(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 analog and digital. Performances of expert tool use (the wearing of professional identity badges) are strategic ways of signaling 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 legitimize 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 legitimize 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 analog and digital tools. The reception of such performance is considered in regards to two audiences, namely, 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 than 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 analyzing how tools are ‘worn’ for both strategic and identity-shaping purposes. The concluding section highlights how digital expertise seems to hold 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 in Beijing and Ningbo (a city 200 km South of Shanghai where I have lived and worked since 2012), from April 2012 to January 2014, to explore the role of tools and technologies in creative work, and how that role is changing with digitalization. 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, and so on. The small-scale study 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). It is not claimed that the interviewees are representative of the Chinese creative industries as such. It is claimed, however, that the concepts ultimately emerging from analysis are firmly grounded in the interviewees’ social reality.

I am not myself active in the creative industries but I have known a couple of the interviewees personally for about 10 years. Others were contacted via snowballing. Most of them agreed to be
interviewed thanks to a Chinese contact person who is a professional artist. I met most of the interviewees in their workplaces in Beijing or Ningbo.

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. The interviewees were offered anonymity, not just to protect them in case they wanted to share anything that could harm their careers but also to create an atmosphere conducive to sharing in the first place.

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. 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 centering on the opening themes of workplace, cooperation, 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 microanalysis. Interviewees tended to generalize their own creative practices and modes of thought with a ‘we’ defined through institutionalized 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: Ch. 7). Interviewees VII and IX (see Table 1 above) 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          |

Note: B denotes balinghou, and asterisk denotes that the interviewee 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–present) 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 centers 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, and VIII) are balinghou who grew up with computers (I explore the theme of generational difference in more detail elsewhere; see Liborius, 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 as 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 labor 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 information and communication technologies (ICTs) 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” (p. 1, original emphasis). A similar sense of radical and irreversible change underlies the concept of the balinghou. Although Prensky has been criticized 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’ (2001: 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.

As part of their scoping study of expertise, Bassett et al. contrast the digital native model – where young people are imagined to possess ‘natural expertise’ (2013: 21) – to other models where expertise is thought of in relation to literacy and competency. The latter models are partly
motivated by the political goal of demystifying expert use of digital media. Expertise becomes potentially available to all when conceptualized 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). In this traditional view, creativity is the domain of a few ‘chosen’ individuals: naturally privileged experts on beauty and the human condition. Psychologists have questioned such an approach to creativity and sought to replace it with the view that creativity is a fundamental capacity characteristic of the human being as such.

This latter position is taken by Csikszentmihalyi 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’ (1996: 27) and is primarily practiced by professionals. From the psychologist’s point of view, little-c and big-C are expressions of the same, underlying psychological mechanism playing out in different ways. In a similar vein, Boden distinguishes between ‘psychological’ (P) and ‘historical’ (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’ (2004: 2, original emphasis). 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’ and IX: ‘sculptor’), one includes the word creative in her self-assigned title (VIII: ‘creative director’), and several of them work in areas where the term creative can be applied (animation, design, and architecture). Being a creative is, however, 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. 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.
(Adams et al., 2011: 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 labor market characterized 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 stabilize the dynamic, intersubjective flows they are part of through projection of a model client subjectivity. Such a subjectivity amounts to what I have elsewhere called an *imagined technicity*, a concept informed by a Cultural Studies-oriented understanding of technicity and denoting an imagined set of ICT skills and taste used by actors to stabilize their networks (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 by Csikszenmihalyi, 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 draw on the entire personality when delivering innovative solutions to design problems has, for example, been conceptualized as *design thinking* (Brown, 2009) and *abductive thinking* (Kolko, 2011) in recent design theory. Such theorizing 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 a designer 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, born 1967). 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 color, oil paint, sketches to represent the whole design’. Chinese architectural firms will often outsource production of these ‘high-end sketches’ to specialized companies and then present the sketches as if they came out of the company’s own practice. The architect interviewee (VII) would prefer visualizations of the project to be made using the digital tools employed in the actual design process. To his eyes, a non-digital, handmade sketch ‘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: ‘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. Interviewees II and III are a couple working closely together. Interviewee II (born 1981) describes himself as a new media artist, and Interviewee III (born 1983) 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 asked 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 multifunctional 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

The balinghou’s older generation peers and competitors express assumptions regarding the digital expertise of the young that resemble the assumptions of clients. 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 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 colored 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 labor 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, noncreative 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), also an animator, and also 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’, behavior 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 arts 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 (designer, 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 in his five-phase model of the creative process, a phase when ‘ideas churn around the threshold of consciousness’ (1996: 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 behavior of which he has first-hand 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 behavior and that such behavior 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 (Hesmondhalgh 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 versus iPad**

The older generation’s general understanding of the balinghou is intermixed with more specific ideas about digital devices and digital tools for creative work, and the balinghou’s assumed affinity with such devices and tools. Interviewee VI, a designer born 1967, uses a strategy typical 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’ when the balinghou generation is seen as a whole, but when it comes to creative work, interviewee VI sees the ‘before computers’ training he and his generation received as a clear 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 that cannot be obtained through work with digital tools, no matter the level of expertise.

Another designer of the older generation, 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, animator born 1971) 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 are 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. 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 labor. 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**

It is worth pausing at this point 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 has, for example, described ‘designing as a conversation with the materials of a situation’ (1983: 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 five-phase model of the creative process:

1. Preparation: ‘becoming immersed’ (1996: 79) in the problem at hand.
2. Incubation: practitioners ‘let problems simmer below the threshold of consciousness’ (1996: 79).
3. Insight: a solution enters consciousness.
4. Evaluation: practitioners ‘decide whether the insight is valuable and worth pursuing’ (1996: 80).
5. Elaboration: ‘This is what Edison was referring to when he said that creativity consists of 1% inspiration and 99% perspiration’ (1996: 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: 82) observe, resonating with the previously quoted opinion held by one of the older designers: ‘we have good software, but still there are fixed tools and forms you have to choose’ (IV).

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 favorite tools, he rejects the (apparently absurd) notion of having a favorite 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 describes ‘the internet and mobile phones’ as a ‘badge of generational identity’ (2010: 25) for the Millennials, ‘the American teens and twenty-somethings who are making the passage into adulthood at the start of a new millennium’ (2010: 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 it, 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 favorite, be it the very specific, Japanese pens of interviewees II and III (balinghou) or simply the generic ‘pen’ discussed by I, IV, and VI (older). It can be added that one older animator (born 1971) 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, the animator 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 matters is the camera as constitutive element of a socio-technical composite, not the camera as a stand-alone instance of digital technology.

The balinghou architect (VII) stood out by wearing Adobe Illustrator and other software as his professional identity badge during my interview with him, 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 1980–1989’ 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 globalization to sum up the distinct experiences and conditions that turn the cohort into a generation. The older generation of creatives interviewed for this article emphasizes 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, and the seductive ease of use of the iPad are qualities fitting the balinghou in the eyes of their elders. (Discursive construction of the qualities of the gadgets could have yielded very different results. The mobile phone’s connectivity could, for example, have been 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 United States, it is interesting to note that the Pew Research Center 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]’ (2010: 6; see also Turkle, 2011). Something similar can be said about China’s balinghou (Liu, 2011; David and Zhou, 2010).

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 peer competitors 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 interviewees 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.

The balinghou interviewees (a balinghou is, strictly speaking, born 1980–1989, but the point could probably apply to someone 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.

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