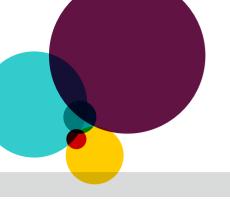


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INTRODUCTION

For many decades space was a solely architectural and practical issue, but now library space can be more than just functional. This FreeBook thus provides library practitioners and students of Library and Information Science (LIS) with an exploration of library space as multifaceted, with different social, cultural, and objective meanings, while also fostering, motivating, and inspiring collaborative and informal learning processes – all of which is in light of Physical Space in the Library.

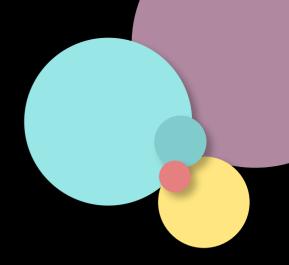
This FreeBook features contributions from experts in their field, including:

Graham Matthews is Professor of Information Management, Department of Information Science at Loughborough University, UK. He has authored and edited numerous publications, including 'Disaster Management in Archives, Libraries and Museums', Ashgate, 2009. Dr Graham Walton is Head of Planning and Resources, University Library and Honorary Research Fellow, Department of Information Science, Loughborough University, UK. He has over 30 years of experience in higher education and is editor-in-chief of the New Review of Academic Librarianship. During this period, he has been involved in learning space provision, including impact assessment.

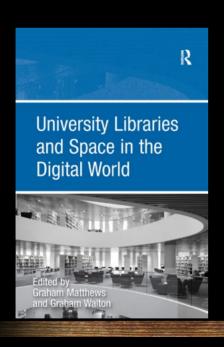
Graham Walton is an Honorary Research Fellow in the Centre for Information Management at Loughborough University, UK. He has over 30 years of experience in higher education and is editor-in-chief of the New Review of Academic Librarianship. During this period, he has been involved in learning space provision, including impact assessment.

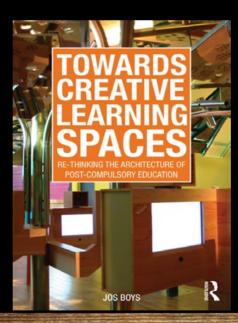
Jos Boys has a background in architectural practice, research and journalism and is currently Senior Research Fellow of Learning Spaces at the Centre for Excellence in Teaching and Learning through Design (CETLD). She has taught at various institutions, including the Architectural Association, London Metropolitan University and the University of Brighton; and has also been an academic developer for the art and design disciplines. Jos' practice is predominantly community-based and she is particularly interested in exploring the relationships between space and its occupation, not just theoretically but also publicly and practically.

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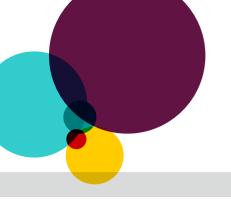
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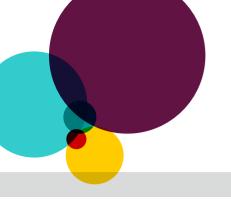
INTRODUCTION

For many decades space was a solely architectural and practical issue in Library and Information Science (LIS). The role of the library in industrial societies seemed to be well defined and at first sight there was not much difference between, for example, socialist and capitalist countries. The library was a place with books, spaces for reading and consulting reference material, and service areas for lending and reference work. Additionally, but not visible, there were stacks, workshops, and offices for library staff. Layout and design of the library building varied between representative buildings for national libraries and public libraries of the nineteenth and early twentieth centuries, functional complexes like college and campus libraries of the 1960s–1980s, and open spaces in the sense of the Scandinavian model for public libraries. At the very moment when the library as a physical space came into question because of technical and social changes, librarians and scholars started to think about the future role of libraries as places.

This process was not only about becoming aware of the non-functional qualities of library space (McDonald 2007), but also about new approaches to the role of library space in the community and for the individual. Scholars stated that a new sociology of libraries and librarianship had been needed and that a lack of sociological theory had existed in LIS:

I think that it is important that courses and research within the perspective 'library and society' are given substantial scope in LIS departments. This, I consider, is important, not only for the role of libraries concerning citizenship, but also for the survival of libraries and library education itself. We must know why we exist and what we are working for. (Torstensson 2002: 219)

Since then, several conferences and publications have focused on the issue both from the architectural and the sociological point of view. The outcome of all this has been high quality papers and articles, each introducing a more or less innovative concept of library space. This discussion about the physical space of the library has taken great steps forward in recent years and we do not need to repeat the reasons for the so-called 'renaissance of the library as place' any more. It seems to be more appropriate to focus on new concepts for academic library space in the evolving knowledge societies.



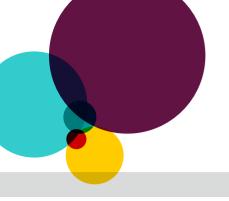
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This issue, like many others in libraries and information services, is often divided between a scholarly debate on the one hand and a discussion of projects and best practice examples on the other. This book offers an opportunity to initiate a dialogue between theory and practice in this field. In order to reach this goal, it is necessary to consider some background information about current theoretical approaches to library space as well as basic information about the social context of those models. Therefore, this chapter presents both theoretical backgrounds for the discussion of contemporary – public – space, and concepts for library space, especially in the university context.

Library space is not seen as a solely functional space in the technocratic sense of the twentieth century any more, but as a multifaceted space with different social, cultural, and objective meanings both for the community and the individual. As such, the university library can continue to be an important place for academic scholarship and education in the context of knowledge societies, but even so, not the exclusive space, e.g. for multimedia education and blended learning. It may also serve the needs of universities concerning information management, sociability, and Bildung (being educated to become an active and beneficial member of society) as a holistic approach in the Humboldtian sense of the word. But the library as an institution and as a physical place will not be unchallenged in this case. The ongoing debate dividing physical and digital space, especially, must come to an end. It is crucial to recognize that we cannot separate both spheres any more when talking about the library as place. The guiding principle for all concepts of library space, whether they are public libraries, academic libraries, or special libraries, has to be the best possible response to the needs of the local community and its individuals in the global context of knowledge societies. We should define a sustainable, self-evident role for library spaces in the nexus of digital and physical as well as global and local.

After an introduction to the concept of knowledge societies, this chapter covers exemplary current approaches to library space. There is a special focus on the 'third place' and the university as a space for learning, experience, and – in the broader sense – *Bildung*. If *Bildung* is something beyond formal education with its plain learning and teaching, we should consider the possible role of the university library in this context. The chapter closes with some remarks on the interrelationship between physical and digital spaces.



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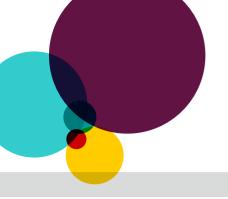
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FROM INDUSTRIAL SOCIETY TO KNOWLEDGE SOCIETIES

In his 1974 study *The Coming of Post-Industrial Society*, Daniel Bell uses the term knowledge society for one crucial aspect of his concept of post-industrial society: the importance of scientific knowledge and information (Bell 1974: 345). The post-industrial society is as much a knowledge-driven society as the industrial society based on labour forces and fossil energy sources. Bell's thesis has been criticized until now because industrial production did not become less important and the need for fossil fuel is still increasing. But this is a misunderstanding. While industrial society did not replace agriculture-based economy, it dramatically changed the methods of farm production into today's industrial agriculture. In almost the same manner, the influence of information technology and knowledge has been revolutionizing industrial production, as agricultural production is again being changed by crop science and genetic engineering. More usually, Bell turns to the term 'information society' in his later publications, so the differences between these two concepts should be considered.

During the last three decades 'knowledge society' and 'information society' have become buzz-phrases in political debates as well as in LIS. In most cases, they are used synonymously, or the concepts behind the terms are intermingled. The significant difference between the two concepts is the human factor. Information society is a technologically and economically based concept referring to the changes caused by the informational or digital revolution. Information is measurable and can be distributed in different ways regardless of its semantic context. Although knowledge is mediated through information, it is a context-based phenomenon which requires understanding and not only decoding. Therefore, most scholars refer to it as an exclusively human concept strongly related to individual and collective memory and wisdom. On the other hand, most theories about information society turn out to be technocratic or solely economic without a profound sociological background.

In his 1994 publication Knowledge Societies, Nico Stehr defines his subject as 'the result of human action but not of deliberate human design' (Stehr 1994: 16). Unlike information, which is a technological concept, knowledge has an explicit human connotation. In information theory, the unimpeded transmission of information, measurable in bits, is always exposed to environmental impacts resulting in noise. One of these impacts is the human factor. The ignorance of the human being in information theory has been criticized several times, and many scholars have called for a humanization of information theory and technology.



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The ends of information, after all, are human ends. The logic of information must ultimately be the logic of humanity. For all information's independence and extent, it is people, in their communities, organizations, and institutions, who ultimately decide what it all means and why it matters (Brown and Duquid 2000: 18).

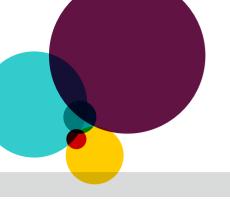
The semantics of information, as well as the production of knowledge by combining, weighing, and contextualizing information, are intellectual works by human beings. From a philosophical point of view, knowledge is also a product of spontaneous inspiration instead of plain information processing.

Knowledge becomes a crucial factor in the economy as well as in other fields of society, but this development is not exactly predictable because of the human nature of knowledge and the pluralism and contingency of global knowledge societies. Although there is no master plan for the development of knowledge societies, it is important to observe the global social and cultural impacts of this process carefully. In this context, UNESCO extrapolates a new social responsibility: 'Knowledge societies are about capabilities to identify, produce, process, transform, disseminate and use information to build and apply knowledge for human development. They require an empowering social vision that encompasses plurality, inclusion, solidarity and participation' (UNESCO 2005: 27).

It is becoming obvious that information is only a vehicle for the distribution and a resource for the production of knowledge, but not the thing itself. Even so, it derives from the economic and technological discussion about post-industrial societies; the concept of knowledge societies has become a sociological fact which has been in need of explanation during recent decades (Bittlingmayer 2005: 48). Both Stehr and UNESCO use the plural 'knowledge societies' instead of a singular as, for example, 'industrial society'. There are different reasons for this uncommon use of a term describing society. It is

- not a normative concept;
- a global concept considering different cultural and social backgrounds;
- not static but emphasizes the contingency of contemporary societies;
- therefore a pluralistic approach.

The fact that there are other influential terms like service society, media society, or network(ed) society persuades us that a pluralistic, non-normative concept may be an appropriate way to understand the developments and challenges of contemporary societies. Furthermore it makes things easier in an international context.



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Critics stating that knowledge societies seem to be quite inconsistent in many ways are right. The differentiation of information and knowledge does not simplify matters. There are at least four paradoxes we should keep in mind when talking about knowledge societies:

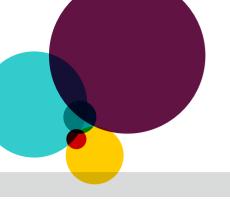
- 1. Information paradox: The more context-free information exists in our environment; the more important context-bound knowledge becomes (Läpple 2004).
- 2. Location paradox: The bigger and easier to transact logistics become, the higher the local integration of a business is valued (Porter 1999).
- 3. Social inclusion paradox: The easier access to information becomes, the more less-educated social groups are excluded (Suchanek 2006).
- 4. The paradox of social mobility: The more people are forced to frequently change residence for flexibility reasons, the more unapproachable residential neighbourhoods become (Oldenburg 1997).

It is not easy to come to a clear-cut definition of knowledge societies. Most definitions like that of UNESCO are formulated in dissociation from other concepts like the information society:

The idea of the information society is based on technological breakthroughs. The concept of knowledge societies encompasses much broader social, ethical and political dimensions. There is a multitude of such dimensions which rules out the idea of any single, ready-made model, for such a model would not take sufficient account of cultural and linguistic diversity, vital if individuals are to feel at home in a changing world. (UNESCO 2005: 17)

This complexity of knowledge societies may be the reason why many scholars and politicians prefer the technology-determinist concept of information society. Sometimes the concepts are even intermingled by using them synonymously. But, as quoted above, knowledge societies are not only a challenge for scholarly debates. In his concluding remarks, Stehr differentiates knowledge societies from industrial society and argues that the problem of clear definition is not only an epistemological one but an individual dilemma as well:

The promise, challenge and dilemma knowledge societies pose for every individual derives from the need to cope with and



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even welcome greater transience and volatility, the recognition that uncertainty is a necessary by- product of the search for any elimination of disagreements and the need to accept the transitoriness of virtually any social constructs. (Stehr 1994: 262)

Stehr underlines the preliminarity of the whole concept, the contingency of knowledge societies as a social fact, and the resulting importance of individual flexibility for members of knowledge societies. On this basis, I would like to suggest a positive definition: knowledge societies is a concept for the transforming global societies characterized by a new approach to knowledge, based on an inclusive, participatory character of society, and facilitated by new information technologies. The concept is not limited by social, cultural, or economic borders because it is based on universal human rights and includes different forms of knowledge and skills.

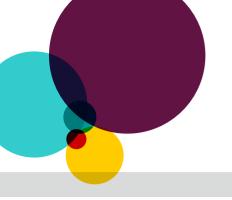
Although 'knowledge societies' is not a normative concept, it seems to be quite idealistic because it is strongly influenced by ideas of the Enlightenment. Therefore, new forms of educational and cultural governance, as well as new public places, have to be developed in order to meet the challenges of today's globally networked societies. Libraries should consider their role in this context from different perspectives. The next section introduces some recent approaches to the space of the library in terms of their possible usefulness for this goal.

CONCEPTS AND THEORIES OF LIBRARY SPACE

Many of these concepts have a common basis in the theory of the third place as outlined in Ray Oldenburg's 1989 study on *The Great Good Place*.² Therefore, Oldenburg's concept will be addressed first.

THE GREAT GOOD LIBRARY

The basis of all Western concepts about social space is the public-private dichotomy. Since ancient times, the private sphere has been separated from the public realm with its limitations as well as freedoms. The private household is the place for the family, protected from unauthorized admission even of state authorities. It is the space of reproduction under the control of the nuclear family, mainly the family patriarch. Until modern times, members of the household were not only blood relatives, but all people were subject to the patriarch. This model changed rapidly during industrialization. One major change was the development of the small family's home as the habitat of the modern citizen. The smaller the private space became,



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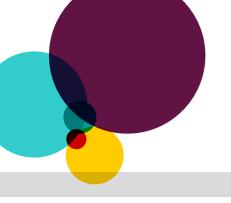
the less accessible it became for strangers to the nuclear family. At the same time a major increase of public space took place. The growing cities offered a lot of formal and informal public spaces like institutions of culture and education, squares, parks, and even the streets themselves. The next dramatic shift loomed as early as the 1900s and showed its full impact after World War II. Middle-class people moved into new suburbs and garden cities and working-class families left the city centres for commuter towns. The automobile changed the city fundamentally and, especially in North America, the streets and squares of the city centre ceased to be public places.

This is the background for Ray Oldenburg's story about The Great Good Place. It is a third place between the private realm of the modern nuclear family and the formalized workplace.

The third place will hereafter be used to signify what we have called 'the core settings of informal public life.' The third place is a generic designation for a great variety of public places that host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work. (Oldenburg 1997: 16)

The third place is characterized by accessibility, purposelessness, and its capability for informal gatherings. Gastronomic businesses like coffee houses, public houses, and beer gardens are the most prominent examples, but in a later publication much more specific places are described (Oldenburg 2001). From a European point of view Oldenburg's description of cities in the United States is hypercritical, while he is obsessed with a romantic cliché with regard to European places. His lack of empirical material is hardly covered by his many literary and journalistic sources.

But despite this criticism, the idea of an informal and open public place between the categories of private and work-related public is very influential in contemporary approaches to the space of the library. In addition, there are several potential functions third places share with libraries. If the library were an informal space, it would allow people to access freely, to gather, and to communicate in a purposeless manner. On the other hand, university libraries, especially, are not aimlessly entered by clients who like to stroll around, hang out, and gather in informal, mixed groups. Clemons et al. (2009), for example, undertook a study on the relevance of library coffee shops as a third place, resulting in 'Guidelines for Designing a Library Coffee Shop' (Clemons et al. 2009: 12). This may be one aspect of a library as a meeting place, if only for the 'free' hours, but it is not the major reason for universities



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maintaining expensive facilities and hiring well- educated staff. It turns out that The Great Good Library is not a sufficient concept for university library space, although it can cover some facets of the library as an attractive place for students and faculty.

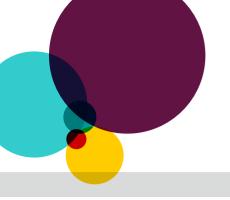
MEETING PLACE

The concept of the library as a meeting place is closely related to the third place. It offers a sophisticated, sociological approach to knowledge societies. The idea is not a new one. In 1980s Germany, for example, public libraries used the same idea for their image campaign *Wir sehen uns in der Stadtbücherei.*³ But the concept is not so much about meeting friends or peers inside the library. Instead, it is based on the idea of a communal arena:

Without arenas and a public sphere where a discourse can take place across social and cultural borders, one cannot reach decisions based on democratic deliberation. The absence of such arenas will probably also make it difficult to establish that degree of cross-cultural tolerance that democracy presupposes. [Audunson 2005: 433]

Therefore, it is more fruitful for the outcome of this intended process when people with different backgrounds meet by chance rather than coming together purposefully. There is an obvious relation between Oldenburg's idea and Audunson's concept for the public library. On the other hand, the arena is closer to the ancient Greek agora, an exclusive space open solely for the male aristocratic elite. The agora is literally a topos and consequently Oldenburg refers to the agora as well, although he is obviously not aware of its many connotations (Oldenburg 1997: 17). Audunson has a place in mind which is much more significant than a communal gathering place. His arena is open for everyone, but it is a space for social conflicts and performances taking place in a very special setting. While 'the third place is a leveler' (Oldenburg 1997: 23), the arena is a more idealistic concept including social discourse and mutual understanding.

This may be slightly utopistic, because unintended contacts between people of different social, cultural, and educational backgrounds do not regularly lead to intensive and positive communication. Nevertheless, for public libraries serving diverse populations, the arena may be a spatial strategy as well as an affordable goal. For the meso-sociological level of university communities, this may be helpful, too. But the sublime stratification within those apparently homogenous communities



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makes it more difficult to define potential conflicts and distinctions. The problem of habitus and distinction is a weak point of the meeting place, as well as the third place. Both authors are not aware enough of the strong significance of class distinctions, particularly in public places (Bourdieu 1984). On the other hand, the library may be a place where distinctions can become a minor factor because the individual identifies with a certain community or a common goal instead of his or her background and status.

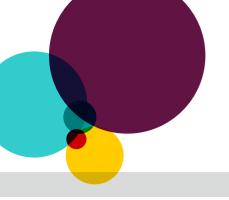
SACRED SPACE

In his 2005 article The Library as Place, Freeman emphasizes the psychosocial and representative aspects of the library building both for the whole campus community and for the individual student (Freeman 2005). Identification with a common mission and a sense of community are typically associated with religious communions. So, it seems obvious to compare the library of a college or university with a church. This idea is associated with the 'oomph or wow factor' in library architecture (McDonald 2007: 14), which is about individual inspiration and the spirit of the community as well.

Consequently, Hahn and Jackson used evaluation methodologies from the field of psychology of religions for their 2008 survey on academic libraries as sanctified spaces. They presented their subjects a series of images showing exteriors, interiors, and items of different 'traditional' and 'modern' style libraries with a set of questions concerning the usage of the library space and the collection.

The main finding of this survey is that the library itself and its collections are more valued by the students when the building has a 'traditional' design, associated with spirituality or church architecture. Modern-style libraries are less likely to evoke feelings of identification with the community and its goals and missions. To me, the association of traditional architecture with transcendence seems to be a little stereotypical. In fact, the iconography of libraries is, to a certain degree, linked with that of Christian churches, but there are other types of library spaces associated with the ideas of Enlightenment or ancient ideals of space, for example the aforementioned arena or the theatre. On the other hand, some modernists have been well aware of the 'spiritual' aspects of their architecture. Le Corbusier and van der Rohe are the most prominent examples. So, modern architecture is not necessarily secular in its impact; there are certainly examples of 'sacral' modern library spaces.

But I do not absolutely agree with the conclusion of Hahn and Jackson:



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One could argue that because those elements students feel most positive about are those they sanctify; they then ascribe spirituality to the goals those things support. We feel it is more the former though, because if the latter were the case you would expect to see all images of academic libraries being designated as spiritual, not just those with traditional architecture. (Hahn and Jackson 2008: 9)

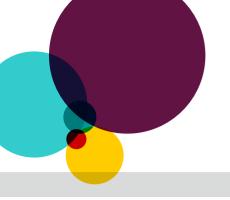
Looking at the data, this seems to be true for the feelings evoked by the design, but not to the same degree for the use of the library itself. Other representative halls and auditoria on the campus may evoke such feelings as well. But there is another aspect of the concept, namely the role of the library building within the campus plan. The place of the library on a planned campus often corresponds to the place of the abbeychurch in the ideal plan of St Gallen monastery, which has been most influential for the construction of convents all over Europe since the Middle Ages. So maybe the role of the library space within the community is not so much linked with its traditional or modern architecture but more likely with its general appearance and location on the campus.

However, within the context of knowledge societies we will have to ask if the spiritual aspect of library space can help us to design the environments in a way that affects people and makes it easier for them to identify with this place. But this is not a question of the shape of a building alone. The layout should consider the importance of intersubjectivity in the learning process.

COMMUNAL SPACE

Another concept of the library as a space associated with identification is the idea of the communal space as put forward by Gayton in his 2008 article *Academic Libraries:* "Social" or "Communal"? The communal space of the library is defined by quiet study in the presence of others. People envision themselves as being part of a community of students and scholars. This feeling is not evoked by talking to each other or working collaboratively but by the very presence of other individuals in the same space (Gayton 2008: 61). Gayton is not the first to define this communal space, but he develops it by a comparison with the social space.

Like Demas 2005, Gayton associates the communal space exclusively with the library. And this is not only true for academic libraries. The huge reading rooms of grand historic public libraries offer the same experience under their vaulted ceilings. But what is this communal feeling about? It is not an individual, spiritual experience like



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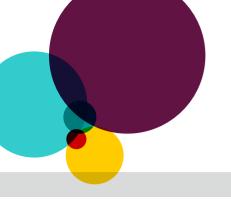
the sacred space, but a question of intersubjectivity. While studying their material in the quietness of the reading room, people are mirrored by the other individuals doing the same thing at the same time. Besides the knowledge represented in the information, and the individual, there is a third factor assuring the reality of the situation. So, the communal space turns out to be an anthropological concept.

But obviously, there are various practical problems in bringing together communal and social space under one roof. Social academic activities like learning groups, seminars, lectures, and informal communication always come with noise. The communal experience is associated with the special silence of reading rooms only interrupted by the turn of a page, typing, an 'hm!' or 'psht!'. But I agree with Gayton that it is not impossible to have both kinds of space in the same library building. It's a question of smart layout.

Even so, most concepts of knowledge societies emphasize the importance of formal and informal communication of individuals and groups; the communal space is not necessarily useless. In a social environment characterized by information overload and the omnipresence of media and communication, a quiet but not private space for study and reflection may be a necessity.

SOCIETAL SPACE

The concept of societal space is based on an idea of the German-American philosopher Hannah Arendt. With good reason, she was apprehensive of the alienation of the individual in mass society. At the same time, she describes an artificial communitarization in the world of products and consumption. Today these processes are counted among the great social challenges. The transformation of the public space into a societal space could be part of the answer. In her study about The Human Condition, Arendt deplores the commingling of political, public, and private affairs in one space she labelled as societal (Arendt 1958). Like most of her writings, The Human Condition is based on a quite idealistic view. As with the agora mentioned above, political space described by Arendt is an exclusive space for the exchange of ideas and the collective pursuit for public welfare. This space is located outside the common public realm where doings and dealings are taking place. Obviously, in the knowledge societies public space must not be exclusive and politics must not be delegated into a space outside society itself. 'Participation is seen not as an activity only possible in a narrowly defined political realm but as an activity that can be realized in the social and cultural spheres as well' (Benhabib 1992: 86). This can only become true under the conditions criticized by Arendt. A new space is being



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constituted by the activities of individuals, who are free to appear in this space and who come together in a self-paced way (Eigenbrodt 2008).

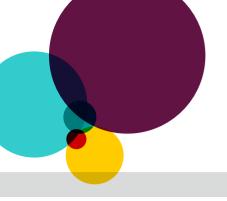
To fulfil its mission, societal space has to assure access to the public and individual freedom for all members of society. Arendt herself has already suggested that action is not always political action in the strict sense of the word but that it is about communication, taking action together with other individuals, and in the first place sharing the same interests (Schönherr-Mann 2006: 119). Therefore, societal space has the following characteristics:

- It replaces the strict differentiation of private and public spheres by a dynamic open concept of space.
- This space is multifunctional and is constantly constituted by the activities taking place in it.
- The interdependence of individual freedom and freedom of public appearance defines the societal space. Only when people have free access to these spaces can they act as free individuals.
- The societal space is based on rational coordination and association of interests in terms of Max Weber (1947). It is not defined by common religious, nationalistic, or ideological interests.

Multifunctional spaces supporting participation and free access to information in a dynamic environment seem to be the ideal solutions for knowledge societies. But as with the concept of knowledge societies itself, societal space is based on a rather idealistic point of view. Otherwise, especially in campus environments, the freedom of appearance, the free exchange of ideas, and the rational coordination of different interests are the core principles of the whole community. As a societal space, the university library could be the heart of such a campus.

LEARNING SPACE

Within the context of knowledge societies, learning has been changing from the education of children and young adults to a lifelong process. Therefore, self-paced and informal learning have become more and more important during the last decades; so, has learning in groups – formal or informal. In this sense, learning is more a holistic concept like the German *Bildung*. In the context of higher education, *Bildung* is associated with the Prussian scholar and reformer Wilhelm von Humboldt. The process starts with the promotion of individual skills and talents in inspiring surroundings. Therefore, individual disposition, information skills, professional



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support, adequate infrastructures, and varied spaces are the main factors for a successful learning process.

Obviously, there is no 'concept' for learning space. A reflection on the library as a learning space results in different perspectives of the topic with additional regional, cultural, and social differentiations. For some universities, the library may be the only physical space for learning and sharing information in an informal context. Other institutions of higher education offer a wide range of possibilities and it becomes crucial for libraries to deal with new partners on the campus. A lot of librarians and LIS scholars have shared their concepts of learning spaces in the last decade. Four main perspectives of the library as a learning space can be identified in the literature:

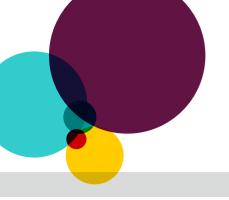
- communal, silent study environment;
- high-tech learning centre;
- open learning space;
- learning or information commons.

The concept of information commons or learning commons is especially popular in Britain, although there is a lack of definition yet (Waller 2011: 70). The best practice Waller shares in her article may be a hint that appropriate, individual layouts are more important for the success of a learning space than given definitions or standards.

Long and Ehrmann (2005) classify university learning spaces into different functional categories. These categories reflect the social, cultural, and technical changes in university education for knowledge societies. Libraries fit in multiple groups. As learning spaces, they obtain the ability to support these transformations by teaching information skills, answering the individual demands of their users and offering learning infrastructures. Bargellini and Bordoni draw the conclusion that libraries can 'greatly contribute to the transition from an information to a knowledge society' (Bargellini and Bordoni 2001: 157). No matter if there is such a transformation or not – I would prefer to speak of two concurrent concepts it is true that multifunctional spaces as described above are useful learning infrastructures for universities in the developing knowledge societies.

PHYSICAL AND DIGITAL SPACES

Within the context of knowledge societies, libraries have to offer both physical and digital spaces. While the physical space is often referred to as 'real', the digital space is labelled as 'virtual'. The term 'virtual' is always associated with artificial or 'not



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real. But as early as 1995, Turkle published her survey about Life on the Screen. Her findings revealed that the 'virtual' world for her test group was as 'real' as the 'real' world (Turkle 1995). Since then, digital space has become a social entity and has developed more and more connections and interrelations with physical space.

Information technology has a strong influence both on the use and the layout of library space today. But physical and digital spaces are mutually dependent. On the one hand, virtual library branches and social networks extend the space of the library into the digital sphere; on the other hand, the societal space is constituted through appearance and activities. Therefore, it is not bounded by bricks and mortar. Although even recent studies on university library space such as Stewart's (2010) do not mention this interweaving of physical and digital space, it is part of the perception of libraries today. It is an anecdote of Second Life, that libraries designed by its users mostly look very old-fashioned.

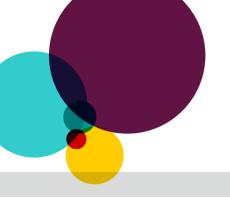
However, students do not like a space to look too tech-heavy. It appears that, just as 'dream' kitchens typically feature the latest in high-tech gadgets and appliances, they also maintain the traditional woods and natural stone of old- fashioned country kitchens. This finding has implications for library remodels or new construction – students want new technologies, but presented in traditional academic surroundings [Hahn and Jackson 2008: 10].

The necessity of high-tech learning environments with their intermingling of physical and digital spaces may not necessarily lead to high-tech-looking buildings.

CONCLUSION: THE MULTIFACETED SPACE

The ideas introduced above are only a selection of the many approaches to the space of the library published or presented in the last decade. Some of them are quite similar but have developed independently. It is remarkable that, depending on the background of the authors, the concepts are either developed for academic libraries or for public libraries. Very few approaches try to look at library spaces in general. I suggest that there are four good reasons for this differentiation:

- the traditional separation between the fields;
- different challenges concerning funding, patrons, and mission;
- different public and political attention;
- academic libraries are easier to survey.



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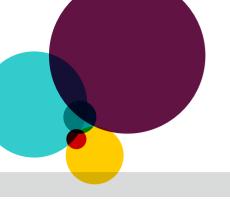
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But there are similarities on all three levels of social stratification as well. On the macro-sociological level, all types of library are challenged by the new sociological concepts and the changing technical, cultural, and economic realities. Individuals are experiencing the same transformations and have to deal with them. Therefore, on a micro-sociological level all libraries are facing new needs and demands from their patrons, especially concerning technology, information resources and service, and infrastructure. The most visible changes happen within the communities themselves. Therefore, on a meso-sociological level the differentiation is much more complicated than only distinguishing academic and public libraries.

All of the concepts introduced here focus their attention on the needs and demands of the user; be it the individual seeking a learning environment or a place for informational participation, or the community searching for a place to meet and to identify with. The library should offer variable spaces open for different kinds of use, and the user should have the opportunity to modify spaces according to her/his conceptions. Community-related theories relating to the meeting place are based on the idea of local relationships as a starting point for worldwide networking. Libraries are always part of a broader social, institutional, and architectural context. Therefore, consideration of the whole population is as important for a good library as openness for the community.

The social transformations and the contingency of knowledge societies are not only challenging institutions like the library but the individual her/himself. People need safe and welcoming places they can rely on. Schroer calls them 'Kontingenzbewältiger' (agents of contingency management) (Schroer 2006: 13). At the same time these places can work as local nodes in the global network. The concept of the low intensive meeting place and the idea of the library as a space for informational participation both highlight this function of the library.

Most concepts presented in this chapter are about education, study, dialogue, research, networking, or community building. They are all useful and necessary for the individual and the community within the context of knowledge societies. But besides these purposeful and serious activities there is one important factor for the benefit of individuals and communities: leisure. Libraries should offer spaces and facilities for relaxation and serene moments in between study, for 'hanging out' and having a coffee. Also, university libraries should entertain their clientele in order to forge identification with the institution. They should become great, good libraries among others.



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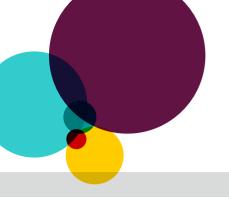
Consideration of library space seems to involve a confusing variety of concepts, ideas, and designs. It is nearly impossible to put all the concepts and theories written down in the last decade into practice. Yet users and communities are expecting technical infrastructures as well as good old library facilities, they need spaces for communal as well as for social learning, and they are searching for concentrated study and recreation in the very same building. University libraries after all turn out to be multifaceted places with various functions and opportunities for students, faculty, and staff. The opportunities offered by the new spaces are not predictable. These spaces have at least five dimensions, the three spatial dimensions, a temporal, and, most important, a social dimension. I would like to call them facets. The physical (and digital) library space is not only a 'chameleon' (Waller 2011) in its development over time but it has already become an iridescent, multifaceted place within the campus infrastructure. It is hard work for librarians and architects trying to develop a coherent design for their project within that background, but accepting this challenge may be more exciting than ever before.

NOTES

- 1. These passages are partly based on a paper presented in 2009 in Turin, Italy (Eigenbrodt 2009).
- 2. Herein quoted following the second edition, Oldenburg 1997.
- 3. Let's meet at the city library.

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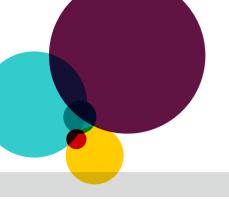


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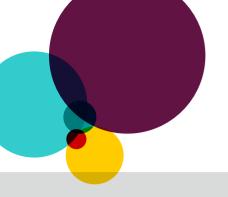
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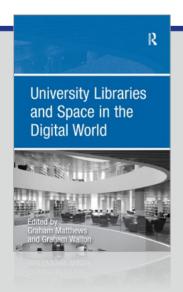
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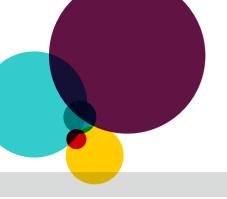
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REDEVELOPING LIBRARY SPACE

Sheela Cannell

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INTRODUCTION

The opportunity to redevelop a library can at first sight seem like a poor relation to the opportunity of designing an entirely new library. This chapter suggests that redevelopments need not be considered second best. In the present economic climate, they are now much more likely than a new build. A redevelopment can be more intellectually challenging than a new build, with more issues to address. There is a greater likelihood of getting it right, because those involved in the redevelopment will already know a lot about their building, and what works and what does not work in the space. All capital projects have the opportunity to improve the service – redevelopments have a particular opportunity and obligation to build in flexibility so that the next generation can continue to respond easily to changing needs.

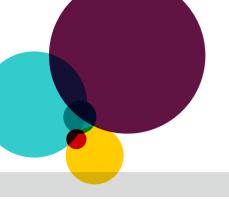
REDEVELOPMENTS ARE NOW MORE COMMON

Redevelopments are now much more common than they used to be. The SCONUL Library Design Award (SCONUL News and Events 2010) is awarded on a triennial basis (until recently, quinquennially). The most recent award in 2010 was remarkable for the number of entries which were redevelopments, or redevelopments coupled with a small new build. The winners of both the Large Award (more than 3,000 square metres) and the Small Award (less than 3,000 square metres) were redevelopments at the University of Leicester and the University of Cardiff, respectively, each addressing the particular challenges of redeveloping library space in different ways (SCONUL Groups: Working Group on Space Planning n.d.). In the current financial environment, few librarians are likely to get the funds for a complete new build, but many can make a case for a redevelopment to meet new needs.

REDEVELOPMENTS ARE CHALLENGING

Redevelopments can mean many, many different things. A redevelopment can be a lick of paint or some new furniture; or, at the other extreme, it can be a complete rebuild and refit of the space from the inside out. Often, redevelopments are phased, giving an opportunity to address a library floor-by-floor, or even part-floor by part-floor, giving the opportunity to learn through experience, and even to correct mistakes made in the earlier phases.

The vocabulary of redevelopments is worth consideration. Estates (or Facilities) departments tend to call any change to a building a 'refurbishment', usually shortened to 'refurb', but librarians may prefer to use the term 'redevelopment',



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particularly for a project which will encompass not only physical change to a building space but also changes to the services delivered in the space. For the librarian, there is a whole new vocabulary, and set of professional expertise, to engage with when embarking on a redevelopment. For many librarians, it can be very stimulating, and a significant boost to their career, if the redevelopment meets the goals of the institution.

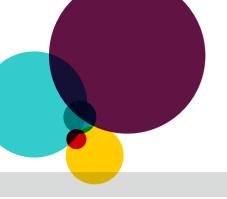
Redevelopments have many of the characteristics of new builds – there must be a vision of what is required, rigorous project management, stakeholder engagement by staff, student, and library staff with the proposals. But redevelopments require more. Not only will there be a set of constraints which must be worked around, but there will also be a requirement to manage the decant of books, staff, and users before the work can be carried out, and the repopulation of the space after it has been finished, whilst maintaining services throughout. The logistics of such moves can be very complex indeed.

THINKING OF THE PAST AND THE FUTURE

As redevelopers, we must be conscious of the past of a building. Often it can feel like we are correcting the mistakes of the past – we are 're-setting' the building for the future, perhaps in response to piecemeal development over the years. We are likely to have strong, and knowledgeable, views about what our predecessors got right and what they got wrong. They were perhaps able to assume that there would be little change required in the building which they designed, but we know differently, because library services are transforming and will continue to transform. We owe it to our successors to ensure that we leave a flexible building, which can cope with future change and developments in libraries – we can only guess at these now. This can be best achieved by having a strong vision of what is appropriate for the library within the institution we are working in, and ensuring flexibility is built into all our thinking.

UNIVERSITY OF EDINBURGH MAIN LIBRARY REDEVELOPMENT

My own credentials for writing this chapter are based on my experience gained in a major redevelopment of the Main Library at the University of Edinburgh which started in 2003, and is likely to be completed in 2013. The Main Library is a 30,000-square metre building on eight floors, designed by Sir Basil Spence, recently 'A' listed as one of the finest buildings of the 1960s in Scotland. The University was aware of the need



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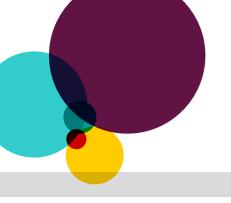
to address the needs of the library and a number of reports were commissioned in the early 2000s. The main precipitating factor in pushing this work up the University's agenda was the discovery of asbestos, which created a risk around the possible sudden closure of the building. Architects and a design team were appointed in 2005 and the construction phase started in 2007. At the time of writing, six of the eight floors have been completely transformed, the seventh is nearing completion, and the eighth is in the final stages of design, with construction work due to commence shortly.

The response by students to the redevelopment has been overwhelmingly positive, despite the fact that at least part of the building has been a construction site for several years, and that we have had to move books and study spaces around every six to nine months, with many staff, services, and books decanted off site. Despite these issues of service continuity, in 2009–2010, on completion of the ground and first floors, there have been increases of around 50 per cent in usage, followed by a further increase of about 30 per cent in 2010–2011 on completion of the second floor, and subsequent increases with the completion of each floor. The Library has been restored as a destination on the campus.

The redevelopment has also allowed a review of the services delivered in the building, and there have been significant service changes in parallel with the redevelopment. Indeed, over the period of time of this redevelopment, it would be surprising if the service did not evolve anyway, and the redevelopment has both fed into and encouraged service development. The biggest accolade was a student newspaper article describing the newly redeveloped ground floor as 'a room of one's own' and stating that 'it's beautiful and it's ours' (2009). Stakeholder involvement, from academic staff, students, and library staff, has been crucial, and communication has played an important part in the project to inform users about the progress of the redevelopment. A website has been maintained with up-to-date information throughout the project (University of Edinburgh Information Services 2012).

OTHER REDEVELOPMENTS

This chapter also refers to a number of other developments. Some recent redevelopments have been of iconic buildings, for example the redevelopment by Foster and Partners of the WH Smith building for the London School of Economics (British Library of Political and Economic Science) (LSE Library 2011), or the Maughan Library of King's College London (King's College London 2012, The Victorian



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Web 2011), which was a conversion of the nineteenth-century Public Record Office. Both of these redevelopments of important buildings presented huge challenges because of the nature of the buildings, which had not been built as libraries. Both have been converted into good libraries, well liked by their users.

But the more common pattern is for the redevelopment of an existing library building, often with a small new build to extend the space available. Examples include the two recent winners of the SCONUL Library Design Award (SCONUL News and Events 2010), the David Wilson Library for the University of Leicester (University of Leicester n.d.), which redevelops the existing library incorporating additional new entrance space, and the Trevithick Library for the University of Cardiff (Cardiff University Trevithick Library 2011), a redevelopment of an existing small library in the same space, showing what can be achieved with thought, creative architects, and stakeholder engagement.

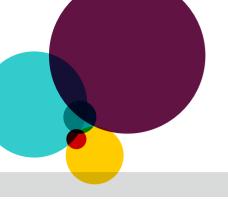
EVOLVING LIBRARY SPACE

Libraries are changing, and the space they occupy needs to evolve to match these changes. Put very simply, the users of libraries and the collections in libraries have changed and are continuing to change; the changes to space act as a physical expression of those changes. Indeed, the need to develop space will often act as a catalyst for making changes in the whole service, to update not only the building, but also the services for the present and future. These changes will vary by institution, but some common challenges which all libraries need to address are:

- Changes in the pedagogical environment.
- Changes in expectations from users about the quality of the service and the space.
- Changes in what users expect to do and how they expect to behave in libraries.
- Changes in the nature of library collections, with greater dependence on digital resources.
- Changes and reduction in print collections over a period of time.

A TYPICAL OPPORTUNITY FOR A REDEVELOPMENT

While some redevelopments are of iconic and older buildings, many library redevelopments are of buildings from the 1960s or 1970s. There were many libraries which date from this time of university expansion, and many are now reaching



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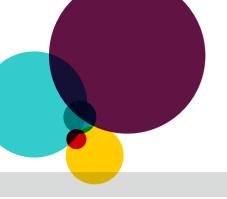
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the end of their useful life. A few universities decide to rebuild, but most decide to repurpose existing buildings.

The typical library of the 1960s and 1970s is made with the materials and has the style and interior decor of this time. It would have been built around the library practices of the time. Over the decades, the building may have been poorly maintained and there may have been a series of piecemeal and incremental adjustments and amendments, each of them logical in their own way, but leading overall to a library building and service which is now illogical and illegible for the student in the second decade of the twenty-first century. Let us consider the issues which such a redevelopment may present:

- The building is likely to have a poorly designed entrance, often small, as was common in the 1960s, and now not fit for the number of students at the university.
- This may be compounded by the installation of a retro-fitted security system, probably intrusive and possibly very intrusive in its location.
- People flows through the building will not be working well, often with heavily used functions far from the entrance (either because they are new functions, or they have been moved).
- Signage is random and unprofessional, showing evidence of several generations of sign-making; users still find it difficult to navigate around the building.
- There is a big desk, creating barriers between users and staff.
- There is likely to be a ceiling which is lower than is now expected.
- The environment is dark, often brown, with little use of colour and poor lighting. Walls and carpets are dingy. Any colour may feel outdated.
- There are more users as universities have expanded.
- The needs of books have been given precedence over the needs of users.
- There is no use of compact shelving to maximize the floor space for other purposes.
- There is little link to the outside environment, with windows sometimes blanked out in order to protect books this was thought to be important in the 1960s.
- The space for users is uniform, based on small, tightly packed tables.
- The furniture chosen often has classic style, but has not been maintained, and, as it breaks, it has been replaced with random furniture in other styles.



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- Computers have been introduced and these have played havoc with the ventilation and air-handling systems. There are poor and intrusive wiring arrangements for these retro-fitted computers.
- There is no café something which is now expected by library users, who may often be in a building for a long period of time, and need refreshment.
- Staff accommodation is often in places which would be prime places for users, and is often inappropriate for the more technically based staff of today.
- No attention is paid to environmental or green issues.
- The building will not be sensitive to the temperature of the outside environment, and will be either too hot or too cold.
- The building may contain asbestos.
- The building is non-compliant with new legislation, with the Disability Discrimination Act (Directgov 2012) presenting particular challenges.

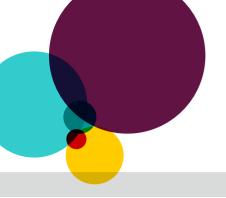
The overall impact is that the building is tired and unattractive, and students do not seek it out as a place to visit and work in.

But there is an advantage over seeking a new build – as librarians, we know what is working and what is not working, and we can persuade others that we can improve it. It is important to have our ideas primed for a potential redevelopment, and these can most easily be found through observing what is happening in our own library and visiting other libraries, perhaps, particularly, other similar redevelopments, and attending professional meetings on space planning.

CREATING THE VISION FOR A REDEVELOPMENT

Whether a project is large or small, there should be a vision for the redevelopment in exactly the same way that there would be a vision for a new build, with stakeholder engagement and buy-in to what is planned. For a redevelopment, where the project may be phased, the vision should not only encompass the immediate project in hand, but should fit into an overall vision for the development of the whole library.

Often the case to the university will take several years to build up, and this is the time to build a vision of what is needed. The vision will, of course, address the issues listed above, but it will be worth also addressing the issues which will ensure that the library can return to its status as a destination on the campus.



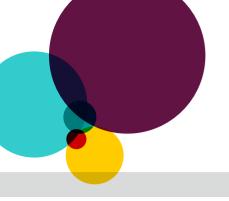
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- What is the overall vision and strategy for the whole library service, and how does the redevelopment of space fit into this vision?
- How will the redevelopment address issues in the institutional mission, for example in enhancing service to learners and researchers?
- Will it be just a redevelopment, or will there be a small new build? Often, a small new build, particularly around the entrance to the Library, will make a significant difference.
- How will the legibility or navigability of the building be improved? Often this may mean a return to the original vision, or a better articulation of the people flow in the building, usually with the busier activities nearer the building entrance.
- How will the building be zoned for quieter and noisier study areas? It will help to think about where the existing building is already noisy, perhaps because there are known areas where students stop to chat to each other, and to focus noisier or more vibrant activities in these areas to free up other areas for quiet or silent study.
- What is the vision for user spaces? It will usually be necessary to enhance the number, the variety, and the quality of the user spaces.
- How will new technologies be supported and continue to be supported as they develop? Will we continue to provide fixed computers, and when will we be able to depend on students having laptops and thus need to provide only wireless? Or will the availability of mobile computing lead to other changes, perhaps requiring fixed monitors for students to connect their mobile device to?
- What is the vision for the collection? Redevelopment is a real opportunity to
 address issues around the print collection, making the collection more logical for
 users to find books, journals, and other print items, and to set an agenda,
 appropriate for the institution, for the reduction in the print collection over time.
 This may involve the use of compact shelving or the creation of off-site storage
 facilities, with appropriate service delivery mechanisms.
- How can the redevelopment be used to change the service? Examples may be the
 introduction of self-service facilities (e.g. self-issue or return machines, change
 machines, new multi-purpose copying devices). All of these will free up staff to
 work in new ways, for example by providing reception or roving help functions, to
 enhance the user experience.

Very importantly, the vision must address how flexibility will be maintained into the future. While our predecessors may have been in the position to make assumptions about stability in service delivery, we cannot – we know that the digital environment will continue to transform the library service, and in consequence we will need to



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continue to manage the reduction in print collections, changes in technology, and changes in the way in which students learn. We have to expect such changes in the future, and leave a building which can be adapted easily to whatever the future holds. At one, admittedly unlikely, extreme, this may mean that the library building is fit to be turned over to completely different purposes.

VISION OF THE UNIVERSITY OF EDINBURGH REDEVELOPMENT

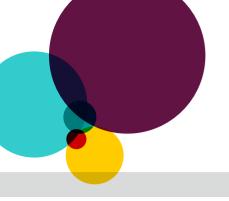
The vision for the University of Edinburgh's redevelopment was established using focus groups with different groups of stakeholders. The overarching vision which was developed was summarized as follows, with a much more fully worked vision supporting it and made available on the website:¹

The redeveloped Main Library building will be:

- An intellectual hub for the University
- The focus for a wide range of activities in learning and research
- A place where users can engage and converse with each other and with information specialists
- More open and accessible
- Flexible to accommodate changes in the future.

The vision also encompassed a practical view of what would be on each floor. The basic scheme was that busier activities would be nearer the ground floor and entrance, moving up the building to quieter functions. This is reflected in both the study space and the collections. On the ground floor, there are group and social study spaces, together with a café; as one moves up the building the spaces become progressively more quiet and then silent. For books, the High-Use Books (HUB collection) are on the ground floor, and as one moves up the building there are the general and then the special collections. This overall strategic view of the building has served us well as we have progressed through the redevelopment.

However, the fact that the redevelopment has been phased over many years has meant that we have been able to review this at each stage, and in response to the usage of the earlier phases, we have been able to make changes in the later phases. This happened in a number of small ways, e.g. the choice of furniture and floor coverings used in later phases responded to the findings of their usage in the earlier phases. But there were also more major changes in response to the hugely increased



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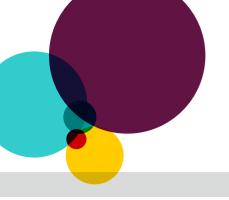
demand. The original plan for the fourth floor had been to have staff on this floor between the general and special collections. But because of the volume of usage, this was swapped with what was planned for the lower ground floor, to provide more study space sooner in the redevelopment programme. This ability to review after each phase and to respond by changing the plans in order to deliver better on the original vision would have been much more difficult in a complete new build, which would have been finished all at the same time.

MAKING THE CASE FOR A REDEVELOPMENT

In parallel with the development of the vision, the librarian will need to make the case to the institution for investment or phased investment in the redevelopment. It is probable that it is an easier 'ask' for a phased redevelopment than for a full new build, because the cost can be spread over more years, and the University continues to get use from the building through the redevelopment, rather than having to wait for the completion of a unitary capital project. The business case will need to be as robust as for a new build, but will also need to address additional issues to do with the redevelopment. These issues will include:

- Highlighting the quality of the student experience, and how it is suffering in the current environment and can be enhanced with a redevelopment.
- Providing evidence, including usage information and other evaluation measures, from other places which have carried out redevelopments, usually focusing on comparator universities.
- Providing information on the reduced cost of a redevelopment as opposed to the cost of a new build.
- Evidencing the reduction in existing costs due to the improvement in the environmental conditions (this appeals in particular to estates staff).
- Establishing the cost savings of not having to knock down a building and maintaining use of the building both the redeveloped and the not-yet- developed parts during the project.
- Pointing out the benefits of managing a redevelopment in an iterative manner, when a review can be carried out after each phase.
- Addressing issues on service continuity through the redevelopment.

In putting the case together, it should be noted that it is more difficult, but not impossible, to raise external funding for a redevelopment than for a new build. There



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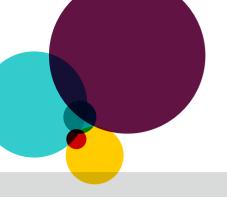
have been significant redevelopments, e.g. King's College London, the University of Leicester David Wilson Library, and the University of Cardiff Trevithick Library, which have succeeded in raising external funds or sponsorship for their redevelopments. However, before including an element of fundraising in the business case for the redevelopment, it will be important to consult with the fundraising arm of the University, and to find appropriate 'hooks' for fundraising. These may include, for example, tapping into the nostalgia of those who used the library when it was first opened in the 1960s.

Once the case is made and the funding stream is in place, architects and a design team will be appointed, and the project can start. At this stage timescales, will vary, and it is likely to be the case that any pre-planning that has been done will be invaluable, because the vision can be shared immediately with the architects and design team. If possible, at this stage the librarian should have ready their list of desirable library redevelopments to visit. Where possible, the whole group should visit these – architects and estates people will learn a lot by understanding what the librarian considers works, and what does not work, in other libraries.

DESIGN CONSTRAINTS

Without a doubt, there are significant constraints in the design of a redevelopment, and this section reviews some of these constraints and how to manage them. The person in charge of redevelopment, who may feel disappointed at not participating in a new build, should, however, be aware that as soon as there is one wall marked on an architectural plan for a new build then constraints are present. Important constraints, all of which were addressed in the University of Edinburgh, are:

- Planning constraints, particularly listed building status. This means that it is not always possible to do what the librarian wants on the outside, and in the cases of higher grade listing, the inside of the building. For example, the ground floor of the Main Library in Edinburgh has a wall across the middle from east to west, breaking the very fine views from north to south. This was installed in the sixties for fire detection purposes; it is no longer needed for that purpose, but could not be removed to create the views because of planning constraints.
- Structural issues also provide similar constraints, meaning that some walls are fixed and cannot be moved. Core services such as the plumbing for toilets are also unlikely to be moveable. Floor loadings will influence where it is possible to position collections and, in particular, compact shelving.



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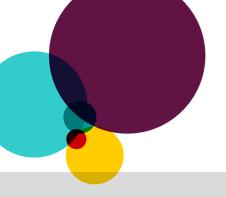
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- Floor-to-ceiling height is likely to be fixed, and may feel quite low in comparison to new buildings of today. This may make it difficult to install under-floor services, now common in new buildings, for services such as wiring, or the floor boxes themselves may be small in height for some larger plugs and chargers now in use.
- Uplift in a building is usually fixed it is often expensive, but not impossible, to re-install stairs and lifts. In Edinburgh, we agreed at an early stage not to enhance the uplift capacity, a decision which is proving challenging with the vastly increased number of users.
- The acoustics of a building are often difficult to change, although it is possible to
 adjust the acoustics of particular rooms, and it is thus necessary to work around
 this by putting noisier activities nearer the less acoustically protected areas of
 the building.
- In redevelopments where environmental issues are not being addressed, there is not a lot that the librarian can do about changing the air handling. In a major refurbishment, as in a new build, it is likely that a major part of the budget will be spent on the environment and air handling the position of the librarian is to fight for as great a flexibility as possible, in order to allow for future transfer of areas between books and study spaces, the former having a lower air requirement than the latter.
- Some may consider the re-use of shelving as a poor solution. In Edinburgh we have re-used the original shelving, despite the fact that the shelving is in imperial measurements, with each shelf an old yard (0.897 m), making for interesting calculations in the move-management of books. This has proved to be a huge saving to the project. However, we have spent funds on bracing the shelving against shelf falls, and have added acrylic shelf ends in pastel colours, which has completely changed the look and feel of the shelving and of the whole library.

With issues, such as these, the librarians and the architects have to work together to provide workarounds for the constraints, and often these can be imaginative and creative, such as the shelving solution above.

DESIGN ISSUES TO ENGAGE WITH

On the other hand, there are many discretionary design issues with which the librarian can engage. Indeed, the librarian should work with the design team to make a strong case that a sufficient element of the budget is devoted to these areas because these are likely to be the issues which will have the most impact on user experience. These include:

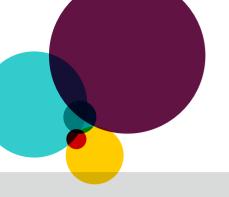


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- Lighting. Recent changes in lighting technology can make interior spaces more like daylight, and may, indeed, be the single highest impact change which a redevelopment enables.
- Entrance. An improved entrance, improved security, and improved navigability from the entrance are essential
- Furniture. Any attempt to re-use the previous furniture, except where this furniture has some iconic status and is in good order, is entirely inappropriate, because the redeveloped library will immediately feel like the original library.
- Types of study space. The librarian should spend time observing students and how they use the existing space. In my library, for example, we noted that in tables for four users, only two of the spaces, diagonally opposite, were usually in use at any one time. This led us to use a study table in the redevelopment which was the same depth but wider. This is more successful because students are now prepared to sit adjacent to each other, and therefore gives us higher occupancy for a slightly higher footprint. There are many types of study space which can be made available, ranging from quiet and traditional, to informal, to group. All of these will be needed, but the balance will vary from university to university. Current thinking may suggest that students are keener on traditional space than they have been, perhaps because they are working harder because of the economic recession.
- Signage. Addressing signage holistically throughout a building will improve legibility and navigability. This is not expensive but is crucially important, and may include centrally managed digital signage on plasma screens.
- Technology. There will be a massive technical infrastructure in any new building, and ensuring that the wired and wireless infrastructures and the phones (which may be Voice over Internet Protocol, effectively requiring a separate network) are up to current standards, while preserving flexibility for the future, will require research and technical advice.
- Environmentalissues.MakingtheLibrarymoreenvironmentallyfriendlyand sustainable tends to be a huge win for the whole community staff, students, library staff, and estates staff. The standard for acknowledging success in this area is the BREEAM® award (BREEAM® 2012). The University of Leicester won a BREEAM® Excellent Award for its redevelopment and partial new build, and this is exceptional for a redevelopment. It is well within reach for a redevelopment to get a BREEAM® Very Good Award, and it is worth insisting that this is an objective. This means addressing a very wide range of issues, including public transport availability adjacent to the building, water usage, recycling, and air handling. (See Chapter 13.)



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As an aside, it is often worth considering tapping into local expertise in university architecture departments, who may be only too pleased to help on current thinking on a wide range of issues, including how architecture can influence pedagogical issues in learning. Likewise, thinking about current retail experience is useful, for example, observing how coffee shops local to a university have set themselves up – these are often akin to good quality library study space.

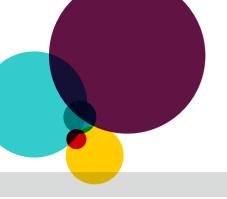
PROJECT MANAGEMENT AND SERVICE CONTINUITY

This chapter focuses on the specific issues to do with project management and service continuity during a redevelopment. It is no easy task to have at least part of a library as a building site for months or years on end, while the rest of the service has to carry on as normal. This section looks at a number of project management issues: move management, decanting books and staff, what it means to be a building site, communications, and morale.

MOVE MANAGEMENT

While a library is under redevelopment, there will be loss of space to the building site. In smaller redevelopments, this may be confined to the summer vacation, but this is often not the case, and the building work will extend into term time. At the very minimum, everything in the parts of the library being redeveloped (books, staff, student space, furniture, and all other associated paraphernalia) will have to be moved out, and then moved back in again. Everything will be touched at least twice in this process. The costs of the move management and decant are a significant percentage of the project costs, and this has to be factored into the project costing.

Sometimes the whole building has to close for a period of time, with alternative space being found for the library functions, or some of the functions will have to be decanted. The University of Leicester had its new build completed, then moved the whole library service into the new build while the existing building was redeveloped. This meant there was a very small space, and some users were disappointed because they thought that this was the new library. Once my own library is completed, we will have had at least one floor out of action for the last six years. The logistics of this have been very complex. At any one point we have had one floor in the midst of design and in preparation for moving everything out, one floor under construction and not accessible, and one floor newly reoccupied, with its new facilities.



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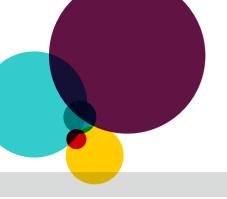
Move management is a big issue for any redevelopment – much bigger than for a new build, where the only requirement is to move from the old library to the new space. It is now possible, and advisable, to employ specialist move managers, who understand the complex logistics and sequencing required to manage this process, particularly around the issues of moving books. Edinburgh has used move managers who have worked with us throughout the project, operating through a series of facilitated workshops, held about every six to twelve months, and maintaining complex spreadsheets of what will happen when.

For many service-based projects in libraries there is little or no risk presented with slippage of time, but in the case of a building redevelopment the project timetable drives all, and if there is a requirement, for example to move books, it must be completed according to the project timetable. As an aside, there is a great dependence on uplift, and there can be significant issues when lifts rebel at the volume of work being demanded of them. Lift engineers become an indispensable ally in maintaining the project timetable.

DECANTING BOOKS AND STAFF

For books, it will be necessary to move some of them within the building, but it may also be necessary to decant some off site. In Edinburgh, we have created two off-site stores. The first of these is a fully compact-shelved storage facility, accommodating about 20 linear kilometres of shelving, with environmental conditions suitable for both general and special collections. The second store of about 15 linear kilometres is to a lower, but still acceptable, standard, and is suitable for lower-value items only. We have spent a lot of time working with the move managers, ensuring that we have the lesser-used books in the stores, and the more heavily used books still onsite – even if not in their usual place. We have also had to establish sophisticated systems for the return of books on demand. The establishment of these off-site stores in a research library has been controversial with users, particularly those in the humanities. They are concerned that many books may not be transferred back at the end of the project, and we have had to clarify what may be in a 'decant' store and what may be in a 'permanent' off-site store.

It may also be necessary to decant staff off site, leaving on site only the staff who are essential for direct service delivery. In Edinburgh, some members of staff were moved off site at the start of the project and will have been decanted for five years by the time they move back into the redeveloped space. The decant space has been far from perfect, and there has been a reluctance to enhance it, even for a decant



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of this length of time. In the longer term, it is our intention to have almost all staff in open plan areas. Ironically, some staff who had been in open plan areas, and will be moving back to open plan areas, have been decanted to cellular office space for the duration of the project. One side effect of the wholesale decanting of staff except for those in front-line service has been the reduction of senior staff, including those involved in the redevelopment, in the building. This has led to difficulties in understanding what is going on in the library, with perhaps less flexible and agile approaches in responding to problems which are developing. The staff remaining on site have to deal with all the issues of service continuity, with regular explanations to users about what is happening. They need to understand on a daily basis what level of disruption there may be from the building site.

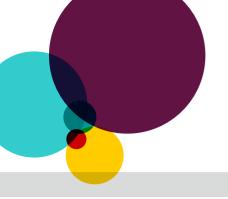
'HAVING THE BUILDERS IN'

The area under construction is 'the site', managed by the building contractors, with library staff not permitted on the site. This is akin to 'having the builders in' in one's home, with all the issues about accommodating their needs in a working library. For Edinburgh's complex redevelopment, the building contractors have had an external lift so that they do not need to transit the parts of the building where normal service is still continuing, but in some redevelopments, the builders may be present alongside the students using the library.

There are likely to be difficulties in access routes during the redevelopment. In Edinburgh, we had an external staircase while the ground floor was being redeveloped, with access through what had previously been windows on the first floor. And with any building site, there may be any number of inconveniences, including noise, smells, and dust, causing issues for staff and users. There may be incidents when the site and the normal working space of the library can come a little close for comfort. It is very important to build up a close relationship with the contractors, and to investigate any unusual incidents which may happen quickly. We have worked closely with the contractors on key dates, particularly the dates of exams, to ensure that noise is kept to a minimum while students may be at their most stressed. This has not always worked, but having contractors with children who are students means that they do understand the pressures facing students!

COMMUNICATE, COMMUNICATE, COMMUNICATE

While it is important to communicate with users and stakeholders through any project, the importance of communication during a redevelopment project cannot be



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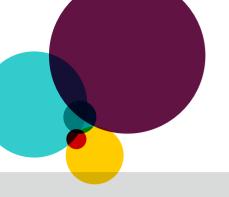
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overstated. Users and library staff need to know what is going to happen when, where the decanted staff are, where the books that used be on this or that floor are now and how to access them, what disruption may happen this week, when the current section of redevelopment is to be completed, and what is to happen next. There are many methods of communication which can be used. In Edinburgh, we have had a website which has acted as a source and repository of information at the core of the communication process.² Other methods have included signs and notices at the entrance to the building and on plasma screens, bulk emails to groups of users, regular updates in newsletters and university magazines, reports to committees, monitoring a special email address, and more recently – and to great effect – a Twitter feed.

There has been a full-time Main Library Redevelopment Project Coordinator, whose primary role has been communication, but even where a full-time post is not warranted, someone must have responsibility for communications. The post has also dealt with complaints – which normally come in to the specially established email address - as they have come in, and we have found that there have been fewer complaints the more we have communicated. At the start of the project, the university predicted that the redevelopment would be cited regularly in exam appeals; to date, this has not happened because we have paid attention to communications. This sort of communication about 'what' is happening is different to the communication at the start of the project about the development of the vision. It is very important to make it clear when communication is seeking input to make decisions about what to do, and when communications are about what is actually happening. Some users may take the opportunity of the latter to re-open issues about the former, and this can be particularly difficult to deal with, because the decision may have been taken some years before. We have been scrupulously honest in all our communication. For example, we have informed users when there has been asbestos removal and provided health and safety information on the website as support for those who are concerned. We have also given reports on any incidents which have happened, so that users and library staff will not think that we are hiding issues from them.

MAINTAINING MORALE

Maintaining morale through a long redevelopment is a challenge. In Edinburgh, the current cohort of students have had their whole undergraduate career of four years during the period of the library redevelopment, while some staff can barely remember any other environment. Communication about the vision of what is



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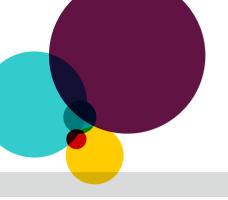
to happen is very important. In Edinburgh, there have been two low points in our redevelopment. The nadir was when the ground floor was under redevelopment, the entrance was up a set of stairs to the side of the building into a cramped entrance space, with poor navigation routes. Smells and noise were an everyday fact of life. Books were dislocated and hard to find. But once this was completed, users and staff saw what could be achieved through redevelopment and tended to be supportive of the continuing redevelopment, except during high-stress periods such as exams. More recently, as the end of the redevelopment approaches, it is clear that the cohort of students who have been most affected by the redevelopment both appreciate and resent the impact of the redevelopment on their student careers. They can see the changes since their first year, and use the library much more heavily, but are all too aware of the continued noise and restrictions in the availability of study space and wish that it could have been finished while they were still students.

LOOKING TO THE FUTURE

An important theme of this chapter is thinking about the redevelopment within the context of the past, the present, and the future. As redevelopers we can learn from the past, and we must create space which will work well now and into the future. Specifically, we must use the opportunity of a redevelopment to create space which will be flexible for the future and for the transformative changes which are happening in libraries. The libraries of the past may have been stable places. We have the opportunity to create vibrant spaces where students want to be. The success of our redevelopments will be short-lived unless we create spaces which can continue to evolve and change in response to user need. We need to continue to listen to the students and other library users, and continue to change and evolve space as their needs change. We will only be able to do this if we have created a strong vision for our redevelopment, and make the space as flexible as possible for the future.

NOTES

- The full version of the vision is available at www.ed.ac.uk/schoolsdepartments/information-services/services/librarymuseum-gallery/using-library/mlrp/redevelopment/vision [accessed: 13 July 2012].
- 2. www.ed.ac.uk/schools-departments/information-services/services/ librarymuseum-gallery/using-library/mlrp [accessed: 13 July 2012].



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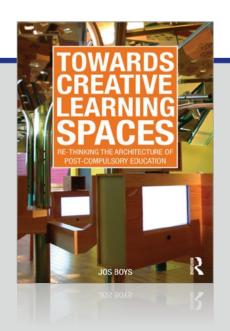
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RE-THINKING RELATIONSHIPS BETWEEN LEARNING AND SPACE



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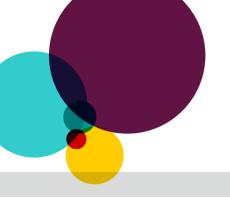
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By Jos Boys

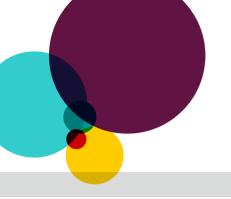
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The previous section opened up problems and gaps in our understanding of relationships between learning and space, from the different perspectives that are currently impinging on debates and developments in post-compulsory education. Here, the intention is to go back to basics; to start unravelling what is it that matters about learning, in relationship to material spaces. This means examining in greater detail what it is that is distinctive about teaching and learning in post-compulsory education, before developing an alternative conceptual framework for relating learning to the spaces in which it takes place; and then beginning to consider appropriate methodologies for both analysing existing spaces and evaluating 'improved' ones.

I will first suggest that, despite its many problems, the concept of 'communities of practice' does help us engage with learning spaces in productive and creative ways. In addition, rather than articulating space as providing a setting for learning behaviours, more recent approaches from cultural and architectural theory begin to show how learning can be understood as a social and spatial practice, which as ethnomethodology describes it is a 'problematic accomplishment' (Turner 1970) which itself has to be learnt. I will also show how some contemporary theories, particularly about the 'location of culture' (Bhabha 1994) can offer a valuable and creative purchase on thinking about the spaces of 'doing learning'.

RE-VISITING COMMUNITIES OF PRACTICE

Some of the uses of, and debates over, the concept of communities of practice have already been explored. Here I want to suggest that, despite its contested and problematic nature, 'communities of practice' does manage to capture some of the key characteristics of teaching and learning in post-compulsory education. In the original book Lave and Wenger actually set out to criticise learning within the academy/ formal learning sector by juxtaposing it to situated learning, offered up as a better, because socially engaged, form of learning. They argued that rather than students attending lectures and writing exams, they learn better through participation in an ongoing specialist activity with others who have varying degrees of expertise. As in some forms of apprenticeship, newcomers begin at the periphery of the group and gradually move towards the centre as they become experienced, passing on, in turn, their situated knowledge to other new entrants. This is 'doing but not just doing in and of itself. It is doing in a historical and social context that gives meaning to what we do' (Wenger 1998: 47).



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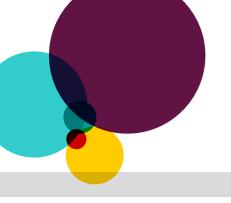
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What Lave and Wenger perhaps miss is that within post-compulsory education just such a process is taking place - in bringing new entrants into the community of practice of knowledge creation and development. Rather than a simplistic, oppositional divide between 'real' activities in workplace settings and the 'artificial' activity of academy-based learning, here I want to value knowledge creation and development in its own right. For this activity, the educational institution is the 'situated' location, not just some substitute for a more 'real' place. Learning, in this context, is a form of doing. This, of course, is part of the inherent tensions in higher education which separate it from education at primary and secondary levels; it brings learning as a means to develop expertise in a subject discipline which will be used outside the academy together with learning as a means to enable the growth and change of the academy-as-a-centre-of-knowledge itself. Teachers, tutor-practitioners, researchers, research students, teaching assistants, educational development workers and students are all engaged to varying degrees not only in their subject area, but also in the post-compulsory educational community of practice which has historically had knowledge creation and development at its core.

This again underlines the very blurred boundaries between 'formal' and 'informal' education. The practice-based and situated learning methods favoured by Lave and Wenger assume learning as an outward-oriented activity, aimed at increasing application in the real world. Importantly, they do not articulate this mechanically as merely training, but are assiduous in underlining the value of meaning-making to learning: 'practice is about meaning as an experience of everyday life' (Lave and Wenger 1991: 52). However, in setting such processes against 'formal' learning, they ignore the parallel (rather than oppositional) concept of learning for its own sake, for the development of knowledge itself – what could be called 'inward- oriented learning'. This is an activity undertaken both by students and by teachers and researchers. As authors, such as Ronald Barnett (2005, 2007a, 2007b) and Maggi Savin-Baden (2008) have shown how this kind of learning in universities is currently under attack, at least in the UK and the USA, Savin-Baden's book argues for the importance of:

the idea that there are diverse forms of spaces within the life and life world of the academic where opportunities to reflect and critique their own learning position occur. The kinds of spaces I am referring to, while also physical, are largely seen as mental and metaphorical. In such spaces, staff often recognise that their perceptions of learning, teaching, knowledge, and learner



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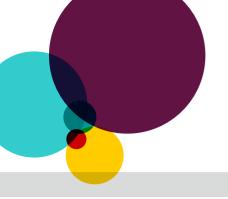
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identity are being challenged, and realize that they have to make a decision about their own responses to such challenges. Yet these often hidden spaces are invariably not valued by university leadership and industrious colleagues nor recognized as being important in our media-populated culture. (Savin-Baden 2008: 1)

She suggests that these kinds of meditative learning spaces are increasingly missing from academic life; that they are a vital part of the academic community which is thus becoming fragmented and dissolved; and that such learning spaces need to be valued and re-built for the intellectual health of academia. To her, these spaces of knowledge reflection and creation are not just spaces of withdrawal, but also of engaged debate about the nature of teaching, learning and research activities them- selves, of value to both staff and students. 'Inward-oriented learning' is thus not simply 'in-the-mind', nor only about intellectual reflection. It is equally a situated form of learning – for personal development, critical engagement with university or college as a knowledge sharing and creating community, and through the process of critiquing the wider context (for example, what constitutes subject knowledge, the status of particular knowledge, or the location of teaching, learning and research). It also has its own practices, whether of writing essays, doing experiments or calculations, or making things, all forms of thinking through doing. And such learning-as-knowledge- creation is not merely self-centred or of limited value to wider society. In fact, in the gallery and museums sector, for example, informal learning of this kind is seen as valuable precisely because it develops qualities of creativity, personal development and social cohesion:

The task [. . .] is to provide experiences that invite visitors to make meaning through deploying and extending their existing interpretative strategies and repertoires, using their prior knowledge and their preferred learning styles, and testing their hypotheses against those of others, including experts. The task is to produce opportunities for visitors to use what they know already to build new knowledge and new confidence in themselves as learners and social agents. (Hooper-Greenhill 2000: 139–40)

Crucially for the argument here, outward and inward-directed learning are neither oppositional, nor divided by an embodied/cerebral split. Learning occurs through the negotiation of shared, social meanings, in the spaces in-between these forms of collective knowing and our own individual knowing, informed not just by our 'location'



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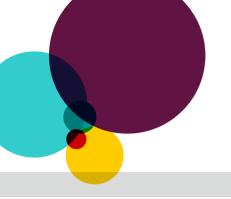
within a community of practice, but also what we bring to it, both from previous and from parallel experiences elsewhere. Learning then, is always happening at the intersections of what we know/do and what we don't; and material space is one of the means through which we engage with and test our cerebral and embodied experiences, both within ourselves and with others. In fact, part of the resonance of the concept of legitimate peripheral participation (LPP) is that it captures a version of this knowing/not-knowing relationship. However, I would suggest it is only one example of such a moment, and that the practices of post-compulsory education, rather than lacking such encounters, are actually full of them.

Starting from the interplay of inward and outward-directed participation is centrally important to any study of post-compulsory learning, whether in an adult education class, a museum-based workshop or an undergraduate degree, because of four underlying key characteristics which, I suggest, separate this kind of learning both from the everyday learning of life experience itself and the work-based learning explored by Wenger:

- 1. Individuals deliberately enter such a 'learning space' to open themselves up to new knowing.
- 2. This kind of learning emphasises the creative and constructive importance of the 'unstable' space between what that individual already knows and what they are learning about, as the place where new forms of thinking and doing take hold.
- 3. Within the communities of practice of post-compulsory learning, all participants (teachers, researchers and learners) undertake generative activities related to knowledge creation and development.
- 4. Processes of post-compulsory learning have the potential not only to change individuals, but also to challenge and alter the communities of practice, both of the subject discipline being studied and of learning itself.

Unlike the tendency to stability in the communities of practice model outlined previously, knowledge creation and development has contestation and instability as the basis of its operations. This is true for all participants, not just new entrants – the 'learners'.

Lave and Wenger, then, offer us a resonant conceptual model for articulating learning as an embodied, meaningful and situated activity, which can give us many clues about its social and spatial practices. But this model also needs to be opened up for critique (by investigating what it doesn't cover as well as what it does) and intersected with other conceptual models and spaces. Second, such a model needs



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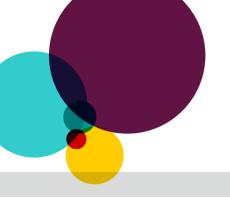
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to be problematised internally, so that the tensions, gaps and conflicts it contains for different participants are opened up for view. And, finally, while outlining its distinctive patterns, we need to understand that 'communities of practice' is only a very generic and uncertain term; what is or isn't a community of practice remains always fluid and partial. In addition such groupings come in many various forms, and are not automatically 'good'. Any specific, situated community of practice can be more or less effective for the learning development of its participants. But by decisively shifting debate from learning seen only from the perspective of the teacher/learner dyad to learning as a dynamic and group process, Lave and Wenger are central to the opening up of our understandings of learning as a social and spatial practice.

OPENING UP THE CONCEPTUAL SPACES OF COMMUNITIES OF PRACTICE

The 'communities of practice' model, as developed by Wenger, has come to incorporate at least three ways of engaging with space conceptually (Wenger 1998: 137). The first of these is in the articulation of learning as a journey, a movement, generally from the periphery to the centre (although Lave and Wenger note that this is not inevitable, that participants may place themselves in a variety of ways). Various authors have considered the implications of such a movement on learning; that it requires an initial boundary crossing (Savin-Baden 2008) and is a space of transition.

Second, learning as a community of practice demands both a belief in communality of understanding ('mutual engagement') and an increasing responsibility to the total entity and its development ('joint enterprise'). It is a space that must enable motivation and develop involvement through an iterative and relatively systematically organised sequence of encounters, towards the absorption of a specific set of social and spatial practices. This produces a space of increasing becoming and belonging. The concept of 'legitimate peripheral participation' indicates a particular pattern to learning as a series of jobs with increasing demands and responsibilities, where learning takes place through the combination of increasingly more complicated tasks with the observation of, and engagement with, experts already undertaking those tasks. As Lave and Wenger show, where the processes of the community of practice do not enable such a passing on of knowledge and skills, learning will not take place effectively (in their example, trainee butchers were located such that they could not see – and therefore could not learn from – the methods expert butchers used to produce different cuts of meat).



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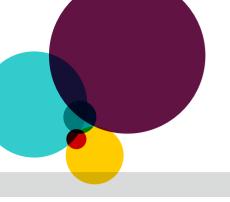
Third, a community of practice is based on a repertoire of events, objects and procedures which do not just come to be consciously recognised by community participants but ultimately are so completely embedded in their shared knowledge and practices as to appear ordinary and 'obvious'. This repertoire is part of ongoing negotiations within and beyond the community of practice, which renews itself precisely through its capability and legitimacy to make and remake these events, objects, procedures and spaces meaningful.

As noted previously, the concept of 'communities of practice' has become an influential one in education, management and social sciences in recent years – 'It is currently one of the most articulated and developed concepts within broader social theories of learning' according to one recent commentary (Barton and Tusting 2005: 1). The research has also generated considerable criticism, as much for what it doesn't cover as for what it does:

Underlying this social approach to learning is a consensual view on social interaction, where people act to reach a space of shared under- standing. [...] Practices exist as coherent and established wholes with their 'insides' and their 'outsides', even when sustained over time by continuities and discontinuities that allow them the possibility of change and transformation (Wenger 1998:125). As a consequence the tense, conflicting, ambiguous processes of the discursive and power negotiations implied in the construction of these centres is silenced as if it were a settled process. Who defines the unitary entity, how it is defined and in whose interests, it is defined as a whole does not appear. (Keating 2005: 108)

Educators and researchers working with basic literacy and adult education skills, for example, have commented that where they have used the 'communities of practice' model to shape learning,

[m]ore confident members may thrive, whilst those less socially able may find their disadvantage continued – or even reinforced and extended; or members committed to the successful outcome of a particular project find their goals conflict with others who are less committed or productive. [Harris and Sheswell 2005: 166–7]



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They thus emphasise the 'unspoken interactions' in such encounters, around issues of, for example, confidence, mutual respect, checks and balances on behaviour, shared goals, etc. For these authors, there are inherently legitimation conflicts around who is included and excluded. These are around what they term expansive or defensive learning (2005: 173–4), which links to ideas of threshold concepts and mimicry explored earlier; to issues of boundaries and barriers (2005: 170–1) and – similarly to other authors already mentioned – to the difficulties of 'boundary crossing', especially in relation to issues individuals bring with them when making an entry into a community of practice.

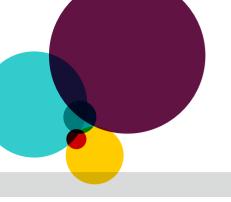
In these critiques, then, the spaces of any community of practice are seen as contested and complex rather than as (relatively) unproblematic. If the processes of inculcation into a community of practice take place through its repetitive daily routines – its affective encounters, social and spatial practices and repertoires – then these also continually intersect and are challenged/resisted/changed by, on the one side knowledge and skills as framed by the community's experts, and on the other through the adaptations and transformations wrought by the newcomers.

Here, I will suggest that re-framing communities of practice by exploring some contemporary theory, particularly the writings of post-colonial theorist Homi Bhabha, can open up to complexity, contestation and partiality the processes of learning articulated through its characteristics of boundary crossing, centripetal movement, iterative affective encounters and negotiated engagement through a specific repertoire.

THE PROBLEMS OF LEARNING AS 'OUTSIDE-IN'

Wenger acknowledges that all communities of practice inherently have particular tensions, for him, most importantly, as new generations inevitably take over from previous experts:

The different ways in which old-timers and newcomers establish and maintain identities can conflict and generate competing viewpoints on the practice and its development. Newcomers are caught in a dilemma. On the one hand, they need to engage in existing practice, which has developed over time: to understand it, to participate in it, and become full members of the community in which it exists. On the other hand, they have a stake in its development as they begin to establish their own identity in its future. (Wenger 1998: 115)



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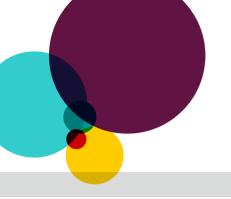
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These contradictions are played out through changing power relations, so the community of practice itself is also in motion, but for Wenger, basically stable. For other authors though, the basic act of separation of insides and outsides (insiders and outsiders) which any community of practice implies, indicates patterns of inclusion and exclusion that may not just be occasionally problematic, but are based on an underlying relationship which is inherently unstable (Bhabha 1994). A community of practice must always be about reproducing a certain kind of normal, where all 'abnormal' characteristics are split off and located outside the boundaries, at the extremities or margins. In Wenger's writing and consultancy, such boundedness is just a necessary characteristic which enables a 'like-mindedness' within the group. This does not preclude change, but Wenger makes no judgements as to what might constitute 'good' and 'bad' forms of shared knowledge, or the potential inequalities of particular inclusions and exclusions. As he writes:

In this regard, a community of practice acts as a locally negotiated regime of competence. Within such a regime, knowing is no longer undefined. It can be defined as what would be recognised as competent participation in the practice. That does not mean that one can know only what is already known. A community's regime of competence is not static. Even knowing something entirely new, and therefore even discovering, can be acts of competent participation in a practice. (Wenger 1998: 137)

Crucially for theorists like Bhabha though, the very common-sense structure through which such a community aims to continue making a separation between those included and those who are not, actually generates rather than prevents instability. This is because a stable group based on inclusion/exclusion is inherently impossible to maintain. A community of practice requires an outside against which to frame itself, yet this doubling undermines the possibility of ever attaining the implied desire for a totally shared stable, transparent and consensual culture, since outsiders are necessary for this very notion, are built into its very definition. Second, no social category or identity is pre-given or fixed. Relationships between what is inside and outside are always slippery and subject to change, disruption or re-framing. Finally, framing 'others' as not part of a particular community of practice does not of itself 'make it happen'. In fact, it can – through that very process – place these others in an ambivalent and difficult-to-occupy location, one that is not of their making and that they do not recognise. Or it can introduce many ambiguities as to what are or are not the 'proper' competencies for a community of practice. And it can, of course,



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generate deliberately disruptive or provocative challenges to a community of practice from outside it. Recognising these facts does not negate the concept of communities of practice, it just opens up the potential problems in assuming a smooth(ish) transition from outside to inside, requires an awareness of the inherent tensions and complexities of boundary crossings, and opens up to critique the metaphor of learning as an outside-to-inside movement, visualised as a centripetal spiralling in from edge to middle.

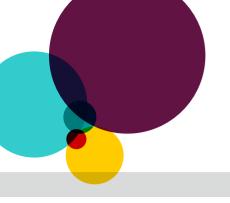
BEYOND 'LEGITIMATE PERIPHERAL PARTICIPATION'

Through the concept of LPP, Lave and Wenger attempt to articulate learning as neither the passive transmission of knowledge, nor the active learning supported by much contemporary educational theory, but as a negotiated process, centred on meaningfulness to the various participants. As previously noted, in their articulation, learning is both a type of social practice (instructional education), and a feature of all social practices (becoming/belonging). Lave and Wenger focus on the latter, on the processes through which learning enables membership of a community of practice. They define learning as 'an integral part of generative social practice in the livedin world' (Lave and Wenger 1991: 35) and argue that 'this social process includes; indeed, it subsumes, the learning of knowledgeable skills' (1991: 29). This, then, is a participation not just in a separate and isolated space of 'learning'; but through the integration of doing and thinking. This idea of learning is important because it does not separate out learning as a form of becoming (being a designer, rather than merely doing design, for example), from simply understanding subject content:

This pivotal emphasis, via LPP, on relations between the production of knowledgeable identities and the production of communities of practice, makes it possible to think of sustained learning as embodying, albeit in transformed ways, the structural characteristics of communities of practice. This in turn raises questions about the socio-cultural organisation of spaces into places of activity and the circulation of knowledgeable skill. (Lave and Wenger 1991: 55)

This, they argue, is ultimately a theory of learning in general not just specific to work-place-based study:

There has crept into our analysis, as we have moved away from conventional notions of learning, an expanded scale of time



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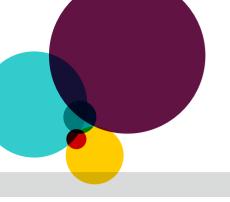
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and a more encompassing view of what constitutes learning activity. LPP has led us to emphasise the sustained character of developmental cycles of communities of practice, the gradual process of fashioning relations of identity as a full practitioner, and the enduring strains inherent in the continuity–displacement contradiction. This longer and broader conception of what it means to learn, implied in the concept of LPP, comes closer to embracing the rich significance of learning in human experience. (Lave and Wenger 1991: 121)

They thus end with a deliberate critique of conventional learning, by re-defining the activity as an engaged and long-term process. But there are two slippages here, in relation to their assumed prioritisation of outward-directed learning, as already out-lined. First, they fail to unravel the whole variety of mechanisms for a simultaneously cerebral and embodied thinking through doing; that is, the multiple and iterative affective encounters we have with self, others, language, objects and spaces. By focusing on learning as outward, shared and socially meaningful, they make invisible the con- testation and problematic nature of how and what becomes socially meaningful to different individuals and groups; that is, how individuals position themselves in, and are positioned by different communities of practice. There may be a recognition that a space exists between the perspectives of individuals (what they bring to a subject, what they take from it, how they challenge or adapt its 'norms') and the beliefs of the community of practice; but this space is not critically examined, except as part of an assumed overall tendency to stability and congruence. The authors therefore ignore the creative and constructive learning and knowledge development embedded not in stability per se, but in the endless shifting backwards and forwards from stability to instability between individual participants and the group, and between the group and other communities of practice. As I have already said, knowledge creation and development as a community of practice demands explicit movements of con- testation and patterns of constructive difference over ideas and methods, affecting individuals both in their personal academic development and also in their subject discipline contexts; and situated in the spaces in-between both.

Second, Lave and Wenger don't explore the impacts of the wider context, sometimes implying that communities of practice have full agency and are autonomous. The relationships between communities of practice (whether competitive or collaborative or both) are not considered, nor are the external forces that may affect where and how a community of practice can operate, or which may impact on its beliefs and



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practices. This is highly relevant to post-compulsory education and its core activity of knowledge creation and development, which often does not have strong control over its own boundaries (however hard it tries) but must engage with the wider political, social and economic context, and wider attempts to frame definitions of this particular community of practice which are different from the way it perceives itself.

While recognising the powerful potential of LPP then, it is suggested here that building a picture of the distinctive characteristics of learning in post-compulsory education needs to include many forms of affective encounters. All of these hold to the important underlying points in Lave and Wenger's work; that in learning activities thinking and doing are integral, not separate; that learning involves not just cerebral knowledge but is also always embodied; and that learning is an on-going process which is centrally about social meaning-making in the world.

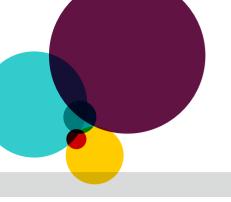
THE PROBLEM OF THE REPERTOIRE

Interestingly Wenger does engage directly with the material world in his analysis, in a way that is uncommon in educational theory. Both design and objects/spaces are seen as part of the processes through which communities of practice are developed and maintained. For him, this is also through ordinary social practices of repetition through which common-sense meanings become embedded in concepts, objects and architecture. He calls this 'reification', defined as:

the process of giving form to our experience by producing objects that congeal that experience into 'thingness'. In so doing, we create points of focus around which the negotiation of meaning becomes organised [. . .] any community of this kind produces abstractions, tools, symbols, stories, terms and concepts that reify something of that practice in a congealed form. [Wenger 1998: 58–9]

What is more, 'reification' can happen through everything from abstract ideas to bus tickets:

A wide range of processes that include making, designing, representing, naming, encoding and describing, as well as perceiving, interpreting, using, reusing, decoding and recasting [. . .] from entries in a journal to historical records, from poems to encyclopaedias, from names to classification systems, from



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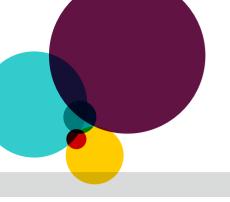
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dolmens to space probes, from the Constitution to a signature on a credit card slip, from gourmet recipes to medical procedures, from flashy advertisements to census data, from single concepts to entire theories, from the evening news to national archives, from lesson plans to the compilation of text-books, from private address lists to sophisticated credit-reporting databases, from tortuous political speeches to the yellow pages. In all these cases aspects of human experience and practice are congealed into fixed form and given the status of object. (Wenger 1998: 60)

While for Wenger, reification is a useful and constructive mechanism which helps glue together communities of practice, for many other authors it is a problematic and inequitable process. They ask instead whose 'ordinary' is being congealed and in whose interests. Theorists such as Homi Bhabha, already mentioned, Michel Foucault (1970, 1977) and Pierre Bourdieu (1987) have analysed how the congealing of a particular 'ordinary' is perpetuated through the material fabric of society. Reification here becomes the attempt to make transparent and obvious (by locating it externally in the 'concrete' world) that which is actually a specific enunciation of ideas and practices, and a particular translation of these ideas and practices into things and spaces. In *The Location of Culture* (1994) Homi Bhabha explores how to 'see through' the persistency of this mode of thought in terms of not just its own legitimations but also the anxieties it represents for dominant groups, and how to make visible the positions of those it 'contains' in a specific way. He first proposes how to conceptualise different positions:

The move away from the singularities of 'class' or 'gender' as primary conceptual and organisational categories has resulted in an awareness of subject positions – of race, gender, generation, institutional location, geopolitical locale, sexual orientation – that inhabit any claim to identity in the modern world. What is therefore theoretically innovative, and politically crucial, is the need to think beyond narratives of originary and initial subjectivities and to focus on those moments or processes that are produced in the articulation of cultural differences. These 'in-between' spaces provide the terrain for elaborating strategies of selfhood – singular or communal – that initiate new signs of identity, and innovative sites of collaboration, and contestation, in the act of defining the idea of society itself. (Bhabha 1994: 1)



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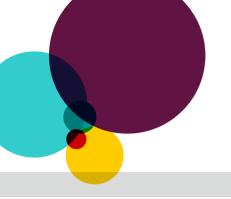
Unlike Wenger, then, Bhabha conceptualises the relationships between ideas and their reification not as a stabilising mechanism for the easy recognition of certainties, but as a much more uneven terrain of hybridity, negotiation and contestation. As he goes on to say, 'the exchange of values, meanings and priorities may not always be collaborative and dialogical, but may be profoundly antagonistic, conflictual and even incommensurable'.

What does such a critique imply for the notion of 'reification', in relation to learning spaces? Not only the lecture theatres, seminar rooms, laboratories and staff offices, but also the timetable, curriculum and modular frameworks, and the essays, exams and other academic protocols, make learning 'concrete' in post-compulsory education. In a specific form, they can become congealed as 'natural' and straightforward, thus making a particular form of teaching and learning seem transparently obvious and correct. For Wenger this serves a useful purpose. For other theorists it hides the actual contestations over what learning is and how it should take place:

We must be insistently aware of how space can be made to hide consequences from us, how relations of power and discipline are inscribed into the apparently innocent spatiality of social life, how human geographies become filled with politics and ideology. (Soja 1989: 6)

For Soja, material space is deeply ambiguous because it has the potential to both hide and express social relationships and practices simultaneously. That is to naturalise a specific set of social relationships and practices as the obvious and normal arrangement of things, so as to make other possibilities much harder to imagine.

So instead of what often happens, which is that space is seen as directly reflecting the social life that it contains, here material space and its occupation are seen as always potentially in tension, with many complexities, gaps and unintended consequences in relationships between them. It is important to note here that it is not just the spaces or repertoire which appear obvious and yet are always problematic; it is also the social and spatial processes towards the reification of particular types and relationships of space (what goes together and what is kept apart) which can seem 'normal' but are really contested and in flux. The ongoing debates over what learning spaces should be like in post-compulsory education, and the range of new built examples produced as a result, only highlights this endless struggle to first challenge existing patterns and then move towards the 'normalisation' of the new. This means



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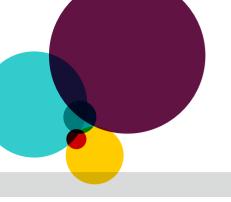
that we should not only list the repertoire of a given community of practice at any one time – for example its typical building types – but we must also open up what is being challenged, and how, and the processes through which such 'campaigns' are or are not successful.

TOWARDS A FRAMEWORK FOR RE-THINKING RELATIONSHIPS BETWEEN I FARNING AND SPACE

In his seminal work The Production of Space (1991), Henri Lefebvre famously proposed a spatial triad, as a means of conceptualising relationships between space and the social, which went beyond the simplistic pattern of binary oppositions and the false coherence of space and society reflecting each other transparently through a process of association, analogy or metaphor in an endlessly tautological circle.

The first of Lefebvre's divisions is the spatial practices of a society. Our daily routines are embedded in space and time, through what goes together and what is kept apart. These are the ordinary, unconsidered experiences which I have already outlined, using terms from ethnomethodology, as being about 'nothing much'; and which, although in actuality are 'problematic accomplishments', are only recognised as constituting work (i.e. 'doing' learning) when normal social and spatial practices are 'breached'. Second, these everyday social and spatial practices are intersected through what Lefebvre calls 'representations of space', meaning the conceptualised space of planners, scientists and other experts that tends towards a system of verbal signs (Lefebvre 1991: 39), such as maps, plans, models and designs. According to him, representations of space are about the history of ideologies (Lefebvre 1991: 116) because these are attempts to explicitly describe particular coherent patterning of the social in space - concrete guidelines for how 'thought' can become 'action' (Lefebvre 1991: 165; Harvey 2000: 203). Finally, the third part of the triad is representational space, the space of inhabitants and users. It is the space that is or can be altered by ordinary people; where their imaginations seek to appropriate, adapt or transform 'normal' social and spatial arrangements and where change 'from the bottom up' can occur, although often incoherent or partial.

Because Lefebvre writes within a Marxist perspective, and through a period where modernism still held sway, he predominantly articulates representations of space as the abstract space of contemporary capitalism (for which designs built environment professionals and their clients appear as mere 'conduits'); while representational space particularly reveals attempts by individuals and groups to challenge such



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By Jos Boys

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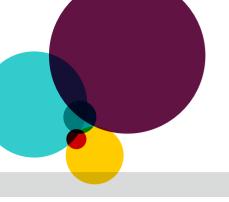
capitalist patterning, for example in the ideas and practices of the Situationists (Debord 1995).

But I suggest that, if these three aspects are taken as partial and overlapping – and often with gaps, unintended consequences, or contradictory elements – they offer a potentially rich conceptual framework for linking architecture and its occupation. Here, building on Lefebvre's spatial triad, examining the relation- ships between learning and space requires understandings of – and an analysis of the intersections between – the following three aspects, situated in specific contexts and locations:

- the 'ordinary' routines of existing communities of practice in education (Lefebvre's 'spatial practices' or what I have called 'social and spatial practices');
- attempts at, and impacts of, designed transformations of existing spatial practices (what Lefebvre calls 'representations of space' and Wenger calls 'repertoires');
- participant engagements with, and adaptations of, these social and spatial
 processes and repertoires (what Lefebvre calls 'representations of space', and I
 have described as the spaces in-between; that is, our own individual positionings
 in relation both to existing and specific social and spatial practices and the spaces
 in which these take place).

Instead of a closed oppositional 'backwards-and-forwards' of learning between either its assumed formal/bad and informal/good locations – or even a circular movement from outside to centre, as described by the communities of practice model – perhaps we can envisage such a patterning more as three parallel lines which overlap sometimes, or stretch far apart; sometimes run very close for long periods of time, or moving jerkily; sometimes thick in their intensity, sometimes petering out. Intersections between lines are always dynamic, with changing relationships towards and away from coherence and stability. Where individual lines drift too far apart, then the pattern is likely to be lost and a new pattern forms (Fig. 4.1).

Importantly, such a method offers one means of opening up our understandings to the concepts of gaps, tensions and unintended consequences. That is, the spaces in-between the 'conventional' social and spatial practices of post-compulsory learning, our different interpretations of those social and spatial practices, and actual attempts at manipulating form and space towards particular learning 'ends'. As I have said, these patterns never settle, nor can they be explained in totality. But such a visualisation suggests that the particular and non-coherent intersections in a specific situation of both individuals and groups can be illuminated (Parlett and Hamilton 1972), as can the processes through which change occurs, personally, at



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the level of communities of practice and across wider social and cultural contexts. I will explore how such a framework might help us understand something about the qualities of spaces at the detailed and immediate level of learning encounters in post-compulsory education, in the next chapter.

This adaptation of Lefebvre's triad also articulates, with some measure of equivalence, the distinctive characteristics of post-compulsory learning that I have begun to outline. Existing practices can be framed via the concepts of communities of practice already discussed. Participant interpretations and their adaptations open up the centrality of what different individuals bring to the processes of negotiation within and across various communities of practice as they learn through developing their own meaning-making, both inwardly and outwardly. And Wenger's idea of 'negotiated repertoires' seems a resonant means of engaging with the design of spaces, objects and procedures in its widest sense; that is both the production of space by architects and others and also its interpretation, negotiation and adaptation by those who occupy it.

It is beyond the scope of this book to research in any detail the whole gamut of social and spatial practices that constitute learning in post-compulsory education or their intersecting patterns in different contexts and locations with specific architectural spaces and participant experiences and engagements. But such an outline framework for understanding relationships between learning and space does enable a way of beginning to critically explore our many different experiences of teaching, learning and research in post-compulsory education; and to open up the kinds of questions and debates we should be having to inform the architectural design of our colleges and universities in the future. In Chapter 6, I will begin to explore what this means for the design of educational institutions.

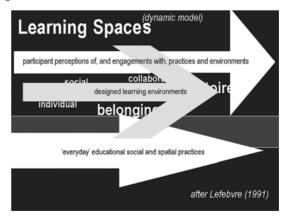


Figure 4.1 • Approach for examining learning space as a pattern of 'and/and' encounters and practices, based on Lefebvre's spatial triad (1991).



SEARCHING FOR THE STUDENT LEARNING EXPERIENCE?



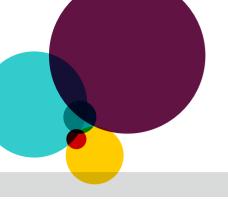
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Towards Creative Learning Spaces

By Jos Boys

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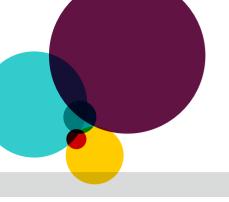
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I ended the last chapter by suggesting that an adaptation of Lefebvre's spatial triad could be useful in capturing something of the experiences of learning spaces. At first glance, unravelling the intersections between a particular set of social and spatial practices, the places in which these take place, and what we each bring to the situation may sound unnecessarily complicated. But of course, it is what we actually do all the time, as we continually negotiate our relationships with each other and the world. This chapter begins by examining how student (and other) experiences of learning spaces are usually evaluated, and then goes on to explore the research of Clare Melhuish (2010a, 2010b). She brings to the debate a background in both ethnography and architecture, and therefore suggests one approach for examining both social and spatial practices.

STUDENT-CENTRED?

Much current literature around post-compulsory learning spaces is increasingly – and rightly – focusing on evaluating the student experience, as a way of better understanding the effectiveness of particular spaces for learning. However, reviews of evaluations to date (Barnett and Temple 2006; Temple 2008; Joint Information Systems Committee (JISC) 2009) have demonstrated how these have tended to lack any kind of theoretical framework which explicitly articulates a relationship between learning and space. In addition, very few studies of learning spaces make use of the wide range of potential methodologies which examine the occupation of material space across anthropology, ethnography, ethnomethodology, discourse analysis, phenomenology, behavioural psychology, cultural geography, human—computer interactions, sociology and the like (Cousin 2009). In their 'Study of effective evaluation models and practices for Technology Supported Learning Spaces' funded by JISC in 2009, Ian Pearshouse et al. set out to 'identify and review the methods and tools currently used to evaluate the contribution that technology-supported physical learning spaces make to learning and teaching' (JISC 2009: 3):

Our initial investigations showed that although institutions were keen to advertise new or innovative learning spaces, the practice of evaluating such spaces was not made readily visible and was thus harder to identify or track. A key finding to emerge from the study was that if evaluations were undertaken they occurred as part of an internal institutional process, typically prompted as part of a student satisfaction survey, of which the outputs were not ordinarily deemed to be for external consumption.



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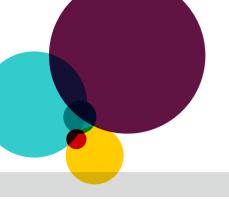
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This has limited the extent to which knowledge- sharing about learning spaces has been promoted across the whole educational community. [JISC 2009: 3]

Overall, their findings were that evaluations tended to be local, and under-resourced. They were usually initiated by, and conducted within, the home institution by managers or other in-house staff, rather than external evaluators. This had an effect on scope and remit; studies were under-theorised and without a clear methodology, often containing an element of 'justification' and closure, rather than any critical analysis. I have already suggested in previous chapters that the very structure of our assumptions about learning spaces - that we 'obviously' need to move from formal/ passive/bad to informal/active/good learning spaces – works against the kind of critical questioning which is central to proper analytical and evaluative study. The current 'common sense' may actually be preventing evaluators from seeing any underlying conceptual problem about how to relate space to learning, or considering methodological issues explicitly. In addition, merely having more space tends to be seen as something that will make a change for the better to learning (which given that any new space involves a valuing of the particular activities it is designed for, is not surprising). Pearshouse et al. show how, in some cases, studies of the student experience were perceived as confirming evaluators' expectations that, based on space usage and student satisfaction ratings, learning could be seen to have improved. They note the difficulties in blurring whether a space is liked or not with whether it enhances teaching and learning:

From these examples, the enabling of new learning and teaching scenarios is implicitly associated with new, 'better' ways of learning, acting as a shorthand for improved pedagogic action. This association of new uses with improved learning is paradoxically often reliant upon indicators of occupancy, usage and scenarios rather than data concerning the socio-cognitive processes of learning, or general assessments of learning. Many evaluators were aware of this tension, and identified learning processes as important, however, only fifty per cent were able to recognise these factors within their evaluations, and in these cases evaluators relied upon self-reported learning. (JISC 2009: 13)

It is therefore clear that we still lack frameworks and methods for understanding how space can or might impact on learning in post-compulsory education.



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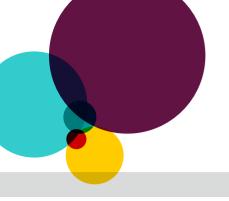
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TOWARDS BETTER METHODOLOGIES

The argument in Towards Creative Learning Spaces to date has suggested that:

- Learning in a post-compulsory context involves participants making a deliberate commitment to enter a 'learning space' and to become involved in the inherently unstable process of new knowledge development and creation.
- Learning in post-compulsory education can be envisaged as the negotiation of various boundary conditions; the choreography of a series of affective encounters through a transitional and liminal space; and the orchestration of learning via a repertoire of spaces, objects and procedures.
- Learning encounters cannot be simply 'read' off a space. The shape of material space does not align coherently or congruently with the activities that take place in it; learning activities are always about more than the space; and space is always about more than just the activities that go on in it.
- Analysing how learning space is experienced and interpreted by its participants involves mapping the complex, non-overlapping and partial inter-relationships between the 'ordinary' social and spatial processes of existing communities of practice in post-compulsory education; designers and clients' attempts at transformations of existing processes and repertoires; and how different participants engage with, and adapt, to these social and spatial processes and repertoires.

To explore how such a conceptual framework can inform evaluations of the student (and staff) experiences of learning space, I will re-visit some research undertaken by Clare Melhuish (2010a, 2010b) entitled 'Perceptions of three new learning spaces and their impact on the learning and teaching process at the Universities of Sussex and Brighton', which was commissioned by two of the HEFCE-funded Centres for Excellence in Teaching and Learning, one through Design (CETLD) and one in Creativity (InQbate). This pilot study aimed to explore how ethnographic methods might be usefully applied to exploring experiences of learning spaces. Here, Melhuish both worked from a pre-agreed set of spatial/aesthetic characteristics (developed in her own previous PhD and other research (Melhuish 2007)) and adapted this set in response to the interpretations of her interviewees. Such an approach is informed by a close reading of existing research about peoples' interactions with material space, such as Augoyard's study of a housing project in Grenoble, France (1979). This is an attempt to develop a detailed phenomenological enquiry of everyday engagements with the material environment. Following Lefebvre, Augoyard also stressed the difference between the static, planned spaces designed by architects and planners, and the 'lived space' as experienced phenomenologically, through the senses,



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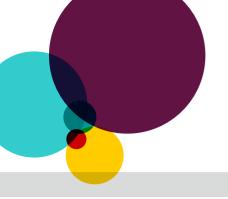
through physical movement, and through the imagination, by its inhabitants. As with other ethnomethodological studies, already outlined here, the aim was to examine every- day un-noticed social and spatial practices, through for example, study of:

walking, movement, and the associated process of verbally naming, or describing, different elements of the environment, [which] reveals much about the way different individuals relate to spaces and environments, and embodies the social dimension which activates and deconstructs the original formal intentions mapped out on the drawing board. (Melhuish 2010b: 9)

Such an approach, then, is as much about observing what people do, as about what they say, with 'embodied' enactments as well as discursive reflections. Augoyard's analysis was based on detailed observation, mapping and photographic documentation, and led to a quasi-scientific notation of individual movements, based on concepts from linguistics. This concern with developing a structuralist, holistic and objective terminology for relating space and its occupation has been increasingly challenged within anthropology, especially by the Geertzian school. They emphasise the personal and subjective character of all interpretation; Geertz uses the phrase 'thick description' as a way of describing all observation and interpretation as culturally produced, partial and personal [Geertz 1973]. As Melhuish goes on to note:

Geertz's work was not specifically concerned with the intersection of culture and space, but his subjective, interpretative approach parallels that of the environmental and architectural phenomenologists who have promoted an understanding of space as subjectively perceived, through the senses and the imagination, by the individual – such that the same space may be experienced and described by different individuals in quite different ways.

[This] is essentially an empirical method of study, wherein the researcher must remain fundamentally open-minded as to what s/he observes in the field, what responses s/he may elicit from respondents, and what those responses may signify. These are the accepted fundamental principles of any ethnographic research, where the ethnographer, as 'author', must aim to set aside any preconceptions and personal bias when entering the field, to draw out rather than prompt responses from participants, but ultimately acknowledge, through the process of interpreting



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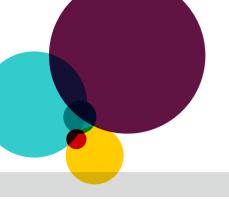
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the data, the ways in which the final analysis is shaped by the inescapable conditions of the author's own background and prior experience. (Melhuish 2010b: 9)

What is valuable about Melhuish's work is that she uses ethnographic methods to ask detailed questions about the architectural properties of the learning spaces investigated, but in a way which remains always integrated with relationships between those spaces and its wider practices and agendas. So, she starts by describing the institutional, physical and social settings of the learning spaces under consideration. Then she asks her participants about their perceptions of each physical setting: its spatial layout and furnishing, lighting, colours, smells, sounds and technology, status and image. She also asks about its social setting: its occupation, uses and interactions, and about her participants' interpretations of both institutional agendas and the impact of space on their learning.

What Melhuish begins to capture in her study is most crucially the sophistication of participant responses. Rather than the simplistic 'likes' and 'dis-likes' of functions or material properties that many studies elicit (too light, dark, hot, cold), here both interactions with, and readings of space, are articulated around the underlying social and spatial practices which energise them in specific ways in different contexts. Her interviewees – both staff and students – are easily able to engage with the new learning spaces under study at a variety of levels simultaneously, from the immediate encounters being mediated, to the relationships with other spaces and activities; and to the wider context of the institution. Second, she enables respondents to open up to view the inherent tensions and overlaps in how particular spaces are perceived. They show an awareness of difference, complexity, contradiction and paradox as they consider the intersections (what I have already called the spaces in-between) across the social and spatial practices of learning being offered, the design and educational intentions of these new learning spaces, and their own interpretations and experiences.

Here, I will make an extended review based on some of Melhuish's data; not to critique it, but to add another angle of view to her important work, which focuses on aspects of what I have already called the distinctive characteristics of learning in post-compulsory education. These distinctive characteristics are framed in relationship to the three qualities that define communities of practice as proposed by Wenger: i.e. the negotiation of boundary conditions, the choreographing of affective encounters (what I have also called everyday social and spatial practices) and various engagements with the repertoire.



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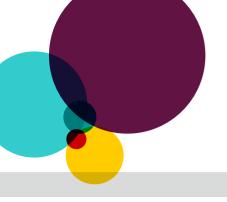
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EXPERIENCING BOUNDARY CONDITIONS

Material space obviously creates a series of physical thresholds – which, as I have emphasised, do not need to align with conceptual 'thresholds'. But both physical and conceptual boundaries do intersect with and therefore affect, and are affected by, our everyday spatial, aesthetic and sensory experiences. These can be described in terms of the relationships between spaces, such as closeness or distance from a point of entry; enable relative ease of access so as to imply particular inclusions and patterns of 'exclusivity'; and can act as a landmark, or express 'front', as against 'back', qualities. But what is most important is not merely the fact of such descriptions but also the meanings such relationships take on in particular situations to different participants.

In Melhuish's research study respondents all described, in different ways, how the new and innovative learning spaces they were using formed a separate 'bounded' category from the rest of the university's spaces and activities. They were able to articulate the quality of these new learning environments as 'conceptual' spaces and as 'physical' spaces, and to engage with the tensions between the two. First, there was an awareness of a specific spatial context; that these facilities had value due to sheer lack of space-availability elsewhere, and particularly due to the lack of availability of comfortable or appropriate space. As already suggested, this reinforces the 'common-sense' evaluation often given, that merely having the space becomes something that enhances learning. This is important, not just as an obvious conclusion, but in seeing that just providing newly designed or renovated space can open up activities that previously did not exist simply for lack of somewhere for it to happen (Fig. 5.1):

The CETLD funding enabled the creation of a learning space in a place – the RIBA library – which is implicitly about learning but had no way of imparting it. Just the addition of a simple physical space was transformational: it made it possible to have an ambitious, aspirational programme for Higher Education, which is already having many repercussions. (Irena Murray, director British Architectural Library, RIBA, (Boys 5 February 2009, unpublished interview notes))



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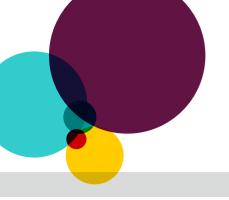
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Figure 5.1 • CETLD Bene Education Room, Royal Institute of British Architects (RIBA), British Architectural Library, London. Photograph: RIBA British Architectural Library Photographs Collection.

However, such new learning spaces also imply additional operational demands, such as educational support staff. Where the new space and its intended occupation are explicitly 'labelled' as different to the conventional social and spatial practices of post-compulsory learning, this also puts them 'outside', that is, in an ambiguous and potentially problematic relationship to existing university communities of practice. So, rather than seeing a lack of positive take-up of such spaces as indicative of staff and students 'resistance to change' (as is often the case), we should investigate it instead as evidence of the contested and negotiated practices and repertoires of learning in post-compulsory education.

In Melhuish's study, most respondents saw all the three new learning spaces investigated as, for example, a space 'away' from an existing department and/or a cross-boundary space that did not 'belong' to any particular department and as located outside of 'standard' centralised timetabling and booking systems, which meant staff who booked them had to 'be in the know'. Negotiating the means of accessing these spaces could give both staff and students a sense of their own 'specialness'. This can make a space simultaneously visible and invisible (Fig. 5.2):

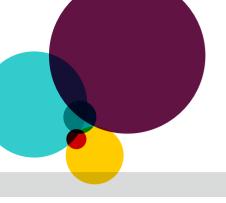


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In some way, then, the [CETLD] room is perceived as a highstatus venue, which has 'got a purpose', is 'serious [...] challenging' [...], and in which users themselves become elevated to a higher status or level of engagement – not only while in the space, but also subsequently, through its stimulating effects: 'this is the only class I've ever done where every week I will go home and I will write up my sketchbook', comments one student [...] This status is reinforced by the fact that it is easily accessible, on the ground floor, near the entrance to the campus, and highly visible through its glazed display cabinet, giving a view onto red, white and black items of furniture inside, which are 'obviously meant to be examples of good and innovative design' [...], putting out a specific message.

But, at the same time, and paradoxically, it is not highly visible. As Tutor 2 points out, the name means nothing to most students, and many of them don't know what its purpose is or whether they are permitted access to it or not: 'most students don't know what it is [...] it's surprising' [...]. The display of magazines inside suggests free access and browsing, but in fact there is a perception that it can only be booked for use, and you cannot just wander in and out: 'you couldn't do that' [...] - even though there is a notice clearly displayed by the door which says there is free access on Mondays and Fridays. There is a sense that it has 'the potential to be more heavily used' [...], but the booking system establishes clear boundaries around its use which effectively gives the facility invisibility except to those in the know about how the system works. The problem, as perceived by Tutor 1, is that if such spaces 'become too visible, you'd need lots and lots of them', because everybody would want to use them. Hence the system works well 'in this transition phase', but could break down under pressure of demand. [Melhuish 2010a: 47]



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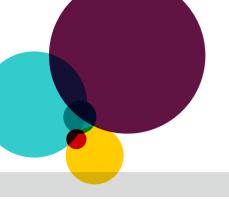


Figure 5.2 • View into CETLD learning space, University of Brighton, 2009. Photograph: Clare Melhuish.

The participants in the study expressed the felt contradictory nature of a space which sits between a recognisably known and an unknown setting, especially where its physical and aesthetic boundaries gave out ambiguous cues about what is 'normal' in terms of educational space. Here boundary crossing both indicates a difficulty and a benefit, and is thus recognised as inherently problematic – good for the staff and students who use it, but 'reduced' if the facility is more generally available.

The other spaces investigated – the InQbate Creativity Zone at the University of Sussex and the Creativity Centre at the University of Brighton – are differently located, towards the back of buildings, reached by a journey through several corridors (Fig. 5.3). Both students and staff articulated an awareness that this location helps to keep it 'separate', while also indicating that using the space implies a special kind of commitment by, and benefit to, its participants.

As with the CETLD room, but through a different spatial configuration, the Creativity Zone simultaneously signals both availability and exclusivity and makes itself difficult to 'recognise' in relation to conventional learning spaces. Melhuish also found that



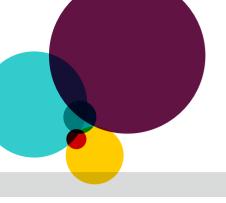
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her respondents were aware that two of the three spaces studied were perceived as having a tension between 'insider' and 'outsider' communities of practice, that is, between university and external business use:

One of the implications of this is, as at Space B, that it is being increasingly hired to outside companies – 'because they [the university] can't afford to have it, apparently' [...]. There is a general perception that the expense of running the place may jeopardise students' and staff's access to it, which is regarded as a serious drawback. Tutor 4 says 'it would be tragic' if she couldn't use it next year, because it is 'an excellent resource'. She says that use of the space has not been guaranteed for next year, and this would make it very difficult for her to teach her course in its present form. This sense of uncertainty and mild resentment seems quite pervasive. 'We're not timetabled in there', comments one student: 'it's a booking thing. Because when we go in there, they don't get any money' [...]. (Melhuish 2010a: 32)

But as she also notes, the attractiveness of these spaces to outside users is also enjoyed by those 'inside' the institution because it provides students with the opportunity to engage with professionals within the university context and that of their course. Experiencing each of the spaces, then, is informed not just by its immediate material qualities, but also by awareness of wider social and institutional agendas and contexts; and engaging with the various boundary conditions/ crossings of learning spaces is not merely a physical act, but a complex negotiation of meanings.

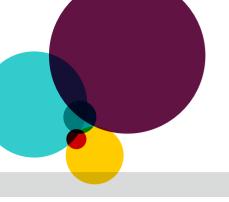


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Figure 5.3 • Entry to InQbate Creativity Centre, University of Brighton, 2009. Photograph: Clare Melhuish.



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THE CHOREOGRAPHY OF AFFECTIVE ENCOUNTERS

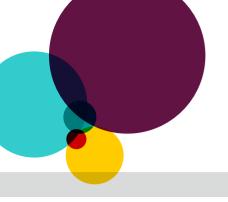
I have already suggested, based on the 'communities of practice' model, that we can understand post-compulsory learning as a series of iterative affective encounters, moving towards increased becoming and belonging, through something which is experienced as an uncertain, liminal space. The material environment and its associated objects and procedures (repertoires) are one mechanism through which such encounters are mediated. To begin to open up how such mediations might be explored, I want to examine how respondents in Melhuish's research interpreted and interacted with their chairs and tables in the new learning spaces studied.

As already noted, the CETLD seminar space is set out café-style with a number of small square tables and examples of modern designer chairs. Tables can be also pulled together to form a larger surface. According to Melhuish:

Within the CETLD space, the layout and furniture are perceived as not only inviting, but also as creating an informal and relaxed atmosphere which is not immediately associated with a teaching venue: 'When I first saw the space my impression was it looked like a café or something because of the tables and the mix and the funny chairs, and I thought, that's a bit strange. But [...] it does actually encourage you to relax'. Another student describes it as 'a lot less formal' [...]. On the other hand, it is not necessarily that comfortable. Tutor 3 maintains the chairs are 'quite uncomfortable', though less so than 'those awful chairs with the little fold-down table [...] which are really uncomfortable and isolating for students'. (Melhuish 2010a: 42–3)

Again, then, the furniture is interpreted in relation to conventional provision, and 'read' in terms of the meanings that are associated with the new variation, here to do with a contemporary, informal and creative feel (Fig. 5.4):

The drawback of furniture that clearly looks 'designed', and possibly more appropriate to another sort of environment, is that it may be intimidating to some users, in terms of the aspirations which it symbolises. Although one describes it as stimulating – 'so modern [...] I want to come up with innovative ideas here' – it also raises the bar of expectations: 'it seems more modern here, not just the interior, but also the way of working here seems more



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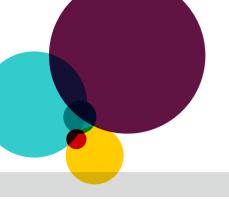
millennium-ish'. For one History of Art student, that is perceived as somewhat daunting: 'because of the design, chairs and the colours and the tables and the fabric on the sofas, it seems very sort of modern and creative and innovative [...] I sometimes feel slightly pressured into being creative and I'm not really' [...]. [Melhuish 2010a: 43]



Figure 5.4 \bullet Examples of furniture, CETLD room, University of Brighton, 2009. Photograph: Clare Melhuish.

Generally, the setting of café-style tables is interpreted as an effective alternative to the traditional seminar room, where sitting around a large table affects whether students feel capable of making a worthwhile contribution to the general discussion 'either because of the feeling of being under a spotlight, with all eyes directed at one point, or because of the difficulty of waiting for a gap in the conversation – 'like crossing a busy street'. As Melhuish continues:

In the CETLD room, the fact that 'there are chairs facing away from you and facing in different directions', means there are



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multiple focal points, which eases up the flow of conversation – 'with small tables you're sure to have your opinion heard [...] everybody does have respect for other people's ideas. It's quite a sort of comfortable feeling'. It is not 'like a ring around you', as in the (conventional) seminar room, where 'there are about 14 of us around this huge table and it does go very, very quiet at times' [...]. (Melhuish 2010a: 43)

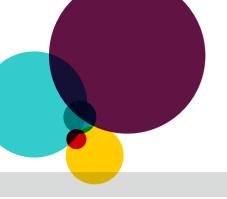
In addition, the potential mobility of table and chair layouts seems to make it easier for students and staff to stand up and move around during a class. Melhuish suggests that the importance of these particular tables is not so much about working with books or drawing, as it is about creating interchangeable focal points for group interactions. It should also be noted, however, that in this process of patterning and re- patterning during a class, the rectangular room shape retains a 'front' and a 'back':

with the body of students and staff generally clustered around the screen at one end, whether or not it is in use, leaving the rest of the space free. Tutor 2 sees this as beneficial, in that it allows students to graduate towards the back or side of the space if they feel like taking a back seat. It also allows the teacher to withdraw from the class at points. Like looking out of the window, this can accommodate the natural rhythms of teaching sessions in a flexible way. 'The set-up of the room makes you concentrate so much on the work because you're so deeply discussing with other people' [...], but at the same time it is possible to take breaks and let your mind wander, which is relaxing, and allows the teacher also to feel that s/he is not under a permanent spotlight at the front of the class. (Melhuish 2010a: 43–4)

The precise details of spatial arrangements are here articulated in relation to particular learning activities, enabling the generalities of 'flexibility', so often used, to be opened up as a distinctive and specific set of social and spatial learning practices.

Both the other two studied spaces use mainly beanbags for seating (Fig. 5.5). Here the cues offered by such seating are potentially more ambiguous:

Although beanbags [...] seem to prompt more spontaneous and playful behaviour during teaching sessions, perhaps because of the smooth floor surface, perhaps because of the makeup of the



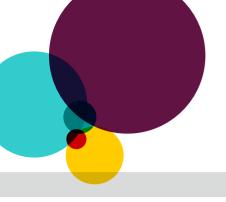
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student group in question – 'almost not grown-up enough to use the beanbags', with a 'macho dynamic' [...] – they do not attract the same level of comment or evaluation from students or staff [as the CETLD furniture]. They clearly facilitate group working at the whiteboards around the perimeter of the space, and there is comment on the comfort which they offer, although it is somewhat qualified: 'it's nice to sit in beanbags, but [...] that just induces sleep if it's not interesting [...] if you're sat on a chair, you're forced to sit up', says one [...]. While another suggests that it's better to be bored and asleep rather than uncomfortable: 'much better being relaxed than in a lecture hall where you're also not listening, but you sit there really uncomfortably'. (Melhuish 2010a: 28)

As with the CETLD room, tutors can choose to orchestrate how beanbags or 'ordinary' chairs are used in the space to indicate different degrees of formality and informality. The furniture is read for the clues/cues it gives about the learning encounters taking place. It is experienced as a space and set of objects which are interacted with by each participant so as to continually 'locate' themselves in relationship to the learning taking place, whether by 'mucking about' or being 'serious' students. This is always within what is available, and concerns both how they are positioned, and how they position themselves, in relation to the social and spatial practices of learning being undertaken and to the larger group and context. Within the same setting there will always be a variety of experiences and interpretations.

Thus, we can 'pin down' some of the precise characteristics of space that can impact on the learning encounter at this detailed and immediate level. From the above, these can be seen to include insides/outsides, boundary conditions, backs/ fronts, spatial and social configurations of tables and chairs, patterns of focus and 'distraction' through visual and environmental conditions, and the 'language' of seating and setting. At the same time, though, there can never be a single correct solution because there is no one-to-one, coherent or obvious relationship between how the space is 'choreographed' (whether by designer, client, estates manager, tutor or student) and the range of individual embodied encounters experienced within it. These are not completely relative, that is, they are not so various as to be closed to analysis or evaluation. What we each bring differently to our learning encounters in particular spaces and contexts means that we cannot expect to find a consensus beyond the gaps, partialities, contradictions and paradoxes as indicated by the participants talking here. Within such a conceptual framework, architecture and



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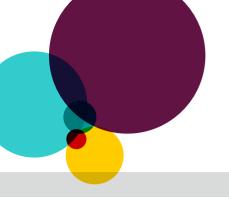
design is always only about offering up a 'best guess' through mapping, re-thinking and then translating into material form a particular set of social and spatial practices.



Figure 5.5 • Examples of furniture, InQbate Creativity Zone, University of Sussex, 2009. Photograph: Clare Melhuish.

NEGOTIATING A REPERTOIRE: THE IMPACT OF NEW TECHNOLOGIES

Most environments for post-compulsory education seem to be made up of generic components, or following Wenger, to have been reified into a particular repertoire. Besides the kinds of furnishings already mentioned, such as seminar tables and chairs, this includes: rooms such as lecture theatres, seminar rooms, design studios and computer laboratories; the lecture, tutorial, experiment, essay and presentation; the learning 'module' with its associated learning outcome and assessment criteria; the curriculum and academic timetable; the academic year cycle; patterns of taught and self-directed study; sequenced levels of achievement with controlled entry and progression points across a number of years; methods of research funding, development and assessment; relationships to stakeholders and associated facilities such as library, student support services, staff offices,



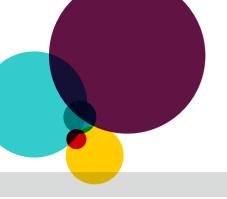
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administrative support facilities, canteens and cafés, students' union, sports facilities and rental accommodation. These elements are also intersected with the specific characteristics of particular institutions (campus, town-based, university/expolytechnic, further education college, elite/research-based/teaching-based) and of various academic disciplines, which give shape to a variety of – linked – communities of practice, both in how learning is differently articulated and in how subject specialisms are framed.

To recap: Wenger treats these repertoires as tending towards stability and 'obviousness' – making concrete and 'true' the arrangement of things in a particular form and set of relationships rather than any other – which is useful in focusing on what makes the common sense of 'doing' learning, the everyday social and spatial practices in post-compulsory education. What it obscures is the extent to which this is a 'problematic accomplishment' where some potential participants cannot be 'ordinary' learners and where particular repertoires may be ignored, misunderstood or challenged by insiders to a community of practice; or how it may be undermined or redefined by outsiders. Most importantly for the study of learning space design, analysing what makes communities of practice a basically stable structure prevents us from understanding how repertoires change – i.e. how any specific reified component comes to lose its obviousness and therefore its power; or from unravelling the dynamic processes through which learning repertoires are more or less settled or contested through time and in different situations.

In Melhuish's research, the key element that the different spaces studied share, is their concern with embedding the potential of new technologies for learning within existing educational repertoires, either as an addition to existing elements, or as a deliberate and major challenge to them. However, as has already been argued, this attempt to 'shift the repertoire' cannot be taken as straightforward and obvious. Because such as approach is framed by a 'deficit' model of teaching and learning, which defines existing educational processes and practices as the problem, it sets up complicated and ambiguous relationships between supposed insiders and out-siders. Those who argue for the centrality of new communication and information technologies as an 'obvious' mode for re-thinking learning define themselves as within the community of practice which is post-compulsory education. Simultaneously, of course, they frame those who do not agree as 'outside' such a community, that is, as 'improper' members. Meanwhile, many academics consider the educational developers and other teachers who adopt new technologies in this way as the outsiders, as relatively irrelevant to the 'real' and normal practices of teaching and learning.



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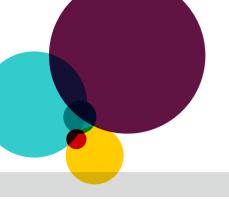
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I have already outlined how Bhabha (1994) shows that this patterning of binary oppositions between inside and outside – which are then linked associatively through the mechanism of either/or to superior/inferior and right/wrong – is inherently conceptually flawed. It merely offers a tautological and closed circle with its own internal (and unprovable) logic. How, then, can we think about repertoires in a way that breaks out of this patterning, informed by the kind of contemporary cultural theory outlined in Chapter 1?

Rather than seeing the new technologically-rich spaces as obviously good or bad, negotiating the repertoire here comes up against underlying issues of power and control. Thus, arguments over repertoire affect not just the usability of spaces and things, but are a key mechanism through which individuals and groups within a particular community of practice offer up a new and supposedly 'improved' version of themselves. Here space can provide an opportunity to make concrete one particular model of the repertoire and to enable – through an ongoing process of accumulation of examples – the slow shift towards a different pattern of reification, together with its associated 'better' community of practice. But these contested attempts to define what elements should be 'in' rather than 'out', central rather than marginal, and drivers rather than mere effects, result in many ambiguities and complexities.

This is particularly so where such attempts to shape the world through simplistic binary oppositions come up against the multiple understandings, experiences and interpretations that individuals bring to any situation.

Technology-rich spaces for example, tend to simultaneously highlight ICT as very visible and important to learning, and at the same time want to emphasise its obviousness, normality and ubiquity. This also means that participants in these spaces are often articulated as requiring 'special' support in developing/changing their teaching and learning practices and yet also already capable of using such additional elements of the teaching and learning repertoire, as a 'natural' and unproblematic development of what they already do. As Melhuish shows, on the whole her respondents neither located new technologies as central to their learning and teaching nor separated it out from the whole milieu of social and spatial practices in which they were operating. What they articulate most clearly are the experiences of being located in the spaces in-between, on the one hand, a recognisable 'push' towards more technologically-rich learning methods in the learning environments being studied and, on the other, their everyday experiences of learning and teaching:



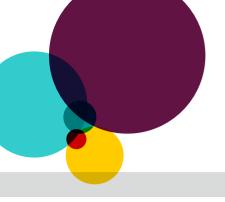
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Both the CETLD room and café spaces are equipped with sockets and internet access, inviting use of individual laptops in addition to the integrated system. They indicate that you can come and 'just hook up' [...]. 'If there are that many power sockets then they're expecting people to have laptops' [...]: however, as the focus group points out, there is only one student on the course in question who actually uses one: 'I'm the only one'. They suggest that personal technology does not play such a big role in the learning experience as might be imagined, and they point out a number of reasons why many students may not wish, or be able, to use a personal laptop computer; notably because of the cost, lack of a printer at home, slow typing speed, noisiness of typing in the class- room, and anxiety about losing or damaging portable equipment and its contents while on the move. [Melhuish 2010a: 45]

While a tutor did note that students brought in memory sticks and mobile phones for presenting and recording work (and that the facilities are there to use them), when Melhuish observed a typical session, the tutor used a flipchart rather than the smartboard and almost all students engaged in traditional paper-based note-taking. The teacher seemed to want to exploit the physical and interactive qualities of writing manually, but also admitted to preferring 'a simpler form of technology that I know how to use and is reliable', than a more complicated system that requires technician support; even where, as in this case, that support was immediately accessible and within close physical proximity' (Melhuish 2010a: 45). In fact, in all the spaces studied, while the technology was no more complicated than in a standard modern lecture theatre, it usually required help to set up and use, because of the different configurations and added functionality available (Fig. 5.6). The research also showed that some students quite explicitly contested any emphasis on ICT:

Surprisingly, there seemed to be some resistance, amongst the particular student group interviewed, to the principle of technology; something which may be partly attributable to the fact that they were all History of Art students and considered themselves to be essentially more orientated towards textual than visual material. 'I get the feeling that technology is being used for the sake of it [...] they've bought all this technology and they have to use it [...] I don't like the feeling of technology being forced upon us', says one. Another suggests that tutors' use of pre-prepared



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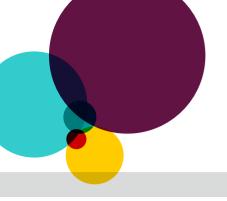
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PowerPoint presentations effectively structures lessons much more tightly, whereas, without it, 'discussions kind of evolve' and become more free-flowing: 'you're never quite sure where it's going to go and where you're going to end up [...] it does feel a lot freer' [...]. [Melhuish 2010a: 45]



Figure 5.6 • Innovative new learning technologies at InQbate Creativity Centre, University of Brighton. Photograph: Clare Melhuish.

At both the other two learning spaces studied, specialist staff were available, not only to help with equipment but also to work with tutors on their design of teaching and learning sessions, and to suggest creative ways of using the available space. On one of these sites the technology was deliberately cutting-edge, enabling immersive environments through 360-degree images, and with considerable control on space size, shape and colour. While this offered considerable opportunities, the complexity of the provision meant 'that neither staff nor students are really allowed to interact with the technology themselves, and that this can make using it "extra stressful" (Melhuish 2010a: 31). Students are also well aware of how expensive and complicated the technology here is, which also generates a sense:



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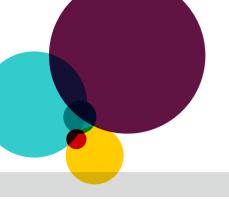
that they are not trusted enough, and therefore not given sufficient responsibility, to be allowed to interact with the resources in the way they would like: 'the lecturer decides if they want to do something. That takes away the fun and greatness of it [...] it's really controlled in there. We're not allowed to use the light patch [...] to move the walls [...] so it makes it not flexible at all. We are adults [...] I'm sure we can manage that' [...]. On the other hand, the sense of frustration seems more acute on the part of female respondents, while, amongst the males, there is a fear that they may, indeed, be lacking in sufficient maturity to engage with the space in a more responsible way: 'I don't know, always people mess around in that kind of space [...]'

There seems, then, to be a level of uncertainty within the group about how much responsibility they feel able to assume, and, further, an acute awareness of the cost of equipment and the potential risk of causing accidental damage to it, which is inhibiting in their overall engagement with the space. [Melhuish 2010a: 31].

The technology here is neither simply good nor bad, rather it was designed with specific intentions which could only partially be fulfilled, and is experienced not just 'as it is', but also in relationship to much wider agendas about the idea of technology, the complexity of its current positioning within post-compulsory education, and differences between individuals' encounters with it. I will return in greater detail to the impacts on space of new information and communication technologies in Chapter 8.

ILLUMINATING EXPERIENCES OF LEARNING SPACES

The experiences of learning spaces explored by Melhuish begin to suggest how the boundaries, affective encounters and repertoires which together give shape to a 'community of practice' of post-compulsory education can be explored as complex, partial and contradictory conditions. In this chapter, I have tried to draw out some threads and offer some directions for mapping and evaluating students (and other) experiences of learning spaces, which starts from just such a perspective and opens it up for investigation. Such a conceptual framework and method does not result in either design 'solutions' or guidance on how to design the architecture of post-



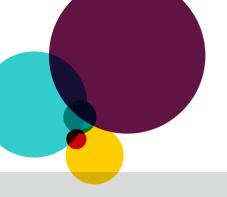
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compulsory education. In their influential paper Parlett and Hamilton (1972) argue that the primary concern of evaluative research 'is description and interpretation rather than measurement and prediction' (10–11), so as 'to contribute to decision-making'. As they go on to write:

Each group or constituency will look to the (research) report for help in making different decisions. [...] A decision based on one group's evaluative criteria would, almost certainly, be disputed by other groups with different priorities. A 'mastery of fundamentals' for one group is, for another, a 'stifling of creativity.' [...] Illuminative evaluation thus concentrates on the information-gathering rather than the decision-making component of evaluation. The task is to provide a comprehensive understanding of the complex reality (or realities) surrounding the program: in short, to illuminate. In (their research), therefore, the evaluator aims to sharpen discussion, disentangle complexities, isolate the significant from the trivial, and to raise the sophistication of the debate. (Parlett and Hamilton 1972: 31–2)

Melhuish's study already suggests some of the kinds of issues and questions that architects, their clients and users, should be addressing and debating in the design of post-compulsory learning spaces. Her approach works directly with the properties of architecture at the immediate level of encounter – its spatial layout and furnishing, lighting colours, smells, sounds and technology, and status and image – so as to illuminate the complex and problematic relationships between these and everyday social practices. At the same time, she is able to begin to unpick how our understandings and experiences of a particular educational and social setting, and of wider institutional and societal agendas about learning (what Parlett and Hamilton call the 'learning milieu') impacts on our experiences in, and interpretations of, particular material spaces. In the next chapter, my aim is to extend the outline conceptual framework and methodological approach being offered here so as to also unravel aspects of learning beyond learning encounters; that is, at the level of communities of practice and the wider educational and societal relationships and contexts within and across which these operate. I will begin to explore how different communities of practice attempt to 'frame' themselves as definable and distinctive, through what is located inside and what is outside; via forms of boundary construction and maintenance; in the choreographing of particular practices and through the reification of those practices into repertoires. I will consider how material space can



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be one of the mechanisms through which these framings are orchestrated and made concrete. This means also examining how different communities of practice overlap or conflict, their patterns of similarity and difference, and their relative weaknesses and strengths through time. Finally, it enables us to think about how things change, about how new social and spatial practices of learning can and do shift, either incrementally or (occasionally) dramatically.



THEORETICAL DELIBERATIONS
AND PRACTICAL
IMPLEMENTATIONS



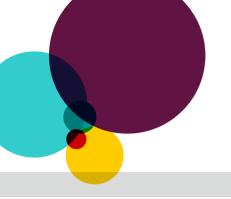
This chapter is excerpted from

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Edited by Graham Walton, Graham Matthews

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THEORETICAL DELIBERATIONS AND PRACTICAL IMPLEMENTATIONS

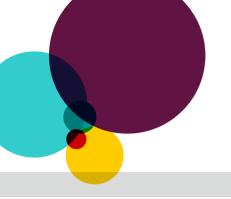
Olaf Eigenbrodt

Excerpted from Exploring Informal Learning Space in the University

INTRODUCTION

Informal learning spaces have been an issue in pedagogical and architectural debates about campus planning and design within the English-speaking world for nearly two decades now. Higher education (HE) institutions and their libraries have been working together in achieving the goal of creating spaces which are fostering, motivating, and inspiring collaborative, as well as autonomous, informal learning processes. Other countries like Germany came to this a little later, especially following the Bologna process, attempting to enhance the comparability of college and university degrees on a cross-European level (see European Higher Education Area, Bologna Process, www.ehea.info). This worked as a catalyst for new approaches to the design of campus spaces outside lecture halls, seminar rooms, laboratories, and libraries in the German-speaking countries. Until this, the circulation areas and thoroughfares, without any other specific purpose in the space allocation plan, did not function as programmed spaces although architects and planners used to give them metaphorical names like street, forum, plaza, com- mons, etc. Lindahl (1992: 99) is one of the scholars in architectural theory who highlights the connection between the modernist search for a new architectural terminology and the use of classical metaphors. This paradox became more obvious in postmodernism, but the late modernist campus university all over Europe was full of metaphorically charged ways and places connecting the functional spaces. With growing student populations and new didactical concepts strongly encouraging group work, student presentations, and self-regulated learning, these spaces attracted new attention. Due to the lack of informal learning spaces in traditional campus environments, students occupied these often underestimated and ill-kept atriums, hallways, and exterior spaces for their new tasks.

A special role in this process has been played by libraries. On one hand, they offer the only informal learning spaces within the traditional campus concepts; on the other, library planning concentrated on silent and controlled spaces of the reading room type. Rooms for group study, collaboration, and communication played a minor role until the 1990s. Since then libraries and librarians have been changing their roles dramatically. Libraries have become social places, including learning centres, information commons, and multifaceted spaces for diverse activities happening at the same time. Librarians try to serve as managers of these new spaces rather than custodians of the reading room. But this apparent reinvention of the library as the major informal learning space on campus is not unquestioned. From a library and information science (LIS) point of view, Gayton (2008) asked if the switch



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Olaf Eigenbrodt

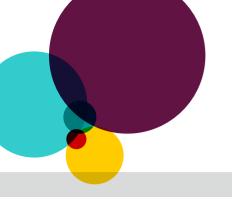
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from 'communal' to 'social' is as beneficial for the library as a physical learning arrangement on campus as is commonly asserted. Stakeholders and advisors on campus planning like the German Institut für Hochschulentwicklung (HIS-HE) (see www.his-he.de), a state-owned consultancy for the planning of HE institutions, question the competence in designing and curating informal learning environments that librarians tend to attribute to themselves. In fact, HIS-HE found no empirical evidence that libraries in general are more attractive to students as environments for informal learning than other spaces on or off campus (Vogel and Woisch 2013). On the other hand, those students using the library as their informal learning space tend to use it frequently, up to several hours a day. The overcrowded and busy academic library is not a German phenomenon, but can be observed all over the world.

These seemingly contrasting developments and observations raise several general questions about space for informal learning on campus. For example, does the context in which these spaces are located make a difference, does it matter how they are equipped and furnished as long as power plugs and Wi-Fi are avail-able, and finally, is there a correlation between student learning outcomes and the space provided for informal learning on campus? After nearly two decades of debate around informal learning spaces, we are still in a phase of testing and conceptualising. We do not know precisely what we are talking about when using the terms 'learning space', 'learning centre', or 'learning commons' - nearly all concepts and measures used previously, in their practical implementation, relate to gate counts and occupancy. Several authors of recent reviews, books, and articles on this topic state that the debate is still 'undertheorized', 'simplified' (Boys 2011: 33), and 'metaphorical' (Bennett 2015: 220). This chapter aims to contextualise the concepts and debates about informal learning spaces on campus within a broader theoretical view of learning and space as correlating concepts. Taking Long and Ehrmann's (2005) typology of academic learning spaces as an example, the possibilities of learning environments, both curated and non-staffed, beyond the formal/informal distinction, which in the author's opinion will become more and more irrelevant in the near future, are investigated. Although libraries have certain roles to play in this context, they are part of the whole campus as a complex learning space with different settings and grades of learner support.

APPROACHES TO INFORMAL LEARNING SPACE

As the debate about informal learning space takes places in an academic context, the question arises: why are there still complaints of insufficient complexity and



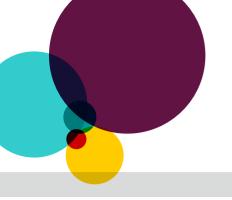
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simplification in the literature? There are at least two possible answers to this question. The first relates to the reciprocal non-observance between theory and practice. This phenomenon sounds familiar not only to scholars and librarians working in the field of LIS; practitioners involved in projects are more likely to inform themselves by observing best practice, seminars and related papers and articles, while scholars tend to rely on academic journals and studies conducted by themselves or others. The first approaches to overcome this separation of theory and practice have been made by LIS scholars and librarians during the last decade. Bryant et al. (2009) worked together in a survey project of learning spaces at Loughborough University using the theoretical background provided by Given and Leckie (2003). Since then the linkage of social constructivism and ethnographic methodology, particularly the mapping of social activities, has become a basic tool for qualitative surveys of learning space as well as other library services to form a user-centred point of view (Walton 2015: 2). Harrop and Turpin (2013) have a similar approach, tracing their theoretical context back to Henri Lefebvre (Harrop and Turpin 2013: 61), whose works on the constitution of space through social activity are crucial for the constructivist theory of learning and space. There are more examples of successful collaboration between scholars and practitioners in surveying and even conceptualising informal learning space which provide strong arguments that these approaches can be a fundamental part of the wider debate. As will be seen later in this chapter, the German situation is not that advanced; here, with a few exceptions, theoretical approaches and practical implementations are rarely connected.

The second possible answer to the question is that simple models are such a success that planners and managers of informal learning spaces do not see any need to bring more complexity to their concepts. Students are voting with their feet, and especially during exam periods, all informal learning spaces on campus are crowded no matter how they are furnished, maintained or staffed as long as Wi-Fi connection is available. This does not sound very convincing or sustainable. Why should any institution invest in well equipped, maintained or even staffed informal learning environments, when a neon-lit corner in a rundown floor of the faculty building can do the same job? Even when the general attitude towards institutions providing informal learning spaces is benevolent (Fischer 2010), more evidence should be provided for investment in, and provision of, informal learning spaces, than current footfall alone.



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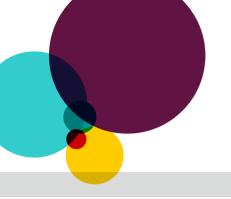
THE EVOLUTIONARY LEARNING SPACE

In 1998, Peter Lyman published a paper on the challenges libraries are facing in the technically changing context of information exchange and learning. Lyman focused on the 'social dimension' of this topic. Again, social context plays a crucial role in his approach towards an 'ecology of learning places' (Lyman 1999: 75). For Lyman the places for the creation of knowledge and the communication processes are the most important perspectives in the discourse on learning and information by experts in education:

An ecology of learning places must find a way to combine these perspectives, not by shaping a new landscape, but by discovering a strategy for balancing the dynamics of human psychology and technical architecture into the design of learning places. [Lyman 1999: 76]

Lyman sets the stage for the ongoing debate on informal learning spaces. His main themes are the social context of learning, inter-subjectivity and communication, the relationship of information and knowledge, and the convergence of digital and material information and space. Although the rest of his paper focuses on community building, networking, and knowledge production in digital environments, his introductory remarks on the relationship of information, learning and space are informative for the theoretical debate about learning and space in HE. While Lyman's thoughts on the ecology of learning places have unfortunately not been included in the ongoing debate, another development has become highly influential on the discourse.

Summarising the literature on library learning spaces, Turner et al. (2013) noted an evolutionary process in the development of learning spaces, starting with the information commons as a mainly technical model. Hence the distribution of IT throughout the campus and the increasing popularity of the World Wide Web became the driving forces for information commons, defined as a physical space shared between the IT services and the reference desk of the library (Turner et al. 2013: 227). Citing Bennett's (2003) study on library design supporting learning, Turner et al. see a shift from a technological perspective to an educational one. In fact, Bennett demands new thinking about library planning 'informed by thinking about student learning' (Bennett 2003: 5). Again, this is not only true for libraries but for informal learning spaces on campus in general. In this context, the term learning commons emerged as a broadening of the information commons concept. But the learning



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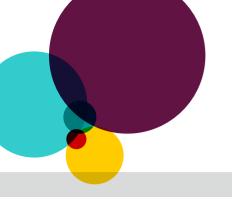
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commons concept shared two problematic issues with the information commons. It remained mainly functional and less user-centred, and it provided no idea of how to actually plan a place like this. While information commons tended towards rooms full of service desks and the bulky computer equipment of the 1990s, learning commons often replaced this equipment with large tables, some upholstery and other heavy furnishings. The new approach to learning spaces focused on atmosphere, flexibility and accessibility instead. 'The importance of spatial designs that encourage and support dynamic, engaged and inspired learning behaviours is a fundamental feature of the learning spaces trend' (Turner et al. 2013: 231). Although evolving trends like MakerSpaces are mentioned, the review closes with the learning space. Both threads of the story, the more philosophical approach of social constructivism, and the evolutionary model of the functional concepts, have many ties and links, as the educational and technical developments 'umbrella' both of them. But the reality of informal learning spaces is often directed by another approach.

'OPEN IT AND THEY WILL COME'

As stated above, the experience of many HE institutions and casual observers is that students tend to learn in literally every unoccupied corner on campus. The more comfortable, furnished and appealing those spaces are, the more popular they become among students. The easiest guideline for an informal learning space is 'open it and they will come'. There are many reasons for a seemingly undernanding attitude towards space like this. First and foremost, it is caused by a lack of alternatives. In Germany, coffee shops on and around campus are nearly as popular as libraries. They provide a good alternative to institutional learning spaces as long as students can afford the coffee served there. Other places used outside campus are public libraries, parks (during the warmer months), and other public places. Many students undertake learning at home as well. But there are indications that the quality of learning environments has an influence on the preference of one place for informal learning over another. Vogel and Woisch (2013: 38) found a strong connection between the choice of the campus as the place for informal learning and the quality of the learning spaces offered to the students. Many institutions of higher education have done a lot to enhance the quality and equipment of their informal learning spaces, sometimes by reviving under-maintained areas, by renovating existing facilities and giving them a new function, or by integrating informal learning spaces into new buildings. While stressing the high quality of many examples, Boys (2011: 25) calls the general idea behind these concepts the "beanbag" approach to learning space design'. Although the 'beanbag' spaces may not have sufficient



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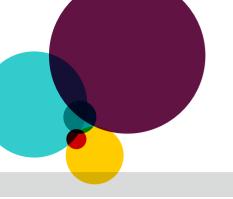
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theoretical background or elaborate conceptualisation, their popularity among students offers the possibility to get deeper insights into how students actually use these spaces for learning, interaction and other social activities. In some institutions like Stuttgart Media University in Germany, 'learner labs' are installed, connecting new learning environments with qualitative research in a very close way (Stang 2014). Whereas it is true that the existing spaces are not the end of the process, they could be a step forward in bringing together practical implementations and scholarly insights.

THE INSTRUCTIVE LEARNING SPACE

Learning in higher education is more than learning the disciplinary knowledge. Behavioural and habitual aspects are as important as the subject matter. Students learn intentionally and unintentionally by internalising attitudes, gestures and even appearances. Therefore, cultural, social, and physical learning are part of the learning experience in formal and, especially, in informal learning settings. Social and environmental variables are of crucial importance for the learning outcome. In teacher centred learning, the social interactions and the environment (i.e. the classroom) are concentrated on one focal point at the front of the space. Students are trained to focus their attention on the input given by the person at the front. Other information is less important or even disruptive. For informal learning, this traditional setting is comparable with the reading room in libraries, a quiet and concentrated space, where readers are focused on their study materials. According to Gayton (2008), this kind of learning is a communal rather than a social process. People are sharing their learning space, sometimes they are studying the same subjects and interaction is possible up to a certain point. The learning environments are created to foster concentration and to reduce disrupting factors. Controlled and stable environmental conditions and functional designs are typical for classrooms, lecture halls and reading rooms of the traditional type. Space and environment are subordinated and reduced to a supportive level. Architecture is used for representation and identification. Although things are changing quickly these days, McLane and Dawkins (2014) report an ongoing dominance of traditional, instructive learning spaces: 'Conventional educational facility design, which promotes teachercentred face-to-face pedagogy in a traditional classroom, is still dominant in most academic architecture.'

But what is the theoretical fundament of the new, social learning spaces in HE?



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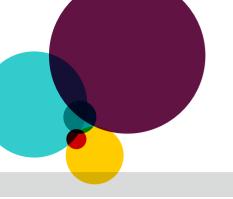
THE SOCIAL CONSTRUCTIVIST LEARNING SPACE

Obviously non-hierarchical, interactive, and team-oriented learning processes require spaces with a different character. At this point the question arises: how can the physical environment help to create a more inspirational and social atmosphere? Graetz (2006) highlights the conscious and unconscious choices students make in relation to environmental information:

In any learning environment, students manage their limited cognitive resources by actively selecting environmental information for further consideration and by using existing knowledge structures to interpret this information in ways that have worked previously. [Graetz 2006: 6.2]

The very idea that environmental information may contribute to the learning process is a change in the way we look at learning spaces. The same is true for cultural and social interaction. Other than the traditional paradigm of learning as the transfer of information, the paradigm of learning as contextualised construction of knowledge requires a diversification of learning environments. Space plays an active role in the learning processes, as the stage where social learning takes place is one major source of environmental information. This includes the whole campus environment. Scholl and Gulwadi (2015), for example, investigate the role of the campus landscape in the learning process. Scholars agree that inspiration, stimulation, encouragement, and communication are the main challenges for new learning spaces (e.g. McLane and Dawkins 2014)

The idea of the social constructivist approach to learning space is that space is not defined by bricks and mortar alone but by the activities taking place in it. Social theorists like Soja (1985) highlight the close connection between critical social theory and the social constructivist space theory. According to this, social spatiality is not independent from the physical environment or the cognitive approaches to space, but they depend on each other. For Soja (1985: 93), it is possible to examine physical, social and cognitive space separately, but they are overlapping and interconnected. Consequently, a theory of social learning spaces must consider all three factors constituting space as a continuum of spatialisations. Other than the theories cited by Harrop and Turpin (2013: 61), this social constructivist theory of space does not see space as an abstract concept, but as a fluid process driven by its inhabitants.



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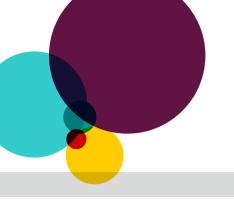
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This process takes place in learning spaces as well. Learners bring their individual ideas of space as a cognitive precondition of their perception. Students synchronise the design of the space and its environmental conditions with their mental perceptions. Environmental information that differs from these perceptions can be either a disturbing or an inspirational factor. At any rate, if spaceis meant to make a difference, it has to offer new impressions to its users on the level of structure as well as on the level of furnishing. Crook and Mitchell (2012) found that macrospatial perceptions are as important for the spatial experience of students as microspatial perceptions. The social complexity of the space is a constituent factor, too. Campus learning spaces are normally socially relatively homogenous as their users match with the student population of the respective institution. On the other hand, they offer the possibility of accidental encounters across disciplines, programmes, and semesters. Learning in social spaces is a systemic process involving cognitive, sensual and emotional input.

All approaches to informal learning space mentioned in the paragraphs above result in a new way of thinking about informal (as well as formal) learning in HE. Learning today is about context, environmental qualities and social interaction. But what makes an interactive learning space and how can we define different types of physical learning arrangements on campus?

DEFINING LEARNING SPACE THROUGH ACTIVITY

One way to prevent definitions of learning space just on functional and technical factors like classroom, lecture hall, or information commons, is to have a closer look at what is happening in a space used for learning (which does not necessarily need to be labelled as a learning space). Within the context of academic libraries, the term 'societal space' was proposed some years ago (Eigenbrodt 2008). It describes public spaces that are constituted by the activities taking place within their borders, flexible, and open for changing roles and relations (Eigenbrodt 2008: 11). This approach does not only suit libraries, but all learning spaces on campus beyond the instructive types of space. In contemporary HE programmes it is com- mon that students change their roles as their day at the university progresses. By taking on different roles they learn all aspects of a subject and its professional adaption. Therefore, the ideal campus should actually provide a variety of spatial arrangements encouraging and fostering guided as well as self-regulated activities of the students, as individuals or in groups. Considering that not all learning spaces on campus are fully flexible and easily adaptable to all things that could conceivably happen in this context, informal



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learning spaces, particularly, should be open and multifaceted to allow the widest range of activities possible.

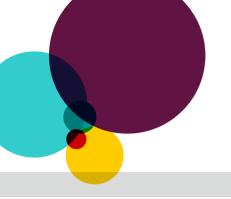
Long and Ehrmann (2005: 55) defined ten different activities adjunct to learning spaces in HE:

- deliberation
- structuring/design
- presentation
- collaboration
- debate
- documentation
- association
- practice
- monitoring
- operational control.

Although Long and Ehrmann discuss learning spaces from the perspective of classroom design, their activity-based typology fits for other learning spaces, too. We will return later to the question of whether the differentiation between formal and informal is still useful after all. There may be roles associated to some of the activities (e.g. the presenter, the surveyor, the operator), but the very idea of the typology is non-hierarchical and open. Long and Ehrmann's list shows us that there is possibly no space on campus fit for all of them:

Any learning space can be used to support almost any elemental activity, if people are willing to make enough compromises ... But each type of activity can be supported more readily by some learning spaces than by others. Identifying cohesive patterns of use and themes in which the elemental activities tend to be more common will provide some structure to an otherwise chaotic stew of technologies. (Long and Ehrmann 2005: 55)

Consequently, beside the open, multifaceted spaces, there is still a need for specialised environments (e.g. laboratories or high-end IT-equipment). Facilities like these need special instructions, safety and security policies, and controlled environmental conditions. Without challenging the need for compromises, it is



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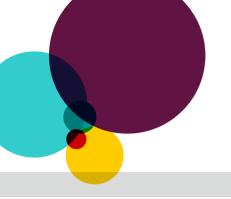
not desirable to base future learning arrangements on the reciprocal tolerance of students with different necessities. Presentation and deliberation, for example, may be connected in specific situations; otherwise a group practising a presentation may cause a disturbance for individual learners, or may feel uncomfortable with an involuntary audience. The benefits of an information-rich environment and the potential conflicts caused by too many coincidental activities in close proximity are hard to balance out.

This underlines the importance of a user-centred design for learning spaces. One possible way of facilitating this, is an activity-based evaluation of existing spaces (for example, Lee and Tan 2013). These mainly ethnographic evaluation methods may help to get a closer look at the tolerance level and possible conflicts in learning spaces. The House of Competence at KIT Karlsruhe uses logbooks to survey student's spatial campus use (Kunz and Pfadenhauer 2014). Another, more designoriented approach is the use of personas for planning learning spaces, based on activity. Originally a psychological concept describing the visible and extroverted part of the human ego, personas are used in user-centred design to work as a model for a certain user group. The Technical University in Delft was the first higher education institution to use personas in its Living Campus project. The aim of using personas is to design learning arrangements fitting student and staff needs all over the campus (Mantel and van Wezenbeek 2014). The obvious advantage of using personas is that they are adaptable and intuitively accessible as every individual may find certain needs and characteristics in one of the personas. Also, personas are not institutionally located. The same personas can be used to investigate different problems around services and facilities provided by the university in general.

Neither the logbooks in Karlsruhe nor the personas in Delft are exclusively adaptable for formal or informal learning spaces. If learning processes tend to become less instructive and more situated, there is no need for surveying learning spaces along these categories any more. Van Note Chism (2006: 2.5) criticises the separation of classrooms and informal learning spaces as well as faculty offices as 'built pedagogy contrary to the idea of social constructivism'. If learning processes are social, non-hierarchical and contextualised, the formal/informal dichotomy seems to be challenged.

BEYOND FORMAL AND INFORMAL: MANAGING LEARNING SPACES

Obviously, the binary idea of formal and informal learning spaces in higher education does not fit contemporary concepts of activity-based learning. According to Boys



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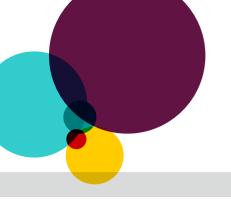
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(2011: 28) there are certain myths connected to the debate about learning. She criticises the metaphorical character of many approaches to learning space in literature. For Bennett (2015: 221) the need for 'a conceptual model of learning' stands against the metaphorical speaking about learning. We are talking about learning in certain ways but we do not ask what the categories we are using really mean. Boys argues that the obvious changes in HE pedagogy are not considered in the literature using the myths (Boys 2011: 29).

Concepts like the 'flipped classroom' are good examples for Boys' argument. Originally invented for school teaching, the concept has been used in HE for several years now. Basically, flipped classroom or flipped learning means the inversion of traditional ways of teaching. Teachers traditionally impart the subject matter in the classroom while students have to revise what they have learned outside the course. Flipped learning means that students learn autonomously by adopting the information before discussing it in class. The obvious advantage is that the discussion is better informed and students argue on a more equal footing. While students can decide where and when they adopt the knowledge and information, the classroom becomes a space for interaction and communication. Formal no longer equates to instructive and informal does not necessarily mean interactive or social. Other current approaches to teaching and learning like project-based learning, microlectures and MOOCs (massive open online courses) are outside the traditional or metaphorical formal/informal binary as well. On the other hand, in 'informal' learning environments, tutorials, lunch or coffee lectures, and other instructive formats are provided in order to meet the teachable moments of students. Consequently, Boys (2011: 28) does not neglect that 'formal' and 'informal' stand for different concepts of learning and teaching but she asks for a more differentiated, non-metaphorical discussion of the ideas behind the terms.

If we consider learning space as defined by activity, it is less important if any kind of formal instruction takes place in it or not. A classroom design for interactive learning may be no more 'formal' than a collaborative learning space elsewhere on the campus. Another way of categorising learning spaces may be the responsibility of the space itself and the face-to-face support of the students using the space. Even in a flipped learning arrangement, the teacher is responsible for the active support of his/her students. In many learning spaces, institutional support is provided by librarians, IT specialists, and other staff or faculty members. Additionally, social learning spaces need a high level of maintenance, evaluation, redesign and further development. Studies like those cited in this chapter are time-consuming and need specialised



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staff with methodological expertise and knowledge in learning theory. It is obvious that these are not just issues for facility management or construction departments alone; the institution must answer the question of responsibility for the respective learning spaces on campus. Bennett (2015: 224) calls this management task the 'ownership' of the space.

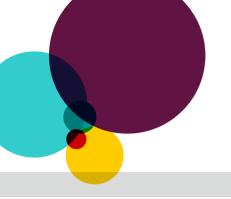
In fact, management of learning spaces is about bringing together different actors and interests. First and foremost, the management must act as an advocate of student needs and interests regarding the learning environments. It has to convince stakeholders to invest in the design of learning spaces and provide sufficient funding for the development and maintenance of the learning space. Other than classrooms, lecture halls, or reading rooms, learning spaces are not 'finished' after opening – a renovation may be necessary at a certain point defined by facility management. They are experimental, flexible, and changing. Departments and other institutions like libraries or media centres may have their own interests and ideas about a learning space which have to be moderated and brought together. Rook et al. (2015) delineate in an exemplary manner the complexity of designing and managing learning spaces with stakeholders and experts.

Many publications referred to in this chapter are from a LIS or library context. Libraries have played a major role since informal learning spaces came into the focus of campus planning. The reason for this dominance of library-related literature is partly that libraries are commonly the largest informal learning spaces on campus and partly that libraries have been facing great pressure in recent decades for change due to technical developments and the changing learning cultures. As a result, many librarians have a certain expertise in designing and managing campus learning spaces.

GERMAN EXAMPLES: DESIGNING AND MANAGING LEARNING SPACE IN CONTEXT

Two examples from larger German universities highlight the differences between design and management of informal learning spaces in a traditional way and a process informed by new approaches.

In 2013, the Georg August University in Göttingen opened its new Lern- und Studiengebäude (learn and study building) in a central campus location. As the building, has been funded by tuition fees, students have been actively involved in the conceptualisation, and the university used surveys to investigate student needs concerning the new building (Helmkamp 2015: 199). Without conceptualisation,



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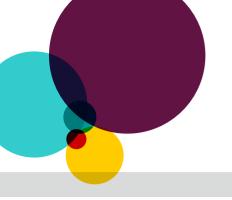
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the design process followed the ways of traditional planning and building for HE. The result is a building which offers a variety of spaces for single and group work. On the other hand, the space is inflexible, traditional in design and, for the most part, equipped with office furniture. The different study rooms have to be booked in advanced via an online booking system (Helmkamp 2015: 200) and are separated with few spaces for meeting and chatting. Neither the social aspects of learning beyond the dedicated study group, nor a variety of environmental information, are provided. The library was commissioned by the management of the building, but only one librarian is in charge, within an office in the building taking care of the booking system and dealing with problems (Helmkamp 2015: 201). It is obvious that the whole process has not been informed by learning theory. Instead the university found a functional and technical solution for the students' demand for informal learning spaces.

In Konstanz things took a different direction. Due to an asbestos clean-up, major parts of the university library had to close for refurbishment for several years. Experimental and social learning spaces are part of the concept (Kohl-Frey and Hätscher 2014: 119). Library, IT service, and writing support centre cooperate in offering services in a joint reference and information centre. The layout of the new space is flexible, transparent, and allows communication and encounters. In some of the spaces, design and furniture do not determine a certain way of usage (e.g. single or group study). Seating varies from seating steps with beanbags to flexible textile carrels. Within the refurbished area only the new rare books reading room offers traditional library desks. An open area for presentations and lectures and a café are integral parts of the space.

CONCLUSION

Scholars and experts agree that space has a huge impact on learning and that design and management of informal learning spaces are of crucial importance for the learning outcome of students. On the other hand, stakeholders and planners do not always consider learning theory as a factor in their decision making and planning processes in a way they should do. The popularity of nearly all available learning spaces on campus is one reason for this less sustainable approach. Today the most common approach to learning space is the social constructivist theory emphasising the social and cultural aspects of learning and the constitution of space in an ongoing process of spatialisation. Social relations and the possible selection of relevant environmental information are the most important aspects of



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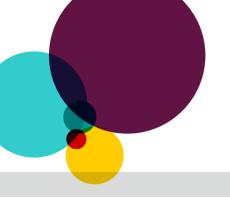
informal learning. Therefore, social learning space on campus have to be flexible, variable and information-rich while instructive learning spaces are information-poor, concentrated and communal in character.

Even in an activity-based approach to learning it is obvious that not all types of learning spaces can be brought together in one multifaceted environment. In order to balance the differing needs of students, the design of learning spaces must be usercentred. The different methodological approaches used for the design of new, and the evaluation of existing spaces, show us a complex situation beyond the metaphorically used dichotomy of formal and informal learning spaces.

Informal learning spaces need specialised management with expertise in theoretical and methodological approaches and questions. Due to their relatively long experience in the field, libraries can, but must not necessarily, play a leading role in designing and managing new learning arrangements. At least, they should be important partners in the planning process and a potential source of staff for learning spaces. Recent examples from Germany show that the reception and consideration of learning theories can play a crucial role in the quality and management of informal learning spaces. Therefore, an ongoing discussion involving scholars, experts, stakeholders, and architects can foster the process of designing and developing high quality learning spaces on campus.

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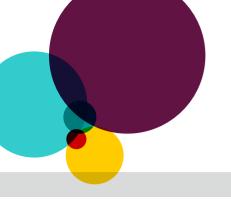
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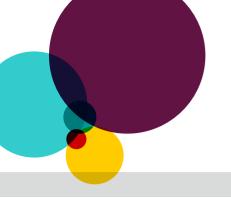
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THEORETICAL DELIBERATIONS AND PRACTICAL IMPLEMENTATIONS

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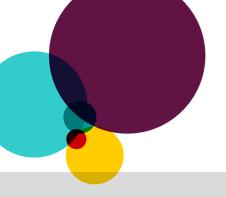
This chapter is excerpted from

Exploring Informal Learning Space in the University

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Amy Ward

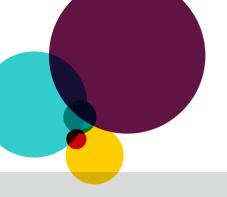
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INTRODUCTION

As this chapter focuses on the student perspectives of information learning spaces, the author has decided to approach this topic with her own personal experiences as well as making reference to appropriate literature and experiences of other higher education institutions.

I was an undergraduate student at Loughborough University, England, (see www. lboro.ac.uk for information about the University) for three years (2011–2014) and as I transitioned throughout my degree I used a variety of informal learning spaces across Loughborough University's campus. I was then elected as Vice President (VP) for Education on the Loughborough Students' Union Executive Team. Whilst I was VP Education I had the opportunity to sit on working groups, committees and attend conferences to represent the student voice and was also able to work in partnership with university colleagues to collect data from students as well as contribute to strategic aims. Currently, I am a member of staff at Loughborough University London which opened in September 2015. My role as Senior Support Officer encompasses a variety of areas, one of them being 'learning resources' in which I ensure all resources needed by students, both electronic and physical, are available, and that appropriate learning spaces are created and developed by working in partnership with Loughborough University Library.

While I was VP Education it seemed to me that the effect of the rise in tuition fees in England (see Wilkins et al. 2013, Higher Education Funding Council 2015 for more detail) was felt by all of us at Loughborough Students' Union and Lough- borough University. Students' expectations have risen dramatically and it appeared to be noticed by students as well as staff from the Students' Union, administrative staff, academic staff and professional services' teams. I was a student myself who was one of the last cohort of students not to have to pay the increase in fees but observed students joining the University after me when the fees were increased. I then became VP Education of the Students' Union executive when it was the first year that all three cohorts of undergraduates were paying the increased fees; it was evident every day that the mindset of students had changed with huge increased expectations of facilities and teaching quality, amongst other aspects of university life and studies. This became increasingly evident as I went through the transitions of being a student to becoming a member of staff at Loughborough Students' Union, to then becoming a member of staff at Loughborough University.



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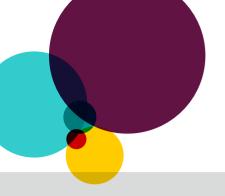
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Comments such as 'where is my money spent?', 'The University should be spending extra income on this', and 'I am not paying this much money to only have this?', were consistently expressed and the pressure on members of staff in the Union, and members of staff at the University, including myself, was mounting, especially as I was the representative voice of the student body. Students not only expect to have more out of their university experience, but to have more in terms of the quality of their university experience, especially in terms of learning and teaching including formal teaching, facilities, and informal learning spaces. Loughborough University consistently rates one of the best universities in the country in league tables such as that compiled by the Guardian (2016) where it is ranked 4th for 2017 and has recently been crowned the university with the best student experience in the UK in the Times Higher Student Experience Survey (2016), after previously being the only university to be crowned as 'best student experience' for six consecutive years. In 2015 it won University and Union of the year in the What Uni awards and in October 2016, it was ranked 6th in this year's Times Higher Education (THE) 'Table of Tables' (Havergal 2016). These positions and awards that the University and Union have earned creates pressure from a different angle to maintain these high achievements and to keep on delivering despite increasing expectations.

It soon became clear to all professional services and academic staff that a new bar had been set; students started to see themselves as customers paying for services. Students seemed to want to see that their money was being invested in things that were visible and worthy to them, and their degree, now, rather than investments for the future

A report published by Universities UK observed that universities are adapting to students' increased expectations. The report states:

in many cases universities, have anticipated the introduction of fees, borrowing against future income, so that students are already benefitting from better teaching and improved facilities. The report demonstrates how, in response to feedback, many universities are improving teaching space, investing in libraries and IT infrastructure, extending opening hours and creating new social learning spaces. Examples in the report show how universities are involving students in the decision-making processes, such as redesigning a library or improving assessment and feedback. (2013: 12)



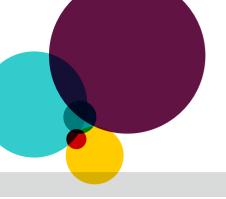
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The above mentions a variety of things which I felt were important factors during my university experience when I was a student and were the dominating issues that I received as feedback from students whilst a staff member and as the representative voice of the student body. Throughout my first two years as a member of staff at Loughborough University, and now at Loughborough University London, improved teaching space, investment in libraries, extending the hours of the library and researching into new informal learning spaces are topics with which I have had a lot of involvement. While I was a student, I had the opportunity to provide feedback about these areas through being a programme representative for my undergraduate course, where my voice was heard and acted upon. I attended summits and working groups with various university teams working on different areas and offered views and experience from the student perspective. One area in which I was able to work in partnership through the various options above was informal learning spaces, where I worked with colleagues from Facilities Management, the library and IT services. This enabled the University to take a partnership approach with the student body and allow students to have direct impact on the future shaping of informal learning spaces at the University.

LOUGHBOROUGH UNIVERSITY LONDON

The importance of the above has become more apparent since I took up a post at Loughborough University's new (programmes commenced at the beginning of the 2015/16 academic year) campus in London (see www.lborolondon.ac.uk/ for further information), where I have worked with the Student Voice (Loughborough Students' Union 2016). Here, the student body – postgraduate – and its facilities have a space of 10,000 m²; Loughborough University, East Midlands and its facilities occupy 483 acres of space on a large campus with multiple facilities. With the limited amount of space and the lack of postgraduate loans from the government and tuition fees up to £25,000 (as at September 2015), expectations at the London campus were higher than anything I had ever experienced before. At Loughborough University London, there is an emphasis on creating first class facilities in the form of informal learning spaces as well as making sure students have access to learning resources and advanced technology. This is all whilst factoring in the space available. To deliver this effectively, the university-student partnership is crucial to maintain the student experience whilst providing value for money by incorporating student views and feedback from the very beginning stages of setting up a new campus.



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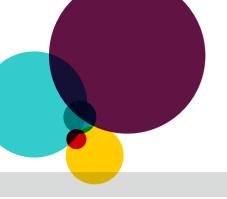
In this situation, partnership approaches such as feedback forums, students being invited onto working groups and staff-student liaison committees are essential to allow students to input on the informal learning spaces/resources planning and development. Being the representative on the Project Management Board for teaching and learning spaces at Loughborough University was the most vital committee to allow student input, and it was on this committee that the University would listen to the student voice at the design and planning level to allow their voice to be proactive and a partner in development rather than asking the views of the student body reactively, once the teaching and learning spaces had already been completed.

WORKING IN PARTNERSHIP

So why is it so important now for the University as a whole, but particularly those in charge of learning facilities, to have a partnership approach with the students themselves, and to include students in the design and development of informal learning spaces? Oblinger (2006) felt that as we come to understand more about learners and when we find out how people learn, our expectations of what learning spaces should be change; this subsequently allows institutions to create and manage spaces that students both require and want. She also notes that spaces need to be increasingly flexible to allow formal and informal learning spaces to come together seamlessly as 'learning can occur anyplace, at any time, in either physical or virtual spaces' (Oblinger 2006: 1). The way that we are able to create these spaces properly and effectively is 'to understand that design is a process, not a product. Involving all stakeholders – particularly learners – is essential' (Oblinger 2006: 2).

INDIVIDUAL LEARNING DIFFERENCES VERSUS UNIVERSITY EXPECTATIONS

In my opinion, there are many reasons to answer the question as to why students should be partners in the development and design of informal learning spaces. First of all, an informal learning space may be viewed very differently by the current paying student, who uses informal learning spaces here and now, than by those who still view learning spaces from a traditional perspective and lack awareness of how learning spaces, formal and informal, are changing and adapting year on year. The university is often focused on the overarching needs of the student body rather than individual students, all with their own expectations, their own way of learning and their own years of debt once their degree has been completed, which they will want to consider as 'money well spent'.



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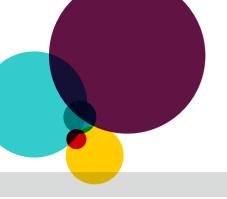
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Alongside these individual student perspectives and the different ways in which they learn, which will be discussed later in the chapter, another important reason for partnership is the increase in student fees. This is raising expectations, not only for what students want from their university, but also what the university requires them to do to complete their degree and be a successful student. This, in my opinion, manifests itself through, for example, higher teaching quality requiring a higher standard of student engagement within the formal learning environment, increased demands on students to acquire the skills to complete flexible and heavy work load assessment diets successfully, technological aids needed to complete assessment, students needing to adapt to other students to work with, and the development of skills they need to work with others to increase employability. And, after my experiences, I believe strongly that who knows best what students need to achieve this, are not just academics and professional services staff, but students themselves. All of these requirements demand informal learning spaces and ones that can support students in the above activities.

One example of this is that learning environments in general are always changing, and increased fees have had an effect on what students are expecting in terms of quality of teaching and their learning experience within formal learning spaces; this ultimately also has an effect on how they learn and work outside the classroom. McLaughlin and Faulkner (2012) found that students have a number of interpretations of the relationship between university learning, teaching expectations and university facilities, showing that all three factors have subsequent impact on each other.

FORMAL TEACHING AFFECTING INFORMAL LEARNING

Milne (2006) comments that classrooms are not the only form of learning space. While the classroom is assumed to be a primary location of learning, data suggest that a majority of student learning activity takes place outside the classroom. Therefore, it is vital that institutions provide spaces that allow learning to take place effectively outside the formal learning environments, as students need these spaces to carry on with the learning process. McLaughlin and Faulkner (2012: 1) also found that learning occurs in both formal and informal settings and stated moreover that 'the timetabled facility dictated the teaching style used and the opportunities for collaborative learning; active learning occurred more often for these students away from the classroom, often in informal, ad hoc spaces'.



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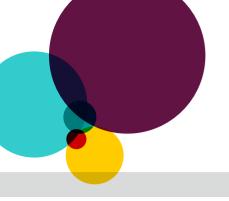
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Thus, learning occurs both in classrooms (formal learning) and through inter- actions among individuals (informal learning) (Oblinger 2006). Both types of spaces need to support more kinds of learning activities such as collaborative, active learning, blended and multidisciplinary (Dugdale 2009). Space, whether physical or virtual, does have an impact on learning and this needs to be taken into consideration when designing informal learning spaces (Dugdale 2009). Students experience all different types of formal learning approaches from a variety of academic staff and this can determine how they feel their formal learning impacts on what they need for their informal learning. Students' needs are continually changing depending on a variety of factors such as year of study, module choice, home environment, and, a big example of how formal learning will affect informal learning, assessment. As a university, we need to work with students as partners to understand these needs and the different experiences students will have.

ASSESSMENT DEMANDS AND VARIETY

Assessment relating to formal teaching requires and encourages students to undertake independent study outside the classroom whilst also setting assessments that require group work, collaboration and formal presentations. For example, a ten-credit module at Loughborough University has 100 hours of teaching and learning, comprising, for example, 12 hours' lectures and 12 hours of tutorials and/or practical's and 76 hours guided independent study.

After attending many working groups and listening to external speakers from other universities, I believe that not only have increased tuition fees had an impact on expectations of independent study but this has also had an effect on many universities' assessment diets. Universities now stress assessment for learning rather than assessment of learning. Therefore, not only are informal learning spaces required by students, informal learning spaces need to adapt to the flexibility of assessment types; they need to have both advanced technology and a variety of technology that assessment diets for different subjects and modules require. Assessment diets can include a variety of assessment types including collaborative group work, reports, presentations, classic essays, reflective essays, dissertations, design books, log books and revision for exams. Dugdale (2009) suggests that universities should consider assessment processes that link space performance to the assessment of learning outcomes and to address how space itself can contribute to the effectiveness, the learning process for students, or hinder it, whilst students complete their assessment requirements. (For examples of different



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types of assessment, see, for example, The University of Reading's Centre for The Development of Teaching and Learning which provides a concise list of assessment methods with details at www.reading.ac.uk/web/FILES/eia/A-Z_of_Assessment_Methods_FINAL_table.pdf; and, the University of Technology Sydney at www.uts.edu.au/research-and-teaching/teaching-and-learning/assessment/types-assessment).

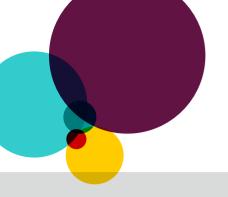
Students are also noticing the change in assessment diet, and research shows that university students want flexible learning spaces that can adapt to both individual and collaborative work with a strong emphasis on social learning and advanced technology (McLaughlin and Faulkner 2012). With these, they will be able to complete the variety of their assessments effectively and appropriately using the 'correct' technology and working in an appropriate environment, whether that is as an individual or a group. This again highlights the importance of a partnership to make sure we recognise what students want and need. These wants and needs of students will be discussed later in the chapter.

TECHNOLOGY AS PART OF THE LEARNING EXPERIENCE

Technology is a crucial part of a student's learning experience and needs to be taken into consideration now more than ever. McLaughlin and Faulkner note that in ad hoc, informal learning spaces students placed huge emphasis on the technology available throughout the university within these spaces and that 'students favoured collaborative, social spaces for learning and technology exchange' (2012: 1). Not only are students more technology savvy, the formal teaching at universities is encouraging students to use technology more to carry out their studies and to pass their degrees; for example, CAD (computer-aided design) work for designers, digital essay writing for English students, reports with videos, links and images for engineers.

Universities are also using technology to aid formal teaching through making all resources (such as online PowerPoint slides, videos, electronic reading lists) and tools (specialist software, discussion groups, survey tools, links to websites, blogs, etc.) to supplement teaching available in Virtual Learning Environments (VLE). These also support distance learning and those with additional learning needs. Oblinger (2006: 1) notes that it is hard to identify any university discipline which does not require technology use as a necessity: 'Collecting, analysing, displaying and disseminating knowledge typically involved IT'.

Research I conducted during my period as VP Education at the Students' Union in partnership with the University found that students will turn up on average with at

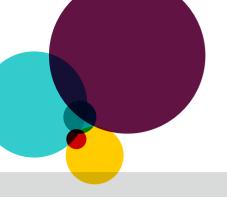


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least two devices, a laptop and a phone, and sometimes you will see students with tablets and music players too. Of respondents who were surveyed in the library, 50% were using their own laptop, requiring a high provision of power sockets, 50% were using iPads/tablets, 56% using smart phones and 87% using plasma screens (Cunningham and Walton 2016). Therefore, equipment such as printing and scanning facilities, tables big enough to fit all technology on and systems to be able to use technology in a collaborative way such as projector screens, plug sockets, all need to be taken into consideration when designing new informal learning spaces or upgrading older informal learning spaces. Technology is forever changing, updates appearing more quickly than we are able to create informal learning spaces – this also needs to be taken into account, you do not want a space that is out of date before it has opened.

It is ultimately the responsibility of those in charge of learning facilities to support students and provide these suitable spaces, resources and technologies for students to be able to meet the academic demands made of them and thus to fulfil their roles as students. They need to complete the tasks required of them, within the recommended number of independent study hours and finish the necessary assessments, in their varied forms, to achieve their degree. It is also the responsibility of the university to prepare students for the real world of work and different work- place environments and spaces they will experience in the future, for example, collaborative areas, technology-facilitated meetings, silent offices. Moreover, due to increased fees students now believe that the university is responsible for providing adequate, comprehensive and up to date technology. With the amount of money students are paying, many believe 'the university now has excess money to be able to provide state of the art software and technology and students should not be having to pay anything more. Beetham and White (2013: 6) also noticed the increased expectations of technology within university learning environments; they suggest a majority of students now expect Wi-Fi across campus, access to learning spaces with robust Wi-Fi and the capacity to easily connect their own electronic devices to the university's network as well as having support such as a helpdesk in place to aid them with their own devices, plus access to institutional devices such as desktop computers and printing facilities.



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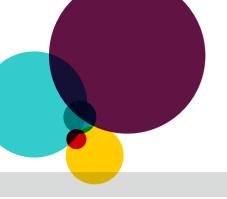
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GATHERING STUDENT FEEDBACK TO UNDERSTAND INDIVIDUAL LEARNING DIFFERENCES

The research the University and Students' Union carried out was crucial in gaining students' opinions, feedback and preferences in order to allow the university to make improvements to the already existing spaces and to understand the utilisation of the campus learning facilities. Without the data from students themselves who use the spaces, and gathering the opinions of students who do not use the spaces to understand why not, we as a university would not know where the demand is in terms of both technology and software requirements and the necessary spaces and facilities required for completion of assessments throughout their degree. This highlights the importance of a partnership with the students to create and maintain spaces with the appropriate technological specification.

Not only does working in partnership make students feel they have ownership of a space in which they know that they can work to their full potential, it makes sure that we as a university provide them with the necessary/preferable furniture and study environment as well as technology that students require to complete their assessments and learning for their discipline. It enables the University to understand the wants and needs of the student body and it is important to take into account many individual differences between students. This was a problem I did notice when I was a student, and it became more evident during my sabbatical year as VP Education, that every student learns differently and every student will have a preference in the way they learn and undertake assessments, as well as a preference for the environment in which they like to learn. This calls out for flexible spaces and also a variety of spaces that are needed across campus to be able to fulfil the ever-increasing student expectations and to adapt to the different requirements that are needed by the variety of different degrees delivered at Loughborough University. When you become a student you expect your university will provide you with suitable spaces and resources for you to be able to achieve your duty of being a good student whatever discipline you are studying.

However, factors like formal teaching, assessment methods, technologies and resources that students need are changing year on year; therefore, to a certain extent, it is only the students who know what they need, like and prefer. For example, in our research, we noticed that students want group learning spaces, social learning spaces and individual study spaces, both noisy and silent. However, these preferences changed in terms of priority depending on the time of year, noticeably whether it was exam period of not.



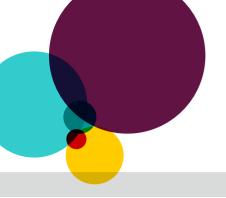
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WHAT DOES STUDENT FEEDBACK SUGGEST STUDENTS WANT IN, AND NEAR TO, INFORMAL LEARNING SPACES?

It is not just about the technology that is provided. If students have to choose between similar spaces which all provide the technology they need to undertake their range of assessments, other factors such as temperature, natural light, comfy seating, furniture, noise levels and decoration also start to be important. These factors are also those in demand by students at universities across the UK, and many universities are now carrying out their own research to investigate learners' preferences in where, when and how they use informal learning spaces as well as gathering students' opinions in order to make informed, evidence-based decisions on the redevelopment of informal learning spaces with respect to what students want in, and near to these spaces (Harrop and Turpin 2013). If these factors are not right, students will not use the space if there is a better space elsewhere. I am aware from my experience that students will travel a lot further to find spaces in which they want to study and have the right technology to facilitate this; their expectations are that, especially having travelled further, they should have food and drink conveniently available to them. Refreshments are seen as a crucial part of the informal learning space environment, not only to benefit those who are studying and need a break, but having a space like a café or food outlet also creates a 'buzz' in the space and makes it a vibrant place in which to study (Harrop and Turpin 2013). It was not until I started asking other students that I realised that having a place for social interactions was much more important than I would have thought, and when I reflect on my time as a student, I did notice the social element of learning was crucial for productivity. Having a social element can allow students to take a break and refresh and to discuss work with others. Many students also found it helpful to have a social element as others can encourage their work ethic and motivation. Even though some students noted that their rooms were an informal learning space, social aspects were still mentioned as extremely important as well as access to refreshments. This was due to the community feel that these factors produced as they contributed to a sense of common purpose, which in turn creates productivity in learning spaces (Harrop and Turpin 2013).

Students will not use a space that they do not deem is acceptable for their assessment and learning needs; for example Art students will not use the library for specific tasks as there is no appropriate equipment for them to use, such as tables that are big enough to do canvas drawings. Engineering students will not use a space where the computers do not provide access to relevant software, and



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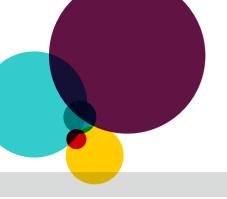
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those who need collaboration spaces will not use quiet study areas. Students vote with their feet, and research and what I hear from the student voice, has shown that students are prepared to walk twice the distance to go somewhere in which they feel comfortable and have the 'right' space around them. Others will view their home or the hall of residence room as an informal learning space and would prefer to learn in a home environment as many feel that this has all the amenities, such as refreshments, toilets, comfortable furniture, technology which requires no carrying around of devices, Wi-Fi connection and no opening hours which can be restrictive and disruptive, and no distractions. Others have stated the opposite and see working in a home environment as very distracting, somewhere they are unable to get into a working, motivated mindset. Either way institutions must recognise that learning spaces go beyond the campus so the university VLE, library catalogues, external databases, and virtual workspaces must be accessible for learning elsewhere outside the university.

To invest in spaces that will be used and valued by the student body, it needs to be consulted and its opinions and needs valued from the beginning of the process. Those who need and use the space are those who are better equipped to design the space. Those who do not use the space are crucial too – it needs to be determined from them why they do not use it and to see where the space can be improved to increase usage. This is particularly important for universities that have limited space, knowing if and how the students use the space is critical to making sure that what space there is will be used effectively.

CONCLUSION

Much of what I have learned and understood about informal learning spaces has not just been from research but from my own experience of being a student and then talking to and representing students as VP Education. I have personally been through the frustrations of finding appropriate technology or sitting in uncomfortable chairs. I have experienced the need to adapt how I work and where I work depending on what assessment is required of me and what type of learning I need to fulfil as a student in my own time depending on the formal teaching and assessment requirements. There are concrete factors that lead to the need for informal learning spaces and what is required of informal learning spaces. These include formal teaching and associated assessments which affect what students require of informal learning spaces such as robust and easy access to technology and its applications via a range of devices. There are then the factors that relate to the preferences of individual students



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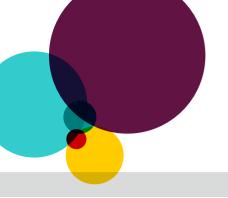
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themselves, and it is these factors such as furniture, noise and refreshments that also determine what is valued as a 'good' informal learning space and one that will be used by students.

Teaching is forever changing, expectations of students are forever changing, and more importantly, what students need to do to be able to complete their degree, is forever changing; therefore, those who are developing spaces for students need to speak to students to understand the here and now – and the future. As the student voice urges development, the spaces around it need to adapt at the same rate. Group work, collaborative assessments, traditional, independent research, social spaces, spaces that are 'value for money' are all needed and expected right now and I have learned that the student voice is extremely powerful and if certain aspects of the student experience are not meeting their expectations, they can have detrimental effects on the university as a whole. If we include the student voice in the design of informal learning spaces, we can not only gain an insight into how best to invest in space, but also develop partnerships with the student voice which will result in students who are not only happier but students who have the 'right' spaces and resources around them in order for them to reach their full potential.

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