(Digital) tools as professional and generational identity badges in the Chinese creative industries

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Abstract

Animators, architects, designers and others active in the Chinese creative industries are expert users of tools both analogue and digital. Performances of expert tool use (the wearing of *professional identity badges)* are strategic ways of signalling *creativity* understood as sets of skills and character traits essential for attracting work projects but also for professional identity formation. Analogue tools are generally associated with creative openness and fluidity whereas digital tools are discursively constructed as a technological other to the analogue. 'Older' creatives (born before 1980) tend to apply some of the media-inflected discourse around the *balinghou* generation (born 1980-1989) to their younger competitors, including an assumed affinity with digital media and technologies (the pinning on of a *generational identity badge*). Such generational assumptions can have the effect of reinforcing

project hierarchies and denying expert users of digital tools their claims to creativity.

Keywords

Animation, architecture, balinghou, China, creative industries, creativity, design, generational differences, sketches, tools

Introduction

Based on interviews with animators, graphic designers and other creative workers, this article explores ‘digital expertise’ in the specific context of the Chinese creative industries, 2012-2014. It highlights how ‘the digital’ and ‘expertise’ are concepts shaped by history and practice, and by their interconnections with other concepts. Digital tools for creative work are understood in contrast to analogue tools and evaluated for their usefulness by creatives themselves, by their potential clients and by their peers and competitors.

China’s recent history is one of change, including significant technological advances. Digital tools arrived relatively late but then spread rapidly, accentuating generational differences found in more modest versions in the so-called West (Liboriussen, forthcoming). Competition for projects and for the right to lead them is fierce, and since creative leadership can be used to

legitimise overall leadership of projects, the discursive power to decide what counts as the most ‘creative’ tools and technologies becomes crucial. If an ink brush is discursively constructed as inherently more ‘creative’ than a piece of software, the expert ink brush user is posed for project leadership. If the younger generation is discursively constructed to have affinity with digital tools, but not with analogue tools, the ‘older’ generation might be able to legitimise overall leadership with reference to expert use of analogue tools. ‘Digital expertise’ in the Chinese creative industries is thus situated within a complex interplay of professional competition, generational differences and links to other concepts such as ‘creativity’.

The next section introduces the interviews followed by sections on China’s so-called *balinghou* generation and core terminology (*Expertise and creativity*). The following two sections then explore how creativity is performed through expert use of both analogue and digital tools. The reception of such performance is consider in regards to two audiences, clients and peer competitors; the two groups are given a section each. The interviewees contrast digital tools with analogue tools, with digital tools coming out of the comparison rather poorly (this is dealt with in the section titled *Sketchbook vs iPad)*, but their evaluations seem influenced by a focus on the early, idea-generating rather then the later, elaborative phases of creative projects (see the section on

Creativity and technology). In the penultimate section I suggest that the concepts *professional identity badge* and *generational identity badge* are useful for analysing how tools are 'worn' for both strategic and identity-shaping purposes. The concluding section highlights how digital expertise holds little potential for gaining managerial and supervisory powers in the Chinese creative industries.

The empirical material

The nine interviews providing the basis for this article were conducted April 2012 to January 2014 and motivated by interest in the role of tools and technologies in creative work, and in how that role is changing with digitalisation. It was assumed that creative workers are - to some extent and in their own, specific ways - expert users of certain tools and technologies. From the outset, an oil painter was thought of as an expert user of brushes, a digital artist as an expert user of software etc. The approach was informed by Grounded Theory's ambition of going beyond description and pointing towards useful concepts informed by, rather than verified by, empirical material (Glaser and Strauss, 1967).

The interviewees are all successful in their various fields. They collaborate with nationally known musicians and architects, own their own businesses, teach at the most prestigious art and design schools in China and

have solved design problems of national importance, for example, the design of the medals awarded at the 2008 Beijing Olympics and the graphic identity of a national museum. Access to the interviewees was gained in various ways. I have known a couple of them personally or professionally for years. Others were contacted via snowballing. Most of them agreed to be interviewed thanks to a Chinese contact person who is a professional artist.

Following Alvesson and Kärreman (2011), the interviews are referred to as ‘empirical material’ rather than ‘data’ to highlight their constructed nature. There is much debate over the status of interview material (for an overview, see Silverman, 2011). In this particular case, a constructionist stance is a prerequisite for seeing any value in the interviews. I do not speak Mandarin, and only two of my interviewees were comfortable being interviewed in English. This added a professional interpreter to the interview situation. On top of this, my artist contact person would often be present during the interviews and find it impossible, or at least very rude, not to make conversation with the interviewee when I was preoccupied listening to the interpreter. This sometimes opened unexpected but highly illuminating lines of conversation. The interviews were very loosely shaped by a guide centring on the opening themes of place (to the extent possible, I conducted interviews in the work places of my interviewees), co-operation, sketching, training and tools. The interview guide was influenced

by the creativity literature, in particular Csikszentmihalyi's (1996) identification of five phases in the creative process; I return to the five-phase model later.

Coding took place as soon as the interviews had been transcribed and translated into English. Codes include management, the digital and freedom. Close attention to the use of 'I' and 'we' proved particularly productive for micro-analysis. Interviewees tended to generalise their own creative practices and modes of thought with a 'we' defined through institutionalised training and what I decided to label 'generation'. This led to a degree of theoretical sampling of subsequent interviewees, that is, the Grounded Theory practice of allowing sampling to be informed by ongoing analysis (Corbin and Strauss, 2008: chapter 7). Interviewees VII and IX (see table 1 below) were thus chosen because they both have a parent who is also a professional in the Chinese creative industries, giving the interviewees a unique perspective on generational differences.

Number	Self-assigned title	Year of birth
I	Animator	1971
II	New media artist	1981 B
III	Graphic designer	1983 B

IV	Designer	1969
V	Animator	1971
VI	Designer	1967
VII	Architect	1982 B *
VIII	Creative director	1982 B
IX	Sculptor	1978 *

Table 1: List of interviewees. B denotes *balinghou*, an asterisk that the interview has a parent who is also a professional creative.

The balinghou

The rapid changes in Chinese society since the beginnings of the so-called *Reform and Opening-up* period (1978-) have led to widespread and extensive soul-searching in Chinese society: What is left of the radical and communal aspirations of the Communist era? Perhaps more importantly, what is left of Confucian virtues such as filial piety? Has consumerism eroded traditional, 'Chinese' values? Discussion often centres on the generation who grew up in the 1980s, the *balinghou* - ba (eight) ling (zero) hou (after), meaning born 1980-1989 - a generation that can be envied, chastised and pitied,

depending on one's point of view, for embodying the recent changes in Chinese society (see Liu, 2011).

Roughly half of the interviewees (II, III, VII, VIII) are balinghou who grew up with computers (I explore the theme of generational difference in more detail elsewhere; see Liboriussen, forthcoming). In contrast to this, the older interviewees did not have any contact with digital technology during their formative years; even interviewees who graduated from China's very best design schools as late the early 1990s did not encounter computers during their institutional training. Nevertheless, the older generation benefitted immensely from their historical timing. In the 1990s, they stood ready as the booming economy brought about a much stronger interest in design and art. Today, members of the older generation are to be found as company owners, leaders on projects and teachers at prestigious institutions. The balinghou find themselves in a much more competitive situation. The older generation operated in a labour market where demand exceeded supply. Today, competition for projects is fierce. The balinghou do, however, have a unique selling point: their perceived affinity with digital technology. All the 'older' interviewees used the balinghou as a technologically defined generational other against which they understood themselves (the older generation did not play any significant part in balinghou reflection on identity). In the eyes of the older,

the balinghou are expert users of computers. This expertise is acknowledged but rarely valued by the older generation, and strong attempts are made to discursively disconnect digital expertise from creativity. These attempts resonate with and are enhanced by the wider discussion about the balinghou.

Expertise and creativity

The notion of a Chinese balinghou who grew up with ICTs (information and communications technologies) has a Western counterpart in Prensky's (2001) *digital native*. What makes the two concepts so similar is Prensky's (2001) premise that '[a] really big *discontinuity* has taken place. One might even call it a "singularity" – an event which changes things so fundamentally that there is absolutely no going back' (1, emphasis in the original). A similar sense of radical and irreversible change underlies the concept of the balinghou. Although Prensky (2001) has been criticised for lacking the empirical evidence to back up his grand claims about '"native speakers" of the digital language of computers, video games and the Internet' (1) (for an overview of such criticism, see Bassett et al. 2013: 18), the concept of the digital native has influenced not only public discourse but also UK education policy (Bennett et al. 2008). This point will prove highly relevant in the current context as well: even if the idea of a digital native balinghou generation is not supported by empirical data, the idea in itself is influential.

Digital natives possess what Basset at al. (2013) call ‘natural expertise’ (21) with ICTs. As part of their scoping study of expertise, Basset et al. contrast this approach to expertise with models where expertise is thought of in relation to literacy and competency, models partly motivated by the political goal of demystifying expert use of digital media. Expertise becomes potentially available to all when conceptualised as part of a fluid continuum of competency or literacy rather than as an entirely separate category. The debate over whether to think ICT expertise as something separate and exclusive or as part of a continuum has parallels in the creativity literature. The Western concept of creativity has roots in the Judeo-Christian figure of the supreme being making things out of thin air, an image lingering in the Romantic myth of the lone, creative genius (McIntyre, 2012). But is creativity the domain of a few ‘chosen’ individuals with special, inborn skills - naturally privileged experts on beauty and the human condition - or is creativity a fundamental capacity characteristic of the human being as such? The latter position is taken by Csikszentmihalyi (1996) who distinguishes between *little-c* creativity, which enriches the everyday lives of amateurs and professionals alike, and *big-C* Creativity ‘that changes some aspect of the culture’ (27) and is primarily practiced by professionals. From the psychologist’s point of view, little-c and big-C are the same. In a similar vein, Boden (2004) distinguishes between ‘psychological’ and ‘historical’

creativity, or *P-creativity* and *H-creativity*: ‘H-creativity is a special case of P-creativity’ but where H-creativity produces something ‘for the first time in human history’, ‘P-creativity involves coming up with a surprising, valuable idea that’s new *to the person who comes up with it*’ (2, emphasis in the original). In the specific context of this study, the interviewees need to come up with new ideas that are surprising and valuable *to their clients*. This is, bluntly put, what is expected of anyone making their living in the so-called *creative industries* (for critical introductions to the term ‘creative industries’, see O'Connor, 2010, 2012; Hesmondhalgh, 2013; for reflection on the importation of the Western concept of creativity into China, see Keane, 2013).

‘Being a creative’ involves a very significant degree of self-identification. Two of the interviewees can be said to self-identify as ‘artists’ (II: ‘new media artist’, IX: ‘sculptor’), one includes the word ‘creative’ in her self-assigned title (VIII: ‘creative director’), several of them work in areas where the term ‘creative’ can be applied (animation, design, architecture). But ‘being a creative’ is not quite the same as ‘being active in the creative industries’ which demands that not only the creatives themselves but also external observers acknowledge their creativity. Adams et al. (2011) describe the process of becoming a professional designer - or an ‘expert’, the authors use the two words synonymously - as follows:

> The process [...] is always open-ended and incomplete. It entails developing and refining an embodied understanding of professional practice [which] is not limited to individual cognition [...] but is embedded and enacted within the dynamic, intersubjective flow of activity that is professional practice (590).

The subjects Adams et al. have in mind when they mention 'intersubjective flow' are creative subjects, the (senior) peers of aspiring professionals, and the next section deals with the relationship between interviewees and their peers. First I want to look at another kind of subjects who emerged as implied yet important observers of interviewee creativity: the clients.

For the eyes of clients

Perhaps not surprisingly in a labour market characterised by ad hoc project employment, it is important for creative workers to anticipate what potential clients expect of them. Or, building on to Adams et al. above, the interviewees can be said to stabilise the dynamic, intersubjective flows they are part of through projection of a model client subjectivity. Such a subjectivity amount to what I have elsewhere called a client *technicity*, a neologism combining 'technology' and 'identity' to denote an imagined set of ICT skills and taste (Liboriussen and Plesner, 2011). The balinghou digital native is another

example of an imagined technicity, in this case used by the ‘older’ interviewees. In short, if one is trying to navigate a complex social network of clients and peer competitors, it helps towards getting one’s bearings to have a clear if somewhat simplified cognitive model of other actors in place.

It is a fundamental premise underlying much of the creativity literature (for example the already mentioned work of Csikszentmihalyi, 1996) that creativity takes place on a ‘deep’ level, that it involves the entire personality rather than a limited set of specific skills. The ability to deliver innovative solutions in terms of deeply ingrained attitudes to problems has, for example, been conceptualised as *design thinking* (Brown, 2009) and *abductive thinking* (Kolko, 2011) in recent design theory. Such theorising is useful for the purposes of teaching and might also, Kolko (2011) suggests, strengthen the designer’s confidence during negotiations with clients. However, my interviewees are infused with a strong and somewhat cynical sense of an outsider’s inability to truly appreciate their skills and capabilities, and the need therefore to perform in a certain way in order to be given jobs. To win a project, the creative might have to signal creativity through the performance of expert tool use as understood by the potential client (or, strictly speaking, as imagined to be understood by the potential client). Expertise in the use of tools becomes a representation of underlying creativity, performed for the eyes of potential clients.

During the interviews, I am cast as an outsider myself, for example when an interviewee points to a small, ceramic pot in front of us and states with confidence: ‘I can draw a picture of this with an airbrush and you can’t even figure out whether it’s a photo or a drawing’ (VI). The tone becomes dismissive, arrogant even, when interviewees discuss the discrepancy between the tools with which clients associate them and the tools used in their actual creative work. Says the balinghou architect respondent (VII, born 1982): ‘a very expensive project, it requires some hand sketches [...] like water colour, oil paint, sketches to represent the whole design’. Chinese architectural firms will often outsource production of these ‘high-end sketches’ to specialised companies and then present the sketches as if they came out of the company’s own practice. Interviewee VII would prefer visualisations of the project to be made using the digital tools employed in the actual design process. To his eyes, the non-digital, hand-made sketches ‘does the same as what you’re doing in the computer, so actually it’s more or less the same’, but to the client, mastery of non-digital tools supposedly ‘means that you’re a trained architect’. In order to win projects, the interviewee grudgingly accepts to perform this kind of expertise. This includes ‘[making] some beautiful visualisation at the end’ of the project but ‘if you really want to make the project convincing to them, you just make [hand-drawn, BL] sketches in front of them’ during explorative meetings

before the client has decided on who to employ. Here interviewee VII finds it useful to work together with his mother, also an architect, who graduated from Tianjin University, a national university with a prestigiously long history. Belonging to an older generation, the mother masters sketching and drawing to a much higher degree than members of the balinghou generation, and 'can always surprise our customers or government officers by sketching something in a very fast way in front of them with all kinds of materials'. Clients seem to be convinced about the architects' creative capabilities according to technical standards of their own - standards which might have little to do with actual work.

Architecture seems to require the performance of analogue expertise, but also digital expertise is in demand. Interviewee II and III are a couple working closely together. Interviewee II describes himself as a 'new media artist', Interviewee III as a 'graphic designer'. Many of the final projects delivered by the couple are digital in nature, for example, visual and sound effects for large-scale events. But 'the actual work is planned and outsourced' (II). Here 'actual' refers to the nuts and bolts work of producing effects, work which the interviewees do not find gratifying in either financial or personal terms. Instead, they are increasingly turning to project management and early planning for their income. To get a clearer sense of the concrete tools used during a typical workday, I ask the couple to describe exactly what they bring with them when

they leave home for work. The interviewees turn out to be very particular about their Moleskine notebooks, used as scrapbooks and for note-taking, and their multi-functional Japanese pens: ‘I have an awesome pen, a gravity-sensing pen’ (II), ‘I only use this pen. This is one I always use’ (III). They do not, in contrast, develop personal relationships with computers: ‘I rarely bring a computer [when leaving home, BL]. The computer is useless and I can find one anywhere’ (II). But even if the interviewees regard computers as rather mundane communication and storage platforms, their clients might expect them to present their work using computers: ‘we only use the computer to show customers our work’ (III). The young creatives responsible for delivering digital design solutions experience a client demand for in some sense appearing ‘digital’ themselves, even if actual, creative work is largely supported by pen and paper.

In the eyes of peer competitors

Also the balinghou’s older generation peers, and competitors, express certain assumptions regarding the digital expertise of the young. These assumptions should be read in the context of competition. Not only competition for new projects but also for the right to lead projects involving more than one creative. Here the balinghou’s real and/or assumed affinity with digital technology can be constructed by the older generation both as an advantage,

and therefore a potential threat, and as a disadvantage, depending on how ‘creativity’ and the ‘the digital’ are aligned. It will become clear over this and the next two sections that digital expertise is generally constructed as a disadvantage for creativity.

One of the ‘older’ interviewees (I, born 1971) was trained in hand-drawn animation at a time when ‘if we wanted to make commercials, we would go to a film factory where the staff coloured the drawings by hand’. Using a generational ‘our’, she says that ‘our juniors [the balinghou, BL] were lucky enough to be in the age of computer technology’ but this ‘luck’ means a division of labour where the interviewee makes the creative decisions by hand-drawing still images and the younger staff with digital expertise then ‘[does] the movements according to my requirements’. Interviewee I draws, scans and sends images to the younger staff who take care of the animation per se: ‘I focus more on designing, creativity, simply the idea. The people who are good on computers will do the more detailed work’; here ‘detailed’ seems a polite way of saying ‘grunt’ or ‘nuts and bolts’. The underlying logic is that since computers are good for practical, non-creative work, those who are good at using computers are inherently less creative than those who are not.

This is echoed by another ‘old’ interviewee (V, born 1971) who employs a number of younger people in his design studio which mainly produces

animation. The interviewee is happy to state that he is ‘not a high-tech person’, so he ‘never [upgrades] the software day and night, or keep pondering on new functions’, behaviour he expects of the younger staff. He sees his own background as a painter as a very important advantage since it has helped him achieve ‘aesthetic [judgement]’, a ‘general appreciation of beauty’ and ‘open and bold thinking’. Interviewee V finds such qualities present in staff with an artistic background, in particular a background in painting, whereas staff who ‘learn computer animation directly from the beginning [...] are helping complete a project rather than creating something’.

Also interviewee IV (born 1969) associates digital technology with completion rather than creation: ‘in computer, we have good software, but still there are fixed tools and forms you have to choose. With your hand you can create, that’s the difference’. This link between analogue tool use and creativity is not only observable in concrete instances of practice but points to a fundamental perceived difference between the balinghou and the older generation. Interviewee IV describes himself as a member of a ‘transition generation’ between an ‘elder generation [who are] more based on paper, writing and drawing’ and a ‘younger generation’ who ‘[relies] too much [...] on laptop, and maybe [is] a little bit lazy. They want things too fast and too efficient’. In practical terms, this means that the younger (balinghou) designers

go to the ‘laptop [and] start design right away’ without taking the ‘necessary step’ of drawing, sketching and writing notes with analogue tools, a step that is ‘necessary’ because the ‘inspiration’ or ‘discovery’ all-important for finding a truly creative solution only comes when there is sufficient time for it; this is a phase of creative work labelled *incubation* by Csikszentmihalyi (1996) in his five-phase model of the creative process, a phase when ‘ideas churn around the threshold of consciousness’ (79) before revealing themselves to the creative person during the third phase, *insight* (see the section on *Creativity and technology).*

Interviewee IV does concede that ‘some of the talented students, they still have the good habit[s]’ just mentioned - and the balinghou interviewees of the previous section actually work in exactly the manner he points to as best practice (after interviewing them, I observed them work) - but interviewee IV’s reflection on the younger generation of designers seems informed both by the balinghou behaviour of which he has firsthand knowledge and by the more general, media-inflected discourse around the balinghou (for a good popular introduction to the balinghou in the media, see Palmer, 2013). This is a generation about whom the interviewee says, not without satisfaction derived from having found an almost aphoristic formulation, that ‘because they get things too easily, they take it easy’. It seems taken for granted that balinghou

creatives will be likely to conform to stereotypically lazy balinghou behaviour, and that such behaviour is counterproductive to creativity because it does not allow for the incubation of ideas. Not only do the older interviewees delegate the balinghou expert users of ICTs to the large group of ‘experts and skilled workers with little or no supervisory or managerial powers’ who make up much of the creative industries workforce (Hesmondhalg and Baker 2011: 68; the point is made for creative industries in the West but seems equally valid for China), they use balinghou digital expertise as justification for that delegation.

Sketchbook vs iPad

Others express only slightly more balanced views of the balinghou. Interviewee VI (born 1967) uses a strategy general for the ‘older’ interviewees when he prefigures reflection on creative work with general reflection on the balinghou: ‘the new generation [...] have a lot of advantages [...] [they] have better living conditions which makes them less concerned about life’. This lack of concern makes the young less ‘determined or persistent in doing one thing’ but, on the other hand, ‘they are becoming more subtle and sensitive in thinking’ and can ‘adapt to future life and career more easily’. On balance, this new attitude of the younger generation ‘can be viewed as either strength or weakness’. But when it comes to creative work, interviewee VI sees the ‘before computers’ training he and his generation received as an advantage: ‘the

handwork training which strengthened our hands-on skills will be quite beneficial in certain aspects of design projects', as he says with modest understatement. The words 'hands' and 'handwork' occur regularly throughout the conversation and are broadly linked to notions of 'culture', 'humanity' and 'spirit'. It is implied that working with one's hands adds a certain depth to creative thinking which cannot be obtained through work with digital tools, no matter the level of expertise.

Interviewee IV says this more explicitly when he discusses the virtues of sketching: 'sketching is an essential expression from your brain, through your eyes, from your brain to your hands'. Such immediate links between cognition, perception and expression are essential for creative work; the interviewee aims at articulating the same links when he talks about 'something from your own mind and heart' being captured through sketching. A technological other, the mobile phone, is then introduced: '[I] know a lot of designers, good designers [who use sketchbooks] all the time. I think they carry [sketchbooks] more often than a mobile phone'. Since the younger generation has been the focus of much of the conversation, it is hard not to hear 'mobile phone' as a reference to the balinghou. Reflection on the virtues of analogue design tools is clarified through the introduction of a generational other, the balinghou, and a technological other, the digital - and it seems to go without saying that the

balinghou has an affinity with the digital.

Only one ‘older’ interviewee (V) sees real merit in digital expertise, although that merit is to be found in a distinct and limited area. The younger generation of creatives working for the interviewee is allowed some autonomy: ‘if I have appointed someone to conduct a project, I’ll give him/her more privilege to make [decisions]’, but the interviewee will always ‘give some advice based on my experience’. Only ‘for projects like a game for the iPad, which I am not familiar with, I would respect the young ideas entirely because I rarely play games’. The balinghou are thus associated with, and are seen to have a superior understanding of, the interactive mode of media consumption in general and a specific instance of ICTs, the tablet, in particular. But across the interviews, neither ‘old’ nor young allows digital expertise any *general* usefulness in creative work. Digital expertise merely provides an advantage when it comes to obtaining leadership of collective projects which appear, at least on a surface level, to require affinity with digital media.

It is somewhat ironic that the dominant paradigm in the teaching of game design is to ‘take away the computer’ and let students design prototypes using bits and pieces of cardboard and paper (Salen and Zimmerman, 2004 is an authoritative and often used textbook articulation of this paradigm). If the basic game mechanics are not sound, no level of graphical sophistication will turn a

bad game into a good game, and cardboard exercises help drive home this point to students. Interviewee V's statement is thus an example of preconceived but not necessarily accurate notions of the capabilities and potentials of specific generations having a decisive influence on the division of creative labour. The statement was not made after careful deliberation but in a rather throwaway fashion. The spontaneous association of 'young ideas' and 'iPad game' seems symptomatic of a wider tendency to associate digital expertise exclusively with projects that are 'digital' in a both narrow and superficial sense.

Creativity and technology

Before the above forms the basis for a discussion of the problems arising from defining generations through their use of certain technologies, it is worth pausing to consider some of the assumptions that have been made regarding creativity and technology. Across the interviews, the creatives find their inspiration through material engagement with design problems. Images do not, for example, present themselves fully formed to the mind of the animator but occur in the mysterious interplay of mind, hand, eye, pen and paper: 'sometimes really brilliant images are created out of [...] unconscious doodling' (I). This is not an insight exclusive to my interviewees. Based on case studies of architectural design, Schön (1983) has, for example, described 'designing as a conversation with the materials of a situation' (78). But that conversation has

several phases, and inspiration is only one of them. Practitioners and theorists are well aware that inspiration does not signal the end of the creative process but instead the beginning of hard work. This is expressed in Csikszentmihalyi's (1996) five-phase model of the creative process:

1. Preparation: 'becoming immersed' (79) in the problem at hand.
2. Incubation: practitioners 'let problems simmer below the threshold of consciousness' (79).
3. Insight: a solution enters consciousness.
4. Evaluation: practitioners 'decide whether the insight is valuable and worth pursuing' (80).
5. Elaboration: 'This is what Edison was referring to when he said that creativity consists of 1 percent inspiration and 99 percent perspiration' (80).

The model can help make the observation that when describing their work, the interviewees focus almost entirely on the generation of ideas found in the phases of preparation, incubation and insight. During these early phases, digital tools are considered useless. Again, the interviewees are not alone in holding this opinion: 'CAD/CAM tools are often avoided in early phases of design because they require or impose a completeness that is premature' as Tversky and Suwa (2009) observe (82), resonating with the previously quoted

opinion held by interviewee IV: ‘we have good software, but still there are fixed tools and forms you have to choose’.

Even when it is acknowledged that digital tools are inferior to analogue in the early phases of creative work, digital tools and digital expertise might still prove superior during later phases. Discussing his contribution to projects in terms of tool use, the balinghou architect interviewee (VII) acknowledges the need to make plastic foam models during the early phases of a project, but is much more confident talking about software. When I ask him about his favourite tools, he rejects the (apparently absurd) notion of having a favourite pen and instead mentions Adobe Illustrator (as well as Adobe InDesign and ArchiCAD). Might the concluding phase of elaboration not be at least as ‘creative’ as the earlier phases of idea generation? If so, it would become much harder to dismiss the importance of digital expertise in creative work.

Tools as identity badges

In a 2010 report, the Pew Research Center (2010) describes ‘the internet and mobile phones’ as a ‘badge of generational identity’ (25) for the *Millennials*, ‘the American teens and twenty-somethings who are making the passage into adulthood at the start of a new millennium’ (1). The metaphor of an *identity badge* is a useful way of summing up the previous sections, and will be developed here as a conceptual tool for future analysis. A badge can be worn to

express identity, but not necessarily with real commitment to what the badge stands for. A badge can be pinned onto someone else, in some instances without the badge-wearer's awareness or consent. Analogue and digital tools have been used in these badge-like ways throughout the interviews.

Generally speaking, 'wearing' a tool by carrying it, using it in front of others and talking about signals that the wearer is an expert user of the tool, but a distinction can be made between tools as *professional identity badges* and tools as *generational identity badges*. Most of the interviewees, both balinghou and 'older', proudly wore analogue tools as badges to express their professional identity as creatives to themselves - and to me as interviewer. The pen was a favourite, be it the very specific, Japanese pens of interviewees II and III or simply the generic 'pen' discussed by I, IV and VI. It can be added that interviewee V uses the (digital) camera as his professional identity badge but that the badge is worn in a special way:

> if I'm to make an animation of a person walking on old city walls, the most popular way will be to animate the walking person and then compose the graphics with a wall during post-processing. I don't like that method (V).

Instead of following the contemporary, 'popular way' of creating the animation directly in the computer, interviewee V prefers to go out and find a

wall, which he then takes photographs of: ‘I like to use the real, material world as creative elements’. The photographs then form the basis for digital animation. As a professional identity badge, interviewee V’s camera is worn like a pen, that is, in opposition to ‘the digital’. It signals a process which is more materially grounded and therefore more creative than a process sustained by purely digital means. In this context it matters little that the camera is a digital camera. What matter is the camera as constitutive element of a socio-technical composite, not the camera as a stand-alone instance of digital technology.

Interviewee VII stood out by wearing Adobe Illustrator and other software as his professional identity badge during the interview, but he was well aware of the strategic importance of other badges. In meetings with potential clients, he wears the pen because that ‘means that you’re a trained architect’. Professional identity badges are not necessarily worn with commitment to that which they are assumed to stand for in the eyes of outsiders such as clients, but can be worn temporarily and strategically.

Throughout the interviews, the ‘older’ generation attached instances of digital technology (mobile phones, laptops, iPads) to the balinghou as *generational identity badges*. Strictly speaking, the balinghou defined as ‘Chinese born 1980-89’ is a *birth cohort*, or simply *cohort*, not a generation. Members of a cohort share the fact that they are born within a given period of

time, whereas members of a *generation* are tied together by significant and distinct shared experiences and life conditions (Mannheim, 2009). In the case of China's balinghou, Cheng and Berman (2012) use the term *globalisation* to sum up the distinct experiences and conditions that turn the cohort into a generation. The 'older' generation of creatives interviewed for this article emphasises that the balinghou grew up during a time of vastly improved material life conditions. They do so by using words such as 'lucky', 'easy' (and 'too easily'), 'less concerned about life', 'advantages' and 'lazy' to describe the balinghou. The 'older' generation then pins mobile phones, laptops and iPads onto the balinghou as generational identity badges. The constant, carefree connectivity of the mobile phone, the laptop's promise of almost instant solutions to tasks that used to require hard and thoughtful work, the seductive ease of use of the iPad: these are qualities fitting the balinghou in the eyes of their elders. (Discursive construction of the qualities of the gadgets could obviously have yielded very different results. The mobile phone's connectivity can, for example, be thought of as a constant reminder of work rather than as a constant distraction.)

Calling attention to the way in which the 'older' generation uses digital tools to identify the balinghou is not done to suggest that the balinghou do not, in fact, have a special relationship with digital tools and consumer electronics.

Despite all the obvious differences between China and the USA, it is interesting to note that the Pew Research Center (2010) also uses 1980 as the first year of a young generation, the Millennials, who feel relatively more defined by technology than previous generations because of 'the way they've fused their social lives into [their gadgets]' (6; see also Turkle, 2011). Something similar can be said about China's balinghou (Michael and Zhou, 2010; Liu, 2011).

Based on the focused interviews, observation of their work and casual contact, it seems to me that the balinghou interviewees are fairly typical of their generation when it comes to continuous, everyday use of digital gadgets and social media. But they are not just balinghou, they are balinghou creatives. As such, they sometimes find themselves wearing two, mismatched identity badges. As creatives they carefully pick out and wear analogue tools as professional identity badges. The 'older' generation of peers competitor then pin digital tools onto them as generational identity badges. This might not be done with sinister purpose but the effects can be to discursively construct the digital tool-wearing balinghou as less creative, to delegate their contributions to the later, elaborative phases of projects, and to justify their relatively low place in project hierarchies.

Conclusion

Expert tool use plays an important role in the intersubjective process of

‘becoming a professional’ in the Chinese creative industries. Analogue tools are strongly associated with creativity and ‘worn’ as professional identity badges by old and young alike, that is, tools such as sketchbooks and pens are used but also discursively constructed as central to creative practice. To impress potential clients and attract projects, a professional identity badge can be worn strategically and not necessarily with real commitment.

Balinghou creatives (strictly speaking, someone born 1980-1989, but the point probably applies to those born after 1989 as well) sometimes wear their self-selected professional identity badge next to digital tools as a generational identity badge pinned onto them by older peer competitors. Being an expert user of digital tools - or appearing to be one - is a mixed blessing. The interviewees (both balinghou and ‘older’) generally associated ‘the analogue’ with openness, choice and fluidity - and, by extension, with creativity - ‘the digital’ with non-creative predetermination. Digital expertise offers an advantage when it comes to obtaining leadership of projects associated with digital media and might actually be essential for fulfilling key roles during the later (elaborative) phases of a project. But since contributions made during elaboration are broadly regarded as inherently uncreative, elaboration work and the associated digital expertise appears to hold only limited potential for aiding the balinghou towards increased managerial and supervisory powers in the

Chinese creative industries.

References

Adams RS, Daly SR, Mann LM and Dall'Alba G (2011) Being a Professional: Three Lenses Into Design Thinking, Acting, and Being. *Design Studies* 32: 588-607.

Alvesson M and Kärreman D (2011) *Qualitative Research and Theory Development: Mystery and Method*. London: Sage.

Bassett C, Fotopoulou A and Howland K (2013) Expertise: A Scoping Study. *Working Papers of the Communities & Culture Network*+, 1: 1-38. Available at www.communitiesandculture.org/files/2013/04/Sussex-scoping-report.pdf (accessed 25 November 2014).

Bennett Sm Maton K and Kervin L (2008). The 'Digital Natives' Debate: A Critical Review of the Evidence. *British Journal of Educational Technology*, 39(5): 775-786.

Boden MA (2004). *The Creative Mind: Myths and Mechanisms (2nd Edition)*. Abingdon: Routledge.

Brown T (2009) *Change by Design: How Design Thinking Transforms Organizations*. New York: HarperCollins.

Cheng M and Berman SL (2012) Globalization and Identity Development: A

Chinese Perspective. *New Directions for Child and Adolescent Development*, 2012(138): 103-121.

Corbin J and Strauss A (2008) *Basics of Qualitative Rese2arch: Techniques and Procedures for Developing Grounded Theory (3rd Edition)*. Los Angeles: Sage.

Csikszentmihalyi M (1996) *Creativity: Flow and the Psychology of Discovery and Invention*. New York: Harper Perennial.

David C and Zhou Y (2010) *China's Digital Generations 2.0: Digital Media and Commerce Go Mainstream*. Boston: The Boston Consulting Group. Available at www.bcg.com/documents/file45572.pdf (accessed 26 November 2014).

Glaser B and Strauss A (1967) *The Discovery of Grounded Theory: Strategies for Qualitative Research*. New Brunswick: AldineTransaction.

Hesmondhalgh D and Baker S (2011) *Creative Labour: Media Work in Three Cultural Industries*. Abingdon: Routledge.

Hesmondhalgh D (2013) *The Cultural Industries (3rd Ed.)*. London: Sage.

Keane M (2013) *Creative Industries in China: Art, Design and Media*. Cambridge: Polity Press.

Kolko J (2011) *Exposing the Magic of Design: A Practioner's Guide to the Methods and Theory of Synthesis*. Oxford: Oxford UP.

Liboriussen B and Plesner U (2011) Imagining Technicities: ICT Taste and Skill as Elements in the Configuration of Virtual Worlds Architecture. *International Journal of Emerging Technologies and Society*, 9(2), 81-94.

Liboriussen B (Forthcoming) Balinghou and Qilinghou: Generational Differences in People and Technologies of the Chinese Cultural Industries. In Keane M, Donald SH and Qiu Z (eds) *Handbook of Cultural Industries in China*. Cheltenham: Edward Elgar.

Liu F (2011) *Urban Youth in China: Modernity, the Internet and the Self*. New York: Routledge.

Mannheim K (2009) The Sociological Problem of Generations. In Cornell L et al. (eds) *Younger Than Jesus: The Generation Book*. Göttingen: Steidl, pp.163-195.

McIntyre P (2012) *Creativity and Cultural Production: Issues for Media Practice*. Houndmills: Palgrave Macmillan.

O'Connor J (2010) *The Cultural and Creative Industries: A Literature Review (2nd Edition)*. Newcastle upon Tyne: Creativity, Culture and Education. Available at www.creativitycultureeducation.org/wp-content/uploads/CCE-lit-review-creative-cultural-industries-257.pdf (accessed 28 November 2014).

O'Connor J (2012) Surrender to the Void: Life After Creative Industries. *Cultural*

Studies Review 18(3): 389-410.

Palmer J (2013) The Balinghou. *Aeon Magazine*. Available at aeon.co/magazine/living-together/james-palmer-chinese-youth/ (accessed 25 November 2014).

Pew Recearch Center (2010) *Millennials: Portrait of Generation Next*. Pew Research Center, Washington. Availble at www.pewresearch.org/millennials (accessed 25 November 2014).

Prensky M (2001). Digital Natives, Digital Immigrants. *On the Horizon*, 9(5): 1-6. Available at www.hfmboces.org/HFMDistrictServices/TechYES/PrenskyDigitalNatives.pdf (accessed 25 November 2014).

Salen K and Zimmerman E (2004) *Rules of play: Game Design Fundamentals*. Cambridge, MA: The MIT Press.

Schön DA (1983) *The Reflective Practitioner: How Professionals Think In Action*. New York: Basic Books.

Silverman D (2011) *Interpreting Qualitative Data: A Guide to the Principles of Qualitative Research (4th Edition)*. London: Sage.

Turkle S (2011) *Alone Together: Why We Expect More from Technology and Less from Each Other*. New York: Basic Books.

Tversky B and Suwa M (2009) Thinking With Sketches. In Markman AB and

Wood KL (eds) *Tools for Innovation: The Science Behind the Practical Methods That Drive New Ideas*. Oxford: Oxford UP, pp.75-84.