

# **In a new Context, we are all Apprentices: How Dialogue Between the Three States of Craft Education is a Catalyst for Adaptation**

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## **Abstract**

This essay argues that dialogue between the three states of craft education is a key mechanism for adaptation. Adaptation here is taken as the act or process of adjustment to changing circumstances (Merriam-Webster 2022), with a particular focus on communal knowledge of making. The three identified phases of medieval craft education – apprentice, journeyman, and master – are not only relevant to current debate around workmanship (Pye 1968; Adamson 2009; Crawford 2011; Sennett 2008,2012; Ingold 2013; Korn 2013), but also resonant in modern design education. Through reflection on key texts and case studies, this essay proposes the three phases can be seen as states which are fluid, co-existent and in dialogue with one another. Dialogue between these states is a key mechanism for adaptation, for which convivial (Illich 1973) and dialogic (Sennett 2012) environments are a pre-requisite. In better understanding this mechanism, we can engage it to create resilient, adaptive communities of practice and learning.

## **Author Keywords**

Craft; Community; Adaptation; Dialogue; Apprentice; Conviviality

## **Introduction**

The act of making resonates far into our past and remains highly relevant to our future. Demanding physical acts are deeply embedded in our sense of self: neuroscientist Daniel Levitin describes how memories formed through arduous tactile engagement are chemically fixed in our brains more firmly and more readily retrieved (Levitin 2014). A lively debate focusses on the relevance of skill and craft in our modern, post-industrial society: Crawford (2009) argues that 'choosing is not creating' and pinpoints making (and repairing) as key to our sense of agency within capitalism. Ingold (2013) proposes making not only a means of agency but as a means of knowing – in engaging with skilled tasks, we benefit from a collectively held knowledge which underpins our responsive ability. Understanding the mechanisms which support and catalyse this collective knowledge is vital for our communal adaptation.

### **1. Background / Literature Review**

Although rooted in the medieval guild system, The three-tiered hierarchy of *Apprentice, Journeyman and Master* endures in many modern forms and remains highly relevant to understanding workmanship and learning (Pye, 1968; Sennett, 2008; Korn, 2013; Ingold, 2013). Medieval workshops were an analogue of the patriarchal family; the language of craftsman, journeyman and so on refers to this patriarchal tradition (though no bias for/against any gender should be inferred). Collectively workshops formed guilds to harness and develop their 'knowledge capital' (Sennet 2008); Chartres Cathedral is described by Ingold (2013) as the embodiment of this collective knowledge, manifested in facades that embody subtle changes under sequential master masons. In this system, the apprentice would learn through hands-on instruction described as 'imitation', learning through copying, with a corresponding lack of differentiation between tasks (Sennett 2008). The apprentice and master were bonded by a reciprocal agreement in relation to the collectively held knowledge; this had a legal basis, but its real legitimacy lay in the level of skill demonstrated by the master. Apprenticeships ended with the presentation of a *chef oeuvre*, a work which demonstrated the

elemental skills of the profession and made manifest the direct instruction received.

To propagate this knowledge to other workshops, the apprentice was then expected to travel as a *journeyman*. Elaborate rituals of belonging developed by the guilds enabled travelling craftsmen to be accepted in new towns and cities. Arriving in a new workshop context, a journeyman was expected to show learning beyond 'brute imitation' (Sennett 2008); to do this, he had to critically negotiate of the original master-apprentice relationship through reflection. Progression from the journeyman stage was embodied by presenting a further artefact, the *chef oeuvre élevé*, after which a journeyman would be entitled to set up his own workshop. Successful navigation by the journeyman of a wider community of makers therefore illustrated the success of that community in collectively supporting adaptation. In becoming a master of his own workshop, the craftsman became responsible for upholding the fluidity of knowledge within it to support adaptation. Sennett, a former professional musician, describes how vital fluid knowledge is: when master luthier Antonio Stradivari failed to teach the secrets of his violins even to his sons this adaptative mechanism failed; 'his secrets died with him' (Sennett 2008). For Sennett, this is evidence of a wider shift towards the culture of artist as sole practitioner, a phenomenon which formed part of the decline of medieval workshops but also as craft practitioners being collective holders of making knowledge. The Apprentice-journeyman-master system, enabled by guilds, forms a community network able to sustain and adapt collective knowledge in practice. The character of this system, and the role within it played by apprentices, journeymen and masters was vital to both individual and communal adaptation.

The following section identifies key characteristics of each of these stages and reflects on their resonance in modern design education. It is then argued that these stages are states which are fluid, co-existent and work in dialogue with one another in the adaptive process.

## **2. Apprentice, Journeyman, Master: Characteristics and Resonance**

### *2.1 Apprenticeship*

For the apprentice, direct instruction is necessary because learning in a new environment is undifferentiated. This osmotic learning approach can be found throughout the spectrum of apprenticeship and across diverse geographical locations. Polynesian apprentice navigators learn how refracted swell patterns show the presence of unseen land from 'swell maps' made from a latticework of sticks (Gooley 2016). In first-year Architectural education in the US and elsewhere, students copy from Francis DK Ching's *Architectural Graphics* (1975), still the benchmark for the kinaesthetic act of orthographic hand drawing. 'Modern apprentices' in the UK are given direct instruction jointly by industrial and FE providers, though Fuller and Unwin (2003) have criticised the sharing of the master role for lacking coherency. The apprentice therefore seeks and requires direct, osmotic instruction to develop skills in a new context. Adaptation in the apprentice state therefore requires fluidity of knowledge enabled by a master, and this forms the currency of the bond between the master and apprentice. As undifferentiated learning defines apprenticeship, progression from this stage requires differentiation and an increasingly reflective capacity.

### *2.2 Journeyman*

If an apprenticeship requires a surrogate dependency on a Master, becoming a journeyman requires holding this relationship up to a critical light. For medieval goldsmiths, the *chef d'oeuvre* embodied both learning and the surrogate apprentice-master relationship, and its scrutiny by a panel of expert peers marks the beginning of a reflective journey (Sennett 2008).

Modern design education is strongly resonant of the apprentice-journeyman experience. In the *crit* system of assessment in schools of architecture and design, students present their work for critical review by a panel of tutors in

front of their peers. This modular studio structure, typified by the Architectural Association unit system, is an analogue of the Beaux Arts system of the 19<sup>th</sup> Century Paris (Garric 2017). As with the medieval guild, students apply as external candidates for acceptance to an atelier, present final projects as *chefs d'oeuvre*; and a panel of experts approves progression to the next level. Students in design schools apply using knowledge as a currency, often in the form of a portfolio. As with the medieval journeyman, the explicit aim for the modern design student is to gain as much knowledge as possible, and to propagate this knowledge in dialogue with others to achieve 'mastery' of a subject. From the polar perspective of the apprentice-master relationship, the medieval journeyman sees this trajectory as leaving one status and aiming for another, with knowledge the proof of success. The medieval journeyman offers his knowledge as a currency which results in pollination of collectively held knowledge, a model emulated by modern design education and academia more widely.

This fluidity of knowledge relies on a confidence in process. Without community agreement on standards for exchange, the medieval workshop would be unable to replenish itself and would quickly stagnate like the workshop of Stradivari (Sennett 2008). A robust apprenticeship and guild system gave confidence in the pre-modern era, and modern students in higher education expect that their degree certificate functions in a similar way. However, the authors' experience as a programme leader suggests that employers frequently value the craft qualities of a portfolio of creative work at least as highly as a degree certificate. With a portfolio, the graduate can travel to new contexts and seek work, just as the medieval apprentice benefitted from the medieval craft guild. This process is more than an echo of medieval workshop system; the importance of the portfolio is a reaffirmation of the master's status as upholder of this process of adaptation.

### *2.3 Master*

The master appears to offer complete certainty, but only from the perspective of the apprentice, who displays undifferentiated learning. For the apprentice, subjective decisions can appear certain when filtered through the lens of direct

osmotic instruction. The master therefore must choose to present as certain those things which are not absolute, but in which the master has sufficient certainty.

In distinguishing between confidence and certainty – degrees of knowing - a master also must engage with degrees of not-knowing. Much of the catalyst for an apprentice becoming a journeyman comes from a realisation that the knowledge of the master is not absolute; that there are other ways of doing things, and hence a compelling need to discover and appraise these in turn. But whereas the journeyman aims for a complete certainty of knowledge – to oneself and to others – the master acknowledges that learning is never completed. Csikszentmihalyi (1996) supports this, arguing that because *making* induces immersive learning through 'flow' it is inseparable from continuous improvement. Making is widely recognized to be an act of profound learning and connection to tacit knowledge (Adamson 2009; Ingold 2013) suggesting that to engage in any craft meaningfully is to appreciate the impossibility of being 'complete' in one's knowledge and skill. David Pye goes further and argues that the 'workmanship of risk' is inherently superior to work which stays within known parameters (Pye 1968). In professional workshop environments a workshop master knows that risk is an inherent part of making; this is what separates custom made artefacts from off-the-shelf counterparts and justifies the additional expenditure. From the acknowledgement of risk follows an acceptance that uncertainty exists; the master therefore must embrace and understand uncertainty.

The complex role of master resonates throughout design education and practice, often placing direct instruction under scrutiny. The design educator must reconcile being a rule-maker who encourages questioning of those same rules. The master must also understand when something is enough; in addition to embracing uncertainty, imperfection must be accepted at least in the current cycle of work; the trap of perfectionism must be avoided. Sennett describes perfectionism as a stopping of the clock, the removal of the possibility of improvement or change (Sennett 2008). The state of mastery requires understanding that perfection is part of a continuum, a longitudinal practice of shared knowledge founded in the common currency of making.

Each phase of the traditional craft apprentice system has characteristics and factors which either support or obstruct the adaptive learning process. The apprentice displays osmotic, undifferentiated learning and seeks direct instruction and reassurance. The journeyman learns through a dialogic exchange between his or her own knowledge and that of others, requiring an empathetic community. The master achieves a degree of peace with not-knowing but cultivates a confidence that a solution will be found through trust in dialogue with the first two.

### **3. *Fluid, Co-Existent States***

Identifying the characteristics and needs of the three phases of craft education - apprentice, journeyman, and master - we can interpret them not as sequential phases but as fluid *states* which co-exist and work in dialogue with each other. Using this as a theoretical framework, we can see that the dialogic exchange which characterises adaptation is therefore possible at any point given the recognition and support.

In design education, it is tempting to draw comparison between the apprentice - journeyman transition and the school - university threshold. There are several parallels - experienced university admissions tutors look for diverse experience in cohorts, just as a master might look for diverse intake of journeymen to enrich their workshop practice. In addition, the direct instruction methods familiar to the apprentice are common in secondary schools in the UK. Transition to a university environment also entails not only a literal journey, but a challenging transition to a self-reflective learning style, a characteristic strongly identifiable with the journeyman.

However, aligning secondary education to apprenticeship would be an oversimplification. The qualities exhibited by first year undergraduate students are *also* reminiscent of the apprentice-state. First year undergraduate students require disproportionate levels of direct instruction; they seek more reassurance than other years and learn osmotically. Undergraduate study

follows a similar duration to the apprenticeship – four years in Scotland – and concludes with presentation of a major project to a panel made up of experienced industry figures. In professional practice, or postgraduate study, we again recognise the characteristics of the apprentice. The Interior and Spatial Design studio at the author's home institution exhibits multiple states of craft education; as in the stages of craft education, each project completion enables progression into the next. Like the workshop environment, a culture of open dialogic exchange proved beneficial to student development, in particular within the rapidly changing COVID-19 context.

Adaptation in craft apprenticeship linear progression occurs through physical relocation, but in the climate emergency we find ourselves adjacent to an environment. As an apprentice beginning work as a journeyman is confronted with the shortfalls of previous ways of working, we are suddenly aware of the inadequacies of our own systems of teaching, communication, and practice. All three states of craft education are recognisable in our own adaptive response: we can see the apprentice-state in our need for instruction and support, yet as researchers and practitioners we have a journeyman's desire to apply and cross-pollinate our existing skillset. Simultaneously, we need a master's acceptance of not knowing the answer immediately but having confidence that solutions can be found through open dialogue within a community of practice. Identifying the three states of craft education therefore allows us to recognise that our own states are fluid and co-existent when faced with the need for adaptation.

The co-existence of multiple states is at odds with the sequential nature of skill development and undermines its authority as a model for learning. It might be argued that these states are not-co-existent but constantly fluctuating – just as changing circumstances or market conditions might cause a Medieval master to become a journeyman. But even if a master becomes an apprentice in a new context, he does not shed the knowledge which underpins previous proficiency; the two conditions co-exist. Adaptation requires these states to be in dialogue with one another; direct instruction in a new context is overlaid with existing knowledge which informs and enriches it. When we identify the states of craft apprenticeship in communities of practice, these states are fluid,



co-existent and work in dialogue with each other. Dialogue underpins adaptation because each state is in a reciprocal relationship with the others; the context in which this takes exchange takes place is therefore of utmost importance.

#### **4. Community Dialogue and Adaptation**

This section demonstrates how an environment that fosters open dialogue within communities of practice can act as a catalyst for adaptation. Two or more states are brought into dialogue with one another when there is an adaptive need. In a sequential craft apprenticeship, we see this dialogue when an apprentice arrives at the workshop of a master; when the apprentice graduates into a journeyman, able to travel between other workshops; and when setting up his or her own workshop as a master. These experiences are unified by a need to work together with others, and the nature of this exchange is crucial to the success of adaptation.

##### **4.1 Dialogic Exchange and Conviviality**

All workshop practitioners benefit from becoming reciprocally aware of others. This mutually beneficial state is what Richard Sennett calls 'dialogic' rather than 'dialectic' exchange; it functions through dialogue, and its goal is not a Hegelian synthesis but a greater understanding and appreciation of one's own approach by better understanding others (Sennett 2012, Wheat 2012, Davis et al 2019). The community is critical; as in successful apprenticeship, an empathetic workshop culture is a prerequisite for such exchanges, because seeking to establish a 'winner' or zero-sum outcome undermines open dialogue between makers. For both apprentice- and journey- states to thrive, the workshop and education studio must become convivial tools, with dialogue between users open for all participants. Both the apprentice-state and journey-state therefore need dialogic, open communities of practice to thrive and progress.

Progression beyond the apprenticeship condition requires openness and dialogue. It is predicated on developing a critical awareness of both one's own practice and the practice of others. Moving beyond the apprentice state therefore needs a community which reduces the perceived risk of critical reflection; one which displays empathy and the capacity to support individual agency rather than deferral of responsibility. Social philosopher and priest Ivan Illich described these as *convivial* qualities, where conviviality exists in opposition to industrial productivity, and tools are intrinsic to social relationships (Illich, 1973: 11, 21). Defining tools very broadly from basic hardware to large productive systems, Illich describes a social relation with tools as being critical in one's own self-image: he contrasts 'tools for conviviality' – 'those which give each person who uses them the greatest opportunity to enrich the environment with the fruits of his or her vision' (1973:21) with industrial tools, most of which 'cannot be used in a convivial fashion'. From this viewpoint, we might describe a community of practice which displays empathetic qualities as a 'tool for conviviality', meeting both Illich's definition as a large productive system that empowers individuals and Sennett's definition of dialogic engagement.

## **5. Catalysing Adaptation in the Student Community**

This section explores two case studies in design education which allowed students to inhabit the three states in dialogue with one another as a mechanism for adaptation. In the first, a mentorship system increased confidence in the apprentice state and fostered reflection amongst those more senior. In the second, a compressed timescale was used to catalyse dialogic exchange and overcome social barriers to achieve communal knowledge exchange.

### **5.1 Dialogue as a catalyst for community adaptation: Interior Design Studio Mentor Scheme**

To catalyse adaptation to the post-lockdown physical studio environment, the author and programme team implemented a system of mentorship for all

students on the BDes (Hons) Interior and Spatial Design programme at Edinburgh Napier University in September 2021. The mentoring scheme was designed to foster dialogic exchange, to support adaptation by sharing knowledge and rebuilding a sense of conviviality within the programme (Illich 1973). Building from experience of colleagues in Nursing and Engineering, the scheme was made an essential part of the programme, with feedback being collected through self-reflection sheets submitted alongside the final portfolio review. Every fourth-year student was given a second-year student to mentor, and every third-year student a first year; allocation was at random but those with common experience of direct entry from another programme were matched. There was no stipulation for the meeting format beyond at least one face-to-face coffee or similar to establish how the relationship might be of professional benefit.

As we saw in the medieval workshop, the currency of knowledge is a means of earning authority and hence developing confidence in the self; seeking assistance and receiving it builds confidence that communal knowledge exists and could be drawn on when needed. In this way a dialogue between the states of master and apprentice was introduced, with the effect of building confidence in the fluid nature of knowledge. The programme team aimed specifically hoped this confidence would counter the uncertainty which inhibited students from learning effectively on return to physical learning. Participation was good; of the 8 in 10 students who managed to meet with their mentor at least once, 90% reported at least some positive benefit in terms of confidence. Respondents felt that the mentor scheme '*created more confidence for new students... encouraged self-improvement and motivation*' and '*enabled [students] to discover things from different perspectives [and] different ways of thinking*' (student feedback from trimester 1 self-reflection, December 2021).

Encouraging open, dialectic exchange benefits confidence in the apprentice-state and encourages the reflective character of the journeyman-state in design education. By making design studios and systems of tutorial support conviviality, we can foster the open culture of collective knowledge which

functioned in medieval craft workshops and persists today in highly skilled workplaces.

## 5.2 Time Compression as a Catalyst for Community Adaptation: Student workshop in ZhengZhou, China 2019

Time compression can stimulate dialogue between fluid states and catalyse adaptation. For a one-week workshop with 98 design students in ZhengZhou, China, the author and colleagues developed intense design tasks in which all participants transformed everyday artefacts into the function of the neighbouring artefact. The 'working quickly' approach (Firth et al 2016) was employed to break the inertia and need for direct instruction normally displayed by first and second-year students. Time compression inverted the default relationship of student as apprentice needing direct instruction from visiting educators before proceeding. In a new temporal context, the participants became journeymen, pollinating knowledge in small 'workshop' groups of 10 participants. The outputs of these workshops were then aggregated into one long modular piece of furniture (see illustration), a linear chef d'oeuvre made over the period of single week. The outcome from this process was a public procession of work which was displayed publicly to the wider university in the manner of a guild. Compression of time in this instance was able to catalyse adaptation because urgency induced states of being normally inhibited by social or professional hierarchies.

This time-compressed approach also fomented reflection in the participants, which was captured using a short student questionnaire about each item. Respondents described a new fluidity of knowledge: '*we feel different academic thinking*'; and described the benefit of making to collective knowledge and community; '*the tacit understanding and clear division of labour [created] the team atmosphere*' (student participant 2019). Overall, the compression of time heightened the importance of conviviality (Illich 1973) and dialogic exchange (Sennett 2012): '*We learned that teams should co-operate with each other. To shorten the time and improve the efficiency, it is necessary to improve the division of labour between the internal departments. When everybody adds fuel, the flames rise high.*' (Student participant 2019)



**Figure 1.** A drawer becomes a plant pot, students at ZZULI Environmental Design programme, Zhengzhou China 2019) (Image author)



**Figure 2.** A plant pot becomes a bookshelf, students at ZZULI Environmental Design programme, Zhengzhou China 2019) (Image author)



**Figure 3.** A file holder becomes a light, students at ZZULI Environmental Design programme, Zhengzhou China 2019) (Image author)



**Figure 4.** A desk fan becomes a stool,  
students at ZZULI Environmental Design programme,  
Zhengzhou China 2019) (Image author)





**Figure 5.** Collective linear furniture assembly: catalysing dialogic exchange to build community capital, students at ZZULI Environmental Design programme, Zhengzhou China 2019) (Image author).

Workshop designed and run collaboratively by Paul Kerlaff and Antonia Cairns

Despite the significant technological and cultural differences between medieval craft and modern design education, all three states of craft apprenticeship are evident in both case studies. Addressing the osmotic, undifferentiated learning style of the apprentice was a priority in the Zhengzhou case study. Younger students, particularly those in the Edinburgh mentorship scheme sought direct instruction and reassurance. The journeyman state was catalysed by introducing a dialogic exchange through teamwork and mentoring respectively. Each student found that exchange between his or her own knowledge and that of others requires an empathetic community. Participants in both experienced some of the qualities of the master - a degree of peace with not-knowing but a confidence that a solution will be found through trust in dialogue.

## **Conclusion**

Awareness of and dialogue between the three states of apprenticeship, journeyman and master is a key mechanism for adaptation. Characteristics of the three states show that they are fluid, coexistent and work with one other. In acknowledging the co-existence of these states, we can induce and support dialogue to catalyse adaptation. Because both external and internal dialogues require civility, we need to foster communities of practice which are convivial and support dialogic exchange to enable us to adapt successfully.

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