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Design Studio: A Community of Practitioners?

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ABSTRACT What constitutes design studio practice, and how do conceptualisations involving communities of practice further our understanding? This analysis is based on key findings of an interview-based research project that examined the insider experiences of final year undergraduate students of architecture, focussing on the network of relationships between peers, places of work and everyday working practices. The analysis critically examines the application of a community of practice model, and draws on Bourdieu's conceptions of habitus and field as a means of understanding how value is conferred upon individual practices through their display in the often challenging social arena of studio culture.

KEYWORDS Communities of Practice, Design Studio, Habitus, Situated Learning.

This analysis is based on the outcomes of an interview-based research study with final year undergraduate architecture students at a London university, focused on gaining an insider view of their work and study experiences. Although the aim of the study was on understanding the practical and social challenges facing students, their emerging identities as student practitioners, their conceptions of community, and the ways in which places and spaces were negotiated, the discussion here centres on the value of established conceptual frameworks that have been used to make sense of design studio, and on the potential of practice theory in furthering this understanding.

Design studio has been seen through the lens of numerous theories of learning; most recently as reflecting a situated learning and communities of practice model, with studies on the crit and studio sessions examining shared repertoires and spaces as facilitators for exchange.

However, a key theme emerging from the research discussed here was the significance of the wider field of physical and social settings, with the studio spaces and teaching as relatively peripheral by comparison. This prompted the need to consider a broader conceptualisation of studio practice, with ranging degrees of participation framed by the negotiation of space and place where

opportunities to participate in community are variously embraced and rejected, and where the act of participating and being seen to participate has inherent value.

In order to better make sense of this picture and to understand students developing identities as emerging practitioners, I have drawn on Bourdieu's theories of practice as a means of understanding the relationship between the students' own embodied practices and the range of social milieu including but not limited to the studios space itself.

Conceptualising studio culture

Central to any architecture course are the familiar activities and culture of the 'design studio,' formal and informal activities focussed on learning through doing, such as one-to-one teaching (the tutorial), individual and group study, peer networking, formative assessment events and presentations (the crit).

The physical spaces associated with studio embody these practices and they are bound together through a shared language and culture of expectations, practices and values. Beyond this familiar terrain are the networks that extend studio culture into the private spaces of the home and the social networks of student life. The research was interested in developing a picture of this wider field, and of the particular role played by the myriad physical spaces and work settings.

Learning in design studio culture has been theorized as a signature pedagogy emulating professional practice models, as a community of practice and as a form of problem-based learning.^{1 2 3} Whilst the term studio culture implies customs and social behaviours and some kind of community with shared endeavours, much existing research into architectural education has focussed on its unique practices such as the crit and the tutorial, the processes by which students learn from their tutors during these events, and parallels with life in professional practice.^{4 5} Defining these key signature pedagogy characteristics as central to architectural education means less consideration has been given to how they sit within students' broader experience that includes studio use outside of formal teaching, support networks and homeworking spaces.

This suggests the need to expand the sphere of scrutiny to include the social milieu of the students, and a broadening of the research to enquire what spaces constitute design studio beyond the studio space itself, how peer networks are involved, and how the social milieu acts as a forum for making sense of new knowledge.

Despite obvious differences related to context (formalised education vs. apprenticeship or workplace), Lave and Wenger's theories of communities of practice and situated learning, have been a significant source of reference in research on conceptualising design studio practice. This has come about through the observation that in design studio, learning appears to be grounded in shared and practical repertoires where the organisation of teaching, space and facilities are student centred, and where the tutor's role is to galvanise learning between all members of the community.^{6 7}

The concept of situated learning in a community of practice is a rejection of the assumption that learning is a process of dissemination where knowledge is transmitted from teacher to pupil, and where learning is primarily about remembering information that can be drawn upon for later practice. Lave and Wenger's studies showed learning to be meaningful from the earliest moment, and to be embedded in the simultaneous acquisition of social practices. The learning communities they studied involved senior and experienced members, and peripherally situated newcomers- a position they described as legitimate in the sense that they were engaged sufficiently to learn rather than peripheral in the sense of not fully engaged, and would become increasingly less peripheral as they became more involved in the community.

The most significant study on design studio to draw on communities of practice concepts by Shreeve, involved a large number of semi-structured interviews with studio based tutors at the University of the Arts London, supported by the use of auto-driven photo elicitation. The research, which focused on teaching activities in or studio, concluded that provision of studio spaces for learning by doing, for material engagement and exchange of practices between students and tutors and also between students themselves were a key dimension to the success of the signature

pedagogy in the arts, and reflected characteristics of a communities of practice model. However, the study was limited to examining what happened during organised studio sessions with tutors so did not explore if and how the community practice extended beyond these and how and if they were sustained by students themselves.⁸

A number of other papers have examined studio culture from a Communities of Practice perspective, including detailed critical research by Morton into the enactment of studio practices in the final year of an architecture programme in Australia.^{9 10 11 12 13 14} This research involved video recording to analyse the use of studio spaces and furniture, with follow up semi-structured interviews with students and tutors. Varying from Shreeve (2007), Morton concluded that participation in the environment of the studio did not follow a discrete community of practice model, because of the influence of the tutor and the nature of the students' independently focussed practices.

Emerging from this research on the application of community of practice frameworks is a developing appreciation that practice as a way of learning and meaning making is bound up with the social setting in which this acquired practice knowledge is displayed and shared.

Learning how to practice is in this sense not so much about a straightforward process of doing things learned at some earlier stage, but rather, a process of picking up and perfecting customs, traits and ways of doing things, and in the process grasping their underlying meaning and significance.

Aristotle uses the term 'hexis,' translated as habitual disposition or way of being, and describes the relationship between personal practices and the objectively agreed or established ways of doing things that we know will lead to good ends.^{15 16} Hexis describes a kind of knowing and doing that is intrinsically the right way of going about things, a range of virtuous practices that we can habituate.

This mode of doing can be likened to Pierre Bourdieu's term *habitus* in his theory of practice, but is extended and broadened to relate to the shared actions in which practice develops and is supported, and the means through which collective frameworks (such as

those in professional fields) and codes and the practice's discourse is sustained.^{17 18} Habitus includes attitudes and perceptions that define what is normal or typical, working methods and approaches, and the patterns that make up physical organisations, and extends to include cultural or social patterns and relationships with institutions.

In 'The Logic of Practice', Bourdieu makes parallels with sport as a way of characterising the relationship between the individual's acquisition and practicing of habitus, and the broader collective realm of the players where structures and rules carry objective weight. The rules for going about doing the right thing reside with the players' interpretation and manifest through their actions. The rules, which are objective by nature are only experienced when displayed by players through their embodied actions. Bourdieu writes that the individual must develop a '...feel for the game. This phrase (like "investment sense," the art of "anticipating events, etc."), gives a fairly accurate idea of the almost miraculous encounter between habitus and a field, between incorporated history and objectified history.'¹⁹

Bourdieu's theory of practice can offer a means of critically examining design studio culture by understanding the relationship between the modes and habits of individual students and the social dimension of studio culture such as studio sessions, teaching events and social networks. Rather than characterising studio culture as single entity that readily allows for the application of terms like community, we can begin to picture a more complex and contested territory of individual learning within a field of players and commonly agreed rules. In this field of play, students test the value of their own knowledge against the shared values of the field through the demonstration or display of their habitus. Bourdieu's use of the more open-ended term field rather than community avoids many presuppositions, such as an active awareness of the individuals of the kind of collective enterprise they are involved with. It also avoids the uncritical conferment of values and assumptions associated with use of the term. Students may or may not identify with a community that they will understand to exist as at notional level, whereas when the game is over the field may cease to be seen at all.

Webster has used Bourdieu's concept of habitus and field in her study of the architectural review to characterise the process of acculturation required to get on in studio, and to understand the practices needed to successfully negotiate the ritual event of the crit.^{20 21 22} Her analysis of the research draws on its performative dimension, emphasising the need for an embodied knowledge embracing not just visual communication but deportment and spoken word as a means to legitimate the student as a practitioner and inculcate them into a field of practice defended by the tutors' own mastered forms of habitus. She concluded that the crit, if critically reshaped, could offer a more productive field for students emerging habitus.

It can be concluded from this research context that there is value in examining the broader picture of the students' experiences through the lens of practice theory and through understanding the nature of their community as a field for developing habitus. Beyond the scene of the studio and tutors, is there a community of practice as such, or merely a community of students, and are their interactions about sharing practice, about sharing the experience of being students, or of practicing acting as practitioners? Webster described in detail how performative practices were an inherent dimension of the crit and that success in this aspect conferred a kind of social capital through acculturation. Is this activity limited to the crit, or can it be identified within a wider studio culture?

The study

The study was carried out in a UK school of architecture with a typical studio arrangement; demarcated spaces for years or groups (ateliers, studios or units), in a larger open plan environment, where students negotiate within the group for the use of the shared workspace, which also operates as a teaching space.

The research involved semi-structured interviews with a small number of final year undergraduate students of architecture based on an interpretivist approach informed by Actor-network theory.^{23 24 25 26} A contact course tutor collaborated to recruit a diverse cross-section of participants following broad criteria: male and female, living with family, independently or in halls, age range (i.e.

mature students), students who used university facilities on an everyday basis against those who used them only intermittently. The interview process was supported by visual elicitation techniques to encourage rich responses; a series of simple line illustrations of various scenes of studio culture ranging from home working set ups to crit days. These were used to prompt discussions (where are you in the picture) and at towards the end of the interview, assembled as together as visual jigsaw of the participant's world.

The interviews each lasted for an average of an hour and were conducted in a quiet seminar room off the main studio space. The interview recordings were transcribed and analysed using qualitative inductive approach. The dialogues explored how the subjects interacted with home and university study settings, peers, tutors, events and how these related to each other. A Grounded Theory approach was used to analyse this data using coding techniques.^{27 28}

Although the researcher themes and the interview questions were informed by Actor-Network Theory, these were not used as the basis for the coding analysis: rather, the aim was to try to identify emerging meanings, actions and events and base coding for further analysis on these using a process of constant comparison. A combination of coding techniques were used: from printed transcripts to nVivo software and back again.

The Actor-Network theory approach usefully informed the research methodology and research activity by introducing a different range of perspectives, shifting the focus away from the familiar stories of the crit and tutorial to revisit through different eyes, a range of wider and perhaps less remarkable scenes of private study, face to face social encounters and synchronous online interactions. This schema allowed interview space to explore the social community patterns and activities; the numerous working spaces (including but not limited to the studio space itself); the equipment, tools of trade and material prerequisites for working; and significantly the demands of the portfolio enrolling the other actors to produce work; as well as the various formal and informal events associated with the design studio teaching itself.

The analysis revealed an overwhelming focus by the participants on the production of portfolio material, mediated, and often impeded by uncertainties of tools, equipment and other necessary things. Students articulated their involvement in studio culture through the terms of a notional community, with a social network that supported peripheral collaborative and social activities concerned with identity and sense of place.

The research provided some detailed glimpses into the notional community formed by the students; the analysis here examines the degree to which a community of practice model might be relevant, and draws on Bourdieu's theories of practice to consider how the informal use of studio space acts as a social dimension for the display of habitus and identity.

Studio: A Community of Practice?

If students are drawn into participating in a community in which their identities develop through the sharing of meaning and knowledge, what binds the community and how do the various levels of involvement operate in practice (from old-timer to peripheral participant)? The picture emerged of a community held by cultural and historical heritage, shared meanings, goals and practices but one largely of students at an equal place in their development, trying to figure things through for themselves: so meaning making talk was highly tentative, with tutors or other 'old timer' active members largely absent from the scene.

Nevertheless, tutors *were* seen as having an ambition in getting students to galvanise. Student A described for a Friday after studio:

We're probably going to go for a pint or something. The tutors as well. Like it's nice because most of the times they're trying to join us as well ... because like the tutor is the one who tries to bring everybody together. It's everybody's connection is in the middle so it's the tutor. (Student A)

The degree of identification with the community varied. Student M, who worked at home, was clearly sensitive to his peripheral place:

Yes, I think in general I feel part of it if that's what you mean? I feel part of it and I think

they perceive me as well as part of it. They don't think, 'Oh this is the guy that never comes' or anything like that. No I don't think they have that feeling. (Student M)

This understanding was at odds with other views, and the experiences of Student A, an ardent studio participant who used multiple means to ensure her presence in the community:

Our whole life basically has to do with us coming in every day and or even if I don't come in it's like all the time I mean...we have like a group you know on WhatsApp we have a group conversation so we're like texting between us...the studio people all the time like where are you what you're doing... (Student A)

The social development of community emerged from working together on similar tasks and on stressing cherished differences between themselves and other (non-architecture) students, with tightly drawn codes and common experiences forming its boundaries.

The students also expressed their individual identities with reference to this bounded space, blurring boundaries between themselves and the community, but not without consideration of self-interest and concerns about status. Student L described requests on Facebook from studio non-participants:

They are generally the ones asking yes. There seems to be often a lack of reciprocation. You know you will provide photos for everyone and maps for everyone because you have done the work, which can sometimes be annoying. But you don't want to come across as an asshole. (Student L)

These characteristics of this community reflected many aspects of Cohen's analysis in "Symbolic Construction of Community," emphasising the meaning, identity and symbolic values.²⁹ The students talked using a shared identity and repertoire of actions, and could describe the social boundaries of their network. Although students were concerned with independently focussed practices, they did not operate as isolated practitioners; even the most peripherally engaged student made efforts to maintain some kind of tenuous membership.

The community therefore had value in supporting learning, but just not through the patent mechanisms described in the communities of practice model, with learning cascading from old-timers down through apprentices and to novices. The fact that the community was constituted of roughly equally placed practitioners (no ‘old-timers’) resulted in a kind of game play, testing out and exploring the field through low stakes interaction over tutorial and crit feedback, shared know-how and troubles. Contrary to Lave and Wenger, students’ identities were not forged through community participation: students learned to belong, but did not behave as newcomers; they brought background experience (from family, from the school art room) and expectations, and were quick to develop their new identities.

Their community did not have a clear social organisation as such, but common values and norms with a shared identity and the motivation to generate ad-hoc social spaces for playing out learned practices and displaying work on the go. The setting for these practices was invariably the studio connected to a range of subordinate spaces, its use choreographed through prior social interactions.

Spaces of practice

Students worked in the studio and workshops, the library and at home, in their bedrooms, living rooms and kitchens, and they worked things out together- in these spaces and online. Accounts of how they used these spaces related to both practical issues and emotive reflections on their identities as students and emerging practitioners.

The stories were always framed by the restrictions they faced, but the practical considerations did not appear to determine outright their work and study patterns. The students held in tension two often conflicting desires: to create an equipped space of creative potential, free from practical and time constraints; and the need to work or simply ‘be’ in the presence of others. For example, although the studio was seen a messy workspace and suitable for modelling and constructing, students talked about setting up at home, in their living rooms and kitchens: They would either have a small home studio

permanently set up, or temporarily convert shared or family spaces.

I have borrowed the terms *in place* and *out of place* from the work of geographer Tim Cresswell, to describe the extent to which place engenders a sense of community and nurtures emerging identities.³⁰

Practicing *in place*

Being *in place* defines the various spaces that reflect and hold students emerging identities as practitioners, where forms of embodied and social practising could be supported, reflected and displayed and individual practices gauged against collective norms. In this dimension student talk reflected the game play of Bourdieu’s field.

Workspace needed to reflect and hold students emerging identities as practitioners, and act as places to support, reflect and display forms of embodied and social practising. Students described setting up workspaces at home where they would feel *in place* and ready to work, in a supportive environment and with the right things to hand. For the most part this involved temporary setups, for weekend and nighttime to support work done in the studio:

Previously I used to just work on the living room table, but then you get slightly distracted... You need to be set up properly... You need to have all of these things, just to make your life easier, to ease into the work. (Student R)

At home I don’t really do work on my laptop... I’m probably on my drawing board because I don’t bring my drawing board into the studio so I’m probably drawing at home or model making. I’ll just take over the living room, just have it all over the floor... (Student S)

Student A described turning her shared living room into a plaster-modeling workshop: a time-unlimited space for back and forth working. Social media, like WhatsApp, supported working alone with the acknowledgement and support of the community:

Then at home, if somebody was not doing okay, then we would just call up, talk about it... when it comes to not being able to figure

out a particular thing that's when the phone comes out. (Student R)

For other students, the studio itself was the space where they felt more *in place*, with both social activities around sharing work in progress and mutual support, and material activities of getting on with work.

I mean it is not so much about them seeing that you are doing the work because they see that anyway through your work, but it is more about staying there...and there are always people who ask for help, so that is reason we stay now. Sometimes we stay until like 11:00PM when it closes. (Student L)

The studio differentiated itself as a place to work alongside in face-to-face contact with peers. The practical concerns like more working space and facilities were secondary to these social opportunities. Being *in place* in the studio thus had two connected dimensions - a social dimension, and a material practicing dimension in the context of the social.

The material practising dimension was conditional upon having the right materials, equipment, space and the freedom to make a mess. The social dimension was supported through social media, required the presence of other students and spaces available with the potential for occupation:

The more commitment you make I think the more you become used to it and it becomes habitual and part of your everyday life. Not everyone I don't think acclimatizes to it like that. If you don't work very hard then it really does become a burden and you don't want to come here at all. Yet the more you do it the more it becomes normal. (Student L)

Practicing out of place

The studio was not an intrinsically conducive place to be: events or other actions could quickly lead to students feeling *out of place* and therefore stymied in their plans to work. Shortcomings in getting space to coalesce in was a recurrent concern:

I'm sure that's our unit space so that's Unit G's unit space, but sometimes...we'll come in and they've taken over the whole space...so they've poured out into ours, they've spilled over into our unit space. Then it's just like

where are we meant to work? If you're all in and they've got their massive AIs... then they look at you like why are you here? This is our unit space where we're meant to work. I'm not sure if that's actually their designated day but then they have their own unit space so I'm not too sure ... we have to go and find somewhere random, maybe downstairs if that's empty to work ... it felt weird being in that space. (Student S)

Problems with the material dimension of working, from forgetting to bring things to the sense that the studio was not a practically amenable place, meant that some students worked exclusively at home. Student *M* described his perfected set-up, which he supplemented with discrete and episodic visits to the architecture studio. Beyond this interaction, he felt *out of place* in the studio and drawn back to his home set-up.

Well I tend not to work in here most of the time, because I think it's a bit messy, it's difficult to get yourself space...I don't think you can do it here the same way as I do it. I don't know if it's the best way, but it works for me.... I can't see how that could relate in here, you've been to have a look at your digital model and you have to go to the model room, to the computer room and then go back to what you were doing in the workshop. Probably someone has stolen your place when you went to check something that you want to change on your model. (Student M)

With the exception of permanent home set-ups, provision for storing things was ad hoc. The studio imposed an almost itinerant work-style:

Quite a few people have their own [locker] ...or we have a little space where our models are, sometimes I just put my stuff behind there, hidden behind the models or something so if I need to get it I can come in the next day and just take it. Or our portfolios are all stashed at the bottom ...or I just put it in someone else's locker and then they'll lock it up for me. Nothing important, it's just usually work. I won't leave my laptop or anything. I'll just leave my sheets of work or a roll of paper that I've used or my model if I don't want to carry it home and then bring it back. (Student S)

So the qualities of being *in-place* came down to the degree to which they could invite and hold both social and working practices.

Variable occupation, negotiated through both prior practice and use of social media reflected the studio's role as a social milieu:

10:00 in the morning onwards we are supposed to come in ...10:00 on the dot no one is there, myself included...People filter in through the day. Generally you will get a certain group of people who will be there from like 11:00 or 11:30 onwards to 7:00 at night. Then you will get a second group of people who will come in for their tutorial but then leave again. There are almost two separate groups. One is a permanent, they know they have to stay there, they know they have to work and that it is easier to work there, and they do that. Then there is another group that just filter in and filter out according to when their tutorial is. (Student L)

Students struggled to confer onto the space enduring markers of *in-placeness*. Student S, described her first experiences of studio work in 1st year:

It changed. Sometimes it would be at the far end of the room. It depended as well how many – because our work was individual but we had like a group of us to one tutor. If most of the group was in, we got a bigger table. I guess if another group, there weren't too many people; there was less of them so they made a smaller amount of space, kind of thing. It changed. If everyone was in then it got a little bit ... so sometimes we'd have to use a little bit of the space next door. (Student S)

The studio represented a place of possibilities, of doing things of value and making sense of these things with peers. But its role in supporting the social and community aspects of design studio culture was more significant and successful than its practical role as a workspace. For some students, connection through studio was a fluid process that took place over the course of a day or week, for others it was a ritualised process of discrete visits made solely to keep a peripheral connection with the studio community, and one that had to be reconciled with the need to get on with work elsewhere.

Places act, engaging or disengaging us with their expectations and implied practices. Here is A describing her first experience of studio:

I was a bit surprised at the beginning and like how the place... it seemed a bit you know like messy but in a good way... it makes you want to work you know get your hands dirty like get involved. (Student A)

This contrasted with her account of later realities: a place requiring efforts to set up, being makeshift and temporary and requiring conscious thinking about set-ups, things. It was an uncertain space when compared with converted living room tables and bedroom floor. The practical difficulties of maintaining a studio set up, contrasted with the pull of the social milieu:

We have like a group you know on WhatsApp like we have like a group like conversations so we're like texting between us like the studio people all the time like where are you, what you're doing..., what time you're going... (Student A)

The *studio people* formed a group that would co-ordinate their studio presence, agreeing when to go into studio, converging at the same moment.

Using studio facilities was seen as investment, requiring effort and planning, but one that was rewarding. They could describe how the design studio should work in theory, but negotiated their own, often-vicarious patterns of attendance and participation. One student advantageously compared his own investment in studio working with others who were marginal participants:

They always look unhappy when they do finally arrive. It is because... they are not enjoying it because they are not getting fully into it. It just becomes something they don't want to do but have to do in a sense which kind of defeats the point of being here... (Student L)

When you are all here you can bounce ideas off each other and if you don't know how to do something someone else might. Then you can, you learn a lot more if you are in the studio working with other people rather than being at home. (Student L)

Practicing capital

Bourdieu's schema of habitus, field and capital offers a further dimension to appraise these observations of the community of studio

culture: with students' habitus played out in a field that includes the studios, and other settings like the home when connected by social media.

Within this field, the students are akin to the players of a game, developing their feel for the rules and the success of their own work actions and demeanour and capitalising on their perceived successes. Simultaneously they will be measuring the value of their peers' displays, embodied actions and practices and drawing on them. The field is the social dimension of studio culture; a network of interconnected physical and virtual spaces for the conferring and acquiring of habitus whose distinctiveness can be measured, in Bourdieu's terms, as a form of capital.

We can think of the social milieu of the studio as a setting for the rehearsing and display of practicing and of the emergent products of this practicing. Whilst the field of play in the study extended to include all spaces and settings such as the living room floor connected by social media, it was the scene of the studio space and its social milieu where value and practicing-capital could be accrued. Working or practicing in the company of others (in space and through social media) was as a more valued aspect of studio than simply space or facilities.

Bourdieu's theory of practice offers an alternative means of examining the workings of the community, and of the role of the spaces (both physical, and online) it operates in. Being in studio was a means not only of seeing other students at work, but also of working before the eyes of other students, hence visibly demonstrating and sharing progress and practices. Capital was gained in being observed doing good practice as well as in observing others playing out their practicing.

So practicing-capital is connected with the acquisition of a habitus of studio culture, and the framing of physical practices or habits through social dispositions. Thus the studio milieu had value even to the isolated home working student: Student M described his need to come in and see what other students were doing, and to work, with much outlay of time and effort for short periods in the studio space, purely as a means of contributing gestures of display.

Being *in place* in the studio allowed opportunities to practice externalising hitherto internalised knowledge, and thus make sense not only through the process of doing, and the act of being seen doing them, but also by demonstrating the distinguishing nature and value of good work itself. The process of conferring and accumulating value was a facet of the social context of studio. Student L described his peers who didn't appear in studio as disengaged, as having nothing that he would want: no practice capital. In the days before a crit, Student L noted these students' increased presence in the studio. Being in place in the studio (as opposed to being in place at home) required negotiation and had costs, but despite this, the students were prepared to make the investment. The social milieu allowed them to develop their knowledgeable embodied practice.

Things acted as gatekeepers to being in place in the studio: having them signified belonging (I have these things, I am an architecture student) and using them was a way of distinguishing themselves through practice. Student A described her burden:

Yeah basically I bring like my sketchbook, the computer, your ruler, your pens, like everything, everything. Like books that maybe you know you find something like to show your tutor as a reference or different stuff ... My friends start laughing 'cos I'm carrying ... I have like constantly like two massive bags oh and the portfolio ... When you forget some of these things actually it's really hard to work. Well, if I forget my sketchbook for example, I'm gonna find like a piece of paper to sketch on or something. But um ... if I forget like my laptop for example, its a big... because all of the work is kind of connected ... So I need this stuff.
(Student A)

Learning what to do with things included how to master a piece of software, how to cut card, what thing or drawing or model to do next, and so on. Whilst lots of this went on in private, the social dimension was for all the students interviewed, an indispensable element. Even for Student M, the committed homeworker, a stint in the studio was a chance to simulate practice in a social milieu. So having and using things were not just practical and material issues, they had a material and social dimension that was most clearly evident in the

studio setting itself. Students who used the studio to work in could trade their know-how; display their things, techniques and working processes. Students who worked in the social milieu of the studio were clearly getting a feel for the game by exploring the limit or boundaries of their field and its 'sensible' practices.¹¹

The students saw crits as apogee moments, and for the confident ones, it was an opportunity for them to have their work recognised by students, staff and external *professional* members. This was not just about the recognition of the value of their work, it was, through the inter-subjective nature of the crit, a process of participants giving and accumulating capital from each other. This capital took the form of knowledge, cultural or practicing capital. Student L described his skill in leading his crit audience, whilst Student S had hers at the end of the day with only one friend to watch (after it had finished it was late and she said the tutors left quickly with the guests).

Around the formal teaching like the crit and the tutorial, there were meetings on social media, informal agreements about staying and waiting for friends to have had their crit, and social get-togethers like going to pub, all forming a wider social field for play. These were student initiated, informal and *ad hoc*:

It is a reflection on the day. Generally we just point out what everyone has done really well and just try and shy away from the negatives. We let the alcohol do that. But yes, it is a mixture of commending each other and slagging off the tutors, like saying what you thought. If you think they are wrong on something then you discuss it at that point. (Student L)

Attendance at these social events was limited; responses ranged from ignorance about them through to distanced acknowledgement:

I don't go myself, because that kind of bar is not really my scene, but I have been there a few times. I definitely remember a time in second year after a big crit that we just went down there and chilled out a little bit (Student R)

The social milieu of the studio (before and after the crit) was clearly important for those

students who participated. The events were heavily inscribed with practices for getting grips with studio culture. The participants in the study who were evidently peripheral or non-attenders in studio did not recognise themselves as such and yet paradoxically were able to clearly articulate the rewards of engagement. Student F described the exhaustion of working up to the crit, of staying to listen to his friends present and then immediately going home. Student M was more open about his responses to the crit:

I normally try to stay if I see that I'm hearing interesting things, I stay until I get bored and then I go... (Student M)

For students like M, social media provided the peripheral participation with the field:

Exchanging ideas, giving opinions. That's the best part I think, is that dialogue with the other people, they give very good feedback and new ideas...at the beginning of the course we do like a group project, so that's the people that I've been more connected through... So those ones are the ones that if I've got a question or something "Do you know about this, do you know about that?" The ones that I normally contact...through the week a few times. (Student M)

Conclusions

The study examined studio culture through the experiences of students and considered how the dynamic of habitus and field could be applied to conceptualise engagement in studio practices. The students spoke of the significance of this community and by contrast the relatively marginal place of tutors and moments of formal interaction with them. Their studio culture had shared meanings, goals and responsibilities but was worked out *in the dark* rather than under the observation of masters or tutors, thus questioning the usefulness of a strict application of a communities of practice model.

The activity of practice in the social realm emerged as a key site of learning, and analysis from this perspective using Bourdieu's theory of habitus and field suggests a conceptualisation of studio culture that embraces the social and performative dimension of the signature pedagogy as a key element of learning.

Students who placed themselves as marginal and even non-players lost out in their opportunities to develop habitus: Student M didn't see any point in sticking around after his tutorial as he knew he wouldn't see the tutor again for the rest of the day, whereas L got that studio culture was a kind field for testing out where he was at, and saw non-attenders as losing out.

All the participants in the study held in tension the conflict between desiring an equipped space free of compromise on the one hand, and recognition of the value of working in the presence of peers on the other. Whilst social media supported an expanded studio culture, it also heightened expectations of what would happen in physical studio space and acted to choreograph students' use of it, enabling individuals to gauge the worthwhileness of either gathering to use the space in groups, or of staying away.

The research highlighted some very straightforward practical problems of studio use, and its capacity to provide amenable spaces for work, and as a consequence an impact on its use as a social milieu for peripherally engaged students. Students could easily feel *out of place* in the studio setting, failing to create markers of *in-placeness*, so although they could describe how design studio might work in theory, would negotiate their own, often-vicarious patterns of attendance and participation, and as a result, miss out on forging their habitus.

Such students also drew back from the pressures of performance in the social setting. This suggests that there are opportunities to advance design studio culture by broadening participation in the notional community, challenging marginal participants who stand at the boundary of the community and as a result avoid engaging in *the game*. Here the tutor has a possible role in ensuring student feel *in place*, stimulating and extending the notional community even though they cannot themselves be insider participants. They can encourage reflective talk by recognising that participation is not just a support network, but site for the learning of sensible practices, and that the studio space offers more than just amenable workspace. The research supports the need for physical space outside of structured teaching as a sphere for nurturing

studio habitus and participation in social learning.

Considering the context more broadly, learning is a transformative process so the business of education must be concerned with more than transferring know-how, skills or capacities. This places the emphasis on education as a challenging process of self-transformation and of *becoming*, rather than the straightforward acquisition of knowledge. In studio this involves the learning of a habitus and is a difficult journey of negotiating crits, deadlines and other ritual events, so must be supported and acknowledged as an intrinsic aspect of architectural education rather than as a tacit knowledge or folklore.

Concepts of practice have particular value if they can relate students' developing capacities in the architecture school with allied practices found in the professional realm, so ritual events must be relevant and related to the wider field where embodied practices are key. The research concludes that the spaces of the studio are not just necessary as practical facilities but as fields for the performative dimension of emerging habitus.

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