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## **Embedding Digital Narratives and New Media in Urban Planning**

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### Abstract

Many new urban developments are systematically planned and rapidly built and marketed, creating instant “communities” in relatively dense concentrations. As a consequence, urban planners are turning to the social sciences, arts and humanities for answers to achieve socially sustainable developments. This paper discusses a narrative based approach to community engagement in the urban planning process. We describe the evolution of this approach and then give details of both a narrative resource kit as well as a method for arriving at this.

### Keywords

urban planning; digital storytelling; public history; new media; urban studies; urban village; urban informatics; community engagement

## Embedding Digital Narratives and New Media in Urban Planning

Many new urban developments are systematically planned and rapidly built and marketed, creating instant “communities” in relatively dense concentrations. Despite the fact that they follow new urban planning and design principles that foster the integration of diverse entrants, the associated strategies are mostly limited to the development of the built environment. As a consequence, urban planners are turning to the social sciences, arts and humanities for answers to achieve socially sustainable developments (Landry, 2001). This paper discusses an innovative, narrative based approach to community engagement in the urban planning process. The use of narrative in community engagement has some precedent (e.g., Ristock & Pennell, 1996), but has rarely been informed and situated by the humanities and arts in terms of a well considered embrace of narrative theory, particularly in a way that is well integrated with planning and design professions. There are three advantages in this approach: namely, better connection, research and systems.

Firstly, narratives provide a way of connecting with real identities and meaning making which is essential to the community engagement process. New media have been used in community engagement, but externally initiated projects applied to communities by government or commercial bodies have encountered difficulties where the project’s goals do not correspond to the host community’s. Differing expectations can lead to disillusionment or rejection. Self-organised initiatives developed from within communities appear to be more aligned with residents’ goals and purposes and may not face these issues. However, such initiatives have also encountered difficulties in maintaining volunteer input and achieving technological sustainability. The use of narrative in new media design initiatives may be one way to overcome some of these difficulties.

Alternative ways – principally the idea of experiential narratives – are required to conceptualise and characterise the qualities of the city to reawaken poetic and emotional connection to place. By combining elements of public history and public art with storytelling, place construction can be redefined from current mainstream experience to include forgotten “invisible” parts of city and make them visible. “Private citizens are of course entitled to save their own past, but when preservation becomes a public act, supported by public funds, it must attend to everyone’s past” (Hayden, 1995). Research needs to explore how community narratives in the form of, for example, public histories of situated experience can be

integrated into current and future practices to value and embed the depth and meaning of people's experiences into the systems and processes of ongoing city planning, development and policy making.

Secondly, narrative approaches underlie various methods that may be useful in community engagement, (e.g., narrative ethnographies for evaluation) as well as various new media tools (e.g., digital storytelling, scenario development, computer game storyboarding) that may prove valuable in the community engagement process. For example, scenarios are concrete descriptions of life activities that can be used to drive the ongoing design and evaluation of new media systems. They have proved to be valuable research and design tools because, as narratives, they can move from general work process to detailed and specific interaction in a coherent and systematic way (Carroll, 2000; Manning, 2003).

Research is emerging that seeks to understand how vernacular forms of creative expression using new media tools can be used in the creation of community by the people themselves (Davies, 2004; Foth, 2006; Burgess, Foth, & Klæbe, 2006). By making new media techniques accessible and providing guidance and training resources, communities can conduct their own hands-on workshops in digital storytelling, oral history and future scenario building in a self directed manner with peer support, and then present these outcomes in a virtual realm as exhibitable content for public viewing. This creates opportunities also for interested virtual community members to participate and contribute as individuals, by providing accessible online tutorial instructions and allowing related personally produced content to be posted.

Thirdly, narrative approaches can be related to systems thinking and formal systems modelling. Guhathakurta (2001) developed an empirically based urban model of the San Pedro region from narratives about the tension between growth and environmental protection. The advances made in the use of urban development models have transformed this from a static, data driven, unidirectional process to simulation exercises (Guhathakurta, 2002) that seek to understand the underlying interrelatedness of community stakeholders and their perspectives. Kok and van Delden (2004) combined narratives and quantitative models in building scenarios to combat the desertification of Spain. They ran a series of workshops with a variety of stakeholders to build a number of narrative scenarios (e.g., convulsive change, water shortage etc.). Actual variables that could be measured were then derived from these scenarios and quantitative modelling undertaken to inform decision making about land use

for instance. Narrative driven scenarios are also an important component of “community visioning”, which is a strategy used by urban planners to encourage the building of sustainable futures for communities through civic engagement (Ding, 2005).

This paper will propose a cross disciplinary methodology delivered within an online resource toolkit to operationalise these ideas. The toolkit is centred on the development of a gateway for locally created content to a digital repository in order to provide a platform for stakeholder debate; animate community engagement; and develop and display community narratives through digital creativity. This module accommodates applications for the publishing of creative and local content (photo and video galleries, digital storytelling, etc.) – either in a broadcast-style collective one-to-many or many-to-many mode, or in a networked peer-to-peer mode of communication. It enables smart information use and exchange by residents, and will link up to other old and new media channels, such as public displays, mobile phones and community television. It provides an innovative gateway into a network of locally produced content, makes social connectivity visible (in both a “virtual” and “real” world and promotes “community efficacy” (Kavanaugh, Reese, Carroll & Rosson, 2005).

#### Narratives in an urban planning discourse

*The multicultural diversity of cities, the need to understand differing ways of life, ... and insurgent planning processes where people take their own initiatives with regards to governance, will reveal a diversity of urban experiences... The access to this information is not necessarily through reports and documents, but may have to be gained through oral histories, storytelling, and poetry. (Odendaal, 2006, p. 36)*

*As urban planners grapple with effective methods to stimulate social sustainability in the ‘art of city making’, through urban renewal or development projects, more are recognising that history and creativity can make great partners. (Landry, 2007)*

As articulated by Odendaal (2006) and Landry (2007) above, there is a growing movement amongst urban planners to utilise creative community narratives in the process of urban planning. Community engagement in urban development is now widely practised in

relation to both heritage issues and future sustainability (Randolph, 2004). This movement parallels developments in new media which have seen the democratisation of production via co-creation of content, and the use of locative media to reinstate “the local” in the midst of the global (Hearn, Tacchi, Foth & Lennie, 2008, forthcoming; Foth & Hearn, 2007, forthcoming).

New ways of capturing and expressing “lived experience”, especially experience of place, are central to this movement. Professional roles and public processes are being broadened by “Place Memory” and “Urban Preservation”, which includes the practice of public history, architectural preservation, environmental protection and commemorative public art, as they are increasingly recognised as integral components of any urban landscape history (Hayden, 1995, p. xiii). We argue that these community narratives will play a significant role in shaping community engagement strategies towards urban planning if new media applications are also included in these professionals’ “toolbox”. A well theorised, comprehensive approach using narrative is still a relatively novel way of engaging community in an urban development, but this strategy enables traction both with the idiosyncratic experiences of community members, as well as a way of informing planning and design frameworks and models.

A narrative is “inter-subjective as well as communicative, since the plot renders meaning to specific experiences or logical deductions. It is also a powerful means of communicating an argument” (Guhathakurta, 2001, p. 4). Moreover, community narratives shift the interests of design and planning processes towards pluralistic and subjective perceptions of space and its use, emphasising the fundamental relationships between space and socio-cultural processes (Kallus, 2001). Stories can make a lasting “place” out of public space, allowing people to connect with these narratives in either a physical or a virtual way. Sophisticated forms of representation and communication can also be used for decision support systems and multimedia to make pragmatic urban modelling tools for public forums (Guhathakurta, 2001). Such approaches can construct regional “stories” of possible futures, informed by collated historical narratives, so as to better forecast evolutionary affects on an urban environment.

Australia is one of the most urbanised countries in the world in terms of the high proportion of urban dwellers among its total population. Approximately two-thirds of the total population reside in major cities (Australian Bureau of Statistics, 2004). Current

projections for South East Queensland (SEQ) are 3.71 million residents by 2026, an increase of around 1.05 million people, or almost 50,000 each year on average (Queensland Government, 2005, p. 5). The Queensland Government is aware that the continuation of the low density urban sprawl in SEQ is not sustainable. These trends (similar in other areas elsewhere in Australia and the world) have global economic relevance and reflect the changing role of cities internationally. Compact city policies are being developed and implemented in all Australian capitals to deal with population pressures and urban expansion. Our work builds on a number of community engagement projects that have been oriented towards both past and future narrative building centred around ongoing research in an inner-city residential development in Australia – the Kelvin Grove Urban Village (KGUV).

For example, in terms of heritage, the KGUV Sharing Stories history project (Klaebe & Foth, 2006) commenced in June 2004 and over the following 30 months captured the social history and heritage of the Kelvin Grove Urban Village and its surrounding community, producing a substantial social history book; an oral history collection; photographic, visual and public art exhibitions; and community storytelling workshops. The projects “living” online archive ([www.kgurbanvillage.com.au/sharing](http://www.kgurbanvillage.com.au/sharing)), which includes digital stories, creative historical writing, photographs, and digital public art elements (as well as futuristic urban design sketches produced by local high school students), was continually updated with new content for the duration. In terms of future oriented community engagement activities, Hearn, Tacchi, Foth and Lennie (2008, forthcoming) articulate the many processes of human deliberation, or enquiry, which are future oriented and have applied these to the design of new media systems (Hearn et al., 1993; May & Hearn, 2005). Foth (2006) and Foth and Hearn (2007, forthcoming) have specifically applied this work in an urban context.

In economic terms, this work is an example of what has been referred to as the embedding of creativity as an enabler across society (Cunningham, 2006; Florida, 2003). Recent work in understanding the significance of the creative sector has shown that there is as much, if not more creative work in sectors outside the core creative industries. Higgs and Cunningham (2007, forthcoming) suggest the growing interest in creativity *outside* of the traditional domains of culture is a key indicator of the rise of the creative economy. The idea of the “embedded creative” (Cunningham, 2006; Higgs & Cunningham, 2007, forthcoming) is important for debates about the future of the creative industries in terms of growth,

employment and understanding how they add value throughout an economy. As Scott (2006, p. 16) argues, urban planning is an instrument “for enhancing the collective order of the creative field”. That is, the intensive interaction between creatives and urban planners will stimulate benefits both ways.

*The creative field that undergirds the new economy is constituted as a constellation of workers, firms, institutions, infrastructures, communication channels, and other active ingredients stretched out at varying densities across geographic space. This network of forces is replete with synergistic interactions variously expressed as increasing returns effects, externalities, spill-overs, socialization processes, evolving traditions, and so on, and it is above all a locus of extraordinarily complex learning processes and knowledge accumulation. (Scott, 2006, p. 15)*

Echoing Richard Florida’s ideas, urban policies can have a significant influence on the retention and circulation of the highly skilled knowledge workers involved in creative industries. Yusef and Nabeshima (2005) emphasise the importance of cultural amenities, and educational and medical services to retain workers, and the development of transportation infrastructure as central to providing mobility and access to human capital. Further, as Shoales (2006) notes, the highly interdependent nature of creative industries clusters can cultivate urban density and support the building of healthy communities.

Hill (1998) proposes that architects and users both produce architecture, the former by design and the latter through use. That is, planners and the community jointly produce cities. In the art of city making, Landry suggests history and creativity can be great partners in producing difference from sameness, and originality out of imitation, so as to avoid a “geography of blandness” (Landry, 2007). The development of a discursive method to activate and embed rich, multivalent conceptions of the situated experience of the built environment (via multi-modal experiential narratives) in urban planning and design processes offers the opportunity to move well beyond the conception of users as abstract / passive into a reality of a co-creative community (Hearn, Roodhouse & Blakey, 2007, forthcoming).

### Towards a research agenda

We propose here the form of a narrative resource kit for community engagement, as well as a method to design the kit. Narrative approaches figure in both the method and the

resource kit. We see the process as inherently comprising multi-perspectives. We therefore propose that a cross disciplinary methodology is required. The use of new media can creatively aid in the porosity between disciplines (Hearn, Tacchi, Foth & Lennie, 2008, forthcoming, chapter 4) and help negotiate boundaries between public / personal and collective / individual in particular. However, our research to date indicates that a mix of traditional and new media narrative devices can deliver a superior comprehensive approach to the engagement of communities undergoing urban development than each can provide individually (Klaebe & Foth, 2006).

Increasingly, narratives will be used as a resource to interactively illustrate and speculate about the future of urban sites in a multimedia environment. Prototypes of interactive multimedia tools for neighbourhood community planning within local government for assessing new developments within the neighbourhood, specifically in terms of:

- mapping cultural assets and narratives of local history of neighbourhoods in an integrated GIS referenced, text, audio, image format;
- designing narrative models that inform future 3D scenarios of neighbourhood;
- evaluating these tools for use in assessing impact of future development and redevelopment in the neighbourhood in terms of land use and infrastructure;
- using these tools for enhancing social and intellectual capital of neighbourhood by providing opportunities for both virtual and physical interaction;
- evaluating the effectiveness of these tools by key stakeholders for community education, engagement and local governance; and,
- investigating, in particular, the challenges and opportunities in involving secondary school students as an underrepresented but significant group for research into urban planning.

### *Overall Method Rationale*

Hearn, Foth and colleagues have developed, applied and tested a suite of action research methods for developing new media applications (Foth & Hearn, 2007, forthcoming; Hearn & Foth, 2005; Hearn, Tacchi, Foth & Lennie, 2008, forthcoming; Tacchi, Slater & Hearn, 2003). Here action research will employ the participants as agents in creative activities and interventions towards urban planning outcomes. Following Matei & Ball-Rokeach (2003), participants are transformed from occupants of a house, to members of a

neighbourhood utilising digital storytelling (DST) and socio-cultural animation; methods described by Lambert (2002), Foth (2006) and Klæbe and Foth (2006). Qualitative research (e.g., Patton, 2001) conducted in parallel, guides this process and assists in assessment of research aims.

For example, a method designed to create resources for heritage issues would ask participants to creatively process their socio-cultural heritage and residential history, which they bring with them to their neighbourhood. This theme would ground the emerging community memory of location in an intricate web of interconnected life paths of individual residents, which vary in length and geographical scope. The communal examination of the individual contributions residents make to the emerging historical consciousness of their location is intended to foster a better understanding of the region and its cultural diversity.

The qualitative research methodology to conduct the fieldwork consists of archival retrieval, semi-structured interviews using oral history, digital storytelling, and the use of photographs and artefacts (diaries, letters) to prompt discussions in life writing workshops (Klæbe, 2006) as well as “history lines” that create additional content to share in a “living archive” website attached to an established community website in each location.

A second cycle involves the translation of narratives into formats more amenable to the development of models and systems useful in the urban planning process, as well as prototypes of new media tools useful in the planning process. Narratives not only support community meaning making about place, but also the construction of planning policy, development strategies, as well as the assembly and interpretation of empirical planning data. Urban phenomena (such as traffic, clustering of activities and environmental outcomes) emerge out of the interaction of complex systems of micro scale processes. New media approaches, guided by interpretive narratives, can model these dynamic systems in a more comprehensible and accessible fashion.

Our approach utilises the notion of “use scenarios” to effect a translation process from emerging themes to stakeholder needs and, finally, new media design prototypes (Carroll, 2000; Manning, 2003). Empirically informed use scenarios function as vehicles for supporting the creative meeting between users and urban planners.

These outcomes are evaluated. Participatory evaluation methodologies have been effectively used in a diversity of fields, including agriculture and rural development, education, social services and health (Diez, 2001; Dugan, 1996; Papineau & Kiely, 1996;

Garaway, 1995). Moreover, there are variants developed specifically for new media projects developed by Lennie, Hearn and colleagues (Hearn, Tacchi, Foth & Lennie, 2008, forthcoming; Lennie and Hearn, 2003; Lennie et al., 2004; Lennie, Hearn and Hanrahan, 2005). The final evaluation phase would be a continuation of the action research cycles already established but supplemented with interview and evaluative data, and would incorporate participants from each case site as well as end users of the research (e.g., community planners, developers, educators and community governance representatives).

### Online resource kit

We pre-empt here the form of the resource kit in terms of current prototypes emerging from previous research. The current array of new media applications being developed and evaluated for use in the urban development of KGUV includes the following three examples (for more details, see Klæbe, Foth, Bilandzic & Burgess, 2007).

#### *History Lines*

This brings a cross section of new residents together in an activity using narratives, digital maps and location markers pinpointing where they have lived during the course of their life. When stories and locations are collated together, overlapping and common lines of location emerge. The material can be used anonymously as content for an exhibitor, as well as for a neighbourhood portal to stimulate interest in community networking. Participants who do not partake in face-to-face workshops are still able to upload their details online to extend the community History Lines patchwork.

#### *City Flocks*

This is a mobile information service for public urban places. It is fully managed by the urban residents and is designed to tap the tacit, social knowledge they hold. City Flocks allows people to use their mobile phones or computers to leave and access virtual recommendations about community facilities, making them easily accessible for other people using user-generated tags. The system can also voice-link residents who can nominate the mode of contact and expertise they are willing to share.

#### *Digital Storytelling*

While not new as a form of storytelling, it is new as a tool in urban development. Digital storytelling in this context gives community engagement projects the opportunity to digitally narrate personal tales with expert guidance, as an interesting and visually stimulating extension of an oral history. Workshops have included diverse participants from all quarters of community. Local government decision makers and stakeholders may also use digital storytelling as an evaluation tool (internally or externally).

### Conclusions

One of the papers recently presented at the *Digital Cities 5* workshop, co-authored by the Associate Director and Citizen Planner Director of the Land Policy Institute at Michigan State University calls for research to ‘identify effective information tools to enable citizens to shape what their communities look like’ and ‘use community data, locative media and social software to enable effective local action’ (Beyea & Geith, 2008, forthcoming). Our argument aligns with this research agenda in that it seeks to answer these research questions and deliver a better understanding of the role of narrative-based new media innovations to support a more participatory urban planning process.

We believe that new media creativity and literacy can help people participate in the urban planning process. Supporting a more meaningful engagement in shaping and designing our urban futures assists in improving a sense of belonging and fosters human talent and socio-cultural values favourable to creativity and innovation. We think that by empowering people to bring about change within their local community, we can re-invigorate a more contemporary interpretation of community values in a knowledge society. Our capacity to interpret and engage with our urban environment is also enhanced by raising our awareness of the socio-cultural background, heritage and future aspirations of local community members.

Our work is an example of a humanities and arts based collaborations with urban designers and urban planners. It illustrates that the integration of new media and ICT can play a positive role in the development of knowledge-based urban communities with a focus on living, working, learning and recreation. New media and learning infrastructure can not only benefit the city but also the surrounding region thus establishing a foundation for a knowledge-based urban region. We hope to translate our approach into action through the collaboration across different disciplines contributing to community development and mutual

learning. Our focus on new media technology and community narratives will form part of the local learning infrastructure and contributes to the development of learning communities in our study area.

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