THE UNSTABLE CURRENCY OF ARCHITECTURAL DRAWING

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Introduction

It is tempting and provocatively simple to make a metaphoric parallel between the critical condition of our society's financial instruments and the status of architectural drawing. To borrow Marx's phrase[i] and apply it to these different forms of currency: 'all that is solid melts into air'. We use increasingly suspect currencies with an exchange value destablised by the open-source and de-professionalising nature of information technology and we find the connection between physical matter and its representation becoming ever more tenuous until eventually - in our drawn and financial currencies - we are left bankrupt. For the teacher of architectural design this raises the question of how architectural drawing should be taught and to what end. Arguably drawing has been the universal currency of modern architectural culture and an education in this culture will be fundamentally incomplete without a thorough understanding of the history, conventions and practice of architectural drawing. But the digital modeling of buildings is undermining the traditional place of drawing as a design tool; and the model of 'design proposition communicated by representation' is being usurped by a method that replaces the intermediary role of drawing with the offer of a digitally simulated form of built reality. In this environment the learning and teaching of architectural drawing would seem to be increasingly problematic – an enquiry that looks to develop cultural capital in a drawn currency that remains socially valorised but which is under reconstruction by the impetus from industry and academia towards digital technology. This paper seeks to understand this question by analysing the 'culture of learning'[ii] architectural drawing where, after Pierre Bourdieu,[iii] this is conceived as a *field* of relationships between the objective social conditions that constrain the drawing Studio and the *habitus* with which students negotiate those conditions. In seeking to understand this learning culture of drawing we can then develop a clearer sense of the character of contemporary architecture drawing as a conduit for architectural culture and what this learning culture might tell us about the continued relevance, if there is any, of teaching students to draw.

Drawing as an Instrument of Architectural Culture

Before exploring this culture of learning we should first understand the nature of architectural drawing and its privileged place as the principal instrument by which architectural culture has traditionally been made and regulated. Here we might argue that drawing has performed three instrumental functions – as the creative generator of intellectual order, as the medium of translation for architectural artefacts, and as the instrument by which the cultural system of architectural production is controlled.

The traditional practice of architectural drawing, as a manual craft communicated in a language of conventional two and three dimensional projections[iv] - incorporates a deeper definition of architectural drawing as essential to the formulation of architectural ideas. In Sir Peter Cook's words this is the role of drawing as the: 'the motive force of architecture'.[v] Another distinguished academic of the same generation, Simon Unwin, reinforces this argument by defining architectural drawing not as the production of artefacts but as a process of:

> **… manual-intellectual activity. […] the knowledge and understanding 'inhabiting' the performative interchange that is underway while a mind is engaged in drawing.[vi]**

In both these quotations we can see drawing as an instrument of intellectual investigation essential for the translation of ideas into architectural form. Each statement also encapsulates a key aspect of professional architectural culture that drawing has valorised over the twentieth century. Cook's phrase, and the book for which it provides the title, places drawing as central to the development of

twentieth century architecture as an avant-garde practice where the process of drawing makes 'paper-architecture' of architectural value in its own right. While Unwin looks to define embodied architectural knowledge, understood through the practice of drawing and expressed in drawing, as the architect's principal – and somewhat magical – currency during the twentieth century. Both views would also support Robin Evan's seminal analysis of "[d]rawing's hegemony over the architectural object" as creator of artistic subject-matter that "will exist after the drawing, not before it".[vii]

Originally published in 1986, Evans' essay *Translations from Drawing to Building* was perhaps written at the culmination of drawing's traditionally instrumental role in the creation of architectural culture. Writing 25 years later, and in some respects in reaction to digital design methods, Marco Frascari defends drawing as instrumental in the creation of architectural meaning and perhaps, in his definition of the hand drawn '*fattura*', a 'facture' with the auratic power to influence the making of buildings. Here he argues more explicitly that architecture and drawing are indivisible. For him: "Architecture is not a work of art, but the art that makes the work"[viii] and this architectural art is hand-drawn. Frascari also links drawing explicitly to the formulation of the *habitus* by which architecture is practiced. In his reading of Bourdieu's *Postface to Panofsky's Gothic Architecture and Scholasticism*[ix] Frascari stresses Bourdieu's analysis of drawing as the development of a regulated and transposable disposition developed through practice.[x] By extension, through Bourdieu, it is one step further to position drawing as social instrument by which the translation into architectural culture occurs.

Architectural Drawing as Late Twentieth Cultural Currency

Applying Bourdieu's mapping of the 'field of cultural production' in *The Rules of Art*,[xi] Helena Webster[xii] makes clear the position of architecture as a contemporary cultural system. The architectural profession has developed an autonomous field of cultural power that substantiates itself with its own internal market for symbolic goods and within this professional field fractional groups of 'distinction' coalesce around poles of economic and cultural capital. One can understand the currency of drawings as a central expression of these groupings. Within the fractional field of small-scale, restricted production the RIBA President's Medals publish ''art for art's sake' or production for producers''[xiii] that are high in cultural but low in initial economic capital, but with high symbolic value holding the promise of future financial reward. Whereas the fractional field of large-scale production meets the immediate needs of the external market with high short-term profit of little symbolic value – here one thinks of the computer-generated view verifiable for purposes of planning submission. Thus both these fractions of the field of architectural culture are expressed in distinct approaches to drawing and one can read the ongoing revolution in computer-aided design as playing out the creation of these distinct fractional fields. Bourdieu's study of the social impact of an earlier visual technology - mid-1960s French camera clubs[xiv] experimenting with a newly accessible technology - showed how 'photographic practices were a 'register' of social position'[xv]. In this development of distinction the game of pure aesthetics is played by those with more cultural, economic and social capital while a resource-bound aesthetic is pursued by those with less symbolic capital[xvi]. If we substitute digital design practices for Bourdieu's camera clubs one might see parametricism as the pure expression social distinction and BIMM as its resource-bound relation.

The architectural drawing as artefact can therefore be seen as an expression of social distinction within the cultural field of architecture and practices of drawing are driven by the forms of capital accumulated within this field. But it is in the learning of it that drawing becomes the social instrument by which the translation into architectural culture is affected. There is nothing more mysterious within Reyner Banham's Black Box of architectural education[xvii] than the learning of drawing and as we have seen from Garry Stevens'[xviii] and Helena Webster's[xix] 'Bourdivin' analyses the development of the architecture student is a physical embodiment of the cultures and attitudes of the architectural profession. It is clear that Unwin's 'manual-intellectual activity' of drawing must be central to this process of physical embodiment and it is also clear that acts of symbolic violence are enacted to reinforce this process – the public burning of student drawings for example, or the enactment by a tutor of self-induced wretching when viewing a first year's first attempted drawing[xx].

So, how do students negotiate this treacherous cultural field?

The Culture of Learning Drawing

Building on Bourdieu, Hodkinson, Biesta and James' theorise a learning culture[xxi] as a space formed at the inter-leaving of a number of related *fields*, where boundaries of the learning culture do not encompass the boundaries of its constituent cultural *fields* and where the *fields* themselves are changeable over time, both by their very nature and due to the possibility of external intervention. In the learning culture of architectural drawing we can identify these inter-leaved objective *fields* as the institutional/professional field and the institutional/academic – these two playing out issues of symbolic value we have discussed above – these are joined by a financially-driven *field* of professional practice, itself influenced by globalizing and governmental *fields*. And as this is a field relationship – a force field if you will - the introduction of students' subjective agency, their *habitus*, revises this field making the culture of learning drawing a shifting interplay of objective and social conditions. The student of architectural drawing is an active agent in this culture of learning; their *habitus* is formed by the social system of architectural culture, forms the culture and is the viewpoint from which the future cultural meaning of architecture is proposed. If then, as argued above, architectural drawing can been seen as indivisible from architectural culture, but architectural drawing is now an increasingly unstable currency undermined by digital simulation, what does the culture of learning drawing tell us about the contemporary field of architectural production?

In answering this question the culture of learning computer assisted drawing is central. As a full anthropological survey has not been carried out on this question, at this point in time the author can only offer his own observations of the student *habitus* as it negotiates the learning culture of architecture drawing. Firstly this *habitus* is negotiating an institutional field that is fractioned into an employment market valuing CAD (and soon BIMM) practice as a means of enhancing economic value and a professional body torn between the protection of its cultural capital and the fulfillment of practice's requirements that architectural schools train CAD/BIMM literate prospective employees. Meanwhile in academia Evan's hegemony of the drawing has fragmented. Scholarly responses to this range from the re-assertion of the 'critical creativity' of the hand-drawn[xxii] and the continued need for hand drawing in practice[xxiii] to assertions of the digital tectonic[xxiv]. One is tempted to categorise the literature around this topic as a chronological reaction to the increasing prevalence of 'CAD'. In the early to mid-1990s, academic papers that tentatively investigate the introduction of CAD to schools of architecture; a millennial group that questions the qualitative effects CAD has on design teaching; and contemporary scholarship that is polarised for and against the digital, now with a new strand that tentatively investigate the introduction of BIMM to schools of architecture. Influencing all these fields is the globalising effect of the network society where generic geographically-specific labour is replaced by high-skilled self-programmable labour non-specific to place. As Brown and Lauder[xxv] have shown this places a further objective pressure on this field as students realise they compete for this form of specialized work within a global market.

And each student *habitus* negotiates this field with its own accumulation of economic, social and cultural capital. Some already embody the '*architect-habitus'* - in the author's own fictitious analogy:

> *The successful architect's son seeks advice from his father's office on the most appropriate rendering package for his student-work and a new 'Mac' is bought through the Practice's books ready for the boy's next university assignment.*

The gendering of this analogy is intended and here, put crudely, *the boy with the biggest machine and the social wherewithal to exploit it gets the best degree* – and the job that financially rewards this accumulation of symbolic capital. At another extreme, students reject digital production and seek distinction through many architectural schools' *'livre du jour'* Juhani Pallasmaa's *The Thinking Hand: existential and embodied wisdom in architecture*[xxvi]. The title suffix of which seemingly acknowledges a search for a traditional form cultural capital protected from the destablised currencies that architects now deal in.

Conclusion: Drawing as a Pedagogic Instrument?

From this first glance the culture of learning drawing seems to be trading in a currency that no longer seems to fully recognise its own value. Exchange rates are faulty, with a range of student *habitus* assigning differing symbolic values to various qualities of architectural drawing and with these values contested by different forms of drawn praxes. How then might we act as teachers in this learning culture? A first step might be to parallel Helena Webster's explanation of Bourdieu's relevance, that, for architects and teachers of drawing we act 'reflexively' recognising our position within a system of cultural production[xxvii]. A second step may then be to shift one's approach to the teaching of drawing from an approach that employs drawing as the principal instrument by which architectural culture is made and regulated to an approach where drawing is introduced as the tool with which aspects of architectural pedagogy are explored – always mindful that in architecture drawing is always more than that, one might say dangerously so.

[i] Through Marshall Berman, 1983. "*All That is Solid Melts into Air: the experience of modernity"*. London: Verso.

[ii] James, D. and Biesta, G., (ed.) "*Improving Learning Cultures in Further Education".* London: Routledge.

[iii] Pierre Bourdieu, 1971. "Intellectual Field and Creative Project". *Social Science Information* (8)2, p. 89-119.

[iv] The conventions of plan, section, elevation, sciagraphy, axonometric, perspective, etc. that I teach to first year students.

[v] Peter Cook, 2008. "*Drawing: the motive force of architecture"*. Chichester: Wiley.

[vi] Simon Unwin, 2007. "Analysing Architecture through Drawing". *Building Research & Information* 35(1), p. 102.

[vii] Robin Evans, 1996. "Translations from Drawing to Building". From *Translations from Drawing to Building and other essays*. London: Architectural Association, p. 165.

[viii] Marco Frascari, 2011. "*Eleven Exercises in the Art of Architectural Drawing: slow food for the architect's imagination"*. London: Routledge, pp. 10-11.

[ix] In Bruce Holsinger, 2005. "Appendix II: Postface to Erwin Panofsky, Gothic Architecture and Scholasticism – Pierre Bourdieu". From *The Premodern Condition: medievalism and the making of theory*. Chicago: University of Chicago Press, 221-242.

[x] Marco Frascari, *op. cit*., pp. 40-41.

[xi] Pierre Bourdieu, 1996. "*The Rules of Art: genesis and structure of the literary field"*, translated by Susan Emanuel. Cambridge: Polity Press.

[xii] Helena Webster, 2011. "*Bourdieu for Architects"*. London: Routledge, pp. 95-100.

[xiii] Ibid, p. 97.

[xiv] Pierre Bourdieu, 1989, "*Photography: a middle-brow art"*, translated by S. Whiteside. Cambridge: Polity Press.

[xv] Helena Webster, *op cit*., p. 40.

[xvi] Ibid.

[xvii] Reyner Banham, 1990. "A Black Box: the secret profession of architecture". In Reyner Banham, 1996. *A Critic Writes*. Berkeley: University of California Press.

[xviii] Garry Stevens, 1995. "Struggle in the Studio: a Bourdivin look at architectural pedagogy". *Journal of Architectural Education* 49(2), p. 105-122.

[xix] Helena Webster, 2005. "The Architectural Review: ritual, acculturation and reproduction in architectural education". *Arts and Humanities in Higher Education* 4(3), pp. 265-282.

[xx] Recent anecdotal evidence.

[xxi] Hodkinson, P., Biesta, G. and James, D., 2007. "Learning Cultures and a Cultural Theory of Learning". In James, D. and Biesta, G., *op cit*., pp. 25-28.

[xxii] Deanna Petherbridge, 2002. " Subverting the silicon: a critique of drawing in the computer age". *UME* 14, p. 5.

[xxiii] Brian Edwards, 2005. "The Use of Drawing in Architectural Design: some recent

experiences from UK practice". *Architectural Research Quarterly* 9(3/4), pp. 273-286.

[xxiv] Neil Leach, David Turnbull and Chris Williams, 2004. "*Digital Tectonics"*. Chichester: Wiley.

[xxv] Phillip Brown and Hugh Lauder, 1996. "*Education, Globalization and Economic Development"*. Journal of Education Policy 11(1), p. 1-25.

[xxvi] Juhani Pallasmaa, 2009. *"The Thinking Hand: existential and embodied wisdom in architecture".* Chichester: Wiley.

[xxvii] Helena Webster, *op cit*., p. 107.