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To cite this article: Alex Prior & Maanasa Sivashankar (2023) Our future in space: the physical and virtual opening-up of parliaments to publics, *The Journal of Legislative Studies*, 29:3, 463-481, DOI: [10.1080/13572334.2023.2202090](https://doi.org/10.1080/13572334.2023.2202090)

To link to this article: <https://doi.org/10.1080/13572334.2023.2202090>



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Published online: 20 Apr 2023.



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Our future in space: the physical and virtual opening-up of parliaments to publics

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ABSTRACT

Parliaments are physical symbols of nationhood and democracy. Public access to these spaces is often strictly regulated, yet it remains highly influential to public experiences of parliament (and their engagement with it). Drawing on data collected for the Inter-Parliamentary Union's 2022 Global Parliamentary Report, this article discusses ways in which parliamentary 'space' can be utilised to encourage public engagement. This encompasses the effective use of physical space, virtual reality and augmented reality for the purpose of public engagement. In doing so, we show the most important and effective strategy for (re)using, and opening up, parliamentary spaces: the complementary use of physical and virtual methods in not only bringing publics to parliament, but also bringing parliament to publics.

ARTICLE HISTORY Received 27 November 2022; Accepted 9 April 2023

KEYWORDS Parliaments; public space; public engagement; virtual reality; augmented reality

Introduction

Parliaments are sites of common access, concerns, and performances. They are simultaneously tangible – as buildings, landmarks, meeting places, venues – and intangible as 'an abstraction, a kind of fiction ... a way of managing disagreement'.¹ Their appearance and location likewise play a simultaneously practical and symbolic role. Indeed, parliaments exemplify the practical *within* the symbolic (Loewenberg, 2011). Consistent with this practical-symbolic role, parliaments present a nexus between historical significance and contemporary practice, as they

are not merely monuments [but] built environments and inhabited spaces. They express not just cultural content that pre-dates the structure – as in

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Preservation – but also contemporaneous attitudes and behaviour. Building interiors are particularly important here, for their surfaces and objects are utilized by occupants on a daily basis and thus receive the imprint of current behaviour. Hence ... architecture acts as a record or index of ongoing political life. (Goodsell, 1988, p. 288)

This discussion is all the more important for parliaments in a context of increased efforts, and impetus, for public engagement (Inter-Parliamentary Union, 2022). The practical challenges that parliaments face in this respect were especially visible during the Covid-19 pandemic (Prior & Kornberg, 2021). These two contextual points contribute to the timeliness of this article, which seeks to explore parliaments' practical (re)use of space (both physical and virtual) for purposes that are both immediately practical and practical-symbolic. In doing so, it provides valuable insight into the means by which 'parliamentary space' can be conceptualised and utilised.

This article first defines the concept of 'space' as it pertains to parliament, before discussing the ways in which parliamentary space can be understood and used in both physical and virtual contexts. Accordingly, we focus our discussion on particular methods of using space in an engaging manner: their applications, the opportunities presented by these methods, and the challenges (both specific and more general) that such methods encounter in practice. We will conclude the discussion with a broader comparison of physical and virtual methods, future challenges, and potential means of addressing these challenges.

The importance of parliaments as spaces

In a discussion about 'space', it is important to define this term and its relation to parliaments. In Lefebvre's view, 'space is material and humans in its production also produce a code and language of space', which presents space as a nexus between 'the physical, the mental and the social' (Fuchs, 2018, p. 134). In discussing 'public spaces' – and parliaments as a specific case in point – Parkinson (2013, p. 440) argues that space can be 'public' in the sense of being openly accessible, a repository/source of common resources/effects, and/or a site of public performances.

Both of these conceptualisations of 'space' are useful in discussing how parliaments occupy and use it. Through this framework, we understand how 'parliaments across the world with the same architectural shape can be performed in very different ways, due to the bodies, customs, rituals, and contests that appear within them' (Puwar, 2021, p. 251).

Most modern parliamentary buildings are designed and built to encourage positive perceptions of parliament as a space and, perhaps more significantly, as an institution:

From Thomas Jefferson – who called them ‘Halls of the People’ – to the architects of the Australian Parliament House and the National Assembly for Wales, designers have celebrated openness and accessibility and produced designs that, in one way or another, are meant to express that value physically and symbolically. (Parkinson, 2013, p. 438)

Nevertheless, there is always a risk of ‘build[ing] isolation into the very fabric of legislative assemblies, and into the rules governing public galleries’ (Parkinson, 2013, p. 448). This isolation was indeed ‘built into’ many older parliaments, which were originally conceived and designed as symbols of power and can thus be intimidating to visitors. As Dovey observes, ‘architecture has great inertia – it inevitably ‘fixes’ a great deal of economic capital into built form ... it enforces a social order’ (2010, p. 39).

This point is relevant to the study of democratic and non-democratic regimes, since the ‘monumentality’ of such buildings can not only intimidate visitors, but ‘reinforce the self-perceptions of those government officials and bureaucrats who identify this exalted territory as their own’, reinforcing ‘existing hierarchies’ as well as ‘extremes of power and impotence’ (Vale, 1993, p. 274). In more explicitly pragmatic terms, modern demands of functionality and security can make parliaments seemingly (and/or literally) inaccessible, problematising the images of openness, transparency and inclusion that they may wish to communicate:

... most [parliaments] are now protected by heavy security both internally and externally ... The kinds of visitors who are welcomed at many assemblies are tourists and school children, and are taught about democratic citizenship in a building that strictly curtails their ability to express that citizenship. (Parkinson, 2013, p. 438)

Examples of parliamentary buildings as isolated and ‘insulated’ from publics include Louis Kahn’s Capitol Complex for Dhaka Bangladesh:

Though he also talked of the need for ‘connection’ and ‘available institutions,’ Kahn’s own notes on the project reveal how Dhaka officials insisted that the Assembly area be reserved for a limited and controllable clientele. (Vale, 1993, p. 274)

Additional examples include Geoffrey Bawa’s Parliamentary House for Sri Lanka, an island temple rooted in vernacular (i.e. ‘non-monumental’) building techniques but sitting on a lake with security posts and reachable only by a single causeway, limiting its access to the larger public. The Parliament of Bhutan, located in the capital city of Thimphu, has limited potential for public access due to rugged terrain and underdeveloped transport infrastructure. Even in countries with highly developed infrastructure (such as Iceland), long distances across varied terrain can be a disincentive to in-person participation. Parliaments can thus be literally and figuratively ‘cut off’ from those they ostensibly represent.

Parliaments are also an increasing area of study as gendered spaces. 'In most cases', as Rai (2010, p. 285) points out, 'parliaments remain privileged spaces dominated by men from the upper classes, castes or dominant religions, regions and races'. Such accounts often focus on the exclusion of women representatives from parliamentary spaces, with findings that are also pertinent to visitors as they relate to 'public' symbolic spaces (and workplaces). Speaking on the case of the UK Parliament, Puwar contends that, despite encouraging recent developments in the proportion of women MPs in the Commons,

the weight of the past is not yet past. Legally both Houses were built for men of specific masculinities. Even as women are in the process of becoming the norm ... they are still performatively donning a political lion skin ... which has been designed for men ... When women wear the male lion skin they are considered to be unbecoming in that skin. And this is precisely the case as there is an undeclared somatic norm upon which the universal figure of leadership is premised. (2021, pp. 252-253)

Erikson and Josefsson (2022, p. 22), meanwhile, point out that despite 'numerous competing masculinities and femininities, the 'institutional masculinity' present in male dominated spaces underpins a particular hegemonic masculinity 'empowering and advantaging certain men over all (or almost all) women and some men'. These studies have also been applied to supranational legislatures. At this level, a study by the European Institute for Gender Equality found that

[t]he European Parliament offers adequate childcare facilities on its premises for staff and visitors, and enhances the gender sensitivity of the physical spaces of the Parliament. However, further efforts are required to emphasise women's contribution to politics and democracy in the Parliament buildings, given that, for example, most spaces are still named after men. (2019, p. 21)

Most parliaments provide a range of public-facing services that make use of physical space. These include tours, open days, and exhibitions. More recently, parliaments have begun to experiment with the use of digital technology, including virtual and augmented reality. Ostensibly, this development would seem to address many of the issues inherent in (physical) parliamentary space, on both sides of the public-institution dynamic: for example, facilitating and/or encouraging an experience of parliamentary space from under-represented publics, with minimal risk to physical infrastructure.

Nevertheless, this development raises some new issues and exacerbates others. The technology for virtual and augmented reality is resource-intensive (for both parliaments and publics), and may create an overlapping disenfranchisement of publics who have neither the time nor resources (to say nothing of inclination) to visit parliament physically, and no access to digital infrastructure either. Moreover, the value of such virtual interactions (compared with the physical equivalents discussed below) remains debatable.

Methods: discussing space

This article draws on research undertaken for the Inter-Parliamentary Union (IPU) and United Nations Development Programme's (UNDP) third Global Parliamentary Report (GPR). This research comprised 141 participants – 85 parliamentary staffers and 48 MPs, across nearly 80 countries – who took part in interviews or focus groups. Interviews and focus groups (conducted in a semi-structured format) were undertaken online by the GPR research team, and subsequently transcribed, between September 2020 and January 2021.

The research participants were selected through responses to a survey distributed by the IPU to its 179 member parliaments. Survey respondents were asked to recommend potential interview participants. The recommended participants that consented to take part in this study were then interviewed or included within a focus group. The sample (containing a diverse range of countries in terms of democratic development, socioeconomic status and demography) comprised an almost 50/50 split between male and female participants, with 33 percent being from Africa and Middle East, 33 percent from Europe, 20 percent from the Americas, and 14 percent from Asia and the Pacific.

In a study of this kind it is important to include staff as participants, and not just Members, though the latter often gain a higher profile in engagement activities (being ostensibly more 'public-facing' in their jobs by definition). Staff nevertheless play a crucial role in 'deliver[ing] public engagement activities to the public', and 'determin[ing] what should be developed, seeing the largely non-political nature of this type of activity' (Leston-Bandeira, 2016, p. 501).

Interviewees typically discussed 'space' as a resource or entity, whether in a physical or digital sense. It was invoked both in terms of input (i.e. a physical/virtual tour *requires* a space to walk around in) and output (a physical/virtual workshop can *create* a space for discussion). As such, the interviewees typically invoked terminology around 'space' while discussing specific engagement methods (or broader efforts in this regard) and the opportunities and challenges that these raised. These will be discussed throughout the article, and are summarised below:

Type of space	Examples	Opportunities	Challenges
Physical	Tours Exhibitions Open days	Relatively low cost, utilising existing infrastructure Can present new messages about parliament (e.g. as inclusive, diverse)	Tours can risk focusing on heritage rather than ongoing relevance Dependence on public proximity to parliament

(Continued)

Continued.

Type of space	Examples	Opportunities	Challenges
	Building new spaces (e.g. visitor centres)	Can be purpose-built for engagement High symbolic value in building inclusive spaces	Resource-intensive (money, time, expertise) Dependence on public proximity to parliament
Virtual and augmented reality	Virtual tours Immersive apps	Audiences can experience space at their leisure Can reach geographically distant communities Can present parliaments as innovative, modern institutions	Resource-intensive (money, time, expertise, digital infrastructure) Requires public to have internet access and/or smartphones

As shown above, the means by which parliaments can make effective use of their ‘space’ can be broadly categorised into physical and virtual/augmented forms. Clearly there are distinctions and nuances within these categorisations; in the case of physical spaces, a distinction should be made between methods that require new spaces to be built, and those that make use of (or re-use) existing spaces. Nevertheless these two categorisations are useful in organising methods, opportunities and challenges. We will begin our discussion by focusing on the effective use of physical space.

Physical space: increasing accessibility and enriching experiences

In communicating openness and transparency to publics, parliaments can make effective use of existing buildings and spaces. There are many ways of carrying this out, including open days and exhibitions. Tours are also widely used in facilitating public interaction with parliaments and (in some cases) elected representatives.

In many countries, however, parliamentary tours often focus almost exclusively on physical design and history rather than where (and how) parliamentary business is carried out. This type of tour often portrays a parliament as a heritage site, rather than a functioning political institution. By contrast, Japhet Muthomi, Chief Public Communications Officer at the National Assembly of Kenya, illustrated how tours can be tailored to visitors in a way that demonstrates their relevance:

when there is space, we allow them in the chamber, in the gallery ... We take them on a tour of parliament and ask questions of the lawmaking process and where applicable, we invite people who come from the area they are coming from, like the Senator or the member of the National Assembly for that area, we invite them to address them.²

A similarly tailored use of parliamentary space can be seen in Germany, where every Member of the Bundestag can, twice a year, invite 50 citizens from their constituency to visit Berlin

to get to know at first hand the political scene in Berlin, the work of the Members of the Bundestag, the Federal Government and the Ministries. A range of important sites of contemporary history are also visited. The length of stay in Berlin depends on the distance between the constituency in question and Berlin (from 1 to 3 nights). (House of Commons Select Committee on Administration, 2007)

These activities ‘can be educational for citizens and contribute to building their interest to engage in the legislative process’ (ParlAmericas, 2018, p. 21). They can also make use of a wide variety of educational methods, including roleplay.³ In Australia, the Parliamentary Education Office has run a series of events for mature age groups; through this programme, public participants have

toured Parliament House, met their federal member or senator if available, participated in a parliamentary roleplay, and observed Question Time in action. A revised version of the programme – Venture into Parliament (ViP) – is now provided by the Parliamentary Education Office and remains oversubscribed. (Hansard Society, 2011, p. 29)

Roleplay is also employed in Norway’s ‘MiniTing’; a 500-square-metre complex replicating the parliamentary chamber, opened in 2005 in the Storting (Parliament). Older students (aged 16–19) are the target audience; on visits to the MiniTing, they are typically asked to

divide into their party groups and agree their positions before splitting into committees for hearings. Each committee then rotates between four ‘working stations’: oral question time; group room services (where they can read e-mails, answer phone calls etc.); information kiosks where they meet voters, lobbyists and the media; and a TV debate. The role-play ends in a plenary debate. Around 6,000 students attend the MiniTing each year. (Hansard Society, 2011, p. 65)

These activities are very recent introductions to many parliaments. Sierra Leonean MP Quentin Sallia highlighted the novelty⁴ of the Parliament of Sierra Leone opening its doors from 9 to 11 December 2019 for ‘all walks of life including farmers, pupils, persons with disabilities, the aged, civil societies, and the media’ (United Nations Development Programme, 2019). Visitors were able to explore parliamentary space and converse with representatives and officials, who provided leaflets and presentations.⁵ One visitor commented that

this [is] the first opportunity for [learning about] parliament, and how it operates for the improvement of this country ... I feel good and happy for that ... I see a lot of people who [would be] good leaders and imagine could be elected ... I hope and pray that I will be one of them. (Sierra Network Radio, 2019)

Through these activities, publics can learn about what parliament is and what it does, and connect this to their own lives. The effective use of parliamentary space can therefore play a valuable role in demonstrating parliaments’

relevance. It can also provide opportunities for publics to see their representatives working, communicating accountability both figuratively and literally. In the case of the Reichstag building (the seat of the German Bundestag), a public space in the roof allows citizens to look down onto the political proceedings below. Public galleries enable visitors to watch debates and other proceedings, and are utilised across many legislatures including the Parliament of Canada, the US Congress, the UK Parliament, and the Scottish Parliament.

Parliamentary space can also be opened up by facilitating greater public access across greater distances. This can be achieved by subsidising visits, a service provided by parliaments including the German Bundestag and the Brazilian National Congress. David Clark, Deputy Chief Of Staff (External Affairs) to the Speaker at the UK House of Commons, described the UK Parliament's introduction of a travel subsidy for school visits:

We spend over £750,000 a year on a transport subsidy. So the schools [that are] furthest away receive a bursary towards actually coming to parliament ... no one should be economically disadvantaged by engaging in their democracy.⁶

New and accessible spaces can also be built within parliamentary premises. Many parliaments now have a dedicated visitor centre for the purpose of public information and education. These vary considerably in their offerings. For example, the visitor centre for the Swedish Riksdag provides 'an enquiry service, TV coverage of the Chamber, official documents, books souvenirs, exhibitions, lectures and seminars; in Portugal multimedia presentations are prominent; whilst in the Scottish Parliament child-care is also provided' (Hansard Society, 2011, p. 37).

The Hansard Society found that 'the most significant new development in this area is to be found in Washington DC. Its success in terms of sheer throughput of visitor numbers in its first years demonstrates that, if done well, there is a public appetite for such a facility' (Hansard Society, 2011, p. 37). Opening in December 2008, the US Capitol Visitor Centre received over 15,000 visitors per day between March and April 2009. By March 2011, five million visitors had been registered.

These spaces can contribute significantly to the number – and diversity – of visitors to parliaments. Subsequent to the opening of the UK Parliament Education Centre in 2015, 'the number of pupils and teachers participating in school visits to Parliament has increased substantially, from about 64,000 in 2015/16 to about 92,000 in 2016/17. The number of schools visiting Parliament increased from around 1,800 to around 2,800 in the same year' (House of Commons Library, 2017, p. 22).

In 2018, Trevor Mallard – Speaker of the New Zealand House of Representatives – announced plans for the building of a playground, open to all publics. The aim of this space was to make Parliament more family-friendly,

welcoming, and accessible. Such spaces can both reflect and reinforce the principles that parliaments attempt to communicate. As New Zealand MP Louisa Wall observed,

We're celebrating our history ... and encouraging people to come and look at our facilities and to use our facilities ... this is their house. This is their place ... all the symbolism around what's on our walls, the art ... it's very multicultural, multi-ethnic.⁷

The built environment of the UK Parliament is under increased discussion, given proposals for a multi-billion pound 'Restoration and Renewal' program, which would likely involve the temporary relocation of key functions (as well as Members themselves). Consistent with the theme of 'renewal', recommendations abound as to how these functions (which include public engagement and representation) can be not only maintained but improved:

... the physical form of the new spaces in which parliamentary debates and scrutiny will take place during any decant should be sufficiently flexible to trial new ways of doing politics – ways that might both enhance the effectiveness within the House, and the legitimacy of the House amongst the electorate. (Childs, 2016, p. 33)

Parliaments (as *spaces*) have always reflected the societies in which they were established. Historically, this meant that parliaments reflected – and indeed celebrated – the inclusion of certain groups and the exclusion of others. The portraits and statues that populate many parliaments symbolise privilege (and, by extension, exclusion) which sends a countervailing message to the methods discussed here. To ensure that these spaces remain relevant to people's lives, parliaments must convey messages of inclusivity and diversity within tours, exhibitions, and other experiences.

On this point, it is possible for the medium (to quote Marshall McLuhan) to be the message. Spaces can be moveable, even mobile; and their perimeters need not be fixed. The National Assembly of Ecuador utilises a bus for public engagement, with 'on-screen interactive resources that travels across the country creating a participative space for citizens to learn about the functions and the management of the National Assembly' (ParlAmericas, 2018, p. 18). Meanwhile, the National Assembly of Nicaragua sets up ad-hoc spaces that are 'coordinated by the National Assembly and universities ... to convene parliamentarians and the university community to discuss legislative work' (ParlAmericas, 2018, p. 18). Parliamentary space can thus be mobile and polymorphous to suit the needs of publics.

It is also important to recognise that engagement opportunities do not always need to be organised by the relevant parliament. In some instances, it is acceptable – even beneficial – for parliaments to facilitate (or at least not restrict) more spontaneous forms of interaction with parliamentary space. The Scottish Parliament, for example, describes public protest and

gatherings (on or near its own grounds) as a sign of public recognition as ‘a physical focal point for Scottish politics’ (Orr & Siebert, 2021, p. 17). Indeed, these incidents trigger productive discussion on

the extent to which the architecture of the precincts supports and enables such public political engagement at this site ... especially on a dark evening, the environs may be somewhat hazardous for those gathering. The low walls, kerbs and water features – despite their aesthetic and symbolic merits – do not necessarily lend themselves to this area acting as a space in which the public can come together as a democratic expression. (Orr & Siebert, 2021, p. 17)

The methods discussed so far show us how parliaments’ physical space can be effectively (re)used – and/or built upon – to make these institutions more engaging and accessible to numerous publics. In the following section we will discuss how this same space can be engaged with (and made even more engaging and accessible) through virtual and augmented reality.

Virtual and augmented reality: bringing publics to parliament, and parliaments to publics

Digital technology has allowed parliamentarians to connect with publics over vast distances. Parliamentary committees can now hear oral evidence from a wider range of sources, beyond those willing or able to travel to them.

The use of video tours by parliaments can replicate (though not replace) physical space from a distance. In responding to the GPR questionnaire, the parliaments of the Czech Republic, Iceland, Ireland, North Macedonia, Poland and Canada made reference to virtual tours and experiences.⁸ Virtual tours were described by the Canadian Parliament as ‘preserv[ing] public access to Centre Block⁹ during its closure, offering innovative new ways for Canadians to understand and engage with Parliament’s people, functions and history’.¹⁰ Dejan Dimitrievski, Head of the Education and Communication Unit at the Assembly of North Macedonia, noted that

I wouldn’t say it’s like a normal experience, but it’s the closest thing that we can do ... The participants are coming back for the virtual tour. So I would say that’s a [real] success during this pandemic.¹¹

A great deal of work in this area was prompted by the Covid-19 pandemic (Hockaday, 2021), which forced parliaments to move their existing engagement functions online (Prior & Kornberg, 2021). Virtual tours can incorporate interactive material and allow the user to take their own ‘route’. For the 3D tour of Leinster House (in the Irish parliamentary complex), users can click on items and learn about their historical importance, and the functions of specific rooms. Combining historical and contemporary detail can present parliament not only as a site of heritage, but of ongoing political relevance.

In 2018 The New Zealand Parliament released a virtual reality app called Parliament XR, a virtual reality app that provides a 360-degree tour of Parliament with narration of the institution's history (New Zealand Parliament, 2018). David Wilson – Clerk of the New Zealand House of Representatives – described this virtual experience as part of the House's strategic objective:

We set a goal of all children visiting parliament during their time at school ... either in person or virtually. We can't realistically get every child through the doors, probably, when Wellington's in the centre of the country ... And cost is a barrier for travel for some people. So we developed a virtual tour of parliament ... a 3D interactive tour, which is available on various virtual reality apps [and] specialised headsets for it ... it can be viewed on people's phones with cardboard headsets, which we would give to MPs and they take [them] to schools as they go out and meet with school students ... The kids love it because they get to keep something ... MPs love it because it's a gift they can give to people.

Distinct from virtual reality, augmented reality (AR) 'fulfils three basic features: a combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects' (Wu et al., 2012). This 'layers interactive virtual objects on real environments in real time, so that users perceive the virtual objects to be part of the real world' (Blanco-Pons et al., 2019, p. 3).

For parliaments, potential applications range from augmented reality tours to the exhibition of artistic works. For example, the Japanese National Diet Library has made many of its artworks available via the Google Arts and Culture App, by which smartphone users can view a three-dimensional image of the artwork through their screen. The UK Parliamentary Education Centre has three themed teaching rooms, each with a unique augmented reality experience. 'By simply pointing a device at an image on the wall of a classroom, a portrait springs to life, with the featured monarch then telling the user about their relationship with parliament' (Peel Interactive, 2015). The app was discontinued in 2020; it was planned as an add-on to educational workshops, which subsequently changed in format. The reduced time given to workshop facilitators meant that maintenance of the app was no longer viable.¹²

This raises an important point in relation to parliamentary investment in VR/AR technology (and technology in general); these tools can quickly become unviable or obsolete. Moreover, they require regular updates and maintenance, and therefore carry an ongoing cost beyond their setup. An awareness of substantial *and* ongoing costs should be a consideration for parliamentary staff when discussing such new and innovative engagement mechanisms.

Studies directly comparing physical to virtual experiences of public institutions are very few.¹³ A comparative study of tours of a US state capitol building¹⁴ concluded that 'individuals in the physically present and 360-

degree video condition had no differences between them. This suggests that 360-degree video tourism may be a strong analogue to a real-world experience' (Wagler & Hanus, 2018, p. 456). When discussing 360-degree virtual tours, Yang et al. contend that

many developers focus on providing a sense of the 'real'. However, participants tend to have a sense of 'being there' rather than the sense of the 'real' ... People who have been to a tourist destination are looking for more than a 'real' sense of the tourist destination in their memory. They like 360° content because they want to discover an ideal place where they can have more than in the real place ... they like to have the 360° virtual tour experience that they could never have accessed in the 'real' environment. (2021, p. 8)

This connects back to the previous discussion about virtual experiences such as Leinster House and Parliament XR, which can provide publics with greater control over the space and information that they explore entirely at their leisure. It suggests that virtual reality can provide not only a 'strong analogue' but an enhancement of the sense of 'being there' at a parliament, rather than a simulacrum of the 'real' space.

Comparing physical and virtual/augmented experiences: opportunities and challenges

In consideration of the discussions raised at the beginning of this article, we return to the point that 'being there' – at a parliament – will likely evoke very different reactions depending on the public in question. It is far from obvious that virtual or augmented reality would allay, or even address, the kinds of concerns that Edelman raised (in relation to purely physical presence) more than 50 years ago:

The scale of the structures reminds the mass of political spectators that they enter the precincts of power as clients or as supplicants, susceptible to arbitrary rebuffs and favors and that they are subject to remote authorities they only dimly know or understand. (1978, p. 3)

Both types of technology replicate the visual appearance (and, in the case of augmented reality, even the scale) of the respective institution. As such, there is a distinct risk that virtual and augmented reality methods would simply 'broadcast' parliamentary spaces – and any symbolically/practically problematic elements therein – to an ever-greater audience. This may have the effect of doubling-down on all of the problematic features of parliaments discussed at the beginning of this article. Addressing this risk would require innovation in practice, to match the respective technology (not a traditional strength of parliaments)¹⁵ and complementary innovation in physical space.

Public engagement with the physical space of parliament is often dependent on public proximity (or ability to travel) to the capital. Christoph

Konrath of the Austrian National Council commented that ‘[public] events are more or less restricted to audiences from Vienna, and its [surrounding area] because for others it would be too long [a distance] ... to come to Vienna for just an hour [long] event’.¹⁶ Though many parliaments offer subsidies to widen access, this can only be done by parliaments with the necessary resources. The costs of engagement for publics (in terms of time, money, and knowledge) falls especially heavily upon already marginalised or disadvantaged communities, a self-reinforcing cycle given that high participation costs present ‘missed opportunities to use their political voice to raise their views, concerns, and challenges, or leverage the momentum of electoral campaigns to influence future policy making’ (Westminster Foundation for Democracy, 2021, p. 16).

New digital tools also demand a great deal from publics (in terms of time and technological literacy, for example). Though Mencarelli (2021, p. 9) acknowledges (in the context of Covid-19 adaptations) that ‘the recognition of virtual forms of parliamentary engagement of civic interests can play down the consequences of electoral systems’ in terms of capturing minority voices, he also notes

a risk that expanding the tools for civic engagement in parliamentary work through digital technologies could end up exacerbating inequalities to the detriment of the most vulnerable groups and the least informed or equipped individuals. (2021, p. 7)

There is also a substantial cost to building new physical spaces. The US Capitol Visitor Centre took six years to build, with total costs running to \$621 million (Hansard Society, 2011). The New Zealand playground costs were widely reported in the news media, with estimates ranging from \$572,000 (Campbell, 2022); the site has attracted controversy not only for cost overruns, but for its lack of accessibility to those with disabilities. Nevertheless, effective use of physical space plays a central role in facilitating accessibility and engagement as a core role of parliaments.

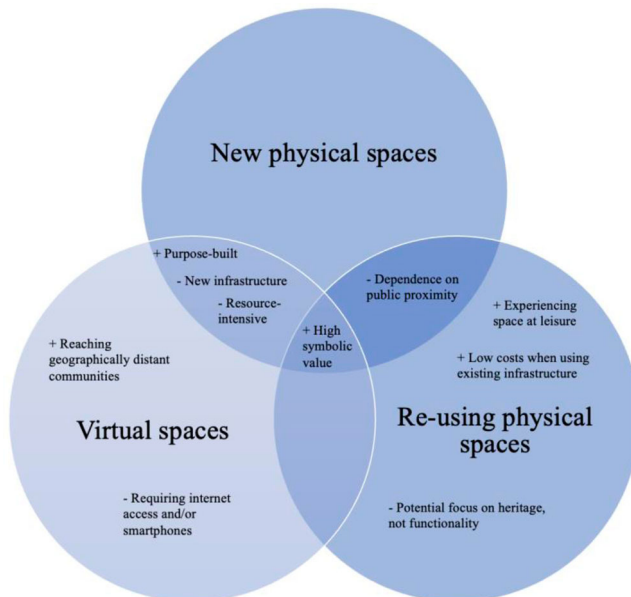
VR methods require substantial resources and expertise (in the case of New Zealand, Mr Mallard cited the assistance of a local cable company and other such partnerships in the Parliament XR project). It should also be noted that ‘more research is needed into whether VR can make real differences to the quality of interaction; pilots in this area are scarce’ (Nesta, 2017, p. 92). Virtual reality (and by extension augmented reality) is applied most effectively in complementing – rather than replacing – the experience of physical space.

This addresses a broader point on resources and infrastructure. In the case of South Africa, Winnie Seoposenge – Team Leader for the North West Province Parliamentary Democracy Office – observed that

I need a hired vehicle and accommodation to move to another district. The distances can be around 200 kilometres, or 400 in other situations. So you will need accommodation. We need [a] laptop and data so that ... while you are in those particular district[s], [you] can continuously send [messages]. And you need human resources.¹⁷

One potential solution is partnering with the private sector. In discussing the New Zealand parliament's use of virtual reality, Trevor Mallard confirmed that 'one of our local cable companies donated ... something like 30-40,000' of the cardboard devices used in conjunction with the smartphone app.¹⁸ There are similar examples of this practice across sub-national parliaments. The Scottish Parliament set up the Scotland's Futures Forum to engage civil society in discussing long-term sociopolitical questions. The forum 'is operated as a company limited by guarantee in order to raise third party finance to support its work' (Hansard Society, 2011, p. 45). In terms of digital transformation more broadly, Kimaid and Fernandes (2022) observe that such partnerships 'can play a crucial role in reducing legislatures' political and financial cost by prototyping new digital solutions' (p. 68) and thus sharing the burden of development costs.

Nevertheless, in contexts where substantial distance is combined with low institutional resources, virtual/augmented reality tools are unlikely to bring parliament and publics closer together because of the cost of implementation and maintenance. In these contexts, effective use of parliaments' physical space remains paramount. This leads on to a broader observation that the challenges and opportunities presented by online and offline methods often overlap with each other. An indication of these relationships is provided below:



What this indicates (drawing on the discussions throughout this article) is that the use of physical and/or virtual space cannot work effectively in isolation, especially since no single method (virtual spaces; new physical spaces; re-using physical spaces) contains all possible opportunities or advantages. For example, both new and re-used physical spaces depend to some extent on public proximity to parliament; this challenge can be addressed, but not entirely ameliorated, by methods such as travel subsidies, and in any case not all parliaments possess the necessary resources for this. Virtual spaces, then, hold a distinct advantage in this regard, though they carry a cost that the re-use of physical spaces does not (necessarily). Examples such as this reinforce the need for holism across these three main 'options', and the numerous methods they comprise.

Conclusions

Parliaments are sites of democratic heritage, yet they also fulfil ongoing political functions. One of these functions is public engagement, which can be strengthened by the (re)use of existing parliamentary space (tours and exhibitions and open days, for example) and by opening up new spaces (such as visitor centres). Facilitating public access to parliaments (e.g. through travel bursaries, public events, and engaging outside of parliament) allows citizens to not only visit, but *experience* these institutions. Engagement efforts are symbolically important, but they also demonstrate the ongoing relevance of parliaments to publics by showing how they work. Parliaments can incorporate techniques such as roleplay into engagement events to communicate what they are, what they do, and what they stand for.

In combining virtual and in-person engagement, parliaments can ensure that they reach an increasingly vast and representative audience. However, these methods carry substantial and ongoing costs, and should be employed to complement – rather than replace – opportunities to engage in person. Whether individually or in combination, physical and digital spaces constitute strategic investments for parliaments. Nevertheless, these investments are crucial to what is increasingly acknowledged, and embraced, as a core function of parliamentary activity. They can also help parliaments work towards a model of engagement that captures as wide and diverse an audience as possible.

Notes

1. These are the words of a parliamentary official interviewed by Leston-Bandeira (2016, p. 509).
2. Japhet Muthomi (November 2020), Online, Interview with Temitayo Odeyemi.

3. The value of roleplay goes beyond parliamentary premises. The New Zealand House of Representatives website provides guidance for teachers on how to organise mock parliamentary debates. Cowley and Stuart also provide a reflection on the usefulness of practitioners and parliamentary staff in role play with university students (for example, in seminar rooms), observing that ‘almost all departments of politics have dozens of similar contacts with practitioners, of different types, who they routinely use to give talks or similar exercises with students. Our experience demonstrates that there are more imaginative ways of utilizing such contacts’ (2015, p. 201).
4. Quentin Sallia (January 2021), Online, Interview with Alex Prior.
5. Quentin Sallia (January 2021), Online, Interview with Alex Prior.
6. David Clark (September 2020), Online, Interview with Maya Kornberg and Alex Prior.
7. Louisa Wall (September 2020), Online, Interview with Maya Kornberg and Alex Prior.
8. Taken from responses to the IPU survey.
9. Centre Block contains the original House of Commons and Senate chambers, as well as many Members’ offices, and serves as the main building within the parliamentary complex on Parliament Hill in Ottawa.
10. Taken from responses to the IPU survey.
11. Dejan Dimitrievski (December 2020), Online, Interview with Marine Guéguin.
12. Parliament also launched an app called ‘Explore Westminster Hall’, ‘combin[ing] AR and VR experiences that are visually accurate and historically correct. By pointing the camera on handheld devices at trigger points around the hall, the app activates a series of narrated interactive encounters’ (Riaz, 2014). This app was later discontinued.
13. Studies of the behavioural effects of virtual reality are often explicitly business-oriented, though their findings still have relevance to scholars of engagement more broadly. De Canio et al.’s (2021) study of the effects of virtual tours on buying intentions, for example, observed that when publics cannot visit producers in person, they ‘may virtually tour the place where the product is produced with similar positive effects on sales. From this perspective, virtual and interactive technologies are an excellent tool to build and extend the relationship with customers’ (pp. 221–222).
14. The comparison conducted by Wagler & Hanus incorporated 2-D video footage, 360-degree VR headset, and physical attendance.
15. See, for example: Kelso, 2009, p. 337; Norton, 2007, p. 356.
16. Christoph Konrath (December 2020), Online, Interview with Temitayo Odeyemi.
17. Winnie Seoposenge (September 2020), Online, Interview with Maya Kornberg.
18. Trevor Mallard (September 2020), Online, Interview with Alex Prior.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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