Evaluating regional spatial imaginaries:
The Oxford-Cambridge Arc

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Abstract

The process of imagination is central to region-formation, underpinning the spatial definition and territorial bounding of areas, the development of spatial identity and institutional capacity, and the cultivation of social relations and networks. While recent academic contributions have crystallised certain theoretical dimensions, attempts to evaluate the nature and efficacy of regional spatial imaginaries remain ad hoc. In this paper we derive a general evaluative frame and six associated criteria against which particular regional spatial imaginaries can be appraised. This is then deployed to evaluate two major episodes in the construction of the putative 'Oxford-Cambridge Arc' in southern England.

Introduction: Regionalism and regional spatial imaginaries

Regions are relational, negotiable and historically contingent entities, constituted by processes, networks, and policy discourses operating within and beyond a region's territorial limits (Allen and Cochrane, 2010; Cochrane, 2012; Goodwin, 2013; Jonas, 2012; Jones, 2009; Paasi, 2010; Painter 2010). They are thus both real and imaginary spaces, the boundaries of which fluctuate according to competing agendas and interests (Allmendinger et al, 2015; Harrison et al, 2018). Within state projects and associated accumulation strategies, competing visions may emerge for particular regional spaces, arising from conflicting societal forces and interests (Jessop, 2016; Jessop et al, 2008). The resulting state spatial strategies 'often involve the identification of particular regional spaces as key objects of intervention, requiring an understanding of regionalization processes' (Mackinnon, 2020: 6; see also Oosterlynck, 2010). The focus of this paper is on evaluating such regional-formation, and particularly the role and performance of spatial imaginaries in constituting regional and city-regional economies.

Recent research on regionalization and the spatialization of the state has sought to focus on how strategy and agency amongst social actors result in concrete processes of regional formation. Studies have highlighted the variety of 'regional' formations, including *inter alia* regions (Alagic et al, 2017; Allen and Cochrane, 2007; Tomaney, 2002), supra-regions (see, for example, Lee, 2017; Mackinnon, 2020), sub-regions and 'soft spaces' (Allmendinger et al, 2015; Haughton et al, 2013; Valler et al, 2014), city-regions (Haughton et al, 2016; Jonas and Moisio, 2018; Jonas and Ward, 2007; Parr, 2005), global city-regions (Scott, 2001; Vogel et al, 2010) and megaregions (Harrison and Gu, 2019). Recognition of the growing importance of global city-regions, in particular, has framed much of the discussion about emergent spaces of globalisation and development. Here, Moisio and Jonas (2018) draw a distinction between city-regionalism as, respectively, a set of geo-economic, political-administrative and/or geopolitical processes, which more or less converge within particular regions yet in the literature are often treated as quite discrete processes shaping territory. Whereas the first set of processes has provided the focus for economic-geographical investigations of newly-emergent territorial forms of capitalist development (e.g. global city-regions, learning regions etc.), the latter two in particular open up opportunities for exploring the relationships between city-regional economic development processes and the political interests and imaginaries that underpin different discursive and policy manifestations of city-regionalism. In this regard, regionalism and city-regionalism can be examined both as particular spatial formations of capital accumulation and at the same time as

contingent societal planning and regulatory responses to the challenges accompanying newly-emergent city-regional economies and their associated political and discursive imaginaries.

At the same time, however, there is acknowledgement of how the planning and economic development of such spaces is problematic, not least where the 'widening geographic orbit of the city-region' overtakes municipal boundaries and less-developed territory (Scott, 2019: 16-17). In this context emphasis is increasingly directed towards various 'in-between spaces' (Phelps, 2017) including for example 'urban interstices' (Phelps and Silva, 2018), high-tech 'clumps', 'corridors', 'cores' and 'campuses' (Forsyth, 2014), and infrastructure or development corridors at multiple scales (Wiig and Silver, 2019). Whilst highlighting the growing importance of internal spatial connectivity in enhancing the functional and political coherence of such spaces, these studies emphasise their constitution not just as material spaces demanding investment and resources, but also as discursive and political imaginaries conceived and promoted by the national state and local/regional political actors. Such spatial formations often face challenges of regional formation, given their spatially dispersed and poorly connected urban form, their fragmented and under-developed governance arrangements, and their lack of embedded political culture and identity.

The process of *imagination* is thus central to region-formation, underpinning the spatial definition and territorial bounding of areas, the development of spatial identity and institutional capacity, and the cultivation of social relations and networks. Territorialized political imaginaries are especially important for mobilizing public support for state investment, the relaxation of planning restrictions, and other related policy actions targeted at local jurisdictional, business and civic interests located both within and outwith the imagined territory (Cox and Jonas, 1993; Healey 2009). Spatial imaginaries thus emerge as historically contingent social and political constructions, which serve to identify and demarcate regions, underpin their constitution as objects of governance, and thereby exert material influence on political relations, investment decisions, and patterns of spatial development. As Healey argues:

> In such situations, the intellectual challenge is to imagine the 'entity' in question…, its connectivities and the relation between its parts (people and groups, places and neighbourhoods) and the 'whole' (the city, or urban region understood as an entity), and the relations with wider systems which flow through such an area. Such strategic initiatives

also have to face the political challenge of mobilising attention to, and creating a 'public' around, such an entity (Healey, 2009: 440)

Here the emphasis is directed firmly towards the social construction of regions, and the 'historically contingent practices and discourses in which actors produce and give meaning to more or less bounded material and symbolic worlds' (Paasi, 2002: 804). Spatial imaginaries and their associated boundaries, symbols and institutions emerge through material practice, and in turn may come to exert influence over action, whether that action be reproductive, resistant or transformative (Paasi, op cit: 805). As Hajer and Versteeg have recently argued, imagination is thus the 'go-between' which dictates what types of change are seen as possible or impossible, and which thereby shapes our politics. As a result:

> It is therefore paramount that we pay careful attention to the political dynamics of imagination, including the creation of images of past, present and future. This means that we need to take seriously circulating images and metaphors and investigate the ways in which they (fail to) emerge, spread and have their effects (Hajer and Versteeg, 2020: 1-2)

Yet a key question is how to evaluate the efficacy of spatial imaginaries in these terms and the conditions under which this impact is or is not realised. In responding to this challenge, a dramaturgical standpoint (Hajer 2003, 2005) might assist in positing spatial imaginaries as a form of scripting and staging within which multiple players then subsequently act, generating more or less successful outcomes across a range of associated criteria (see below). In straightforward terms we might ask: To what extent is the proposed staging and scripting successful in shaping consequent political discourse, governance structures, policy commitments and systems of belief? As Hajer argues, this form of constructivist approach is particularly pertinent in analysis of new political spaces where the changing setting and staging of politics calls for more explicit attention to the dramaturgical side of political processes, as actors respond to the new context (Hajer, 2003).

High-tech corridor regions represent a case in point. These can be identified by the presence of innovative clusters of research and technology-driven industries (e.g. biotechnology, advanced manufacturing, ICT, etc.) which are often located in dispersed urban and suburban centres and loosely connected by major transportation corridors and/or collaborative regional governance arrangements (Wachsmuth, 2017; Storper, 2013). Local politicians and growth coalitions

operating in such newly-imagined regions look increasingly to new forms of regional collaboration in order to leverage additional infrastructural resources, capacities and finance from national governments and global investors (Jonas et al., 2010). Yet while investment in associated transportation and other infrastructures can have a direct bearing on the territorial coherence such spaces and the drawing of formal administrative and political boundaries, their constitution as effective spatial imaginaries also implies wider political, governmental, and cultural negotiation. It is the performance of these latter processes which forms the focus for our current investigation.

In this paper we derive a general evaluative frame for spatial imaginaries relating to regional and city-regional economies and apply this to the recent emergence of the 'Oxford-Cambridge Arc', a formative high-tech corridor region in southern England. The discussion is organized into five further sections: First, we examine definitional questions around spatial imaginaries as the basis for an evaluative frame and six associated criteria against which particular spatial imaginaries can be appraised. We then present a brief methodological note before the paper moves on to evaluate two major episodes in the construction of the Arc. This describes initially an attempt to introduce the 'O2C Arc' between 2003 and 2008/9, which would seek 'to create one of the most successful knowledge-based economies in Europe, with world leading aspirations' (Miles, 2008). However, this was a limited exercise which was unable to gain significant traction. The discussion then moves on to examine a subsequent review and launch of the 'Cambridge-Milton Keynes-Oxford' corridor – recently re-titled as the 'Oxford-Cambridge Arc' – underway since March 2016, which would make recommendations to 'maximise the potential of the area as a single, knowledge-intensive cluster that competes on a global stage whilst both protecting the area's high quality environment and securing the homes, and jobs, the region needs' (Osborne, 2016). This second episode is more substantial, though the limits of the Arc as spatial imaginary remain apparent. Finally, the conclusion summarises the evaluative outcomes and provides some more general reflections.

2. Spatial imaginaries – an evaluative framework

Several excellent reviews of the literature on spatial imaginaries have been published recently and will not be further rehearsed here (see for example Davoudi et al, 2017; O'Brien, 2019; Watkins, 2015). Rather, we draw out the foundations for a broad evaluative framework which can be deployed in appraising the influence and effectiveness of particular spatial imaginaries for regional or city-regional economies and their role in providing some sort of territorial coherence

to fluid, contestable, and historically contingent processes of region-building (Jonas, 2012; Paasi, 2009). The focus, therefore, is on synthesising key evaluative criteria that are generalizable across a range of cases and circumstances. These should, in turn, assist in underpinning more explanatory approaches that illuminate the role of context (national and historical), institutions and action in particular cases.

Watkins (2015: 514) identifies four distinct ontological positions on spatial imaginaries: as 'semiotic orders', emphasising their composition as discourse and other symbolic phenomena; as 'worldviews' based in ideology (seen as assembled, rather than necessarily shared, systems of thought); as 'representative discourse' constituted through linguistic representation in images and texts and directed towards the cultivation of identity and associated material practice; and finally as 'performative discourse', focusing on the enactment of imaginaries as material practice rather than solely as representation. While a focus on representative discourse has been the predominant approach in geographical research, Watkins favours a performative emphasis on how material practices animate spatial imaginaries, and how linguistic and symbolic inquiries may be complemented by analysis of 'living', 'citing', and 'reiterating' discourse (*op cit*: 518). This also foregrounds processes of formation and change in imaginaries, which is clearly important in our current case.

Given this ontological diversity, definitions of spatial imaginaries have different emphases and, at times, confusing terminology. Watkins again provides a useful categorisation here, contrasting 'place imaginaries' which characterise particular places, 'idealized space imaginaries' ascribing general idealized characteristics to particular kinds of spaces, and 'spatial transformation imaginaries' narrating processes of perceived or proposed evolution and thereby delineating potential future paths (Watkins, 2015: 512-513). Within the latter category, regional spatial imaginaries are defined by particular characteristics. Boudreau (2007: 2596-7), for example, highlights the importance of both *relative permanence* and *identification* and/or *ownership* as characteristics of spatial imaginaries, in contrast to 'spatial discourses' which are 'moments' in the social process 'repeated and uttered punctually, but [which] do not necessarily alter deeply held beliefs, fantasies, and desires in the long term'. Elsewhere, Davoudi (2018) stresses the *collective* and *performative* features of spatial imaginaries, which are necessarily shared by a large group of people, if not a whole society, and which are played out in material practice. Marshall (2014), meanwhile, reminds us of the practicalities of regional spatial planning, such that some forms of *spatial mechanism*, either more or less explicit, will be required:

We may start simply, from the premise that in order to do something with a large geographical and spatial component, something must be existing in the mind or imagination of the actors involved. This may be made evident in the form of maps or planning documents… or it may be a textual expression. Metaphors are commonly used – corridors, gateways, hubs, belts. Spatial emphasis may also… be simply implicit in an approach, say to invest more in one part of a country than elsewhere, even if it would be politically difficult to spell this out.

Against this definitional background, and given our dramaturgical emphasis on imaginaries as a form of staging and scripting, we derive six generic criteria as the basis for evaluation of regional spatial imaginaries, together with associated research questions (see Table 1). First, effective spatial imaginaries come to exert *discursive hegemony* (Nabers, 2008) in the particular context. This often derives from some correspondence with prior imaginaries (O'Brien, 2019; Boudreau, 2007) and implies a degree of predominance over competing readings of the context and associated strategic responses. A sense of exclusivity is thus created around the dominant discourse, which comes to be naturalized and routinized through its circulation, acceptance, and embodiment (Watkins, 2015: 511). For Hajer (1993), a 'discourse coalition' often dominates the discursive space, with this dominance observable in institutional practices or the presence of a powerful alliance of influential local actors, such as a local 'growth coalition' (Cox and Mair, 1988). The imaginary derives authority and legitimacy; it comes to be believed and has traction. In turn it becomes generative, in the sense of stimulating accompanying political action, and partnering policies and processes.

Second, spatial imaginaries exert *material influence*, both through changing institutional practice, performance and policy, but also more tacitly through their cultural embeddedness. They are reflected in new plans and revised policy commitments, and may be triggers for disruptions to institutional forms and processes, with capacity to combat institutional stasis and propose alternatives (Dembski, 2015, p. 1650). Here questions of governance are foregrounded, potentially through formal reorganisation of governmental arrangements, but also through the ushering-in of 'soft spaces' oriented more directly towards spatial imagination *per se*.

Third, spatial imaginaries by definition display a relative *durability*. As Boudreau (2007) describes, once spatial imaginaries achieve a discursive hegemony they derive a degree of

persistence in societal discourse. This is not to argue that spatial imaginaries are in any sense unchanging, for they are continually (though variably) sites of struggle and contest. Yet they necessarily exhibit some persistence, often facilitated by a malleability and adaptability in the face of change.

A fourth characteristic is *cogent spatial imagery*. Here O'Brien's (2019) analysis is valuable in pointing towards Neuman's lifecycle theory of institutional change, wherein: 'the interrelationship of the image and the [institutional] lifecycle reveals their dual nature: images sustain institutions and project them into larger society; at the same time, institutions maintain and project their constituting image' (Neuman, 2012, p. 144). This has a particular salience in the contemporary era where 'the coordinating role of the image becomes more important as metropolitan planning and governance become more fragmented' (Neuman, 1996: 310). Thus spatial imaginaries rely heavily on suitable imagery to demonstrate their appropriateness and coherence, to appeal and persuade.

Fifth is the principle of *collective ownership*. Spatial imaginaries are ideas about spaces and places which are shared collectively (Driver 2005). Here Boudreau (2007) highlights the importance of spatial imaginaries within 'new political spaces' which resonate with the citizenry, producing a level of allegiance and legitimacy. This derives from a level of basic support for the spatial imaginary *per se*, its relation with the local/regional political culture, and its embeddedness in daily practice and lived experience. As Boudreau argues: 'a certain degree of consensus, collective identity, and common objectives seem necessary for collective action' (2007: 2594).

Finally here are *supporting spatial tools*. These might include strategy documents and policy processes, institutional and personal relations, spatial forms and assets, infrastructural facilities and the like which serve as 'artefactual anchors' for the imaginary in question (Mäntysalo et al, 2019). We now move on to deploy these six criteria in two recent episodes of the Oxford-Cambridge Arc, after a brief outline of research methods.

Table 1: Regional spatial imaginaries – evaluative criteria and associated research questions

Evaluative criterion	Associated evaluative research questions
Discursive hegemony	To what extent is the imaginary accepted by key stakeholders and the wider citizenry? How does it derive authority and legitimacy? How is the imaginary experienced and lived in day-to-day policy conduct and associated decision making? Do competing imaginaries exist within/across/beyond the area? To what extent do these conflict with and/or destabilise the imaginary in question? Has the imaginary provided a foundation for further strategy making and policy development? To what degree does the imaginary set the parameters for or circumscribe further policy alternatives?
Material influence	Is the framing role of the imaginary apparent in other strategic and policy documents for the area? Has the imaginary materially changed policy commitments in the area? Is there a good degree of consonance between the spatial imaginary and detailed spatial policy commitments within the area? Is the imaginary reflected in revised governance arrangements? Has the imaginary become embedded in local planning cultures?
Durability	How long has the spatial imaginary been in place? How has it evolved over time? Has it been adaptable in the face of change? Has the spatial imaginary been subject to significant challenge? What aspects seem to make the imaginary 'sticky'?
Cogent spatial imagery	Is there a defining image (or set of images) which conveys the spatial imaginary at a particular moment in time? Does the imagery somehow reflect the reality of lived experience? Does the imagery identify key spatial features and inter-relations? Does the imagery convey sufficient spatial detail to be persuasive in the relevant context?
Collective ownership	Does a significant proportion of the population support the imaginary? Does the spatial imaginary resonate with residents and users of the city-region in terms of their lived experience? Is there a level of basic belief in the spatial concept? Has the spatial imaginary become an established part of the public vocabulary?
Supporting spatial tools	Is the spatial imaginary supported in relevant policy processes and documents through tools such as maps, images, diagrams and scenarios? Is the spatial imaginary supported by appropriate spatial resources and relationships within the area in question?

Methodological Note

Empirical work for the current project comprised an initial tranche of 13 interviews conducted with public and private organisations located across the Arc in 2018, as part of a Master's

dissertation by Robinson. Additional interviews and meetings were also conducted in 2017 and 2018 by the other authors with the Executive Director of the 'O2C', a partnership organisation formed by three Regional Development Agencies (RDAs), focusing on the earlier period reported here. Subsequently, an ongoing series of interviews have been conducted through 2018-20 with senior representatives of local authorities, sub-regional growth boards, Local Enterprise Partnerships (LEPs), and the England's Economic Heartland (EEH) partnership, giving a total of 24 semi-structured interviews. Some limited participant observation was also secured through membership of a working group established to help develop spatial strategy for the Arc, and further insight emerged from attendance at several conferences and public meetings, online commentaries and podcast recordings (e.g. 50 Shades of Planning, 2020).

An additional source of information was a Phase 1 'call for evidence' from the National Infrastructure Commission launched on 16 March 2016 (responses to this call are available in full at: https://www.nic.org.uk/wp-content/uploads/Cambridge-Milton-Keynes-Oxford-Phase-1-call-for-evidence-responses.pdf). Section 3.2 of the consultation (NIC, 2016b) included questions especially relevant to the Arc as spatial imaginary, as follows:

Does the Cambridge–Milton Keynes–Oxford area, including Northampton, form a recognizable economic corridor? If so:
- What factors unite the area?
- Would greater emphasis on corridor-wide planning and decision-making benefit local communities and local economies?
- Would that same emphasis on coordinated planning and decision making provide wider benefits for the UK economy?
- Should adjacent towns and cities be incorporated into the corridor in terms of growth and infrastructure planning?

A total of 79 consultation responses were submitted by stakeholders from local authorities, utilities, developers, consultants, business interests, neighbourhood groups, parish councils, and individuals, generating over 1100 pages of material. These published responses were therefore examined in detail to further strengthen the foundations for the current research and to provide some initial insight regarding the perceived status of the Arc in 2016 (see footnote 6 below).

Episode 1: Imagining the O2C Arc, 2003-9

The O2C Arc: Introduction and Timeline

One of the defining characteristics of Oxford and Cambridge historically has been their spatial and jurisdictional separation. The two cities are physically distant, located 66 miles apart as the crow flies, but 85 miles and over 2 hours on the most direct driving route. The current bus connection is timetabled at a tortuous 3 hours 40 minutes. Historically the two cities were connected by rail with the Varsity Line (or 'Brain Line') introduced in two sections in the mid-19th century and operated as a complete service from 1922 to 1967. Sager could write though, even in 2005, that 'there is no physical link between the two – not even a proper road – and if it were not for the universities there would be no link at all' (Sager, 2005: 3). Despite the 'Oxbridge' epithet, Oxford and Cambridge also exhibit distinct cultural and political identities. Though there are some notable parallels between the two cities beyond the University context, their settings are distinct. There are also important historical differences between the universities, reflected in the well-known affectation to refer respectively to 'the other place'.

The separation of the two cities is also apparent in jurisdictional terms. Oxfordshire has been a north-western outpost of England's South East region since the formal creation of the Government Offices for the Regions in 1994, with Oxford identified in the 'Western Policy Area' of the South East, while Cambridgeshire was part of the East of England region. Thus the emergence of the Oxford-Cambridge Arc as a substantive strategic planning orientation is relatively recent. Indeed, there was little before 2000 which suggested the notion, though the late Sir Peter Hall's earlier idea for a "Golden Doughnut" of major development outside London's green belt incorporated the area within a wider band of high employment, high productivity regions beyond the metropolitan area as a whole (Cambridge Econometrics-SQW, 2016). Clearly, though, such a plan had little geographical, institutional, political or cultural foundation upon which to build.

During the 1990s some parts of what has become the Arc area began to engage in local efforts at regional upscaling in the face of mounting growth pressures. In Cambridgeshire, for example, a crisis discourse emerged, largely orchestrated by high-tech entrepreneurs operating in and around the City of Cambridge. Growth proponents highlighted a need to 'unblock the city', release land for new development, and improve local transport linkages especially the A1-A14-M11 connector linking an imagined 'Greater Cambridge' region to London and the South East

(While, Jonas and Gibbs, 2004). At this stage, however, a putative high-tech corridor regional imaginary did not yet extend across county council jurisdictional boundaries in this part of the area. At the other end of the Arc the South-East England Development Agency included the Oxfordshire-Milton Keynes/Luton/Bedfordshire/Aylesbury Vale area as one of seven sub-regional drivers in its regional economic strategy for the South East, which led the Economic Partnerships for Oxfordshire and Milton Keynes to develop a formative 'Technology Arc' idea, though the progression of this in the late 1990s was seemingly limited (Smart Growth UK, 2019: 30).

Against this rather unpromising background the Oxford to Cambridge Arc (O2C Arc) was initially established in 2003 by three regional development agencies, respectively South East England, East of England and East Midlands (SEEDA, EEDA and EMDA). The vision was 'to create one of the most successful knowledge-based economies in Europe, with world leading aspirations' (Miles, 2008). Improved collaborative working across the area would enhance competitiveness and critical mass, securing its position within global innovation-industrial platforms and the 'global network of innovation regions'. In this, Oxford and Cambridge were cast as the knowledge-generating 'poles' at either end of the Arc, while the central portions would bring complementary high-tech business applications, and commercial and logistical strengths. The O2C Arc organisation was a public-private partnership initiative working with representatives of the knowledge community (e.g. universities, high technology companies, government) to implement the vision, initially by building a common sense of purpose for the O2C Arc area, and benchmarking against a peer group. However, its budget was small with just two people employed (part-time) from 2003. The institutional landscape comprised a complex and – in the words of an O2C employee – fractious set of organisations including the three RDAs, six economic partnerships (Buckinghamshire, Bedfordshire and Luton, Milton Keynes, Northampton, Oxford, and Cambridge), five main Chambers of Commerce, four area-based professional networks and numerous sector networks /consortia, eight universities, and a number of colleges of further education, multiple research institutes, science parks, enterprise hubs, incubation centres and business parks, over 3,000 high tech/knowledge intensive companies of all scales, city, district and county councils, and central government departments. A key objective of the O2CArc was to provide more coherence to this fragmented landscape.

The initiative developed through three distinct phases. Initially, from 2003-2005, O2C Arc was constituted as a public sector-dominated, area-based partnership, with themed working groups on

marketing, land & property, communications, commercialisation, and skills. However, criticisms quickly emerged regarding the separate and often competing territorial agendas of the sub-regional economic partnerships, the overlapping of O2C Arc working groups and the respective economic partnership activities, the breadth of the initial O2C Arc vision, and the crowded governance arena. Additionally there was some concern that the universities were operating in competition rather than collaborating in support of wider objectives. Overall this first phase was characterised by a lack of clarity and structure which undermined the Arc's strategic vision and in turn the mechanisms for delivery.

A second phase emerged from 2006-2008. This remained public sector-led, but oriented more towards sector-driven initiatives. Here the focus was specifically on supporting innovation activities and promoting international connections, thereby differentiating O2C Arc more clearly from the sub-regional economic partnerships. The rationale here, together with the introduction of sector-based consortia, was easier to communicate to private sector interests and began to attract corporate sponsorship.

The third phase was from 2008-2009, where the spatial focus widened out from the O2C Arc *per se* to the wider 'Greater South East' region, working with sector consortia. From this point the O2C Arc Ltd (and subsequently London-Oxford-Cambridge Ltd) explicitly involved London, given its role as a major centre of finance and channels to global markets, indicating a developing global city-regional perspective. This dovetailed with the government's Technology Strategy Board and emphasised the 'Golden Triangle' of London, Oxford and Cambridge, with London highlighted as a global financial centre, a collection of world-leading universities, Europe's largest health technology cluster, and the site of key relations between venture capital and business.

In 2010, however, the RDAs were effectively abolished by the incoming UK Coalition Government as part of its anti-regionalist localism agenda, marking the effective end of this first O2C Arc experiment. Plainly, therefore, the O2C Arc in its initial guise did not endure, and in this immediate sense the spatial imaginary did not meet the *durability* criterion established above. Yet the idea has resurfaced subsequently, and it is instructive to examine the performance of this first iteration against the other evaluative criteria.

Evaluating the O2C Arc as spatial imaginary

In terms of *discursive hegemony*, it is clear that in this initial episode the Arc imaginary did not achieve a pre-eminence in the strategic arena. Indeed, it was somewhat lost within a fog of public sector initiatives at the time, cutting across three emerging Regional Spatial Strategies[1], two 'growth areas' identified in the Labour Government's 2003 Sustainable Communities Plan, and other sub-regional initiatives such as Cambridge Horizons, a non-profit making company comprised of the local authorities and other key agencies to coordinate the planned growth of Cambridgeshire (See CAG Consultants, 2006).

In this crowded context the Arc imaginary struggled to achieve profile and to capture the spatial planning agenda. Competing imaginaries at local, regional and sub-regional scales left little policy space to occupy, and the Arc was often effectively side-lined as an idea. Interview evidence suggests that many local authority areas across the Arc, and Cambridge in particular, were unconvinced of the need for the Arc and of the benefits of any engagement with the proposal. Additionally, the Arc imaginary was unable to convey an overarching vision that might underpin an effective strategic coordination role:

> The majority of those interviewed felt that there were too many public sector bodies and public-private partnerships tasked with assisting businesses and promoting the 'knowledge economy'…. 'Who is coordinating the efforts?... I can't see a clear structure of delivery…. There's a huge number of networks….where's the vision and strategy that brings this all together'… were common comments.' (Deloitte-GHK survey of firms for the O2C Arc Company, November 2006, quoted in Miles, 2008)

In light of this marginal role in strategic discourse it is not surprising that the O2C Arc exerted little *material influence* on key strategic planning and infrastructure policies. Through the 2000s the idea was very occasionally referenced in policy documents such as the Milton Keynes South Midlands Sub-Regional Strategy (GOSE et al, 2005: 16-17), but it was absent from the majority of local plans adopted across the area, and merited only the most passing references in two of the three Regional Spatial Strategies adopted at the end of the decade[2], while being absent from the

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[1] The East of England Plan (adopted 2008), the South East Plan (2009), and the East Midlands Plan (2009).
[2] The South East Plan (SEERA 2009: 24) argued that the "South East performs strongly on the economic level with much of its wealth generation coming from the highly networked information-rich knowledge economy centred in the 'Golden Arc' from Bournemouth and Poole and South Hampshire and extending into a Western Crescent taking

third. This suggests that it did not operate as an overarching frame for strategic deliberations and formal policy commitments, and interview evidence strongly reinforces the sense that it was not embedded in local planning cultures. The fact that the O2C Arc initiative itself had no effective powers and extremely limited resources further reinforced the lack of influence and leverage.

Unsurprisingly, given the formative stage of O2C and its shortened lifespan the *spatial imagery* for the area was substantially under-developed. Figure 1 presents a 'script and masterplan' from 2008 but beyond some form of general impression the image was unconvincing. For example, here: (i) the boundary drawn around the area was clearly indicative, but lacked any obvious foundation such as a relation with existing institutional boundaries. It also illustrated (perhaps not purposely) the Harwell Science and Innovation Campus – and also therefore other important science locations in southern Oxfordshire – outside of the putative area; (ii) the image tends to reinforce the distinction between the intellectual/innovation engines at either pole of the Arc and the less obvious rationale for, and connections with, the middle; (iii) major residential development was identified at 'Milton-Keynes South Midlands' and two other 'planned residential and/or high-tech developments' identified by the red triangles on the map, but notably not at either Oxford/Oxfordshire or Cambridge/Cambridgeshire, which would clearly be implicated in major growth plans; and (iv) plans for an East-West rail route and upgraded/dualled road connections were disjointed and uneven, suggesting different forms of transport corridor across different parts of the Arc. To some extent this reflects a tendency to under-emphasise the spatial connectivity implications of economic growth and associated infrastructure and housing development; indeed this iteration of the O2C Arc even in its early years was not oriented towards spatial strategy *per se*, and as it evolved it increasingly emphasised a sectoral rather than spatial focus, directed towards the promotion of commercial innovation and international inward investment. Also, from 2008 the Arc imaginary was effectively subsumed within a wider notion of the London-Oxford-Cambridge Golden Triangle, and thence into a possible 'Greater South-East super-innovation region' (Miles, 2008).

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in Reading and Oxford and onto Milton Keynes to Cambridge", and the East of England Plan (GOEE, 2008: 23) noted that "there is potential for economic links to be strengthened between Cambridge and Ipswich and westwards through Bedfordshire to Milton Keynes and Oxford, the Oxford to Cambridge Arc".
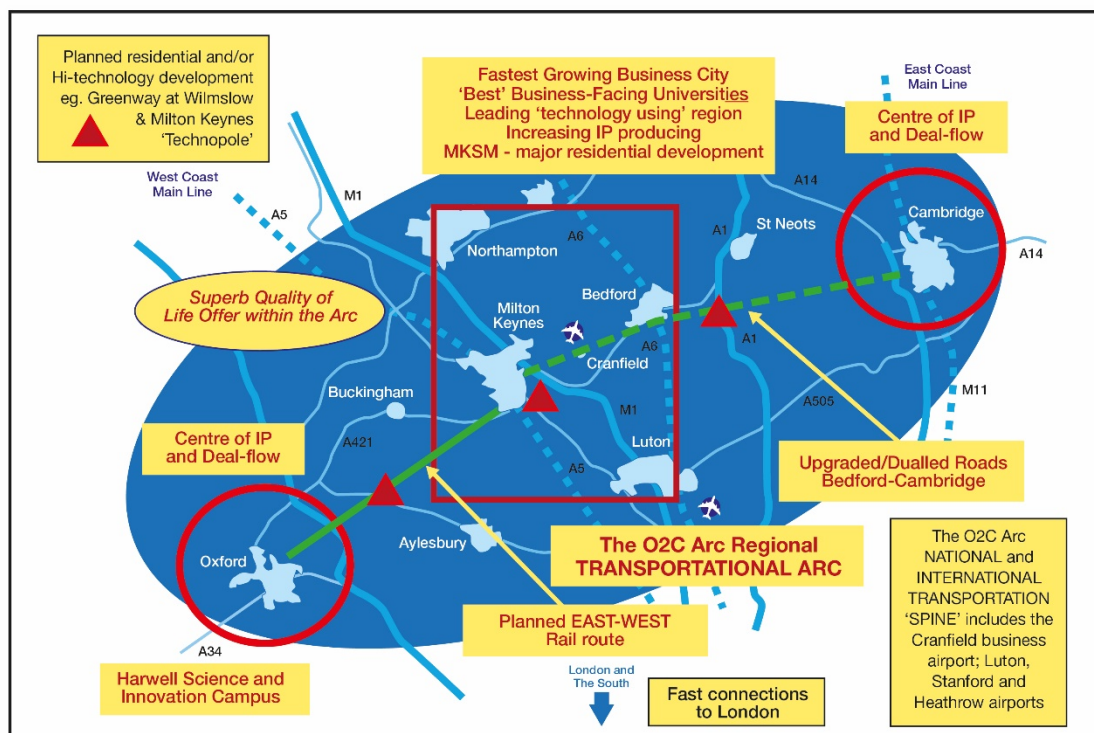
Figure 1: The O2C Arc Script and Masterplan (Miles, 2008)

Turning to the question of *collective ownership*, and looking beyond the complex and fractious organisational context noted above, the O2C Arc was immediately faced with public opposition to the proposed road and rail links, housing development, and perceived threats to the countryside and rural-village lifestyles. This opposition was relatively diffuse, but nonetheless highly-motivated and in places well-organised. Importantly, as an interviewee noted, it had strong political resources on which to draw:

It's highly problematical because of the types of communities that you're dealing with within the Oxford to Cambridge Arc. They are very vocal. They are very well connected. You'll find the local people in this area are retired senior civil servants or retired, senior people from the private sector, and also people still working at very senior levels. So they are connected. They know how to lobby. They know how to get their own way (Arc official, 3rd September 2018).

Perhaps most notable here, however, is that the O2C Arc project never reached out in any meaningful sense to a public arena and debate beyond the confines of the governmental and

partnership organisations operating in the area. This was an initiative which operated amongst formal organisations and stakeholder groups, and increasingly with sectoral commercial interests, rather than seeking to build political support within the wider population of the region. Hence the programme was largely unknown amongst the citizenry, and a political case for it was hardly made.

Lastly, in light of the above it is apparent that *spatial tools* developed in support of the O2C Arc were negligible. This was clear both at smaller scales in terms of associated local planning documentation and local/sub-regional infrastructure plans, but also at the larger scales which would be implied in development planning across a 60-70 mile high-tech infrastructural and place-making corridor. This would undoubtedly require major coordinating planning organisations and in all likelihood some form of development corporations along the lines of the previous post-war new towns programme, but such forms were absent. Overall, then, by the end of the first decade of the 2000s the staging and scripting of the O2C Arc had all but waned without significantly altering the institutional, cultural or political terrain, and it is perhaps not surprising that some of the same issues and challenges faced here would resurface in a subsequent effort.

Episode 2: The Oxford-Cambridge Arc, 2016- [3]

The Oxford-Cambridge Arc: Introduction and timeline

The second encounter with the Oxford-Cambridge Arc has been an altogether more substantial exercise, not least because of central government involvement through the process. However, an initial impetus for this second wave also emerged from the County Councils. An alliance developed in 2014-15 between the leaders of Buckinghamshire, Oxfordshire and Northamptonshire County Councils, known as 'The Heartlands Board', seeking to exploit collaborative opportunities across the three counties[4]. This grouping was subsequently joined by the leaders of the three Bedfordshire Unitary Councils and Milton Keynes, and, later, by the leader of Cambridgeshire County Council. As the group expanded the focus turned increasingly to the potential of the area between Oxford and Cambridge in terms of economic growth.

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[3] The outline of policy development in this section is informed by detailed analysis undertaken by the No Expressway Group, see: https://www.noexpressway.org/

[4] Interestingly, on 17th December 2014 a combined authority proposal was unveiled by Oxfordshire, Buckinghamshire and Northamptonshire county councils. However, the district councils across the respective counties had not been engaged in associated discussions and the tri-county unitary idea was effectively stillborn.

At the same time, however, central government attention was also emerging. The Department for Transport (DfT) published its Road Investment Strategy 2015-2020 for England (RIS1, December 2014), which referenced transport connectivity constraints between Cambridge, Milton Keynes and Oxford and the potential to underpin knowledge-based growth across the area more generally through improved linkages. RIS1 instructed Highways England (HE), a government-owned company, to undertake a study to "examine the case for creating an Expressway to connect the towns and cities of the 'Brain Belt' together" (NEG, 2019).

Subsequently, central government – in particular George Osborne as Chancellor of the Exchequer[5] – commissioned the National Infrastructure Commission (NIC) to produce a report on the area. This request was accompanied by the simultaneous 'call for evidence' outlined in Section 3 above[6]. In November 2016 an interim report was published (NIC, 2016) which identified the corridor as a potential Silicon Valley for the UK, but argued that a lack of housing and connectivity were holding up this vision, and proposed a joined-up strategy to link infrastructure development and housing. In particular: "Planning for East-West Rail and the Oxford-Cambridge Expressway should be taken forward urgently. These are once-in-a-generation investments that will deliver substantial national benefits" (NIC, 2016: 5). This was followed in November 2017 by a further report making recommendations, which emphasised the potential missed opportunities for economic growth in the area due particularly to structural housing pressures, and the consequent need to double current rates of house-building to deliver up to one million new homes by 2050 (NIC, 2017). Infrastructure provision would also be vital to support this substantial growth, and both East-West Rail and the Expressway were identified as a means of 'enabling new settlements' (NEG, 2019).

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[5] Chancellor Osborne was the key central government actor, though it has been reported that a chance conversation between Lord Wolfson (Chairman of Next) and Prime Minister David Cameron was a starting point here (see Smart Growth UK, 2019: 4)

[6] Detailed reporting of all 79 responses is impossible within the confines of the current paper, but in sum revealed a substantial majority which did not yet recognise the area as a unified economic corridor. Indeed, responses tended to emphasise the diversity of the area rather than its unity, and in some cases identified its important relation to London. However, shared strengths were quite widely perceived within the 'corridor', in terms of general business growth, openness to innovation and collaboration, and economic growth potential, together with shared challenges in terms of infrastructure shortfall, housing pressures, environmental sensitivities, and lack of institutional foundation. The case for greater emphasis on co-ordinated, corridor-wide planning and decision making was often (but not universally) supported, though in support of diverse and conflicting objectives at both local and national scales. Lastly here, the question of incorporating adjacent towns and cities was generally viewed positively in terms of transport, infrastructure and spatial planning, with Swindon particularly prominent in this regard, but also looking towards East Anglian cities (Norwich, Peterborough), and Reading in the Thames Valley.

In October 2018 the Government gave its official response to the NIC Report, supporting the ambition to build up to one million homes by 2050 to maximise the economic growth of the Arc. The document announced significant funding for both East-West Rail and the expressway, and indicated future commitments to local partners, including universities, and to the appointment of an independent business Chair for the Arc, and a Ministerial champion, to 'facilitate co-ordination across Whitehall'.

Alongside the NIC reports various studies have been produced with respect to the proposed Expressway[7]. Additionally, in terms of spatial planning, the 5th Studio/SQW Report 'Cambridge, Milton Keynes and Oxford Future Planning Options Project: Final Report' (February 2018) was important in laying out nine different spatial scenarios for the Arc, ranging from urban intensification to dispersed development, wholly new cities, and mixes of development forms. It also mapped the potential distribution of new houses by administrative region across the area, with a total of just over one million homes drawing from houses across three categories: those already allocated in Local Plans; those where development had been previously committed but not yet built due to land shortages; and those representing additional development required to meet the transformational growth targets by 2050. 553,000 houses were identified in this last category.

More recently, in March 2019, MHCLG released a report titled 'Oxford-Cambridge Arc: Government ambition and joint declaration between Government and Local Partners'. This announced the establishment of the Arc Leaders Group (ALG), comprising local authorities, Local Enterprise Partnerships (LEPs), England's Economic Heartland (EEH) and 10 Universities across the Arc. The report emphasises the role of housing delivery in realising the economic potential of the Arc, and states that the ALG is organising itself across four thematic areas to do this: productivity, place-making, connectivity and the environment. The Report promised 'a broad, joint, public engagement exercise over Summer 2019. This will engage with the public

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[7] In November 2016 HE published the 'Oxford to Cambridge Expressway Strategic Study Stage 3 Report' outlining the case for an expressway connecting Oxford, Milton Keynes and Cambridge, and proposing three initial options for a perceived 'missing link' between the M1 and the M40, to be reviewed in relation to the proposed East-West rail connection. Subsequently, in September 2018, HE produced an extensive 'Oxford to Cambridge Expressway: Corridor Assessment Report' which assessed the suitability for the Expressway of three broad corridors between Oxford and Cambridge under seven headings; Connectivity, Strategic Transformation, Economic Growth, Skills and Accessibility, Planning for the Future, Environment, and Innovation. One corridor (Corridor B) was announced as the 'preferred corridor', and two associated sub-options were identified for further study: B1 (passing West of Oxford City) and B3 (East of Oxford City) for further study.

across the four themes above and will be used to help inform our future plans for the Arc and ensure they benefit existing and new communities and businesses'. In the event, though, this has not yet been implemented.

Evaluating the Oxford-Cambridge Arc as spatial imaginary

Turning first to the question of *discursive hegemony*, there is no doubt that the Oxford-Cambridge Arc project has established a relatively high profile within the area and beyond. The two NIC reports have clearly carried weight, significantly extending discussion of the Arc as an idea and providing foundation for a range of related policy and consultancy reports. Within the UK Government, at least, the idea has seemingly become a dominant discourse for this area, a fact which itself derives some degree of authority and legitimacy for the Arc imaginary.

Within the Arc area, however, the situation remains more complex. The ambition for 1 million new houses by 2050 has been a very prominent but highly controversial element, for example. And while the business-oriented LEPs have been supportive, some Arc local authorities have been more sceptical and cagey. Here an initial enthusiasm for the economic growth and infrastructure aspects of the Arc has been tempered by a perception of the increased central government focus on housing, which gradually came to dominate the agenda. Also, importantly, there is a strong sense that the Arc project and vision still lacks clarity, and thus some local authorities are unsure of the political calculation, and the opportunities and costs that might be implied.

To some extent, therefore, a state of limbo has characterised the experience of the Arc at the local government level. While it is consistently referenced as part of local policy discourses, and meetings, conferences and other gatherings are continually organised around the project, there remains an insecurity for some local authorities about the overall idea. It would be difficult in these circumstances to say that it has achieved a hegemonic status. Rather, it exists alongside established local political contexts which retain their own particular cultures and imaginaries and which, we might note, have been effectively reinforced by a strong localism agenda in English planning since 2010. Consequently the Arc imaginary does not, as yet, define the parameters for strategy making and policy development across all of the constituent local authorities, where the strategic calculation may be to watch and await developments before committing to decisions which might subsequently be seen as prejudicial.

Despite these overall limits in terms of discursive hegemony, there is nonetheless evidence of the Arc's *material influence* in certain areas. In Oxfordshire, for example, NIC and central government interest in the Arc was a further catalyst underpinning a £215m Housing and Growth Deal with Government announced in November 2017, reinforcing a substantial growth agenda established by a previous Oxford-Oxfordshire 'City-Deal'[8] in 2013 (see Phelps and Valler, 2018). Also, in some instances there is evidence of more detailed influence on particular policies, with pro-growth Milton Keynes, for example, allocating additional housing land above the outstanding assessed need in its 2016-2031 local plan, in part reflecting a commitment to the overall Arc agenda (Interview, Chief Planning Officer 6 July 2018; see also Milton Keynes Council, 2019: 4).

More generally, however, the limits of the Arc's material influence are apparent. First, here, most local plans across the area have not been revised to accommodate the substantial economic and housing growth implied by the Arc ambition. Rather, many local plans have continued based on prior housing commitments and in light of the government's recently revised standard method for assessing local housing needs. In large part, this suggests that the Arc has not become embedded in local planning cultures as a 'developmental frame' materially reorienting development trajectories, locational boundaries and strategic orientations (see Valler and Phelps, 2018). Indeed, the NIC itself acknowledged in its final report:

> As respondents to the Commission's call for evidence noted when describing the work of growth boards more generally, 'it has been too easy for local authorities who disagree with the outcomes to disengage from the process and to seek to revert to individually-led more inward looking decision making.' (NIC, 2017: 81-82)

Second, while organisational arrangements have gradually begun to orientate around emerging 'growth board' geographies comprising the four main constituent areas in the Arc (Oxfordshire, Buckinghamshire, 'Central', and Cambridgeshire), governance remains a critical issue, though central government has been reluctant to intervene in this question. Thus the sheer number and diversity of local authorities currently involved is reflected in the difficulty of achieving effective decision-making mechanisms, coordinating with existing local state territorial structures, and –

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[8] 'City-Deals' were introduced by the then UK Coalition Government in 2011-12 to extend decentralisation to the eight largest English cities outside of London, and to foster economic prosperity and growth. A second wave of deals were then negotiated with smaller cities in 2013-14, with Oxford–Oxfordshire the eleventh area signed in Wave 2 on 30 January 2014.

crucially – generating political leadership for the entire region. A local government officer summarised the current position and the range of challenges:

> At this point, you've broken the Arc into four manageable pieces. So you could let that middle layer and the growth boards do lots of it, give them the resources, let them do their local projects, give them targets, let that bubble up and then look across all of it and say 'this, plus this, plus this, plus this, equals the Arc', and then put something over the top, like data observatories, regional coordination on certain key strategic issues. But none of that has been set out yet ...It can sound like people are being defensive and obtuse, but when they go on and on about the governance, that is the *key* thing. So is it these four places, these four sub-regions, coming together to do a pact and saying 'we can do this and we're going to make it happen'. That could work… but are you going to get that happening from 30-plus places? Are you going to get clear political leadership saying 'this is the guiding star that we're all going to follow'? (Interview, 8 March 2020; emphasis original)

In terms of *imagery*, maps of the Arc suggest that the spatial imaginary remains under-developed. Figure 2 below from MHCLG's (2019) 'Government ambition and joint declaration' is presented explicitly as an attempt to 'define' the Arc spatially with an overall boundary and by identifying the constituent local authorities, but it provides no sense of infrastructure routes/connections (both within and beyond the area), major new settlements or development locations, key spatial and economic assets, and the underlying rationale for the Arc. This seems something of a retrograde step given that the NIC's Interim Report in 2016 had identified and mapped 'Potential passenger services from opening of full EWR Western Section' (p.45) and 'Oxford-Cambridge Expressway Options' (p.52), while the subsequent Final Report (NIC, 2017) illustrated 'planned and required development levels, 2016-2050' across four sub-areas of the Arc (p.28), options for the proposed East-West Rail scheme (p.33) and 'Broad route options for the Expressway between the M1 and Oxford' (p.34). Indeed, it might be suggested that the 2019 map betrays ongoing questions of basic definition and governance which seem to have bedevilled the project. In many respects the Arc is still caught in the search for a shared narrative between the various local authorities, and a vision or strategy which can effectively bind the authorities together.

Figure 2 - 'Defining the Oxford-Cambridge Arc' (MHCLG, 2019: 9)

In light of these limitations the most developed spatial plan for the Arc has come from consultancy firms 5th Studio and SQW, for the NIC in 2018 (see Figure 3). This incorporated the completion of East-West Rail and the introduction of the Expressway (though both route alignments remained to be decided), the extension and creation of a number of high-quality transit routes, and a strategy for the spatial distribution of growth based around five sub-regional zones: Oxford City Region; Calvert, Buckinghamshire; 'Eight Town Figure-of-eight' across the central sections; Sandy, Cambridgeshire; and Cambridge City Region. Firstly, the city-regions at either pole would promote more intensive and mixed-uses within the existing cities, prioritise active and public transport, adjust green belts in locations that link and integrate well with the wider cities, facilitate the creation or expansion of compact satellite settlements, and create efficient city-region transit and systems. Secondly, two new compact cities would be established within areas of relatively unconstrained countryside at Calvert between Oxford & Milton Keynes, and at Sandy, between Bedford & Cambridge. These are at key intersections of the new East-West rail and existing/extended North-South routes, with links to the strategic highway network. Third, three East-West 'stitches' were proposed with development along new or extended high-quality transit routes that connect existing towns and north-south rail

connections[9]. The report then proceeded to work through a series of associated case studies and development typologies, but despite the valuable insights and ideas presented here the plan has to date received limited consideration and importantly it has lacked any formal institutional backing.
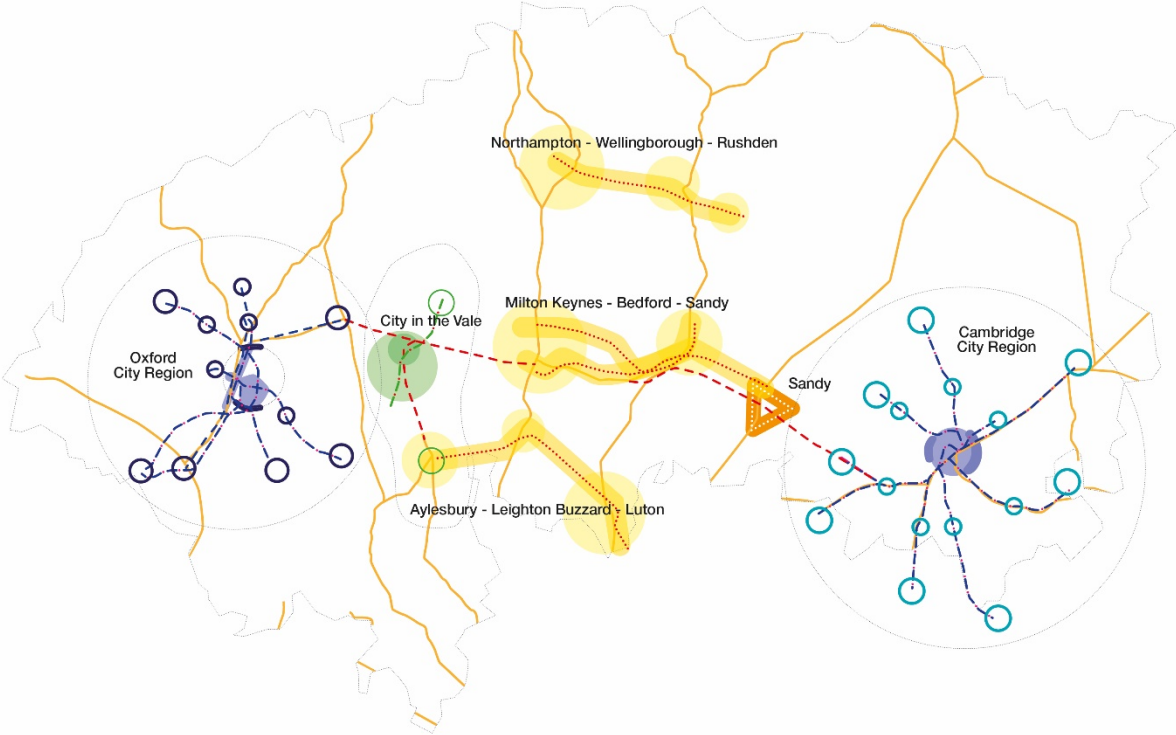

Figure 3 - 5th Studio/SQW Strategy for the spatial distribution of growth (2018: 33)

Perhaps *the* key shortcoming of the Oxford-Cambridge Arc qua spatial imaginary concerns the issue of *collective ownership*. Though the initial 12-week call for evidence in 2016 promised that the NIC would work with key local and national stakeholders as part of an 'open and transparent process of engagement', the overwhelming emphasis here was on engagement with local authorities, LEPs, business groups, infrastructure providers and higher education institutions, rather than wider engagement with the public. Also, as we have noted above, the public engagement exercise promised in the 2019 'joint declaration' failed to materialise. Attempts to reach out to communities and the wider public have thus remained notably limited.

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[9] These were (i) Daventry/Silverstone-Northampton-Wellingborough-Rushden - in line with the aspirations for a Northamptonshire Arc Mass Transit scheme, (ii) Milton Keynes/Bletchley-Marston Vale/Cranfield-Bedford-Sandy, and (iii) Aylesbury-Leighton Buzzard-Dunstable-Luton.

In the absence of effective outreach, the development of the Arc into the public consciousness has been problematical. Opposition has been mobilised to the Expressway in particular, with pressure groups such as the No Expressway Group (https://www.noexpressway.org/) and POETS (Planning Oxfordshire's Environment and Transport) in Oxfordshire calling for the scrapping of the road proposal in favour of an alternative package of rail, bus, road and cycling enhancements. Substantial opposition has also emerged around the proposed housing numbers and urban expansion, environmental and climate impacts, the loss of greenbelt and other designated land. Yet in the face of growing and influential opposition there has been little attempt to engage the public in the idea and to build wider political support. A local authority officer described:

> There's this discussion about selling this to the public; how do you communicate the Arc? But it hasn't been launched in the public except for the NIC report, which was around a million houses and a new Expressway. That is how it's been launched into the public. Not: 'we're going to have this place that's going to be innovative, on par with these other international competitive economies'. That message doesn't go out to the person in the street - it goes out as a million houses. All the candidates for the [December 2019] general election campaigned *against* the Expressway, across every party. So the Expressway and the million houses are absolutely launched into the public, which is unfortunate. There's been no preparing the ground for the messages to land really well, or any kind of counter-positive. (Senior Local Authority Officer, 27 January 2020)

Thus, the staging and scripting of the Arc has largely failed, at least to date, to resonate with the residents and users of the area. There is little sense of the Arc as a political project seeking to reach out and change opinion amongst the wider public, and to shift the associated vocabulary. This experience chimes with the broader conclusions of the *Raynsford Review One year on* (TCPA 2020: 17) which has highlighted the real democratic and legitimacy deficits associated with the growing number of informal strategic plans in England, where the public generally has no clear opportunity to participate. As Raynsford argues, with regard to the Oxford-Cambridge Arc specifically, planning processes have been subject to confidentiality agreements between local authorities and consultants, and 'because the overall process lacks clear legal definition or statutory underpinning, there is no effective participation or governance framework. As a result, when individual plans – or a collective plan – for the Oxford-Cambridge Arc are placed in the public domain, there is likely to be a strong public response' (TCPA, 2020: 17).

Finally, regarding *spatial tools* there are certainly important policy processes and spatial resources which have emerged in support of the Arc. For example, Local Industrial Strategies have recently been adopted by the four respective LEPs/Combined Authorities, all of which strongly feature the Arc, having apparently been encouraged by the Department for Business, Energy & Industrial Strategy that this would be a more potent and effective economic entity than the four separate areas. Additionally here, in July 2019 EEH released a document titled 'Outline Transport Strategy: framework for engagement' which considers the present growth areas across the Arc, and suggests developing several public transport 'modes' (trains, rapid shuttles, buses), and dedicated cycle routes, to improve connectivity. Yet despite these important developments it is notable that the Arc has generally made more limited impression on statutory planning processes, formal local plans, and wider governance arrangements.

Conclusion

In this paper we have distilled a general evaluative frame to appraise the effectiveness of regional spatial imaginaries and deployed the associated criteria against two episodes in the development of the Oxford-Cambridge Arc. Given the inchoate and somewhat amorphous nature of the Arc, questions remain over its durability and coherence both as an actual territory in - if not of - the UK state and as a meaningful political-cum-policy construct. While the Arc has achieved a level of profile amongst both stakeholders and opponents, and has exerted variable influence in the framing and detailing of planning policy, it has not become hegemonic. Nor has it become a fully entrenched territorial structure in the state which is legally defined by jurisdictional borders, institutional capacities and/or flows of fiscal resources. If anything, an overall lack of discursive and material coherence has meant that Arc local authorities remain wary, central government leadership has been tentative, and public engagement and ownership is embryonic at best. At the time of writing (Summer 2020) there is little evidence that current governance and state structures can sustain the Arc, or cultivate material change in established local planning cultures. Yet there is ongoing interest in the idea, and some signs of revitalised central government ambition following the landslide election victory of the Conservative government under the leadership of Boris Johnson in December 2019. Indeed, the potential development of the Oxford-Cambridge Arc resonates strongly with stated commitments by the UK Government towards infrastructure development, science-based growth, support for research and development, design and place-making, and accelerated housing delivery. But the prospects

for the Arc at this point remain unknown, not least in the turbulent contexts of Brexit and the Coronavirus pandemic.

More generally, while there is much contemporary interest in regional spatial imaginaries there has to date been less consensus on their real influence. Yet the current turbulent conjuncture requires revitalised capacities that can effectively stage and script regional planning in the face of complexity, fragmentation and multiplicity. Convincing spatial imaginaries are, we contend, key in bringing order and legitimacy to a newly constituted approach, beyond the contemporary penchant for a 'responsive' and 'agile', but ultimately reactive, regional planning. Thus, we have identified six general criteria against which regional spatial imaginaries can be appraised and which will be implicated in setting regional futures, namely discursive hegemony, material influence, durability, cogent spatial imagery, collective ownership, and supporting spatial tools. Plainly, these criteria do not cover all conceivable qualities of spatial imaginaries, and other characteristics might be influential in particular cases. Indeed, regional spatial imaginaries are highly differentiated in the face of diverse socio-economic, political and institutional challenges, and we might anticipate that particular criteria might be more or less relevant in specific cases. It is also apparent that other more limited forms of 'spatial discourse' rather than consolidated spatial imaginaries may exert real influence in political decision-making, even where they lack the durability and wider sense of ownership characteristic of new political spaces. And we should acknowledge that processes of spatial imagination are inherently dynamic and contested, so that evaluations of such emergent forms are subject to (possibly very rapid) change. Nonetheless, our contention is that the evaluative framework and criteria offered here can assist in appraising examples of spatial imaginaries characteristic of 'deep' or 'shallow-rooted' regionalism, more clearly differentiating those 'which are likely to develop into harder institutional forms, which might remain weakly institutionalised and which could just as easily disappear altogether' (Galland and Harrison, 2020: 15). Importantly, this evaluative stance can provide a mechanism to facilitate comparison between cases, add to the rich explanatory research undertaken in individual cases, and thereby provide some further grip on the messy reality of regional formation. In this way, this form of multi-dimensional evaluation can further expose the processes and practices of spatial imagination which are critical in defining how and why regional formation is being undertaken.

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