This paper reviews a selection of websites that explore urban geographies. Many sites use the web as a depository for large amounts of research data. However, many are using websites to disseminate research findings, and the paper focuses on these. It suggests that, thus far, there are three significant ways in which urban researchers are exploiting the potentialities of web technologies to interpret urban spaces: by evoking a sense of the complexity of urban spatialities; by inviting site visitors to engage actively and performatively with the research materials; and by emphasising the sensory qualities of urban spaces. The paper discusses how one website in particular invites its visitors to engage with complex, sensory urban spatialities. The paper compares geographers' use of collage and montage as part of this discussion, and ends by reflecting on current work and commenting on its future development.

**keywords**

urban geography, urban experience, website, research dissemination, sensory, performative, spatialities
NOTE: THIS PAPER CONTAINS LINKS TO THE WEBSITES IT DISCUSSES. YOU MAY FIND IT EASIEST TO READ ONLINE WITH ACCESS TO THE WEB.

**introduction**

Since the very beginning of the 'cultural turn' in the 1980s, the discipline of geography has been repeatedly asked to change the ways it does its research, represents its findings and explicates its theories. As conceptual frameworks change, so there have been requests for new methods, new ways of writing or performing the discipline, and – the focus of this paper – new ways of communicating its knowledges.

As several commentators have remarked (for example, Latham 2003), for the most part, geography continues to use tried and trusted methods of research (though these now include a wide range of qualitative as well as quantitative methods, of course). More recently though, there are signs that the forms in which geographical work is disseminated are becoming a little more diverse. There seems to be an growing interest in experimenting with textual strategies, in journals (for example, McCormack 2002) and elsewhere (see for example the Landscapes of Global Capital website at [http://it.stlawu.edu/~global/](http://it.stlawu.edu/~global/)). Some
geographers are using photographs as integral parts of their arguments rather than as taken-for-granted illustrations (Edensor 2005; DeSilvey 2007). Some are choosing to put archives of research data on the web to share with others; examples of this include Edensor's Industrial Ruins site, which also showcases his striking photographs (http://www.sci-eng.mmu.ac.uk/industrial_ruins/), and the 'Virtual Museum of Everyday Soviet Life' which explores everyday life in communal apartments and includes photos, audios, films and text (http://kommunalka.colgate.edu/index.cfm). Others have turned to video, uploaded onto the web for viewing (Jones and Evans 2008; Hansen 2007; Jones 2008). Some blog regularly (see for example The Open University's social sciences site, http://www.open2.net/blogs/society/). And still others have worked with hybrids of textual, visual and aural materials (see for example Campbell's project on media images of famine at http://www.imaging-famine.org/, Latour and Hermant's site 'Paris: Invisible City' at http://www.bruno-latour.fr/virtual/index.html and Pryke's website exploring post-1989 Berlin at http://www.open.ac.uk/socialsciences/berlin/index.shtml). As is obvious, it is websites that are very often being used as the medium for these dissemination strategies.

Whilst it is true that geographers have always taken photographs, made films and animated maps, for example, the existence of the worldwide web and the availability of relatively cheap digital hardware and software does seem to be encouraging an increasing number of geographers to experiment on the web with different ways of disseminating their work, and this is the focus of this
paper. We review a number of websites associated with urban geography, as well as reflecting on our own site at http://www.urban-experience.net. However, one difficulty we must confess immediately is that it is difficult to locate multimedia, interactive websites disseminating academic urban research using the usual search engines. Some of the sites discussed here we located more-or-less by chance, or by personal acquaintance with their authors, while several others were cited by Ricketts-Hein, Jones and Evans (2008); and this is no doubt only the tip of a much larger iceberg (Caquard et al 2008; Kitchen 2008; Pinder 2007). So this paper's review of such sites must be tentative.

Nevertheless, from the websites we have located, we would suggest that the two qualities of webpages that urban geographers are utilising most fully are their ability to carry different kinds of data (large numbers of still and moving images as well as aural and textual data) and a certain sort of interactivity. And many websites about academic urban research projects are using these qualities of the web in an attempt to achieve three things: to evoke a sense of the complexity of urban spatialities; to invite site visitors to engage actively and performatively with the research materials; and to emphasise the sensory qualities of urban environments. These possibilities were certainly key to our own decision to build a website as part of an urban geography research project, and it is to this project that we now briefly turn, before placing our site in the context of a number of other urban geography websites.
The website http://www.urban-experience.net is part of a research project funded by the Economic and Social Research Council of the UK. The overall aim of the project was to explore how people experience designed urban spaces. The assumption that good quality urban design both increases the quality of life of urban residents and attracts new inward investment into cities widely held among urban policy makers, including planners, urban marketing specialists, public art workers and urban designers. However, there is remarkably little empirical work exploring just how people in town and city centres experience urban design. The project aimed to rectify this gap by conducting both quantitative and qualitative research in two medium-sized towns in south-east England, Bedford and Milton Keynes.

Milton Keynes is a new town, conceived in late 1960s and built half-way between London and Birmingham in the south of the UK. Its centre was designed in the 1970s as a covered high street open to the surrounding streets, but it very soon came to resemble a shopping mall; its owners installed doors and used them to close the space down once the shops shut at night. The original building was joined at its western end by an extension in 2000. These two buildings remain the city's town centre.
In contrast, Bedford is an old market town. Its centre has been pedestrianised for a while. More recently, raised flowerbeds, a small sculpture playground for kids, a number of sculptural play objects and some modern street furniture have been installed; in 2007 a fountain was put in a particularly run-down square. In 2008, ambitious plans to demolish its bus station and replace it with a piazza and an upmarket supermarket were put on hold when the global economic recession started to bite.
Bedford town centre

Our project explored what people thought of these spaces, as well as how they used them. The project website introduces and discusses the project, it shows lots of photographs of the two town centres, it brings together our published outputs, and it makes links to other relevant websites. It thus shows much more of the project than individual publications can. However, there are also a number of pages that to try to convey some of the project's conclusions about how Bedford and Milton Keynes are experienced as urban environments, and it is some of these pages that we want to discuss here, in relation to other sites also disseminating urban research.

**complex urban spatialities: collage and montage on websites and elsewhere**
The first pages of the project's website we want to discuss were based on a method we called the 'walk-alongs'. In brief, and adapting Kusenbach (2003) and Latham (2003), during a walk-along the researcher accompanies someone on a routine trip to the town centre. During that trip they record the conversation, sometimes prompting the participant to talk about how they are experiencing the built environment, and also observing how the participant engages corporeally and sensorially with the town centre. Participants are also asked to take photos of anything that particularly strikes them about the town centres, and the photos are then used later in a follow-up interview which explores their reactions to the town centres in more detail.

A key finding from the walk-alongs was that perceptions of the built environment are multiple, not simply between different people, but for each person on each walk-along (Degen, DeSilvey and Rose 2008; Degen, Rose and Basdas, forthcoming). There are many different ways of seeing and engaging with these environments. While some objects attract people's attention – interactive objects like a fountain, or chimes in a pavement, get people stopping to play, and benches were heavily used – others had much less impact. Shop windows, perhaps surprisingly, did not generally impact on our participants. Moreover, like Holbrook and Jackson (1996), we found that these were intensely social spaces, and that chatting with someone, either in person or on the phone, radically changed the attention that was given to the urban environment. What particularly struck us, then, was the discontinuities
and interruptions of experience that these specific engagements in and with the built environment seemed to produce. And this was what we hoped to convey by using a web page that would allow us to evoke the changing intensities and fragmented attention of urban encounters.

Of the 25 walk-alongs we did for the project, we chose six – three from each town – and worked with web designer Manuela Barz to develop a sketch-map of the walk-along route, some text, audio files and photos from each into a webpage. We selected a range of different participants – younger people, a family, men and women – but we also chose those walk-alongs that seemed to us, from our analysis, to be good examples of important aspects of the experiencing of these urban spaces.

http://www.urban-experience.net/bedford/walk_bedford.html
http://www.urban-experience.net/miltonKeynes/walk_mk.html

The menu on the right-hand side of this web page accesses the three walk-alongs in Bedford. On each map, if you do as it says and move your mouse over the map, various photos and sounds and text will pop up and then disappear.

This sort of pop-up on a map is in fact quite a common strategy in websites devoted to urban geographies. In the map of her Museum of the Moment Project, an audio soundwalk by artist Jennie Savage for a London high street,
for example (http://www.jenniesavage.co.uk/museum of the moment/museum of the moment.htm), the dots trigger sound files and simply locate where the recorded voices could be heard. Butler uses it rather differently in his Memoryscape project (http://www.memoryscape.org.uk/index.htm); the dots on his maps open up a page of photographs, text and audio related to that location. Click onto http://www.memoryscape.org.uk/Dockers05.htm, for example, which is about Lovell's Wharf in London's old Docklands. Below a photograph of what Lovells' Wharf looks like now is one that shows it when it was still working; there is also some text from Miller and a soundfile to download with voices from the Museum of London's archive talking about what it was like to work with the cranes like those at the wharf. All that remains now of the cranes are the huge concrete pillars in the new picture; but according to Miller's text on this page, the recorded "voice still has the power to bring the hidden story of these strange pillars to life". For Miller then, this pop-up method is a way of building up layers of understanding of a place, of revealing "voices from the hidden history of the Thames".

Our interest in people's experience encouraged us to stay on the surface of the town centres, however, and so our maps' dots do not open up onto deeper, or hidden, understandings. And while they do locate the materials that pop up, this is not all they do. Rather, they evoke certain, distinct moments. In particular, what we really wanted them to do was to evoke the fragmentation of experiences involved in any one visit to what are, actually, rather ordinary urban places. The flickering on and off of the different snippets on the walk-along
webpages is intended to evoke the fragmented and multiple nature of how such urban spaces are experienced. These are everyday spaces where different spatialities flicker on and off, in and out, as people do various, different things, in succession or even simultaneously.

To emphasise this sense of disjuncture between different perceptual moments, we describe these maps as collages. Collage is the practice of taking things from different places and assembling them together in another. As Wolfram (1975, p. 14) puts it, collage brings “into association unrelated images and objects to form a different expressive entity”. It is a technique for bringing different bits and pieces together, and in its mix of both association and unrelation, seems to be an appropriate method for evoking this experiencing of urban space.

In the wider literature of cultural critique, collage is often used interchangeably with another term: montage. And indeed, montage is also a method of assembling something new from other things. However, montage has already been discussed at some length by geographers, in quite specific ways that are distinct from www.urban-experience.net. While we use collage to emphasise the multiplicity of experiences of urban space, other geographers have described montage as a method that reveals a truer understanding of urban spaces than do surface appearances. For Clarke and Doel (2007; see also Doel and Clarke 2007), drawing on Eisenstein, montage is a productive method for showing urban space because it can produce disconnective juxtapositions
that produce rupture rather than the spectacular sameness of capitalist
urbanity. Such juxtapositions challenge the reality effect of everyday urban
spaces and allow supplement and excess to do their disruptive work in "a
repetition of difference rather than a return of the same" (2007, p. 602-3). Pred,
instead, follows Benjamin and argues that montage is about bringing what the
spectacle of capitalism hides into visibility, "a simultaneous showing of different
(geographical his)stories" (Pred 1995, p. 23). He describes the way unexpected juxtapositions can "startle the reader-observer out of the
(dream)world of commodity-society-modernity" (p. 264) by bringing "the past
into tension-filled constellation with the present moment, which speaks to the
here and now in strikingly unexpected but potentially meaningful and politically-
charged ways" (Pred 1995, p. 24).

These definitions of montage by geographers are particular, and distinct from
our use of collage. For Doel and Clarke (2007, p. 899), in montage, "reality is
seen to stutter", while for Pred, montage can incite criticism of the commodity
dreamworld of late capitalism. That is, their montages offer a specific critique of
urban spaces (see also Allen and Pryke 1994). In this sense, Butler's
MemoryScape website might also be described as a montage, as it too uses the
the web to make often-hidden places seen and voices heard. Similarly, Pryke's
Berlin website also uses montage to reveal something otherwise hidden: in this
case, the rhythms of capitalism underlying the city's post-1989 redevelopment.
At
http://www.open.ac.uk/socialsciences/berlin/influencesandbuildingmaterials.sht
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ml, for example, is an image of a new glass and steel skyscraper overlaid with pieces of a photo of an old stone building; according to Pryke’s text, we should read this as sign of how neoliberal economic process are “juxtaposing old and new surfaces and making the former seem inadequate”.

In contrast, rather than offer an alternative urban spatiality, www.urban-experience.net wants to emphasise the diversity and fragmentation of experiencing urban spaces. If "collage composition does not cohere, and there is nothing inherent to it“ (Kuspit 1989, pp. 39-40), it seems an appropriate method for emphasising the incoherence and uncertainty of embodied and sensory encounters with urban environments with which our project was concerned.

In other literatures, the distinction between collage and montage is less distinct. And indeed, as these methods develop in geography, the differences between them are likely to blur. This is particularly the case since what both set out to achieve, in different ways, is a demonstration of urban spatial complexity. And our review suggests that this is a quality shared by a number of websites evoking urban geographies.

inviting visitors to actively engage with the website
A second characteristic shared by many websites is that the sites' visitors can actively engage with the materials on the site. In the case of www.urban-experience.net, this is done by hovering over the points in any order, to listen or watch or move on. Interactive possibilities on other sites include navigating between different pages; browsing an archive of photos; listening to an audiofile; downloading an audiofile onto an mp3 player and listening to it (or not) on a walk. (The kinds of interaction allowed by Web2.0 technologies seem very rare; the only example we found was a site where photos and text could be uploaded, at http://nuweb.northumbria.ac.uk/mywalks/intro.php). However, even this rather limited form of engagement with the website is seen as a way of challenging traditional, narrative accounts of city spaces (and their conventional mapping). This is made clear on a site published as part of the online journal Liminalities about a bus route through Lexington, Kentucky, by Human (2008; http://liminalities.net/4-1/bus/index.htm). Human introduces her paper/site like this:

Why a website? Because like the bus, you board here, you disembark at the next stop or maybe the next. Because even as the bus has a linear route, you ultimately choose your journey. Visit each link progressively for a traditional linear approach to the project. Or, start with a scene and read through some stories or trace a personal or cultural map.
Human's site has nine parts, ranging from 'rationale' to 'methods' to 'references', and each of these is peppered with links to other things: to the websites of bus companies and shopping malls and churches, to a page explaining her research questions, to the template she used to sketch where people sat on the bus, to field notes, to blurry photographs. So a visitor to her site can indeed create a unique route through it.

Indeed, the ability of websites to allow a visitor to trace their own specific route through the site seems to be emerging as a key reason for using the web to disseminate research. While websites can be designed to tell singular stories, they can also be designed to allow different versions of the same materials. While not all urban websites do this (Pryke's Berlin site, for example, does not; it reads pretty much as a narrative), many use the hyperlink page structure of the web to ask their visitors to trace their own patterns, pausing, linking, returning and moving on as their interest and fancy takes them.

This might seem a rather trivial way to engage with urban places. However, in our case we were inspired by Marshall Berman's (2006) account of Times Square in New York, which he sees not as a dazzling monument to capitalist commodification, but full of details, multiple screens, histories and practices. He sees that spectacle not as numbing, not as seducing its viewers into a passive acceptance of brands or commodities, but rather as an invitation, a demand even, to engage, to see, to see and be seen. And other sites too want to emphasise the constructed and performed nature of urban space by asking
their visitors to interact with their research materials. Another example is a project called *73 journeys* by Katrina Jungnickel (http://www.studioincite.com/73urbanjourneys). According to that site, the project is "designed to explore, experience and capture textual, visual and sensual narratives of the mobile London urban experience" through the experience of travelling on the number 73 bus. Visitors to the site are invited to interact with the project materials not via the website directly, but by downloading and printing a printed sheet of paper from the site that can be folded so that "different images, interview excerpts, observations and ideas lie near each other". Each sheet can be folded in two different ways, "enabling multiple ways of viewing, reading and thinking about the data", according to the site. We too would suggest that allowing visitors to websites to play with the data allows them to read the data in different ways, reflecting the experiential diversity and the instability of urban experience.

However, it is important that the rationale for such play is made clear to site visitors – otherwise the visit may remain a trivial piece of play. And indeed, such sites do tend to be explicit about what visitors should do with them and why; we have already quoted two bus projects doing just this (see also Caquard et al 2008, p. 1229).

In fact, there are a couple of justifications for making the aims of an urban geography website explicit. Firstly, such experiments with urban research are new, and social scientists might find them a little strange, hard to engage with
and easy to dismiss. Secondly, while geographers working with montages tend to assume that their montage will simply reveal another reality, other researchers prefer to emphasise the constructed nature of knowledges a little more. Polkinhorn (1989, p. 219), for example, says the collagist "must create signs whereby the viewer is told that collaging has occurred". As the creators of www.urban-experience.net, we wanted to emphasise our own collaging practice (and Kitchen and Dodge's [2007] recent account of mapping as a practice is relevant here). So the site points to its own processes of construction. The walk-along pages note that they are partial versions of these town centres, put together with specific research participants and mediated by particular research methods and conceptual frameworks. The pages use a hand-drawn map of the walk-along route to emphasise the made nature of the page, and also point out who took the photos. The pages also emphasise that the walk-alongs are about the experiencing of urban space, not about its financing, for example, or its social exclusions (which have been well-document elsewhere). Moreover, we also plan to link this paper to the walk-along maps, to contextualise them still further.

So, as well as emphasising the complexity of urban spatiality, the ability of websites to allow visitors to find their own route through the site can also be part of a certain reflexive move, emphasising the construction of that complexity both by researchers, by people in urban spaces, and by the website visitors.
the sensory qualities of urban space

Like many other sites, then, the point of the walk-along pages at www.urban-experience.net is to evoke a certain quality of urban spatiality: the complex, shifting, flickering spatialities through which these town centres are experienced. Through its interactivity, the site also emphasises the multiple ways in which those spaces can be performed. Using webpages means that images, sound and text can appear and disappear, mimicking the everyday perceptual multiplicity of people shopping, caring, socialising and hanging out in Bedford and Milton Keynes.

This perceptual restlessness is partly visual – hence the use of photos on the webpages – but it is also constituted through other sensory perceptions. Our research participants showed us that both places have quite specific sensory atmospheres, which were both visual but could also involve temperature, texture, layout and bodily mobility. Milton Keynes, for example, was described as white, grey, smooth, and as uniform and warm; while Bedford was rough like bricks or sandpaper, was dirty and smelly in parts and much loved in others (Degen, Rose and Basdas, forthcoming). The walk-along maps evoke some of this, in some of the pop-up quotations from our participants; the site's sensory maps do so more systematically. More generally, on our project website, the use of soundfiles of voices and ambient noise, of photos taken by participants, and of lines showing routes, were all meant to emphasise an embodied and experiential account of these two town centres.
It is quite common for websites evoking urban space to use ambient sound as well as images to evoke the 'feel' of a place. Photographs are by far the most common way to do this, but sound recordings are also used (Butler's [2009] Memoriescape website, for example); Hansen's (2007) film of New York is also very evocative. Recorded voices are common, often explaining the significance of a location to a particular individual. The 2004 Ottawa federal election sound map plays the voices of the candidates in each constituency, the loudness in proportion to the votes they won (gcrc.carleton.ca./cne/prooF_of_concepts/elect2004), to convey a sense of the political contestation in Ottawa constituencies. While different projects put sound to different uses, then, the audio capabilities of websites clearly enable a somewhat fuller engagement with the feel of a place than more conventional textual strategies allow.

conclusions

Clearly, interest in exploring the specific potentialities of the web as a means of disseminating urban research is growing. From the range of websites that we have tracked down, it is clear that, while there is some diversity in what is being done, web technologies are allowing three emphases to emerge very clearly. The first of these is a sense of the complexity of urban spatialities. The second is an invitation to site visitors to engage actively with the research materials,
partly to perform that complexity but also to reflect on its construction. And the third is to emphasise the sensory qualities of urban environments, especially their aural and visual qualities. We have also stressed how many websites are concerned to explain themselves to their visitors, and suggested that this is an important feature if websites are not to be seen as trivial.

However, while our review has identified these three aspects of urban geography websites, this is neither to claim that these are the only possible uses of web technologies, nor that these aspects are only achievable via websites. While articles in print journals are almost always linear narratives, they do not have to be: it is possible to imagine some of the complexity of urban spaces being conveyed textually. So too it is possible to imagine printed photo-essays that might parallel Hansen's (2007) movie. And it is also important to note a major limitation of these websites, which is that very few carry long pieces of text. Their written elements tend to be short – little more than the length of a screen – and this means that they are less effective in developing the kinds of linear sequential arguments on which academic insight so often depends. Nonetheless, it is intriguing to see a number of contemporary geographers willing to exchange those long arguments, in at least part of their work, in return for the chance to explore the possibilities of complexity, performance and multisensoriality that webpages offer.
There are two other issues that might be useful to raise, in the hope of prompting further discussion and debate about the future of such work. Firstly, there's the question of technical skills. Lots of this work depends on skills that are not usually part of the geographer's research toolbox: photography, filmmaking, sound recording, web design. While many of us could probably cobble together a film or a photo-essay or a blog in a half-way decent manner, to produce well-made web materials is a lot harder (as Jones and Evans [2008] note rather ruefully). Learning how to use a professional film-editing software, for example, takes a lot of time. Working with others who have those technical skills is possible course, but then you need to develop an effective collaboration so that your academic aims are achieved. (Our web designer trained first as an architect, which really helped our website project to develop.)

Secondly, there's the issue of making sure your website reaches the audience you intend it to (other academics, presumably) as well as that wider, unknowable public that browses the web. Developing a specific site, and linking to it from an individual's institutional webpage, seems the most common model. But these are the ones most difficult to find using search engines. Another model is offered by the online journal *Liminalities*, however, which takes over the hosting of websites it accepts. This could make them much easier to find, since they'd be listed on databases. And perhaps this is one direction that online journals should take, if the web continues to grow as a place where academic research is disseminated. Perhaps in five years time,
You'll be able to browse not only papers in *Geography Compass*, but also websites.

**Acknowledgements**

The authors would like to thank Manuela Barz for her creative input into the website, and the Economic and Social Research Council for funding this work as part of grant RES-062-23-0223.
This is the pre-peer reviewed version of the following article: Rose, G.; Degen, M. & Basdas, B. (2009) “Using the web to disseminate research on Urban Space” Geography Compass 3 (6) 2098-2108. Wiley-Blackwell, which has been published in final form at http://www3.interscience.wiley.com/cgi-bin/fulltext/122599132/PDFSTART

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