⁶ Jacqueline Wernimont, ‘Whence Feminism? Assessing Feminist Interventions in Digital Literary Archives’, *Digital Humanities Quarterly*, 7.1, (2013), n.p., in <<http://www.digitalhumanities.org/dhq/vol/7/1/000156/000156.html>> [accessed 15 December 2016], para. 12.

³³⁷ Lisa Marie Rhody, ‘Why I Dig: Feminist Approaches to Text Analysis’ in *Debates in the Digital Humanities*, ed. by Matthew K. Gold and Lauren F. Klein (Minneapolis: University of Minnesota Press, 2016).

³³⁸ Tanya Clement, ‘Where Is Methodology in Digital Humanities?’, in *Debates in the Digital Humanities*, ed. by Matthew K. Gold and Lauren F. Klein (Minneapolis: University of Minnesota Press, 2016), n.p..

³³⁹ McGann, p. 435.

³⁴⁰ S. Brown, T. Clement, L. Mandell, D. Verhoeven, J. Wernimont (2016). Creating Feminist Infrastructure in the Digital Humanities. In *Digital Humanities 2016: Conference Abstracts*. Jagiellonian University & Pedagogical University, Kraków, pp. 47-50.

article, too, which asks “what metrics should be applied to measure the degree of feminism embodied by a digital archive, and what is the subject of that measurement?”³⁴¹ In this article Wernimont also reflects on some of the other ways in which a DH project or archive can be considered feminist, but here I want to focus not on the people involved, nor the subject matter chosen, but on how the subject matter is dealt with.³⁴² An important mode by which a project’s ‘degree of feminism’ should be measured, I believe, is in its conceptualisation of data.

As I have discussed, data is always an argument, a classification is always an interpretation, which places the power in the encoder’s hands. This is particularly important when we recall that, in dealing with digital methods, we are always querying the proxy, not the object, and therefore our creation of data is integral to what we will discover about our studied object. Sculley and Pasanek point out that “we must always take into account the powerful determinations of our own fore-projections” and be aware of the circularity involved for an encoder who “must project meaning [encoding] onto the very object he [sic] hopes will disclose its meaning for him [sic]”.³⁴³ Christie, too, warns of the potential of a “feedback loop which may skew the contents of a database and consequently our understanding of the world”.³⁴⁴ Multiple encodings of the same data, however, will mitigate this concern – as I will explain below – whilst also embracing a feminist conceptualisation of knowledge statements.

Although the topic of what is being called ‘feminist data’ or ‘feminist infrastructure’ has only relatively recently emerged explicitly as an issue in Digital Humanities – as shown by its elevation, in 2016, to having its own panel at DH2016 in Krakow, and as a major theme

³⁴¹ Wernimont, para. 2.

³⁴² She asks: “Are digital archives feminist because the content is by women, or because the modes of production are feminist, or because the technologies themselves are feminist or used to feminist ends? Is it all three? Do we have to account for both the historical and social contexts from which particular archives arise when thinking about the nature of their feminism? What tools might be helpful in thinking through the sense that tools like XML are neutral?” (p2).

³⁴³ Sculley and Pasanek, p. 2.

³⁴⁴ Christie, p. 5.

running through the 2016 edition of *Debates in Digital Humanities*, both of which are field-leading forums – the destabilising of positivist conceptualisations of data has longer roots in the sciences, particularly in the work of Donna Haraway and Luce Irigaray, and it is from the feminist understandings of knowledge statements found here that I construct my understanding of feminist data and trace its presence in current DH theory.

Recalling that one of the most important limitations of a broad classification system is its reliance on a totalising view, the single authority statement of what something *is*, regardless of context, it is instructive to consider Haraway and Irigaray's critique of such a view. Irigaray refers to the process of "imposing a *model* on the universe to appropriate it...to dress it blindly in your identity" as a masculinist mode.³⁴⁵ In addition to the problematic projection of signification, the issue for Irigaray, here, is the placelessness, the alleged neutrality of an "instrument's mediation", which, therefore, somehow inhabits a space outside of having a viewpoint.³⁴⁶ Not only is 'meaning' imposed, but it is imposed by someone who denies the partiality and situatedness of their viewpoint. Haraway contrasts this "invisible conspiracy of masculinist scientists" with feminists, "the embodied others, who are not allowed *not* to have a body, a finite point of view, and so an inevitably disqualifying and polluting bias in any discussion of consequence".³⁴⁷ It is, for Haraway, the very situatedness of feminist critique which has historically barred it from challenging the allegedly disembodied, patriarchal hegemony, a situatedness which both Irigaray and Haraway see as a charge that ought, also, to be levelled at mediating instruments; the computer, and its classification systems, should be seen as such an instrument.

³⁴⁵ Luce Irigaray, 'Is the Subject of Science Sexed?' trans. by Oberle, E. *Cultural Critique*, 1 (1985): p. 72.

³⁴⁶ Ibid..

³⁴⁷ Haraway, p. 575.

Recalling the difficulties faced by the Blake, Whitman, and Women's Writers archives, above, Drucker relates how the "basic conclusion" of many DH scholars was that, "to play in a digital sandbox one had to follow the rules of computation: disambiguation and making explicit what was so often implicit in humanities work was the price of entry".³⁴⁸ This, however, is not the conclusion Haraway reaches. In her critique of the allegedly disembodied male scientist, the masculinist myth of "a conquering gaze from nowhere",³⁴⁹ the "infinite vision" which she calls "an illusion, a god trick",³⁵⁰ Haraway argues that eyes, or lenses, "including our own organic ones, are active perceptual systems, building on translations and specific ways of seeing".³⁵¹ By drawing attention to vision, be it a human's or an instrument's, Haraway highlights that every viewpoint is a "wonderfully detailed, active, partial way of organizing worlds".^{352 353} This terminology of 'organizing worlds', resonates with the idea that classifications instantiate a worldview, and she takes this parallel further when she writes that "[t]ranslation is always interpretive, critical, partial",³⁵⁴ once more, a viewpoint that reflects the process of creating data.

Rather than the problematic masculinist claim to objectivity through the use of instruments, Haraway argues that "Feminist objectivity means quite simply *situated knowledges*";³⁵⁵ "objectivity turns out to be about particular and specific embodiment and definitely not about the false vision promising transcendence of all limits and responsibility".³⁵⁶ Not only does this situatedness mean that knowledge claims can be "called into account"³⁵⁷ but it acknowledges that worldviews are inherently partial; she, therefore, advocates a system "where partiality and not universality is the condition of being heard to make rational

³⁴⁸ Drucker, *Humanistic Theory*.

³⁴⁹ Haraway, p. 581.

³⁵⁰ Op. Cit. p. 582.

³⁵¹ Op. Cit. p. 583.

³⁵² Ibid.

³⁵³ She insists on "the particularity and embodiment of all vision...including technological mediation". p. 582.

³⁵⁴ Haraway, p. 589.

³⁵⁵ Op. Cit. p. 581.

³⁵⁶ Op. Cit. p. 582.

³⁵⁷ Op. Cit. p. 583.

knowledge claims”.³⁵⁸ Haraway’s understanding of truth claims clearly responds to the ‘epistemic culture of the Humanities’ called for by Feminist Infrastructure given her “doctrine and practice of objectivity that privileges contestation, deconstruction, passionate construction, webbed connections, and hope for transformation of systems of knowledge and ways of seeing”.³⁵⁹ Further, by accepting that Humanities artefacts signify plurally, that is, recognising the “agency of people [or any subject] studied itself transforms the entire project of producing social theory”.³⁶⁰ What this means is that, by not turning our artefacts into passive objects, but instead accepting their agency, and the multiple ways in which their signifiers can ‘mean’, better Humanities work can be produced.

This embrace of polysemy, I believe, is particularly important and productive for the classification of images. By combining the fact that models and classifications are arguments with Haraway and Irigaray’s problematisation of a singular, totalising gaze, it is clear that Humanities sources, and comics in particular, can be modelled better by creating multiple situated and partial ontologies. The parallax this affords offers not only a model of the source text more in keeping with both the culture of the Humanities and the text itself, but also enables productive, generative conversations between viewpoints.

Before closing this chapter with a discussion of the benefits of bringing different arguments, in the form of ontologies, into conversation with one another, it is important to note the practical advantage of encoding multiply. Even accepting that the majority of Digital Humanities practitioners, both makers and users, are aware that a data model is an argument,³⁶¹ when it comes to actually using or not using computational resources and methods that knowledge can only have a limited effect. This is because – and, here, I exclude the

³⁵⁸ Op. Cit. p. 589.

³⁵⁹ Op. Cit. p. 585.

³⁶⁰ Op. Cit. pp. 592-3.

³⁶¹ Flanders and Jannidis, p. 285.

‘idiosyncratic’ tinkerers who set up their own investigative projects³⁶² – the affordances of digital techniques, particularly their capacity to deal with large and complex datasets, mean that, ultimately, it is more appealing to use them than to discard them on theoretical grounds. Because the insight they offer is otherwise unachievable, the positivism of a single encoding is overlooked. However good the researcher’s, and the project’s, intentions, the practicalities of verifying and investigating every instance of the classifications of the variables the user wants to draw into their analysis means that too often digital tools become black boxes. Although deploying multiple encodings does not, cannot, give a ‘complete’ view of the source, it at least problematizes the fixity of classification schemes and gives a better “purchase on the real”.³⁶³

Investigative capacity

So far I have cited a lot of the work undertaken, in feminist infrastructure, to problematize Humanities datasets. Aside from a closer adherence to Humanities modes of signification and study, what deploying multiple, situated, encodings enables, however, is the ability to analyse and critique the types of datasets which only “reproduce[...] existing social inequalities”.³⁶⁴ By encoding a comic, or any text, multiple times it is possible to problematize reductive worldviews – and add complexity to any ontology – because they can be brought into conversation with less problematic arguments about the data. This would enable an analysis *by* dataset, rather than an analysis of a dataset.

In instances where only one encoding is enacted on a source, every operation must be carried out on that dataset, on that perspective of the original text. Although it cannot be claimed that multiple encodings offer a ‘complete’ view of a text, since that would fall outside the bounds of feminist epistemology, what they do enable researchers to do is compare datasets

³⁶² Flanders in Walsh, para. 2.

³⁶³ Drucker, *Humanistic Theory*.

³⁶⁴ Posner.

to each other, as well as to the original text, in order to gain a better understanding of both the source text and the respective appropriateness of the classification systems. By bringing different arguments, in the form of classification systems, about the text into conversation – which is, ultimately, how analogue scholarship proceeds³⁶⁵ – analyses can be more effective.

By encoding different positions on debates, these positions can be brought to bear on one another, as well as the source text, and this enacts Laura Mandell’s argument that the Humanities needs “metadata built for thinking, not sustainability”.³⁶⁶ That is, it is possible to turn the argument-ness, the constructed-ness of classification into a generative, investigative force. The potential of such an approach can be seen in Martin Schoeller’s ‘The Changing Face of Race’³⁶⁷ which presents photographic portraits of people “of visually ambiguous ethnicity” along with the Census box they tick and their own racial self-identification. Unsurprisingly, “in every case the individual’s self-conception...is more complicated and nuanced than the Census category”³⁶⁸. Whilst it is certainly commendable to highlight the inadequacies of Census classification, the real power of this project comes not from the presentation of people’s self-identification, but from its juxtaposition with the authority position’s model, and therefore understanding, of race. Without including the Census position, the heterogeneity and situatedness of racial identification would be retained, but it is only by including the Census position that it is possible to critique it, even if we understand that it is limited and reductive. Each facet – the image, the self-identification, and the Census box – can be measured against, and used to measure, two things rather than one, bringing a greater

³⁶⁵ The reason this doesn’t happen in the digital sphere, I believe, is down to the fact that funding bodies are more likely to give money to digital projects which offer something new, rather than do, say, another William Blake Archive, but differently, in order to compare the two.

³⁶⁶ S. Brown, T. Clement, L. Mandell, D. Verhoeven, J. Wernimont (2016). Creating Feminist Infrastructure in the Digital Humanities. In *Digital Humanities 2016: Conference Abstracts*. Jagiellonian University & Pedagogical University, Kraków, pp. 47-50.

³⁶⁷ Martin Schoeller, *The Changing Face of America* (2013)

<<http://ngm.nationalgeographic.com/2013/10/changing-faces/schoeller-photography>> [accessed 9 October 2016].

³⁶⁸ Posner.

understanding of each, rather than what would otherwise be a process of assigning a value. In other words, it not only enables users to see that the Census model is reductive, but demonstrates that by showing how it deals with real world data.

Encoding such reductive arguments, arguments of the lowest common denominator, is preferable to the false vision of a single, however well-researched and nuanced, encoding. Although it is frustrating to see gender “which we have worked so hard to complicate, [being] suddenly reduced to ‘female author’ or ‘male author’”,³⁶⁹ it is important to encode even very reductive understandings of things like gender³⁷⁰ so we can problematize them. As von Flotow cites Gamson as arguing, “fixed identity categories are both the basis for oppression and the basis for political power”.³⁷¹ But this problematisation is only possible through a multiple encoding. And within a smaller project since it must remain human readable. Although most projects reduce their data on gender to Clement’s male/female binary, a book’s articulation of gender is itself something which can be studied computationally. As Miriam Posner suggests, we must “stop acting as though the data models for identity are containers to be filled in order to produce meaning, and [...] understand that these structures themselves constitute data”.³⁷² If a Census – or even TEI³⁷³ – offers only a binary opposition of gender, that will lead not only to a loss of data – as in Srinivasan and Wallack – but demonstrates that the Census understands gender as a binary. It is, however, only by comparing the Census’s worldview with people’s self-identification, that we can demonstrate that it is reductive. Only by retaining the Census’s argument in the conversation – as opposed to omitting it because it was too reductive to be

³⁶⁹ Tanya Clement, ‘The Ground Truth of DH Text Mining’ in *Debates in the Digital Humanities*, ed. by Matthew K. Gold and Lauren F. Klein (Minneapolis: University of Minnesota Press, 2016).

³⁷⁰ even if “no self-respecting humanities scholar would ever get away with such a crude representation of gender”. (Posner)

³⁷¹ Luise von Flotow, *Translating Women* (Ottawa: University of Ottawa Press, 2011). p. 3.

³⁷² Posner.

³⁷³ Melissa Terras, *On Changing the Rules of Digital Humanities from the Inside* (2013) <<http://melissaterras.blogspot.co.uk/2013/05/on-changing-rules-of-digital-humanities.html>> [accessed 7 September 2016].

useful – can it be analysed, and analysed not only against the source, but against other arguments about gender. Again, this allows researchers to analyse not only their source text but the different arguments made about it in classifications.

Deploying multiple interpretations in this way, then, it is possible to scrutinize reductive classifications. This mobilises Sculley and Pasanek’s warning about fore–projection as an investigative technique. In her memoir, *Fun Home*, Alison Bechdel, reflecting on pre–Stonewall New York, considers whether she could “pass the three–articles–of–women’s–clothing rule”.³⁷⁴ Rules, of course, are ultimately sorting algorithms, and therefore this rule can operate as a classification system. The argument that this rule makes, its mode of classification, can be applied across Bechdel’s text to see what each indicates about the other. As with Schoeller’s photographs, this would shed light not only on the sorting algorithm but on the text; by bringing them into conversation, each, and their relationship to one another, could be better understood. There is no reason, however, to limit such a practice to two points of view; an investigation of gender and sexuality could continue by adding further arguments into this conversation, such as relying on explicit self–identification, linked to, separately, both narrative time and discourse time. By modelling self–identification in this way it is possible to respond to Posner’s call for models that are “built to show us categories...*as they have been experienced*, not [just] as they have been captured and advanced by businesses and governments”. Since it is not possible for literature studies to work with studied groups in the same way that Srinivasan and Wallack, Christie, or Deb Verhoeven do,³⁷⁵ using relay and anchorage offer an alternative, allowing, in a sense, the author to carry out the naming, rather than the encoder, or to bring those two namings into conversation.

³⁷⁴ Alison Bechdel, *Fun Home* (London: Jonathan Cape, 2006), p. 107.

³⁷⁵ Deb Verhoeven, *Doing the Sheep Good: Facilitating Engagement in Digital Humanities and Creative Arts Research* (2014)
<http://www.academia.edu/6904660/Doing_the_Sheep_Good_Facilitating_Engagement_in_Digital_Humanities_and_Creative_Arts_Research> [accessed 27 January 2017].

This, however, is not the extent of the usefulness of such an encoding. In fact, it is mainly when a classification like this is brought into a broader question and varied against other cascading³⁷⁶ classifications that its investigative potential to model and query the source text can be realised. Multiple encodings, however, are not only useful for human subjects; the method can, and should, be extended to the classification of any signifier. Whilst it is positivist to state, say, that something *is* a chair, the role that such an object/signifier plays can be modelled through the text; this returns to the fact that images signify multiple meanings at once. Multiple encodings allow a researcher to ask, and discover, what is significant about this (particularly pictorial) entity; is it that the author uses this chair specifically within certain contexts, or this type of chair, or furniture more broadly? Perhaps what is significant about it is actually not that it is an object for sitting on, but that it is an object for sitting on in the kitchen, or for talking or listening from. Different ontologies, different ways of conceptualising and classifying objects, can reveal what it is about those objects that is being used rhetorically. Returning to an example I used above, there are several ways one might conceptualise the formal structure of panels, but it is only by encoding them multiply, and by alternating these ontologies – these conceptualisations of what is significant about the formal structure – against other alternating ontologies that it is possible to understand what is the most significant factor about them in *this comic's* usage.

This type of approach is supported by geographic modelers Marianna Pavlovskaya and Kevin St. Martin who argue that “situated knowledges diversify and enrich our understanding of the world by engaging into dialogue with each other”³⁷⁷ and responds to Verhoeven’s call for

³⁷⁶ Used in the sense of Cascading Style Sheets (CSS).

³⁷⁷ Marianna Pavlovskaya and Kevin St. Martin, 'Feminism and Geographic Information Systems: From a Missing Object to a Mapping Subject', *Geography Compass*, 1.3, (2007), 583-606, in <<http://www.geo.hunter.cuny.edu/~mpavlov/articles/geco2007gisandfeminism.pdf>> [accessed 12 December 2016], p. 589.

infrastructure that “creates not reproducibility but contestability”.³⁷⁸ Despite the advantages, both theoretically and practically, of this approach, however, the closest existing method to this of which I am aware in Digital Humanities, is what Flanders and Jannidis point to when they discuss the “popularity of ‘bottom-up’ or ‘user tagging’ approaches in recent years”.³⁷⁹ They understand this popularity as reflecting a “desire for modeling to inductively reflect a diversity of perspectives rather than operating from a pre-established position of authority”.³⁸⁰ An example of such a system is HuNI (Humanities Networked Infrastructure) where “researchers [who use the platform] themselves create the links between data [and] produce a kind of ‘vernacular ontology’ which, rather than providing an ‘authoritative’ model of the data, instead allows for diversity, complexity, interpretation and contestability”.³⁸¹ Although this certainly resonates with the partial, perspectival and situated positionality which is found in Haraway and Irigaray, and is certainly a positive approach for large scale projects, it does lack the intentional parallax, the investigative testing of ideas against one another and the original artefact, which is so powerful within the context of work on an individual text.

Returning to the Blueprint

Having established, then, my conceptualisation of comics as a medium, and therefore what I needed to model, and having established specifics about Digital Humanities, its assumptions, and its potential affordances for this project, let us return to the blueprint for scholars who wish to recreate this study, adding in coding specifics, where relevant.

³⁷⁸ S. Brown, T. Clement, L. Mandell, D. Verhoeven, J. Wernimont (2016). Creating Feminist Infrastructure in the Digital Humanities. In *Digital Humanities 2016: Conference Abstracts*. Jagiellonian University & Pedagogical University, Kraków, pp. 47-50.

³⁷⁹ Flanders and Jannidis, p. 286.

³⁸⁰ Ibid.

³⁸¹ S. Brown, T. Clement, L. Mandell, D. Verhoeven, J. Wernimont (2016). Creating Feminist Infrastructure in the Digital Humanities. In *Digital Humanities 2016: Conference Abstracts*. Jagiellonian University & Pedagogical University, Kraków, pp. 47-50.

Step 1: Research and formalise your understanding of your research object, here comics.

Although the process of creating a digital proxy will itself change how you think about this object, it is important to think through any fundamental opinions you have about how that object, and also the medium as a whole, functions. In this study the fundamental aspects of comics that I wanted my model to capture were the rhizomatic, not hierarchical, mode of signification, and the importance of verbal signifiers for creating connections between panels.

Step Two: I mentioned in Step One that the process of creating a digital proxy will change your understanding of your object of study, even before you start using your database; this is because of what Willard McCarty calls computational thinking.³⁸² I have now countered the positivist, binary thinking that this often entails in my section on Feminist Approaches to Pictorial Data Creation, the process of having to formalise your understanding of each and every facet of your object of study demands a challenging but very productive rigour. Understanding models as arguments about the modelled object requires unambiguous and consistent conceptualisations which can test Humanities heuristics of knowledge, but they test them productively. Staying agile and willing to rethink theoretical viewpoints we bring from qualitative methods constitutes an important and iterative step of quantitative work.

Step Three: This was the first stage of what might be considered the building component of the project. It entailed purchasing a physical copy of my text, *Fun Home*, and labelling every panel in sequence. In fact it is likely that through this thesis you will notice that many of images of *Fun Home* include a number written in red ink; this is the panel number.

³⁸² Willard McCarty, 'Knowing ... : Modeling in Literary Studies', in *A Companion to Digital Literary Studies*, ed. by Susan Schreibman and Ray Siemens (Oxford: Blackwell, 2008), Web.

Step Four: Having counted the number of panels, I created a row for each of the 946 panels in a spreadsheet. Each panel used its position in the sequence of the book's panels as a unique identifier.

Step Five: In order to be able to carry out work looking at subsets of the verbal data, I repeated steps three and four for each container of text in *Fun Home* in a new sheet. This included header text, inset captions, labels with arrows, and speech balloons. Each instance of enunciation was assigned a source. This value either captured the type of narratorial text – header, caption, label – or the speaker(s) of the speech balloon. A further sheet was created for intra-pictorial text, the words in the images which the characters can see, such as signposts, words on food packaging and images of text, such as diaries or novels. This made it possible to add a further facet to my readings of verbal signifiers because I could consider the variance in usage by character. Further, it makes it possible to separate out the text of Bechdel the author, and Alison Bechdel the character, to look for differences in usage. Again, each of these instances got a unique identifier tied to their linear order in the text.

Step Six: For each of these containers I manually transcribed their verbal contents, and checked them over twice. It probably goes without saying that this took a lot of time, especially given the importance of eliminating errors. Unfortunately, at the time I began this process, *Fun Home* did not have a digital surrogate. Further, because *Fun Home*, like many comics, is written in an idiosyncratic font, Optical Character Recognition technology does not adequately transcribe it. In order to facilitate the matching and counting formulas later on, each word received its own cell in the row which detailed both its panel number, and its enunciation instance number. This created a record in the sheet which looked like this:

Panel	Enunciation	Verbal
ID	Instance	Signifiers...

1	1	Like	many	fathers	mine	could	occasionally	be
---	---	------	------	---------	------	-------	--------------	----

Step Seven: From this point it was possible to query the database using matching statements.

This means that the user can select a word from the text that they want to research, for example “father”, and the matching statement would find every instance of that verbal signifier, and return which panels included that word. To make this process easier, however, I created a new sheet from my existing version of the panel rows. For this sheet I moved all the cells into a single column and removed the duplicate values using Excel’s Data -> Remove Duplicates function. This gave me a list of every verbal signifier in *Fun Home*. I then used the a matching statement to reconstitute the sheet I had created in Step Six, but replacing the panel number and enunciation instance number as the unique identifiers with the words. This created a sheet, therefore, which listed every word with a record of every panel it was used in. I repeated this matching statement process with enunciation instance numbers, too, to have access to that information as well. Here is an example of such a matching statement:

=COUNTIF(\$B2:\$FE2,R\$1)

What this statement is asking, is for Excel to count how many instances, between columns B and FE in the spreadsheet (the words of the second row’s panel), there are of the value displayed in R1 (“father”). By storing all the verbal signifiers in row 1, this then lets me look up whether or not each verbal signifier occurs in this row/panel. By extending this formula down, I can ask Excel to return me this information for every panel.

Step Eight: At this stage of the database’s development it was possible to choose either a panel, an enunciation, or a word as a starting point and discover what other panels, enunciations or words they were connected to by one of the other values. This was important to enable me as a researcher to think through connections and connectedness, and would be sufficient to support

a scholar who already knew which panel or which word they wanted to analyse and discover more about. What I wanted to add to this was a functionality that would facilitate analysis where the object of discovery, the meaningful connection, was not already known by the researcher. In order to make that possible I created three matrices, one for the panels, one for the enunciation instances, and one for the words. Along the x and y axes of these new sheets I listed each unique identifier from the relevant set, and used the below matching statement such that at each intersection of values from the x and y axes the number of attributes held in common was displayed. This made it possible to think through the most frequently connected panels, and the most frequently co-locating words. As such, I could see how many times “father” co-located with “Sunbeam”, or use a =(MAX) expression to find which panels were connected by the most words, and which panel each panel was connected to most strongly*.

The matching statement require to do this looked like this:

=IF(COUNTIF('fun_home_text'!\$F\$2:\$FH\$2,'Destination_Sheet'!A2)>0,B\$1,"")

What this statement is asking is for Excel to look at whether or not there is a value in common with the first row (2) between the columns F and FH (where the contents of the first panel of *Fun Home* are recorded) and return the number of co-occurrences in this sheet (Destination_Sheet). A similar statement to this is used to look up every row (panel), and write to the sheet whether the values in A2 and B1 (a list of verbal signifiers, and a list of panels) matched in this row or not. By extending formulae like this across the matrix, it was possible to create a matrix that counted the number of values in common that any two panels (stored, again, in Row A and Column 1).

Step Nine: I have asterisked strongly at the end of the previous step because it was at this stage of the building that I started to reconsider that term. This was a result of the readings I was producing using the matrices. It became apparent that my thinking about braiding was being

changed by my results – which is the subject of my second Analysis Chapter. The number of connections between panels, and between words, was being overly-determined by the some very frequent words, and these words were not frequent because they were particularly meaningful in *Fun Home*, but because they were the connective tissue of the English language, the “the”s, “a”s and “is”s. To counter this imbalance I created new versions of each of my spreadsheets by creating copies and editing them in two ways.

a) I removed all the words that were distorting my analyses. To do this I chose a list of stop words from MySQL – a common structured query language – and removed those values.³⁸³

b) I increased the overlap between the relatively under-represented words by reducing them to their stems and lemmas. As the Stanford Natural Language Processing Lab explain, “the goal of both stemming and lemmatization is to reduce inflectional forms and sometimes derivationally related forms of a word to a common base form”.³⁸⁴ To do this I used both a Snowball Stemmer and a Porter Stemmer on my list of words and then manually checked these values against one another,³⁸⁵ and against the original word forms. The effect of these collapsed word forms was that there was an increased volume of connections between panels.

Step Ten: Although I will address the particulars of my pictorial information in more detail later in the thesis, it bears adding some information about that stage here, too. At this point in the building, as I have alluded to above, it was possible to query just the speech instances of particular characters, or of the narrator, by filtering by the source attribute. This was useful for analysing the vocabulary of a particular character, but I also wanted to consider what words got

³⁸³ Dev.mysql.com. 2021. *MySQL :: MySQL 8.0 Reference Manual :: 12.10.4 Full-Text Stopwords*. [online] Available at: <<https://dev.mysql.com/doc/refman/8.0/en/fulltext-stopwords.html>> [Accessed 5 August 2021].

³⁸⁴ Nlp.stanford.edu. 2021. *Stemming and lemmatization*. [online] Available at: <<https://nlp.stanford.edu/IR-book/html/htmledition/stemming-and-lemmatization-1.html>> [Accessed 5 August 2021].

³⁸⁵ Snowball.tartarus.org. 2021. *Snowball*. [online] Available at: <<http://snowball.tartarus.org/>> [Accessed 5 August 2021].

Martin Porter, 2021. *Porter Stemming Algorithm*. [online] Tartarus.org. Available at: <<https://tartarus.org/martin/PorterStemmer/>> [Accessed 5 August 2021].

said in collocation with which characters. As Lisa El Refaie puts it, “we all adopt multiple roles depending on the social contexts in which we find ourselves”.³⁸⁶ To make it possible to address this I repeated Steps Six and Seven but replaced the verbal signifiers with which characters were present in that panel.

Step Eleven: In order to create more overlap between these braids I used an If-Else expression to determine and record what relationships characters had to one another in each panel.³⁸⁷ The way this worked was that if Alison and Bruce, her father, were both present in a panel, the expression would find this and write to a new sheet that it also included a daughter and a father, and a child and a parent. I then repeated Step Eight and created a matrix using these values.

Step Twelve: The final stage of my building resulted from a desire to further mediate my results, and to add nuance to the idea of the braid – this is mainly addressed in my second Analysis chapter. Even after removing the stop words from my dataset – Step Nine a – the results that the matrices returned were still heavily influenced by the new most common words and characters. While removing stop words improved my analyses of *Fun Home*’s network, in the matrices it is easy to see how “father” occurring one hundred and forty times can effectively erase verbal signifiers that only occur twice. In such a non-chronological narrative as *Fun Home* this is best demonstrated with an example of the character data created in Step Ten. I suggest it is beneficial, therefore, to be able to think through connectedness in the following way: each panel is less defined by, and therefore less meaningfully connect through, the presence of Alison, who occurs 648 times, than through a character who only occurs twenty times, such as Roy. Roy’s scarcity in the dataset, and in *Fun Home*, renders him a stronger identifier of a panel and therefore a more meaningful connection, or braid, between panels. To investigate this different type of connectedness, I experimented with weighted connections. To

³⁸⁶ El Refaie, p. 138.

³⁸⁷ I will explain this in more detail in my Methodology section.

do this I used my table that recorded how many instances of each word there was, and divided the total number of words by this number to create a crude weighting of strength of connection based on rarity.

Conclusion

In this chapter, I have described the advantages, both theoretical and practical, of using multiple ontologies, multiple classifications, when creating data from individual comics sources. Some specific examples of this methodology's utility are in evidence in my Analysis chapters. Due to time constraints, however, many of the rewards of this conceptual thinking remain to be harvested in future studies based off of this foundational work. As I have here described, however, the very development of a model, a heuristic, actualises theoretical and analytical work; it constitutes a procedural rhetoric. Further to this, my Future Work chapter, as well as components of the Analysis chapters, evidence and discuss another research outcome of this work: thinking computationally. By this term I understand the following: by thinking at the level of abstraction and rigour necessary to design a classification system such that a source text can be made legible to a computer, an otherwise unlighted on formalisation of a topic or category is produced. Returning to the theoretical angle, though, although the very usefulness of this approach is predicated on its non-transferability, that is, that it operates on the condition that it only has to classify a single text, some of the principles and practices involved do have broader applicability.

Particularly, this chapter has demonstrated the affordances of severely restricting the size of the corpus used in Digital Humanities projects. That is, to reiterate, a trade-off such as any Digital Humanities project has to make; the above is tailored to my research needs and context, just as the size of corpus employed by the Hybrid Narrativity Group or 'What Were Comics?' and the resulting schemas they have employed are directed towards their research goals. Although, in my project, this heuristic is particularly useful for classifying images, this

does not mean that such an approach could not be used for other signifier types, including words. Arguably something approaching this kind of work is already being undertaken in projects which use Parts of Speech (PoS) tagging, but the addition of semantic groups could offer further insight on these projects' texts.

This kind of work will be particularly interesting and productive when undertaken within a feminist 'epistemic culture'. Indeed, it should not be overlooked that such approaches to the digital enact an implicit critique of the structures of the increasingly digitally-organised world in which we all live. Feminist approaches to data and data structures ought to seek to directly critique such infrastructure and devise their own. Such a move might, suggests Drucker, enable Humanities to demonstrate, to those outside of it, its relevance and "cultural authority".³⁸⁸ By undertaking practical, as well as theoretical, interpretation it will be possible to encode more humanistic values, at least in our projects and in cultural heritage projects. As Luise von Flotow said of translation, remediation can be "as intentional, as activist, as deliberate as any feminist or otherwise socially-activist activity".³⁸⁹ This is an important and necessary way of writing back to the spheres from which Digital Humanities has borrowed these tools.

Introduction to the Analysis Section

This section is comprised of three chapters, each of which centres a concept which is fundamental to how comics functions as a rhetorical medium, before demonstrating the utility of my approach for progressing our understanding of those concepts. Each chapter will go through the same four phases, which are as follows:

1. examining the critical context, theoretically and in practice as appropriate;

³⁸⁸ Drucker, *Humanistic Theory*.

³⁸⁹ von Flotow, *Translating Women*, p. 4.

2. laying out what I wanted to test or add to that concept, and how I designed the data and any experiments towards that end;
3. demonstrating the value added to the existing discourse by my quantitative approaches and thinking computationally through a quantitatively-facilitated analysis;
4. reflecting on what good practices, developments and improvements I would make in future iterations of this work.

The three concepts that I centre, are verbal solidarity, comics as a network, and comics as a system. Since these concepts are interconnected, I will elaborate briefly on each of them here, before going deeper into the specifics of each mechanism in their respective chapter.

With verbal solidarity I mean to complement comics theorist Thierry Groensteen's idea of iconic solidarity; the means by which iconically similar shapes or objects braid the panels that contain them together, entering them into conversation and connecting them for interpretation. More broadly, however, this chapter serves to push back against the picto-centrism of Comics Studies that I identified in my Comics Scholarship Background chapter, and to demonstrate the analytical value of incorporating words into discussions of the rhetorical mechanisms of comics.

With the comic as network chapter I look to extend my analysis past individual verbal braids, and the close reading potential that they offer scholars, into seeing such braids as threads that interlace to weave an entire garment. Indeed, this is reminiscent of Bechdel's own image of *Fun Home* as a sweater that I referenced in the Introduction: "everything [...] is so carefully linked to everything else, that removing one word would be like pulling on a thread that unravels the whole sweater".³⁹⁰ The chapter adds further nuance to the concept of the braid by introducing some terminology from the field of network analysis. Specifically this

³⁹⁰ Chute, *An Interview*, p. 1008.

means challenging the current perception of the braid as a homogeneous connector by considering firstly, how the relative strength of a braid is inversely proportional to its frequency within a text, and secondly, by considering how different braids operate with different mechanics.

These two chapters then combine to form the foundations of the chapter on comics as a system. This final chapter sets these prior analyses into a wider lens view of quantitative analysis, in the mode of The Stanford Literary Lab's distant reading, where "distance is a condition of knowledge".³⁹¹ This chapter particularly hints at the potential of quantitative analyses of individual graphic narratives going forwards. Of course, it has not escaped my attention that the term used in the title of Groensteen's first monograph on braids is "System", the same as in this final chapter of analysis, but, as I try to show across all three of these chapters, that word suggests a greater scope, and a more dynamic model than what Groensteen's theory offers. It ought to be understood, however, that I attribute this limitation not to the strength of Groensteen's concept, but to his analogue mode. By taking a database-facilitated approach to what Groensteen has also termed "promiscuous transition", it was possible to counter critiques of it that rejected it both on the grounds of exceeding working memory,³⁹² and on the (im)practicalities of implementing it.³⁹³

These three chapters, therefore, contribute to and develop the idea of the braid, and through it shift the conversation around the rhetorical mechanics of sequential narratives. But beyond these Comics Studies interventions, the chapters also demonstrate the value of the methodological interventions outlined in my *Braiding a Digital Methodology Between Comics and Feminist Approaches to Data* chapter. These methodological interventions are threefold.

³⁹¹ Franco Moretti, *Conjectures on World Literature*, pp. 57-58

³⁹² Cohn, p. 68.

³⁹³ Groensteen himself draws attention to this criticism in: Thierry Groensteen, *Comics and Narration*. trans. by Ann Miller (Jackson: University Press of Mississippi, 2013), p. 21.

Firstly, they operate as a proof of concept for applying a digital methodology to individual graphic narratives in response to the corpus-based projects outlined in the *Braiding a Digital Methodology Between Comics and Feminist Approaches to Data*. Secondly, they demonstrate the value of thinking computationally, a necessarily embedded component of my Digital Humanities heuristic, as described in the *Braiding a Digital Methodology Between Comics and Feminist Approaches to Data* chapter, which forced me to reconceptualise received concepts from Comics Studies. Thirdly, they show the investigative potential of my feminist approaches to data creation, which were, in turn, necessitated by the ruptures created by thinking computationally.

Analysis One: Verbal Solidarity

*“It wasn’t really the story I wanted to tell; it was my ideas about the story”.*³⁹⁴

Introduction

The aim of this chapter is to establish what I am coining ‘Verbal Solidarity’ and to demonstrate both its validity as a theoretical concept, and its utility as an analytical tool. This is an important step in the project’s work establishing a more networked approach to comics and their systems. That is because, by expanding the scope of potential connections between panels to include verbal signifiers, the volume of potential braids increases by a significant amount; in its original form,³⁹⁵ my database counted over 25,000 verbal signifiers spread across the 946 panels. The chapter therefore also writes back against the picto-centrism that I identified in the Comics Scholarship and Verbal Solidarity chapter, and looks particularly at how this manifests in *Fun Home* scholarship. That body of scholarship’s attention to Bechdel’s verbal braiding is of particular interest given how unusually verbal *Fun Home* is in its signification.

³⁹⁴ Alison Bechdel, *Alison Bechdel Q&A - Seattle, WA (for Are You My Mother?: A Comic Drama)* (2012) <<https://www.youtube.com/watch?v=0ayXbaTWzLY>> [accessed 9 February 2017].

³⁹⁵ That is, before removing stop words.

Given how under-theorised I believe the verbal component of comics to be, the main intervention that this chapter makes is a Comics Studies intervention, my introduction of Verbal Solidarity. This concept, however, was both arrived at through, and is geared towards, a Digital Humanities mode. It was arrived at through Digital Humanities because the use of a database liberated me to expand the scope of braids beyond human working memory; and it is geared towards a Digital Humanities end because Verbal Solidarity is the base on which much of my subsequent work analysing the system of comics rests. What the digital component of my project offers this section is a remedy to the limited scope of the analogue mode which manifests in the critical reception to the verbal braid. It is by looking at this scholarly context that I will, therefore, open this chapter.

The chapter will then succeed through:

- 1) a demonstration of the utility of verbal solidarity
- 2) a demonstration of the validity of verbal solidarity
- 3) an analysis of the existing versions of verbal readings of Bechdel, and the gap created by their weaknesses

After looking at some more limited examples of verbal braids, across both intra-diegetic text and extra-diegetic text, to demonstrate how their rhetorical and structural mechanism is at the very heart of how comics and their panels make meaning, through an associative, tessellating refrain, I will weave these together to demonstrate the potential of Verbal Solidarity with my database, by weaving them together in an analysis of *Sunbeam Bread* which I believe will demonstrate both the utility of the verbal braid for all comics scholars whilst also showing how my methodology made this possible.

Before that, it is worth clarifying the role that my database played in this chapter specifically since many of the examples I use, and the other critics use that I will highlight, can

be arrived at in an analogue mode. These advantages can be characterised as completeness, speed and complexity. In terms of completeness, having a database behind my verbal search queries offered me a higher degree of certainty that I had found every instance of a signifier in the text when it came to analysis. Since this was an effect of having carefully input and then checked all of my database entries, it is not unreasonable to suggest, in terms of time commitment, that the database would not always save a researcher time if they knew which verbal signifier they wanted to study. I would suggest that for researchers who want to follow multiple verbal braids, however, the security of a database's completeness rewards the time investment. It should be added that this effect is particularly useful after words have been lemmatised and reduced to their stems, especially for words that occur very frequently. Whilst a braid such as "Sunbeam" occurs fewer than ten times, and could thus be analysed manually, any analysis of the usage of the more frequently occurring words such as "father", "dad", "mother", "time", "year" – which each occur between 140 and 53 times in *Fun Home* – would be very challenging for a researcher without a database. This, it ought to be noted, is also true when looking at pictorial signifiers, as characters such as Alison and Bruce who combine for almost a thousand occurrences.³⁹⁶

The second advantage of the digital mode I adopt for this analysis is speed. Speed and completeness can be understood to be complementary in the sense that, in order for a scholar to feel they have successfully located a complete set of a word's usages, they will have to invest a higher volume of time. As such, whilst it would technically be possible for a researcher to manually create a complete dataset of "father"'s one hundred and forty usages, with assiduous checking, this would be impractical.

³⁹⁶ For more information on these totals and others, see the final analysis chapter.

The final, and potentially most useful, affordance of using a database for this work is the complexity of analysis it facilitates. Once more, in a sense this is a function of its affordance for speed and complexity. Whilst it would be possible for an analogue reader to compile the usages of “Sunbeam” and even “father”, to follow those signifiers on their adventures through the text, to analyse their particular usage in the text’s idiolect, and to see which panels these signifiers braid together, it is at the next stage of analysis that the database really exceeds human capacity. What the database can offer here is the ability to quickly retrieve a complete set of “father”’s usages, and then return the frequency with which it co-occurs with every other verbal signifier in the text. It enables jumping from the network of one braid to others, and even to combinations of three signifiers. Further, it enables a reading to proceed through a relay of connection. A researcher can start with a single verbal braid connecting two panels, and pick up on a different verbal braid from each of these, and so on, creating a network of allusion.

The Critical Context

Panels and Anchorage

In ‘The Specificity of Comics for Digital Humanities Research’ section I analysed the specific affordances of the panel for the analysis, and specifically the digitally-enabled analysis, of comics. I contrasted the discrete and concrete unit of the panel with Barthes’s arbitrary units of reading, “lexias”. Let us briefly refresh those ideas and build on them with a further affordance of the medium of comics which feeds into Verbal Solidarity, anchorage, before embarking on a deeper discussion of the concepts of Barthes and Groensteen.

Whilst Groensteen has imported the idea of the braid from Roland Barthes’s structural analysis *S/Z* and applied it to images, such a transposition is not as straightforward as simply moving from words to images. Although Barthes takes as his object of study Honoré de Balzac’s short story ‘Sarrasine’, and Groensteen takes as his sequential narratives, this is not

merely a shift from an exclusively verbal medium to a medium that usually combines words and images. It is also a shift from a relatively smooth medium, to a highly striated one.

What I mean by this is that, by merely translating the concept of the braid from words to images, a more foundational facet of comics is ignored: its panels. Whilst verbal texts, in general, take their grammar from the language in which they are written, comics are not bound by grammar in the same way. This effect is heightened by what Robyn Warhol terms “the space between”.³⁹⁷ What Warhol means by this term, is that the dual tracks of word and image offer comics creators the ability to move their narrative around chronologically, geographically or thematically in one of these tracks by anchoring the narrative trajectory in the other. This, indeed, is something Bechdel, herself, has specifically talked about in reference to writing long-form comics.³⁹⁸

To pick up on Warhol’s essay, then, and on relay and anchorage in the comics form more generally, this affordance of comics has important implications for braiding, and particularly for verbal braiding. One narrative stream – either the pictorial or verbal – can function as an anchor, allowing the other to move between heterogeneous subjects much more quickly, and, crucially, without the explanation that would be required in a purely verbal text, resulting in, or at least enabling, a more complex layering of information, association and reference, that is, not simply a co-narration of one event, but a co-location/co-presentation of separate events. This can be seen in *Fun Home* both when continuous chronological successions of images allow the verbal content to move between narration of the images to, say, references to popular culture or literary allusion, as in Figure 27, and back again, and when a continuous verbal narration enables the pictorial content to move from an illustration of the

³⁹⁷ Robyn Warhol, 'The Space Between: A Narrative Approach to Alison Bechdel's *Fun Home*', *College Literature*, 38.3, (2011).

³⁹⁸ Alison Bechdel and Christopher Farley, *Alison Bechdel, Author of 'Are You My Mother?'* - *WSJ Interview* (2012) <https://www.youtube.com/watch?v=HMr0-UWe_9o> [accessed 15 February 2017]. (1:52).

verbal content to different geographical and temporal locations as well as to archival material, as in Figure 28.



Figure 27: *Fun Home*, pp. 10–11 (rows one and two tinted by me).

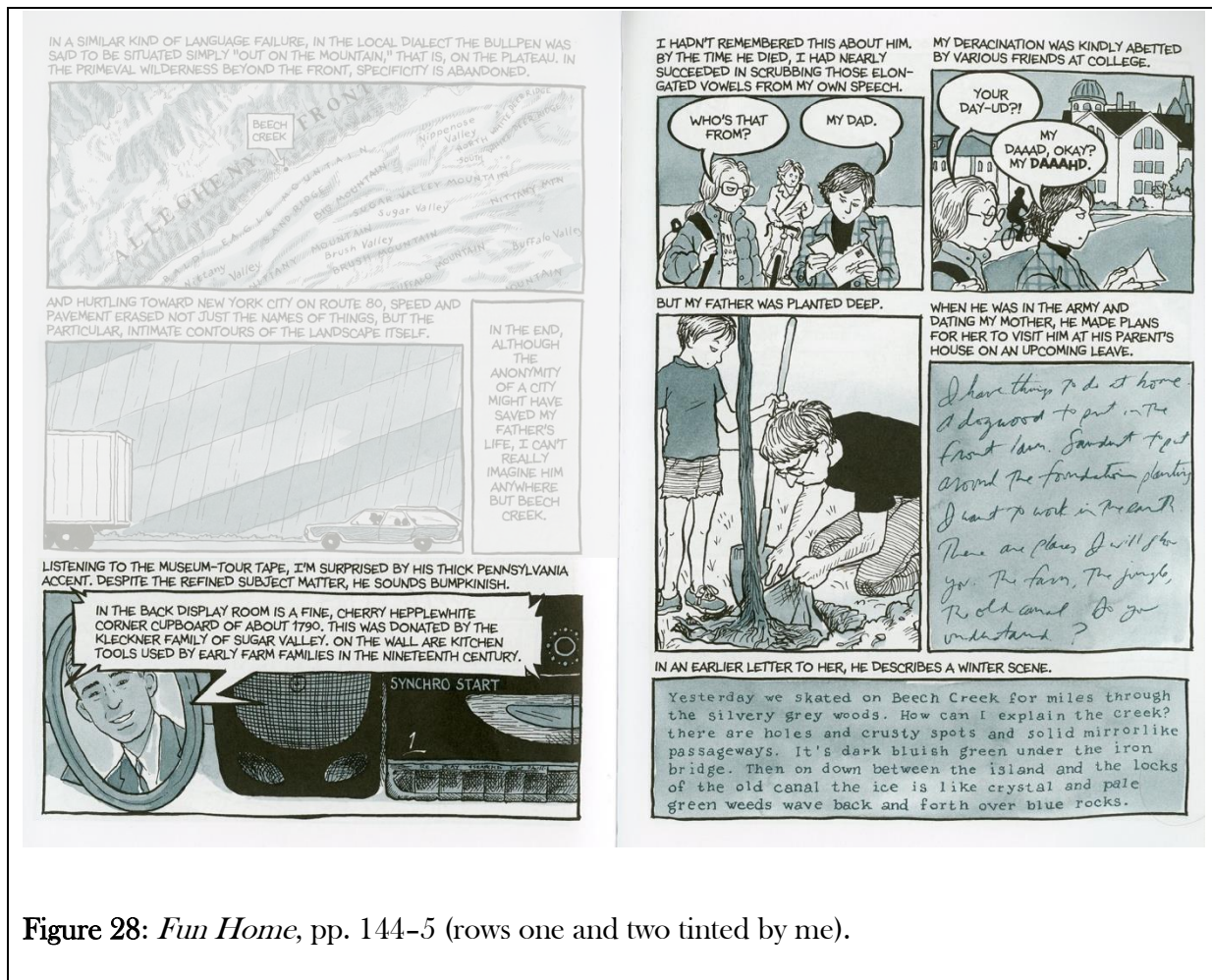


Figure 28: *Fun Home*, pp. 144-5 (rows one and two tinted by me).

A particular use to which Bechdel puts this affordance is the creation of a recursive narrative; since the extradiegetic narrative can provide a linear support, a predictable trajectory, the intradiegetic narrative can revisit already narrated incidents recursively. This can be seen in Figure 28 where the third panel of the right-hand page depicts Bruce and Alison planting a dogwood; this is part of an event found earlier in the narrative, where Bruce takes his children “dogwood-napping” before they plant the dogwoods with Roy,³⁹⁹ in an intersection of two ‘illegal’ themes,⁴⁰⁰ both of which are now entered into a relationship with, and operated on by, the verbal content of this panel. It can also be seen in the fourth panel which refers back to the depiction of Bruce’s time in the army.⁴⁰¹ Through anchorage and relay, this page can therefore

³⁹⁹ *Fun Home*, pp. 92-4.

⁴⁰⁰ Since Roy, of course, is one of Bruce’s under-aged lovers.

⁴⁰¹ Op. Cit. pp. 62-3.

be understood to be not only invoking scenes from elsewhere, and the allusions and themes going on in them – using the pictorial content as a narrative shorthand – but also as altering those original scenes; Bruce’s planting of dogwoods becomes marked by his being ‘planted deep’ in rural Pennsylvania. This specific affordance of comics should be understood to be facilitating braiding, since either narrative track can anchor a narrative trajectory whilst the other departs from it, either evidencing it indirectly or performing an ironic, or knowing, dissonance.

This mechanism, too, is an affordance of the centrality of the panel in the comics medium. Returning to *S/Z*, the grammatical architecture of a story such as ‘Sarrasine’, is composed of the hierarchical units common to the French language – clauses, sentences, and paragraphs – and the non-linguistic superset of these paragraphs, the chapters into which the narrative is divided. Although authors can, and do, flout the rules of language, and often for rhetorical effect, the containers which collect their words generally nest upwards in these predefined grammatical containers, leaving only chapters available for rhetorical deployment. Further, unless a verbal author such as Balzac wishes to seriously disorientate their reader, they do not have the freedom with the single stream of verbal information, to move their narrative around as Bechdel does. What the panel offers a comics creator is a discrete site at which they can assemble as many, or as few, signifiers as they require for their rhetorical ends. A panel can contain only words or no words. It can have an intricately detailed background, or none. It can present full sentences, or fragment speech and narration across multiple panels. It can contain multiple narrative streams at a single site of the text. Signifiers, therefore, can more rhetorically be assembled at the site of the panel, than they can in purely verbal texts.

Braiding in Groensteen

In order to investigate Groensteen’s foundational concept of the braid in comics this section will look at his theoretical writing before engaging with how he applied this theory in his analytic monograph, *Ten Modern Masterpieces*. It will then discuss how other critics have

applied it to *Fun Home*. What I am going to focus on in this particular chapter is his privileging of the image, leaving his “system” of comics, and “networked reading” to Analysis chapters Two and Three, as that is where I will expand on those concepts. It is worth bearing in mind, however, the more over-arching point that a lot of the perceived shortcomings of Groensteen’s theory and its application come from these larger apparatuses (the system and network). Arthrology is a concept built on scale, on potentiality of connection, and that will be important to deal with later, but I contend that part of the reason Groensteen excludes the verbal component of comics in this theory, be it consciously or unconsciously, is because of how much this would expand the number of potential connections. That is, folding verbal solidarity into the system of a comic makes arthrology an even more challenging theory to apply in an analogue mode, when there are already issues for scholars applying it only to pictorial content.

In my ‘The Work of Barthes and Groensteen’ and ‘The Specificity of Comics for Digital Humanities Research’ section, I set out a broad version of Groensteen and his source, Barthes’s, approach to braiding and arthrology. In this section I will expand on the picto-centrism I there identified. Following on from the idea, in my discussion of Digital Humanities, that the scope of analogue work is necessarily smaller in scope than database-enabled work, it makes sense to think of this picto-centrism as an extension of trying not to overload human memory, for to think of a “networked reading” – as I will in Analysis Three – requires considering each and every part of the network. To anticipate that section briefly, when the panels of a comic are conceptualised as nodes, and the braids between these panels are conceptualised as edges, then it stands to reason that by expanding the scope of what can be an edge, from images to words *and* images, the more connected, and the more detailed that system will be.

You will remember from the Comics Scholarship and Verbal Solidarity chapter the field of Comics Studies’, and Groensteen’s more specific, picto-centrism. To reiterate,

Groensteen defines reading comics as a practice where “one must recognize the relational play of a plurality of interdependent *images*”.⁴⁰² It is, for him, “*images* that the breakdown holds at a distance, physically and contextually independent” and,⁴⁰³ once more, when he is speaking of the unique affordance of what a networked reading allows, it is “the *image* [which is then able] to deploy all of its significations and resonances”.⁴⁰⁴ As I relayed above, Groensteen is intentional with this bias, defining comics as a “preponderantly visual language in which text plays a subordinate (though far from superfluous) role”.⁴⁰⁵ I must again declare this as a slightly incongruous point of view. To champion the network, the interconnectedness of comics, its status as network, and yet exclude the type of signifier that offers the most braiding potential between panels does not cohere with the impulse to map connections, to create a system. Again, for Groensteen to argue that “[t]he meaning of each of the occurrences of [a] theme can only emerge in full measure when the reader links each one to the others”,⁴⁰⁶ is an important point about how comics create meaning, but one that is undermined by excluding words.

Given the critique Groensteen’s ideas had received,⁴⁰⁷ the 2015 publication of *The Expanding Art of Comics: Ten Modern Masterpieces* signalled a fresh opportunity to understand what his theory would look like when applied to longer form graphic narratives. In the introduction Groensteen rearticulates his interest in ‘braiding effects’, so it is reasonable to assess the application of this concept in this book. He characterises them as features which “establish additional and conspicuous relations between contiguous or distant panels” and states that they are “in general, a characteristic of works that are particularly highly wrought on a

⁴⁰² Groensteen, p. 17.

Emphasis mine

⁴⁰³ Op. Cit. p. 158.

⁴⁰⁴ Op. Cit. p.127.

⁴⁰⁵ Op. Cit. p. viii.

⁴⁰⁶ Op. Cit. p.141.

⁴⁰⁷ As is set out in ‘The Work of Barthes and Groensteen, and Verbal Solidarity’s place in between’.

formal level”.⁴⁰⁸ Despite the analytical potential of the braid, there is room to expand on these two features of conspicuousness and not being a characteristic of all works of comics.

Groensteen’s more inclusive rendering of the braid in *System*, where “every panel exists, potentially if not actually, in relation with each of the others”,⁴⁰⁹ seems more useful, although Groensteen’s focus on the image may again explain this exceptionalism. By limiting braids to pictorial signifiers it is much more likely that there could be few of them in any given piece. By applying such a mechanism to words it is a lot less plausible that such an absence could exist.

Going through his book, this limitation persists. The key point to come out of his analysis on Alan Moore and Dave Gibbons’s *Watchmen* is a perception that conspicuous repetition – read braiding – does not only manifest itself pictorially. He points out specifically that the “work turns out to be pervaded by two repetitive motifs: symmetrical motifs and circular motifs”.⁴¹⁰ He adds to this that the “conspicuous repetition of the motif from the [smiley face] badge acts mainly here as a signal that invites the reader to notice a more discreet rhyme of loop [...] Rorschach’s journal”.⁴¹¹ For Groensteen, *Watchmen*’s central motif “does not concern, on this occasion, an iconic motif or an object within the diegesis, but a dramatic device or rhetorical figure”; this, for Groensteen, is “proof that a braiding operation can apply as much to elements of enunciation as to elements of content”.⁴¹² Such an analysis is interesting for expanding the scope of the system of comics, but still elides the verbal component of comics.

Indeed, across much of *Masterpieces* Groensteen’s focus on the verbal component of comics is restricted to a very specific instance of the word “rage” in David B’s *Epileptic*.

⁴⁰⁸ Groensteen, *Modern Masterpieces*, p. 38.

⁴⁰⁹ Op. Cit. p. 146.

Emphasis mine.

⁴¹⁰ Groensteen, *Masterpieces*, p. 70.

⁴¹¹ Op. Cit. p. 75.

⁴¹² Op. Cit. p. 76.

However, what he writes here is that “[t]he word keeps returning like a leitmotif” (85). This can be built on in two specific ways. Firstly, verbal solidarity can be applied much more broadly than to a single word, and in a more networked way. Secondly, ‘leitmotif’ contains a different quality to “braid” for me. Indeed, it is conspicuous that he does not use the word “braid” nor the word “solidarity” here. The idea of ‘leitmotif’ is also a little more complex than that of a braid. Visually, a braid is that single strand of lace of which Barthes wrote. A ‘leitmotif’ is, rather, a theme which may shift key or emphasis, but which is more than the individual word, rather an assemblage; a more appropriate comparison would be a phrase, a term which can more easily be applied to both words and music. Later in the book, according to the translator’s foreword, his analysis of Moebius “tracks the dense network of verbal and visual motifs that provide exemplification of his notion of ‘braiding’, infranarrative series that set up chains of semantic and formal relations”. Once more, however, the reader finds themselves over-promised, as this is delivered at a very limited level, and what little he does, he looks at as a series of stitches, suspended in isolation, in relation with nothing. Bechdel’s sweater is not held together by a single stitch, though, it is a dense network; Groensteen simply does not deliver this.

These readings ought also to be couched in Groensteen’s acknowledgement that “it is the text that detains the reader’s gaze and provides a stable path across the page. Many readers leap from speech balloon to speech balloon and glide rapidly over wordless panels, which are thought to be low in information content and instantly intelligible” (133). It is understandable that Groensteen might want to write back against potential snobbery around the images, as I outlined in my Comics Scholarship chapter, but his analysis does seem limited by ignoring these apparently privileged speech balloons. It is only, suggests Groensteen, in a “silent narrative”, such as Shaun Tan’s *The Arrival*, where “there is no longer an entry point giving access to meaning [that] meaning has to be sought out and tracked down through the patient,

meticulous, investigative readings of motifs contained within the image and of the different levels of articulation with preceding and following images” (133). Certainly this is true of Tan’s wonderful book, but such an attention to words is continually absent from Groensteen’s readings, making such a pronouncement seem unnecessary in Groensteen’s prose.

This elision of the verbal extends even to Groensteen’s analysis of *Fun Home*, despite the fact that his analysis highlights its “spiral, obsessional structure” (6) and describes it as “rather like attending an illustrated lecture, in which photographs appear on the screen to illustrate each point” (8). He even goes so far as to foreground how it is “borne along by a *verbal* narrating voice, with only rare and barely noticeable interruptions” (emphasis mine), and relates how all these panels “are overhung by one or more lines of narrative text, or include a narrative caption within them” noting how it “is extremely unusual for a narrator to exert so much control over a graphic story” (8). Groensteen cites this effect as “somewhat at odds with run-of-the-mill comics. It has a different kind of rhythm and fluidity. The reader does not glide from one image to another, but, continually, from a text to an image” (8), and yet his analysis merely remarks on this structure, focussing, when he does on a braid, on the recursion of the truck which hits Bruce, not on the verbal braid on the once-glimpsed side of that truck, which I will return to shortly, Sunbeam. All of this, I believe, is symptomatic of Groensteen’s attention to the pictorial at the expense of the verbal, and his under-use of the potential of Barthes’s theory for comics analysis.

Braiding in *Fun Home* criticism

Groensteen is, of course, not alone in his picto-centrism. Recall what I wrote in my Comics Scholarship and Verbal Solidarity section, specifically Gedin’s discussion of the definition of comics and how critics from both sides of the Atlantic conceptualise the image as foundational, and the word as optional:

Gedin supports this assertion with quotations from Scott McCloud that comics are “‘juxtaposed pictorial and other images ...’, and establishes at the same time that “it doesn’t *have* to contain words to be comics... While Groensteen writes, for example, ‘I plead for the recognition of image as preeminent in status ... Its predominance within the system attaches to what is essential to the production of the meaning that is made through it’”.⁴¹³

It is not that the image is not central to comics, but that the word should not be dealt with as peripheral. Whilst Groensteen’s theory echoes decades of image-first analysis, its potential utility when combined with words is far greater.

It is important to note, at this stage, a specific context for the literature addressed in this section. The way in which I designed my literature review was to be highly specific for my purposes, dealing particularly with criticism surrounding *Fun Home* and Bechdel’s work more broadly. That is not to suggest that useful and important work has not been carried out on other texts with regards to braiding, only that they fall outside of the purview of this project. In the future, however, it will be instructive to carry out a meta-analysis of how readers of any and all comics use Groensteen’s theory. That being said, given the challenges of fully implementing Verbal Solidarity without a database, and given the literariness of *Fun Home*, and therefore the critics it attracts, I suggest that in this case reviewing Groensteen’s practice and the analyses being carried out by Bechdel scholars is sufficient to demonstrate the gap in current approaches to braiding.⁴¹⁴

⁴¹³ Quoted in Gedin, p. 299.

A useful counterpoint analysis that uses braiding is:

Michaels J., (2020) “Graphic Backgrounds: Collective Dissociative Trauma in Rutu Modan’s *Exit Wounds* (2007)”, *The Comics Grid: Journal of Comics Scholarship* 10(1), p.14.

One important focus in the critical reception to Bechdel's text is the focus on its veracity. This is deemed as central to the text in the critical response. This represents an interesting space where I believe Bechdel is actually making some clear rhetorical decisions in order to amplify connections between panels over veracity. This points to what I consider a different type of truth, one oriented by connection, indirectly, a queering of truth which *feels true* rather than being "historically accurate", another mode of Bechdel rewriting the memoir form.⁴¹⁵ Warhol describes this as a "distinct narrative level": the archival material.⁴¹⁶ Bechdel uses photos, maps, diaries, letters, dictionaries, literature, newspapers and other supporting documentation in her memoir. As Helene Tison puts it, archival material is not peculiar to *Fun Home*, but the extent to which Bechdel uses it is.⁴¹⁷ Markedly different to the intradiegetic images, the archival materials operate as almost threshold images in that they are potentially either or both intra- and extra-diegetic. Additionally, they occupy a transitional space between verbal and pictorial content since, in most cases, it is verbal documents that are depicted. As such, this textual content must, also, be considered as operating at a different level. Bechdel has spoken of *Fun Home* as an 'argument' and an 'essay,' a working out of her past,⁴¹⁸ and in this sense, these different verbal and pictorial layers can be seen as offering different kinds of evidence.⁴¹⁹

In order to reflect on the type of scholarship being done in Comics Studies more broadly, then, it is worth surveying what is being written about *Fun Home*. As Valerie Rohy describes, "[d]iscussion of *Fun Home* around the time of its 2006 publication celebrated its

⁴¹⁵ Chute, *Graphic Women*

⁴¹⁶ Warhol, p. 6.

⁴¹⁷ Helene Tison, 'Loss, revision, translation: Re-membering the father's fragmented self in Alison Bechdel's graphic memoir *Fun Home: A Family Tragicomic*', *Studies in the Novel*, 47.3, (2015), p. 346. Indeed, Valerie Rohy suggests that "If every memoir is in some sense a research project, Alison Bechdel's *Fun Home* is a case of documentary obsession" in: Valerie Rohy, 'In the Queer Archive', *GLQ*, 16.3, (2010), p. 341.

⁴¹⁸ Bechdel and Roiphe, (21:18).

⁴¹⁹ Indeed, Ann Cvetkovich uses this word, 'evidence', herself in: Ann Cvetkovich, 'Drawing the Archive in Alison Bechdel's *Fun Home*', *Women's Studies Quarterly*, 36.1/2, (2008), p. 112.

veracity [...] with reference to the role of concrete details”, that is, the archival material.⁴²⁰ Such focuses on the ‘truthfulness’ are present in the work of Sean Wilsey⁴²¹ and Monica Pearl⁴²² as well as more broadly in Lisa El Refaie’s analysis of graphic memoir, but these analyses do not connect this observation to the broader narrative structure or to a rhetorical deployment or distribution. The fact of the archive, the deepest well of *Fun Home*’s verbiage, supersedes the *content* of the archive. When the usage and role of the archive is taken further, in the critical discourse, it is to comment generally on the fact that it provides “memorial talismans that carry the affective weight of the past”,⁴²³ “crucial access to her father’s story in the absence of more direct forms of information”,⁴²⁴ or is part of Bechdel’s reclaiming of her family history and its objects in a process of “marking [the family archive] with her body”.⁴²⁵ These are important observations, but not ones, even in the discussion of words, that deal with the words as more than pictorial information. They have important functions for these readings, and offer interesting and valuable interpretations of the archival material, but the sense that a database behind them, which can build on, and unify these reading seems clear. In terms of the benefit that digital methods can bring, and the different questions they enable scholars to ask, such analogue readings would benefit from being understood in relation to the textual circumstances under which they occur, as well as being connected to semantic and structural layers.

Robyn Warhol, to return to her, responds specifically to the book’s medium, unpacking “the space between the two media [of words and images]”.⁴²⁶ She focuses on the productive tension between the two, their dissonance, to produce meaning. Whilst there is

⁴²⁰ Rohy, p. 342.

⁴²¹ Sean Wilsey, 'The Things They Buried', *New York Times*, 18 June 2006, n.p.

⁴²² Monica Pearl, 'Graphic Language: Redrawing the Family (Romance) in Alison Bechdel's *Fun Home*', *Prose Studies: History, Theory, Criticism*, 30.3, (2008), p. 292.

⁴²³ Ann Cvetkovich, 'Drawing the Archive in Alison Bechdel's *Fun Home*', *Women's Studies Quarterly*, 36.1/2, (2008), p. 120.

⁴²⁴ Op. Cit. p. 112.

⁴²⁵ Hillary Chute, 'Comics Form and Narrating Lives', *Profession*, (2011), p. 113.

⁴²⁶ Warhol, p. 8.

certainly value in this, in an account of what is such a picto-centric discipline, particularly with such a verbally-dense comic, Warhol does not go far enough in her analysis of text, as her focus is mostly trained on individual instances, rather than expanding the scope of her idea and seeing it as an important facet of a network. Though she sees words and images as forming significant narratological units, and her essay is intent on “push[ing comics theory] past a dual mode” and “going beyond the binaries in order to understand how narratives work”,⁴²⁷ it remains a weakness of Comics Studies that, rather than a binary or dual mode, that the second – and markedly second as was seen with Groensteen and McCloud – is never focussed on.

A similar feeling is produced by K. W. Eveleth’s article on “the aesthetics of labyrinthine space [which] engenders a pained celebration of false passages, misleading corridors, and superfluous ornamentation as elements of queer potentiality”.⁴²⁸ Although Eveleth discusses *Fun Home*’s “intricate structure”,⁴²⁹ and suggests that “the maze’s utility...becomes appreciable as a whole only after solution” encouraging the creation of a mapping of the “vast network of transversals...that seek to find the crucial angles of inquiry”,⁴³⁰ he leaves this as an encouragement. It is notable that Eveleth specifically invokes Groensteen’s networked notion of the comic form, even restoring the verbal component to parity with the visual. He describes it as a “hybrid medium that privileges neither visual or verbal codes but which hinges upon their combined action, it is the ‘braiding’...of these two modalities into an isolated, ‘compiled separateness’ that generates the richness of its signification”.⁴³¹ This resonates strongly with Warhol’s argument above,⁴³² highlighting the relay between the two modes of signification without denigrating the verbal component. This is certainly a persuasive

⁴²⁷ Op. Cit. p. 5.

⁴²⁸ K. W. Eveleth, 'A vast 'network of transversals': Labyrinthine aesthetics in fun home', *South Central Review*, 32.3, (2015), p. 89.

⁴²⁹ Op. Cit. p. 93.

⁴³⁰ Op. Cit. p. 97-8.

⁴³¹ Op. Cit. p. 104.

⁴³² Warhol, p. 10.

reading of how panels function individually to produce meaning, but pulls back from a fuller conceptualization of *Fun Home* as a network. Certainly what he identifies in this article is important, that *Fun Home* has an intricate structure, and that it would benefit from the network of connections being mapped. I would suggest here, as elsewhere, that it is his analogue mode of inquiry that constrains this worthy intention.

These analyses offer useful differentiations of *Fun Home*'s verbal and pictorial layers, and often hint at useful work that *could* be done by mapping the verbal networks. Understandably, they also only hint towards tying such an analysis to other structural features. That is, the critical context does not bring it into conversation with either the other structural sub-levels or the rhythmic distribution of such evidence. The scope of these analyses has once again been limited by the analogue methodologies of the authors. It is curtailed by non-digital methods being used alone to understand how Bechdel structurally deploys her "archival backup,"⁴³³ and, therefore, suffers from not being able to tie this semantic level into a broader understanding of the text's structuring and phrasing of narrative, processing and evidence. Neither the role of the much-referenced archive nor the text's structural rhythm can be fully understood if they are only analysed independently, without understanding how they interact.

The critical reception to *Fun Home*, therefore, privileges two particular elements of Bechdel's craft: her recursion and her evidencing or truthfulness. Helene Tison productively introduces the term "metonymy" to Bechdel's text, but her usage of this term falls somewhat short of how I will imagine its potential to think through *Fun Home*'s phrasing and articulation. Looking at Figures Twenty-Nine to Thirty-Three, Tison describes a "daedal, multi-layered composition process intricately woven into the repetitions with a difference"⁴³⁴ - and the

⁴³³ Bechdel and Roiphe, (6:14).

⁴³⁴ Tison, p. 354-5.

associated “accumulation of different interpretations”⁴³⁵ as one of the principal modes by which Bechdel creates meaning, and structures her exposition. This is certainly a strong interpretation of these figures, and of Bechdel’s recursive storytelling mode. Such an analysis is echoed by Hillary Chute and Monica Pearl who, respectively, describe it as “layered recursive narrative in which events and images overlap and repeat”⁴³⁶ and “a layered telling, adding information and impressions over the story as it has already been told”.⁴³⁷ Certainly this can be seen in the panels below, and across Bechdel’s narrative. Bechdel’s handling of “the space between” and use of the headers and insets to anchor her narration whilst evidencing them with her images deserves all the praise it receives. It not for nothing that the MacArthur Grant she received references her contributions to “changing our notions of the contemporary memoir and expanding the expressive potential of the graphic form”.⁴³⁸ Such high praise from Chute, Tison and Pearl appropriately foreground the accumulative, recursive queering of memoir, but what this leaves somewhat in the background is, I suggest, the background itself, the sub-panel units of connection.

The use of recursion is probably the most popular thematic topic for scholars writing about Bechdel’s phrasing and rhythm, indeed Tison remarks that it “has been remarked on by most critics of *Fun Home*”, although these critics rarely frame their arguments in those terms.

⁴³⁹ Certainly, the text returns over and over again to several of its central scenes, returning them to the reader in light of new evidence, ever building on and subtly shifting the reader’s focus. For example, it is in this context that Tison highlights, particularly, “Alison’s coming out and the ensuing exchange of letters and phone conversations with her parents (58, 77, 79, 210) and

⁴³⁵ Op. Cit. p. 346.

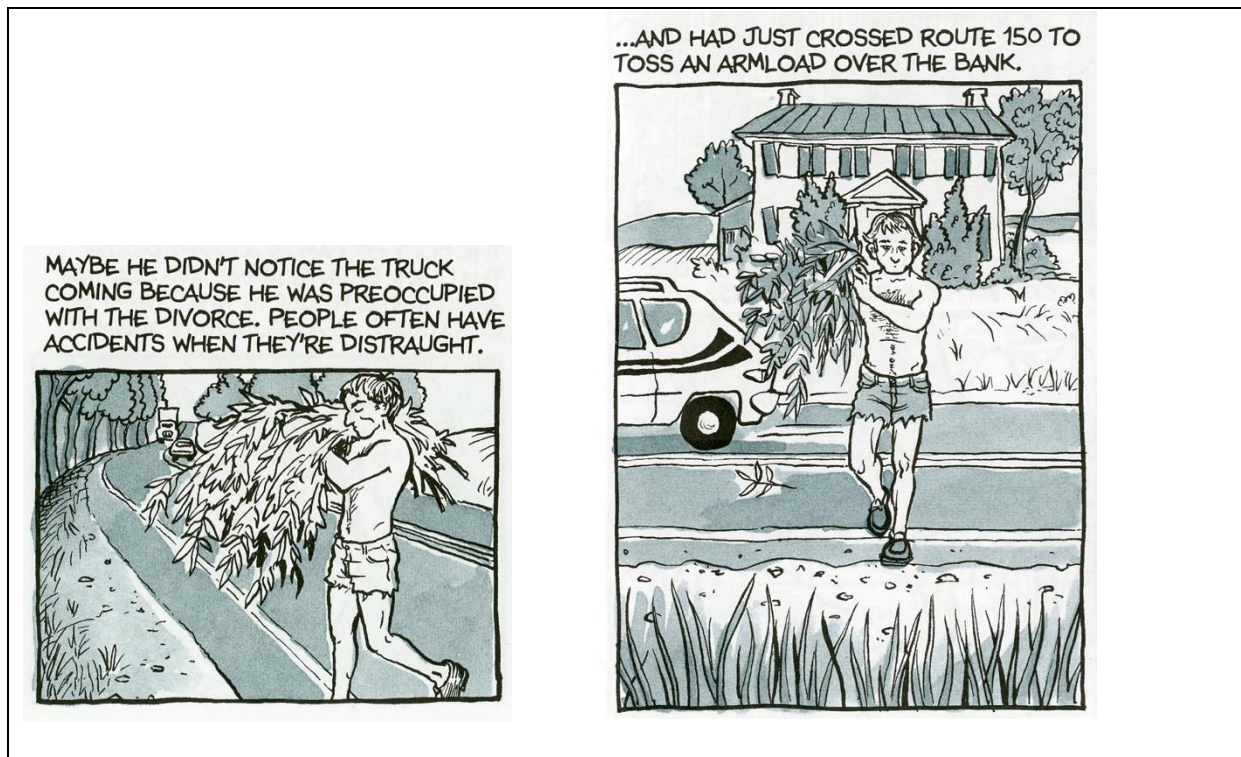
⁴³⁶ Hillary Chute, *Graphic Women: Life Narrative and Contemporary Comics* (New York: Columbia University Press, 2010). p. 180.

⁴³⁷ Pearl, p. 289.

⁴³⁸ <https://www.theguardian.com/books/2014/sep/17/alison-bechdel-wins-macarthur-foundation-grant>.

⁴³⁹ Tison, p. 361.

Bruce's death (28, 89, 116, 232)".⁴⁴⁰ Figure 29 gathers these latter four panels which depict the moments leading up to Bruce's death. If a reader were to ignore the narrative headers and focus on just the images they could very plausibly be read as consecutive panels, given their chronological proximity and sequence. Rather than simply being sequential panels on the same page, however, they are actually spread over two hundred and five pages.



⁴⁴⁰ Op. Cit. p. 346.

It is worth noting that Tison excludes the below panel, from page 59, from her set. This is, presumably because it depicts a hypothetical event, what might have happened "[i]f I had not felt compelled to share my little sexual discovery": *Fun Home*, p. 59.



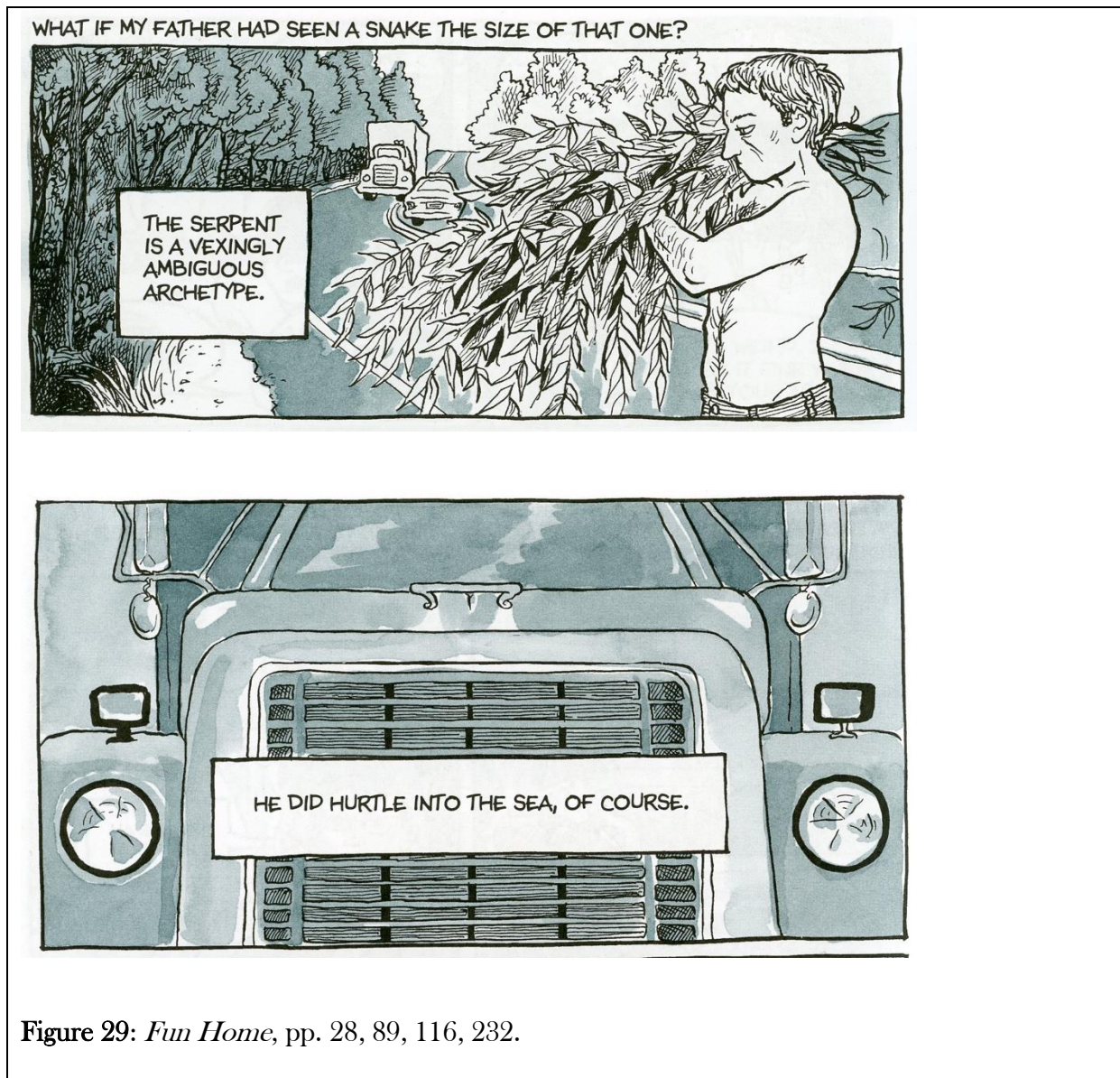
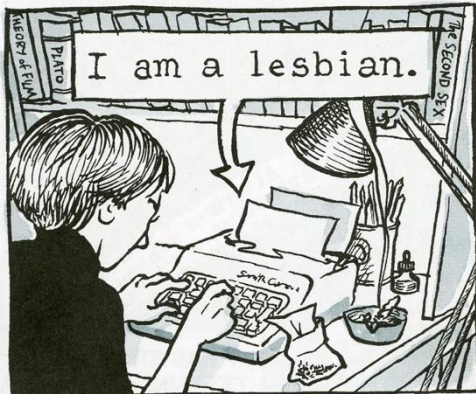


Figure 29: *Fun Home*, pp. 28, 89, 116, 232.

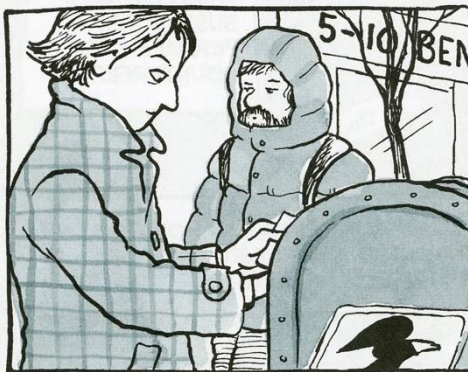
A similar recursion to a single stimulus can be seen in Figures 30 and 31, which gather Tison's other grouping of panels which depict Alison's coming out to her parents. They are again united by their sequential response to a single stimulus or narrative event, even if the timespan over which they occur is somewhat longer.⁴⁴¹ All the same, these are examples, again, of Bechdel's recursive storytelling.

⁴⁴¹ Figure 31 depicts the somewhat anomalous fourth instance that Tison collects under this term. This, however, seems more in line with pages she has excluded from her analysis which I would include: 59 and 211. Pages 58 and 77 do include panels which relate to what Tison calls 'the ensuing exchange of letters and phone conversations with her parents', which are a lot closer to the content of page 79.

ONLY FOUR MONTHS EARLIER, I HAD MADE AN ANNOUNCEMENT TO MY PARENTS.



BUT IT WAS A HYPOTHESIS SO THOROUGH AND CONVINCING THAT I SAW NO REASON NOT TO SHARE IT IMMEDIATELY.



I DID IT VIA LETTER--A REMOTE MEDIUM, BUT AS I HAVE EXPLAINED, WE WERE THAT SORT OF FAMILY.

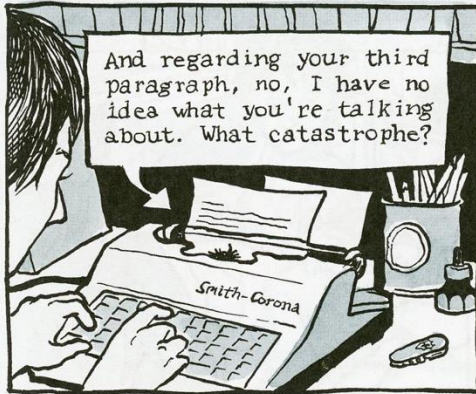


NOR COULD HE HAVE BEEN MORE TRANSFORMED BY THE INITIATION THAT BEFELL HIM THERE. IN THE WEEK AFTER THE MEETING, MY QUEST SHIFTED ABRUPTLY OUTWARD.

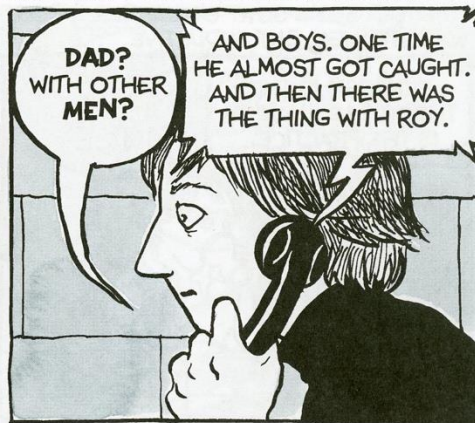


Figure 30: *Fun Home*, pp. 58, 77, 210.

I RESPONDED TO MY MOTHER'S LETTER POINT BY POINT.



SHE FILLED ME IN A FEW DAYS LATER.



THIS ABRUPT AND WHOLESALE REVISION OF MY HISTORY--A HISTORY WHICH, I MIGHT ADD, HAD ALREADY BEEN REVISED ONCE IN THE PRECEDING MONTHS--LEFT ME STUPEFIED.



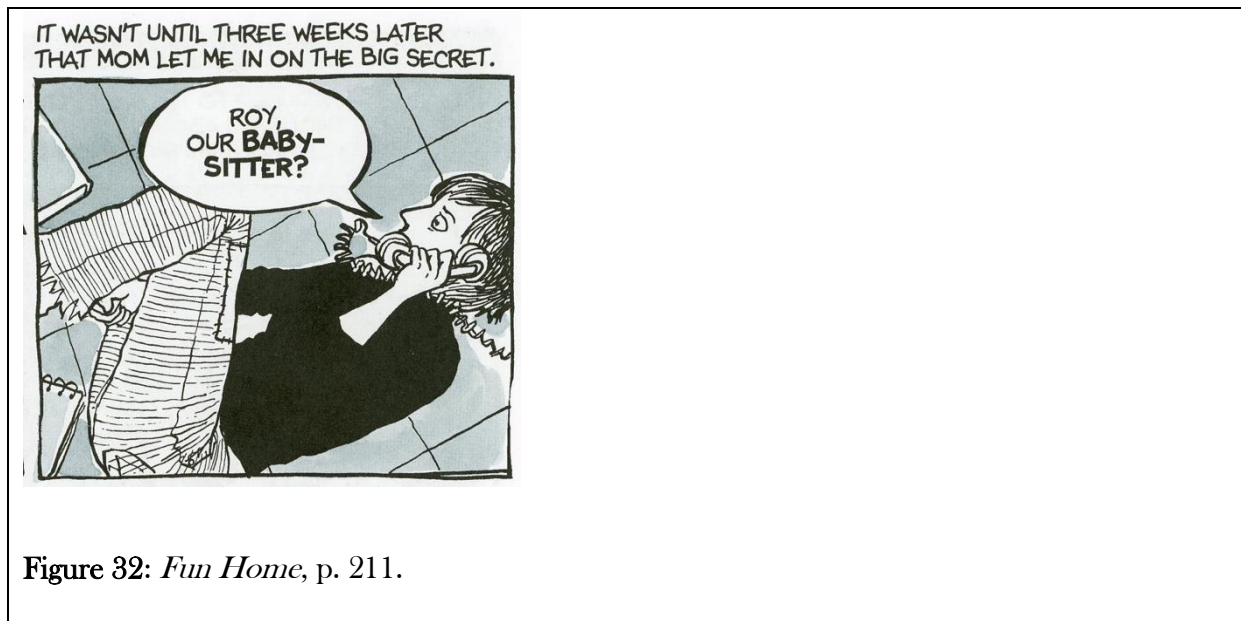
BUT NOT QUITE STUPEFIED ENOUGH--A CONDITION WHICH I REMEDIED UPON HANGING UP THE PHONE.



SOON, HOWEVER, I DISCOVERED AN EVEN MORE POTENT ANESTHETIC.



Figure 31: *Fun Home*, p. 79.



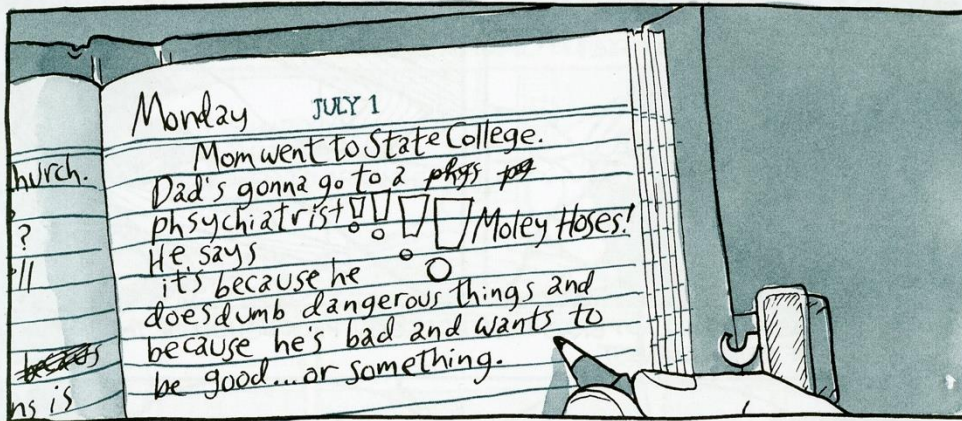
Recursion is a function of the fact that Bechdel “ended up having to structure the book thematically”.⁴⁴² Because these scenes are relevant to multiple themes,⁴⁴³ they are revisited on multiple occasions through the book. This, of course, plays an important structuring and rhythmical role in the text; temporality weaves back and forth through the book at a far quicker rate – as Bechdel suggested – than would be possible in a verbal text. This does not only occur in multiple revisitings, however, as I have mainly discussed so far, but also operates on one-offs such as, for example, in Figure 32, where the events of Figure 31 are revisited.⁴⁴⁴ Not dissimilarly it is possible to see this sort of one-off recursive tactic in Figure 33, though in a much more locally limited way, occurring as it does just ten pages apart.

⁴⁴² *Q & A Seattle*, 9:58.

⁴⁴³ As is clear from the verbal content of these pictorially similar panels.

⁴⁴⁴ Note that page 59 of *Fun Home* includes a panel that somewhat foreshadows this but without naming Roy.

THE SUMMER I WAS THIRTEEN, MY FATHER'S SECRET ALMOST SURFACED.



AT BREAKFAST THAT MORNING HE'D BEEN IN A JACKET AND TIE, NOT HIS USUAL VACATION DISHABILLE OF CUT-OFF JEANS.

THE IMPORT OF WHAT HE SAID WAS REMARKABLE, BUT LESS SO THAN THE FACT THAT HE WAS SAYING IT TO ME.



ON THE FIRST OF JULY, DAD AND I HAD OUR ENCOUNTER IN THE KITCHEN.

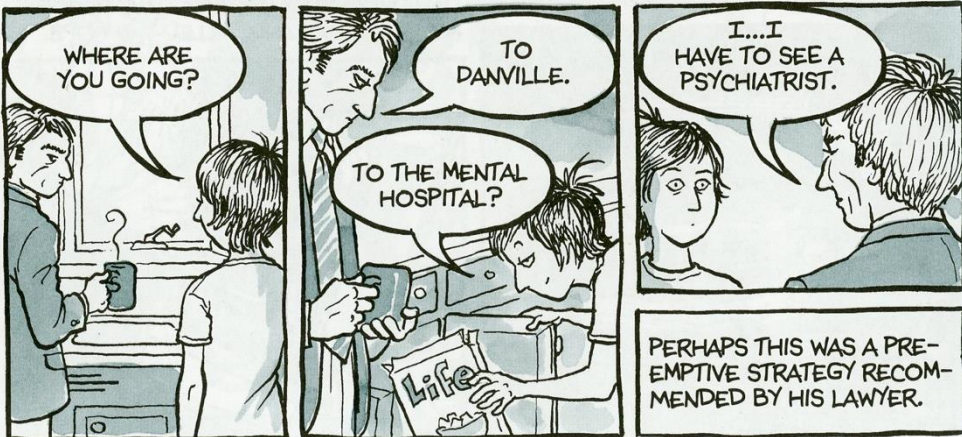


Figure 33: *Fun Home*, pp. 153, 162.

Aside from Tison's examples, but in line with her comment that nearly all critics comment on this narrativising mode, interpretations of these recursions abound in the critical discourse surrounding *Fun Home*. Ken Parille discusses how the style empties Bechdel's work of

“conventional drama, either heightened emotions or narrative suspense”,⁴⁴⁵ Rohy sees it as indicative of her doubt, which gets transformed into “intellectual energy” and a “narrative strategy”,⁴⁴⁶ an idea echoed by Chute.⁴⁴⁷ Similarly, Freedman sees it as the “narratological expression of multiplicity and the evasiveness of a single truth”⁴⁴⁸ and Watson names the interweaving without mobilizing it, calling it an “intricately multi-layered narrative”.⁴⁴⁹ This recursive mode, so particularly afforded by the medium of comics and its dual streams of narration, speaks to the intricacy of Bechdel’s structuring, as well as the necessities of a “thematic”, rather than chronological, structure.

It bears reiterating that Eveleth, who himself criticizes much of the above work, does not fully make the connection to the potential of words, a verbal solidarity, to make similar connections. While he suggests that much of the existing criticism “misses the point of the work [*Fun Home*] and takes the maze for its solution, not for its design and artistry”,⁴⁵⁰ he leaves as clarion call the creation of a “vast network of transversals...that seek to find the crucial angles of inquiry”.⁴⁵¹ Like the rest of the existing criticism, then, he does not mobilise the very reading he supports, nor does he try to situate or quantify it, let alone explore, more concretely, its structural deployment and affordances, preferring to impose a single meaning across the heterogeneous usage of this tactic. Given the scale of such an enterprise, this is not surprising in a critical context using only analogue methodologies, even if the system and utility of such an analysis are recognized.

⁴⁴⁵ Ken Parille, *Six Observations about Alison Bechdel’s Graphic Archive Are You My Mother?* (2012) <<http://www.tcj.com/six-observations-about-alison-bechdel%E2%80%99s-graphic-archive-are-you-my-mother/>> [accessed 1 March 2017].

⁴⁴⁶ Rohy, p. 357.

⁴⁴⁷ Qtd. in Rohy, p. 357.

⁴⁴⁸ Freedman, p. 133.

⁴⁴⁹ Julia Watson, ‘The Pleasures of Reading in Alison Bechdel’s *Fun Home*’, *Life Writing*, 3.1, (2012), p. 311.

⁴⁵⁰ K. W. Eveleth, ‘A vast ‘network of transversals’: Labyrinthine aesthetics in *fun home*’, *South Central Review*, 32.3, (2015), p. 89.

⁴⁵¹ Op. Cit. p. 97-8.

What is interesting about Eveleth's analysis is his keenness to keep separate the verbal and the pictorial components of comics, even if he does not support the pictocentrism that can be perceived in so many readers. Despite all this attention to recursive modes and Bechdel's structuring, this criticism remains set in pictorial braids, revisiting of central events. There is no doubt this montage mode facilitates Bechdel's narrative flourishes and structural innovations, but I suggest that this same mode is being achieved, more subtly, with verbal solidarity.

Braiding in the Background

This focus on 'evidence' in the critical context, leads me onto a point about where in a panel braiding often occurs. I posit that, alongside Groensteen's focus on central iconic signifiers, a great deal of the rhetorical braiding that occurs in comics happens in the backgrounds of the images, and in the verbal content. Where the graphic and the verbal meet – and from where I will draw most of my examples in the analysis section of this chapter – is in what I will term the intrapictorial text. By this, I mean the words which label depicted objects such as the word "Colette" on the cover of a book, a street sign such as "Christopher Street", or the packaging of food such as "Sunbeam Bread" or "Snyder's Pretzels". Whilst it is certainly plausible to see such labelling as merely fulfilling what Roland Barthes terms the "truth effect", a mode of conveying realism to the reader which does tally with the extensive reception of Bechdel's work which applauds this, I believe that the background intrapictorial text is setting up sophisticated verbal braids which instruct *Fun Home's* readers how to connect certain, seemingly disparate, panels and events, reflecting Bechdel's statement to Hillary Chute that she was not so interested in the events of the book, but in the connections she could make between them, and reflecting the introduction to *S/Z* that "what is always told is the telling".⁴⁵² This recalls Barthes's image above of the creation of Valenciennes lace, and making the banal

⁴⁵² Roland Barthes, *S/Z*, trans. by Richard Miller (Oxford: Blackwell, 1990), pp. xi.

“speak”.⁴⁵³ This is the state of the art that I related in the Comics Scholarship and Verbal Solidarity Chapter.

It is worth focusing for a little, then, on how Bechdel uses the intra-pictorial text of her archive to create and elide connections between her panels. I have argued that the critical reception to *Fun Home* focused on two main features of the text, its recursive storytelling, which offers it a queering of memoir as I discussed in that chapter, and her truthfulness, her “archival backup”. These sources are useful locations from which Bechdel can devise braids and allusions. In this section I want to focus on, in fact, their queering of expectation. That is, in presenting documentary evidence, the archive can actually subvert the reader’s expectation of truthfulness because Bechdel is willing to make slight tweaks in her presentation of this alleged reliability to alter the connections being made in the panel.

In the previous section, Braiding In *Fun Home* Criticism, I discussed how scholars have responded to the authenticity that Bechdel’s archive lends to her work. To build on that for a moment, whilst it is of course true that memory is fallible and, therefore, could be mis-remembered or re-remembered differently,⁴⁵⁴ Bechdel points specifically to what she calls her “archival backup”⁴⁵⁵ – the diaries she has kept since she was ten and the extensive documentary photographs Bruce took of her childhood house^{456, 457} – that act as a “corrective to the inevitable distortions of memory”.⁴⁵⁸ Indeed, in *Fun Home*, she even remarks that given the “heavy-handed plot devices to befall my family”, that she was “glad I was taking notes./ Otherwise I’d

⁴⁵³ Op. Cit. 133.

⁴⁵⁴ In accordance with Wagenbaur’s model of memory, as quoted in El Refaie, as “a continuous process of reinterpreting, or re-remembering, the events of life in the light of current interests and concerns”: El Refaie, p. 16.

⁴⁵⁵ Bechdel and Roiphe, (6:14)

⁴⁵⁶ Wilsey.

⁴⁵⁷ Bechdel, Thompson and ‘Dave’.

⁴⁵⁸ in Wilsey

find the degree of synchronicity implausible”.^{459, 460} Despite her explicit engagement with truth and authenticity, though, it is notable that Bechdel is not above subtly altering details of her presentation to change the panel and event’s network of association. One such example is cited by Warhol who claims that Bechdel moved which wall of the library the picture of the cockatoo was on, so that it would be included in certain panels, particularly Helen’s reading of Wallace Stevens’s ‘Sunday Morning’.⁴⁶¹ This change enables Warhol to make an analysis connecting this scene to Bruce’s “passion” for renovation – one of the ways his queerness is encoded in the text – and therefore is highly significant for understanding the text.

Whilst Warhol’s discovery, however, came from discussion with Bechdel, other examples can be found by contrasting her various presentations of certain entries from her childhood diary, one of the very archival features that, allegedly, is an indicator of the text’s authenticity. By contrasting *Fun Home* with *Are You My Mother?*,² differences between the respective presentations of two diary entries can be seen, as shown in Figures 34 and 35. These examples demonstrate Bechdel’s awareness of connection, once again, and her desire to either add or remove certain connections from her narrative.⁴⁶² Since the extra-narratological parts of these records, the parts such as “We had lunch”,⁴⁶³ have little bearing on the telling of the narrative, their primary purposes, when we consider that in each of these cases at least one entry has been edited for an effect, are to operate as a “truth effect” and to connect this panel with another or, alternatively, to avoid such an association. Either way, the potential connections being made or elided are central to Bechdel’s rhetorical presentation.

⁴⁵⁹ *Fun Home*, p. 154.

⁴⁶⁰ As Alison tells her mother in *Are You My Mother?*, “The whole point of [*Fun Home*] was that it was true” (p. 28).

⁴⁶¹ Warhol, p. 14.

⁴⁶² It is worth mentioning, though I will not elaborate on it here, that some of Bechdel’s presentations of magazines and newspapers are not consistent with the databases held by the publishers, demonstrating the same inclination to tweak the associations.

⁴⁶³ *Fun Home*, p. 143.

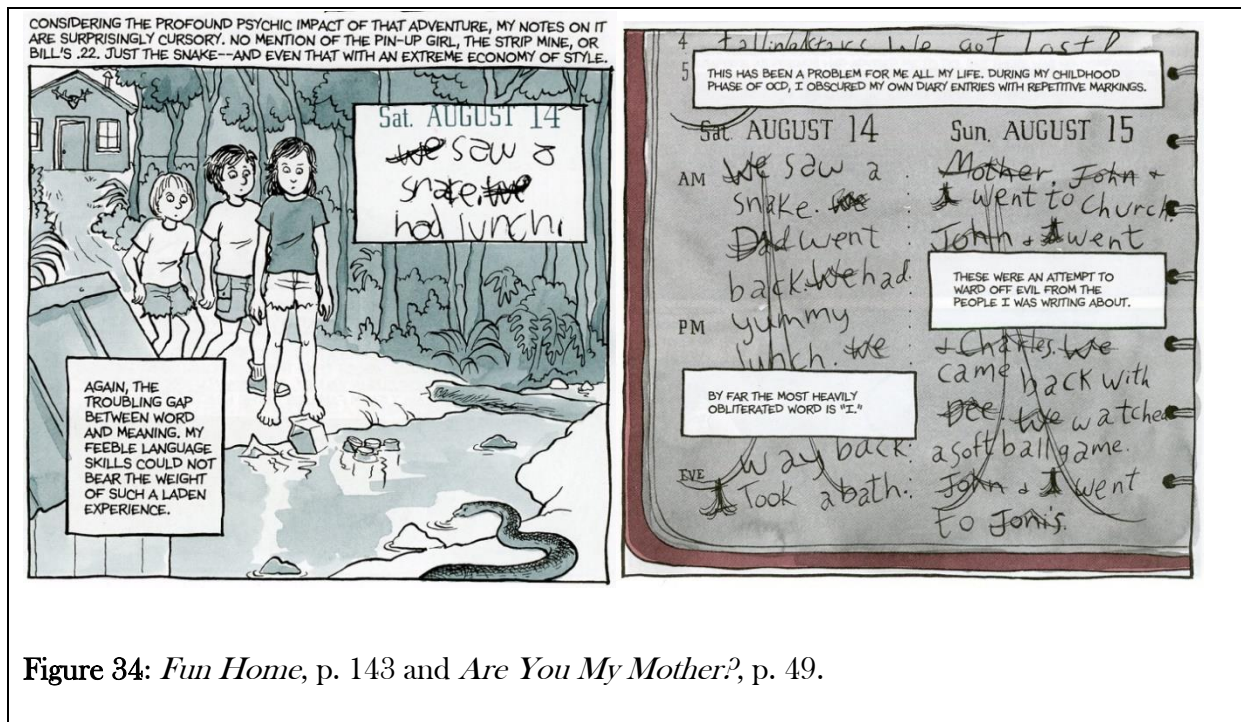


Figure 34: *Fun Home*, p. 143 and *Are You My Mother?*, p. 49.

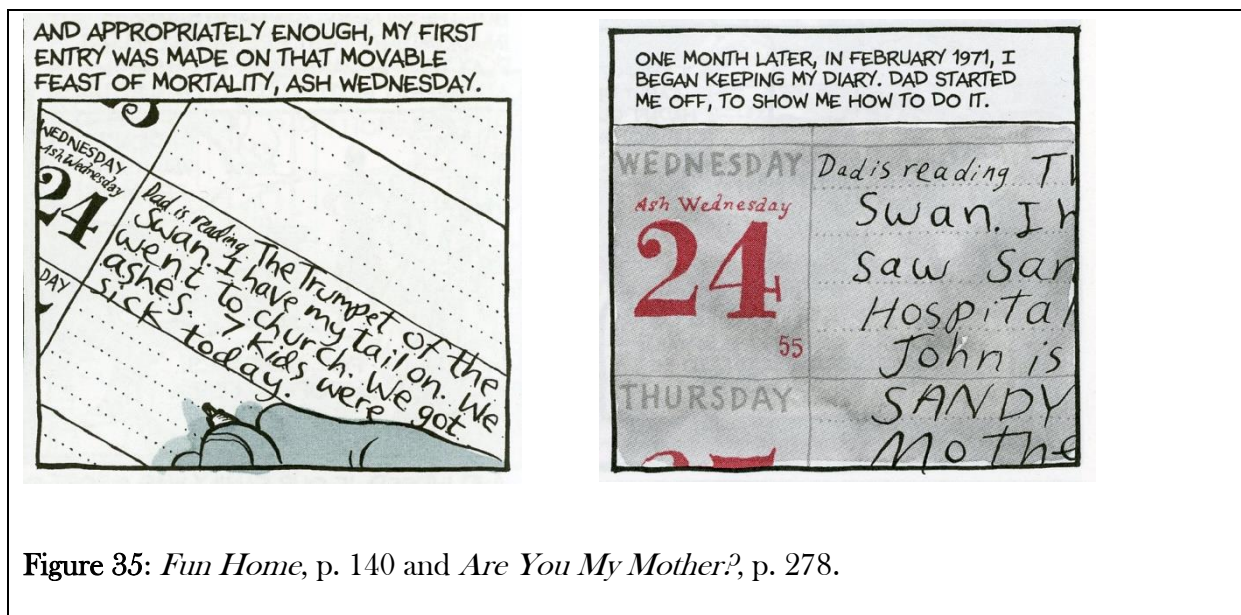


Figure 35: *Fun Home*, p. 140 and *Are You My Mother?*, p. 278.

This kind of modulation to make or avoid connections – which, after all, is how all metonymic allusions, such as Sunbeam, function – can also be seen in the non-autobiographical archival material, too, what can be considered the literary side of the archive. When Bechdel redraws her verbal archival material she often highlights part of the writing, as in Figure 36, to focus the reading, and yet also tends to show more than would strictly be

necessary to capture that highlighted material.⁴⁶⁴ In the second panel of the second row of Figure 37, for example, during Bechdel's discussion of the prominence of the word 'Lesbian' in her dictionary, she also shows the entry below, 'Lese majeste'. Although in this example Bechdel does not highlight the text, it is clear, from the verbal component, that the subject of the pictorial component is the prominence of the entry for 'lesbian'. Bechdel had the potential to change the size or shape of the panel, to zoom to a different distance or crop the image more closely, in order to fit only what she appears to need to show; the fact that she has not, therefore, demonstrates an active decision to include 'Lese majeste'. Whilst it is plausible that it has been left to convey authenticity, such a suggestion does not explain the fact that there are three lines of definition for 'Lese majeste'. Though Bechdel did not choose, alphabetically, what word comes after 'Lesbian' in her family's dictionary, she has chosen that nobody will miss the potential connection of 'Lese majeste' with the wider narrative since it, and its defining words, have been left to inter-weave and associate with the rest of the narrative.

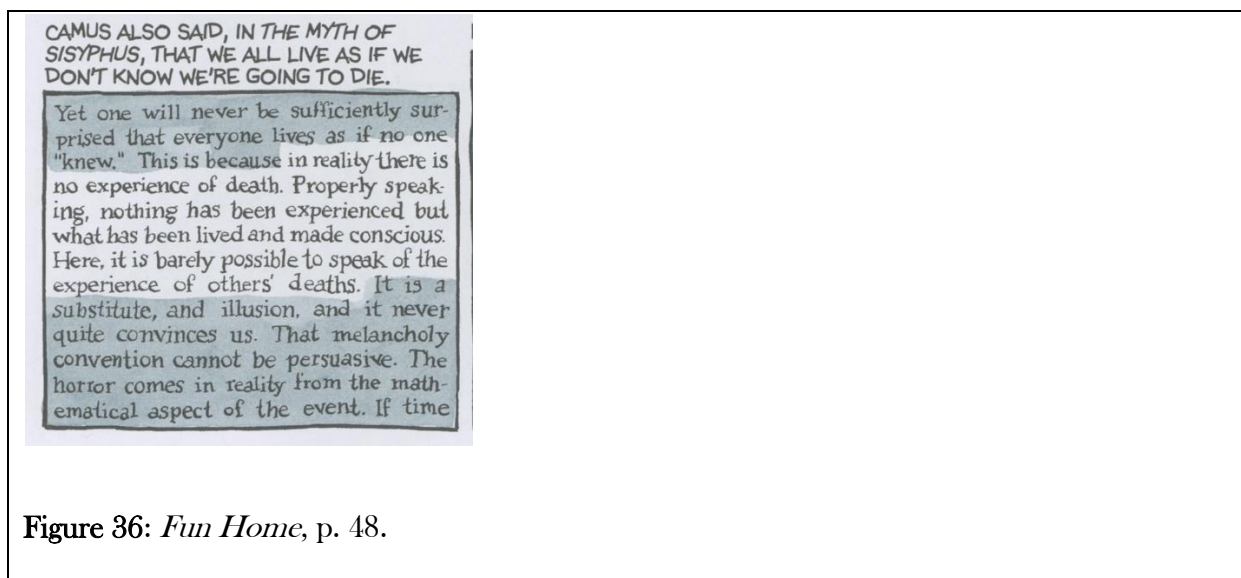
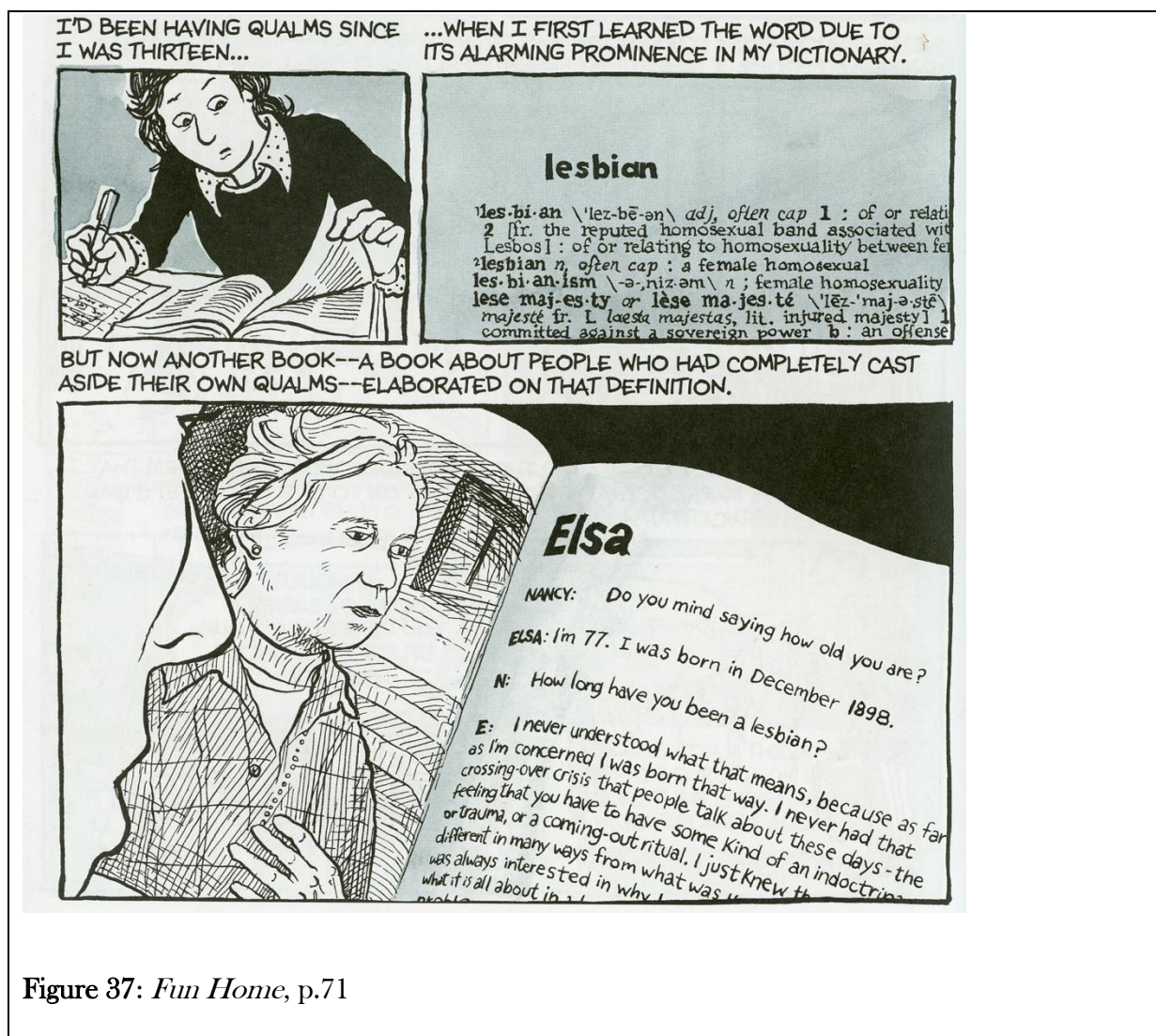


Figure 36: *Fun Home*, p. 48.

⁴⁶⁴ Notably, when she does public readings from *Fun Home*, these are the only parts she reads out. In the cases where there is no highlighting, she will read to a full stop, but finish there.



Moving From Recursion and Metonymy to Verbal Solidarity

Before engaging more deeply in my own analysis, I want to briefly re-centre the main points from the Critical Context section of this chapter and from the ‘Work of Barthes and Groensteen...’ section of the Comics Scholarship chapter. I outlined Comics Studies’s picto-centrism, and outlined the power of the braid whilst explaining what it might be lacking. Now, I want to demonstrate the potential of the braid when brought to the analysis of words, and demonstrate how this is a valid mode of fulfilling what I see as the two important facets of braiding which I outlined in my allusion to concordances and Key Words in Context (KWIC). These are, to reiterate, the ability to connect two sites together, whereby the panels brought into conversation are the objects of analysis, and the potential to clarify particular meanings of

words, similar to working on an idiolectical approach to language. In order to demonstrate the viability of verbal braids I will look at several examples from both the intra- and the extra-diegetic text. It should be reiterated here that the main utility of digital approaches here come in terms of completeness and speed of finding connections, as well as the thinking computationally which drove this desire to map as many connections as possible.

Recalling the background on concordances, one particular affordance of verbal signifiers over pictorial ones is the fact that they can be indexed. There are two main ways that this is important for my project: speed and scale. Returning to the braids that other scholars have pointed out, as seen in the Critical Context section of this chapter, most of the connections are very close to one another in the book's linearity. This, of course, has also been spotted on longer distance braids in *Fun Home*, partly due to the recursive narrative structure where usually pictorial braids are used to re-orientate the reader. In my Context section I also pointed to the montage effect of *Fun Home* and the way in which Bechdel anchors her narrative in one track – Robyn Warhol's visual and verbal – to allow the other to flow more freely. It makes sense, then, to consider how in such a montage mode, there is also a level of collage, where Bechdel does not want to interrupt her trajectory but wants to include an allusion outwards. I suggest that verbal braids give her this option.

It is not only through pictorial recursion that this form of allusion and evidencing can be achieved, though. There are points at which Bechdel connects her reader back to a previous scene or theme without using an entire panel to do so. Of course, this happens in a very direct way, in the foreground of a panel sometimes. For an example of this, we can think of when Alison does not interrupt her father's "shame-faced recitation" in Figure 38.

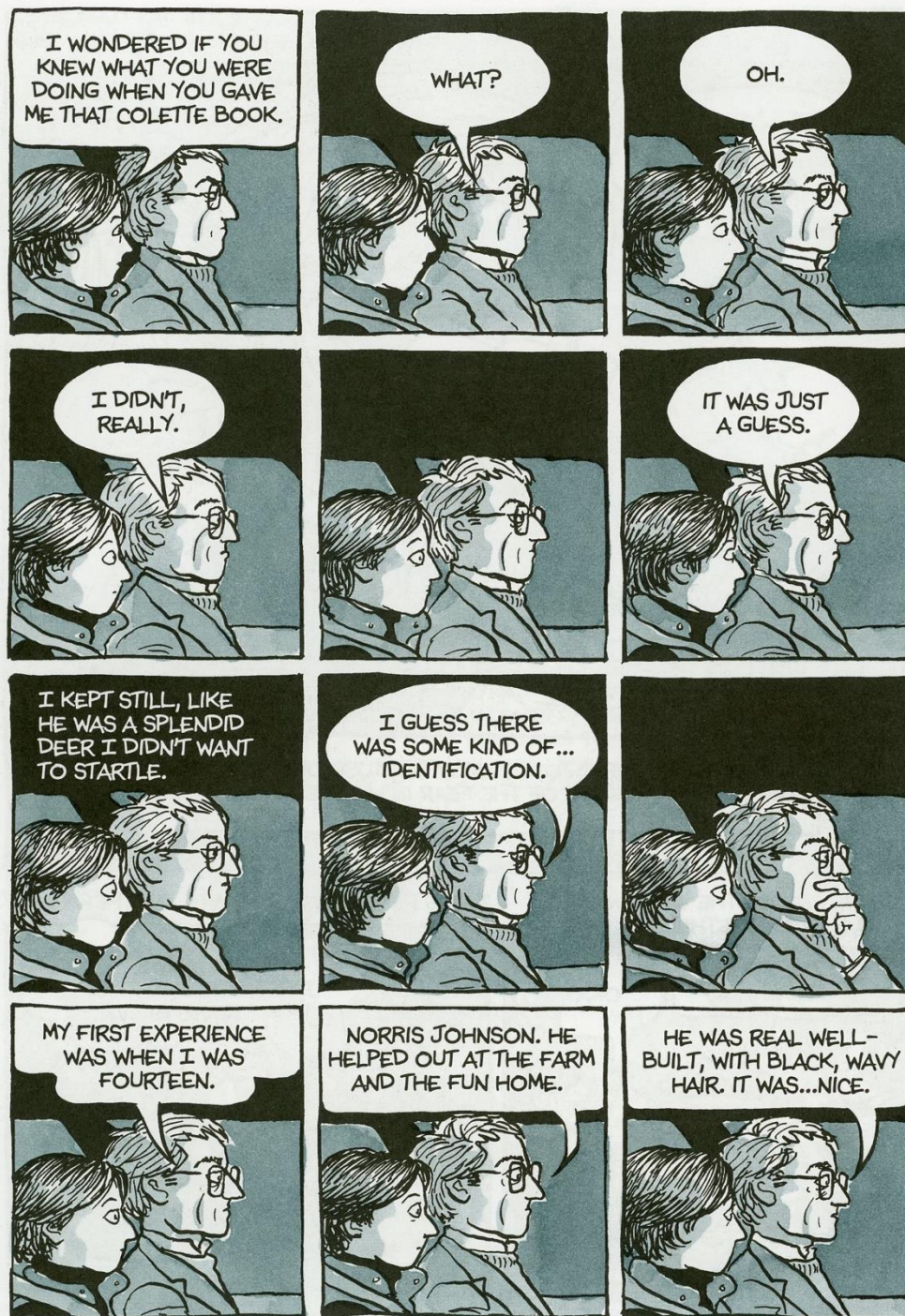


Figure 38: *Fun Home*, p. 220.

Although Bechdel has shown the cover of the Colette book at several other points,⁴⁶⁵ and depicted herself reading it, here she merely points to it with a verbal signifier, which avoids interrupting the intensity of the scene's rhythm.

Spartan

A similar example of such a braid can be found in Figure 39, which depicts part of the scene in which Alison attempts to comfort herself after her mother's long-awaited but ultimately distressing reaction to the letter in which Alison declared her homosexuality. To deal with this, Alison purchased a Swiss army knife, and clarifies that it is the "Spartan' model",

⁴⁶⁵ *Fun Home*, pp. 205, 229

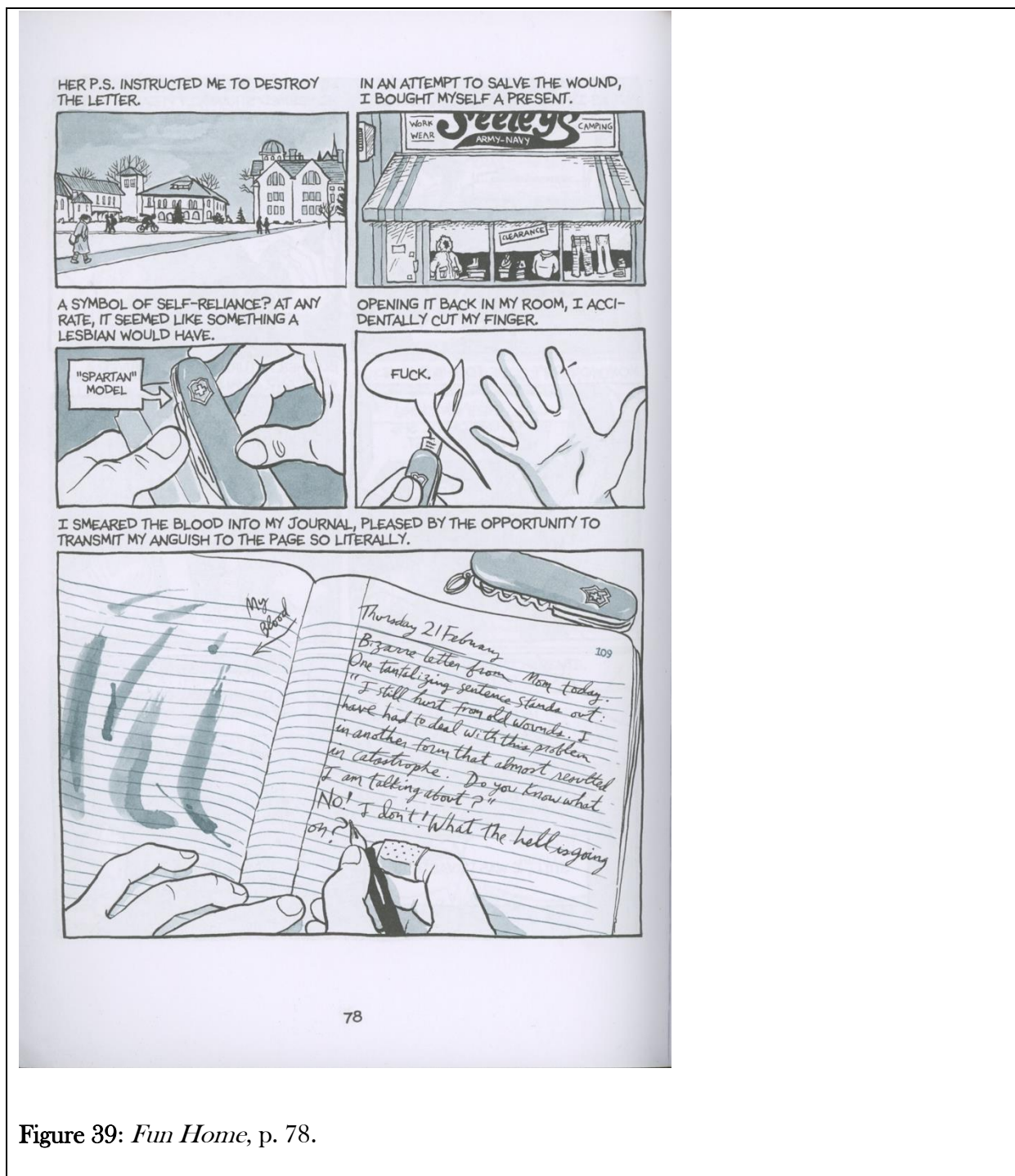


Figure 39: *Fun Home*, p. 78.

Her clarification that it is the “Spartan’ model” verbally braids to page fifteen – Figure 40 – where Bechdel contrasts her character with her father’s, detailing that she “was Spartan to my father’s Athenian”.⁴⁶⁶ This is set within a broader context of playing functionality as honesty off against “embellishments in the worse sense” and their respective openness about their

⁴⁶⁶ *Fun Home*, p. 15.

homosexualities.⁴⁶⁷ Spartan-ness, then, carries not only its dictionary definition, but is synthesised with this previous iteration, connecting both the panels and the ideas within those panels. It is imbued with each of these moments, and the Spartan model Swiss army knife draws in once more Alison's frank attitude to her queerness in direct contrast to Bruce's closetedness and secrecy, one of the central contrasts on which the book turns. The significance of this braid reverberates all the more resonantly for the fact that Alison is prompted to buy the knife to soothe herself after her mother's reaction to her open queerness, having suffered through her husband's closetedness. Further, in the phone call from her mother that follows the letter prompting Alison to buy the knife, her mother outs her father. In this sense the *Spartan* Swiss army knife foreshadows Helen's outing of Bruce.



Figure 40: *Fun Home*, pp. 15

⁴⁶⁷ Op. Cit. p. 16.

Vital

Another such verbal braid occurs when the extra-diegetic Bechdel is explaining to the reader why she laughed when she was telling an acquaintance of her father's death. She states: "The idea that my vital, passionate father was decomposing in a grave was ridiculous".⁴⁶⁸ The word 'vital', here, carries the association of its only other (lemmatised) usage, as seen in Figure 41. Bruce's 'vitality', then, connects into several significant networks: the literary guise through which much of the memoir is structured; Bruce's artifice, in both senses; and his co-occurrences with Roy, one of his student lovers.

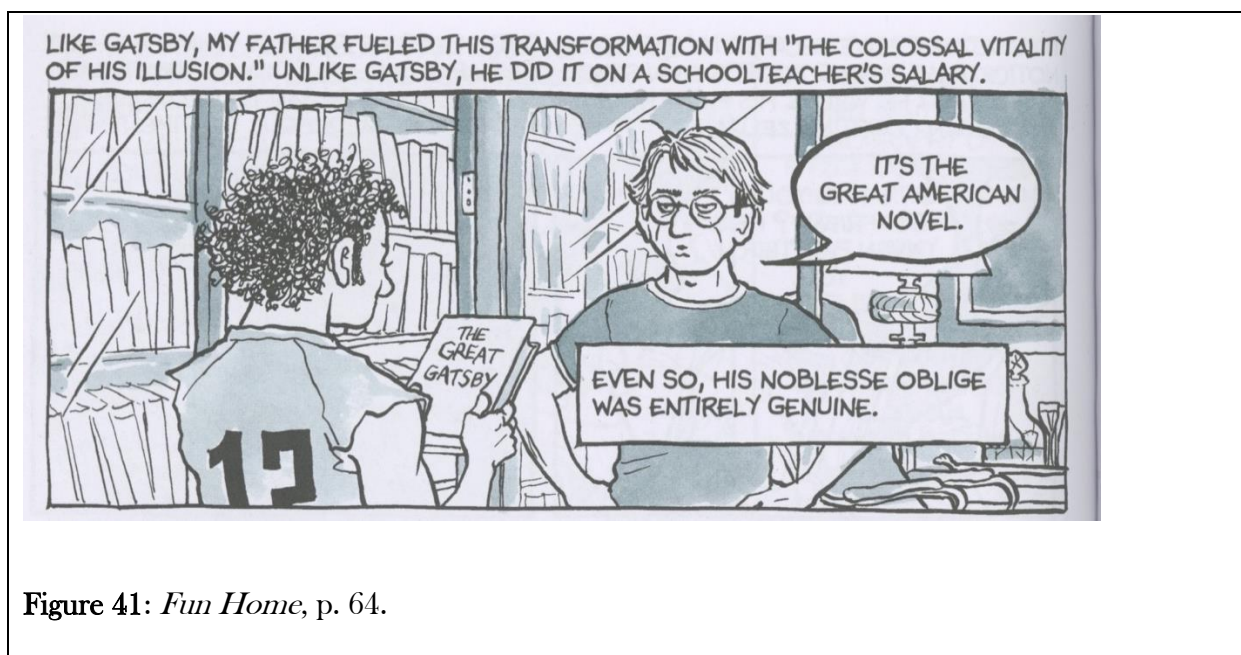


Figure 41: *Fun Home*, p. 64.

Country Squire

Looking at Figures 42 and 43, another such example can be seen with the verbal braid of "Country Squire".⁴⁶⁹ This is particularly interesting because it represents a cross-container braid. That is, in the first instance the words are found in the narrator's header text, and in the second instance they are intra-pictorial text written on the automobile.

⁴⁶⁸ Op. Cit. p. 227.

⁴⁶⁹ This, of course, is a bigram – a pair of consecutive verbal strings. Whilst my database is currently not set up to find these, it would be an interesting future project. In this instance, however, the word "squire" was sufficiently rare to find this braid.

PART OF DAD'S COUNTRY SQUIRE ROUTINE INVOLVED EDIFYING THE VILLAGERS--HIS MORE PROMISING HIGH SCHOOL STUDENTS.



THE PROMISE WAS VERY LIKELY SEXUAL IN SOME CASES, BUT WHATEVER ELSE MIGHT HAVE BEEN GOING ON, BOOKS WERE BEING READ.



Figure 42 - Fun Home, p. 61.

BUT AT THE END OF THE NOVEL THE TWO WAYS ARE REVEALED TO CONVERGE--TO HAVE ALWAYS CONVERGED--THROUGH A VAST "NETWORK OF TRANSVERSALS."



Figure 43 - Fun Home, p. 102.

In the second instance Bruce is driving his children and Roy, a boy with whom he is having an affair, to collect his wife from New York. The car is branded "Country Squire", the very words used in the first instance to describe the nature of Bruce's relationships with boys such as Roy.

Towards Sunbeam Braid

Therefore, if recursion is a direct use of a ‘whole’ (panel) to refer to another ‘whole’, then metonymy can be considered as the use of a fragment, such as we saw with ‘Spartan’, to evoke a whole (be that an entire scene or just another panel). Indeed, the structural use of recursion becomes meaningful, acquires its new meanings, through the new (potentially metonymic) signifiers that the event enters into becoming with, its new assemblage or re-assemblage. Whereas recursion enters one, usually pictorial, event into a new association with words, as in, not only does it perhaps offer more detail but it also re-combines an image with different textual signifiers, metonymy can link separate scenes or panels which share a single attribute. Tison explains that, in *Fun Home*, “connections are established by association, and one scene or theme flows, sometimes leaps, into another”.⁴⁷⁰ This ‘association’, again, is an affordance of the comics medium and can be enacted by either verbal or pictorial signifiers. What Tison terms the ‘flow’, is a result of the anchoring trajectory of one stream, as above, and that her ‘leap’ resonates more closely with the use of the fragments to layer up associations and references, a layering that creates palimpsestic panels and pages.

The redeployment of a single signifier links the two panels or scenes involved and each invests the signifier with a particular resonance. Were the word “Spartan” to be used anywhere else in the narrative, it would be necessary to consider it through the lens of the two scenes analysed above. It is perhaps telling, that both Warhol and Tison’s examples are still relatively locally limited; they each use examples of metonymy that occur in the same chapter. This, however, does not represent the extent and distance at which metonymy is at work in Bechdel’s narrative. A highly significant example of metonymy, in fact, spans almost the entire length of the book. This is one of Bechdel’s “truth effects”.

⁴⁷⁰ Tison, p. 346.

This section functions as a proof of concept for what can be achieved by close reading a graphic narrative in conjunction with the database I designed. To begin with, I will readdress some of the context to this mentioned above. As I discussed in the, the redeployment of a single signifier links two points in a narrative, with each of those points imbuing that signifier with their resonances. This is what Groensteen terms a ‘promiscuous transition’, and is an instance of what he refers to as ‘braiding’.⁴⁷¹ This mode of this effect, if not actually arrived at through Groensteen, is found in microcosm in Bechdel’s *Fun Home* when, at the close of the first chapter, Alison narrates, “his absence resonated retroactively, echoing back through all the time I knew him”.⁴⁷²

Looking at the existing critical writing on *Fun Home*, these metonymic braids (as Tison calls them) are limited to quite local resonances. In the works of Tison and Warhol, readings of braids are restricted to ones which exist within the same chapter. Such a practice is clearly possible without a database. But braids function at a much wider scale than this. One particular strand, which Bechdel consciously and explicitly wove into her narrative was her intention to “work a Sunbeam Bread allusion into each chapter”.⁴⁷³ As readers find out on page fifty-nine of *Fun Home*, Sunbeam was the brand logo emblazoned on the side of the lorry which killed Bruce, Bechdel’s father. In this sense, all references to this brand of bread resonate with the weight of this event – even though they are never the focus of the narrative but rather background or circumstantial information – perhaps explaining the motive for Bechdel’s intention. Mobilising a particular affordance of the comics medium, these references are, other than when depicted actually on the truck, always information that could be considered as background information; the logo is never the subject of the narrative text, nor the intrapictorial

⁴⁷¹ Thierry Groensteen, *System of Comics* [complete ref]

⁴⁷² *Fun Home*, p. 23.

⁴⁷³ Alison Bechdel, *Reading and discussion by graphic artist Alison Bechdel* (2009) <https://www.youtube.com/watch?v=kKy0yJ_Owi4> [accessed 13 February 2017]. (50:45).

dialogue, it is merely placed there by Bechdel as a detail a casual reader could easily fail to pick up on, but which clearly refers back to Bruce's death, and infuses that particular panel with that allusion. Not only are these panels and scenes linked together, they are each invested with the context and significance of the others.⁴⁷⁴

It is interesting to note that, despite her explicitly stated aim, Bechdel did not manage to work Sunbeam bread into every chapter. Although it can be found in chapters one, two, three (twice), four and seven, it is absent from chapters five and six.^{475, 476} Despite her intention, then, Bechdel is unable or unwilling to create this connection to her father's death in two chapters. When considering the braid, it is often just as profitable to consider the omitted braid, the missed connection, what we might frame as the queering of expectation. Taking the Sunbeam references as direction allusions to Bruce's death, this begs the question of why such an allusion was undesirable or unachievable in 'The Canary-Colored Caravan of Death' and 'The Ideal Husband', a question to be addressed in future work. Whilst Sunbeam Bread may be alone, as far as I am aware, in having been discussed by Bechdel in terms of her designed usage of it, it is representative of how braids work across *Fun Home*, across any graphic narrative. Indeed, any pictorial or verbal signifier can be potentially deployed in this way within and across the network of a text.⁴⁷⁷ Further, once these are aggregated and balanced, I believe this thesis demonstrates proof that a system of executable and predictable rules can be developed to explain these networks, and the relationships by which they are governed. It is in developing

⁴⁷⁴ In this instance it might be worth considering the metonymic value of the lorry's logo, which transports the reader back to the scene of Bruce's death, as a particular *type* of braid, one which functions as a braiding 'hub'. That is, rather than an assemblage of braids which is informed equally by all of the instances, each of the other instances refers to a single catalytic moment, rather than drawing them all together equally. In future work it would be useful to create a compendium of such different types of braids.

⁴⁷⁵ The references can be found on pages 21, 31, 67, (96) 112 and 217, with 59 being the event itself.

⁴⁷⁶ Of course, implicit in this analysis is that the chapter is a meaningful unit; I am not, after all, querying why it isn't on every page or in every panel. This is partly due to Bechdel's own description, and the existing distribution of incidences, but it is important to consider, here, what exactly should be considered context.

⁴⁷⁷ It is worth noting Bechdel's interest in the psychological ideas of 'transitional objects' (56-9) and 'object relations theory' (22), as seen in *Are You My Mother?*, which, in part, depicts the period during which Bechdel is writing *Fun Home*: Alison Bechdel, *Are You My Mother?* (London: Jonathan Cape, 2012).

this system, as opposed to what I more properly understand as Groensteen's network/web, that a database, prosthetised memory, is necessary for understanding how comics function and make meaning.

To explore more fully this notion of braiding, and Verbal Solidarity, let us build on the readings above of "Spartan", "vital" and "Country Squire", with a juxtaposition of the instances of "Sunbeam" in *Fun Home* to demonstrate braiding's function both as a structural connection, and as a signifier going on its own adventure.

Sunbeam Readings

Below is the first time "Sunbeam" is linked to Bruce's death, although, as I will show below, it occurs several times beforehand.⁴⁷⁸ This is a rare hypothetical panel in *Fun Home*, depicting what might have happened if Bechdel "had not felt compelled to share my little sexual discovery", by which she means, her coming out. It presents an alternative history where Bruce is not hit by the truck that kills him.



Figure 44 - *Fun Home*, p. 59.

⁴⁷⁸ Its first and second, in fact. For such an infrequent term it is interesting to consider that it occurs twice here. This is certainly something that future work would benefit from investigating further because, using the matching statements detailed in my Methodology, I am only currently able to query in a Boolean mode. By this I mean that there is either a positive result that there are matching values, or a negative one that there are not.

The first time Sunbeam is seen in *Fun Home*, however, is the below image where a loaf of Sunbeam bread is placed on the kitchen counter as the Bechdel family eats dinner. The panel depicts one of Bruce's characteristic angry outbursts resulting in a "permanent linoleum scar" in the floor which illustrates the narration's assertion that "it was impossible to tell if the minotaur lay beyond the next corner". Here, Bechdel refers to Bruce's temper via an allusion to the Bechdel's labyrinthine house, which Bruce has restored. This is part of the polysemic "artificer" duality which Bechdel uses to characterise her father in this opening chapter where "the meticulous, period interiors were expressly designed to conceal [his shame and self-loathing]".⁴⁷⁹ This references and contributes to both the Spartan/Athenian dialectic referenced above with regards to closeting, and to Alison's feeling, as a child, that "My father began to seem morally suspect to me long before I knew that he actually had a dark secret",⁴⁸⁰ the dark secret being that he had "sex with teenage boys".⁴⁸¹

The loaf of Sunbeam bread, that totem of Bruce's death, is placed into this assemblage of artifice, false domesticity and violence where "he used his skilful artifice not to make things, but to make things appear to be what they were not".⁴⁸² The verbal braid of "Minotaur" binds this in more closely, to a panel on page twelve where Alison must flee Bruce's rage through "the labyrinth—a maze of passages and rooms opening endlessly into one another"⁴⁸³ where Bruce is instead cast as Daedalus, the creator of the Minotaur's domain, reinforcing the connection between Bruce's death – the Sunbeam loaf – and his artificing.

⁴⁷⁹ *Fun Home*, p. 120.

⁴⁸⁰ Op. Cit. p. 16.

⁴⁸¹ Op. Cit. p. 17.

⁴⁸² Op. Cit. p. 16.

⁴⁸³ Op. Cit. p. 12.



Figure 45 – Fun Home, p.21.

Figure 46 represents the second occurrence of “Sunbeam”, again in a standalone panel where Alison and Bruce are at Spott’s Market, as is visible in the background, buying bread and milk. Alison holds the bread, Bruce the milk. They bump into an “old school chum” of Bruce’s who reassures him if he joins him in going out to the “camp”, that he “don’t hafta shoot nothin’”, underneath a header that reads “But it’s puzzling why my urbane father, with his unwholesome interest in the decorative arts, remained in this provincial hamlet”.⁴⁸⁴ Again the loaf of bread is brought into conversation with Bruce’s artifice – the “unwholesome [...] decorative arts”. It also connects to violence again, after the linoleum scar in Figure 55 and of course the moment of his death, with the potential, but evaded, activity of hunting. This time the panel also picks up on Bruce’s provincial inclination for staying in Beech Creek, after all he was “planted deep”,⁴⁸⁵ despite his apparently more “urbane” character. This provincialism ultimately is a condition and function of his queerness. It requires him to remain closeted, and

⁴⁸⁴ Op. Cit. p. 31.

⁴⁸⁵ Op. Cit. p. 145.

For Figure 47's Sunbeam instance, the reader once again finds herself in the kitchen with the Bechdel family (minus John) recalling the example seen with the "linoleum scar". Christian draws a plane dropping bombs on the blackboard with chalk, Helen and Alison are making meatballs at the dinner table, standing over where that linoleum scar would be. Bruce is entering the room and removing his overcoat, before leaving again two panels later with Helen consigned, as ever, to the practical running of a house which heaves with the weight of Bruce's artifice and false domesticity. The narrative header relates: "I employ these allusions to James and Fitzgerald not only as descriptive devices, but because my parents are most real to me in fictional terms". This panel returns the Sunbeam bread to the domestic sphere but these Jamesian and Fitzgeraldian allusions pull the reader again to Bruce's - and Alison's - sophistication, that urbane-ness which separates Bruce from his old school chum.

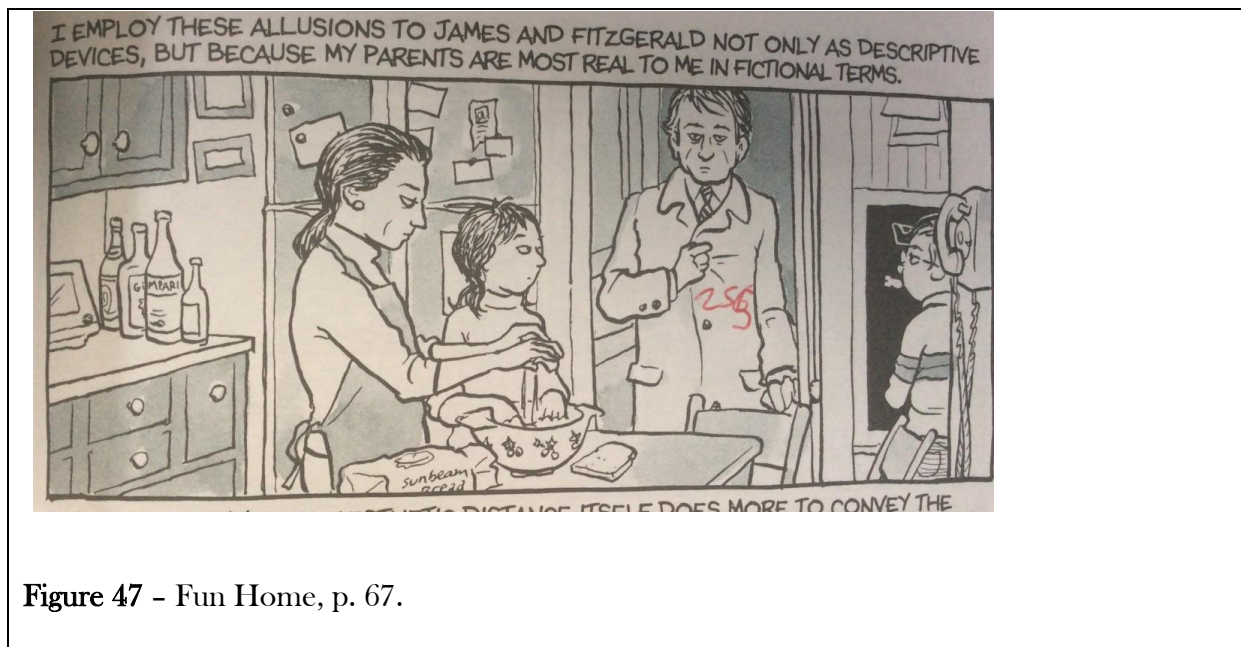


Figure 47 - Fun Home, p. 67.

Figure 48 again places Sunbeam - for once on a poster in a gas station window rather than on a loaf of bread - in the context of a panel contrasting Bruce with the other men of Beech Creek. Bechdel narrates that she "measured [her] father against the grimy deer hunters

[...] with their yellow workboots and shorn-sheep haircuts”.⁴⁸⁷ The notion of hunting connects back to the old school chum reassuring Bruce that he would not “hafta shoot nothing”.⁴⁸⁸

Alison is depicted sitting in the car, as she will be in the final occurrence of “Sunbeam”. This braid itself takes the reader down an interesting line of connection. As we know from above, the car in which these instances occur is a Ford Country Squire. This verbal braid connects the car to Bruce’s “country squire routine”, also discussed above, the term Bechdel uses to intertwine Bruce’s illicit affairs with teenage boys with “edifying” them, with his more refined tastes. In this light, the fact that several of these Sunbeam Bread references occur in and around cars gestures to this relationship between his provincial surroundings, his education and culture, and his death. Further, the car’s own braid connects these instances to Bruce’s “shamefaced recitation” on pages 220–221 where Bruce finally explicitly discusses his sexuality with Alison.



Figure 48 – Fun Home, p. 96.

⁴⁸⁷ Op. Cit. p. 96.

⁴⁸⁸ Op. Cit. p. 31.

Figure 49 returns the reader – with an intra-pictorial textual braid on the page before – to “Spott’s Market”, the shop in which Alison and Bruce ran into Bruce’s old school chum who invites him to the “camp”. In this image, it is Bruce and Alison who are going to the “family’s deer camp”,⁴⁸⁹ for which they are collecting the key. This is the event, braided to from Figure 46, where Bruce takes his children and lover, Bill, to the woods, leaving Helen at home. Bruce leaves Alison in the car to go into Spott’s Market to get a loaf of Sunbeam bread whilst Allison is left to feel “as if I’d been stripped naked myself” as a resulting of looking at the dirty calendar her uncle had given her father. This also braids the scene to the strip mines the group visit shortly after, both because of the verbal braid “strip” and because of the pictorial braid of another dirty calendar in the shovel operator’s cab.⁴⁹⁰ This time it is Alison who will repress something of her sexual self, believing, in the company of the shovel operator, that it was “imperative that he did not know I was a girl”.⁴⁹¹ This braid, being put in conjunction with Bruce’s literal escape from Beech Creek with his lover, into the woods, and his death, with the Sunbeam loaf allusion, paints complex interrelationships of themes and brings a moment of Alison’s closeting into conversation with one of Bruce’s illicit affairs.

⁴⁸⁹ Op. Cit. p. 111.

⁴⁹⁰ Op. Cit. p. 113.

⁴⁹¹ Ibid.



Figure 49 – Fun Home, p. 112.

Having seen five Sunbeam references up to page 112, the reader does not see another until page 217, the last one they will find. Alison, back from her openly queer life at college, sits at the kitchen table with her mother. Much has changed by this point; Bechdel narrates that, “Home, as I had known it, was gone”, “Some crucial part of the structure seemed to be missing”.⁴⁹² Her brothers depart for a friend’s house and a scout meeting separately and Bruce has “a viewing”.⁴⁹³ This, as Bechdel relates, “was the first time my mother had spoken to me as another adult”.⁴⁹⁴ In the crucial panel of the scene, with the loaf of Sunbeam Bread visible over Helen’s shoulder on the counter where the reader first encountered it, Helen confides in

⁴⁹² Op. Cit. p. 215; Op. Cit. p. 216.

⁴⁹³ Op. Cit. p. 216.

⁴⁹⁴ Op. Cit. p. 217.

Alison that she “can’t stand it any more [sic]. This house is a tinder box” with Alison counselling her “You’ve done enough. You should go”.⁴⁹⁵ The house, Bruce’s project and Helen’s domestic prison, comes full circle as the context from the Sunbeam loaf’s original iteration, and the reminder of Bruce’s death in one of the few moments of filial connection between Helen and Alison, as it is described as a “tinder box”, foreshadowing how Helen’s request for a divorce from Bruce may have contributed to his death, as suggested in both the suicide theory of his death – “There’s no proof, but there are some suggestive circumstances. The fact that my mother had asked him for a divorce two weeks before” –⁴⁹⁶ and the accident theory of his death – “Maybe he didn’t notice the truck coming because he was preoccupied with the divorce” –⁴⁹⁷ of his death. This brings us back round to the first instance I discussed of “Sunbeam”, where Bechdel wonders what might have happened if she “had not felt compelled to share my little sexual discovery”.

Sunbeam Elisions

By following the “Sunbeam” braid through *Fun Home*, it is possible to the value of both braiding in general, and Verbal Solidarity more specifically. Each of these panels inflect our reading of each of the others, and create an assemblage of themes and signifiers which are productive for carrying out a close reading. It is worth reiterating that Bechdel does not *have* to put loaves of bread anywhere in her narrative, as they are always background details, nor does she have to make them Sunbeam bread loaves. In fact, thinking though the chapters in which Bechdel does not braid in such a reference, it is interesting to consider that bread – but not Sunbeam bread – is referenced twice in one of these chapters, Chapter Six, as seen below.

⁴⁹⁵ Ibid.

⁴⁹⁶ Op. Cit. p. 27

⁴⁹⁷ Op. Cit. p. 28.



Figure 50, *Fun Home*, p. 163.

In this first example the verbal signifier “bread” is used, whereas in the second instance it is a pictorial reference, in the form of sandwiches.

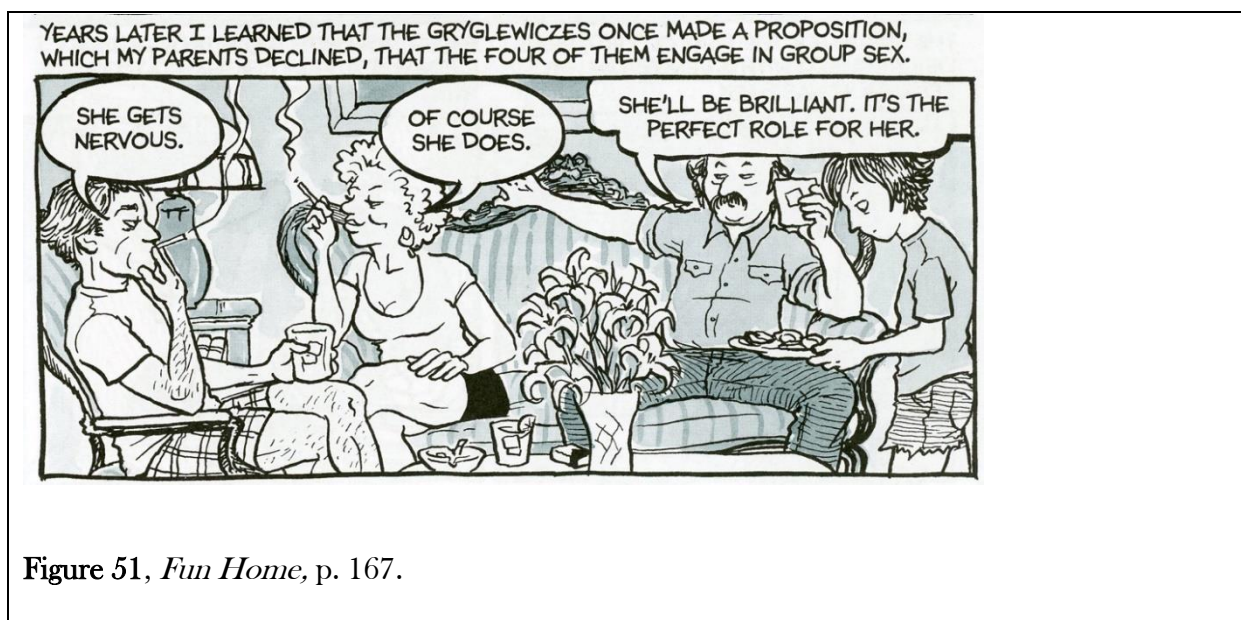


Figure 51, *Fun Home*, p. 167.

Indeed, given the elided braid to *Sunbeam* bread, but the solidarity with bread as a trope, in Helen’s “fresh sourdough”, an example of her “exacting standard”, it is possible to draw a clear contrast to the shop-bought, sliced bread of Sunbeam, and begs the question, in Figure 51, whether these cucumber sandwiches – inspired by Wilde’s play – which Alison serves Bruce and the couple by whom he and Helen were propositioned for “group sex”, are made with the Sunbeam bread of Bruce’s death, or of the home-baked bread of Helen’s exactitude.

As I have suggested, the panels depicting Sunbeam bread clearly invoke Bruce's death, and as readers we can speculate why that is the case for each panel individually. But the network of Sunbeam bread which these braids constitute, of words and themes, of people and places that are co-present with Sunbeam is where the database can deliver a complex and nuanced view. It may not be surprising that this reference is evoked in the kitchen in half its instances, a natural place to include bread,⁴⁹⁸ and it is also found in public spaces when it is being purchased, usually within a car. This is itself a significant choice both given Bruce's belated acknowledgement of his own queerness to Alison in the car in his "shame-faced recitation".⁴⁹⁹ Cars are also strongly associated with Bruce's affairs with teenaged boys, as was seen in the analysis of "Country Squire". This connection also extends to when Bruce essentially goes cruising, looking for Dave Walsh, another of his young male lovers, and the one for whom he is most nearly publicly outed, following the police report and his subsequent trial.⁵⁰⁰

Conclusion

Picking back up on Warhol's analysis of the "space between" the verbal and pictorial tracks, analysis of any given panel in Bechdel's text can be considered as having two particular chronologies, and the potential for their relationship to be one either of "evidence" or of dissonance. I suggest that in addition to operating through montage, Bechdel operates through collage. Bechdel has discussed *Fun Home* as "essay" and a "working out". It is the material artefact of her rethinking her childhood and her relationship with her father. As we have seen with Sunbeam Bread, with Colette, with Spartan, and with Country Squire, she is very willing to both connect to a specific event - in the case of Sunbeam - or link two events and bring them

⁴⁹⁸ Although we must consider the kitchen elsewhere in the book marked with this association, and marked as it is with the domain Bruce requires Helen to occupy, given his attention to embellishment and artifice, and the weight of the domestic work that therefore falls on Helen.

⁴⁹⁹ *Fun Home*, pp. 220-1.

⁵⁰⁰ *Fun Home*, p. 161

into conversation – as we see with *Spartan* and *Country Squire* as indirect connections – and *Colette*, which is a more direct example. Each of these verbal braids, however, offers Bechdel a mode by which she does not *have to* pause her narrative with an entire panel – in a montage mode – in order to contribute to the allusions and connections she wants to make, instead offering her a collage mode. This, I believe, demonstrates both the validity and utility of Verbal Solidarity as a theoretical concept.

This all provokes the question, if braiding is potentially so productive for making analyses, and if words clearly amplify this, why is more work not being done on this? Although this is partly due to the idiolectical nature of comics composition,^{501, 502} and therefore the difficulty (or impossibility) of a unified theoretical description,⁵⁰³ I believe that, as Cohn perhaps unintentionally draws attention to in his critique of promiscuous transition, it is the *human* insufficiency to wholly apprehend and perceive comics, and the fact that digital approaches have not yet been leveraged to this end which explains these gaps in comics theory and analyses, at least in the analysis of long form comics. It is one of the aims of my building, then, to extend the scope of human perception, in order to mobilise – and corroborate – Groensteen’s manually impractical theory of “networked reading”,⁵⁰⁴ thereby demonstrating that digital methodologies can support and enrich human readings and understandings of graphic narratives. Whilst *Sunbeam bread* is alone in being discussed by Bechdel, it is not alone in operating in this way: indeed, any signifier can potentially be deployed in this way

⁵⁰¹ John Bateman. "From Creative Freedom To Empirical Studies Via Qualitative Descriptions: Annotation Schemes For Comics And Graphic Novels". 2017. Presentation.

⁵⁰² Cohn.

⁵⁰³ It should also be noted that even within an idiolect, page layouts are not necessarily used in a homogenised, generalizable manner, nor to articulate a single, particular context. Were Bechdel or Sacco to use the intra-textually unique page layouts described in Footnote 1 at another point of their respective books, there would be a very strong connection between the events related, but that structural mechanics of the page layout may not be being deployed to evoke the same effect, again, even though the effect of the original iteration would resonate strongly.

⁵⁰⁴ Thierry Groensteen, *The System of Comics*. trans. by Bart Beaty and Nick Nguyen (Jackson: University Press of Mississippi, 2007), p. 146.

within the network of a text.⁵⁰⁵ In order to discover such presences – and absences – and potentially overlapping patterns and relationships, without such explicit direction, however, requires a prosthetised ‘memory’. Therefore, whilst the investigative method of a spatial concordance is already in use in literary studies, this metonymic deployment suggests that a verbal concordance would be useful in a similar way.

Groensteen’s ‘arthrological’ focus is limited to pictorial braids, but there is no reason to believe this braiding mechanic is limited to pictorial signifiers, especially given its history in Barthes’s verbal world of *S/Z*. In fact, it is perhaps in verbal braidings that we find the most complex notion of what a braid is, or perhaps more accurately, what different kinds of braids there are. In the Comics Scholarship chapter I alluded to some experimental comics from *Metal Hurlant* and showed how even a line, seemingly an inanimate synthetic fragment of a drawing, could go on an adventure; indeed, it is the iconic solidarity of a character which allows the reader to understand them as character. It is this consistency of representation which allows a character to function in a graphic narrative.

Since a character is very rarely, and only to achieve certain affects, pictured twice in the same panel, it is clearly possible for an individual word to occur more times in a panel than an individual pictorial signifier. When building my database, further, it was necessary to make a decision about what words were useful (including the removal of ‘stop words’); some words simply occur so frequently that to consider them a meaningful braid is problematic. Verbal solidarity presents us with what ought to be considered the width of the edges between nodes, where the nodes in the network are panels, and the edges are the braids. To be clear, this is

⁵⁰⁵ It is worth noting Bechdel’s interest in the psychological ideas of ‘transitional objects’ (56-9) and ‘object relations theory’ (22), as seen in *Are You My Mother?*, which, in part, depicts the period during which Bechdel is writing *Fun Home*: Alison Bechdel, *Are You My Mother?* (London: Jonathan Cape, 2012).

again to make a distinction within the class of braids where it is necessary to understand the strength of a braid, and how it can or should be understood.

Why Does This Require a Digital Approach?

The combination of recursive and metonymic structuring that I have detailed above stands to benefit from a digital prostheticisation of memory as indicated by the sheer volume of connection that is possible and by the gap in the existing criticism. Whilst the verbal solidarity braids I have drawn attention to above are interesting parallels and connections, the full extent of the connections can only be understood with a database behind the analysis to not only facilitate the process but also enable the discernment of patterns and relationships as well as tying these, more widely, into other structural concerns. This expanded notion of Groensteen's 'braiding', then, will open up new avenues for analysis and interpretation, demonstrating the overly limited nature of existing understandings of recursion and connection and corroborating his and Barthes's notion of text as network. Structural connections are not isolated incidents, rather they are inter-dependent structures that operate synthetically and symphonically, as refrains and leitmotifs. It would be possible, for example, to consider the interplay between the Sunbeam metonym that Tison discusses, the recursion of Helen's phone call to Alison, and the recursion of Alison's letter to Bruce and Helen as being a productive avenue for discussing Bechdel's desire for Bruce's suicide to have had something to do with her, something she notes in her text,⁵⁰⁶ for that point of connection with her father.

⁵⁰⁶ Op. Cit. p. 86.

Analysis Two: The Strength of the Braid

Introduction

This chapter builds on the work in Analysis One. Having demonstrated in that chapter the rhetorical and structural affordances of my term “verbal solidarity”, this chapter will build from the useful work Groensteen has done establishing the “braid” as a mechanism. Such a powerful rhetorical and structural component of comics has, until now, largely been dealt with as something which operates homogeneously, connecting two or more points in a text, bringing them into conversation, and altering the way in which the word or image which constitutes the braid is interpreted. In this chapter I expand on that strong foundation by considering different ways in which scholars might conceptualise the braid, particularly in relation to the strength of connection that different braids make.

This builds on the notion of the comic as a network, with braids crossing one another and interacting, adding a greater degree of dynamism to the network of the comic. To demonstrate this I return to some of the examples from Analysis One. Some questions that, by the end of this chapter we will be able to think of, and in the future will be able to answer are:

- What is the most connected panel, and what that mean for both digital and analogue scholars?
- What is the rarest/strongest braid, and what is the weakest braid, and what do these concepts mean for analogue scholars?
- What does it mean for braids to relay, and to collocate with other braids frequently?

All of these are questions that perhaps we would not have conceptualised before this project, a result of computational thinking, but they are also useful questions to think with for analogue scholars, again building from that central feature of the comic, the panel.

Critical Context

In terms of establishing the critical context for this chapter, it will be worth briefly revisiting some of the ideas from Analysis One. In that chapter I dealt in great detail with how Groensteen writes about braiding theoretically, how he practiced it as a method in *Masterpieces*, and how other *Fun Home* scholars have applied it to Bechdel's text. This chapter is also responding to that scholarly landscape, so I shall only quickly revisit some of those themes in this section. Implied in Groensteen's braiding, and in concordances to the extent they exclude certain words, is the idea that braids function in one way, they connect panels together, bringing chronologically distant panels into conversation. This can be a very productive function, but the way he shows it functioning (as we saw in Analysis One) is somewhat limited. This manifests in three ways:

1. His picto-centrism elides the potential of words to make connections between panels;
2. As a result of this he does not treat the text sufficiently as a highly connected system;
3. He does not go any further in thinking through how different braids function.

Looking at his examples in *System* they are, understandably locally limited. Less understandably, however, the examples in *Ten Modern Masterpieces* did not build on this limitation.

One way to rethink the nature of braids is to think of their strength. In a sense this idea is already baked into "iconic solidarity", and braiding, because the examples used – as I showed in the previous chapter – tend to be relatively infrequently used. That is, the objects of the braid are not ones a reader finds in every panel; Groensteen is not suggesting we braid every instance of Alison in *Fun Home* together. Whilst that is how the reader forms and alters their schemata on Alison, by taking every instance and accreting what she enters into conversation with, and how she changes in certain scenarios, this is not how Groensteen is thinking of the braid.

But I want to ask what would happen if we did? And what would happen if we did that for every word, and then tried to map those connections onto one another? Firstly, it would take an enormous human effort to effect without a database. But more importantly, we would not get the same kind of meaningful connection as we do when we look at the central example of Analysis One, the Sunbeam Bread logo.

In this there seems to be the idea that, to some extent, a level of scarcity of connection is important. Combining these two ideas – what happens if you map every connection, and, what happens when you try and account for strength of braid – with the specificity of the comics architecture, what new insights can this provide and what future applications of quantitative work on individual texts can be done? How much closer can we get to a more fully realised system or network, with intersecting and interrupting relationships? To provoke further reflections, let us return to some of the examples from Analysis One, and consider different types of understandings they can produce for our conceptualisation of the braid.

Re-Viewing Braiding

The main example from Analysis One which I want to recall is “Country Squire”. Looking at the Figures below you will remember how Bechdel connects Bruce’s more general “country squire routine”, present in the narration of the first example, to a detail in the background, the make of the car, in the second example. This instance of Verbal Solidarity clearly connects these two panels and inflects each with the signification of the other.⁵⁰⁷

⁵⁰⁷ I might add that this is particularly interesting in that it represents a cross-container braid. That is, in the first instance the words are found in the narrator’s header text, and in the second instance they are intra-pictorial text written on the automobile.

PART OF DAD'S COUNTRY SQUIRE ROUTINE INVOLVED EDIFYING THE VILLAGERS--HIS MORE PROMISING HIGH SCHOOL STUDENTS.



THE PROMISE WAS VERY LIKELY SEXUAL IN SOME CASES, BUT WHATEVER ELSE MIGHT HAVE BEEN GOING ON, BOOKS WERE BEING READ.



Figure 52 - Fun Home, p. 61.

In this second instance, you will remember Bruce is driving his children and Roy, a boy with whom he is having an affair, to collect his wife from New York. The car is branded “Country Squire”, the very words used in the first instance to describe the nature of Bruce’s relationships with boys such as Roy.

BUT AT THE END OF THE NOVEL THE TWO WAYS ARE REVEALED TO CONVERGE--TO HAVE ALWAYS CONVERGED--THROUGH A VAST "NETWORK OF TRANSVERSALS."



Figure 53 - Fun Home, p. 102.

This connection is clearly meaningful, but it bears unpacking some further insights about this panel. Firstly, this verbal braid is, in fact, a bigram, a pair of consecutive verbal strings,

“country” and “squire”.⁵⁰⁸ Querying my database, the word “country” occurs six times in *Fun Home*, the word “squire” only these two times. As such, taking these verbal signifiers separately, squire-ness is always being operated on by country-ness, but country-ness makes connections with other panels.

The first of these “country” references that I want to draw attention to can be found on page one-hundred and two. Bechdel’s narration is reflecting on Bruce’s duality again:

“Bourgeois vs aristocratic, homo vs hetero, city vs country, eros vs art, private vs public”. In this panel Bechdel is looking at photos from a holiday she went on with her father and Roy, again without Helen. This is a third instance in which the word “country” is connected to Roy, and therefore to Bruce’s extra-marital affairs. It also connects to this discussion in Analysis One around Bruce’s closetedness and how that differs from Alison’s openness, as was seen in the analyses of Sunbeam bread, and of “Spartan”. Another example of “country” comes in a letter Bruce writes to Alison when she is away at college:

It’s ironic that I am paying to send you North to study texts I’m teaching to highschool twits. As I Lay Dying is one of the century’s greatest. Faulkner is Beech Creek. The Bundrens ARE Bechdels - 19th century perhaps but definitely kin. How about that dude’s way with words? He knows how us country boys think and talk. If you ever gawdforbid get homesick read Darl’s monologue. In a strange room you must empty yourself for sleep... How often have I lain beneath rain on a strange roof... Darl had been to Paris you know - WWI.⁵⁰⁹

Bruce identifies himself here as a “country boy”, and Bechdel inserts this verbal braid into her management of the archive. The panel is another which discusses the “Bourgeois vs

⁵⁰⁸ Returning to the idea of this verbal braid as a bigram I think one way in which my database might be improved would be to redesign the cell structure such that bigrams, such as this one, could be found.

⁵⁰⁹ p. 200.

aristocratic, homo vs hetero, city vs country, eros vs art, private vs public” seen in the previous example.

The final example I wish to draw attention to here comes in an inset caption on page one-hundred and eighteen. In this panel Alison is “four or five” and sat in a diner with Bruce.⁵¹⁰ She sees a “vision of the truck-driving bulldyke [which] sustained me through the years” before her coming out.⁵¹¹ She describes this meeting thusly: “I didn’t know there were women who wore men’s clothes and had men’s haircuts./ But like a traveler [sic] in a foreign country who runs into someone from home – someone they’ve never spoken to, but know by sight – I recognized her with a surge of joy”. In the ensuing scene she notes, “Dad recognized her too”, and contrasts it sustaining her with “haunt[ing]” him.⁵¹² Once again country-ness is being infused with Bechdel and her father’s respective queernesses. Each of these verbal braids inflects one another, and informs those initial two “country squire” panels with which I began.

What this reading, enabled by my database, demonstrates is, I believe, both the validity of Verbal Solidarity as a concept, but also its analytical potential when backed up by a database. It is hopefully clear from the reading that such verbal braids can be leapt from, one to another, and thus the whole text connected by various braids. Further, I think it is important to dwell on the scarcity of this connection. “Country Squire” had two occurrences; “Country” had six; and “Squire” had two. Compared to a word like “father”, which has one hundred and forty occurrences, it is productive to reflect on the fact that the relative infrequency of this verbal braid is part of what makes it interesting, and meaningful to analyse in this way. For a word like “father”, it would require a more distant reading,⁵¹³ such as I undertake in the next chapter.

⁵¹⁰ p. 117.

⁵¹¹ p. 119.

⁵¹² Ibid.

⁵¹³ Franco Moretti, *Conjectures on World Literature*, pp. 57-58.

I also want to reflect, here, on the different type of connection being made between these panels than is being made in the Sunbeam bread example I ended the previous chapter with. Both of these examples have bound within them the connecting function of the braid, and the inflection of meaning of the braiding signifier; in the parlance of my Meaning-Making in Comics section, the panels are plateaux *and* the panel populators are plateaux. Despite this, I suggest they do operate differently, and that further research needs to be carried out formalising these different kinds of braids. “Sunbeam” functions totemically; each panel that includes it is inflected, I would suggest, most strongly with the instance where Bechdel reveals Bruce’s cause of death. “Country”, on the other hand, operates in a less totemic manner.

Let us return now to Sunbeam. After the removal of the stop words, there are sixty-two words with which it co-occurs, this can be considered its immediate network. Of these words, “father” is the most common. Although this analysis is still at a low level of sophistication, I want to demonstrate the potential of my database methodology by considering another word by which Bechdel can reference her father’s suicide, the word “truck”. This word occurs seven times, and the image of the Sunbeam truck occurs a further six. Each of these instances clearly braids back to the event of Bruce’s death and draws in its own network of people, places, and verbal signifiers. Using my database to look at the words with which these signifiers co-locate, the word “father” again features most frequently. The word “dad”, however, does not co-occur with any of these instances. To find a word that co-occurs with “dad” and refers to Bruce’s death, we must turn to “suicide”. This word occurs seven times in *Fun Home*. What is notable, though, is that on none of these occasions does it co-occur with the text’s most frequent word, “father”. I suggest that thinking about these modes of appellation, the ways in which Bechdel refers to her father with these different references to his death, is a productive way of thinking about the text as a network. We may even speculate there is a relationship, a structural rule, that runs under this collocation. It is also worth considering, here, that the word ‘school’

seemingly unrelated, keeps cropping up in these concordances. This suggests a new area for reading, and an interesting relationship to try to unpack.

Different Types of ‘Braids’

These different types of braids have implications for how we view braiding as a system. The difference that I want to foreground here is the idea of a network as a somewhat fixed web of connections between set points, and a system as a similar web of connections, but one which operates in a predictable manner, with rules which govern it. This difference is made a little harder to compare, given Groensteen calls his book and its methodology a System of Comics. What I would identify Groensteen as doing is explaining the system by which comics make meaning, through arthrological braids, but not looking at individual comics’s systems. That is, his theory points to how capital C Comics function, but then he doesn’t go further and think about how individual comics function within this. For this, it is important to think about the types of braids, and necessarily the connections between different braids. Groensteen foreground braids as special examples, and that is perfectly reasonable in the context of writing a book to explain, but what some may perceive as cherry-picking, is actually not picking the whole crop. Whilst there are specific braids which are very helpful, it is important to note that *everything* operates in a braided way, that these special examples like Sunbeam are not few and far between, but are important – or perhaps not even important – parts of the texture of the whole book. Perhaps it is a key structural braid which undergirds certain tropes or off of which many other braids hang, but it is not alone in functioning in this way. For this there are cascading/relay braids – a sort of eigenvector centrality – and there are composite braids, the most useful for finding rules which govern a comic, what things operate with.

As it stands, Groensteen has one mode of operation for the braid, the simple connection/assemblage. I want to suggest that whilst all braids operate idiolectically and facially – that is, they acquire a specific meaning in conjunction with the other uses of that signifier in the text,

and that the aggregate, accumulation of those uses inter-inform as an assemblage. They are lines which cross at a point called signifier. But signifiers, and braids, also operate in different kinds of ways; there are different kinds of braid. The first one I want to talk about is the 'hub braid'. This is the kind of braid where there is a key event, and how we define that is an important question, where this signifier is at the centre of the 'action'/diegesis. Again, the clearest example of this is the Sunbeam bread logo on the truck which kills Bruce. The relationship of this 'hub', and its spoke braids outward, as we can see in Sunbeam, is that in interpretation, the inclination is to aggregate the wheel braids as informing, or commenting on the hub, and the hub giving its suggestion to the wheel braids, but there being minimal connection between the various wheel braids.

Relay braids and composite braids ought to be understood as two halves of the same mechanism. The composite braid is an assemblage of two or more braids which frequently co-occur, and/or which co-occur under certain conditions (indeed, these 'certain conditions' are likely to be other composite or regular braids themselves which either mutually disrupt – that is are also affected by the combination – or govern the condition). The relay braid is the kind which connects panel to panel, more in line with my discussion of "Country Squire". It connects things but more loosely. However, this is not to suggest that it is not useful. By swinging from panel to panel, so to speak, it is possible to find much more interesting groups of panels. Yes, the Sunbeam panel is interesting in its assemblage with all the others, but it is when the reader looks at the other things that it swings out to, its degrees of separation, that a more complex view is given. This interacts, inevitably, with the composite braid. At its most extreme the composite braid is a bi-gram or tri-gram, but this does not happen too frequently --- when does it happen, what are these instances, which words collocate most frequently? Putting this together I think we have the vocabulary to talk about a system, not just a web, and tie it into

questions about connection and ‘strength of connection’, how we understand braids more generally again.

What this opens up, then, is the idea that braids which are shorter, in the sense that they have fewer occurrences and therefore stretch through the text to a lesser degree, can be most productively read with what I would call a relay approach. By this I mean that a scholar, such as myself, can use the database to find each instance of that verbal signifier and carry out a reading comparable to the one of “Country Squire”. This reading starts by looking at one signifier, the bigram “Country Squire”, and then proceeds to look at other verbal braids. In this instance I stopped having followed the braid “country”, but I suggest that this reading can continue down multiple braids. Indeed, it was noticeable even from that reading that “country” was co-occurring with pictorial instances of Roy, and intersected with themes of Bruce’s closetedness, a theme that was prevalent in Analysis One’s analysis of both “Sunbeam” and “Spartan”. To further interrogate this conceptualisation of the braid, and to demonstrate the sophistication of verbal structuring, it will be instructive to analyse an occasion on which Bechdel avoids creating a braid. This opens up an area of future analysis which would only be possible by engaging in a database-enabled relay reading.

The Elided Braid

In her meta-analysis of graphic memoirs, Lisa El Refaie argues that the “formal features of comics offer new possibilities for autobiographical storytelling”,⁵¹⁴ a position echoed in Robyn Warhol’s analysis that the comics medium “presents challenges to narratology’s descriptions of how narrative levels operate”.⁵¹⁵ Whilst their respective focuses on the image-word relationships of graphic narratives are important, it is the structural, syntactical containers of

⁵¹⁴ Elisabeth El Refaie, *Autobiographical Comics; Life Writing in Pictures* (Jackson: University of Mississippi, 2012), p. 3.

⁵¹⁵ Robyn Warhol, “The Space Between: A Narrative Approach to Alison Bechdel’s *Fun Home*”, *College Literature*, 38.3, (2011), p. 1.

these signifiers which actually determine how the information is paced, and therefore is what I focus on first.

Reflecting on the breathability and space of a long-form graphic narrative, Alison Bechdel described her capacity as a creator to vary panel sizes and scene structures as a “treat” compared to the “rigid” structure of her long-running syndicated strip, *Dykes to Watch Out For*.⁵¹⁶ Her attention to the rhetorical affordances of, particularly long-form, graphic narratives is in evidence in an interview with Hillary Chute where she discusses her composition process using Adobe Illustrator. Bechdel used this visual programme to compose her verbal content before adding any pictorial material, meaning that:

“[e]ven though I wasn’t drawing, I could start thinking, what’s the sequence here? What image will accompany this narration? Does this panel need to be larger? Vertical? Horizontal? Does it need to surprise the reader by appearing at the top of a left hand page, so they don’t see it coming”?⁵¹⁷

In this short quotation Bechdel picks up on the rhetorical affordances of the relationship of words to images, panel sequences, page layouts (and therefore row compositions), and double-page layouts. To more fully grasp the complexity of her composition, however, it is instructive to investigate the “rules” of composition that she devised, which she relates “ha[ving] to learn” when she moved from *Dykes to Fun Home*.⁵¹⁸

The first of these self-imposed rules that indicates the compositional complexity of comics is that Bechdel, “never wanted there to be more than four lines of text above the panels,

⁵¹⁶ Alison Bechdel, Craig Thompson and 'Dave', *Alison Bechdel Meets Craig Thompson* (2006) <<http://www.powells.com/post/interviews/alison-bechdel-meets-craig-thompson>> [accessed 13 February 2017]. n.p.

⁵¹⁷ Hillary Chute, 'An Interview with Alison Bechdel', *Modern Fiction Studies*, 52.4, (2006), p. 1011.

⁵¹⁸ Op. Cit. p. 1008.

so that the words didn't overwhelm the pictures".⁵¹⁹ Bechdel relates that this created a context wherein "the available space affected the language I could use" and where she was "constantly having to throw words out, just to make things fit".⁵²⁰ She admits, however, that there was "actually one page where I had five lines, but that is the only time I broke the rule"; in fact a close reading of her text suggests that she breaks the rule on five occasions over four pages.⁵²¹ Having established this rule, and willingly related it in an interview, it seems fair to suggest that this is a significant part of Bechdel's compositional phrasing and her pacing of narrative information. As such, the five occasions on which she breaks the rule must be considered significant, their words sufficiently important not to warrant changing. These five panels are united by the fact that the information the words carry, and the particular words chosen to carry that information, are considered too significant to change, even to the detriment of the pictorial information which, she implicitly argues, gets 'overwhelmed'. This underlines the importance of verbal braiding and provokes me ask: what are these words, what do these words connect to, and what connections do they avoid?

There are two important factors here, in fact, which might explain these aberrant panels. Firstly, the words are non-negotiable to Bechdel. Although, a glance at Figure 54's second panel suggests this is not quite so. The phrase "shuffled off this mortal coil" could clearly be phrased more concisely to avoid breaking this self-imposed rule, especially given the fact that it only just tips over into a fifth line. Something about this word choice is more desirable than the alternative of changing the panel layout.⁵²² For that is the alternative available to Bechdel; that is the second factor. The panel structure of each of these pages – and it is possible also, by extension, of the scene and the chapter – was non-negotiable. The way in

⁵¹⁹ Op. Cit. p. 1011.

⁵²⁰ Ibid..

⁵²¹ 44; 71; 71; 128; 157 *Fun Home*. Presumably the 'page' Bechdel is referring to is page 71.

⁵²² It is interesting to consider not only where points of connection are made, but also where they are avoided; it is plausible, in this example, that Bechdel wants to avoid connecting the demise of the locusts with her father's death, and therefore does not apply any of the words surrounding Bruce's death to the locusts.

which she wanted to articulate, pace and structure this information was deliberate. I use 'non-negotiable', here, to describe both the diction and the panel structure because altering either could effect a change which would avoid Bechdel breaking this compositional rule. Although it is possible that this rule was merely a guideline, by bearing out some of the methods Bechdel could have used to avoid breaking it, it is possible to demonstrate not only the volume of unused possibilities open to her, but also the depth of compositional decisions that creators of graphic texts have available to them for the phrasing and articulation of their narratives.



Figure 54: *Fun Home*, p. 157.

Let us begin from the assumption that the words in these panels were too significant to change. Further to this we can rule out as inappropriate the idea of changing the size of the text, since Bechdel does not do this anywhere else in *Fun Home*. Considering these as fixed, there are still plenty of options available to Bechdel to avoid breaking her compositional rule by using the panel structure differently, indeed, by using page layouts found elsewhere in the narrative:

1. The panel could be widened. This would reduce the size of the adjacent panel, as in Figure 55, but retain the site of the verbal signifiers;



Figure 55: *Fun Home*, p. 196.⁵²³

2. The text could be run across two panels, as in Figure 56, which would change the site of the verbal signifiers and their relationship to the pictorial signifiers, although this would be less likely to work here;⁵²⁴

⁵²³ It is interesting to note that this is actually nearly always used in conjunction with a purely text panel, seemingly splitting the textual and verbal content.

⁵²⁴ For example, it would not ameliorate the situation for the adjacent panels on page 71 each of which have five lines of text.



3. Not dissimilarly it would be possible to move some of the text from the offending panel header to an adjacent panel, again changing the site of the verbal signifiers and changing their relationship to verbal and non-verbal signifiers. This would alter the relationship between text and image in both the original panel and the one the excess text was moved to and may, in turn, alter page composition, depending on the location of the original panel. This could even be extended to creating an entirely textual panel for all, or part, of the offending text, as in Figure 57. Indeed, on occasion, Bechdel deploys two purely textual boxes in succession.⁵²⁵ This removes the textual fragment from direct relation to an image and paces the information differently since, necessarily, it would either come before or after the image;

⁵²⁵ Alison Bechdel, *Fun Home* (London: Jonathan Cape, 2006), pp. 39-40, 174-5, 202.

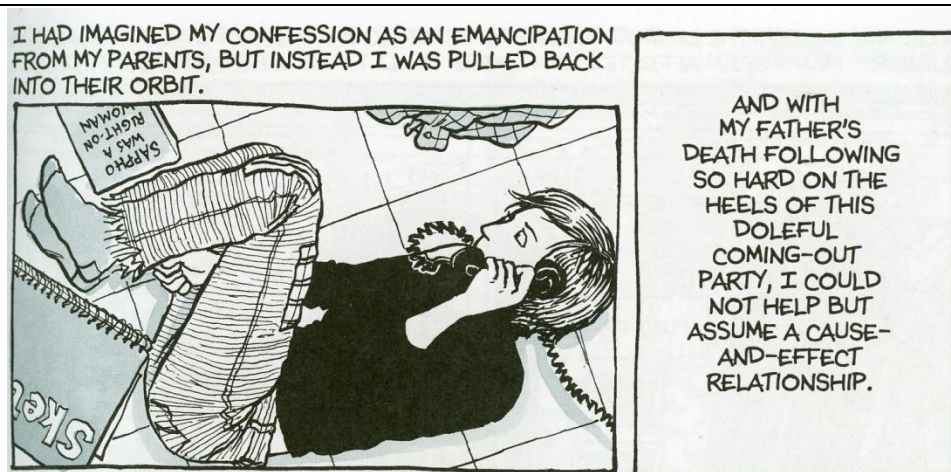


Figure 57: *Fun Home*, p. 59.

4. all or part of the text could be moved into one (as in Figure 58) or more (as in Figure 59) inset captions. Insets are used frequently in this text,⁵²⁶ in fact, some panels, as in Figure 54, have no header text but do contain an inset. Once more this alters the pacing of information as Figure 59, particularly, demonstrates, since it modulates the impact and timing of the panel's information.

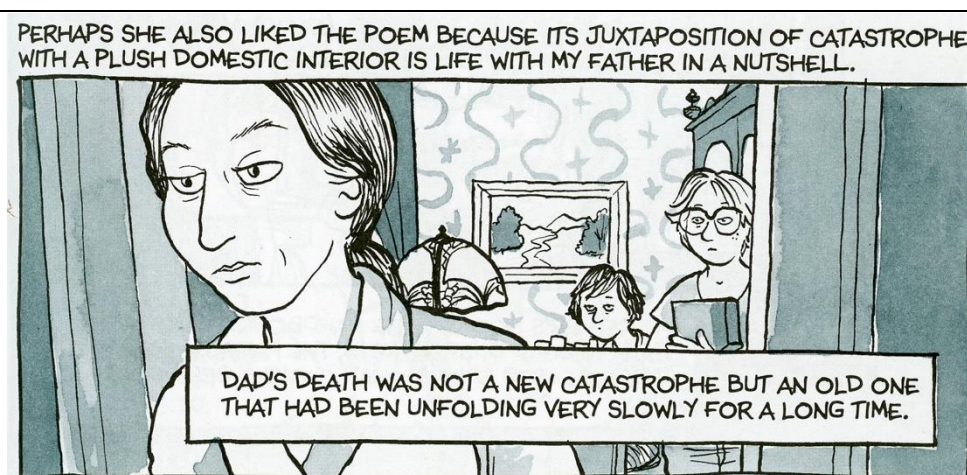
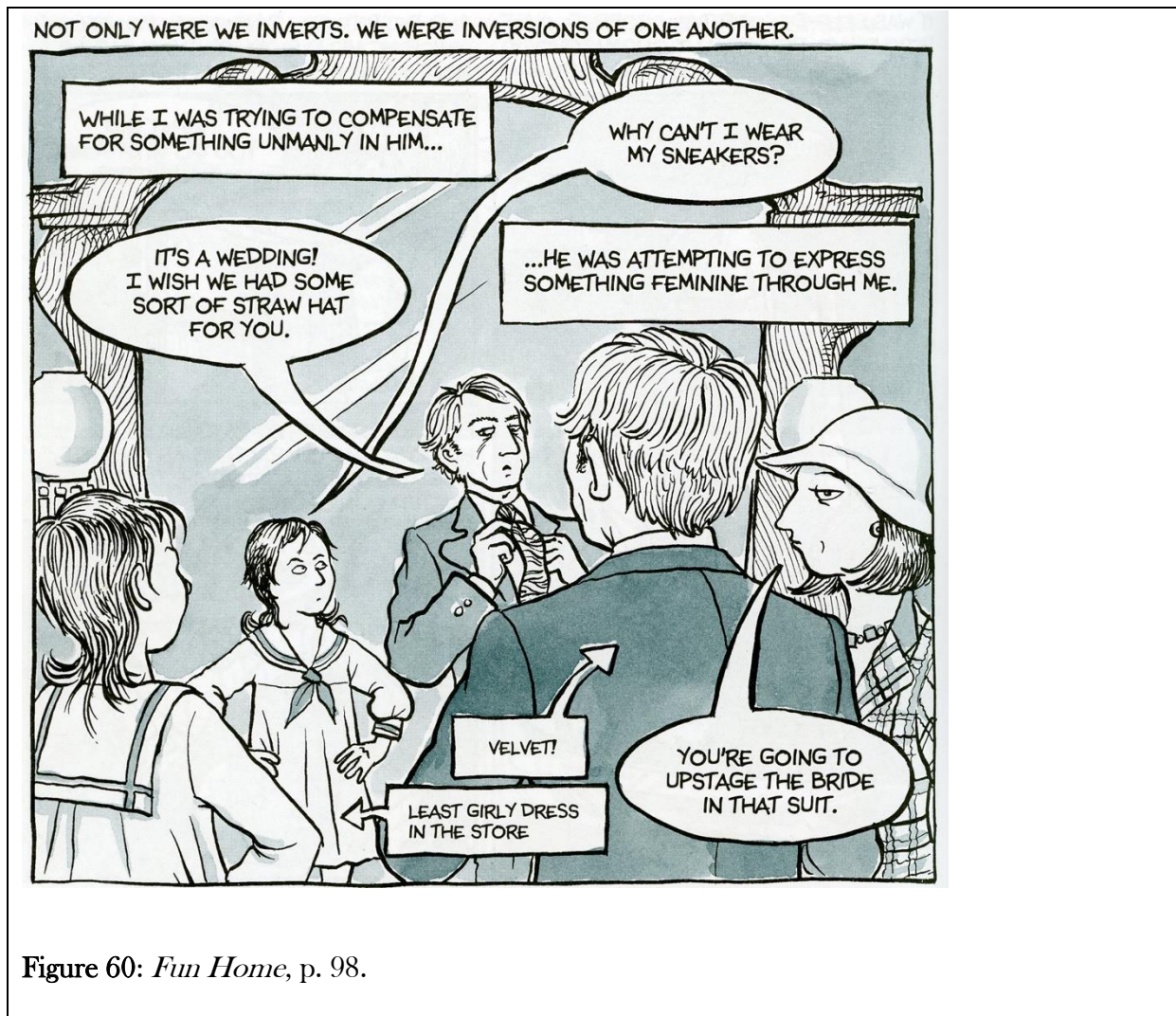


Figure 59: *Fun Home*, p. 83.

⁵²⁶ Two hundred and nineteen of the nine hundred and fifty-three panels have at least one inset.



Not only does each of these unused circumventions demonstrate a different pacing of the textual narrative stream – as in a brute sooner or later in the book’s exposition – but all except the first also would result in the changing of the site, and therefore the co-occurrence, of verbal signifiers. All this is to say that, despite myriad ways by which Bechdel could alter these panels to adhere to her rule, her composition retains these words, in these panels, co-occurring with each of the other signifiers in those panels. Of course, it is possible that the height of this panel is such that Bechdel did not feel her pictorial composition was “overwhelmed”, as she puts it, but this analysis remains instructive about panel composition, about the many ways in which a panel can be compiled, and, therefore, the precise decisions that have been made about what

happens where.⁵²⁷ This, then, suggests a type of relayed reading that would be greatly facilitated by my database methodology: an analysis of the words included in these panels with their seemingly non-negotiable diction.

Conclusion and Future Work

At the beginning of this chapter I set out to demonstrate how the notion of the braid can be further nuanced with my digital approach. What this chapter has shown is the new questions that can be asked of braids, and how they function. By using my database to further complicate some example from Analysis One, I believe this chapter constitutes a step towards a more complex notion of the braid. Where it has been most useful, however, is in terms of the completeness and speed of finding references. This was demonstrated with each of “country” and “truck”, and I think this gestures to the potential in future work of engaging in a more sophisticated relayed reading.

At the outset of this analysis I suggested that it would be possible to answer questions about the “most connected” panel, about the “strength” of braids based on rarity of occurrences, and what it would mean to think of braids relaying, one to another. The latter two of these questions have been discussed above, but it is the first one, the notion of “most connected”, the notion of centrality to *Fun Home*’s network that I think it would be interesting to investigate in future iterations of this work. I detailed in my Methodology chapter the mode of creating matrices of panels, and verbal signifiers, but unfortunately this has fallen outside the time constraints of this project. In this conclusion, I want to offer an idea of how I perceive this as functioning in the future.

⁵²⁷ It should be noted that Bechdel’s decision not to use boxes around the header text removes the possibility of using footer text, as she does in her second memoir, *Are You My Mother?* which could also alleviate the feeling of overwhelming the image and would alter the panel’s articulation of information.

As I described in my Methodology Chapter, using my database I was able to create a table which had the number of each panel along both the x axis and the y axis, with the number of braids between each panel at their intersection in the table. It should be noted that, for this table, I have removed the “stop words”. What this returned, then, was a broad key to the connectedness of each panel, how many verbal braids it makes with each of the other panels. Once the stop words were removed, and each word had been lemmatised and stemmed, this left a total of 9813 verbal signifiers across the non-intra-pictorial text.

The “most connected” panel, then, can be found on pages one hundred and one hundred and one. It depicts a photograph of Roy, taken on the same vacation with Alison and Bruce discussed in my analysis of “country”, reclining in his underwear on a bed. This analysis once again turns on the pictorial signifier of Roy, a character who only occurs in twenty panels in *Fun Home*. Certainly this opens up new avenues for analysis, new networks, to consider a relayed reading of “country squire”, and the associated themes of closetedness, urbane-ness, and how these tie into *Fun Home*’s central event, Bruce’s death.

Returning to this panel, though, there are ninety-two verbal signifiers, making a maximum of six connections to any one panel. Considering the centrality, the braidedness of this panel, the database tells me it makes at least one verbal connection to 506 panels. It makes four connections to twenty-five separate panels. Whilst it will take more time to analyse this volume of data, I suggest that this is indicative of the potential power of both Verbal Solidarity, and enacting a braiding reading with a database. This panel is not, after all, a significant outlier. Ninety-one panels make up to four verbal connections. Only twenty-one of these, though, make four verbal connections with more than two panels. Only six of these make four connections with more than three panels. I give these figures here to give a sense of the complexity and the inter-relations of *Fun Home*’s verbal braiding. Understanding how these networks interact with one another, what values braid them together and govern their systems

will offer new insights. Below I include a table detailing these connections to demonstrate the complexity.

Panel Number	Total signifiers	Max connections with another panel	Number of Panels with 3 connections	4 connections with panel numbers:	5 connections with	6 or more connections with
#243	42	4	32	237, 242, 248, 309, 576, 796		
#248	13	4	1	243, 334, 336		
#388	92	6	37	97, 106, 228, 260, 279, 356, 389, 400, 464, 504, 524, 544, 554, 586, 611, 728, 807, 822,	110, 193, 199, 423	174, 500, 761
#416	26	4	1	415, 463, 465		
#462	12	5	5	355, 415, 555,	97	
#568	27	5	9	537, 544, 699	547, 646	
#611	44	5	9	194, 388,	614	

				693, 717,		
#699	30	4	5	546, 568, 647, 697, 921		
#780	51	5	14	119, 229, 561, 781, 796,	234, 773	
#796	20	5	11	243, 773, 780,	781, 793	
#934	15	4	1	627, 788, 805		

Table 1.

The matrices that I designed to create this kind of reading, however, will benefit also from a more sophisticated investigation of weighting the strength of braids. In this chapter I have discussed how the scarcity of a braid like “Spartan” makes it meaningful in a different way to a word such as “father”. By taking this idea further, in future work, I will be able to reimagine the notion of connectedness, and of centrality, differently again. What has been productive here, though, is the type of thinking that modelling the verbal data of *Fun Home* has necessitated, which is an outcome itself.

Returning to the idea that the database facilitates completeness, speed, and complexity, I believe this chapter offers a productive stepping stone for future analysis. The creation of my database has enabled me to start my analysis from both a panel of interest and a verbal braid of interest. Whilst there is more work to be done on these facets of *Fun Home*, this chapter demonstrates the potential of my digital methodology for enabling close readings, and has created further theoretical interventions to the concept of the braid, and particularly of Verbal Solidarity. Roy’s centrality to the networks discussed in this and the previous chapter, despite

only occurring in twenty of the nine-hundred and forty-six panels, certainly deserves further study, and is indicative of the sophisticated networks at play in the verbal facets of *Fun Home*.

Analysis Three: Towards a Distant Reading of Comics

Introduction

In this chapter I introduce more experimental work which I believe can add a further layer of texture to the braided network of *Fun Home*. I approach this by taking a wider lens view on the text as a whole and begin an analysis of the distribution of *Fun Home*'s Most Frequent Words, as well as the distribution of characters and roles, as they populate chapters. This sets the previous analysis in a broader context, a context where “distance is a condition of knowledge”.⁵²⁸

Adding this chapter orientation not only allowed me to spatialize the analyses I worked on in the previous chapters, but to go some way towards interrogating Bechdel's claim of structuring *Fun Home* thematically. Particularly, however, this chapter functions as an early step towards the future work that I hope this thesis can inspire in Comics Studies. As such, despite the early stage at which are some of these results, I believe the findings here constitute an important step on the way to what I see as a new theoretical mode, more deserving of the title “system”.

From the work that I have been doing analysing the verbal content of *Fun Home*, I have a strong sense of which panels are most strongly connected to which other panels. This is useful for the close-reading interventions of the thesis, and serves to establish baselines against which to measure discussions of structure. This chapter will begin by going through some analyses of the tables produced, detailing what useful insights they offer to comics scholars. I

⁵²⁸ Franco Moretti, *Conjectures on World Literature*, pp. 57-58

will then engage in a discussion of what I thought the strengths and weaknesses of this dataset were, and how this analysis could be built from in future work.

The motivation for the work carried out in this chapter is to consider the different types of questions that my database allows to be asked. Whilst the readings I make, and the hypotheses I pose, will benefit from future engagement, the true outcome of this “distant” reading is to consider how the distance inflects an analysis of *Fun Home*, and how a database such as the one I have created for this project can open up new questions for scholars. What is at stake in this data is less about the readings being made, and more about the potentiality of the database. My work in the previous analysis chapters pushes forward the concept of the braid and of Verbal Solidarity. What this chapter does is query how a more expansive reading of a comic’s verbal signifiers can open up new avenues for analysis with a database. This, therefore, offers a different kind of Digital Humanities lens on Comics Studies.

On Chapters

I designed this chapter to look at *Fun Home*’s chapters in response to its thematic structure. This, indeed, is one of the reasons that braiding functions so strongly in the text; the narrative mode of recursion – discussed in my first analysis chapter – is a result of the thematic structuring. This was evident in Tison’s discussion of both Alison’s coming out to her parents, and of the truck approaching Bruce. The analysis in this chapter seeks to open up the question of what this chapter structure offered Bechdel. In an interview with Salon Magazine Bechdel said of the structure,

Nothing was set from the beginning -- I had no idea what shape the book would take. It was entirely a process of discovery from start to finish. But it did become clear early on that a chronological structure wouldn't work because I found myself wanting to say so many different things about particular events. Eventually I settled on a thematic

structure, which enabled me to replay those events through the lenses of multiple ideas.⁵²⁹

In order to say these ‘many different things’ requires revisiting the same events and time periods over and over again with a different focus. Given this, the chapter structure offers Bechdel an architecture within which she can compose thematically and cross over the same events and time periods under a different focus.

This thematic composition allows us to ask whether how these sub-sections actually function as narrative blocks. Nicholas Dames argues that the chapter is a mode of breaking up reading and encouraging immersion “by letting us know that we will soon be allowed to exit and return to other tasks or demands”.⁵³⁰ He draws on Henry Fielding’s allusion in *Joseph Andrews* to chapters serving as “an Inn or Resting-Place, where [the reader] may stop and take a Glass, or any other Refreshment, as it pleases him [sic]”.⁵³¹ Perhaps the more relevant comparison for my concordancing impulse, however, is that Dames makes reference to the chapter’s early history as being used by early Christian editors and early Renaissance editors alike, who used it, as William Caxton did in his 1485 edition of Malory’s *Morte D’Arthur*, “largely to permit readers to choose which moments of the story could be applied to particular moral teachings”.⁵³² Dames contends that the segmentation of “continuous, narrative texts rather than informational ones” not only greatly challenged the early Christian writers and editors, but greatly altered the texts on which they worked. That is, it was a great challenge *because* they ended up altering and determining meaning with their chopping; to divide was already to interpret. I want to suggest that this should be no surprise but, also, that it is a challenge comparable to the one Bechdel faced, and which she explicitly foregrounds, in turning her

⁵²⁹ https://www.salon.com/2006/12/12/bechdel_int/

⁵³⁰ <https://www.newyorker.com/books/page-turner/chapter-history>

⁵³¹ Ibid.

⁵³² Ibid.

It should be noted that Biblical segmentation was highly fraught with multiple competing standards.

linear diary, with segmentations only for days, into the document we read today. Ken Parille argues that Bechdel's style empties her work of "conventional drama, either heightened emotions or narrative suspense",⁵³³ by trying to characterise these thematic chapters, this analysis queries whether this statement can be made quantified.

Chapter Profiling with Most Frequent Words

To try to evaluate what it is that characterises a particular chapter I will employ two main approaches. Firstly, it is useful to identify the features that occur most frequently in a chapter since such words, characters, roles, time periods, etc. obviously go a long way towards defining it. Secondly, this impression can be nuanced by contrasting whether those values occur proportionally highly or lowly within a chapter – that is, relative to other values in the same chapter – and across chapters – that is, relative to the same value in different chapters. To illustrate this point I will use the 'Character' variable as an example, here, but the same principles apply across the other variables too.

Since *Fun Home* is a memoir predominantly detailing and discussing Bechdel's relationship with her father, it is no surprise that not only are these characters the most common across the text, but also within each chapter. In this sense, it would be difficult to argue that their mere presence defines any one chapter. This demonstrates, then, how it is important to distinguish between the signal from a chapter and the signal from the book as whole. That is not, however, to say that features that are common across the text cannot play a part in defining a chapter. If Alison were to be much more frequent in one chapter than in the others, her presence (or relative absence) might still be an effective mode of characterising that chapter. To take this idea from the other side, whilst a character like Joan, Alison's college

⁵³³ Ken Parille, *Six Observations about Alison Bechdel's Graphic Archive Are You My Mother?* (2012) <<http://www.tcj.com/six-observations-about-alison-bechdel%E2%80%99s-graphic-archive-are-you-my-mother/>> [accessed 1 March 2017].

girlfriend, or Roy, one of Bruce's paramours, may not feature strongly across the entire book, or even within a single chapter, if they are much more frequent within particular chapters then they can still be a strong demarcating feature for that or those chapters. Indeed, such characters are often unique to a chapter, especially when it comes to characters who are even less frequent than Joan and Roy who may only occur in a single scene. It should be noted that, whilst such a 'finding' could clearly be made by even a cursory reading of the book, it is useful to consider such features since they can later be contrasted with whether their presence corresponds to the most frequent time period for that chapter. Further, any sense that they are 'obvious' features of a chapter can be somewhat mitigated by factoring the complementary feature of the 'Role'. That is, whilst a paramour such as Bill might be present exclusively in one chapter, his fellow 'paramours' such as Roy and the Walsh brothers may show a more even distribution. Finally, there is productive work to be done with characters that fall between the extremes of single-chapter characters and almost ubiquitous characters with characters that are present in all or most chapters but display a high degree of variance, such as Helen, John and Christian.

Most Frequent Words

As it is the prism through which many of the rest of the features can be read and understood, I will begin profiling the chapters by looking at word usage. This includes the Most Frequent Words in each chapter and the unique (and almost unique) words within chapters. To begin with, though, I will look at the distribution of the overall Most Frequent Words across *Fun Home's* chapters. This will be partly by way of example for the different modes of reading this data within a discrete and small dataset, but also to characterise how 'typical' of the book each chapter is. Remember that for this and all forthcoming analyses of Most Frequent Words I have removed 'stop words' in accordance with the MySQL stop word list and lemmatised then stemmed the words in order to increase overlap and eliminate superficial (in terms of 'theme') differences between part-of-speech variations. Again, although I acknowledge that these stop

words may be indicative of certain trends and concerns of the respective chapters, in terms of getting to the distinctive ‘character’ of each chapter, I think it is more useful to consider the words that are most typical of the book, rather than the English language more generally. It should also be noted that I have separated out what I will refer to as ‘pictorial text’ from the speech and narration, that is, the text which labels images such as ‘Sunbeam bread’ on a loaf of bread, or ‘Colette’ on the cover of a book have been removed from this particular dataset. The reason for this separation is that, since it is a labelling device, I believe that it functions differently to the rest of the text and is better understood as part of the pictorial data than the verbal data.

As I alluded to above, there are two ways of interpreting this data that I will focus on: how the same word is represented across each chapter; and how each word is represented in the same chapter. The two, of course, are not mutually exclusive. To begin with, then, Table 2 lists the Most Frequent Words across the text next to their respective frequencies. For clarity I have returned them to an actual word from their stemmed representation in the database. As might be expected, these are words that easily fit into a memoir (time-based words are in blue) set within a family (familial terms are in yellow) home (house-related words are in green) where both parents are English teachers and their daughter becomes an author (literature words are in red).

Father	140	Home	44	Parent	32
Dad	109	Back	41	Play	31
Mother	60	Book	38	Brother	30
Time	54	Mom	38	Good	30
Year	53	Read	38	Live	28
House	48	Life	33	Fact	27
Day	45	Thing	33	Family	27

Table 2

Even to a scholar who had not read *Fun Home*, many of the focuses of the narrative would be clear from this table. As indicated by the four highlighted groupings, many of these most popular terms also fall into pretty clear semantic groups. It might be noted that whilst several of these terms hold a high degree of semantic overlap – Father/dad/parent, Mother/Mom/parent, and even house/home – this variation of appellation, this diction, opens up an interesting area for analysis that would not be possible for a scholar who did not have access to my database. The database, therefore, enables a researcher to conceive of a question, and to then undertake the analysis: When does Bechdel call Bruce “father”, and when is he “dad”? Under what circumstances are these terms used?

Without recourse to a database it would be, hypothetically, possible to work out the answer to this question but I suggest it would be impractical. One might hypothesise, progressing logically from anecdotal evidence, that the more formal values, “father” and “mother” would be used by Bechdel the author, with the less formal terms reserved for Alison the character (as well as her brothers John and Christian). With a simplified index this would still be, hypothetically, plausible for an analogue scholar to verify in a general way, but given the number of values that there are for “dad”, it would be unlikely for examples like this one to be simply resolvable by hand; such a clear split would require, I suggest, that an intentional approach from Bechdel on this word usage. To clarify, that is not to say that she has not been intentional here, nor that intentionality should be championed particularly or sought after as a research end, but to say instead that it is unlikely that any word value a researcher is looking to analyse is being used in such a homogenised way unless this were the case. It should be noted, therefore, that such a simple categorisation is not supported by the dataset since Alison, despite

having the highest number of instances of speech of all the characters,⁵³⁴ still only accounts for just over a quarter of the number of headers and half the number of inset captions in the text. Indeed, for Alison to be responsible for all of the instances of ‘dad’, she would have to be including the word in more than half her speech balloons. Given the montage form Bechdel employs in *Fun Home*, discussed above, we know that this is not the case.⁵³⁵

Below, then, is a table of how these words are distributed across the seven chapters of *Fun Home*. Please note that here, and below, the words shown have been stemmed, and therefore do not always appear as they do in the text.

1	2	3	4	5	6	7	Total	
22	18	28	21	15	10	26	140	father
2	19	13	15	22	13	25	109	dad
5	7	14	4	13	12	5	60	Mother
2	8	7	4	10	11	12	54	time
2	8	3	8	6	11	15	53	year
11	8	1	2	13	9	4	48	hous
0	6	8	3	3	15	10	45	dai
3	13	1	4	7	6	10	44	Home
1	7	6	7	8	3	9	41	BACK
1	5	13	0	8	1	10	38	book
1	4	6	5	4	13	5	38	Momm
0	6	6	2	6	5	13	38	read
2	4	6	4	6	4	7	33	Life
2	2	5	4	7	4	9	33	thing

⁵³⁴ 201 to Bruce’s 150, Helen’s 94 and then the big jump down to John and Christian’s 21 and 20, respectively.

⁵³⁵

1	5	14	1	3	4	4	32	parent
1	1	4	0	4	18	3	31	plai
5	10	1	7	0	6	1	30	brother
5	4	8	1	2	5	5	30	Good
1	7	4	2	7	4	3	28	live
3	8	5	1	2	5	3	27	fact
6	5	3	5	5	1	2	27	fami

Table 2

This is, however, somewhat challenging to read so below, in Table 3, each row is formatted from lowest value (red) to highest value (blue) via a middle value (white) by percentage. That is, instead of using pre-set or percentile gradations of red and blue to rank first through seventh ‘place’ as it were, the formatting indicates the values between as a gradation by percentage. To clarify, the image immediately below shows the difference:

1	2	3	4	5	6	7	
1	4	10	12	13	14	16	Percentile
1	4	10	12	13	14	16	Percentage

Table 3

Although the two rows below the chapter headings contain the same numbers they are formatted differently. The values for chapters 3 and 4 show this most starkly. In the percentile formatting ‘12’ is the median, or middle, value, but in the percentage formatting, even the value for chapter 3, ‘10’, is above the middle which is a mean value. In the percentile formatting there will always be three blue, three red and one white value (although they will shift opaqueness according to gradation); in the percentage formatting the top value will always be blue and the bottom value will always be red, but the others can change, as indicated by the below image where the highest value has been increased.

1	2	3	4	5	6	7	
1	4	10	12	13	14	36	Percentile
1	4	10	12	13	14	36	Percentage

Table 4

Whilst all the values apart from the ‘36’ are gradations of red in the percentage row, the percentile row retains some (very light) blue formatting for the higher values, still, and a white (middle) value for the fourth chapter.

Let us, then, return to the Most Frequent Words in *Fun Home* and how they are distributed across the seven chapters.

1	2	3	4	5	6	7	Total	
22	18	28	21	15	10	26	140	father
2	19	13	15	22	13	25	109	dad
5	7	14	4	13	12	5	60	Mother
2	8	7	4	10	11	12	54	time
2	8	3	8	6	11	15	53	year
11	8	1	2	13	9	4	48	hous
0	6	8	3	3	15	10	45	dai
3	13	1	4	7	6	10	44	Home
1	7	6	7	8	3	9	41	BACK
1	5	13	0	8	1	10	38	book
1	4	6	5	4	13	5	38	Momm
0	6	6	2	6	5	13	38	read
2	4	6	4	6	4	7	33	Life
2	2	5	4	7	4	9	33	thing
1	5	14	1	3	4	4	32	parent
1	1	4	0	4	18	3	31	plai
5	10	1	7	0	6	1	30	brother
5	4	8	1	2	5	5	30	Good
1	7	4	2	7	4	3	28	live
3	8	5	1	2	5	3	27	fact
6	5	3	5	5	1	2	27	fami

Table 5

What is immediately obvious from this table is, but for a few exceptions, how low the values are for Chapter One and how high for Chapter Seven. Taken at face value this would make an

interesting argument that they are, respectively, the least and most ‘typical’ chapters of *Fun Home*. This, however, highlights the issue of looking at these numbers without a better awareness of the context in which they sit; chapters one and seven are, respectively, by far the shortest and longest chapters in *Fun Home*. Whilst this does not mitigate the fact that it makes fewer connections out, or ‘braids’, to other chapters, it is worth reviewing these chapters in light of their length.⁵³⁶ The reason that I have shown this table, however, to give a sense that, even before accounting for chapter length – and chapters two, three and four are the next shortest chapters and are each around eighty percent longer – the first chapter has proportionally high values for the words “father”, “house” and “family”. It is also interesting to note, then, that despite being almost three times the length of Chapter One, and around twenty-five and forty percent larger than the second and third largest chapters, – Six and Five – that Chapter Seven is still under-represented for the terms “Mother”, “Mommy” and “house”. A final immediate takeaway from this table is the amount of words that feature in this Most Frequent Words list despite being heavily concentrated in just one chapter, particularly “parent” in Chapter Three, “Mommy” (but not “Mother”) in Chapter Six, and “play” in Chapter Six.

This does not necessarily belie any potential argument that, say, an establishing chapter has a somewhat different purview to the rest of a memoir and therefore is less like the rest of the book, but suggests that we must first modulate this information relative to the length of each chapter. Another potentially interesting feature of this table which must be cross-referenced with lengths is how Chapter Four appears to be formatted red for almost every one of the Most Frequent Words across the text. It will be worth keeping an eye on whether this is borne out in the rest of the data as it shows a rather unrepresentative chapter.⁵³⁷ Table 6, then, shows the

⁵³⁶ Note to self: ‘Length’ here is an interesting metric since we could take it to mean either number of (non-stop word) words – as I have done so far – or number of panels (or indeed number of speech instances).

⁵³⁷ That said, it can also be suggested that actually ‘unrepresentative’ is the furthest from the average, that actually having the most of any of these values is its own kind of unusual.

same table but with each of the scores having been transformed into a percentage value of that chapter's (non- stop word) total words (which are recorded above the chapter headings) and rounded to two decimal points.

	735	1335	1329	1296	1555	1724	2152		
	1	2	3	4	5	6	7	Total	
	2.99	1.35	2.11	1.62	0.96	0.58	1.21	140	father
	0.27	1.42	0.98	1.16	1.41	0.75	1.16	109	dad
	0.68	0.52	1.05	0.31	0.84	0.70	0.23	60	Mother
	0.27	0.60	0.53	0.31	0.64	0.64	0.56	54	time
	0.27	0.60	0.23	0.62	0.39	0.64	0.70	53	year
	1.50	0.60	0.08	0.15	0.84	0.52	0.19	48	hous
	0.00	0.45	0.60	0.23	0.19	0.87	0.46	45	dai
	0.41	0.97	0.08	0.31	0.45	0.35	0.46	44	Home
	0.14	0.52	0.45	0.54	0.51	0.17	0.42	41	BACK
	0.14	0.37	0.98	0.00	0.51	0.06	0.46	38	book
	0.14	0.30	0.45	0.39	0.26	0.75	0.23	38	Momm
	0.00	0.45	0.45	0.15	0.39	0.29	0.60	38	read
	0.27	0.30	0.45	0.31	0.39	0.23	0.33	33	Life
	0.27	0.15	0.38	0.31	0.45	0.23	0.42	33	thing
	0.14	0.37	1.05	0.08	0.19	0.23	0.19	32	parent
	0.14	0.07	0.30	0.00	0.26	1.04	0.14	31	plai
	0.68	0.75	0.08	0.54	0.00	0.35	0.05	30	brother
	0.68	0.30	0.60	0.08	0.13	0.29	0.23	30	Good
	0.14	0.52	0.30	0.15	0.45	0.23	0.14	28	live
	0.41	0.60	0.38	0.08	0.13	0.29	0.14	27	fact
	0.82	0.37	0.23	0.39	0.32	0.06	0.09	27	fami

Table 6

In fact, what Table 6 shows is perhaps not actually as different as might have been expected, at least with regards to Chapter One. Chapter Seven has clearly been adjusted downwards whereas the shorter chapters, other than Chapter One, have somewhat polarised. This is perhaps no surprise since it is ‘easier’, as it were, to register a high number in this table if there are fewer words in the chapter. Indeed, “Mother” only registers five times in the first chapter and yet is one of the middle values across that row, despite only representing a twelfth of that word’s occurrences, whereas “house” has the same twelfth of its occurrences in Chapter Seven (4/48) and yet is a) one of the lower values, and b) over three times less frequent (0.19 vs 0.68) relative to its chapter.

As above, it is also important to consider this data as a proportion of the word’s total usage. If we were only to look at Table 6 then we might conclude that Chapter One uses it very heavily and it is not used much elsewhere. In fact, it only has one more occurrence of this value than chapters Two, Four and Five. To clarify this, the below table shows the original data as a percentage of its total uses (irrespective of chapter length):

1	2	3	4	5	6	7	Total	
15.71	12.86	20.00	15.00	10.71	7.14	18.57	140	father
1.83	17.43	11.93	13.76	20.18	11.93	22.94	109	Dad
8.33	11.67	23.33	6.67	21.67	20.00	8.33	60	Mother
3.70	14.81	12.96	7.41	18.52	20.37	22.22	54	Time
3.77	15.09	5.66	15.09	11.32	20.75	28.30	53	Year
22.92	16.67	2.08	4.17	27.08	18.75	8.33	48	Hous
0.00	13.33	17.78	6.67	6.67	33.33	22.22	45	Dai
6.82	29.55	2.27	9.09	15.91	13.64	22.73	44	Home
2.44	17.07	14.63	17.07	19.51	7.32	21.95	41	BACK
2.63	13.16	34.21	0.00	21.05	2.63	26.32	38	book

2.63	10.53	15.79	13.16	10.53	34.21	13.16	38	Momm
0.00	15.79	15.79	5.26	15.79	13.16	34.21	38	read
6.06	12.12	18.18	12.12	18.18	12.12	21.21	33	Life
6.06	6.06	15.15	12.12	21.21	12.12	27.27	33	thing
3.13	15.63	43.75	3.13	9.38	12.50	12.50	32	parent
3.23	3.23	12.90	0.00	12.90	58.06	9.68	31	plai
16.67	33.33	3.33	23.33	0.00	20.00	3.33	30	brother
16.67	13.33	26.67	3.33	6.67	16.67	16.67	30	Good
3.57	25.00	14.29	7.14	25.00	14.29	10.71	28	Live
11.11	29.63	18.52	3.70	7.41	18.52	11.11	27	fact
22.22	18.52	11.11	18.52	18.52	3.70	7.41	27	fami

Table 7

This analysis of the distributions of the text's Most Frequent Words across its chapters, then, has served two functions. The first was to demonstrate the thinking behind the types of analyses and formatting that I will be using in the rest of this section, the second was to put these chapters in some degree of context. In many cases, however, the most frequent words across the text, despite their larger overall volume, are not the Most Frequent Words in each chapter. This is something that has been seen already when looking at Chapter One where, even when the values were adjusted for chapter length, showed a lot of very low scores for the text's Most Frequent Words. Indeed, Table 8, below, shows their distribution across Chapter One's Most Frequent Words, with the overall Most Frequent Words in pink and anything outside of that in yellow.⁵³⁸

1	2	3	4	5	6	7	Total	
22	18	28	21	15	10	26	140	father

⁵³⁸ NB the reason for the slightly extended list here is the number of values tied on '3'.

11	8	1	2	13	9	4	48	hous
7	3	3	1	2	3	6	25	room
6	5	3	5	5	1	2	27	fami
6	0	0	0	0	0	0	6	DAED
5	7	14	4	13	12	5	60	Mother
5	10	1	7	0	6	1	30	brother
5	4	8	1	2	5	5	30	Good
5	2	1	0	5	3	5	21	chil
4	1	0	0	0	2	0	7	perfect
4	0	0	0	0	1	0	5	design
4	0	0	0	0	0	1	5	ICAR
3	13	1	4	7	6	10	44	Home
3	8	5	1	2	5	3	27	fact
3	2	2	0	2	2	5	16	knew
3	0	3	3	2	2	2	15	poin
3	1	0	3	2	3	1	13	ag
3	3	1	1	3	0	1	12	DARK
3	1	2	2	4	0	0	12	Stop
3	0	0	0	0	7	0	10	period
3	1	0	1	0	1	1	7	buil
3	1	0	0	0	1	0	5	Hold
3	1	0	1	0	0	0	5	restor
3	0	0	0	0	0	1	4	function
3	0	0	0	0	1	0	4	wing
3	0	1	0	0	0	0	4	Jimmy
3	1	0	0	0	0	0	4	wallpaper
3	0	0	0	0	0	0	3	Stewart

Table 8

Even in this list of twenty-nine values there is no room for the following thirteen Most Frequent Words overall: “dad”, “time”, “year”, “day”, “back”, “book”, “Mommy”, “read”, “life”, “thing”, “parent”, “play”, and “live”. Indeed, as we can see from almost all of the values of four and higher, even before adjusting these values for the relative brevity of Chapter One, many of them are most frequent in this chapter. For completeness, the weighted values relative to chapter length are below:

1	2	3	4	5	6	7		
15.71	12.86	20.00	15.00	10.71	7.14	18.57	140	father
22.92	16.67	2.08	4.17	27.08	18.75	8.33	48	hous
28.00	12.00	12.00	4.00	8.00	12.00	24.00	25	room
22.22	18.52	11.11	18.52	18.52	3.70	7.41	27	fami
100.00	0.00	0.00	0.00	0.00	0.00	0.00	6	DAED
8.33	11.67	23.33	6.67	21.67	20.00	8.33	60	Mother
16.67	33.33	3.33	23.33	0.00	20.00	3.33	30	brother
16.67	13.33	26.67	3.33	6.67	16.67	16.67	30	Good
23.81	9.52	4.76	0.00	23.81	14.29	23.81	21	chil
57.14	14.29	0.00	0.00	0.00	28.57	0.00	7	perfect
80.00	0.00	0.00	0.00	0.00	20.00	0.00	5	design
80.00	0.00	0.00	0.00	0.00	0.00	20.00	5	ICAR
6.82	29.55	2.27	9.09	15.91	13.64	22.73	44	Home
11.11	29.63	18.52	3.70	7.41	18.52	11.11	27	fact
18.75	12.50	12.50	0.00	12.50	12.50	31.25	16	knew
20.00	0.00	20.00	20.00	13.33	13.33	13.33	15	poin
23.08	7.69	0.00	23.08	15.38	23.08	7.69	13	ag
25.00	25.00	8.33	8.33	25.00	0.00	8.33	12	DARK

25.00	8.33	16.67	16.67	33.33	0.00	0.00	12	Stop
30.00	0.00	0.00	0.00	0.00	70.00	0.00	10	period
42.86	14.29	0.00	14.29	0.00	14.29	14.29	7	buil
60.00	20.00	0.00	0.00	0.00	20.00	0.00	5	Hold
60.00	20.00	0.00	20.00	0.00	0.00	0.00	5	restor
75.00	0.00	0.00	0.00	0.00	0.00	25.00	4	function
75.00	0.00	0.00	0.00	0.00	25.00	0.00	4	wing
75.00	0.00	25.00	0.00	0.00	0.00	0.00	4	Jimmy
75.00	25.00	0.00	0.00	0.00	0.00	0.00	4	wallpaper
100.00	0.00	0.00	0.00	0.00	0.00	0.00	3	Stewart

Table 9

And below again with the values being conditionally coloured.

1	2	3	4	5	6	7		
15.71	12.86	20.00	15.00	10.71	7.14	18.57	140	father
22.92	16.67	2.08	4.17	27.08	18.75	8.33	48	hous
28.00	12.00	12.00	4.00	8.00	12.00	24.00	25	room
22.22	18.52	11.11	18.52	18.52	3.70	7.41	27	fami
100.00	0.00	0.00	0.00	0.00	0.00	0.00	6	DAED
8.33	11.67	23.33	6.67	21.67	20.00	8.33	60	Mother
16.67	33.33	3.33	23.33	0.00	20.00	3.33	30	brother
16.67	13.33	26.67	3.33	6.67	16.67	16.67	30	Good
23.81	9.52	4.76	0.00	23.81	14.29	23.81	21	chil
57.14	14.29	0.00	0.00	0.00	28.57	0.00	7	perfect
80.00	0.00	0.00	0.00	0.00	20.00	0.00	5	design
80.00	0.00	0.00	0.00	0.00	0.00	20.00	5	ICAR
6.82	29.55	2.27	9.09	15.91	13.64	22.73	44	Home

11.11	29.63	18.52	3.70	7.41	18.52	11.11	27	fact
18.75	12.50	12.50	0.00	12.50	12.50	31.25	16	knew
20.00	0.00	20.00	20.00	13.33	13.33	13.33	15	poin
23.08	7.69	0.00	23.08	15.38	23.08	7.69	13	ag
25.00	25.00	8.33	8.33	25.00	0.00	8.33	12	DARK
25.00	8.33	16.67	16.67	33.33	0.00	0.00	12	Stop
30.00	0.00	0.00	0.00	0.00	70.00	0.00	10	period
42.86	14.29	0.00	14.29	0.00	14.29	14.29	7	buil
60.00	20.00	0.00	0.00	0.00	20.00	0.00	5	Hold
60.00	20.00	0.00	20.00	0.00	0.00	0.00	5	restor
75.00	0.00	0.00	0.00	0.00	0.00	25.00	4	function
75.00	0.00	0.00	0.00	0.00	25.00	0.00	4	wing
75.00	0.00	25.00	0.00	0.00	0.00	0.00	4	Jimmy
75.00	25.00	0.00	0.00	0.00	0.00	0.00	4	wallpaper
100.00	0.00	0.00	0.00	0.00	0.00	0.00	3	Stewart

Table 10

And then again with these values being formatted depending on overall percentage (rather than percentage within that row's (word's) usage:

1	2	3	4	5	6	7		
15.71	12.86	20.00	15.00	10.71	7.14	18.57	140	father
22.92	16.67	2.08	4.17	27.08	18.75	8.33	48	hous
28.00	12.00	12.00	4.00	8.00	12.00	24.00	25	room
22.22	18.52	11.11	18.52	18.52	3.70	7.41	27	fami
100.00	0.00	0.00	0.00	0.00	0.00	0.00	6	DAED
8.33	11.67	23.33	6.67	21.67	20.00	8.33	60	Mother
16.67	33.33	3.33	23.33	0.00	20.00	3.33	30	brother

16.67	13.33	26.67	3.33	6.67	16.67	16.67	30	Good
23.81	9.52	4.76	0.00	23.81	14.29	23.81	21	chil
57.14	14.29	0.00	0.00	0.00	28.57	0.00	7	perfect
80.00	0.00	0.00	0.00	0.00	20.00	0.00	5	design
80.00	0.00	0.00	0.00	0.00	0.00	20.00	5	ICAR
6.82	29.55	2.27	9.09	15.91	13.64	22.73	44	Home
11.11	29.63	18.52	3.70	7.41	18.52	11.11	27	fact
18.75	12.50	12.50	0.00	12.50	12.50	31.25	16	knew
20.00	0.00	20.00	20.00	13.33	13.33	13.33	15	poin
23.08	7.69	0.00	23.08	15.38	23.08	7.69	13	ag
25.00	25.00	8.33	8.33	25.00	0.00	8.33	12	DARK
25.00	8.33	16.67	16.67	33.33	0.00	0.00	12	Stop
30.00	0.00	0.00	0.00	0.00	70.00	0.00	10	period
42.86	14.29	0.00	14.29	0.00	14.29	14.29	7	buil
60.00	20.00	0.00	0.00	0.00	20.00	0.00	5	Hold
60.00	20.00	0.00	20.00	0.00	0.00	0.00	5	restor
75.00	0.00	0.00	0.00	0.00	0.00	25.00	4	function
75.00	0.00	0.00	0.00	0.00	25.00	0.00	4	wing
75.00	0.00	25.00	0.00	0.00	0.00	0.00	4	Jimmy
75.00	25.00	0.00	0.00	0.00	0.00	0.00	4	wallpaper
100.00	0.00	0.00	0.00	0.00	0.00	0.00	3	Stewart

Table 11

What these tables clearly show, even with a cursory glance, is the number of Chapter One's Most Frequent Words which are almost exclusively found in this chapter. This demonstrates a high degree of uniqueness for Chapter One, albeit one that is slightly mitigated by the length of the chapter. As will be shown below, three instances of a word is not, proportionally, very frequent and can easily be confined to a single scene. Later in this chapter,

indeed, when the base unit is moved from the word to the scene (that is, when it is not the number of times a word features that is computed, but the number of scenes in which it features) this type of signal will be suppressed. This can be seen, for example, in the bottom row, ‘Stewart’. All of the references to this word come in a three page sequence (albeit across two scenes) where Bechdel compares her father to Jimmy Stewart (see also that ‘Jimmy’ features on this list, two rows above, the only uses of this word apart from Chapter Three’s single allusion to ‘Jimmy’ Gatz, as in, Jay Gatsby), and then Martha Stewart.

There are, however, some unique and almost unique words on this list, though, which are conspicuously absent elsewhere. Whilst “wallpaper”, “function” and “perfect” are perhaps too specific to the broader theme of this first chapter of Bruce doing up the Bechdel home, it is interesting that “build”, “restore” and “design” are mainly absent elsewhere given that it was at the farmhouse that Bruce was restoring that he died, one of the central and most returned to events of the book. Such words, therefore, come to characterise a chapter. In this sense it is possible to create a list of words which ‘belong’ to each chapter by ranking the Most Frequent Words list by percentage of the time it occurs in each chapter. As can be seen in the table below, this hits on another strong indicator of a chapter’s profile, its intertexts. As indicated by each chapter’s title, every chapter deals with a few main intertextual points of reference as was seen with ‘Jimmy’ and ‘Stewart’, and as below with ‘Daedalus’ and ‘Icarus’.

In this sense we can make a sense of words that *belong* to chapter one by ranking the Most Frequent Words list by percentage of the time it occurs in each chapter. This hits on another strong indicator of a chapter’s profile, its intertexts. Since each chapter deals with a few intertextual points of reference, these are the sorts of words we would expect in such a list, as indeed we found with ‘Jimmy’ and ‘Stewart’, and as we do with “Daedalus” and “Icarus”.

1	2	3	4	5	6	7		
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100.00	0.00	0.00	0.00	0.00	0.00	0.00	6	DAED
100.00	0.00	0.00	0.00	0.00	0.00	0.00	3	Stewart
80.00	0.00	0.00	0.00	0.00	20.00	0.00	5	design
80.00	0.00	0.00	0.00	0.00	0.00	20.00	5	ICAR
75.00	0.00	0.00	0.00	0.00	0.00	25.00	4	function
75.00	0.00	0.00	0.00	0.00	25.00	0.00	4	wing
75.00	0.00	25.00	0.00	0.00	0.00	0.00	4	Jimmy
75.00	25.00	0.00	0.00	0.00	0.00	0.00	4	wallpaper
60.00	20.00	0.00	0.00	0.00	20.00	0.00	5	Hold
60.00	20.00	0.00	20.00	0.00	0.00	0.00	5	restor
57.14	14.29	0.00	0.00	0.00	28.57	0.00	7	perfect
42.86	14.29	0.00	14.29	0.00	14.29	14.29	7	buil
30.00	0.00	0.00	0.00	0.00	70.00	0.00	10	period
28.00	12.00	12.00	4.00	8.00	12.00	24.00	25	room
25.00	25.00	8.33	8.33	25.00	0.00	8.33	12	DARK
25.00	8.33	16.67	16.67	33.33	0.00	0.00	12	Stop
23.81	9.52	4.76	0.00	23.81	14.29	23.81	21	chil
23.08	7.69	0.00	23.08	15.38	23.08	7.69	13	ag
22.92	16.67	2.08	4.17	27.08	18.75	8.33	48	hous
22.22	18.52	11.11	18.52	18.52	3.70	7.41	27	fami
20.00	0.00	20.00	20.00	13.33	13.33	13.33	15	poin
18.75	12.50	12.50	0.00	12.50	12.50	31.25	16	knew
16.67	33.33	3.33	23.33	0.00	20.00	3.33	30	brother
16.67	13.33	26.67	3.33	6.67	16.67	16.67	30	Good
15.71	12.86	20.00	15.00	10.71	7.14	18.57	140	father

Table 12

Since this section is about profiling the chapters before considering how they vary from and compare to chronological groups and their distribution over the chapters, it is not necessary to go into a lot of detail yet about the arguments that can be made about distribution of words across chapters as the meaning will be found in the variations. I will, however, now briefly lay out tables for each of the chapters along with some immediate reflections before moving onto the other features of the chapters. Whilst it was relatively easy to limit Chapter One's tables due to its brevity – remember that only twenty-nine terms came up three or more times – some of the following tables will be longer, but I will endeavour to cut them off at a sensible point.

Chapter Two by Most Frequent Words:

1	2	3	4	5	6	7	Total	
2	19	13	15	22	13	25	109	dad
22	18	28	21	15	10	26	140	father
3	13	1	4	7	6	10	44	Home
0	12	7	1	3	0	2	25	death
5	10	1	7	0	6	1	30	brother
0	9	0	0	0	0	0	9	Camu
2	8	7	4	10	11	12	54	time
2	8	3	8	6	11	15	53	year
11	8	1	2	13	9	4	48	hous
3	8	5	1	2	5	3	27	fact
1	8	2	2	5	1	3	22	PEOP
5	7	14	4	13	12	5	60	Mother
1	7	6	7	8	3	9	41	BACK
1	7	4	2	7	4	3	28	live
0	7	1	4	6	1	3	22	Di

0	7	2	1	1	1	1	13	accid
0	6	8	3	3	15	10	45	dai
0	6	6	2	6	5	13	38	read
0	6	4	2	6	2	3	23	made
0	6	3	1	2	2	5	19	SCHO
0	6	1	0	2	6	0	15	car
0	6	1	1	3	0	2	13	funer
1	6	0	0	0	0	0	7	smell
1	5	13	0	8	1	10	38	book
1	5	14	1	3	4	4	32	parent
6	5	3	5	5	1	2	27	fami
2	5	3	6	2	1	3	22	LONG
0	5	0	1	1	0	0	7	grandfath
0	5	0	1	0	0	1	7	Mort
0	5	0	0	0	0	1	6	suicid

Table 13

Chapter Two formatted conditionally relative to total number (row) by occurrence:

1	2	3	4	5	6	7	Total	
2.00	19.00	13.00	15.00	22.00	13.00	25.00	109	dad
22.00	18.00	28.00	21.00	15.00	10.00	26.00	140	father
3.00	13.00	1.00	4.00	7.00	6.00	10.00	44	Home
0.00	12.00	7.00	1.00	3.00	0.00	2.00	25	death
5.00	10.00	1.00	7.00	0.00	6.00	1.00	30	brother
0.00	9.00	0.00	0.00	0.00	0.00	0.00	9	Camu
2.00	8.00	7.00	4.00	10.00	11.00	12.00	54	time
2.00	8.00	3.00	8.00	6.00	11.00	15.00	53	year

11.00	8.00	1.00	2.00	13.00	9.00	4.00	48	hous
3.00	8.00	5.00	1.00	2.00	5.00	3.00	27	fact
1.00	8.00	2.00	2.00	5.00	1.00	3.00	22	PEOP
5.00	7.00	14.00	4.00	13.00	12.00	5.00	60	Mother
1.00	7.00	6.00	7.00	8.00	3.00	9.00	41	BACK
1.00	7.00	4.00	2.00	7.00	4.00	3.00	28	live
0.00	7.00	1.00	4.00	6.00	1.00	3.00	22	Di
0.00	7.00	2.00	1.00	1.00	1.00	1.00	13	accid
0.00	6.00	8.00	3.00	3.00	15.00	10.00	45	Dai
0.00	6.00	6.00	2.00	6.00	5.00	13.00	38	Read
0.00	6.00	4.00	2.00	6.00	2.00	3.00	23	made
0.00	6.00	3.00	1.00	2.00	2.00	5.00	19	SCHO
0.00	6.00	1.00	0.00	2.00	6.00	0.00	15	Car
0.00	6.00	1.00	1.00	3.00	0.00	2.00	13	funer
1.00	6.00	0.00	0.00	0.00	0.00	0.00	7	smell
1.00	5.00	13.00	0.00	8.00	1.00	10.00	38	book
1.00	5.00	14.00	1.00	3.00	4.00	4.00	32	parent
6.00	5.00	3.00	5.00	5.00	1.00	2.00	27	fami
2.00	5.00	3.00	6.00	2.00	1.00	3.00	22	LONG
0.00	5.00	0.00	1.00	1.00	0.00	0.00	7	grandfath
0.00	5.00	0.00	1.00	0.00	0.00	1.00	7	Mort
0.00	5.00	0.00	0.00	0.00	0.00	1.00	6	suicid
1.00	4.00	6.00	5.00	4.00	13.00	5.00	38	Momm
2.00	4.00	6.00	4.00	6.00	4.00	7.00	33	Life
5.00	4.00	8.00	1.00	2.00	5.00	5.00	30	Good
2.00	4.00	5.00	2.00	2.00	5.00	6.00	26	Call
2.00	4.00	4.00	0.00	3.00	3.00	1.00	17	hand

1.00	4.00	5.00	0.00	2.00	0.00	5.00	17	stori
0.00	4.00	2.00	2.00	2.00	3.00	4.00	17	college
0.00	4.00	1.00	1.00	3.00	2.00	3.00	14	John
1.00	4.00	1.00	0.00	3.00	1.00	1.00	11	DEAD
0.00	4.00	0.00	0.00	2.00	2.00	1.00	9	Bechdel
0.00	4.00	1.00	1.00	0.00	2.00	1.00	9	emot
2.00	4.00	2.00	0.00	0.00	1.00	0.00	9	stic

Table 14

What is interesting in these lists, particularly after the results of Chapter One, is how many of the Most Frequent Words in Chapter Two are Most Frequent Words overall. Indeed only five of the eighteen top results fall outside of the overall Most Frequent Words and only five of the overall Most Frequent Words do not make this list (“Mom”, “life”, “thing”, “play”, “good”). Of the more remaining frequent words, “death” and “Camus” clearly come from the titular intertext, Camus’s *A Happy Death*, along with words related not only to Camus’s but Bruce’s death such as “die”, “accident”, “car” and “suicide”. A clear character for Chapter Two coalesces in this vocabulary. Added to this are characters who mainly occur in this chapter, the appropriately named “Mort”, and “grandfather”.

Chapter Two formatted conditionally relative to total number (row) by percentage:

1	2	3	4	5	6	7		
1.83	17.43	11.93	13.76	20.18	11.93	22.94	109	dad
15.71	12.86	20.00	15.00	10.71	7.14	18.57	140	father
6.82	29.55	2.27	9.09	15.91	13.64	22.73	44	Home
0.00	48.00	28.00	4.00	12.00	0.00	8.00	25	death
16.67	33.33	3.33	23.33	0.00	20.00	3.33	30	brother
0.00	100.00	0.00	0.00	0.00	0.00	0.00	9	Camu

3.70	14.81	12.96	7.41	18.52	20.37	22.22	54	time
3.77	15.09	5.66	15.09	11.32	20.75	28.30	53	year
22.92	16.67	2.08	4.17	27.08	18.75	8.33	48	hous
11.11	29.63	18.52	3.70	7.41	18.52	11.11	27	fact
4.55	36.36	9.09	9.09	22.73	4.55	13.64	22	PEOP
8.33	11.67	23.33	6.67	21.67	20.00	8.33	60	Mother
2.44	17.07	14.63	17.07	19.51	7.32	21.95	41	BACK
3.57	25.00	14.29	7.14	25.00	14.29	10.71	28	live
0.00	31.82	4.55	18.18	27.27	4.55	13.64	22	Di
0.00	53.85	15.38	7.69	7.69	7.69	7.69	13	accid
0.00	13.33	17.78	6.67	6.67	33.33	22.22	45	dai
0.00	15.79	15.79	5.26	15.79	13.16	34.21	38	read
0.00	26.09	17.39	8.70	26.09	8.70	13.04	23	made
0.00	31.58	15.79	5.26	10.53	10.53	26.32	19	SCHO
0.00	40.00	6.67	0.00	13.33	40.00	0.00	15	car
0.00	46.15	7.69	7.69	23.08	0.00	15.38	13	funer
14.29	85.71	0.00	0.00	0.00	0.00	0.00	7	smell
2.63	13.16	34.21	0.00	21.05	2.63	26.32	38	book
3.13	15.63	43.75	3.13	9.38	12.50	12.50	32	parent
22.22	18.52	11.11	18.52	18.52	3.70	7.41	27	fami
9.09	22.73	13.64	27.27	9.09	4.55	13.64	22	LONG
0.00	71.43	0.00	14.29	14.29	0.00	0.00	7	grandfath
0.00	71.43	0.00	14.29	0.00	0.00	14.29	7	Mort
0.00	83.33	0.00	0.00	0.00	0.00	16.67	6	suicid
2.63	10.53	15.79	13.16	10.53	34.21	13.16	38	Momm
6.06	12.12	18.18	12.12	18.18	12.12	21.21	33	Life
16.67	13.33	26.67	3.33	6.67	16.67	16.67	30	Good

7.69	15.38	19.23	7.69	7.69	19.23	23.08	26	Call
11.76	23.53	23.53	0.00	17.65	17.65	5.88	17	hand
5.88	23.53	29.41	0.00	11.76	0.00	29.41	17	stori
0.00	23.53	11.76	11.76	11.76	17.65	23.53	17	college
0.00	28.57	7.14	7.14	21.43	14.29	21.43	14	John
9.09	36.36	9.09	0.00	27.27	9.09	9.09	11	DEAD
0.00	44.44	0.00	0.00	22.22	22.22	11.11	9	Bechdel
0.00	44.44	11.11	11.11	0.00	22.22	11.11	9	emot
22.22	44.44	22.22	0.00	0.00	11.11	0.00	9	stic

Table 15

This theme is also borne out when the table is sorted for typicality to the chapter, as in the below table. I have increased the length of this table to accommodate any terms that occur three or more times in order to catch a broader array of words, and to remain consistent with Chapter One. Aside from “Camus”, however, most of the words with 100% occurrence are limited to a single scene. Of the remaining words the clear theme is a locational one; “salts”, “smell” and “casket” are all indicative of the eponymous family funeral home, which also probably accounts for the unusually high figure, 29.55%, of instances of the word “home”.

Chapter Two ranked by percentage of occurrences extended to values that appear more than twice and more than the ‘expected’ 1/7th of the total:

1	2	3	4	5	6	7		
0.00	100.00	0.00	0.00	0.00	0.00	0.00	9	Camu
0.00	100.00	0.00	0.00	0.00	0.00	0.00	4	consol
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	emba
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	field
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	MAIL

0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	puzzl
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	Sue
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	barber
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	cemetery
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	granite
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	obelisk
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	oven
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	prep
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	salts
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	Sisyphus
0.00	100.00	0.00	0.00	0.00	0.00	0.00	3	wrapped
14.29	85.71	0.00	0.00	0.00	0.00	0.00	7	smell
0.00	83.33	0.00	0.00	0.00	0.00	16.67	6	suicid
0.00	80.00	0.00	0.00	20.00	0.00	0.00	5	casket
0.00	80.00	0.00	0.00	20.00	0.00	0.00	5	Born
0.00	80.00	20.00	0.00	0.00	0.00	0.00	5	mud
25.00	75.00	0.00	0.00	0.00	0.00	0.00	4	sister
0.00	71.43	0.00	14.29	14.29	0.00	0.00	7	grandfath
0.00	71.43	0.00	14.29	0.00	0.00	14.29	7	Mort
0.00	66.67	0.00	16.67	0.00	0.00	16.67	6	absurd
0.00	66.67	0.00	0.00	33.33	0.00	0.00	6	GRAN
0.00	60.00	20.00	0.00	0.00	20.00	0.00	5	Dear
0.00	60.00	0.00	0.00	0.00	0.00	40.00	5	red
0.00	60.00	0.00	0.00	20.00	0.00	20.00	5	die
20.00	60.00	0.00	0.00	0.00	0.00	20.00	5	table
14.29	57.14	0.00	0.00	0.00	0.00	28.57	7	GRIE
0.00	53.85	15.38	7.69	7.69	7.69	7.69	13	accid

0.00	50.00	12.50	25.00	12.50	0.00	0.00	8	VELV
0.00	50.00	12.50	12.50	0.00	25.00	0.00	8	Bruce
0.00	50.00	0.00	0.00	0.00	50.00	0.00	6	Aunt
0.00	50.00	16.67	16.67	0.00	16.67	0.00	6	busi
0.00	50.00	0.00	16.67	0.00	16.67	16.67	6	reach
0.00	50.00	0.00	16.67	16.67	0.00	16.67	6	Fun
0.00	48.00	28.00	4.00	12.00	0.00	8.00	25	death
0.00	46.15	7.69	7.69	23.08	0.00	15.38	13	funer
0.00	44.44	0.00	0.00	22.22	22.22	11.11	9	Bechdel
0.00	44.44	11.11	11.11	0.00	22.22	11.11	9	emot
22.22	44.44	22.22	0.00	0.00	11.11	0.00	9	stic
0.00	42.86	57.14	0.00	0.00	0.00	0.00	7	EURO
14.29	42.86	14.29	0.00	0.00	28.57	0.00	7	fles
14.29	42.86	0.00	0.00	42.86	0.00	0.00	7	spot
0.00	42.86	14.29	28.57	0.00	0.00	14.29	7	TRUC
0.00	40.00	6.67	0.00	13.33	40.00	0.00	15	car
4.55	36.36	9.09	9.09	22.73	4.55	13.64	22	PEOP
9.09	36.36	9.09	0.00	27.27	9.09	9.09	11	DEAD
16.67	33.33	3.33	23.33	0.00	20.00	3.33	30	brother
11.11	33.33	0.00	0.00	11.11	22.22	22.22	9	local
0.00	33.33	11.11	0.00	11.11	33.33	11.11	9	told
0.00	31.82	4.55	18.18	27.27	4.55	13.64	22	Di
0.00	31.58	15.79	5.26	10.53	10.53	26.32	19	SCHO
0.00	30.00	10.00	10.00	10.00	10.00	30.00	10	SPEN
11.11	29.63	18.52	3.70	7.41	18.52	11.11	27	fact
6.82	29.55	2.27	9.09	15.91	13.64	22.73	44	Home
0.00	28.57	7.14	7.14	21.43	14.29	21.43	14	John

9.09	27.27	18.18	9.09	9.09	9.09	18.18	11	rela
9.09	27.27	27.27	0.00	0.00	9.09	27.27	11	SUSP
0.00	27.27	0.00	27.27	18.18	0.00	27.27	11	hair
0.00	26.09	17.39	8.70	26.09	8.70	13.04	23	made
3.57	25.00	14.29	7.14	25.00	14.29	10.71	28	live
25.00	25.00	8.33	8.33	25.00	0.00	8.33	12	DARK
8.33	25.00	8.33	25.00	0.00	8.33	25.00	12	HIGH
8.33	25.00	0.00	8.33	25.00	16.67	16.67	12	front
11.76	23.53	23.53	0.00	17.65	17.65	5.88	17	hand
5.88	23.53	29.41	0.00	11.76	0.00	29.41	17	stori
0.00	23.53	11.76	11.76	11.76	17.65	23.53	17	college
15.38	23.08	23.08	0.00	0.00	7.69	30.77	13	GREA
0.00	23.08	15.38	46.15	7.69	7.69	0.00	13	phot
9.09	22.73	13.64	27.27	9.09	4.55	13.64	22	LONG
14.29	21.43	21.43	7.14	7.14	7.14	21.43	14	Part
6.67	20.00	20.00	6.67	6.67	0.00	40.00	15	GODD
13.33	20.00	13.33	0.00	13.33	26.67	13.33	15	move
6.25	18.75	0.00	6.25	18.75	31.25	18.75	16	work
22.22	18.52	11.11	18.52	18.52	3.70	7.41	27	fami
1.83	17.43	11.93	13.76	20.18	11.93	22.94	109	dad
2.44	17.07	14.63	17.07	19.51	7.32	21.95	41	BACK
22.92	16.67	2.08	4.17	27.08	18.75	8.33	48	hous
5.56	16.67	11.11	16.67	5.56	11.11	33.33	18	found
0.00	15.79	15.79	5.26	15.79	13.16	34.21	38	read
3.13	15.63	43.75	3.13	9.38	12.50	12.50	32	parent
7.69	15.38	19.23	7.69	7.69	19.23	23.08	26	Call
3.77	15.09	5.66	15.09	11.32	20.75	28.30	53	year

3.70	14.81	12.96	7.41	18.52	20.37	22.22	54	time
4.76	14.29	14.29	33.33	4.76	14.29	14.29	21	girl

Table 16

Chapter Three ordered by Most Frequent Words:

1	2	3	4	5	6	7	Total	
22	18	28	21	15	10	26	140	father
5	7	14	4	13	12	5	60	Mother
1	5	14	1	3	4	4	32	parent
2	19	13	15	22	13	25	109	dad
1	5	13	0	8	1	10	38	book
0	2	11	0	0	1	5	19	library
0	0	10	0	0	0	0	10	Fitz
0	6	8	3	3	15	10	45	dai
5	4	8	1	2	5	5	30	Good
0	2	8	0	2	1	8	21	letter
0	2	8	5	0	1	1	17	love
0	0	8	0	0	0	0	8	Gatsbi
2	8	7	4	10	11	12	54	time
0	12	7	1	3	0	2	25	death
1	2	7	2	2	0	2	16	MARR
1	7	6	7	8	3	9	41	BACK
1	4	6	5	4	13	5	38	Momm
0	6	6	2	6	5	13	38	read
2	4	6	4	6	4	7	33	Life
0	0	6	0	5	0	7	18	Writ
0	0	6	4	0	0	7	17	lesb

2	2	5	4	7	4	9	33	thing
3	8	5	1	2	5	3	27	fact
2	4	5	2	2	5	6	26	Call
1	4	5	0	2	0	5	17	stori
0	0	5	1	1	2	0	9	charact
0	1	5	0	0	0	3	9	Joan
0	0	5	0	0	0	3	8	JAME
0	0	5	0	0	0	0	5	Zelda
0	0	5	0	0	0	0	5	catastrophe

Table 17

Looking at Chapter Three it is, again, striking how many of the overall Most Frequent Words occur towards the top of this list, the exceptions this time being “year”, “house”, “home”, “brother”, “family”, “live” and “play”. Clearly the focus has shifted from the home to Bruce and Helen, as indicated by the highest overall usages of “father” and “mother”, despite this being one of the shorter chapters, as well as almost half the appearances of “parent”.

Accordingly the words “love” and “marry” also have nearly half their appearances here, too. As usual the main intertexts, *That Old Catastrophe* and *The Great Gatsby*, feature highly along with those connected to their production, Henry James and Zelda and F. Scott Fitzgerald, the latter two of which of course also connect to “love” and “marry”. Added into this theme, though, are over half the references to “Joan”, Alison’s college girlfriend, as well as “lesbian” with these respective relationships tied together by the “writing” of “letters”, be they between Bruce and Helen (discussing the Fitzgeralds) or between Alison and her parents discussing Alison’s queerness and the resulting revelation of Bruce’s affairs. Indeed, in this context the relative omission of highly frequent words such as “house”, “home” and “family” is quite notable. For the record, below is the complete table for Chapter Three, ordered by percentage

of occurrences with a minimum of three results. Given the size of this table, though, I will wait to compare it to chronological periods before commenting on it.

1	2	3	4	5	6	7		
0.00	0.00	100.00	0.00	0.00	0.00	0.00	10	Fitz
0.00	0.00	100.00	0.00	0.00	0.00	0.00	8	Gatsbi
0.00	0.00	100.00	0.00	0.00	0.00	0.00	5	Zelda
0.00	0.00	100.00	0.00	0.00	0.00	0.00	5	catastrophe
0.00	0.00	100.00	0.00	0.00	0.00	0.00	4	DRUN
0.00	0.00	100.00	0.00	0.00	0.00	0.00	4	QUAL
0.00	0.00	100.00	0.00	0.00	0.00	0.00	4	Isabel
0.00	0.00	100.00	0.00	0.00	0.00	0.00	3	convent
0.00	0.00	100.00	0.00	0.00	0.00	0.00	3	atlas
0.00	0.00	100.00	0.00	0.00	0.00	0.00	3	biography
0.00	0.00	100.00	0.00	0.00	0.00	0.00	3	Crazy
0.00	0.00	100.00	0.00	0.00	0.00	0.00	3	moon
0.00	0.00	80.00	0.00	20.00	0.00	0.00	5	phone
0.00	25.00	75.00	0.00	0.00	0.00	0.00	4	compel
0.00	0.00	75.00	0.00	0.00	0.00	25.00	4	Fuck
0.00	0.00	75.00	0.00	0.00	0.00	25.00	4	PROB
0.00	0.00	75.00	0.00	0.00	25.00	0.00	4	desk
0.00	0.00	75.00	0.00	0.00	25.00	0.00	4	Sunday
0.00	0.00	62.50	0.00	0.00	0.00	37.50	8	JAME
20.00	0.00	60.00	0.00	0.00	20.00	0.00	5	affect
0.00	0.00	60.00	0.00	0.00	0.00	40.00	5	Amer
0.00	0.00	60.00	40.00	0.00	0.00	0.00	5	Gilbert
0.00	0.00	60.00	20.00	20.00	0.00	0.00	5	pick

0.00	20.00	60.00	0.00	0.00	0.00	20.00	5	remain
0.00	20.00	60.00	0.00	20.00	0.00	0.00	5	army
0.00	0.00	60.00	0.00	40.00	0.00	0.00	5	poem
0.00	10.53	57.89	0.00	0.00	5.26	26.32	19	library
0.00	42.86	57.14	0.00	0.00	0.00	0.00	7	EURO
0.00	0.00	57.14	42.86	0.00	0.00	0.00	7	fiction
0.00	0.00	55.56	11.11	11.11	22.22	0.00	9	charact
0.00	11.11	55.56	0.00	0.00	0.00	33.33	9	Joan
0.00	0.00	50.00	0.00	12.50	12.50	25.00	8	talk
0.00	0.00	50.00	0.00	0.00	50.00	0.00	6	Scott
0.00	11.76	47.06	29.41	0.00	5.88	5.88	17	love
0.00	0.00	44.44	0.00	11.11	22.22	22.22	9	parti
0.00	11.11	44.44	0.00	11.11	11.11	22.22	9	stra
0.00	0.00	44.44	44.44	11.11	0.00	0.00	9	trip
3.13	15.63	43.75	3.13	9.38	12.50	12.50	32	parent
6.25	12.50	43.75	12.50	12.50	0.00	12.50	16	MARR
14.29	14.29	42.86	14.29	0.00	14.29	0.00	7	DISC
0.00	14.29	42.86	14.29	14.29	14.29	0.00	7	fill
0.00	0.00	42.86	0.00	0.00	14.29	42.86	7	sexual
10.00	10.00	40.00	10.00	10.00	10.00	10.00	10	IMAG
0.00	20.00	40.00	10.00	10.00	20.00	0.00	10	month
0.00	9.52	38.10	0.00	9.52	4.76	38.10	21	letter
0.00	12.50	37.50	12.50	0.00	25.00	12.50	8	refer
0.00	25.00	37.50	12.50	0.00	12.50	12.50	8	TRAG
25.00	0.00	37.50	12.50	12.50	12.50	0.00	8	bought
18.18	9.09	36.36	0.00	0.00	18.18	18.18	11	idea
18.18	0.00	36.36	0.00	9.09	18.18	18.18	11	miss

0.00	0.00	35.29	23.53	0.00	0.00	41.18	17	lesb
2.63	13.16	34.21	0.00	21.05	2.63	26.32	38	book
0.00	0.00	33.33	0.00	27.78	0.00	38.89	18	Writ
10.00	0.00	30.00	0.00	30.00	10.00	20.00	10	feel
5.88	23.53	29.41	0.00	11.76	0.00	29.41	17	stori
0.00	48.00	28.00	4.00	12.00	0.00	8.00	25	death
9.09	27.27	27.27	0.00	0.00	9.09	27.27	11	SUSP
9.09	9.09	27.27	18.18	27.27	0.00	9.09	11	sort
16.67	13.33	26.67	3.33	6.67	16.67	16.67	30	Good
0.00	6.67	26.67	20.00	0.00	20.00	26.67	15	men
11.76	23.53	23.53	0.00	17.65	17.65	5.88	17	hand
0.00	5.88	23.53	5.88	23.53	29.41	11.76	17	word
8.33	11.67	23.33	6.67	21.67	20.00	8.33	60	Mother
15.38	23.08	23.08	0.00	0.00	7.69	30.77	13	GREA
0.00	7.69	23.08	15.38	15.38	15.38	23.08	13	Leav
0.00	15.38	23.08	7.69	7.69	15.38	30.77	13	felt
0.00	5.56	22.22	16.67	0.00	33.33	22.22	18	week
7.14	0.00	21.43	14.29	28.57	7.14	21.43	14	kind
14.29	21.43	21.43	7.14	7.14	7.14	21.43	14	Part
15.71	12.86	20.00	15.00	10.71	7.14	18.57	140	father
6.67	20.00	20.00	6.67	6.67	0.00	40.00	15	GODD
20.00	0.00	20.00	20.00	13.33	13.33	13.33	15	poin
7.69	15.38	19.23	7.69	7.69	19.23	23.08	26	Call
6.25	6.25	18.75	6.25	12.50	12.50	37.50	16	boi
12.50	0.00	18.75	12.50	18.75	18.75	18.75	16	learn
11.11	29.63	18.52	3.70	7.41	18.52	11.11	27	fact
6.06	12.12	18.18	12.12	18.18	12.12	21.21	33	Life

0.00	13.33	17.78	6.67	6.67	33.33	22.22	45	dai
0.00	26.09	17.39	8.70	26.09	8.70	13.04	23	made
5.56	11.11	16.67	5.56	0.00	27.78	33.33	18	open
2.63	10.53	15.79	13.16	10.53	34.21	13.16	38	Momm
0.00	15.79	15.79	5.26	15.79	13.16	34.21	38	read
0.00	31.58	15.79	5.26	10.53	10.53	26.32	19	SCHO
7.69	11.54	15.38	11.54	11.54	19.23	23.08	26	Put
6.06	6.06	15.15	12.12	21.21	12.12	27.27	33	thing
2.44	17.07	14.63	17.07	19.51	7.32	21.95	41	BACK
3.57	25.00	14.29	7.14	25.00	14.29	10.71	28	live
4.76	14.29	14.29	33.33	4.76	14.29	14.29	21	girl
4.76	4.76	14.29	0.00	23.81	33.33	19.05	21	began

Table 18

Chapter Four ordered by Most Frequent Words

1	2	3	4	5	6	7	Total	
22	18	28	21	15	10	26	140	father
2	19	13	15	22	13	25	109	dad
0	1	0	14	0	0	0	15	Prou
0	0	2	12	0	0	1	15	Roy
2	1	0	9	0	0	0	12	flow
0	1	0	8	2	0	3	14	Citi
1	7	6	7	8	3	9	41	BACK
1	3	3	7	1	3	3	21	girl
2	5	3	6	2	1	3	22	LONG
0	0	2	6	0	4	4	16	YOUN
0	1	0	6	0	3	5	15	narr

0	3	2	6	1	1	0	13	phot
0	0	0	6	3	0	0	9	snake
0	0	0	6	0	0	0	6	translat
0	2	8	5	0	1	1	17	love
1	4	6	5	4	13	5	38	Momm
0	2	8	5	0	1	1	17	love
1	1	1	5	3	1	0	12	beau
1	1	0	5	0	0	3	10	bar
0	1	0	5	1	0	3	10	Street
0	0	0	5	2	0	0	7	Bill
0	0	1	5	0	1	0	7	garden
5	7	14	4	13	12	5	60	Mother
2	8	7	4	10	11	12	54	time
2	4	6	4	6	4	7	33	Life
0	0	6	4	0	0	7	17	lesb
2	2	5	4	7	4	9	33	thing
0	7	1	4	6	1	3	22	Di
0	0	6	4	0	0	7	17	lesb
0	0	2	4	1	3	7	17	woman
1	1	1	4	0	3	4	14	lost
0	1	0	4	1	3	4	13	YORK
1	0	0	4	4	0	1	10	mine
0	0	4	4	1	0	0	9	trip
1	0	0	4	1	1	2	9	fell
1	0	0	4	2	0	1	8	fail
0	0	0	4	2	0	1	7	cross
0	1	0	4	2	0	0	7	SPRI

0	0	0	4	1	0	1	6	begin
0	0	0	4	2	0	0	6	lila
0	0	0	4	0	0	2	6	French
0	0	0	4	0	1	0	5	CUFF
0	0	0	4	0	0	1	5	titl
0	0	0	4	0	0	0	4	Swanns

Table 19

Chapter Four, the last of the three chapters longer only than Chapter One, is another chapter like Chapter One to be dominated by words outside of the Most Frequent Words overall. Although “father” and “dad” appear top of the list, they are proportionally still quite uncommon in this chapter relative to the rest of the book. The same can be said of “back”, “Mother”, “Mom”, “time”, “thing” and “life”, the only other overall Most Frequent Words featured in the chapter with any frequency. Unusual locations – “city”, “new York”, “mine” – unusual people – “Roy”, “Bill” – and the typically idiosyncratic intertext – *Proust’s* ‘In the Shadow of *Young Girls in Flower*’ and ‘*Swann’s Way*’ in “translation” from the “French” – dominate the chapter. Indeed, looking at the percentage of times these words occur in this chapter it does not seem necessary to further display the words most typical of the chapter until a comparison to chronological periods is being made. In fact, almost all of the words on the list *not* in the overall Most Frequent Words are most frequent in this chapter, despite its relative brevity. Again, a clear identity forms in this chapter, this time quite apart from the norm.

1	2	3	4	5	6	7		
15.71	12.86	20.00	15.00	10.71	7.14	18.57	140	father
1.83	17.43	11.93	13.76	20.18	11.93	22.94	109	dad
0.00	6.67	0.00	93.33	0.00	0.00	0.00	15	Prou
0.00	0.00	13.33	80.00	0.00	0.00	6.67	15	Roy

16.67	8.33	0.00	75.00	0.00	0.00	0.00	12	flow
0.00	7.14	0.00	57.14	14.29	0.00	21.43	14	Citi
2.44	17.07	14.63	17.07	19.51	7.32	21.95	41	BACK
4.76	14.29	14.29	33.33	4.76	14.29	14.29	21	girl
9.09	22.73	13.64	27.27	9.09	4.55	13.64	22	LONG
0.00	0.00	12.50	37.50	0.00	25.00	25.00	16	YOUN
0.00	6.67	0.00	40.00	0.00	20.00	33.33	15	narr
0.00	23.08	15.38	46.15	7.69	7.69	0.00	13	phot
0.00	0.00	0.00	66.67	33.33	0.00	0.00	9	snake
0.00	0.00	0.00	100.00	0.00	0.00	0.00	6	translat
0.00	11.76	47.06	29.41	0.00	5.88	5.88	17	love
2.63	10.53	15.79	13.16	10.53	34.21	13.16	38	Momm
0.00	11.76	47.06	29.41	0.00	5.88	5.88	17	love
8.33	8.33	8.33	41.67	25.00	8.33	0.00	12	beau
10.00	10.00	0.00	50.00	0.00	0.00	30.00	10	bar
0.00	10.00	0.00	50.00	10.00	0.00	30.00	10	Street
0.00	0.00	0.00	71.43	28.57	0.00	0.00	7	Bill
0.00	0.00	14.29	71.43	0.00	14.29	0.00	7	garden
8.33	11.67	23.33	6.67	21.67	20.00	8.33	60	Mother
3.70	14.81	12.96	7.41	18.52	20.37	22.22	54	time
6.06	12.12	18.18	12.12	18.18	12.12	21.21	33	Life
0.00	0.00	35.29	23.53	0.00	0.00	41.18	17	lesb
6.06	6.06	15.15	12.12	21.21	12.12	27.27	33	thing
0.00	31.82	4.55	18.18	27.27	4.55	13.64	22	Di
0.00	0.00	35.29	23.53	0.00	0.00	41.18	17	lesb
0.00	0.00	11.76	23.53	5.88	17.65	41.18	17	woman
7.14	7.14	7.14	28.57	0.00	21.43	28.57	14	lost

0.00	7.69	0.00	30.77	7.69	23.08	30.77	13	YORK
10.00	0.00	0.00	40.00	40.00	0.00	10.00	10	mine
0.00	0.00	44.44	44.44	11.11	0.00	0.00	9	trip
11.11	0.00	0.00	44.44	11.11	11.11	22.22	9	fell
12.50	0.00	0.00	50.00	25.00	0.00	12.50	8	fail
0.00	0.00	0.00	57.14	28.57	0.00	14.29	7	cross
0.00	14.29	0.00	57.14	28.57	0.00	0.00	7	SPRI
0.00	0.00	0.00	66.67	16.67	0.00	16.67	6	begin
0.00	0.00	0.00	66.67	33.33	0.00	0.00	6	lila
0.00	0.00	0.00	66.67	0.00	0.00	33.33	6	French
0.00	0.00	0.00	80.00	0.00	20.00	0.00	5	CUFF
0.00	0.00	0.00	80.00	0.00	0.00	20.00	5	titl
0.00	0.00	0.00	100.00	0.00	0.00	0.00	4	Swanns

Table 20

Chapter Five, on the other hand, is dominated by Most Frequent Words overall. Thirteen of its seventeen Most Frequent Words are also in the overall Most Frequent Words, with another “die” only just outside. Many of the other Most Frequent Words are united by the location of the Bechdel house, “Beech” “Creek”, the “small” “town” near the “plateau” and the “mountain” which is compared to the chapter’s main intertext, *Wind in the Willows*, particularly Mr “Toad’s” “Canary” “Colored” caravan. The other words to feature prominently are connected to Alison’s obsessive-compulsive phase, which involved a fair amount of diarising, and therefore words related to time.

Chapter Five ordered by Most Frequent Words

1	2	3	4	5	6	7	Total	
---	---	---	---	---	---	---	-------	--

2	19	13	15	22	13	25	109	dad
22	18	28	21	15	10	26	140	father
5	7	14	4	13	12	5	60	Mother
11	8	1	2	13	9	4	48	hous
2	8	7	4	10	11	12	54	time
0	0	0	0	9	0	1	10	color
1	7	6	7	8	3	9	41	BACK
1	5	13	0	8	1	10	38	book
0	1	0	0	8	0	2	11	Creek
0	0	0	0	8	0	0	8	compul
3	13	1	4	7	6	10	44	Home
2	2	5	4	7	4	9	33	thing
1	7	4	2	7	4	3	28	live
2	8	3	8	6	11	15	53	year
2	4	6	4	6	4	7	33	Life
0	7	1	4	6	1	3	22	Di
0	6	6	2	6	5	13	38	read
0	6	4	2	6	2	3	23	made
0	1	0	2	6	1	1	11	spea
1	0	0	1	6	4	0	12	town
2	0	0	1	6	0	2	11	SMAL
1	1	2	0	6	1	1	12	Sunn
0	2	1	0	6	0	0	9	wall
0	0	2	0	6	0	0	8	number
6	5	3	5	5	1	2	27	fami
1	8	2	2	5	1	3	22	PEOP
2	3	1	1	5	6	5	23	night

0	1	0	1	5	0	4	11	blue
0	0	0	1	5	0	0	6	plateau
5	2	1	0	5	3	5	21	chil
1	1	3	0	5	7	4	21	began
0	0	6	0	5	0	7	18	Writ
0	1	0	0	5	1	1	8	iron
0	0	0	0	5	1	0	6	SEPT
0	0	0	0	5	0	0	5	bridg
0	0	0	0	5	0	0	5	Toad
1	4	6	5	4	13	5	38	Momm
1	0	0	4	4	0	1	10	mine
1	2	0	2	4	5	1	15	show
2	2	0	2	4	1	3	14	clos
1	0	3	2	4	1	3	14	kind
3	1	2	2	4	0	0	12	Stop
1	1	3	1	4	4	8	22	left
2	2	0	1	4	5	7	21	Make
0	1	4	1	4	5	2	17	word
0	1	0	1	4	2	2	10	10
1	0	0	1	4	2	0	8	crea
0	1	1	1	4	0	1	8	sett
0	1	0	1	4	0	1	7	Route
0	0	0	1	4	0	0	5	mountain
1	1	4	0	4	18	3	31	plai
1	2	2	0	4	6	5	20	start
0	0	0	0	4	11	0	15	diary
0	0	2	0	4	5	3	14	watch

0	0	0	0	4	5	1	10	ENTR
0	0	0	0	4	3	0	7	tape
0	1	0	0	4	0	2	7	Beech
0	0	1	0	4	0	1	6	effect
0	1	0	0	4	0	0	5	mile
0	0	0	0	4	1	0	5	obse
0	0	0	0	4	0	1	5	rub
0	0	0	0	4	1	0	5	church
0	0	0	0	4	0	1	5	island
0	0	0	0	4	0	0	4	CANA
0	0	0	0	4	0	0	4	mysteri
0	0	0	0	4	0	0	4	canal
0	0	0	0	4	0	0	4	sunset

Table 21

Although it is correct to say that the seven most frequent words of Chapter Six are all in the overall Most Frequent Words, which might appear to suggest it is a ‘normal’ chapter, it is worth adding that three of the top four values are only in that overall list because of Chapter Six: “play”; “day”; “Mom”. Comparatively, “dad” and “father” are proportionally very under-represented, especially considering Chapter Six is second only to the final chapter in length. Conversely, “Mom” and “Mother” are proportionally over-represented, reflecting the focus of this chapter, Helen’s acting in Wilde’s play, *The Importance of Being Earnest*. Again, temporal and diary-specific words such as “day”, “time”, “year”, “diary”, “summer”, “week”, “afternoon”, “day” feature heavily, reflecting not only the chronicled nature of this chapter, but the need for orientation for the reader in a chapter that moves back and forth a lot within a relatively confined period.

1	2	3	4	5	6	7	Total	
1	1	4	0	4	18	3	31	plai
0	6	8	3	3	15	10	45	dai
2	19	13	15	22	13	25	109	dad
1	4	6	5	4	13	5	38	Momm
5	7	14	4	13	12	5	60	Mother
2	8	7	4	10	11	12	54	time
2	8	3	8	6	11	15	53	year
0	0	0	0	4	11	0	15	diary
22	18	28	21	15	10	26	140	father
0	0	1	1	3	10	0	15	Wilde
11	8	1	2	13	9	4	48	hous
0	2	1	0	0	8	1	12	summer
1	1	3	0	5	7	4	21	began
3	0	0	0	0	7	0	10	period
3	13	1	4	7	6	10	44	Home
5	10	1	7	0	6	1	30	brother
1	3	1	3	2	6	7	23	end
2	3	1	1	5	6	5	23	night
1	2	2	0	4	6	5	20	start
0	1	4	3	0	6	4	18	week
0	6	1	0	2	6	0	15	car
1	0	0	2	1	6	2	12	find
0	0	0	3	0	6	2	11	afternoon
0	0	0	0	3	6	1	10	Order
0	0	1	0	0	6	1	8	impo
0	0	1	0	0	6	0	7	engag

0	0	0	0	0	6	0	6	Gryglewicz
0	6	6	2	6	5	13	38	read
5	4	8	1	2	5	5	30	Good
3	8	5	1	2	5	3	27	fact
2	4	5	2	2	5	6	26	Call
2	3	3	2	2	5	9	26	man
2	3	4	3	3	5	6	26	Put
2	2	0	1	4	5	7	21	Make
1	2	3	1	0	5	6	18	open
0	1	4	1	4	5	2	17	word
1	3	0	1	3	5	3	16	work
1	2	0	2	4	5	1	15	show
1	0	0	0	2	5	6	14	Mr
0	0	2	0	4	5	3	14	watch
0	1	1	0	2	5	4	13	line
0	0	0	0	4	5	1	10	ENTR
0	0	2	0	1	5	0	8	complet
0	0	1	0	0	5	1	7	court
1	0	0	1	0	5	0	7	Game
0	0	0	0	1	5	0	6	June
0	0	0	0	0	5	0	5	thesis
2	4	6	4	6	4	7	33	Life
2	2	5	4	7	4	9	33	thing
1	5	14	1	3	4	4	32	parent
1	7	4	2	7	4	3	28	live
1	1	3	1	4	4	8	22	left
0	0	2	6	0	4	4	16	YOUN

2	3	2	0	2	4	2	15	move
1	0	0	1	6	4	0	12	town
0	1	2	2	1	4	1	11	pass
0	1	1	1	3	4	0	10	act
0	1	0	0	0	4	5	10	guess
2	1	2	1	0	4	0	10	practic
0	2	0	3	1	4	0	10	tree
0	0	0	0	3	4	0	7	Dr
0	0	0	1	0	4	2	7	Mark
0	0	0	1	2	4	0	7	August
0	0	0	0	1	4	1	6	touch
0	0	0	0	2	4	0	6	window
0	0	0	0	0	4	2	6	July
0	0	0	0	0	4	1	5	sandwich
0	0	0	1	0	4	0	5	beer
0	0	0	0	1	4	0	5	Wednesday
0	0	0	0	0	4	0	4	Beth
0	0	0	0	0	4	0	4	mapl
0	0	0	0	0	4	0	4	ning
0	0	0	0	0	4	0	4	cucumber
0	0	0	0	0	4	0	4	Horrid

Table 22

Also of note in Chapter Six is not only the high volume of words that have the majority of their uses in the chapter, but also how many of these occur more, and in some cases many more, times than the minimum requirement of three. Whilst the below table shows some unique characters as would be consistent with other chapters – the “Gyrglewiczes”, “Beth”, “Mark”, the characters and actors from “Wilde’s” play, and “Nixon” – there is a clear theme linking words

such as “cucumber”, “sandwich”, “beer” and “kitchen”. What is interesting about this is that, despite the relatively high and low values for Bruce and Helen’s parental names, these characters and food-related words all stem from *Bruce’s* buying a “beer” for “Mark” Walsh whilst Alison is with “Beth” at the “Gyrglewicz” house, an act that leads to him having to go to court, which Bechdel connects to Oscar “Wilde’s” own trial and the use, in *The Importance of Being Earnest*, of “cucumber” “sandwiches” to encode illicit desire, an illicit desire shared by Bruce and Wilde, both of whom are, to varying degrees, betrayed by a lover with “Douglas” in their name, Mark *Douglas* Walsh and Lord Alfred *Douglas*.

Chapter Six ordered by percentage of occurrences

1	2	3	4	5	6	7		
0.00	0.00	0.00	0.00	0.00	100.00	0.00	6	Gyrglewicz
0.00	0.00	0.00	0.00	0.00	100.00	0.00	5	thesis
0.00	0.00	0.00	0.00	0.00	100.00	0.00	4	Beth
0.00	0.00	0.00	0.00	0.00	100.00	0.00	4	mapl
0.00	0.00	0.00	0.00	0.00	100.00	0.00	4	ning
0.00	0.00	0.00	0.00	0.00	100.00	0.00	4	cucumber
0.00	0.00	0.00	0.00	0.00	100.00	0.00	4	Horrid
0.00	0.00	0.00	0.00	0.00	100.00	0.00	3	Bracknel
0.00	0.00	0.00	0.00	0.00	100.00	0.00	3	charg
0.00	0.00	0.00	0.00	0.00	100.00	0.00	3	algebra
0.00	0.00	0.00	0.00	0.00	100.00	0.00	3	Augusta
0.00	0.00	0.00	0.00	0.00	100.00	0.00	3	Billy
0.00	0.00	0.00	0.00	0.00	100.00	0.00	3	Bobby
0.00	0.00	0.00	0.00	0.00	100.00	0.00	3	Jack
0.00	0.00	0.00	0.00	0.00	100.00	0.00	3	locusts

0.00	0.00	0.00	0.00	0.00	100.00	0.00	3	Nixon
0.00	0.00	0.00	0.00	0.00	100.00	0.00	3	POLICE
0.00	0.00	14.29	0.00	0.00	85.71	0.00	7	engag
0.00	0.00	0.00	0.00	16.67	83.33	0.00	6	June
0.00	0.00	0.00	0.00	0.00	80.00	20.00	5	sandwich
0.00	0.00	0.00	20.00	0.00	80.00	0.00	5	beer
0.00	0.00	0.00	0.00	20.00	80.00	0.00	5	Wednesday
0.00	0.00	12.50	0.00	0.00	75.00	12.50	8	impo
0.00	0.00	0.00	0.00	0.00	75.00	25.00	4	Douglas
0.00	0.00	25.00	0.00	0.00	75.00	0.00	4	state
25.00	0.00	0.00	0.00	0.00	75.00	0.00	4	sudden
0.00	0.00	0.00	0.00	25.00	75.00	0.00	4	24
0.00	0.00	0.00	0.00	25.00	75.00	0.00	4	bunch
0.00	0.00	25.00	0.00	0.00	75.00	0.00	4	drew
0.00	0.00	0.00	0.00	25.00	75.00	0.00	4	psychiatrist
0.00	0.00	0.00	0.00	25.00	75.00	0.00	4	Tuesday
0.00	0.00	0.00	0.00	26.67	73.33	0.00	15	diary
0.00	0.00	14.29	0.00	0.00	71.43	14.29	7	court
14.29	0.00	0.00	14.29	0.00	71.43	0.00	7	Game
30.00	0.00	0.00	0.00	0.00	70.00	0.00	10	period
0.00	0.00	6.67	6.67	20.00	66.67	0.00	15	Wild
0.00	16.67	8.33	0.00	0.00	66.67	8.33	12	summer
0.00	0.00	0.00	0.00	16.67	66.67	16.67	6	touch
0.00	0.00	0.00	0.00	33.33	66.67	0.00	6	window
0.00	0.00	0.00	0.00	0.00	66.67	33.33	6	July
0.00	0.00	25.00	0.00	12.50	62.50	0.00	8	complet
0.00	0.00	0.00	0.00	30.00	60.00	10.00	10	Order

0.00	20.00	0.00	20.00	0.00	60.00	0.00	5	deliv
0.00	20.00	0.00	0.00	0.00	60.00	20.00	5	ride
20.00	0.00	0.00	0.00	0.00	60.00	20.00	5	secret
20.00	0.00	0.00	0.00	20.00	60.00	0.00	5	slight
0.00	0.00	20.00	20.00	0.00	60.00	0.00	5	stup
20.00	0.00	0.00	0.00	20.00	60.00	0.00	5	Tammi
0.00	0.00	0.00	20.00	20.00	60.00	0.00	5	utter
0.00	20.00	0.00	0.00	20.00	60.00	0.00	5	kitchen
3.23	3.23	12.90	0.00	12.90	58.06	9.68	31	plai
0.00	0.00	0.00	0.00	42.86	57.14	0.00	7	Dr
0.00	0.00	0.00	14.29	0.00	57.14	28.57	7	Mark
0.00	0.00	0.00	14.29	28.57	57.14	0.00	7	August
0.00	0.00	0.00	27.27	0.00	54.55	18.18	11	afternoon

Table 23

It is worth prefacing any reflection on Chapter Seven with a reiteration of its relative length.

Whilst it is interesting in itself that Bechdel's chapters get increasingly longer as the book continue, indeed Chapter Seven is almost three times longer than Chapter One, when dealing with raw data it would be somewhat misleading to directly compare the Most Frequent Words of each chapter. The analysis that will come when comparing chapters to chronological periods will account for this, as demonstrated above when comparing the distribution of the overall Most Frequent Words. For reference, the below table again details the length of each chapter in words (excluding, you will remember, stop words).

1	2	3	4	5	6	7
735	1335	1329	1296	1555	1724	2152

Table 24

As has come to be expected, literary intertexts and characters unique to the chapter feature heavily in this list with “Ulysses”, “Bloom”, “Stephen”, “Odyssey”, “Paris”, “Colette” and Mr “Avery” all featuring frequently from not only Bechdel’s literary allusions but Alison’s “readings” as a student. This is also borne out in her feminist awakening with words such as “man”, “woman”, “lesbian” and “art” all featuring heavily.

1	2	3	4	5	6	7	Total	
22	18	28	21	15	10	26	140	father
2	19	13	15	22	13	25	109	dad
0	0	0	0	0	0	19	19	ULYS
0	1	0	0	0	1	16	18	class
2	8	3	8	6	11	15	53	year
0	0	0	2	0	0	15	17	Bloom
0	0	0	0	0	0	15	15	ODYS
0	6	6	2	6	5	13	38	read
0	0	0	0	0	0	13	13	Stephen
2	8	7	4	10	11	12	54	time
0	0	0	0	0	0	11	11	Joyc
0	6	8	3	3	15	10	45	dai
3	13	1	4	7	6	10	44	Home
1	5	13	0	8	1	10	38	book
1	7	6	7	8	3	9	41	BACK
2	2	5	4	7	4	9	33	thing
2	3	3	2	2	5	9	26	man
2	1	1	0	1	1	9	15	English
1	1	3	1	4	4	8	22	left
0	2	8	0	2	1	8	21	letter

0	2	2	3	2	1	8	18	frie
0	0	0	1	1	2	8	12	thou
2	4	6	4	6	4	7	33	Life
1	3	1	3	2	6	7	23	end
2	2	0	1	4	5	7	21	Make
0	0	6	0	5	0	7	18	Writ
0	0	6	4	0	0	7	17	lesb
0	0	2	4	1	3	7	17	woman
1	1	2	1	3	0	7	15	art
1	1	0	1	0	0	7	10	ey
0	0	0	0	0	0	7	7	Colette
2	4	5	2	2	5	6	26	Call
2	3	4	3	3	5	6	26	Put
7	3	3	1	2	3	6	25	room
1	2	3	1	0	5	6	18	open
1	3	2	3	1	2	6	18	found
1	1	3	1	2	2	6	16	boi
1	3	3	1	1	0	6	15	GODD
1	0	0	0	2	5	6	14	Mr
0	1	0	1	1	1	6	10	stai
0	2	1	0	0	0	6	9	HERO
0	0	2	1	0	0	6	9	meet
0	0	0	1	0	0	6	7	Elly
0	0	1	0	0	0	6	7	Paris
0	0	0	0	0	0	6	6	Avery
5	7	14	4	13	12	5	60	Mother
1	4	6	5	4	13	5	38	Momm

5	4	8	1	2	5	5	30	Good
2	3	1	1	5	6	5	23	night
5	2	1	0	5	3	5	21	chil
1	2	2	0	4	6	5	20	start
0	6	3	1	2	2	5	19	SCHO
0	2	11	0	0	1	5	19	library
1	4	5	0	2	0	5	17	stori
3	2	2	0	2	2	5	16	knew
0	1	0	6	0	3	5	15	narr
0	1	2	1	2	2	5	13	face
0	1	1	2	3	1	5	13	realiz
0	0	2	3	0	1	5	11	HOMO
0	1	0	0	0	4	5	10	guess
0	0	2	0	2	0	5	9	SIMP
0	0	2	1	0	0	5	8	portrait
1	1	0	0	0	0	5	7	TEAC
0	0	1	0	0	0	5	6	Gay

Table 25

To get a clearer sense, though, of what defines this chapter, given its length, it will be more instructive to look at the table, below, where I have retained the ordering of the values, but converted the raw data into percentage of total occurrences. Whilst it should be expected that most terms will occur more than average in this chapter, words such as “class”, “read”, “book”, “English”, “teach”, “library” and “school” clearly occur well above the ‘expected’ average.

Given the literariness of *Fun Home*, this is an interesting theme to feature so strongly in this final chapter. It is indicative of not only the importance of the intertexts as a mode of the reader understanding the book but of Alison understanding her parents, as she discusses in Chapter

Three. Despite the length of the chapter it is notable that only ten of its twenty-one Most Frequent Words are in the overall Most Frequent Words- and only eleven of its top forty-five - with “mother”, “Mom”, “parent”, “brother”, “family” and “house” conspicuously absent for the closing chapter of ‘A Family Tragicomic’. The absence of these words and the presence of the educational ones, then, leads nicely into a profiling of the chapters by the Characters and Roles that they contain. Whilst there is, of course, a lot more to be said about the verbal content of these chapters, these immediate impressions should serve as a starting point for the upcoming comparisons with chronological periods and other - competing - organising features.

1	2	3	4	5	6	7		
15.71	12.86	20.00	15.00	10.71	7.14	18.57	140	father
1.83	17.43	11.93	13.76	20.18	11.93	22.94	109	dad
0.00	0.00	0.00	0.00	0.00	0.00	100.00	19	ULYS
0.00	5.56	0.00	0.00	0.00	5.56	88.89	18	class
3.77	15.09	5.66	15.09	11.32	20.75	28.30	53	year
0.00	0.00	0.00	11.76	0.00	0.00	88.24	17	Bloom
0.00	0.00	0.00	0.00	0.00	0.00	100.00	15	ODYS
0.00	15.79	15.79	5.26	15.79	13.16	34.21	38	read
0.00	0.00	0.00	0.00	0.00	0.00	100.00	13	Stephen
3.70	14.81	12.96	7.41	18.52	20.37	22.22	54	time
0.00	0.00	0.00	0.00	0.00	0.00	100.00	11	Joyc
0.00	13.33	17.78	6.67	6.67	33.33	22.22	45	dai
6.82	29.55	2.27	9.09	15.91	13.64	22.73	44	Home
2.63	13.16	34.21	0.00	21.05	2.63	26.32	38	book
2.44	17.07	14.63	17.07	19.51	7.32	21.95	41	BACK
6.06	6.06	15.15	12.12	21.21	12.12	27.27	33	thing

7.69	11.54	11.54	7.69	7.69	19.23	34.62	26	man
13.33	6.67	6.67	0.00	6.67	6.67	60.00	15	ENGL
4.55	4.55	13.64	4.55	18.18	18.18	36.36	22	left
0.00	9.52	38.10	0.00	9.52	4.76	38.10	21	letter
0.00	11.11	11.11	16.67	11.11	5.56	44.44	18	frie
0.00	0.00	0.00	8.33	8.33	16.67	66.67	12	thou
6.06	12.12	18.18	12.12	18.18	12.12	21.21	33	Life
4.35	13.04	4.35	13.04	8.70	26.09	30.43	23	end
9.52	9.52	0.00	4.76	19.05	23.81	33.33	21	Make
0.00	0.00	33.33	0.00	27.78	0.00	38.89	18	Writ
0.00	0.00	35.29	23.53	0.00	0.00	41.18	17	lesb
0.00	0.00	11.76	23.53	5.88	17.65	41.18	17	woman
6.67	6.67	13.33	6.67	20.00	0.00	46.67	15	art
10.00	10.00	0.00	10.00	0.00	0.00	70.00	10	ey
0.00	0.00	0.00	0.00	0.00	0.00	100.00	7	Colette
7.69	15.38	19.23	7.69	7.69	19.23	23.08	26	Call
7.69	11.54	15.38	11.54	11.54	19.23	23.08	26	Put
28.00	12.00	12.00	4.00	8.00	12.00	24.00	25	room
5.56	11.11	16.67	5.56	0.00	27.78	33.33	18	open
5.56	16.67	11.11	16.67	5.56	11.11	33.33	18	found
6.25	6.25	18.75	6.25	12.50	12.50	37.50	16	boi
6.67	20.00	20.00	6.67	6.67	0.00	40.00	15	GODD
7.14	0.00	0.00	0.00	14.29	35.71	42.86	14	Mr
0.00	10.00	0.00	10.00	10.00	10.00	60.00	10	stai
0.00	22.22	11.11	0.00	0.00	0.00	66.67	9	HERO
0.00	0.00	22.22	11.11	0.00	0.00	66.67	9	meet
0.00	0.00	0.00	14.29	0.00	0.00	85.71	7	Elly

0.00	0.00	14.29	0.00	0.00	0.00	85.71	7	Paris
0.00	0.00	0.00	0.00	0.00	0.00	100.00	6	Averi
8.33	11.67	23.33	6.67	21.67	20.00	8.33	60	Mother
2.63	10.53	15.79	13.16	10.53	34.21	13.16	38	Momm
16.67	13.33	26.67	3.33	6.67	16.67	16.67	30	Good
8.70	13.04	4.35	4.35	21.74	26.09	21.74	23	night
23.81	9.52	4.76	0.00	23.81	14.29	23.81	21	chil
5.00	10.00	10.00	0.00	20.00	30.00	25.00	20	start
0.00	31.58	15.79	5.26	10.53	10.53	26.32	19	SCHO
0.00	10.53	57.89	0.00	0.00	5.26	26.32	19	library
5.88	23.53	29.41	0.00	11.76	0.00	29.41	17	stori
18.75	12.50	12.50	0.00	12.50	12.50	31.25	16	knew
0.00	6.67	0.00	40.00	0.00	20.00	33.33	15	narr
0.00	7.69	15.38	7.69	15.38	15.38	38.46	13	face
0.00	7.69	7.69	15.38	23.08	7.69	38.46	13	realiz
0.00	0.00	18.18	27.27	0.00	9.09	45.45	11	HOMO
0.00	10.00	0.00	0.00	0.00	40.00	50.00	10	guess
0.00	0.00	22.22	0.00	22.22	0.00	55.56	9	SIMP
0.00	0.00	25.00	12.50	0.00	0.00	62.50	8	portrait
14.29	14.29	0.00	0.00	0.00	0.00	71.43	7	TEAC
0.00	0.00	16.67	0.00	0.00	0.00	83.33	6	gay

Table 26

Chapter Profiling with Pictorial Signifiers

People

Looking beyond words it will be instructive to consider a few further features when profiling these chapters. As I alluded to at the end of the Most Frequent Words section, I will continue

these profiles with Characters. The table below details all of the characters that occur at least seven times – once per chapter on average – across the book. As you will have noticed, there are two composite ‘Characters’, “New Yorkers” and “actors”. These are groupings of unnamed non-speaking individuals (counted as one per panel) that have been included because I believe they may be indicative of fluctuating values for some of the more orthodox characters.

1	2	3	4	5	6	7	Total	
69	70	77	102	71	95	164	648	Alison
65	38	42	64	23	34	77	343	Bruce
12	14	35	15	27	50	9	162	Helen
16	18	10	40	15	27	10	136	Christian
13	17	4	37	12	25	13	121	John
0	3	15	0	0	0	19	37	joan
0	0	5	15	0	0	0	20	Roy
0	15	0	0	1	0	0	16	Grandmother
0	0	7	0	0	6	0	13	Actors
0	0	0	0	0	13	0	13	Beth
0	0	0	0	0	0	10	10	Mr Avery
0	0	0	4	0	0	6	10	New Yorkers
0	0	0	9	0	0	0	9	Bill
0	0	0	0	0	0	9	9	Student
0	0	0	0	0	8	0	8	Dr Gryglewicz (f)
0	0	0	0	0	7	0	7	Dr Gryglewicz (m)
0	0	0	0	0	7	0	7	Jack (actor)
0	0	0	0	0	0	7	7	Record shop person

Table 27

It is clear from the ‘Total’ column that there are several strata to the Character table; Alison has almost twice the appearances that Bruce, the second most frequent character, does, and in turn Bruce has more than twice as many as anyone else. Helen, Christian and John – the rest of Alison’s nuclear family – occupy a third tier with almost four times as many occurrences as any of the characters below them. Most of the remaining characters occur in a maximum of two chapters suggesting that they are better read as values that cause variance in the nuclear family, than as facets to be understood individually. Given this disparity between values I have re-formatted this table, below, by frequency relative to the rest of the row.

1	2	3	4	5	6	7	Total	panel\word
69	70	77	102	71	95	164	648	Alison
65	38	42	64	23	34	77	343	Bruce
12	14	35	15	27	50	9	162	Helen
16	18	10	40	15	27	10	136	Christian
13	17	4	37	12	25	13	121	John
0	3	15	0	0	0	19	37	joan
0	0	5	15	0	0	0	20	roy
0	15	0	0	1	0	0	16	Grandmother
0	0	7	0	0	6	0	13	actors
0	0	0	0	0	13	0	13	beth
0	0	0	0	0	0	10	10	Mr Avery
0	0	0	4	0	0	6	10	new yorkers
0	0	0	9	0	0	0	9	bill
0	0	0	0	0	0	9	9	student
0	0	0	0	0	8	0	8	dr gryglewicz (f)
0	0	0	0	0	7	0	7	dr gryglewicz (m)

0	0	0	0	0	7	0	7	jack (actor)
0	0	0	0	0	0	7	7	record shop person

Table 28

What this table makes strikingly clear is not only the number of characters that are unique to a single chapter – which we would probably expect – but the high degree of variation between the chapters as to how many such characters each chapter has. Chapter One and Chapter Five focus (almost, in the case of Chapter Five) exclusively on the nuclear family with chapters Two, Three and Four having two to three main characters outside of this and chapters Six and Seven having five each. Reading a little further into these non-nuclear characters there would appear to be clear relationships between them and the level of frequency that the nuclear family members register in that chapter. The clearest example of this is in Chapter Four where Roy and Bill are present and Christian and John record their highest values since, despite being Bruce’s lovers, they are also ostensibly babysitters. This is also apparent in Alison recording her second highest total in this chapter. Later in this section I will address the ‘Roles’ profile of each chapter and this is something which I would expect will corroborate this reading. For now, however, it is sufficient to look at the below table which details the number of co-occurrences in a panel each character has with each other character.

	Alison	Bruce	Helen	Christian	John	Joan	Roy
Alison	(649)	262	110	127	107	34	13
Bruce	262	(344)	67	73	59	2	10
Helen	110	67	(163)	43	33	9	3
Christian	127	73	43	(137)	94	1	11
John	107	59	33	94	(122)	2	11
Joan	34	2	9	1	2	(38)	0

Roy	13	10	3	11	11	0	(21)
Grandmother	13	6	0	9	7	0	0
actors	4	3	11	0	0	0	0
Beth	13	0	1	5	3	0	0
Mr Avery	9	0	0	0	0	0	0
New Yorkers	7	1	0	3	5	0	2
Bill	9	4	0	8	7	0	0

Table 29

Despite being Bruce's lovers, then, we can see that both Roy and Bill occur more frequently with Alison, Christian and John than they do with Bruce.

Given the disparity between the total number of instances of each character it is not particularly helpful to re-format the table of Character distribution by column since Alison is always the most frequent – although Bruce comes very close in Chapter One – and Bruce is nearly always the second most frequent – with Chapter Five being just lower than Helen and Chapter Six about a third lower than Helen. That said, it is interesting to consider such a re-formatting without Alison and Bruce. With the exception of Chapter Three, Christian and John record very similar values to one other – and perhaps this should not be surprising given their frequent co-location, as seen in the colocation table above – and therefore it makes sense to treat them as a single influence on other characters or as similarly influenced by other characters here. It is interesting to note how Helen is most frequent in the chapters in which Christian and John are least frequent (excepting Chapter Seven where none of them figure very highly, the focus having been shifted to Alison's college life and her relationship with Bruce). Indeed, this also seems to inversely track to what might be considered their 'alternative guardians', their babysitters. Whilst chapters One, Two and Seven show very similar values for Helen and her sons, it is when Helen is 'replaced' as a caregiver by Bill and Roy in Chapter Four that

Christian and John are significantly more common than their mother, her role, in essence, being usurped by Bruce's paramours. By a similar token, Helen is far more frequent in chapters Three and Six when the values for other "actors" are highest; it could be argued that, within the economy of her time, her mothering activities are replaced by acting ones.

12	14	35	15	27	50	9	162	Helen
16	18	10	40	15	27	10	136	Christian
13	17	4	37	12	25	13	121	John
0	3	15	0	0	0	19	37	joan
0	0	5	15	0	0	0	20	roy
0	15	0	0	1	0	0	16	Grandmother
0	0	7	0	0	6	0	13	actors
0	0	0	0	0	13	0	13	beth
0	0	0	0	0	0	10	10	Mr Avery
0	0	0	4	0	0	6	10	new yorkers
0	0	0	9	0	0	0	9	bill
0	0	0	0	0	0	9	9	student
0	0	0	0	0	8	0	8	dr gryglewicz (f)
0	0	0	0	0	7	0	7	dr gryglewicz (m)
0	0	0	0	0	7	0	7	jack (actor)
0	0	0	0	0	0	7	7	record shop person

Table 30

In order to consider this data further I have adjusted the raw data by transforming it into a percentage of instances for that character. Because characters that only occur in one chapter produce a one hundred percent value, I have restricted the formatting of this table to the

nuclear family, whilst simply conditioning the rest of the character values from white to blue to facilitate legibility by highlighting their locations.

	1	2	3	4	5	6	7
Alison	10.65	10.80	11.88	15.74	10.96	14.66	25.31
Bruce	18.95	11.08	12.24	18.66	6.71	9.91	22.45
Helen	7.41	8.64	21.60	9.26	16.67	30.86	5.56
Christian	11.76	13.24	7.35	29.41	11.03	19.85	7.35
John	10.74	14.05	3.31	30.58	9.92	20.66	10.74
Joan	0.00	8.11	40.54	0.00	0.00	0.00	51.35
Roy	0.00	0.00	25.00	75.00	0.00	0.00	0.00
Grandmother	0.00	93.75	0.00	0.00	6.25	0.00	0.00
Actors	0.00	0.00	53.85	0.00	0.00	46.15	0.00
Beth	0.00	0.00	0.00	0.00	0.00	100.00	0.00
Mr Avery	0.00	0.00	0.00	0.00	0.00	0.00	100.00
new Yorkers	0.00	0.00	0.00	40.00	0.00	0.00	60.00
Bill	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Student	0.00	0.00	0.00	0.00	0.00	0.00	100.00
dr gryglewicz (f)	0.00	0.00	0.00	0.00	0.00	100.00	0.00
dr gryglewicz (m)	0.00	0.00	0.00	0.00	0.00	100.00	0.00
jack (actor)	0.00	0.00	0.00	0.00	0.00	100.00	0.00
record shop person	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Table 31

In order to remove the chapter length bias towards chapters Seven, Six and Five, the below table divides these percentages by the number of characters in each chapter (and then multiples them by 100 to retain legibility).

	1	2	3	4	5	6	7
Alison	5.52	4.87	5.23	4.97	6.64	4.78	6.51
Bruce	9.82	4.99	5.39	5.89	4.06	3.23	5.77
Helen	3.84	3.89	9.52	2.92	10.10	10.05	1.43
Christian	6.10	5.96	3.24	9.28	6.68	6.47	1.89
John	5.57	6.33	1.46	9.65	6.01	6.73	2.76
Joan	0.00	3.65	17.86	0.00	0.00	0.00	13.20
Roy	0.00	0.00	11.01	23.66	0.00	0.00	0.00
Grandmother	0.00	42.23	0.00	0.00	3.79	0.00	0.00
Actors	0.00	0.00	23.72	0.00	0.00	15.03	0.00
Beth	0.00	0.00	0.00	0.00	0.00	32.57	0.00
Mr Avery	0.00	0.00	0.00	0.00	0.00	0.00	25.71
new Yorkers	0.00	0.00	0.00	12.62	0.00	0.00	15.42
Bill	0.00	0.00	0.00	31.55	0.00	0.00	0.00
Student	0.00	0.00	0.00	0.00	0.00	0.00	25.71
dr gryglewicz (f)	0.00	0.00	0.00	0.00	0.00	32.57	0.00
dr gryglewicz (m)	0.00	0.00	0.00	0.00	0.00	32.57	0.00
jack (actor)	0.00	0.00	0.00	0.00	0.00	32.57	0.00
record shop person	0.00	0.00	0.00	0.00	0.00	0.00	25.71

Table 32

This table, then, indicates the strength of signal for each Character across each chapter as an identifying feature. Within the context of an individual row, and therefore character, blue values indicate a strong signal as a positive identifier for the chapter, whilst red values indicate an equally strong signal as a negative identifier. That is, Alison's relatively low score for chapters Two and Six is as characteristic of those chapters as are the high values for chapters Five and Seven. To understand this table through the columns, however, that is, through the chapters

themselves, it is necessary to format the table as a whole. Unfortunately, the very high values that are reached as a result of some characters being unique to particular chapters renders the nuclear family entirely unindicative of character profile. Fortunately, it is very clear where the non-nuclear family characters are present so it is possible to present the below table with only the nuclear family.

	1	2	3	4	5	6	7
Alison	5.52	4.87	5.23	4.97	6.64	4.78	6.51
Bruce	9.82	4.99	5.39	5.89	4.06	3.23	5.77
Helen	3.84	3.89	9.52	2.92	10.10	10.05	1.43
Christian	6.10	5.96	3.24	9.28	6.68	6.47	1.89
John	5.57	6.33	1.46	9.65	6.01	6.73	2.76

Table 33

Although still clearly being operated on by variable character totals thereby tipping the strength of signal to less frequent characters, this table helps clarify both the positive (blue) and negative (red) characterisations of chapters, leaving the unindicative facets closer to white.

The final way in which I wish to consider this data is as divided not by total characters in the chapter, but by panels in the chapter. As the below table shows, many characters appear in upwards of a quarter of all panels in at least one chapter. Indeed, Alison appears in around three quarters of the panels in Chapters One, Four and Seven. I have formatted this table by row (character) once more to show the strength of signal that each character offers for each chapter. This helps to restore some strength of signal to the most frequent characters.

	1	2	3	4	5	6	7
Alison	77.53	55.56	61.60	81.60	64.55	62.50	74.89
Bruce	73.03	30.16	33.60	51.20	20.91	22.37	35.16

Helen	13.48	11.11	28.00	12.00	24.55	32.89	4.11
Christian	17.98	14.29	8.00	32.00	13.64	17.76	4.57
John	14.61	13.49	3.20	29.60	10.91	16.45	5.94
Joan	0.00	2.38	12.00	0.00	0.00	0.00	8.68
Roy	0.00	0.00	4.00	12.00	0.00	0.00	0.00
Grandmother	0.00	11.90	0.00	0.00	0.91	0.00	0.00
actors	0.00	0.00	5.60	0.00	0.00	3.95	0.00
Beth	0.00	0.00	0.00	0.00	0.00	8.55	0.00
Mr Avery	0.00	0.00	0.00	0.00	0.00	0.00	4.57
New Yorkers	0.00	0.00	0.00	3.20	0.00	0.00	2.74
bill	0.00	0.00	0.00	7.20	0.00	0.00	0.00
student	0.00	0.00	0.00	0.00	0.00	0.00	4.11
Dr Gryglewicz (f)	0.00	0.00	0.00	0.00	0.00	5.26	0.00
Dr Gryglewicz (m)	0.00	0.00	0.00	0.00	0.00	4.61	0.00
jack (actor)	0.00	0.00	0.00	0.00	0.00	4.61	0.00
record shop							
person	0.00	0.00	0.00	0.00	0.00	0.00	3.20

Table 34

Roles

One other way in which we might intersect this data would be to consider the sources not as people, but as their ‘role’. As I have explained in previous chapters, a role is designated when two or more characters are co-present in a panel, and a clear relationship exists between them. Therefore, if Alison and Bruce are in the same panel, unsurprisingly *Fun Home*’s most frequent pairing, it can be said that the panel contains not only Alison and Bruce, but a father and a daughter, as well as a parent and a child. This is a useful distinction to be able to make from characters because, when we are looking at something like ‘under what circumstances is

“father” being used and in what circumstances is “dad” being used – the example with which I started this chapter – we may find that it is not governed by rules pertaining to characters, but rules pertaining to a particular role. Indeed, in this example it is rather obvious that ‘children’ will be using this term, though it would be interesting to know whether that value erred more towards ‘daughters’ or ‘sons’. Towards this point, Table 35 shows a breakdown of the number of panels that the most common characters have in common, and Table 36 shows that breakdown for roles.

	Alison	Bruce	Helen	Christian	John	Joan	Roy	Grandmother
Alison	649	262	110	127	107	34	13	13
Bruce	262	344	67	73	59	2	10	6
Helen	110	67	163	43	33	9	3	0
Christian	127	73	43	137	94	1	11	9
John	107	59	33	94	122	2	11	7
Joan	34	2	9	1	2	38	0	0
Roy	13	10	3	11	11	0	21	0
Grandmother	13	6	0	9	7	0	0	17
Table 35								

	Child	Parent	Daughter	Father	Sibling	Brother	Sister	Romantic Partner	Mother	Son	Friend	Husband	Spouse	Wife	Co- Parent

Child	345	345	333	273	101	98	98	70	124	111	22	51	51	48	44
Parent	345	345	333	273	101	98	98	70	124	111	22	51	51	48	44
Daughter	333	333	333	264	98	95	98	67	118	99	22	48	48	45	42
Father	273	273	264	274	85	82	82	63	53	93	9	50	50	48	44
Sibling	101	101	98	85	160	153	153	52	49	96	12	39	39	35	31
Brother	98	98	95	82	153	156	146	49	49	96	12	39	39	35	31
Sister	98	98	98	82	153	146	153	48	48	93	12	36	36	32	30
Romantic Partner	70	70	67	63	52	49	48	129	55	46	42	77	77	71	44
Mother	124	124	118	53	49	49	48	55	124	59	14	49	49	48	44
Son	111	111	99	93	96	96	93	46	59	112	6	38	38	36	32
Friend	22	22	22	9	12	12	12	42	14	6	78	8	8	4	2
Husband	51	51	48	50	39	39	36	77	49	38	8	77	77	71	44
Spouse	51	51	48	50	39	39	36	77	49	38	8	77	77	71	44
Wife	48	48	45	48	35	35	32	71	48	36	4	71	71	71	44
Co-Parent	44	44	42	44	31	31	30	44	44	32	2	44	44	44	44

Table 36

One trap into which we might fall when analysing this data would be to over-privilege the ‘daughter’ attributes against the ‘son’ attributes when investigating ‘father/dad’ usage. Although daughters may be using ‘dad’ more than are sons, in order to discern a rule to govern this, it is important to consider these values proportionately. The way in which I have countered this issue is to weight the correlations. Stepping back to an easier example of mere co-location – how strong is the link between two panels based on the characters or roles they have in common? – it is possible to understand how such a bias can be addressed. Table 34

lists the most frequent characters alongside the weighted value of connection that they bring to a relationship between two panels. As Table 35 shows, some characters appear far more frequently than others. What this weighting is saying is that a weaker correlation exists between two panels that include Alison than does between two panels that includes Roy. These values are equal to the total number of all character occurrences divided by the occurrences of that particular character. This same data also exists for the lemmatised words, enabling me to more accurately judge the strength of connection between panels.

Alison	2.808642	Roy	91	Bill	202.2222
Bruce	5.306122	Grandmother	113.75	Student	202.2222
Helen	11.23457	actors	140	Dr Gryglewicz (f)	227.5
Christian	13.38235	Beth	140	Dr Gryglewicz (m)	260
John	15.04132	Mr Avery	182	Jack (actor)	260
Joan	49.18919	New Yorkers	182		

Table 37

Whilst individual characters are interesting alone, it is useful to also consider them in light of the roles that characterise each chapter, as I showed with John and Christian's relationship to Roy and Bill, and with Helen's relationship to her fellow actors. Below, then, is the complete table of the distribution of the different roles across the seven chapters, formatted by row (Role).⁵³⁹

1	2	3	4	5	6	7	Total	Role
---	---	---	---	---	---	---	-------	------

⁵³⁹ I should clarify that there are a couple of roles with a '?' after them. These are where the relationship is unclear and can be added or kept separate depending on what makes the most sense.

57	30	26	62	37	54	79	345	Child
57	30	26	62	37	54	79	345	Parent
55	26	25	61	36	51	79	333	Daughter
56	22	20	57	21	23	75	274	Father
23	18	10	45	17	36	11	160	Sibling
19	18	10	47	15	36	11	156	Brother
23	18	10	44	15	32	11	153	Sister
15	8	40	17	6	20	23	129	Romantic Partner
11	14	18	14	23	35	9	124	Mother
19	17	9	26	11	20	10	112	Son
2	11	13	2	5	18	27	78	Friend
12	5	23	9	6	17	5	77	Husband
12	5	23	9	6	17	5	77	Spouse
12	5	23	9	6	11	5	71	Wife
9	0	10	9	6	5	5	44	Co-Parent
0	3	13	0	0	0	18	34	Girlfriend
0	2	14	0	1	6	2	25	Co-worker
0	0	0	22	0	0	0	22	Babysittee
0	0	0	22	0	0	0	22	Babysitter
1	1	0	0	0	0	20	22	Teacher
1	1	0	0	0	0	18	20	Student
0	0	5	9	0	5	0	19	Paramour
0	15	0	0	1	0	0	16	Grandchild
0	15	0	0	1	0	0	16	Grandparent
0	0	5	9	0	0	1	15	Boyfriend
0	14	0	0	1	0	0	15	Grandmother
0	13	0	0	1	0	0	14	Granddaughter

0	0	6	0	1	5	0	12	Actor
0	9	0	0	1	0	0	10	Grandson
0	0	5	5	0	0	0	10	Student?
0	0	0	0	0	4	2	6	Secondarily Guardianed
0	0	5	0	0	0	0	5	Soldier
0	0	0	0	0	3	1	4	Alternatively Guardianed
0	2	0	0	0	0	0	2	Girlfriend?
0	0	0	2	0	0	0	2	Niece
0	0	0	0	0	1	0	1	(Step)Mother
0	1	0	0	0	0	0	1	Grandfather

Table 38

As I have discussed above, however, such a table needs readjusting relative to chapter length. In order to facilitate comparison with the final table of the Characters section, the below table transforms these figures into a percentage of the number of panels in each chapter that they feature in.

1	2	3	4	5	6	7	Total	Role
64.04	23.81	20.80	49.60	33.64	35.53	36.07	345	Child
64.04	23.81	20.80	49.60	33.64	35.53	36.07	345	Parent
61.80	20.63	20.00	48.80	32.73	33.55	36.07	333	Daughter
62.92	17.46	16.00	45.60	19.09	15.13	34.25	274	Father
25.84	14.29	8.00	36.00	15.45	23.68	5.02	160	Sibling
21.35	14.29	8.00	37.60	13.64	23.68	5.02	156	Brother
25.84	14.29	8.00	35.20	13.64	21.05	5.02	153	Sister
16.85	6.35	32.00	13.60	5.45	13.16	10.50	129	Romantic

								Partner
12.36	11.11	14.40	11.20	20.91	23.03	4.11	124	Mother
21.35	13.49	7.20	20.80	10.00	13.16	4.57	112	Son
2.25	8.73	10.40	1.60	4.55	11.84	12.33	78	Friend
13.48	3.97	18.40	7.20	5.45	11.18	2.28	77	Husband
13.48	3.97	18.40	7.20	5.45	11.18	2.28	77	Spouse
13.48	3.97	18.40	7.20	5.45	7.24	2.28	71	Wife
10.11	0.00	8.00	7.20	5.45	3.29	2.28	44	Co-Parent
0.00	2.38	10.40	0.00	0.00	0.00	8.22	34	Girlfriend
0.00	1.59	11.20	0.00	0.91	3.95	0.91	25	Co-worker
0.00	0.00	0.00	17.60	0.00	0.00	0.00	22	Babysittee
0.00	0.00	0.00	17.60	0.00	0.00	0.00	22	Babysitter
1.12	0.79	0.00	0.00	0.00	0.00	9.13	22	Teacher
1.12	0.79	0.00	0.00	0.00	0.00	8.22	20	Student
0.00	0.00	4.00	7.20	0.00	3.29	0.00	19	Paramour
0.00	11.90	0.00	0.00	0.91	0.00	0.00	16	Grandchild
0.00	11.90	0.00	0.00	0.91	0.00	0.00	16	Grandparent
0.00	0.00	4.00	7.20	0.00	0.00	0.46	15	Boyfriend
0.00	11.11	0.00	0.00	0.91	0.00	0.00	15	Grandmother
0.00	10.32	0.00	0.00	0.91	0.00	0.00	14	Granddaughter
0.00	0.00	4.80	0.00	0.91	3.29	0.00	12	Actor
0.00	7.14	0.00	0.00	0.91	0.00	0.00	10	Grandson
0.00	0.00	4.00	4.00	0.00	0.00	0.00	10	Student?
0.00	0.00	0.00	0.00	0.00	2.63	0.91	6	Secondarily Guardianed
0.00	0.00	4.00	0.00	0.00	0.00	0.00	5	Soldier
0.00	0.00	0.00	0.00	0.00	1.97	0.46	4	Alternatively

								Guardianed
0.00	1.59	0.00	0.00	0.00	0.00	0.00	2	Girlfriend?
0.00	0.00	0.00	1.60	0.00	0.00	0.00	2	Niece
0.00	0.00	0.00	0.00	0.00	0.66	0.00	1	(Step)Mother
0.00	0.79	0.00	0.00	0.00	0.00	0.00	1	Grandfather

Table 39

Although this is a very long table, I think it is useful to record it in its entirety since nearly all of its Roles involve at least one of the nuclear family discussed in the previous section. What it is particularly useful for showing is the difference between various relationships such as “parent”, “father” and “mother”, and their reciprocal “child”, “daughter” and “brother” as well as, thinking through Bruce and Helen’s relationship, the relative frequencies of “Father”, “Mother”, “Parent”, “Co-Parent” and “Spouse”. Although I will not spend very long, here, unpacking the implications of this table, it is gratifying to see the relationships between Christian and John, Roy and Bill, and Helen reproducing the hypotheses from the section on characters, above. Before moving on, however, it is instructive to see, in the table below, the raw data formatted by column (chapter) to see how certain chapters can be somewhat characterised by relationships outside of the nuclear family such as grandparent/grandchild relationships in Chapter Two, co-working relationships in Chapter Three, babysitter/babysittee relationships (once more) in Chapter Four, and Student/Teacher relationships in Chapter Seven as well as in the relatively low importance of parent/child relationships in Chapter Three.

1	2	3	4	5	6	7		
57	30	26	62	37	54	79	345	Child
57	30	26	62	37	54	79	345	Parent
55	26	25	61	36	51	79	333	Daughter
56	22	20	57	21	23	75	274	Father

23	18	10	45	17	36	11	160	Sibling
19	18	10	47	15	36	11	156	Brother
23	18	10	44	15	32	11	153	Sister
15	8	40	17	6	20	23	129	Romantic Partner
11	14	18	14	23	35	9	124	Mother
19	17	9	26	11	20	10	112	Son
2	11	13	2	5	18	27	78	Friend
12	5	23	9	6	17	5	77	Husband
12	5	23	9	6	17	5	77	Spouse
12	5	23	9	6	11	5	71	Wife
9	0	10	9	6	5	5	44	Co-Parent
0	3	13	0	0	0	18	34	Girlfriend
0	2	14	0	1	6	2	25	Co-worker
0	0	0	22	0	0	0	22	Babysittee
0	0	0	22	0	0	0	22	Babysitter
1	1	0	0	0	0	20	22	Teacher
1	1	0	0	0	0	18	20	Student
0	0	5	9	0	5	0	19	Paramour
0	15	0	0	1	0	0	16	Grandchild
0	15	0	0	1	0	0	16	Grandparent
0	0	5	9	0	0	1	15	Boyfriend
0	14	0	0	1	0	0	15	Grandmother
0	13	0	0	1	0	0	14	Granddaughter
0	0	6	0	1	5	0	12	Actor
0	9	0	0	1	0	0	10	Grandson
0	0	5	5	0	0	0	10	Student?
0	0	0	0	0	4	2	6	Secondarily

								Guardianed
0	0	5	0	0	0	0	5	Soldier
0	0	0	0	0	3	1	4	Alternatively Guardianed
0	2	0	0	0	0	0	2	Girlfriend?
0	0	0	2	0	0	0	2	Niece
0	0	0	0	0	1	0	1	(Step)Mother
0	1	0	0	0	0	0	1	Grandfather

Table 40

Chronology

Further to characters, the roles they perform and verbal data, one of the most useful ways of subdividing *Fun Home*, and therefore of profiling its chapters, is through the various chronological time periods it includes. Perhaps a more orthodox memoir or bildungsroman would follow a linear trajectory from infancy, through childhood and then into and out of adolescence, but Bechdel, as discussed in previous chapters, describes *Fun Home* as being structured “thematically”. Whilst more linear memoirs and narratives allow their readers to come to understand a person and their actions by the gradual accretion of causes and effects, Bechdel subverts this with an associative rhetoric, drawing on the affordances of the comics medium to constantly jump between chronological moments to furnish the arguments she makes about her experience. Bechdel uses visual cues in the form of Alison’s haircuts to delimit the different ages at which she appears in the book. For the purpose of this analysis I have divided up the chronology into nine sections. Below is a table detailing what they are and how frequently they occur, ordered by frequency. At this stage it is worth adding that a few panels have been assigned two (or more) chronological stages, another affordance of the comics medium.

Number	Group	Percentage
258	College	27.3
164	Rat Tails (10-11)	17.3
154	Rat Tails (12-13)	16.3
139	Text only	14.7
116	Bowl	12.3
54	Before Alison alive	5.7
40	Barette	4.2
28	Aged 15	3.0
25	After the main events	2.6
11	Pre-barette	1.2
11	Pre-College	1.2

Table 41

The table below shows how these phases are distributed across the chapters, with each row formatted for frequency. The table is ordered by earliest to latest chronological phase.

1	2	3	4	5	6	7	Total	
1	14	25	6	4	0	4	54	Before Alison alive
5	4	0	0	0	0	2	11	Pre-barette
4	5	0	18	8	0	5	40	Barette
46	15	15	29	11	0	0	116	Bowl
25	27	18	37	56	1	0	164	Rat Tails (10-11)
0	1	3	6	0	142	2	154	Rat Tails (12-13)
0	0	0	0	0	0	28	28	Aged 15
0	0	0	3	0	1	7	11	Pre-College
0	38	58	8	13	0	141	258	College
0	7	0	8	3	0	7	25	After the main events

2	22	17	11	29	23	35	139	Text only
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Table 42

Here it is with each column formatted for frequency:

1	2	3	4	5	6	7	Total	
1	14	25	6	4	0	4	54	Before Alison alive
5	4	0	0	0	0	2	11	Pre-barette
4	5	0	18	8	0	5	40	Barette
46	15	15	29	11	0	0	116	Bowl
25	27	18	37	56	1	0	164	Rat Tails (10-11)
0	1	3	6	0	142	2	154	Rat Tails (12-13)
0	0	0	0	0	0	28	28	Aged 15
0	0	0	3	0	1	7	11	Pre-College
0	38	58	8	13	0	141	258	College
0	7	0	8	3	0	7	25	After the main events
2	22	17	11	29	23	35	139	Text only

Table 43

What this really pulls out is the extent to which these chapters, with the possible exception of Chapters Two and Four, have a clear dominant time period. As I mentioned, the periods are ordered chronologically along the y axis which, in the top table, does actually suggest something of a gradual progression forwards in time, albeit not without exceptions, as we would expect in a traditional memoir arc. What the second table shows, however, is that it is not quite as clear cut as this might suggest given that the most frequent time period in five out of seven time chapters are accounted for by just two time periods. This will, in fact, be useful when it comes to comparing the groupings of words, characters and roles by chapter and by chronological period. To investigate this further, then, it is necessary to adjust these values by chapter length.

The top table, below, formats these readjusted tables relative to the columns (chapters), and the bottom table formats them relative to the rows (chronological periods).

1	2	3	4	5	6	7	Total	
1.12	11.11	20.00	4.80	3.64	0.00	1.83	54	Before Alison alive
5.62	3.17	0.00	0.00	0.00	0.00	0.91	11	Pre-barette
4.49	3.97	0.00	14.40	7.27	0.00	2.28	40	Barette
51.69	11.90	12.00	23.20	10.00	0.00	0.00	116	Bowl
28.09	21.43	14.40	29.60	50.91	0.66	0.00	164	Rat Tails (10-11)
0.00	0.79	2.40	4.80	0.00	93.42	0.91	154	Rat Tails (12-13)
0.00	0.00	0.00	0.00	0.00	0.00	12.79	28	Aged 15
0.00	0.00	0.00	2.40	0.00	0.66	3.20	11	Pre-College
0.00	30.16	46.40	6.40	11.82	0.00	64.38	258	College
0.00	5.56	0.00	6.40	2.73	0.00	3.20	25	After the main events
2.25	17.46	13.60	8.80	26.36	15.13	15.98	139	Text only

Table 44

1	2	3	4	5	6	7	Total	
1.12	11.11	20.00	4.80	3.64	0.00	1.83	54	Before Alison alive
5.62	3.17	0.00	0.00	0.00	0.00	0.91	11	Pre-barette
4.49	3.97	0.00	14.40	7.27	0.00	2.28	40	Barette
51.69	11.90	12.00	23.20	10.00	0.00	0.00	116	Bowl
28.09	21.43	14.40	29.60	50.91	0.66	0.00	164	Rat Tails (10-11)
0.00	0.79	2.40	4.80	0.00	93.42	0.91	154	Rat Tails (12-13)
0.00	0.00	0.00	0.00	0.00	0.00	12.79	28	Aged 15
0.00	0.00	0.00	2.40	0.00	0.66	3.20	11	Pre-College
0.00	30.16	46.40	6.40	11.82	0.00	64.38	258	College
0.00	5.56	0.00	6.40	2.73	0.00	3.20	25	After the main events

2.25	17.46	13.60	8.80	26.36	15.13	15.98	139	Text only
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Table 45

To reiterate, the formatting on the top table, here, is useful for indicating which is the most used time period or time periods in each chapter, and the formatting on the bottom table is useful for contextualising this in light of the frequency of that time period. So, whilst ‘College’ is highly used in chapters Two, Three and Seven, the bottom table shows how College is used most in Chapter Seven, with Chapter Two almost a neutral value. Conversely, looking at Chapter Seven’s ‘Aged 15’ and ‘Pre-College’ in the bottom table, it would be possible to conclude they were highly important for Chapter Seven, whereas the top table shows that it is not that they are important, but that they are *distinctive*. That is, they are the equivalent of the infrequent words that were unique to a single chapter. It is when two corresponding cells are a similar colour, such as “College” for Chapter Seven, “Rat Tails (12-13)” for Chapter Six and “Bowl” for Chapter One where there is a really strong correlation between a chapter and a chronological period. The table below balances these two factors and demonstrates which chapters have a single distinctive time period and which are better considered as a blend.

1	2	3	4	5	6	7	Total	
2.08	20.58	37.04	8.89	6.73	0.00	3.38	54	Before Alison alive
51.07	28.86	0.00	0.00	0.00	0.00	8.30	11	Pre-barette
11.24	9.92	0.00	36.00	18.18	0.00	5.71	40	Barette
44.56	10.26	10.34	20.00	8.62	0.00	0.00	116	Bowl
17.13	13.07	8.78	18.05	31.04	0.40	0.00	164	Rat Tails (10-11)
0.00	0.52	1.56	3.12	0.00	60.66	0.59	154	Rat Tails (12-13)
0.00	0.00	0.00	0.00	0.00	0.00	45.66	28	Aged 15
0.00	0.00	0.00	21.82	0.00	5.98	29.06	11	Pre-College
0.00	11.69	17.98	2.48	4.58	0.00	24.95	258	College

0.00	22.22	0.00	25.60	10.91	0.00	12.79	25	After the main events
1.62	12.56	9.78	6.33	18.97	10.89	11.50	139	Text only

Table 46

Conclusion and Reflections

It is important to reflect on two facets of digital experimentation with this chapter. The first is that experimentation does not guarantee meaningful results. The second, and these facets intersect, is that building is an iterative process. It is a cyclical model of creation, where negative results are often a necessary step towards more meaningful findings. At this stage, the readings produced in this chapter require further modelling, but I believe it still bears reproducing them here for two reasons. The first of these is that the process of creating these tables, and the modes by which I sought to find meaning in them, constitutes meaningful thought and intention. It is my hope that they offer future researchers, amongst which I count myself, a basis off of which they can build their own research. The second reason to reproduce these tables here is to afford other scholars the opportunity to find something in this data that I did not, be that a question or an answer. Providing these tables for others seems, then, part of a scientific method of publishing negative results.

In this chapter I set out to gain a different type of insight on *Fun Home* by trying to characterise its chapters. Despite the results above, however, I do think that this is a potentially useful vein of research. Returning to Nicholas's Dames's ideas about the role that the chapter has played in the history of the novel, I believe there is useful work that could be done attending to this theme in *Fun Home* and other graphic texts. Marie Kolkenbrook's work on Pierre Bourdieu can offer useful insight for this future analysis.⁵⁴⁰ She documents Bourdieu's criticism of biography and life writing for its construction of "the idea of life as a coherent

⁵⁴⁰ Marie Kolkenbrook, *Life as Trajectory: Pierre Bourdieu's Biographical Illusion* (1986), in *Biography in Theory*, ed. by W. Hemecker and E. Saunders (Berlin: de Gruyter, 2017), pp. 217-228.

whole, which can be narrated in chronological order”,⁵⁴¹ and for “giving [a life] an overall purpose through the selection of a few events presented in a way that attributes an overall meaning to them and makes them seem causally and logically connected”.⁵⁴² Bechdel’s memoir writes back meaningfully to this critique with its thematic structure and lack of chronology.

What I perceive as the most significant limiting factor for this analysis as it stands is the size of the units being used, the chapters, and not yet having been able to compare them to an alternative unit. The section on Chronology certainly represents the beginning of such an analysis, but to strengthen this work going forward I think a significant benefit would be felt from adding in more such information. To this end, in my Future Modelling chapter, I have included my approach to modelling, and therefore being able to analyse, scenes. In future work, I also would like to combine each of these analyses with another model of *Fun Home* that I created – discussed in Future Modelling – a linear chronology of each of *Fun Home*’s panels. This I arrived at through close-reading Bechdel’s text, and I believe such a linear model would serve as the most useful contrast for the above work on chapters.⁵⁴³ Combining that future output, with the Scene modelling in my next chapter, I believe that a more meaningful interaction with Bechdel’s chapters will be arrived at.

It would be productive to combine these future readings with one of the more positive outcomes of the above tables, the People table. Whilst my thinking on this is still in development, it seems a positive outcome to be able to suggest that Bechdel actually aligns her minor characters with individual chapters. These characters are, therefore, more part of a theme, for Bechdel, than they are part of an event. Revisiting Bechdel’s idea at the beginning of this chapter that she needed to revisit each event multiple times, thematically, it would seem in

⁵⁴¹ Kolkenbrook, p. 217.

⁵⁴² Kolkenbrook, p. 218.

⁵⁴³ Returning to Warhol’s ideas on anchorage, it should be evident that this linear re-making of the text proceeds linearly in the pictorial information. The narration, of course, occurs in a later time, when Bechdel is writing the book.

contrast to this idea that characters who must have been present at an event, rather than for a theme, align so neatly with themes, not events.

Future work aside, the most positive finding from this chapter is how it informs the idea of braiding. The ‘People’ tables evidenced a very clear stratification of character occurrence. Contrasting this with the principles of Verbal Solidarity that I have argued for up to this point in this thesis, it is marked to compare the occurrences here with verbal signifiers. Looking at a simplified version of that table, combined with the twenty-one Most Frequent Words, it is productive to see where they chart against one another.

Alison	648	“Back”	41	“Family”	27
Bruce	343	“Book”	38	Roy	20
Helen	162	“Mom”	38	Grandmother	16
“Father”	140	Joan	37	Actors	13
Christian	136	“Read”	38	Beth	13
John	121	“Life”	33	Mr Avery	10
“Dad”	109	“Thing”	33	New Yorkers	10
“Mother”	60	“Parent”	32	Bill	9
“Time”	54	“Play”	31	Student	9
“Year”	53	“Brother”	30	Dr Gryglewicz (f)	8
“House”	48	“Good”	30	Dr Gryglewicz (m)	7
“Day”	45	“Live”	28	Jack (actor)	7
“Home”	44	“Fact”	27	Record shop person	7

Table 47

Whilst pictorial instances of characters account for five of most frequent six signifiers, only two characters – Alison’s girlfriend Joan and Bruce’s lover Roy – feature as frequently as any of the other top twenty-one verbal signifiers. This offers a useful insight when thinking about Verbal

Solidarity as opposed the Groensteen's iconic solidarity; verbal signifiers are much more evenly distributed.

Modelling for Future Work

Building a model for analysis, especially when done within a strictly time-bounded way, sometimes results in facets being modelled that do not find their way into the final analysis. In this chapter, I am making available some of the facets of *Fun Home* that I modelled, but which did not contribute directly to the readings made in my analysis chapters. As has been posited in this thesis, modelling is itself a critical, theoretical act. As such, my intention in including these models and the thinking behind them, here, is to indicate certain future directions this project might be taken, be that by myself, or by another scholar.

The two topics which I give the most coverage here are the sites of pictorial text, which includes elements of pictorial mark-up, and scenes. Each of these, therefore, responds to a more pictorial side of *Fun Home* than the rest of the thesis. Although this thesis has focused on the verbal component of what is a highly verbal graphic memoir, it is important to bear in mind that models are arguments. It would, therefore, distort the argument I would make about what *Fun Home* if I were to exclude these pictorial facets. Further, in my Digital Humanities chapter I discussed at length what I called "feminist data creation". As I stated there, this is an important part of this project's intellectual biography. Such data creation, however, was designed for applying to the pictorial signifiers discussed in this chapter. Recalling that words are indexical, and that images are iconic, this explains why less of that theorisation has been used in my modelling and analyses up to this point.

Modelling Intra-Pictorial Text and its Containers

In its broadest conceptualisation, *Fun Home*'s textual content can be split into two categories: text which occurs in narrative containers, such as headers, inset captions and speech bubbles; and intra-pictorial text, such as the writing in Alison's diary or the novels she presents her audience with, branding on objects such as loaves of bread, and straightforward labelling, such as the descriptive 'Christopher Street' on a sign in New York. The characters of the memoir can see this second type of writing, as it is part of their world, but the first type is not (even if they do *hear* the speech). Bechdel graphiates this difference by rendering the text that the characters can see by hand, effectively as images, rather than using the custom type font she had made from her hand lettering, which she uses for narration and dialogue.⁵⁴⁴ It is the various levels of classifying this intra-pictorial text that I will address here, with attention to the challenges it poses for modelling, how I resolve these, and the reasons and desired effects behind these decisions.

As suggested above, I divide intra-pictorial text into four main subsets: content found in literary sources; content found in archival sources; labelling that serves the purpose of branding; and labelling that serves a more informational purpose. To clarify, by 'in archival sources' and 'in literary sources' I mean the contents of these sources; the front cover of a book or diary would, conversely, fall under 'informational labelling'. I have divided them like this to reflect the different purposes to which these kinds of information can be put. Ann Cvetkovich discusses *Fun Home* in terms of the kinds of "evidence" it uses and Bechdel herself has described it both as an 'argument' and an 'essay', forms which utilise evidence,^{545, 546} and these conceptualisations are useful ways of breaking down the intra-pictorial text. Further, 'the

⁵⁴⁴ Graphiation is Thierry Groensteen's term for the pictorial element of writing, how it is rendered stylistically.

⁵⁴⁵ Ann Cvetkovich, 'Drawing the Archive in Alison Bechdel's *Fun Home*', *Women's Studies Quarterly*, 36.1/2, (2008), p. 112.

⁵⁴⁶ Alison Bechdel and Katie Roiphe, *Alison Bechdel Talks with Katie Roiphe* (2012) <https://www.youtube.com/watch?v=J_xQdGhM_JM> [accessed 11 February 2017]. (21:18).

archive' and 'literary allusion' are themes which I will want to investigate and analyse after this thesis, so they needed to be kept separate from one another.

The different subsets here do different work in the system of the comic. Whilst the pure textual content of the headers and speech bubbles is used to deliver the narrative and Bechdel's thoughts about the narrative, – "It wasn't really the story I wanted to tell; it was my ideas about the story" reflects Bechdel –⁵⁴⁷ the intra-pictorial text is used to provide evidence and create rhetorical 'braids' between instances, but the different subsets of intra-pictorial text seem to perform different functions in the system of the comic.

Literary allusion, as one of Bechdel's most common and significant themes,⁵⁴⁸ functions to embellish and elaborate on the narrative; allusions are transactional sites through which the narrative develops, as well as providing cultural touchstones for the reader. Bechdel relates this when she writes, "I employ these allusions to James and Fitzgerald not only as descriptive devices, but because my parents are most real to me in fictional terms".⁵⁴⁹ Archival materials, the most clearly 'evidential' of the intra-pictorial text sources, include photos, maps, diaries, letters, dictionaries,⁵⁵⁰ magazines and newspapers, and play the role of historical 'proof', attempting to secure the authenticity and verifiability of Bechdel's story. Separate to both of these are the texts used in informational and commercial labelling. Eric Bulson relates how Roland Barthes placed "geographical signposts in his category of 'useless details' common to Western narrative: 'useless' because they are not integral to the narrative design, but useful because they produce a reality effect in readers".⁵⁵¹ This 'effect', however, can be extended from such 'labelling' text – which, like 'Christopher Street to text that comes under the subset of

⁵⁴⁷ Alison Bechdel, *Alison Bechdel Q&A - Seattle, WA (for Are You My Mother?: A Comic Drama)* (2012) <<https://www.youtube.com/watch?v=0ayXbaTWzIY>> [accessed 9 February 2017].

⁵⁴⁸ There are over one hundred and thirty pictorial allusions to literary sources, according to my calculations

⁵⁴⁹ *Fun Home*, p. 67.

⁵⁵⁰ Dictionaries may appear a peculiar inclusion but it is the specific page layouts of family dictionaries which afford the text some of its connections.

⁵⁵¹ Eric Bulson, *Novels, Maps, Modernity; The Spatial Imagination, 1850-2000*. London: Routledge, 2010. p. 3.

‘branding’. Although these subsets are different in nature, they both operate to create an effect of reality, of relatability. Informational labelling does this by producing references that the reader knows to be true; branded labelling does this by producing references that appear incidental, like the name on a cereal box, but have a greater affordance for rhetorical distribution than do signs for ‘Christopher Street’.

It is not, of course, just because these four subsets are supposed to operate differently that they are tagged as such. By coding these groups separately it is possible to track the progression, density, and relationships of these various kinds of information and evidence against or within any of the structuring forms of the memoir. This means that arguments can be made about, for example, the way in which Bechdel distributes archival documents across her childhood. This would respond to, and interact with, her reflections on her diarising practice: “When I was ten, I was obsessed with making sure my diary entries bore no false witness. / But as I aged, hard facts gave way to vagaries of emotion and opinion”.⁵⁵² Equally a researcher could query the relationship between her age and the distribution of references to literature made, separately, by the covers of books – which, remember, fall into the labelling of objects – and literary quotation – which falls into writing *in* objects – in light of Bruce’s opinions of small children, “Dad didn’t have much use for small children, but as I got older, he began to sense my potential as an intellectual companion”,⁵⁵³ and the idea that “books [...] serve[d] as our currency”.⁵⁵⁴ This separate encoding, however, will not only allow questions to be asked of these broadest of intra-pictorial themes ‘against’ or ‘within’ these structural constraints, however, but across them, too. That is, it is possible to address the relationship between the chronological and the linear distribution of archival documents, how the archive functions

⁵⁵² *Fun Home*, p. 169.

⁵⁵³ *Op. Cit.* p. 198.

⁵⁵⁴ *Op.Cit.* p. 200.

relative to how the events passed in Bechdel's life, and how she chooses to present them to her reader.

Thus far, I have discussed only the grouping of the tags used, rather than the tags themselves (such as 'Newspaper', 'Diary' or 'Food packaging') or their contents, what they actually say. Although I will come to these areas shortly, it is worth reinforcing why these partitions matter. Recording them separately means being able to track Bechdel's types of 'evidence'. Having these three levels available means it is possible to ask three different kinds of questions: how is Bechdel distributing informational labels that achieve a 'reality effect' allusion across her narrative, compared to, say, archival material, which appeals to authenticity in a different way?; how does Bechdel distribute entries from her diary across her childhood, which we do not have access to outside of the text, compared to her distribution of newspaper clippings or court records, which we do?; what connections to other scenes or panels does the *content* – the words used – in these newspaper clippings make, that is, how does Bechdel's archival research impact the story she ends up telling?⁵⁵⁵

These last two questions hinge on the difference between what can be asked of the content of the intra-pictorial text, the words actually depicted, and the source that they are attributed to. None of these four groupings could sensibly be considered to operate homogeneously, it is just for the first level of questions that they need to be grouped as such. The actual source to which the content is attached is the type of container in which it is found such as 'Food packaging', 'Street signs', 'Book covers' or 'Newspaper articles', each of which offer a discrete container-type whilst still allowing for variation of contents. These two parts of the intra-pictorial text's data point operate in different ways in the text and, thus, allow different

⁵⁵⁵ Here it is worth considering how the record of Bruce's obituary in the *New Haven Express* (125.3) closely mirrors the scenes presented in the memoir (come back in terms of 'what do we really read?'), which supposedly draws on a family secret.

kinds of questions to be asked. The broader the category, the wider the web of association but the weaker the intensity of the connection with other such panels or scenes. Whilst the brand of bread, 'Sunbeam Ranch', occurs six times in the book, and the cover of Colette's *Earthly Paradise* occurs four times, the branding of food and the covers of books come up a lot more frequently, respectively thirty-one times and a hundred and ten times, in fact. The 'source' of these 'contents', then, make for a different kind of connection, in a different volume. This is comparable to how every pictorial instance of Alison is tied to her unique identifier, but is also fragmented for richer and more nuanced analyses by the different chronological 'stages' of her life, as indicated by her haircuts, or by the different relationships or 'roles' she assumes in a panel, such as 'daughter', 'child', 'student', or 'girlfriend'.

Storing the intrapictorial text thusly: Book Cover [source]: Colette's *Earthly Paradise* [content]' functions in the same way. As such, each of the original intra-pictorial sections has a set of tags it uses to designate the source. In the case of archival sources, then, this separates out the different kinds of archival sources, outlined above, to reflect not only that they belong to the group 'archival sources' in different ways and to different extents, but that the component parts of 'archival sources' function differently, an assumption that the complete database will make quantifiable, if not verifiable. This hints at the idea that sometimes it is merely the fact that Bechdel has a character read a book, or write a diary entry, that is important, but sometimes it is the content which is of interest. The former allows me to talk about trends along kinds of evidence and the latter lets me look at connections across different kinds of evidence pointing to the same thing. Both the content of a diary entry, and the fact that Bechdel chooses to deploy a diary entry, are useful things to be able to query.

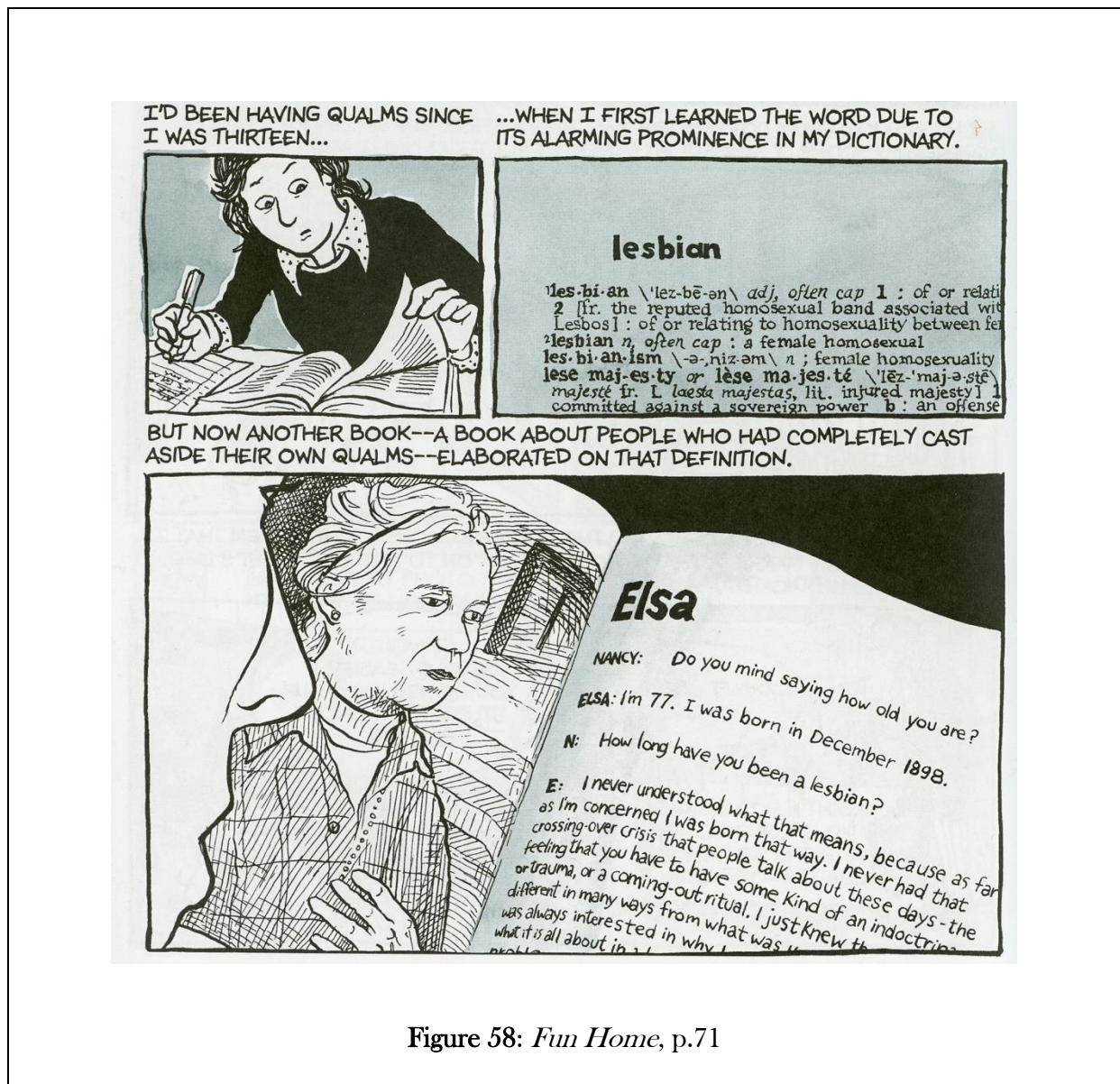
At every level of taxonomising and appending tags, the questions that are enabled are about types of evidence, but at the level of 'content' the connection type changes, and the signifiers used operate across these evidence types. This recalls the example of "Country

Squire”, discussed in my first analysis chapter. A clear connection, or braid, between the panels existed, made all the stronger by its uniqueness. In this sense, the words in the content are less predictable and less interesting to track across structures, but the connections they do make can be very interesting, and deployed for explicitly rhetorical ends. Although data points like book covers or bread brands are discrete and short, this is not true of all intra-pictorial text. Diary entries and quotations from books are never copied verbatim by Bechdel in the same way that ‘Ulysses’ or ‘Sunbeam’ are. It is their component parts, their words, which create braids then, rather than the entire value. As such, each verbal source in each panel constitutes a further ‘bag of words’ which may or may not share words with other panels.

This, however, is not the end of the issues when it comes to classifying intra-pictorial text. It bears, here, revisiting some examples from my first analysis chapter which I there used to demonstrate Bechdel’s willingness to conduct what I called “braiding in the background”. Here, I want to discuss the modelling strategy for such sources’ incompleteness, the way in which their positioning in the panel can obscure fragments of the text. A significant difference between narrative text and intra-pictorial text is its completeness, and this poses important questions for what actually should be included in the ‘content’ column of many intra-pictorial text entities. Because narrative text is held in discrete boxes or bubbles, it is never occluded by other elements of a panel nor does it, indeed nor can it, continue beyond the subject of its ‘content’; neither of these features is true of intra-pictorial text which can be occluded by inset captions, the hands of someone reading a diary, or the body of someone standing in front of a sign, and also can continue beyond the alleged designation of the text.

Both of these can be seen in the Figure below, where the dictionary entry for ‘lesbian’ – which is what the header points the reader to – continues onto ‘lese majeste’, and where what Alison is reading in *Word is Out* is cut off by the borders of the panel. Both of these phenomena are, I would argue, extensions of the ‘reality effect’ discussed above; print

dictionaries do not only show their readers the one specific definition they want, and when we look over somebody's shoulder at what they are reading we do not get a neatly aligned page of content. Another way of interpreting these instances is to return to Cvetkovich's idea of 'evidence'; these entries are not for reading, they are for proving, for demonstrating the narrative text. In this sense they are pictures first, text second. I would suggest that they function to secure Bechdel's version of events, her authenticity and verifiability.



Incompleteness also occurs in regard to labelling content, as in Figure 59. Both Alison's 'Sketch' pad and, to a lesser extent, her copy of *Sappho Was a Right-On Woman* are cut off

by the borders of the panel. Again, it would look unnatural, in the sense of being ‘posed’ and therefore inauthentic, for these objects to perfectly fit into the panel, so they are fragmented for authenticity.

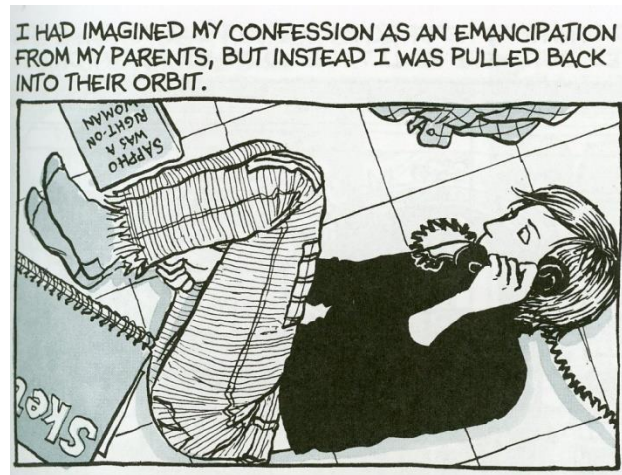


Figure 59: *Fun Home*, p. 59

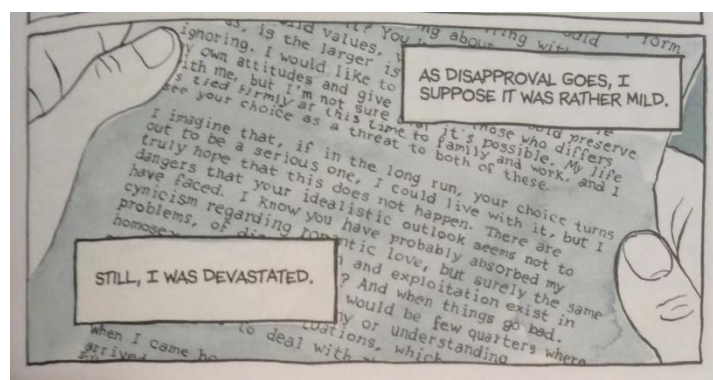


Figure 60: *Fun Home*, p. 77.

Continuing with the images in the first Figure, though, the ‘lesbian’ dictionary entry is actually not as representative as the image of *Word is Out*, since it is aligned nicely. Most

extended quotation is presented on at least a partially rotated page. This can be seen in Figure 60 which combines this tilt with the, also frequent, occlusion by inset captions. As Figure 61 shows, however, tilting textual sources also often means unrelated entries, or parts of entries get depicted, too. Indeed, in some panels the tilt ends up including text from the page opposite the information described in the header. But if this content is only there to give a ‘reality effect’, how much of it needs to be recorded becomes a question. The same question of inclusion also arises for text, as is found in Figures 60 and 61, where some of the verbal record is highlighted and when text is simply so small that it is difficult to read. In these instances it is unclear whether the text is merely a ‘reality effect’ or whether readers are meant to read it.⁵⁵⁶

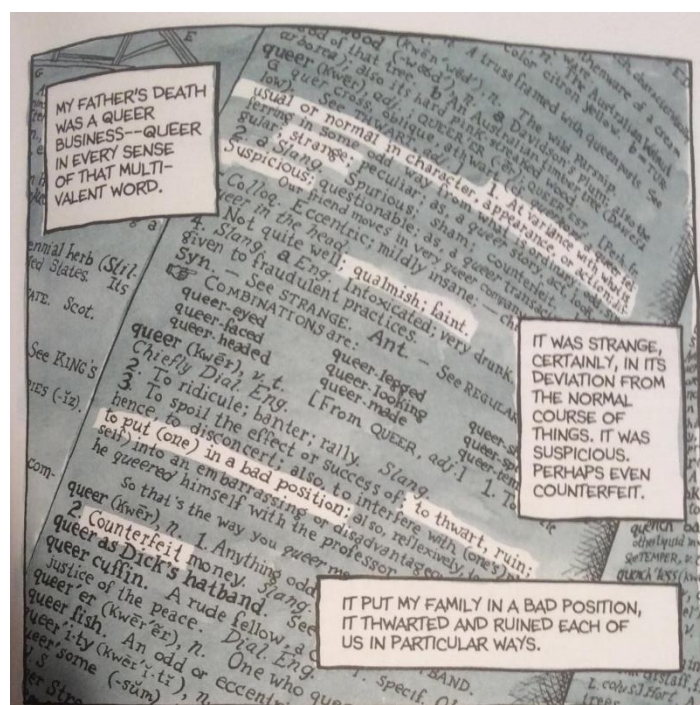


Figure 60: *Fun Home*, p. 57.

⁵⁵⁶ It would be interesting, in such cases, to look at what gets translated in foreign-language copies of *Fun Home*, and to use eye-tracking results to see what readers actually spend their time reading. Each of these would provide interesting contexts to interpret how these ‘unhighlighted’ passages of text are used and what they say.



Figure 61: *Fun Home*, p. 125.

For me, these words are as much part of the system of the comic, as much part of its web of association, as the directly narratologically relevant ‘lesbian’ or otherwise highlighted text. Indeed, the unhighlighted text of Figure 61 actually records almost all of the public appearances of Bruce that Bechdel presents. Whilst these are not, in theory, part of the narrative trajectory, what they do serve to do is to link rhizomatically, or ‘braid’, panels together, as well as create more interesting webs of association for the panel, in a way no less meaningful than the loaves of Sunbeam Bread rhetorically positioned in panels. Although unhighlighted, or seemingly unrelated, textual content is not part of the narrative’s trajectory then, these instances do play linking roles and introduce ideas or themes into panels in the same way that Sunbeam bread does, which is why they must be captured in the database. Indeed, in the instance of very small writing – where the reader looks over Alison’s shoulder as she writes seven lines of her diary in an area of 1.5cm² – an incident is related that is recorded nowhere else: “Dad went canoeing with Bill”. The addition of Bill’s network into this panel creates many extra, potential, connections. In the same way, the definition of ‘organzine’ above the indicated dictionary definition of ‘orgasm’ – a raw silk thread – draws in associations of

fashion. The fact that ‘organzine,’ as a signifier, does not occur elsewhere in the memoir, as well as the uniqueness of ‘silk’ and ‘thread’, however, indicates the potential in future work of creating thematic categories for all verbal signifiers. This means that it would be possible to draw a link between this panel and the, narratologically interesting, “slender demilitarized zone” of male fashion that lies between Bruce and Alison.

This intersects with another facet of intra-pictorial text found in labelling, the fact that the same object is sometimes labelled differently. Here, I do not mean that different editions of books have different covers, but rather that the cover of the same book, panel to panel, minutes apart, can change. This does not only happen to books, though; the packet of pretzels in panels 108.3 and 109.1 variously read “Snyder’s of Hanover” and “Snyder’s”, and the writing on a calendar in panels 113.1 and 113.3 also changes. The different ways in which the same thing is represented are important, though, and they make different connections. When it comes to front covers, one example can be found with the various labelling of Colette’s autobiography, *Earthly Paradise*. Panel 205.1’s cover of the book states ‘Colette’s autobiography’, but the next panel, when Alison is reading it, states Earthly Paradise – Colette. Arguably this is a function of the fact that Bechdel does not have space in the image to represent the entire front cover, which may have included used both appellations. Such an interpretation can be supported by paying attention to how Bechdel has dealt with other external sources, specifically the September 1974 copy of ‘Gentleman’s Quarterly’ she receives for her fourteenth birthday⁵³⁷ where she changes the line breaks in order that the letters ‘FIT’ align along the left hand side of the magazine where we can see it, rather than the letters ‘TO’ as the actual magazine had it, in the rendering of the headline, “MESSAGE EASY WAY TO

⁵³⁷ p. 186.

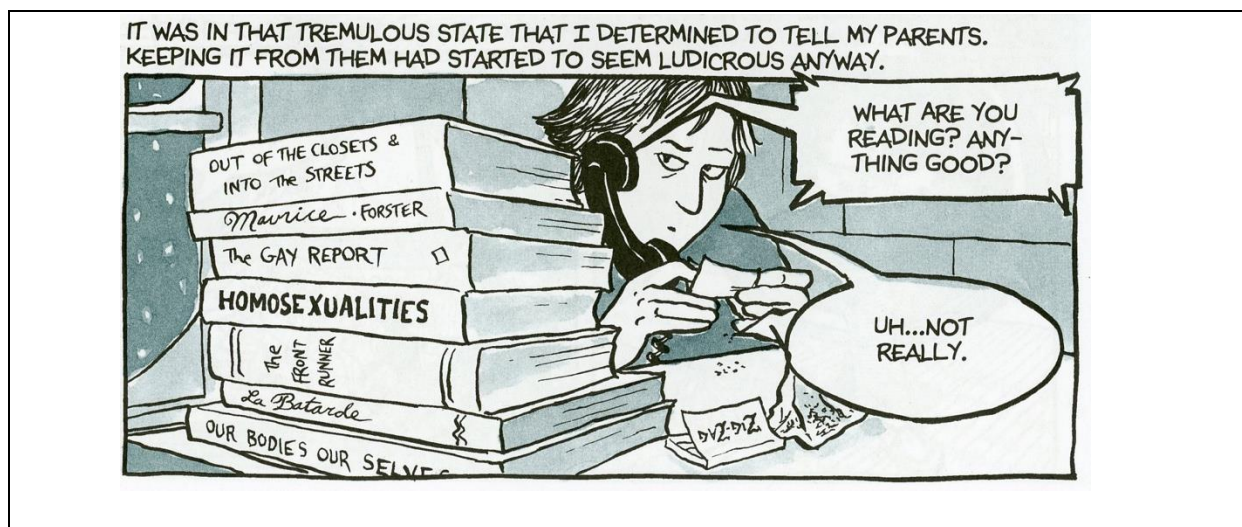
FITNESS". Such a change, of course, makes different connections.⁵⁵⁸ The same is true of the different covers to *Earthly Paradise*. They take the same object but the panels end up with very different networks of association due to Bechdel's rhetorical decision.

By including all of this content it becomes possible to ask 'in what ways are the non-highlighted intra-pictorial textual signifiers significant; what does their inclusion or exclusion do to the network of the text, and do such 'reality effects' operate in a consistent way, or in consistent circumstances, across the text?'. By recording this content and seeing how it varies my results, it will be possible to see how such parts of intra-pictorial text alter both the text's network and the more privileged braids between panels. Where this system hits its limits, even within a context where I try to operationalise the seemingly 'less directly relevant' material, is when words themselves are fragmented in literary or archival materials. This, however, is not a concern for labelling content such as Sketch, in Figure 59, because the complete signifier is available elsewhere and, therefore, the reader is aware of the missing content. To deal with all of these different types, however, I keep the same versions of each content: the highlighted (either physically or through narration); the visible (without gaps filled in); the visible (with gaps filled in). Keeping these different versions makes it possible to leverage the differences and see *how* these different versions operate, rather than questioning whether they should be included.

Books, however, signify in multiple ways, they have several potentially significant attributes. *Ulysses* is clearly an important text for *Fun Home* - it is the dominant intertext for the final chapter - but to what extent should a researcher conflate it with the references to *A Portrait of the Artist as a Young Man* throughout the first chapter and on pages 201 and 203, or Joyce himself on 229-31? Bechdel has discussed 'bookending' her narrative with James Joyce

⁵⁵⁸ We might consider this passage, now, as connecting to Alison asking Roy to "make a muscle" (95) and her narration that: "I wanted the muscles and tweed like my father wanted the velvet and pearls—subjectively, for myself" (99).

in an interview with Hillary Chute but the two works would not concord on a blunt indexing of titles. The best way to connect these different manifestations of the literature theme, and how they operate structurally as a different mode of ‘evidence’, allusion, and connection, is to embrace this polysemy and to further deploy the ‘feminist’ approach to data creation espoused in my previous chapter. In this way, the relationships between and significance of the different books can be formalised and understood structurally, adding nuance to Freedman’s idea of them as both props and thematic indicators. Comparing Figures 62 and 63, and seeing *Ulysses* now assembled with Alison’s extra-curricular reading, it is clear that, whilst each of the books in Figure 62 belong to several sub categories, as the very existence and nature of library cataloguing systems points to,⁵⁵⁹ they are also, of course, united by certain themes or topics that they have in common.⁵⁶⁰ Once they are brought into conversation with *Ulysses* their differences retreat, just as a library that originally held only these books would have to rapidly expand their call numbers or classification system if it were to start holding books such as *Ulysses* and its ilk.



⁵⁵⁹ Indeed, Bechdel writes: “One day it occurred to me that I could actually look up *Homosexuality* in the card catalog” (emphases original) (*Fun Home*, p. 75).

⁵⁶⁰ *Ulysses*’s physical separation from the pile in this panel has a clear significance. Unfortunately, this is another instance of internal composition which must be left for future work. It would, however, be interesting to understand how/whether this physical separation from the stack of books productively ties it into a different network to that of page 208 where *Ulysses* is part of the stack, but at the bottom. The comics medium is almost unique in using static pictorial narration in a way that its audience has time to take in the composition. Future work, therefore, should investigate the potential use to which this is put.

Figure 62, *Fun Home*, p. 76.

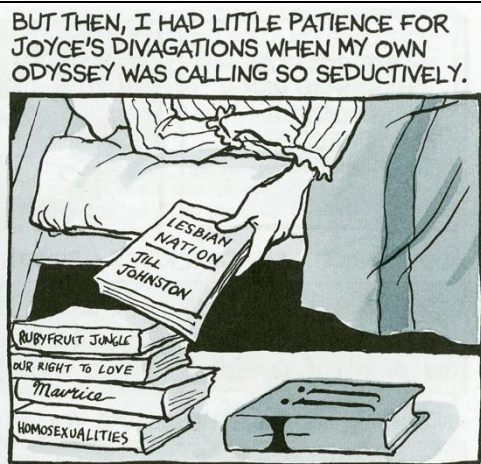


Figure 63, *Fun Home*, p. 207.

Books, of course, are not alone in signifying in multiple ways, nor in the important fact that it is often unclear to a reader which of these ways in particular is significant at a particular moment. Returning to the example of Sunbeam bread, Bechdel's explicit intention to deploy this particular brand, as well as the clear significance it has in being associated so heavily with Bruce's suicide, means that it is meaningful as its own subset of food and, indeed, bread. What is less clear is how that index interacts with Figure 64. Although it would be inappropriate to simply map a significance of Sunbeam – that it serves to and is deployed as invoking Bruce's death – onto this panel, the panel would clearly benefit from being part of a broader 'bread' index in order that it, its scene and themes can be understood in relation to, as an actively 'not' value, this index. That is, Sunbeam alters how to read 'sourdough' but not the other way around. There is, however, a further instance of bread in *Fun Home*, but one of uncertain provenance, since it is only clear that bread is depicted because the verbal component allows the reader to infer that the indiscernible contents of the plate Alison is holding are actually

cucumbers sandwiches,⁵⁶¹ and therefore it cannot be decided whether it is Sunbeam, sourdough or another type of bread. It does, however, tie into a broader bread index. Whether or not this is significantly different from any form of eating or edible content is uncertain. To answer whether or not Bechdel's metonymic deployment of Snyder's pretzels⁵⁶² and Life cereal⁵⁶³ are significant only in and of themselves, or whether they tie into a broader theme of food and eating could prove a useful structural element for researchers to understand and, therefore, supports a plural approach to data creation.

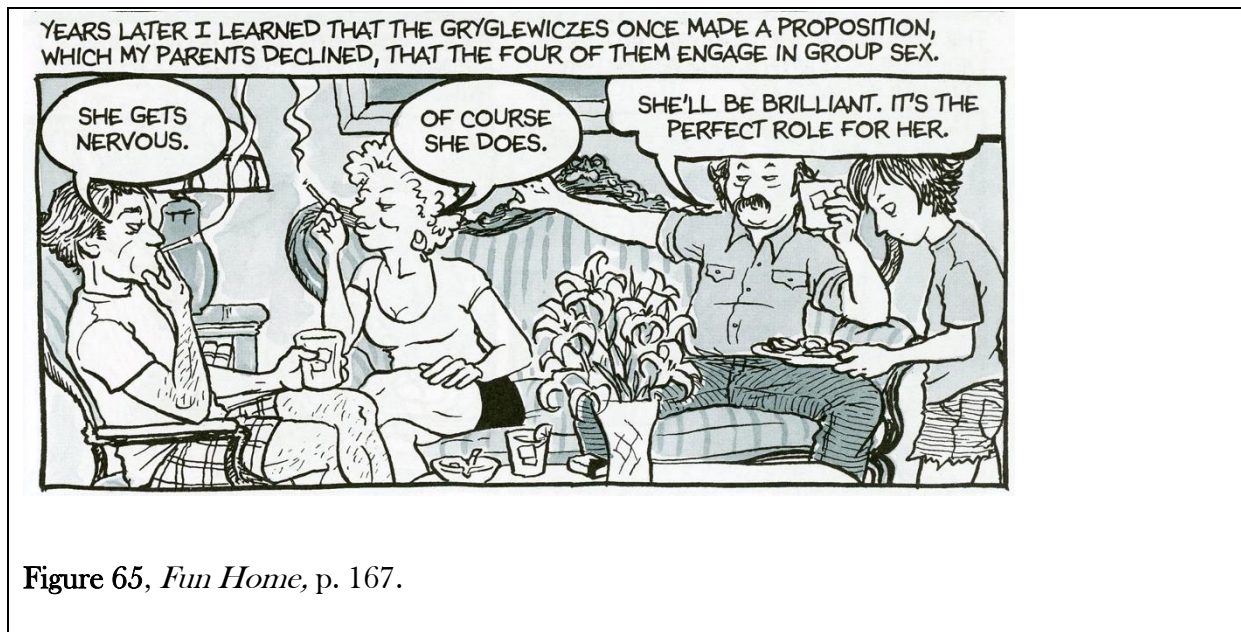


Figure 64, *Fun Home*, p. 163.

⁵⁶¹ Which the Bechdels “ate [...] all summer” when Helen was acting in *The Importance of Being Earnest* (in a clear example of how the Literature theme weaves through the text) in which their significance is imbued with the fact that “In *The Importance*, illicit desire is encoded as one character’s uncontrollable gluttony”: *Fun Home*, p. 166.

⁵⁶² *Fun Home*, pp. 108, 147.

⁵⁶³ Op. Cit. pp. 68, 110, 153.



Similarly, to understand whether it is the mere presence of books and/or other archival material that plays a significant role in the structural pacing of information and articulation of narrative, or whether the nature or differentiation of that material matters, would require values that can be quickly varied in order to discern the correlations and patterns that would be necessary to answer this question. Likewise, in answering whether the regularity of the page's panel layout is a significant determiner of connection or if a similar breakdown of rows is significant, or if, in fact, the volume of intra- to extra-diegetic text is more important, or even if pages are not being used productively, and that it is scenes that are, in fact, significant, it is in the rapid modulation of values that answers can be sought. These and many other questions rely on a feminist approach to data creation if they are to be answered.

Just as words and images operate in different ways to one another, and just as within the verbal and pictorial components different types of containers – headers, insets, speech, for example – can operate in different ways, within these areas, and between them, the same concept can be represented by different envelopes. Figures 58 and Twenty-60, for example, contain different envelopes, a verbal and a pictorial one, of *The Sun Also Rises*, and Figures 65 and 66 use different envelopes for the giving of the Colette book. Given the premise of this

project that it is the way in which information is relayed, – ‘What is told is always the telling’ – this difference is significant. After all, as I have shown, Bechdel often invokes a previous scene or event by re-using all, or a fragment, of a previous panel; it would, therefore not, be unusual for Bechdel to redeploy Figure 65 in Figure 66 as a shorthand – indeed she enacts this deployment elsewhere – ⁵⁶⁴ so her decision not to is clearly meaningful. This scene is, in fact, the longest continuous sequence of panels that occur on the same timeline and in the same location.



Figure 65: *Fun Home*, p. 205.

⁵⁶⁴ *Fun Home*, p. 229.

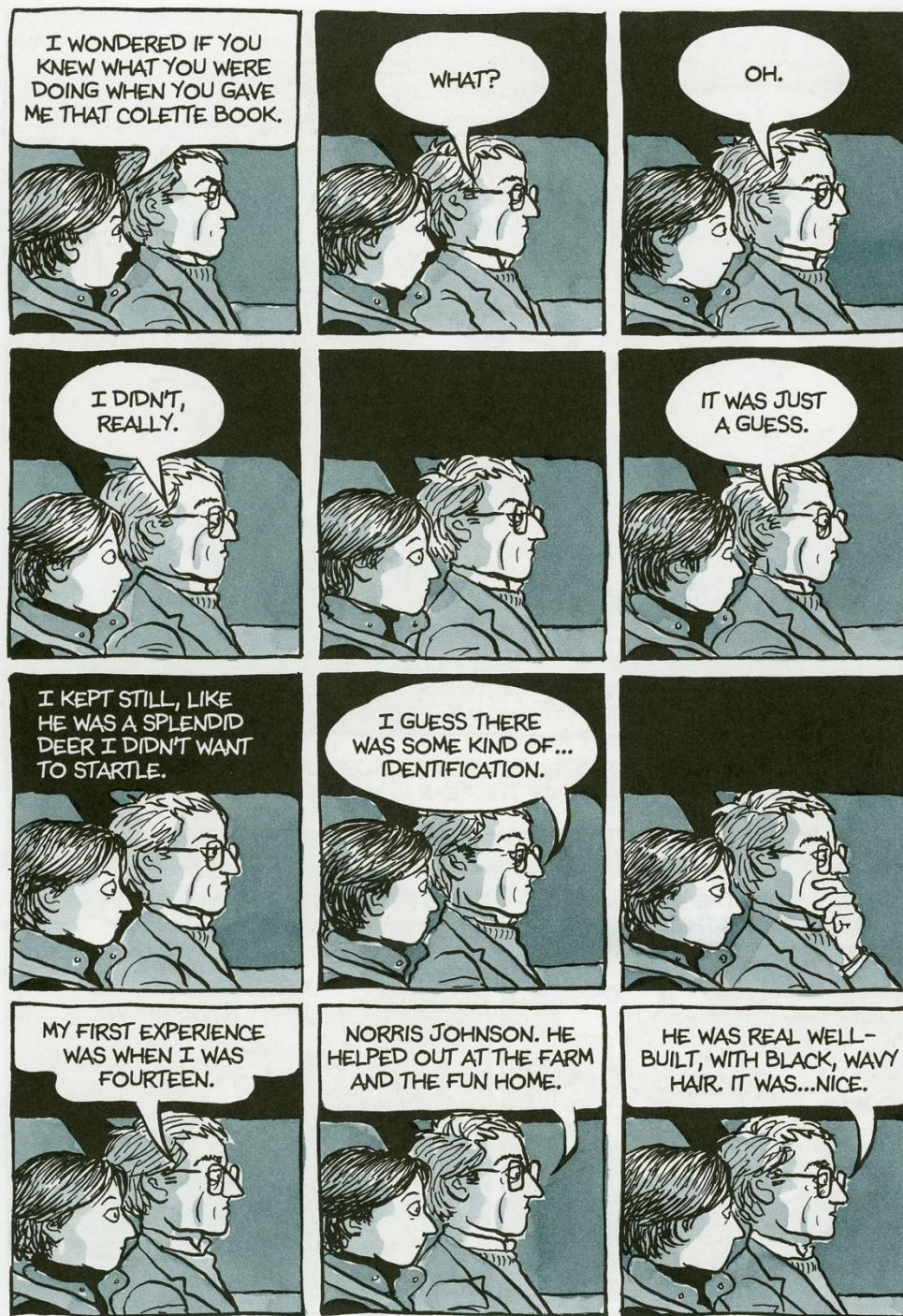


Figure 66: *Fun Home*, p. 220.

This, however interesting and important for an understanding of the driving scene above, is not the main way in which a variation of envelopes is used in *Fun Home*. More frequently it is of the nature of my first example, *The Sun Also Rises*, a picture/word envelope difference, but it also occurs within these different registers. This occurs most expansively and most frequently with human actors. The same character can be verbally referred to in first, second or third person, singular or plural, as well as by several variations of their name, nicknames, or modes of appellation related to their status within familial or professional relationships. The significance of appellation is demonstrated in *Fun Home* when Bruce answers the Bechdel home phone and states, “It’s for you”, of which the extra-diegetic narrator Bechdel remarks, “We all knew who *you* was”, indicating Helen.⁵⁶⁵ Indeed, Bechdel notes how Bruce and Helen “did not use terms of endearment” and that Bruce “perversely avoided addressing my mother with even her given name”, marking a significant shift from the “sentimental letters” Bruce wrote to Helen in their courtship.⁵⁶⁶

The same character can also be indicated pictorially in a variety of ways. The most significant of these, within the *family* tragicomic, *Fun Home*, with regards to the variation of authority and agency of different characters, is the stage of life that they are at. Bruce, for example, “didn’t have much use for small children, but as I got older, he began to sense my potential as an intellectual companion”.⁵⁶⁷ Clearly, though, this is not a generalizable sliding scale. There are, however, five common distinct pictorial intradiegetic Alisons from which all the other characters’ stages can be extrapolated, that is, their stages are relative to Alison’s,^{568, 569}

⁵⁶⁵ *Fun Home*, p. 68.

⁵⁶⁶ Ibid..

⁵⁶⁷ Op. Cit. p. 198.

⁵⁶⁸ Five is the number of distinct, recurring Alisons; there are several infrequently used ones as well.

⁵⁶⁹ There are also some other exceptional circumstances for characters before Alison has been born (which, itself, marks an interesting distinction between scenes Bechdel was present for and ones she has had to make up, especially given her penchant for truth, and whether she works these differently in some way) such as when Bruce was a child (p. 42) and when he and Helen are pregnant with Alison in Germany (p. 32).

in addition to the extra-diegetic Bechdel.⁵⁷⁰ The fact that these stages can be discerned, primarily, from Alison's haircuts is indicative that other variations in physical representation could also be considered as potentially significant. Sartorial variations, facial expressions and gestural indexes, however potentially useful and interesting, would require a lot of additional work.

These envelopes determine, in part, how the reader receives the already narratologically distinct verbal level of speech. The envelope of the character speaking operates on the words they speak. Indeed, whilst a word accumulates idiolectal meaning and significance through its usage – as seen with 'Spartan', above – the context of those usages is also significant, they are part of the assemblage of the panel. It would be reductive to see as directly comparable the presentation of Alison's relationship with Helen when she is a child and they discuss whether Alison has had 'bad thoughts' about her parents (Figure 67), and when they discuss Bruce's suicide when Alison is home from college (Figure 68). Therefore, even though each of these panels contains a reference to Helen's role as Alison's parent in the header, discusses Alison's thoughts about Bruce, and occurs at the Bechdel home, their differences cannot be reasonably explained by the different mode of referring to Helen ('Mom' vs 'Mother'), even though her mode of addressing her mother was a significant concern of Alison's when she was growing up.⁵⁷¹ The variation in their interaction is more likely, though not certainly, driven by Alison's age rather than a different contextual detail or panel structure. Although the characters 'Alison' and 'Helen' have the same relationship in these two examples, their roles towards one another are different, and this is caused by and indicated in Alison's age.

⁵⁷⁰ It is worth noting that in the musical adaptation of *Fun Home*, two intra-diegetic and one extra-diegetic Alison is used: Alison as a child (small Alison); Alison as a teenager and college student (medium Alison); Alison as narrator. This meant that three of the nine actors in the musical played an Alison.

⁵⁷¹ *Are You My Mother?*, p. 85.



Figure 67: *Fun Home*, p. 138.

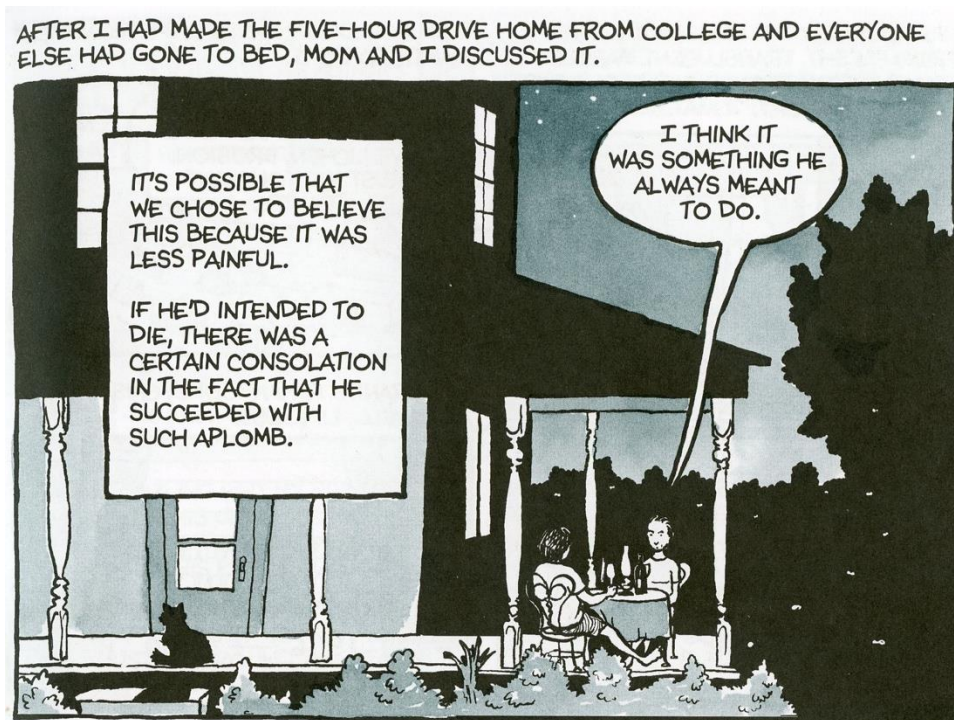


Figure 68: *Fun Home*, p. 29.

Their interactions also, however, contribute to understandings of how the book presents parents and children, just as how, when Bruce becomes Alison's high school teacher he contributes not only to the book's presentation of parents, but also to its representation of

teachers.⁵⁷² These roles are both singular and composite; not only can ‘Bruce’ and ‘teacher’ be understood as categories, but so can ‘Bruce as teacher’, each establishing their own profiles and norms of usage. In this sense, roles are significant in and of themselves as abstract entities operating on a scene or panel, in the same way as archival material or page layout do; they are becomings assembled at a common site within the book’s network.⁵⁷³

The clearest ‘roles’ that are played out in the narrative however, again demonstrating the thematic significance of literature, are Helen’s literal roles in plays which are presented both in rehearsal – often with Alison – and in performance – often to Alison and the rest of the family, as well as the other audience members. Considering Helen as a character – an agent of change and a synthetic part of many assemblages – by drawing together all of her pictorial and verbal presences and her speech acts, a marked shift in her discourse would be expected when she speaks lines written by a playwright. Of course, in *Fun Home* she already speaks lines written by Bechdel,⁵⁷⁴ but when she speaks the words of Albee, Wilde or the Goetzes, a stylometric analysis would recognise these as distinct, idiosyncratic. They function as a lens over her speech and represent a different part of her being.

It should be noted, however, that this is another instance in which Bechdel’s selection is highly significant. Although Helen is not speaking as Helen, or at least Bechdel’s ventriloquized Helen, when she acts, Bechdel has still rhetorically selected these words from the plays; just as Bechdel did not choose what word followed ‘Lesbian’ alphabetically in the dictionary but chose to retain ‘Lese majeste’, the fact that she did not choose which plays Helen acted in during her childhood, does not mean her selection from that list, of both plays and particular lines, is not

⁵⁷² *Fun Home*, p. 198-9.

⁵⁷³ It should be noted that this is a unique opportunity of the comics medium, in that the panel affords a static scene in which a character’s various relationships to different characters can be seen, and at various levels of verbal and pictorial presence. On a panel by panel basis then, characters are present (to differing degrees) and therefore a subtle modulation of relationships can occur at each panel change.

⁵⁷⁴ It should be noted that much of her speech in *Are You My Mother?* is transcribed during phone conversations, as seen on page 11.

rhetorically significant. Before Alison is old enough to run lines with Helen, for example, Helen rehearses with one of her fellow actors. The extra-diegetic header reads: “Once I went with her to a house where she argued with a strange man, as if she knew him intimately. / This was acting”.⁵⁷⁵ These panels occur between an exposition of Bruce’s creative talents and Helen’s talent playing the piano, and within a larger theme of the Bechdels’ “separate [creative] pursuits” which, for Bruce and Helen, “was all that sustained them”.⁵⁷⁶ These two panels serve to indicate, then, that Helen was involved in the theatre. There is no requirement for Bechdel to show her reader which play was being rehearsed in this, already rhetorically selected, example. Indeed, given Alison’s intra-diegetic age it is possible that it required research, rather than being a distinct memory. In the same vein, the lines of dialogue she depicts Helen as speaking have clearly been selected for effect; they add meaning, significance and association to the panel. The reader cannot, and should not, read Helen speaking Mommy’s line “I have a right to live off you because I married you, and because I used to let you get on top of me and bump your uglies” without considering how they reflect on Helen’s own life and the broader narrative.⁵⁷⁷ This is the very power and affordance of the comics medium at work and it enables Bechdel to construct the character of Helen, and the categories of ‘mother’ and ‘parent,’ in interesting ways.

Although such a differentiation of roles is most easily discerned in the role of an actress, all and any roles – mother, teacher, lover – operate in this way. As suggested by my variation of ‘mother’ and ‘parent’, roles are, once again, an area in which the uncertainty of what, precisely, is the significant facet of a concept – just as it is uncertain which syntactic structural units are being rhetorically mobilised – means that a ‘feminist’ approach to data creation is a productive way forward of identifying concordancing trends and patterns. The potential differentiation in

⁵⁷⁵ *Fun Home*, p. 131.

⁵⁷⁶ *Op. Cit.* p. 134.

⁵⁷⁷ *Op. Cit.* p. 131.

the presentation of mothers and fathers, for example, may be interesting to quantify given Bechdel's own suggestion that "the bar is lower for fathers than for mothers".⁵⁷⁸ Likewise, the differentiation of spouses from romantic partners – thereby drawing Bruce and Helen's married relationship into dialogue and comparison not only with their relationship before marriage but also Bruce's relationships with his teenaged students, particularly Roy and Bill, Alison's relationship with Joan and even Petruchio's relationship with Katherine in *The Taming of the Shrew* –⁵⁷⁹ will offer interesting insights into Bechdel's presentation of relationships.

As I suggested with Helen's acting, these different roles also offer the reader a different lens, new variables, through which to understand a character as a whole. Bruce, for example, can be considered as a father, a parent, a son, a child, a teacher and a student, and through these different roles, what is distinctive about Bechdel's usage, phrasing and articulation of Bruce can be investigated. As El Refaie explains, "we all adopt multiple roles depending on the social contexts in which we find ourselves".⁵⁸⁰ These roles, however, are not only multiple across contexts but within them. In Figure Thirty-Three, for example, Bruce is not only a husband and spouse to Helen (as well as being grouped in nomenclature as part of "my [Alison's] parents"), but a father and parent to his children and a lover to Roy. Bruce, however, is also Roy's teacher, and will become Alison's. This raises the point that, even within this multiple approach to 'Truth' and 'Being', situatedness is also important. Roles, and being, are temporally, chronologically and contextually dependent. Although the reader is made aware that Helen is, like Bruce, an English teacher,⁵⁸¹ we never see her in this guise. Similarly, though

⁵⁷⁸ Op. Cit. p. 22.

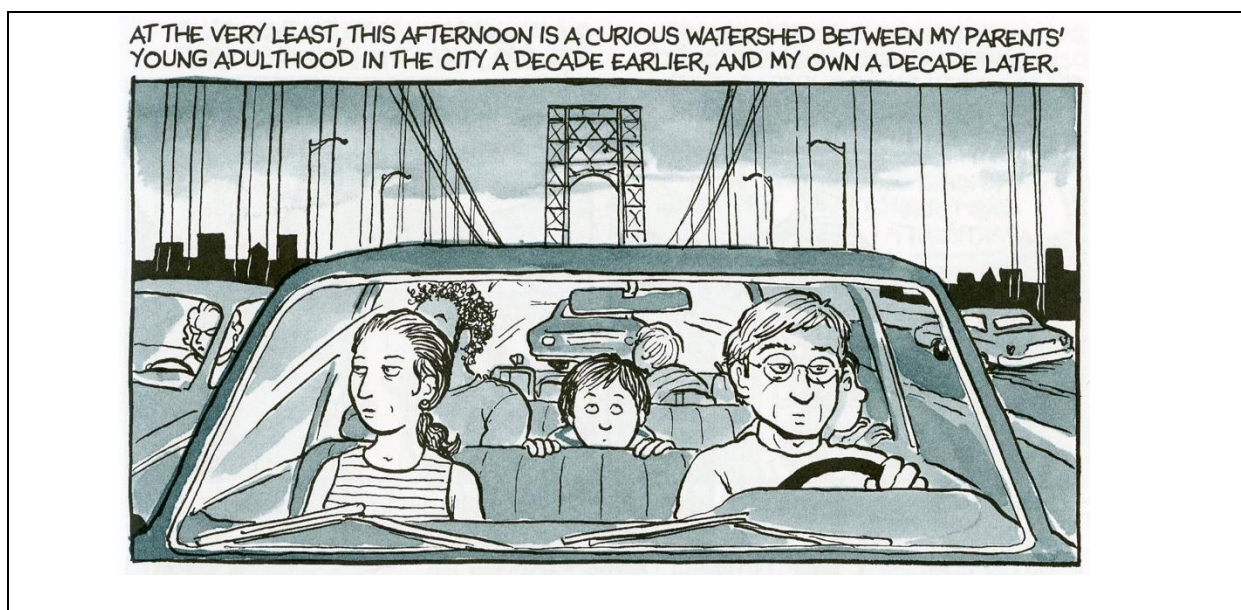
⁵⁷⁹ Op. Cit. p. 69.

⁵⁸⁰ El Refaie, p. 138.

⁵⁸¹ *Fun Home*, p. 19.

Bruce is Roy's teacher,⁵⁸² this is only referenced once and, again, only in the verbal component.

⁵⁸³ Ought their 'teacher-ness' be marked up differently? And with Alison's homosexuality: she has "qualms" at thirteen and a "realization" at nineteen, both of which are depicted in Figure Eight from page seventy-four, but the reader is first made aware of this when Bechdel makes reference to her "girlfriend" on page forty-six. Are Bruce and Helen only teachers in the panels that that role is described or depicted? Could the same determiner be said to function satisfactorily for Alison's homosexuality? Are they always teachers or is it only the case from the point that the reader becomes aware of it? And if it is the latter, does that include panels in which they are not yet, temporally, teachers, such as when Bruce is in the army and Helen works in New York? In other words, does intra- or extra-diegetic representation determine classification; is chronology or narrative time more significant? How significant is prior knowledge compared to what is explicitly being highlighted through presentation in a particular panel? Are Bruce's significant relationships in Figure 68 his relationships with Helen and Alison because of the verbal 'my parents' being the foregrounded, explicitly stated bond or are all his relationships, stated or not, equally important here?



⁵⁸² Op. Cit. p. 61.

⁵⁸³ Unlike Helen, however, Bruce is depicted actually teaching and on multiple occasions: pp. 33, 198-9.

Figure 68: *Fun Home*, p. 105.

Each possible answer gives the reader and researcher different perspectives, none of which can be authoritatively declared to be the ‘correct’ one, nor need they be. These multiple perspectives are interesting and need to be embraced for just this reason; they allow a researcher to see which different scenes or panels can be drawn together, brought into conversation, when different positions are taken. Since the narrative mode of comics operates with larger syntactic base units than does traditional prose literature – ⁵⁸⁴ a panel holds more signifiers than a sentence does, and is arguably a more ‘complete’ site – the concordancing potential is richer and affords a greater potential for connection. Mobilising this potential within a narrative enables a researcher to understand how different understandings of the information of the comic, different perspectives on data creation, open up different concordances or indexes, link panels and scenes together differently. This responds to El Refaie’s point that one of the ways in which memoir functions is by drawing on the “unavoidable fluidity of our self identity”, ⁵⁸⁵ a fluidity that is also drawn on in the pictorial/verbal duality. It also mitigates the issue of the data creator only being able to discover patterns that they have imposed on the original artefact; it turns the process of data classification into an investigative method, as I suggested previously.

⁵⁸⁴ As well as a greater volume of hierarchical nesting (panel; row; page; double page; chapter as opposed to sentence; paragraph; chapter).

⁵⁸⁵ El Refaie, p. 18.

Modelling Scenes and Chronology

First, it bears noting the mode by which I was able to address these scene categorisations. In order to group panels into scenes and chronologies it was necessary to get them into a form where I could easily move them around, and place them next to one another for comparison, rather than take panels on a case by case basis and try to keep the classification consistent. This was, in part, necessary because I was not going in with strict definitions of what I wanted to classify, but rather, went in knowing what I wanted to investigate but not how it should best be taxonomised, preferring to engage closely with the source as I classified. To achieve this I removed the binding from two copies of *Fun Home* – two because I needed the recto and verso side of each page – so that I could cut out the panels and place them in chronological sets, whilst retaining groups of panels that clearly followed on from one another.

The alternative method to this literal deconstruction of the text would be to carry out an equivalent process on a computer. Technologically this would not be a complex task, however, there are two reasons that I chose to perform the task manually. *Fun Home* does not currently have a digital surrogate – though to be able to manipulate that hypothetical document would have required breaking the DRM (Digital Rights Management) – which means that to get a digital version of the text it would have been necessary to scan the book in page by page. The copyright implications of such an act are somewhat uncertain, though if the system on which this copy was stored was hacked it would be an illegal breach of copyright. Taking a low-tech approach meant that I did not have to engage with the copyright implications of digitally scanning an author's intellectual property.⁵⁸⁶ Further, on a purely practical level, it is easier to see a large amount of information, a large quantity of panels, when using physical rather than

⁵⁸⁶ It is also worth noting that the recent change in UK copyright law, establishing the right to mine data, is a privilege not currently shared across other countries. In order to keep this methodology accessible to those without such dispensation it was worth not taking advantage of this new ruling.

digital panels given the limited size of the computer screens available. This meant it was easier to assemble and disassemble groups of panels.

An effect of this was that it encouraged a greater engagement with the act of breaking down, of taking apart, a graphic narrative. The physical act emphasises the deconstruction of the text and is more deliberate; the gravity of the cut is more keenly felt. This deliberation is important. The pause that proceeds cutting apart two panels that, once separate, will be harder to relocate is a productive tension – what Nowviskie alludes to in her allusion to William Morris’s ‘resistance in the materials’³⁸⁷ – a space for thought and reflection. Simultaneously, then, this analogue method has a wider scope than a digitally-performed panel by panel categorisation, but also makes the researcher pause for longer before separating two panels because it will take that bit more time revising that decision.

To demonstrate the process of creating the taxonomy I will go through it, stage by stage. Starting with the most basic formation I will introduce case studies or elements that confuse the mode of describing a classification, cumulatively building a model. This should accrete information at a manageable rate, and explain the decisions behind the classificatory model rather than merely present it as self-evident.

Chronology Description

The definition of a ‘scene’ must operate separately to, but in conversation with, mere chronology. By recording chronology separately, the notion of the ‘scene’ is freed from the potential burden of representing temporal linearity; the model of the scene can be made more interesting, and more useful, when it does not just have to bear sequentiality. Chronology, then, operates at one higher remove from the ‘scene’, it is broader in scope and slower in tempo. To

³⁸⁷ Bethany Nowviskie, *resistance in the materials* (2013) <<http://nowviskie.org/2013/resistance-in-the-materials/>> [accessed 2 October 2017].

sort panels into chronological sets I used the different haircuts Bechdel gives Alison. As Figure 69 documents, Bechdel uses six main haircuts for the different stages of Alison's life, each of which indicates a different period of her youth. Nearly all of these have an age attached to them at some stage in the memoir, and those that do not tend to occur at stages of her life that are easy to discern anyway.⁵⁸⁸ Relying on Alison's haircuts was a dependable method of sorting panels into sets since there are very few sequences that do not involve Alison, since, generally, for something to be included in the memoir, Alison would have had to have been present to witness it. A few of the outliers – such as when Bruce spends time with Mark Walsh⁵⁸⁹ – are described in relation to what Alison was doing at the time, which returns them to a clear set, but the majority of the exceptions to this rule are before Alison is born – and principally during Bruce's time in the army – and can be grouped as such.

Within these broader chronological sets it is also possible to order some events into positions relative to one another with close reading.⁵⁹⁰ Those events that cannot be chronologised beyond their haircut superset, however, should not be considered less interesting, but, rather, pose their own questions of usage. Despite the usefulness of close reading to chronologise events within sets, however, an important benefit of grouping by Alison's haircut is that it means the pictorial classification is not overly reliant on verbal information, an important consideration when asking questions about the pictorial information of the piece. As such, the broader haircut supersets reflect a pictorially-determined classification, whereas the subsets within these chronologies reflect a conceptualisation of the text that allows verbal information to operate on the classification of pictorial information. The model, therefore, accounts for either theoretical position.

⁵⁸⁸ An example of this would be the wedge Alison sports on p.45, when she is discussing Bruce's death, "years after my father's death" (45).

⁵⁸⁹ Alison Bechdel, *Fun Home* (London: Jonathan Cape, 2006), p. 161.

⁵⁹⁰ It is an interesting feature of *Fun Home*, in fact, that Chapter Six does a lot of the chronologising of events that have been depicted in earlier chapters.



Figure 69: *Fun Home*, pp. 95, 85, 16, 189, 81, 53

Montage

Bechdel has two main modes of organising her pictorial content. This conclusion is a result of the computational thinking which the act of classification necessitates. Over and again I was variously faced with what I could comfortably call – separate to the particular taxonomical language needed for my actual categorisations – scenes (which obeyed some level of cause and effect, or narrative trajectory) and what might better be understood as montages. An example of panels that operate in montage – by which I mean stand alone and are thematically, not diegetically, linked – can be seen in Figure 70, below, where Bruce renovates the Bechdel family home.

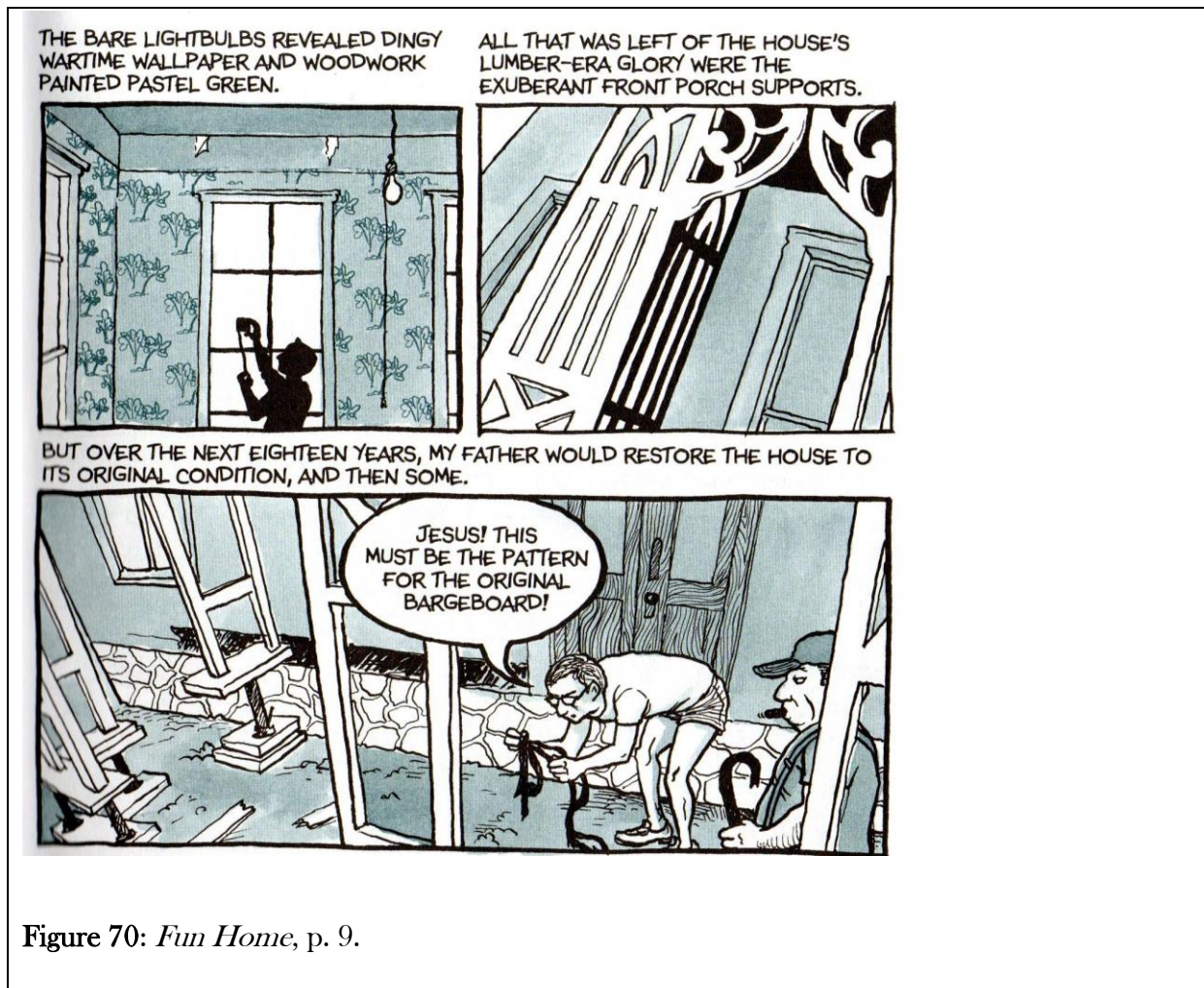


Figure 70: *Fun Home*, p. 9.

In these images there is much more a sense of collage than causality. Arguably the whole book – the whole medium, potentially – exists in a state of montage, though, given the fact that, as Bechdel has explicitly stated,⁵⁹¹ and as is clear from the book, *Fun Home* is ordered thematically (rather than linearly). In this sense, the definition of a ‘scene’ is the definition of fragments of the overall montage which are made up of more than one panel. Units of montage, such as in Figure 70, that consist of only one panel are more usefully considered chronologically, but could be conceptualised as single-panel scenes. Although such units are available to query, the rest of this chapter will consider only units larger than a single panel.

⁵⁹¹ Alison Bechdel, *Alison Bechdel Q&A - Seattle, WA (for Are You My Mother?: A Comic Drama)* (2012) <<https://www.youtube.com/watch?v=0ayXbaTWzIY>> [accessed 9 February 2017], (9:58).

Gutter Duration

The least ambiguous example of a scene is characterised by a continuous conversation carried out across a sequence of consecutive panels. In a dramatic sense, the word ‘scene’ seems entirely appropriate for such a group of panels. What such a sequence offers is a continuous and consistent rhythm or metre across the gutters. Although there is still some level of assumption in this statement, it is the assumption and expectation on which the medium is predicated and, therefore, it is sufficiently unproblematic to state that, in such sequences, time passes in a uniform manner. Such a grouping is the most limited definition of a scene and even splits Figure 71 into multiple ‘scenes’. Even in the context of a consistent layout and consistent panel sizes, there is technically no way of knowing the length of the pauses for certain.

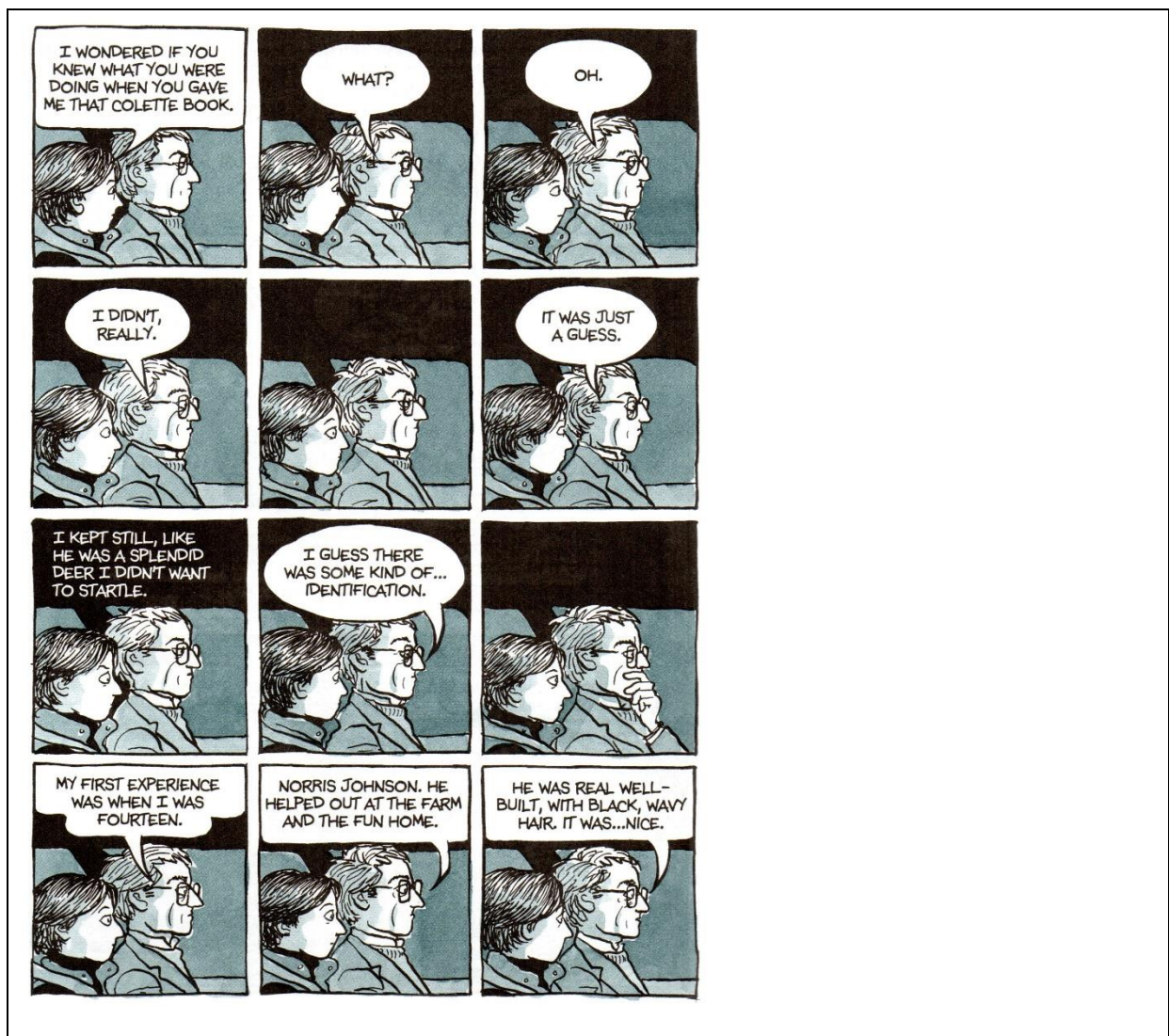


Figure 71: *Fun Home*, p. 220.

This definition, however, creates a lot of very limited scenes and, for most purposes, overly segments the panels, though later I will show how such a definition is useful when brought into conversation with other definitions. The consistent location and the continuation of a conversation, with the clear causal relationships between panels, however, are sufficient in every other definition of a scene. A consistent conversation, in most instances, forms a rigorous definition of a scene, and tends to indicate a consistent passage of time. This second definition of scenes, however, is still one of the more restricted definitions; scenes can also be understood outside of the predictable passage of time required in these two, stricter, definitions.

It is not just the rate at which time passes but the quantity of time that passes which contributes to the above Figure being described as a scene in all but the continuous conversation definition. In Figure 72 there is a clear narrative arc and causal relationships between panels but inconsistent periods of time pass in the gutter. Alison makes a call home; she then talks to her boss at the library over two panels; cycles home; is consoled by her girlfriend; then arrives home in one panel before grinning at John in another.

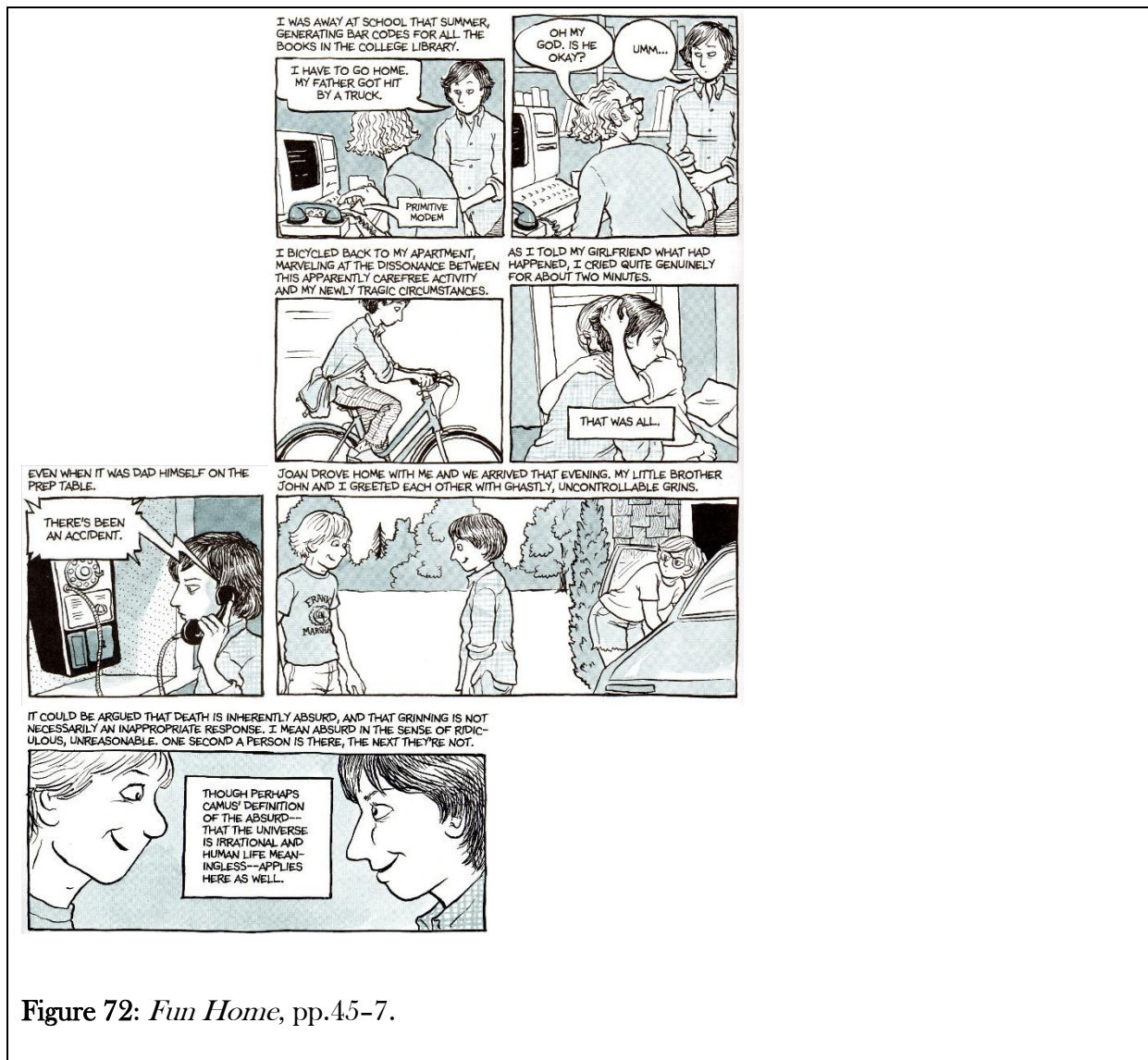


Figure 72: *Fun Home*, pp.45-7.

Examining just the gutters between the last three panels demonstrates the differences in time lapse. From being held by Joan at Oberlin to being greeted by John in Beech Creek there is, at least, a four-hour period occupied by the drive between the two locations; from standing about a metre from John to standing about thirty centimetres from him, only seconds can have passed. Clearly the way in which this narrative arc unfolds is different to Bruce and Alison's conversation in the car in Figure 71. But it is also different to the montage of Bruce fixing up the Bechdel family home in Figure 70, even if it could be considered to be a montage of responding to the news of her father's death. What further complicates this sequence's scene-ness is that, due to the inconsistent gutter durations, it includes two instances that fit the more

restrictive definitions of scenes, the conversation with her boss and the silent interaction with John. Not dissimilarly, in Figure Five, Alison writes, seals, and posts a letter before receiving a letter in response, and then later receiving a phone call which takes place over three panels (the third of which is not depicted, here). The duration of the gutters between the first three panels, here, are long, relative to the back-and-forth conversation of the final three panels, but are very short in comparison to the time between Alison sending the letter and receiving a response, and between her receiving a response and getting a phone call.⁵⁹² There is, once again, a clear narrative arc across these panels but the inconsistent gutter durations require them to be categorised differently to Figure 71.



⁵⁹² Later in the book the reader finds out that that Helen's letter arrived "a week and a half later" (77) and that it was "a few days later" than that when she called Alison (79).

This is where different understandings or definitions of scenes, which sometimes overlap, are useful. It is possible to consider the first three panels as one sub-scene and the final three as another, with the fourth panel only part of a broader arc encompassing all seven panels. The first three can thus be recorded as a letter-writing sub-scene, the final three can be recorded as a conversation (as well as panels five and six being defined as a continuous conversation, since the seventh panel does not include any speech), and all seven can be included as one narrative arc. The same approach can be taken in taxonomising Figure 72 although many of the panels in that sequence would only be part of the broader arc. The fact that one of these scenes occurred in a relatively consistent location and the other varied greatly in this respect, but that both are classified in the same way, reflects how location is not a significant factor in these examples of defining scenes. Causality and temporal proximity are more important.

It is worth considering, however, whether the standalone panels in these examples operate differently because they occur in the middle of an arc, rather than at either end. Of course, in Figure 72, the phone call Alison makes occurs in the first panel, but it is clearly a stimulus for the rest of the arc. In Figure 74, however, where Bruce is depicted with a freshly arranged display of lilacs in the top panel, which he is seen carrying away once they have faded a few panels later, does the same rule apply?

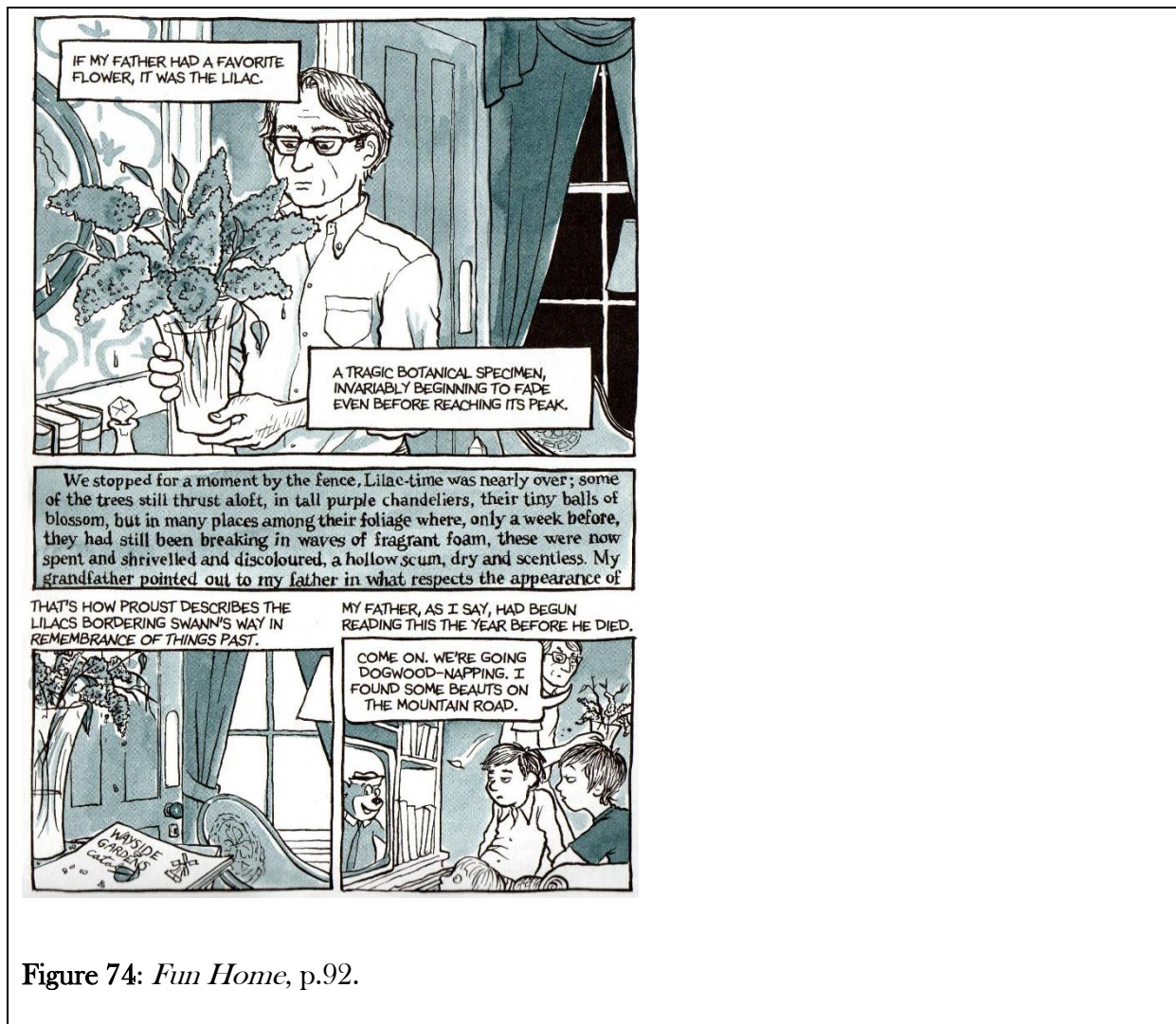


Figure 74: *Fun Home*, p.92.

In the final panel on this page Bruce's speech initiates a sequence that proceeds over the following three pages where the Bechdel children help him steal some dogwoods for the garden. To what extent is the panel at the top of this page part of that scene? It does not play the catalytic role that Alison's call home did, and nor is it a transitional panel between two sub-scenes within a narrative arc. Relative to the rest of the narrative arc the timespan between it and the other panels is wide: lilacs, when properly cared for, can take up to five days to fade; the rest of the narrative arc could not have taken much longer than five hours. Despite these limitations, though, it would be difficult to support a reading that suggested that this first panel was no more part of this scene than any other panel in the book, so at some level of definition it must be included. In fact, even excluding this top panel, and focusing rather on the left-hand

panel on the bottom row, the same questions would be raised. In this instance, and comparable incidences actually occur relatively frequently in *Fun Home*, this panel should be considered as an ‘establisher’ for the rest of the arc. As such there are classifications of a ‘scene’ which include and exclude such establishers, depending on the definition that I, or another researcher, wishes to mobilise. This class of ‘establisher’ negotiates such panels that are more part of the scene than every other panel in the book, but do not play a catalytic, a transitional, or a strictly causal role in a scene.

Proximity

This analysis, however, glossed over a separate question which applies to all of the last three examples. In the lilac scene, the top panel is separated from the rest of the scene by a passage of Proust; in the wake of Bruce’s death, Alison and John are depicted continuing their absurd grins three pages later; and Alison’s phone conversation with Helen, from Figure Five, is not only resumed after a couple of panels (one all text, the other a flash forward to Bruce’s death) but is reprised and continued on page seventy-nine. It is a feature of Bechdel’s narrative – and indeed one of the core premises of this project – that she intersperses archival material, literary allusion, and temporal and spatial shifts into her more linear diegesis, but to what extent can these be considered elements that interrupt, and therefore end, a scene? It is here that maintaining a separate classification for chronology is useful. Whilst in each of these scenarios the disconnected panels refer to the same event, there is a difference between a scene and an event; there would be no value in classifying everything that refers to the same event as the same ‘scene’ as well, since that connection is already caught in the chronological classification. The notion of ‘scene’ has to add something to the notion of ‘event’. Whilst events are blind to the book’s linearity, scenes are locally-delimited. For this reason any reprisal of an event that occurs after a separate scene begins a new scene. Events can be revisited, but a scene is halted by the intervention of a different multi-panel scene. As such, Bruce holding his fresh lilacs, and

Alison continuing her phone conversation two panels later can be considered part of the same scene, but John and Alison's grin three pages later, and the resumption of the phone call on page seventy-nine cannot.⁵⁹³

It is worth reiterating, here, that under the first and second definitions of 'scenes' that I outlined, none of these extensions could be considered 'scenes'. Every potential scene is judged against all of the different definitions in the taxonomy and delimited where appropriate. Some definitions are contingent on the panels being sequential, others are not, just as some are contingent on being temporally consistent and others are not, and some are contingent on a continuous location and others are not. An example of this final facet, iso-location, can be demonstrated by considering the sequence when John goes missing in New York. Across pages 192 and 193, John walks alone to the Hudson from Elly's flat. The sequence begins and ends in Elly's flat but seven of the eleven panels in the sequence occur outside of the flat. In definitions of scenes where iso-location is not important this is classed as a single scene, but other definitions split it into two scenes, the one in Elly's flat and the one outside of it.

Modelling Conclusion

Creating a taxonomy to describe the events of a narrative is a kind of critical making, it is a mode of engaging with a text and of arguing about a text. The taxonomy of arguments about scenes, above, is not complete but it covers the various understandings of scenes that I wanted to investigate in my research. Nor is it a closed group. If other researchers wanted to add their own definitions or interpretations and to build off this work that would be interesting, possible and welcome. Although the mode of classification has been analogue, it should be stated that it is in the processing and analysis of these classifications that the digital enables my research.

⁵⁹³ It is worth briefly reiterating that under the first and second definitions of 'scenes', however, neither of these would be considered scenes. Every potential scene is judged according to every definition included in the taxonomy.

Indeed, this investigative, ‘feminist’ approach is only viable with digital processing behind it. As Mark Sample quotes Tom Scheinfeldt as stating, “what’s game-changing about digital technology is the way it allows us ‘to make and remake’ texts in order ‘to produce meaning after meaning’”.³⁹⁴ The most important use of digital technology in this method, then, is that it enables the ‘mak[ing] and remak[ing]’ that Scheinfeldt describes when alternating interpretations of the source material in the ‘feminist’ mode outlined here. Its capacity to quickly alternate different variables and different understandings of those variables – here demonstrated with scenes – in order to perceive correlations and patterns between the variables, and their definitions, makes it possible to productively and quickly identify the patterns left during the classification stage. Not only is the process of thinking computationally productive for a researcher’s understanding of a text, and the classifications they will ultimately be able to mine, but it is investigatively useful for leveraging different interpretations of difficult to define entities such as scenes. Whilst my analysis uses this method for every classification it performs, it is possible for researchers to use it only for the topics or themes that they are interested in, and to supplement or challenge computationally-derived image tags or clusters. With image-classification becoming an increasingly delegated and automatised part of Digital Humanities projects, this project demonstrates the benefits of thinking computationally and hand-coding primary sources.

Conclusion

This project was initially motivated by one question: what can digital methodologies bring to the close reading of comics? Specifically I set out to address and extend a theory in Groensteen’s “promiscuous transition” which at once felt intuitively powerful and frustratingly un(der-)realised, dismissed either explicitly as beyond human readers’ memory or implicitly through

³⁹⁴ Mark Sample, *Notes towards a Deformed Humanities* (2012) <<http://www.samplereality.com/2012/05/02/notes-towards-a-deformed-humanities/>> [accessed 2 October 2017].

lack of adoption. Whilst there are several projects doing excellent work on corpus-driven research into comics, seeking better answers and better questions about the history of comics and its development as a form, I wanted to leverage the database against a single text, responding to Bechdel's own formulation about her design for *Fun Home*, that by writing very closely about the individual, the result would apply more universally.

Restating of Contributions

Verbal Solidarity and its rhetorical potential

My first analysis chapter challenged Comics Studies' marginalisation of the word and raised it to parity with the image as a rhetorically-loaded and structural unit for analysis. Although critics such as Helene Tison, Valery Rohy, Hillary Chute, Monica Pearl, and Ann Cvetkovich, amongst many others have addressed in valuable ways some locally-limited verbal braids, metonymy, and Bechdel's use of the archive, I demonstrated how their analogue mode of analysis hamstrung their analyses, even in a text so vociferously verbal as *Fun Home*. Indeed, Groensteen's own study of Bechdel's memoir, despite praising its literariness and intricate nature, almost entirely glosses over the verbal connections being made between panels, following through on the iconic proclivities he originally asserted in *The System of Comics*. By pursuing a verbal turn, my example of Sunbeam bread, alongside companion case studies of "Country Squire", "Spartan", "absurd" and "orgy", revealed the analytical potential of considering both the extra- and intra-diegetic text as a rhetorical and structural mechanism, central to comics. As such, I supplemented Groensteen's "iconic solidarity" with my own "verbal solidarity".

The Strength of Braids and what this means for the network of comics

My second chapter of analysis then added nuance to Groensteen's relatively homogeneous "braid", the means by which both verbal and iconic solidarity bring two or more panels into

conversation. By introducing the concept of braid strength, which I measure as indirectly proportional to frequency, I not only add nuance to the concept of the braid, but lay the groundwork for discussing the connectedness and the centrality of panels to a text. This means that I am modelling the comic as more of a dynamic network, with braids crossing one another and interacting, rather than a document wherein a close reader might only pick up one or two strands and (try to, in an analogue mode) follow them through. In this context, then, it became easier to pick up Analysis One's attention to Sunbeam again, and take the edge – Sunbeam – as the object of analysis, rather than the nodes/panels that it connects. By following what might be considered a comics version of Key Word In Context analysis (but with all the superior affordances that the panel brings to that) I showed the analytical potency of considering which terms certain braids frequently co-occur with, expanding again the notion of comic as network as the various networks of signifiers interact and interconnect.

Towards a wider System of Comics

In my third Analysis chapter I add a final layer of texture to the network of *Fun Home*, taking a wider lens on the text. By analysing the distribution of most frequent words, as well as the distribution of characters and roles, as they populate chapters it was possible to set the previous analyses in a different context, a context where “distance is a feature of knowledge”.³⁹⁵ Adding this chapter orientation not only allowed me to spatialize the results I had found in the previous chapters, but to go some way towards interrogate Bechdel's claim of structuring *Fun Home* thematically. Particularly, however, this chapter functioned as a proof of concept for the future work that I hope this thesis can inspire in Comics Studies, which I will now detail.

³⁹⁵ Franco Moretti, *Conjectures on World Literature*, pp. 57-58

Final Reflections

It is worth reflecting, at the end of this thesis, on my status as both a Digital Humanities scholar and a Comics Studies scholar. I believe this project demonstrates, through the relative simplicity of its digital approach, that individual scholars, and ones without a high degree of digital literacy, can still “tinker” productively on idiosyncratic projects, as Julia Flanders put it.⁵⁹⁶

It is my hope, also, that my work on each of Verbal Solidarity and Feminist Data Creation can help inform some of the excellent work being carried out by larger projects employing quantitative approaches to comics. Particularly, though, I think that the findings across my Analysis Chapters, and in my Future Modelling Chapter demonstrate the valuable insights that “thinking computationally” can offer scholars.

The most positive intervention that this thesis makes, I believe, is a demonstration of the validity and utility of Verbal Solidarity for Comics Studies, but this is an intervention that I do not believe I would have arrived at without my digital methods, without “thinking computationally”.⁵⁹⁷ Being forced to iteratively go over the text, and model what I was finding, and try to remodel in response to that – as I discuss in the conclusions to those Analysis Chapters – created insights which have applications for analogue, as well as digital scholars of comics. My analysis of Verbal Solidarity and its affordances should, of course, be set in the context of Bechdel’s highly textual memoir. Hers is a style, in both its verbosity and its recursion, that is an outlier amongst graphic narratives. Even accepting this, though, I believe the ideas that I was developing in Analysis Two, about different types of braiding functions and about different strengths of braids, open up productive avenues for further research on not only verbal braids, but pictorial ones as well.

⁵⁹⁶ Qtd. in Walsh.

⁵⁹⁷ McCarty. n.p.

I am resolute in my opening conviction of the resonance between Digital Humanities's concordancing inclinations, and comics' mode of articulating time, the panel. I believe that one of the most important outcomes from this analysis was the connection, the braiding if you will allow me, of these two informational technologies. Finally, I think it worth revisiting what it is that the database brought to this analysis of comics more generally, and *Fun Home* more specifically. These advantages were completeness, speed and complexity.

In terms of completeness, having a database behind my verbal search queries offered me a higher degree of certainty that I had found every instance of a signifier in the text when it came to analysis. Since this was an effect of having carefully input and then checked all of my database entries, it is not unreasonable to suggest, in terms of time commitment, that the database would not always save a researcher time if they knew which verbal signifier they wanted to study. I would suggest that for researchers who want to follow multiple verbal braids, however, the security of a database's completeness rewards the time investment. It should be added that this effect is particularly useful after words have been lemmatised and reduced to their stems, especially for words that occur very frequently. Whilst it is true that a braid such as "Sunbeam" occurs fewer than ten times, and could thus be analysed manually, any analysis of the usage of the more frequently occurring words such as "father", "dad", "mother" would be very challenging for a researcher without a database. This, of course, is also true when looking at pictorial signifiers, as characters such as Alison and Bruce who combine for almost a thousand occurrences.³⁹⁸ To further complement this work, it would be interesting to extend this completeness, extend the dataset, by clarifying the text's deictic terms. Whilst, in the analyses here presented, these were expelled with the rest of the stop words, I think it would be productive to try and fold these terms back into the dataset, thinking of, for example, "his" as

³⁹⁸ For more information on these totals and others, see the final analysis chapter.

merely a different envelope, in that Deleuzoguattarian sense mentioned in *Meaning-Making in Comics*, for “Bruce”. I look forward to such further experimentations.

The second advantage of the digital mode I adopted for this analysis was speed. Speed and completeness can be understood to be complementary in the sense that, in order for a scholar to feel they have successfully located a complete set of a word’s usages, they will have to invest a higher volume of time. As such, whilst it would technically be possible for a researcher to manually create a complete dataset of “father”’s one hundred and forty usages, with assiduous checking, this would be impractical.

The final, and potentially most useful, affordance of using a database for this work was the complexity of analysis it facilitates. Once more, in a sense this is a function of its affordance for speed and complexity. Whilst it would be possible for an analogue reader to compile the usages of “Sunbeam” and even “father”, to follow those signifiers on their adventures through the text, to analyse their particular usage in the text’s idiolect, and to see which panels these signifiers braid together, it is at the next stage of analysis that the database really exceeds human capacity. What the database can offer here is the ability to quickly retrieve a complete set of “father”’s usages, and then return the frequency with which it co-occurs with every other verbal signifier in the text. It enables jumping from the network of one braid to others, and even to combinations of three signifiers. Further, it enables a reading to proceed through a relay of connection. A researcher can start with a single verbal braid connecting two panels, and pick up on a different verbal braid from each of these, and so on, creating a network of allusion.

Future Areas for Research

Bechdel’s rich text has proved a productive testbed not only for investigating a more verbally-oriented reading of comics as a form, but for understanding the rhetorical affordances of the medium more broadly. Both her verbosity and her seemingly inexhaustible vocabulary

offered a deep corpus of verbal braids and elisions of such braids, as well as broader insights into the nature of braids. It also offers several avenues down which this analysis can be taken in future work. The fixedness of comics' signifiers in panels, that is the basis of this work, offers a potentially fascinating analysis of the different verbal structures and relationships at work in the seven translations that *Fun Home* as elicited. Further, moving from the realm of comics to theatre, work could potentially be undertaken on Lisa Kron and Jeanine Tesori's musical adaptation of the memoir, replacing panels with scenes, and perhaps, following Tesori's comments about the interiority/exteriority of songs and spoken dialogue in musicals, even a comparison made to the narrativising headers of the comic and the dialogue.

In my Introduction I wrote about how the narrative of a comic is organised by structural, spatial, temporal, and thematic logics, suggesting that "each of the different kinds of organising logics in comics, or lines along which the text can be folded, operate on a comic's content, its words and its images". In the future I intend to build on the verbal braids, and the more complex understandings of them that I related in my second Analysis chapter, and move beyond the panel, to the rows, and page layouts of comics. Whilst critical attention to page layouts tends to be reserved for the unique and remarkable layouts, I believe it will be worth folding the more frequently used layouts into an analysis. Further, by modelling the themes and chronologies of *Fun Home*, I plan to extend this work into an understanding of how the dialogue between these structuring forms can function in comics, how these different forces interact, how they "meet, reroute, and disrupt one another".⁵⁹⁹ As such, I see this thesis as a stepping stone to an increasingly complex modelling of the systematics of *Fun Home*, and a deeper understanding of the comics medium's unique affordance for signification.

⁵⁹⁹ Caroline Levine. *Forms: Whole, Rhythm, Hierarchy, Network*. , 2017. Print., p. 23

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