
Sketching with Knives

Architects & The Confidence Theory of Magic

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In the documentary film, *Snøhetta on Ground Zero* (2012), several employees of the architecture company Snøhetta, take us through the process of designing the National September 11 Memorial Museum Pavilion in New York. Interviews with the two directors are combined with shots of workshops with clients and contractors. At one point the camera zooms in on a young architect in the New York office landscape. Surrounded by miniature models made out of museum board and wood, he exclaims with enthusiasm: ‘We sketch with knives, not pens. Isn’t gravity wonderful? That’s the magic trick in a way’.

Close to a century earlier, Malinowski (1935) outlined the function of the Trobriand carver magician. The carver magician carves patterns in the canoes used in the Kula trade to make them whirl through rough seas, as effortlessly as in the Trobriand myth of the flying canoe (Malinowski [1922] 1932: 311). Rites and spells are accompanied by magical crafting techniques to ensure a safe journey – in the myth, by enabling the canoe to fly in the air rather than navigate the treacherous ocean. The communion made between the magician and the objects addressed in such rites is a form of dialogue, Malinowski argues – ‘the magician speaks and the object responds’ (1935: 241). This insight resonates with the later theoretical arguments of Alfred Gell (1992) in his work on the enchantment of technology. His theory outlines how the artist enchants the audience through his ‘magical’ skills, viewing the art object as an agent, a collaborator of the enchantment.

This article looks at the relation between creativity, magic and *professional confidence* in the context of capitalist competition and risk taking, and is based on lengthy ethnographic fieldwork between 2008 and 2011 in Snøhetta offices in Oslo and New York. After following five competition teams in their quests to produce winning concepts, a question arose: how do the architects in Snøhetta – the majority of whom are in their mid-20s or 30s, some newly educated and even quite inexperienced – come to believe that they are capable of crafting prestigious buildings such as the Bibliotheca Alexandrina in Egypt? I argue that the concept of magic is more to the architects than just an emic term used in casual conversation or to explain to others what they do. Magic is believed, and it is closely connected to the materiality and hierarchies of their everyday, professional lives.

The Snøhettas

The main office of Snøhetta is situated in the harbour area of Oslo, Norway. The satellite office – set up as a consequence of the Ground Zero win in 2004 – is located in lower Manhattan. The company was established in 1989 after a group of young, newly educated architects unexpectedly won the global competition for designing the new library in Alexandria, Bibliotheca Alexandrina (completed 2001). They have since designed buildings that have become iconic, among them The Oslo Opera House (completed 2008) and The Memorial Museum’s Pavilion on Ground Zero (completed 2014). During my period in the field they won competitions for designing the extension to the San Francisco Museum of Modern Art (completed 2016) and the reconstruction of Times Square in New York (ongoing). Snøhetta originated as a Norwegian-based firm comprised of young architects and landscape architects, and to this day works hard to uphold the original egalitarian ideology of collaborative creativity and the sharing of ideas. The number of employees fluctuates according to competition wins and losses, project revenues and external factors such as the global financial crisis in 2008. During my fieldwork period, the Oslo office reduced its staff of 140 by about half, while the New York office almost doubled from about 17 to 30 employees.

Producing architecture at this level is all about selling lines, stories and sensations, seducing the world, juries and each other into believing anything is possible. The staff call themselves the Snøhettas – ‘Snøhetter’ in Norwegian – to signal their communal identity, as the company is named after the legendary Norwegian mountain Snøhetta, in contrast to most architects’ offices which are named after the partner(s), e.g. BIG (Bjarke Ingels Group), Zaha Hadid Architects or Gehry Partners.¹ To ensure success, these architects make use of a range of magical practices in their everyday work. The magic is inherent in their origin myths, the technologies they explore, the collaborative efforts they sustain and the sensory atmosphere that they co-create with their material surroundings (see Hagen 2014). It is something they work hard to be able to experience over and over again, and, I argue, it is their most valuable commodity.

These architects operate within the global architects’ economy of fame, where winning competitions seldom bring in substantial revenues, but is highly valuable as it strengthens their position within the global architect elite. The magical capitalism is recognizable in their in-house motto: ‘we are selling the process, not the product’. They constantly repeat that making money (for something other than survival) is not really the point. Making magic happen in the creative process is.

I have previously looked at magical practices and creativity during processes of downsizing (Hagen 2015). Here I will focus on a specific practice that I call *crafting magic*, as part of a learning process instilling confidence and collaborative creativity as the norm. A dozen of the Snøhetta senior employees pose, in Malinowski’s terminology, as *garden magicians*: ‘the person magically responsible’ for collective work. They encourage the younger or less experienced employees through their speech acts. In Snøhetta these ritual experts are predominantly female, with the exception of the two male directors who pose as *architectural shamans*. Equally responsible for the company’s success, although usually junior in experience and age, would be the role of the *carver magician*, quoting Gell ‘whose artistic prowess is also the result of his access to superior carving magic’ (1992: 46).

Despite continuous success for both offices, a lack of confidence or ‘shrinking’ is present, and it seems to correlate with gender, technology and the fear of aesthetic judgement. The crafting magic inherent in new software technology and the making of physical models is mainly

reserved for the tech-savvy – the digital experts. Despite their insistence on the collective creative process, the image of the heroic creator who innovates effortlessly is present in organizational everyday life and to a predominant degree, he is young and male. In the New York office, the picture is slightly different. Unlike their counterparts in Oslo, the US-educated female architects are all skilled in 3D software, and spend time in the model shop using both heavy and sophisticated tools like the electric saw and the brand new, expensive laser cutter.²

Crafting magic concerns the ritualistic practices of securing the dialogue between materiality and the virtual or imaginary. To see how the production of creativity, the ‘sketching with knives’, plays out among the architects, let us visit the enclosed space of their model shop in Oslo, where a team is working on the competition design for a national library. The 3D-skilled architects Luke³ and Ayden are at the stage of interpreting the collective ideas of the larger group into an architectural model made out of museum board and plexiglas – with the help of software, glue and a laser cutter.

In the model shop

26 January 2009, Oslo office

They all seem to be caged in a silent movie, the numerous employees moving about in the open office landscape. The plexiglas wall enclosing the model shop where I sit on a bar stool muffles all familiar sounds. My gaze spans the busy activity going on around the desks, pierces the transparent barrier of the model shop and slowly takes in rows of plastic boxes filled with small-scale trees, the laser cutter next to a computer in the corner, shelves with white museum boards, acrylic sheets and cubes of blue foam, before zooming in on the miniature model in front of me.

Ayden’s body is hunched over the massive workbench that fills most of the small model shop. He is gluing an androgynous-looking plastic figurine to the smooth surface of this library-to-be. The model will be presented to the team later on this freezing January day. Like Gulliver in Lilliput, Ayden inspects the citizens in their 1:500-scale habitat. The team is to deliver a physical model as part of the competition entry in a month’s time. I am curious about the level of precision he is aiming for, so I ask him how detailed an architectural model should be at this stage.

Ayden holds his gaze on the model while answering: ‘Oh, it’s a personal choice’. Then he lifts his head, directing his physical being towards my question. ‘But it’s crucial that everyone *agree* that we want to see it as a fairly precise model’.

With a nod to the meeting room on the mezzanine above us, he explains how the project team discusses and reaches agreement on some key ideas, withdraws to sketch on their computers – in 2D or 3D, according to their individual skills – resumes in small groups to discuss the work and then withdraws and sketches some more. When the team as a whole is satisfied, they export the 3D model drawings to the laser cutter that ‘prints’ by directing a laser beam to burn or melt whatever flat-sheet physical material is put in the machine, leaving the pieces with razor-sharp edges. Each component of a building – roof, walls, facades, outdoor landscape etc. – is cut out, and it only takes a few minutes. All the pieces are then assembled and glued together by hand, slowly becoming a miniature model like the one in front of us.

‘The model is, in effect, based on decisions reached in common’, Ayden says with confidence, ‘even though it is true that Luke and I choose the technique – which can be decisive for the aesthetic expression’. I have already learned through individual interviews how collective creation and consensus is valued in this company. Some employees have also revealed how they would be sanctioned by the in-house ritual experts for claiming something as ‘my idea’. In Snøhetta, all ideas are to be expressed as ‘our ideas’, they say.

Ayden’s colleague Luke, turns from the laser cutter he has been busy operating, and points his finger at the physical model in front of us. ‘It will stimulate ideas. A model is good when it’s convincing’.

He explains how they want to move on, help the group overcome certain challenges. He pauses before concluding: ‘It’s a tool of clarity’. ‘And you can touch it, feel it’, Ayden adds.

I ask: ‘Does it ever happen that new ideas emerge while you are working on the model?’

Up until now I haven’t paid much attention to the other two guys working quietly on their own miniature model in the adjacent part of the room. I don’t know them that well, as they are not on the library competition team. But they have obviously been listening in on our conversation, as they both turn around, as if on cue, and blurt out: ‘Yes!’

Ayden picks up on their sudden exclamation and continues energetically: ‘We implement and improvise. It’s actually fun when that happens – and the best thing is to explain it to the team later’. He smiles before adding with a tone of voice that calls for an audience, ‘a little change, minor adjustments’.

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Drawing the first line is decisive for the unfolding of the creative process, the architects argue (Hagen & Rudningen 2012). With the introduction of 3D software and machines like the laser cutter, the architectural sketch models have in recent years been replaced by more detailed and precise physical models. The practice of ‘sketching with knives’ is becoming more about gluing pieces together. But, if we listen to Ayden’s arguments, what one would think is reduced to a mere afterthought of designing, is in fact a creative process of ideas evolving. And this part of the creative process is closely connected to material, professional and social hierarchies.

In order to uncover the mechanisms of such objects of creativity, it is first necessary to ask what a miniature model *is* – this object that Ayden and Luke are working on so meticulously in the model shop. To me, it looks like a miniature building populated with imaginary visitors. What is it to them? A functional tool of work or an object of art, made solely for jury presentation? Senior architect Lydia argues for both, when I ask her: ‘So models are not just [depicting] buildings?’

‘No’ she replies, ‘They’re ideas, they’re ideas. It’s really not until really deep into the design that a model becomes a representation of a building. It might represent an attitude of a building or just a specific part of the building or a type of form’.

For this reason, project leader and ritual expert Bente wants the two digital experts, Ayden and Luke, to delay the moment when they introduce the first 3D model to the team, arguing that doing this too early may endanger the goal: that the ideas of all members of the group be integrated in the final competition outline.

The architects tell me that in most other companies, the building of models is considered a job for interns or is outsourced to cheaper labour. The directors of Snøhetta consider model building a valuable part of the creative process. Yet, most of the younger architects today neither sketch with knives nor pens, but with the click of a mouse, using 3D software like Grasshopper or Rhino. Some even claim they cannot draw a line by hand, a skill that once defined the architectural profession. When Ayden talks about the influence that he and Luke have as the ones who

are choosing 'the technique', he is referring to the skill set they have and the relation between the digital drawing of models in 3D software and the various ways of shaping the physical models in different materials.

Asdal et al. (2007) argue that categories like subjects, objects and agents must be understood as *results*, and that it is not until relations manifest in materiality that one can distinguish the real value of an object. Software is made 'invisible' in modern organizational life (Thrift 2005), and hence is often ignored both by practitioners and observers. The practices of the competition teams I followed in Snøhetta clearly show that both traditional sketching and advances in hardware and software technology influence the way architects design. But *how* exactly they influence the creative process is not so straightforward. Nor is the process of choosing ideas for the continuation of the creative process.

According to Ayden, ideas evolve as they build a physical model, even when it may seem to be just about gluing flat parts of wood together. He explains it as a process leaving room for improvisation. Seducing the team-as-audience is a specific magical performance where the carving magicians need to convince their colleagues that this physical model is the perfect synthesis of the collective's ideas. This act of seduction is what Malinowski describes as the dialogue where 'the magician speaks and the object responds' (1935: 241), leaving the model as the agent of enchantment (Gell 1992).

Confidence theory of magic

Architectural design in a competition phase is about convincing others and oneself that a certain concept is brilliant, and worth spending years of your professional life struggling to design. After the New York branch of Snøhetta won the competition for designing the extension to the San Francisco Museum of Modern Art, one of the young architects, in his early 30s, shared how he felt awed by the fact that he was now designing a building in an imaginary 'collaboration' with its original designer, the iconic architect Mario Botta. If he stopped for a moment to think about this, fears of failing struck him with force, he explained to me.

In Firth's discussion on magic's role in the Polynesian economy, he explains how magic 'enters where human knowledge is least and the liability to failure is greatest' ([1939] 1972: 169). He is inspired by Malinowski's confidence theory of magic, which denotes the rituals surrounding everyday work practices as endowing man with 'the conviction that he can master the obstacles which nature presents to him, and therefore is equipped to undertake tasks from which he would otherwise *shrink*' (Malinowski 1935: 184). The risks and liability to failure can be overwhelming for the individual, and magical practices and rituals are ways of remedying the situation. The magical rite of becoming a Snøhetta is to voice your ideas verbally or through material expression, regardless of your experience, age, gender or professional status.

After they handed in their entry in February 2009, the library competition team gathered to reflect on the process and their own work practices. A discussion of what was so special about working in Snøhetta soon arose. 'It is expected of you that you contribute and that you are at the forefront, and it is expected of you that you come up with amazing ideas. There is actually quite a lot that is expected', project leader Bente argues. The high standard of creative practice is a consequence of Snøhetta's amazing achievements, she explains, contributing to expectations of excellence from the public, clients and contractors and from the employees themselves. The Snøhettas expect that their design solutions will be somewhat different from and better than others – and that they will win prestigious competitions. When they lose, which they report they do in about 9 out of 10 competitions they partake in, they usually blame it on external factors like the jury – and they move on without evaluation, believing that a too-strong focus on failure will cripple creativity.

According to Bente, the high expectations require employees to be outspoken and share their ideas no matter how frightened they might be. The ritual experts expect every new employee to take on full responsibility for the collaborative creative process. 'Then you also dare to make mistakes, because everyone is supposed to come with some crazy idea or other, so here's mine, in a way. This I think is really liberating compared to working in other offices, because there, if that idea is not thought through and chewed over and worked on and totally bomb-proof genius when it's put on the table, then you don't dare to bring it'.

In Snøhetta on the other hand, 'it is expected that you are a super genius all the time. It is a very liberating way to work because, in a way, that is the framework'. The Snøhetta employees argue that something unexpected comes out of this particular engagement with ideas, using laughter and humour as essential ingredients. This kind of magical bantering or joking relationship (Radcliffe-Brown 1940) resonates with theories on processes of creativity in organizations (Bilton 2007).

Looking at Bente's statement through the French philosopher Gilles Deleuze's empiricism we see that 'it is the capacity for *imagination* to expect, anticipate or extend experience that produces formations that *seem* to govern human life but which are actually outgrowths or "fictions" produced from life' (Colebrook 2002: 82). Bente does not claim that the architects in Snøhetta *are* more brilliant or more creative than others; her argument implies that it is the expectation 'as fictions of life' (hence not untrue) that shape their practices into *becoming* genius and creative. They don't talk as much about what inhibits their creativity, like the ongoing downsizing processes (Hagen 2015).

When discussing other creative industries, like the movie or music business, Bilton argues that 'the myth of individual talent provides a glimmer of hope for the vast army of underpaid and exploited hopefuls who feed the industry machine' (2007: 16). How are the Snøhettas aligning this prominent Western myth with their ideology of sharing ideas and collective creativity?

The two digital experts, Ayden and Luke, are both knowledgeable users of Rhino, the most common 3D software tool, and was, according to the project leader Bente, impatiently waiting for the day they would be allowed to make the group's first 3D model. A few weeks in, Bente reluctantly let them have a go at it. She is working hard as project manager and ritual expert to give the library competition team extended knowledge of the mechanisms of a collaborative, creative process, through repeated informal and spontaneous 'lectures' on the topic in group meetings.

The spell of materialization

31 October 2008, Oslo office

They are all seated in the meeting room, gathered around a red table with black steel legs, the table cluttered by a site model, coffee cups, tracing paper, printouts of reference pictures and an early, conceptual 3D model in coloured plexiglas. Bente is standing, holding a pile of blue, sliced foam pieces in her hands. The sleeves of her sweater are pulled up and she starts laying out the pile on the table while explaining the creative process.⁴

If we do what we have done so far, to spread all our possibilities, because we have so many possibilities, reference projects, organizational diagrams, possibilities, possible programmes [she arranges and rearranges the pieces of blue foam while she talks], possibilities, everything is possible and we spread it out and look at everything [she is gesturing, a pause, an inclusion of all the elements]. Then you start putting something aside [throws a piece behind her, before laying out a new piece], and that is on the table, that is presented and that one we put aside for the moment and that one will maybe be brought out and we'll cultivate that one [she grabs a piece far in front of her], so we've got to fetch that from another place and start building.

I don't get this from the old [pointing to the pile behind her], I fetch something new [she looks at the others and smiles, they laugh] and then we start to cultivate, narrowing [she pats the pieces, shuffles them together], throwing away and eliminating silly things – or no, not silly things, but things we are not going to use. That is very important, that we do not continue adding new things. We also have to do that, but this time in a more rectilinear process [she gestures a line moving forward, wiggles her hand a little], so that we'll reach the goal.

Malinowski outlines three elements of magical performances: the rite, the formula and the condition of the performer (Tambiah 1990). According to Nadel, the magic formula or spell is the core of the magic procedure, often accompanied by 'rites, ritual gestures or use of a further object operating as a medium' (1935: 197). Bente is here assuming the guru role described by Barth (1990), explaining the process to the team novices. Such instructional speeches happened regularly, and were usually accompanied by excessive gesturing and example materials like the cubes of blue foam. The aim of the 'spell-making' session described above was to visualize the importance of materialization throughout a creative process, Bente later explained. It can also be interpreted as a true *bricoleur* moment when the project leader uses what she finds at hand in the room to work a 'formula' of the magical practice of creative processes.

The 'rhetorical art' of magic described by Malinowski (1935), where the regular way of using speech to 'induce action in people became the magical use of addressed language to *induce motion in things*' (Tambiah 1990: 82; emphasis added), thus serves as an accurate description of the practices of ritual experts like Bente. She attempts to induce motion in the potential sketches and models of the group, to set them 'to produce'. In this manner she instils in the group the professional confidence they need when competing for a prestigious commission. Another interpretation is that Bente here is responding to the teams' actions so far by making a magical counterspell. This happened several times, and seemed to coincide with her disagreement over the direction the team was taking at the moment. She was thus using her senior professional identity as leverage to influence the communal idea generation.

I argue that the employees are attempting to outmanoeuvre the professional hierarchies through their spells. Yet, sometimes glitches appear. During my full day observation in the model shop, described above, only one female colleague sets foot in the enclosed space. She was admiring the model being made. 'It's not democratic', Ayden states and nods towards his colleague as she leaves the room. He then goes on to explain how the gendered bias in the domain of the 3D competent digital experts, is diminishing the female employees' ability to influence the idea process. This dilemma is not among the general topics discussed openly in the firm, as they consider themselves to be gender balanced in mostly all matters.

According to the Snøhettas, the liberating effect of high expectations ensures that you don't have to constantly prove your brilliance? or as Bente frames it, you dare to make mistakes, because it does not devalue your abilities. This frees up a lot of resources that would normally, in a more competitive environment, go into defending your territory, proving or boasting about skills or plotting how to *appear* to be the most creative in the office. Through being employed as a Snøhette, the derivative series of mythological magic is bestowed upon you, as you rest on the creative shoulders of seniors responsible for the firm's past 20 years of achievements. For the Snøhettas to succeed, their level of confidence needs to be balanced – enough to make them believe they can actually perform when it matters, but not so much as to cripple the collaborative spirit that defines the company ideology.

The dialogue between the magician and the objects forms a communion. The resistance arising from the material, when sketching with knives instead of pens, gestures or the click of a mouse, *is* the dialogue Malinowski is referring to. Gravity is not normally viewed by architects as something wonderful, rather it is seen as a painful obstacle keeping them from fulfilling their ideas. A building that can be made without columns, to float in the air, is a recurrent dream, like the Trobriand myth of the flying canoe.

The architects often become so enchanted by the 3D software that they forget to see it for what it is: the result of a multitude of relations formed as much by materiality as by the imaginary, and by normative structures. Bente's 'speech' on the materialization of ideas can, according to theories on magic, also be seen as a ritualization of optimism (Malinowski [1948] 1992) and a way of inducing motion in the potential model itself, making it fluid through the use of spells. She is, like the young architect quoted at the beginning of this article, 'sketching' with imaginary knives, gestures and words.

The magic trick

Instilling confidence in workers is a crucial part of magical capitalism. In the end, the team of Bente, Ayden and Luke lost the competition. Their reasoning in hindsight was that the jury lacked the confidence to go with the Snøhetta non-traditional, creative solution. Following Bilton, I argue that the capital assets of the creative economy 'depend primarily upon a valuation of intangible assets and future profits' (2007: xix). The stakes are high, as the partners risk to lose the brand name if the company collapses financially and the employees risk to lose their community and their job. With too many competition losses they all risk to lose the *idea of the company* as a collective endeavour, the origin myth itself. To ensure this will not happen, the Snøhettas all put faith in the practices of crafting magic, executed in communion by the garden magicians – the ritual experts – and the carving magicians – the digital experts.

The constant tension, caused by status differences and professional hierarchies within the organization, is amplified by the resistance of materials. Magic is the equalizer effect in a professional world filled with inequality, risk and exploitation. The myth of the creative genius (Bilton 2007) is surpassed by the repeated chanting of the collective creativity performed in this particular architecture company. Whose ideas are really chosen we will never know, as the notion of 'our ideas' is the magic trick of gravity within Snøhetta. Creativity and professional confidence is thus linked to magic through the rituals and spells performed in the architects' everyday lives. These practices are present, I argue, to ensure confidence of safe journeys through the treacherous waters of a magical capitalism. ●

1. More on the company name's importance as origin myth and brand in Hagen (2014).

2. The gendered aspect of the relation between creativity, magic and technology is discussed in more detail in Hagen (2014).

3. All personal names in this article are pseudonyms.

4. This moment is recorded on video and thus transcribed in its totality.

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Fig. 1. Carver magicians in the New York branch of Snøhetta (left and upper right). One of the many conceptual models made by the library competition team in Oslo (lower right). Photo: Aina Landsverk Hagen/Gudrun R. Skjælaaen