Spatial culture, learning and design: shifting ecologies of practice

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ABSTRACT

Design interventions into environments reshape the ecologies of practice that the environment has participated in, housed or enabled. This paper draws upon research into the complex ecologies of next-generation learning practices and the respondent interior design practices that facilitate and sustain the evolution of those ecologies. The role of the interior designer is expanded to include not only the design of objects, communications and their contexts but also the design of processes through which these may be conceived and understood. Through cross-disciplinary methods and theories the design of an inclusive and responsive process highlights the ecological nature of interior design interventions.

. . man is an animal, suspended in webs of significance he has spun . . .[1]

ECOLOGIES OF PRACTICE

The metaphorical transposition of the concept of 'an ecology' from the natural to the human sciences in the mid-20th century, opened a fruitful trajectory for engaging with the open, complex and adaptive systems that are constructed, interpreted and inhabited by the peripatetic modern. Ecologies are characterized by ongoing, open-ended, animate negotiations within and between complex entities. Understanding human practices as ecologies brings to view the dynamism of their internal transformations, shifting border conditions and renegotiation of external relations. This paper is concerned with two ecologies; an ecology of learning institutions and an ecology of spatial design practice. These two ecologies intersect in the context of a concern to design appropriate spaces for next-generation learning. The paper introduces cross-disciplinary research, headed by a spatial design team, into the requirements of an inclusive brief-development process for next-generation learning spaces.

The need to design for such a process has become ever more evident as universities enter into a period of dramatic shifts and expansion. The expertise of diverse stakeholders needs to be given a voice, and the complex negotiation of competing desires and claims needs to be as well informed as possible, if the spaces constructed are to meet the needs of future learners. The space that

houses a practice, such as learning, is an element within the ecology of that practice. A change in spatial design can shift an ecology of practice, for better or worse. Equally, a space unresponsive, or unsuitable, to shifts and emerging trajectories within the ecology they participate in, can deaden or debilitate that ecology; at least locally, and perhaps beyond. Many educators and theorists of next-generation learning feel that this is indeed the fate of many local learning ecologies, housed in inherited spaces and framed by inherited institutions that arose in response to a very different style of learning. Educators struggle to keep students interested and involved in their learning; struggle to compete with the apparently greater allure of students' economic and social lives, and the enticements of digital distraction. Theorists argue that the ecology of learning has moved on, into other spaces.[2] Institutions of formal learning need to shift their own practices, structures and assumptions in order to reinvigorate the learning that takes place in their name, and their domain. This paper argues that the predicament of contemporary educators does indeed have a spatial dimension. The radical shifts in spatial and temporal experience over the course of the 20th century impacted upon learning practices in far-reaching ways. The first part of this paper outlines the history of these spatio-temporal shifts.

This history is also of critical importance to the spatial design disciplines. If, as this paper claims, interior design emerged as a distinct spatial practice in response to the needs of new kinds of narrative and performative identities within the emergent activity settings of late 19th and early 20th century modernity, then the destabilization of these activity settings by mobile and ubiquitous technologies will have a transformative impact on this practice. Equally architecture and other spatial disciplines must respond to the new peripatetic practices of a digitally enabled culture.

The second part of the paper looks at learning practices in particular, the way they have been housed and the need for change. Finally, the paper introduces the approach taken by spatial designers within an Australian Learning and Teaching Council (ALTC) funded research project charged with the task of developing an inclusive, curriculum driven, human-centred process for developing briefs for next generation-learning spaces. It is argued that this expansion of the role of spatial designers into the design of processes (and tools to facilitate those processes) speaks of an emergent shift in the ecology of design practice. The paper concludes with an argument as to the benefits to be gained, both for design practice and for those whose territories are intervened by such design practice.

THE DYNAMICS OF SPATIAL EXPERIENCE

Experience of both space and time profoundly altered during the course of the 19th and 20th centuries; with far-reaching consequences for everyday practices.[3] The 20th century city radicalized the trend towards a compartmentalisation of daily life into different spheres of activity – family life, education, economic production, consumption and leisure – that were spatially distinct. Increasingly

efficient transport networks enabled flows of people, goods and services through and between these settings.[4] The everyday experience of space and time within the modern city became one of neutral and efficient movement punctuated by meaningful, located activity or pleasure-seeking tarrying; a rhythm of focus and flow, attention and distraction.

While embodied spatial experience was increasingly organised as a punctuated engagement in differently located activities, the potential for virtual engagement in distant or imaginary spaces burgeoned, as popular communications media became ubiquitous. First print, then screen-based media, constructed narrative identities that, for the moment, consumed the reader or viewer, proliferating the possibilities for experience. The shifting of attention from the physical to the virtual and back, gave experiential depth to embodied inhabitation of spaces. Virtual experience of the world accessible through media, was originally anchored (in large part) to particular spaces; books were read in libraries, performances watched at the theatre, films at the cinema and television at home; and these associations enriched the distinctiveness of experience of place, confirming the articulation of temporal experience into sequences of located activities, and richly developed spatial environments particular to these activities.

It was in the context of this articulation of spatial experience into activity-specific environments that interior design, as a discipline, was born. There was a need for places that not only oriented themselves to an activity to be performed, but also articulated the identity of the body that laid claim to that activity. National, historical and cultural identities, as well as corporate, branded and domestic identities, variously articulated through design, gave narrative continuity to the projects pursued within different activity settings.

These richly developed spatial contexts were both complicated and enriched by their relations with virtual worlds (imaginary, projected, distant, other). First print media, then, increasingly, screen-based media, broke free from their spatial locatedness, and became portable; offering instant and ubiquitous access into the worlds they projected, regardless of physical place. One could read a newspaper or a paper-back book at home, on public transport, in a café or while on holiday. The portable television eroded the association between television viewing and a room devoted to 'sitting', 'living' or 'lounging'. Televisual engagement became a transportable pleasure equally available in the kitchen or bedroom. The narrative pleasures offered by film proliferated from the cinema to the television and thence to the computer and mobile Wi-Fi device, where they now appear alongside information streams, games and social software interfaces. The laptop and the mobile phone rendered workplace and social life continuous. Thus, alongside the punctuated rhythms of embodied spatial experience within the 20th century city, a second kind of spatial experience assumed increasing dominance. The virtual worlds and information flows accessed through communications media are experienced as continuously available; as a stream that can be dipped into at will. Boundaries collapse, and active negotiation of the flow assumes an ongoing imperative.

The distinctive character of spatial experience within modernity, and as crystallized in the multi-media spaces of the late 20th and early 21st century, was co-produced with the emergence of the modern subject. Recognition of the emergence of a new mode of engagement with the world radically shaped the designed spaces, objects and communications of the 20th century. Designers such as Harry Beck and the Eameses understood that, for the modern, meaning is constructed through the making of 'connections'.[5] Through an ongoing negotiation of multiple contexts, activity settings and information streams, through the making of connections between disparate fragments, the individual has become an active co-producer of meaning in everyday life.

Home, school, work, commerce – each generate a continuous stream of information, images, impressions and narratives. The experience of overload is a constant of contemporary life. The individual can either disengage, adopting a stance of distraction, or participate and negotiate, co-constructing meaning from the proliferating streams on offer. It is participation in the production of meaning, by individual or group, which animates contemporary cultures.[6]

LEARNING SPACES

The modern individual is a learner; positioned as such by the enlightenment imperative for self-improvement, for boundary breaching and critique. The proliferation of distinct activity settings within modern life included settings for learning. At first housed in 'school rooms' in the houses of the rich, in public schools and in universities, learning acquired a set of distinctive associations, practices and embedded dispositions. The student's body was schooled to attentive reception, positioned in acknowledgement of the authority of the teacher. Blackboard, writing table, chair, paper and pen, books, maps and measures; all exercised a discipline, shaping the space and the experience of learning. During the 19th century these dedicated spaces of learning were supplemented by projects of public enlightenment represented by the library, the museum and the exhibition. These more informal learning spaces assumed a different kind of body – self-directed and, in the case of the museum and exhibition, active, perambulatory and social.

These different learning practices and their accompanying body disciplines developed different possibilities for the negotiation of self, world and trajectory. Together they enabled the construction of identities that retained coherence while being open and mobile. These 19th and early 20th century negotiations made sense in the context of relatively stable and intelligible bounded entities of early modernity, as of nation states, gender-roles, and distinct activity-settings. However the progressive erosion of boundaries, blurring of distinctions and destabilisation of identities through the course of the 20th century, has re-written the needs of the learner.

Despite the transformation of everyday life by technologies of mobility, and the proliferation of engagement in virtual spaces, the physical and institutional structures accommodating learning have changed very little. Schools and universities, libraries, museums and exhibitions, essentially retain

their 19th century form. However the revolution in mobile and information technologies radically altered learning possibilities, rendering the traditional physical sites of learning peripheral to many emerging learning practices. The ecology of learning, as practiced by a new generation of 'digital natives' has shifted to encompass new technologies, and has developed new literacies, new body-disciplines and performances, and correspondent emotional comportments and touchstones.[7]

The inherited environments of mainstream learning institutions do not cohere with the desires and disciplines of digitally enabled learning practices. The relations they assume between learners and learned are built on pedagogies of instruction, not of participation, negotiation and experimentation.[8] They assume the spatial and temporal co-locatedness of learners, rather than the dispersed and collapsed spatiality and temporality of the digitally enabled. They assume that learning is an activity for which there is a place and a time, distinct from the places and times of work and leisure. These inherited learning spaces are still, in large part, the accepted sites of formal learning. However a new generation of learners increasingly treats these spaces, and the activities they house, as a necessary sufferance on the path to formal qualification, rather than as places of discovery and self-accomplishment.

The need to re-conceptualize the relations between institutional spaces and learning practices has driven a flurry of research over the past decade.[9] Central to this research have been questions concerning the shifting relations between virtual and physical spaces. The tempting efficiencies envisaged as a consequence of the transfer of learning from physical to virtual spaces, has driven investment in online learning. However, while it is clear that these virtual environments have an important role to play within next-generation learning, a substantial body of research into the nature of learning cautions against wholesale abandonment of embodied learning within face-to-face contexts and physical spaces.

Influential in this research are the arguments of Hubert and Stuart Dreyfus, Paul Duguid and John Seely Brown, Jean Lave, Etienne Wenger, Ron Oliver, Jan Herrington and Anthony Herrington. These thinkers and others highlight the role of tacit knowing, informal understanding and appropriate comportment in the embodiment of expertise, and the situated nature of authentic learning.[10] As Brown and Duguid observe, you can't "learn to talk like a native by studying grammar books. Anyone who has travelled in a foreign culture knows that what goes down on the street isn't what's put down in the books. Learning involves inhabiting the streets of a community's culture."[11]

Sustainment of ecologies of practice (the practices that learners are to learn) requires that learners be given opportunities to become 'street-wise' in the culture of their disciplinary community, as a necessary step on the path to expertise. This means direct exposure to, and interaction with, the embodied expertise of authentic bearers of that culture, as well as guided practice in the kinds of performance particular to that culture. As Brown comments:

Ecological robustness is built – mysteries are put in the air – through shared practice, face to face contacts, reciprocity, and swift trust, all generated within networks of practice and communities of practice. New communications technologies can certainly reinforce these. It is more doubtful that they can readily replace them.[12]

Expert practice already does, and increasingly will, incorporate the negotiation of digital flows within the everyday performance of practitioners. A focus on the performative aspects of practice does not exclude engagement with the digital. Further, digital flows and virtual spaces provide learners with crucial interfaces, connecting them with bodies that lie beyond the practice; with the learning institution, with educators, with friends and workplaces.

Clearly, next-generation learning spaces must accommodate diverse flows of digital information, and provide settings for the creative negotiation of these flows. Equally, however, they must enable cultivation of new and practice-relevant modes of self- and body-discipline; they must accommodate and encourage the performance of expert practice, and provide for the cultivation and dissemination of modes of comportment appropriate to particular fields.

Next-generation learning spaces, therefore, need to offer learners a rich mix of opportunities for both virtual and physical engagement with the practice to be learned, with practitioners, educators and other learners, and with the institutional facilitators of, and stakeholders in, their learning process. Further, these spaces must be seductive enough, rewarding enough, that students will shift the centre of their attention, and the site of their negotiation of competing demands, into the space of learning; at least for sufficient time for the seeds of an acculturation into disciplinary expertise to be sown.

Unlike the discrete learning spaces created for early moderns, next-generation learning spaces need to cater to the hyper-mobility, the connectivity, and the pleasures of transgression that inform the practices of contemporary learners. Such spaces may be physically dispersed or transient; they may be temporarily and opportunistically appropriated from other uses and practices; they may be loosely defined and inclusive of other activities; they may be actively and continuously re-constituted by their users. However such spatial dispositions challenge many of the assumptions and processes that currently shape the production, inhabitation and control of institutional learning spaces.

Significant barriers to change are located prior to, and beyond, the traditional role of the designer. Radical change to learning space design requires a repositioning of many of the assumptions and expectations that educators and learners currently bring to learning. More controversially, but perhaps with equal imperative, such change requires a rethinking of assumptions about the ownership of learning spaces, and of the systems of control and management that currently dominate learning institutions. What is demanded is a paradigmatic shift in the ecology of learning

institutions. Few stakeholders disagree. The challenge is how to successfully negotiate such complex change. It is here that emergent areas of design practice have a significant role to play.

DESIGN AND ECOLOGICAL CHANGE

The ecology of design is bound into the ecologies of cultures that it is embedded in, and that it services. The shifts in spatial experience and in the embodied experience of learning, in the course of the 20th century, have been echoed by shifts in design practice.

While mainstream interior (and other) design practice has actively participated in the construction and communication of personal, corporate, branded and community identities throughout the modern period, and has provided settings for the performance and consumption of these identities, emergent design practices are now engaging with another aspect of identity construction; the negotiation of alternative, future identities, and of the changes necessary to enable those identities. The consolidation of the consultation process into a brief marks a crucial point in such negotiations.

The purpose of the brief is to communicate a desired future. It is the moment at which the possibilities for promising change envisaged by the stakeholder group are translated into a specific set of desires and constraints for design. Mainstream design practice has traditionally entered the process at this point. However, the recognised potential that design holds for redirecting ecologies in which the design plays a role, has focused stakeholder groups on the importance of well considered communication of their desires for the future of their practice. The complexity of the consultative process, and the difficulty most stakeholders have in projecting and critically engaging with possibilities, has opened up a new role for designers. In this pre-briefing process, the designer's role is as an enabler of communication and envisioning among a stakeholder group. This shift in role demands a very different set of strategies and a different focus for design energies.

Spatial designers (among others) have dabbled with inclusive design, social design and community consultation in their public projects since the 1970s, however participatory design did not gain impetus outside of these tentative settings until the 1990s, when ethnographic researchers and design anthropologists turned their attention to patterns of engagement between users and new technologies.

The importation of ethnographic research methods into design user research was paralleled by the exportation of 'design thinking' (characterized by creative, iterative generation, testing and re-framing of possibilities) into management, organisation design and business innovation.[13] Such boundary-crossing, borrowing and reinterpretation of practices drawn from other disciplines is characteristic of the late-modern pursuit of 'connections'. Just as spatial articulations blurred in the latter part of the 20th century, so too have many disciplinary distinctions.

A combination of ethnographic methods (re-interpreted for design contexts) and design thinking approaches (reinterpreted for innovation contexts) consolidated within participatory design. Participatory design is more concerned with eliciting stakeholder understandings and concerns, and facilitating engagement with innovative change, than it is with the direct production of a designed thing or environment. In our ALTC funded project, participatory design becomes the means for enabling the diverse (and often conflicting) understandings and concerns of different stakeholder groups to be co-present within an open-ended, generative conversation about possible characteristics and qualities of proposed new learning spaces. An iterative cycle of such conversations feeds into the brief development process. Thus the preparation of the design brief becomes a process that is guided (though not controlled) by design.

DESIGNING TOOLS AND PROCESSES

As spatial designers we brought to the project an understanding of the ways that spaces can shape experience and enable behaviours and practices. Interior (and other spatial) designers understand the interplay of different elements that combine to shape spatial experience; the play of light, sound, colour, texture, form, surface, depth, openness, closure, and so on. They understand the importance of adjacencies, and of flows within and through the space. They understand temporal dimensions, the relative permanence and transience of different materials and configurations.

These understandings, which belong to spatial design practice, are important players within the brief development process. While the brief must not attempt to accomplish or dictate the design itself, it does need to communicate to the designer the kind of character and mood that will fit the practices to be housed; the ways the space is expected to behave, what it needs to support and what it must exclude.

Within design scenarios for next generation learning spaces, different design possibilities have different implications for the management and modes of occupation of the spaces. If a built space demands a shift in facilities management practices, for example, this needs to be understood and agreed to by those who will be responsible for the management of that space. If the space assumes a shift in teaching and learning practices, this shift must be one that academics and students can see value in, and wish to pursue. In each case, the built space will represent an intervention into (or a consolidation of) existing practices of management and of learning. As each of these practices adjusts to new possibilities, and develops new strategies and routines, the ecology of the learning institution itself is re-configured.

The designing that was done within our ALTC project was centred on interactions between different stakeholders. Playful prompts were designed to facilitate collaborative exploration of ideas and promising directions for new learning spaces. We drew upon theory of game design and play, in addition to borrowing and adapting tools already in use within participatory and innovation design settings.[14] These latter included persona development and forecasting tools, as well as prompt or 'cue' cards, reconceptualised to suit the specific needs of spatial design within next generation learning contexts. The design of these tools has been detailed elsewhere.[15]

Expanding spatial design practice to include the design of participatory processes and enabling tools for the development of design briefs should benefit both stakeholders in the designed spaces and the practice of spatial design itself. Well designed processes for brief development should result in spaces that stakeholders are keen to engage with; that they understand and identify with. The designed spaces that germinate from such a brief may realise new possibilities for learning, as well delighting users by their fitness to the practices they house.

Previously, the potential for creating truly innovative design often has been constrained by design briefs that reflect partial consultative processes and limited involvement of crucial stakeholders. The design of better brief development processes opens the door to more exciting design scenarios. Our project is not unique in exploring this new territory for spatial designers. The interest that is beginning to burgeon in this expanded terrain suggests a promising shift in the ecology of spatial design practice.

CONCLUSION

At the close of the first decade of the 21st century, we can survey the ongoing dynamic of the ecologies to which we are heirs. From early modernity an emphasis upon mobility and a critical interrogation of boundaries has informed our practices. This is a spatial disposition. To be modern is to be in motion; a transgressor. But equally, to be modern is to be a learner. As moderns, in the course of the 20th century, we learned to be wary of the simple principles the Enlightenment had pinned its hopes to. The enthusiasm of early 20th century spatial designers for the transparent, the rational, neutral and efficient, was displaced by a consciousness of greater complexities; of the pervasiveness of power and deception, but also of human resilience, of generosity, wit, playfulness and delight. Together with the other design disciplines, spatial design offered opportunities for corporate and independent bodies, for communities of practice and culture, to reinvent themselves; to reposition themselves within more promising trajectories, or to play the game for what it might offer. The ecology of spatial design practice has responded to and thrived upon the restless striving of the peripatetic modern.

New technologies have transformed social and work practices over the past decades. They have accelerated the collapse of spatial and temporal experience. The moments that we inhabit a single space are increasingly few; our time is increasingly independent of shared schedules and agreed routines. The transgressive seeds sown early in modernity have borne extraordinary fruit.

The ecology of spatial design practice is undoubtedly on the move. Our venture into territory relatively new to spatial design, in designing tools and strategies for participatory brief-development processes, is but one of the many boundary crossings that characterize contemporary ecologies of design.

ACKNOWLEDGEMENTS

NOTES

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