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The many faces of uncertainty: getting at the anthropology of uncertainty

Abstract:

Creative work involves a blend of imaginative and analytical lenses. Getting the mix right can be quite a challenge, though we often do so without certainty about the hows and whys of our practice. Uncertainty is present in some shape or form throughout this process, but it is far from a predictable quality.

As part of her 2-year ethnographic exploration of scholarly researchers, Anderson witnessed the creative/analytical tensions experienced by her informants as they crafted their research. She also collected empirical evidence of the many faces of uncertainty present in creative practice. In some instances, uncertainty was a motivating factor driving the researchers to break new ground, to explore unknown terrain. The experimentation and risk-taking needed for innovation were present in such encounters. There is, however, a limit to our capacity to deal with uncertainty. In Anderson's study, for instance, the presence of uncertainty could also stifle the creative process, causing her informants visible frustration as they struggled to deal with a particular situation. This face of uncertainty caused the scholars to stop following unknown pathways, to be less adventurous and stay with the known, the safe options.

Why is it that uncertainty can be an enabler in some situations, but an obstacle in others? What is it that allows us to tolerate uncertainty in some instances, but not in others? Can we learn to manage our reaction to uncertainty? Can we build on the 'positive' effects and limit the 'negative' effects when we encounter them in our practice? This paper looks at research that helps us to answer these questions.

Biographical Note:

Dr Anderson is a researcher with the UTS Faculty of Arts and Social Sciences, exploring the relationship between people and emerging technologies. She has a particular interest in examining ways that information systems and institutional policies may better support creative and analytic activities. Her earlier doctoral research examined human decision processes, information retrieval interactions and e-scholarship. In 2005 she was awarded the inaugural annual Emerald/EFMD Outstanding Doctoral Research Award in Information Science.

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Uncertainty - risk - anthropology of uncertainty - productivity of risk - creative practice

Creative work involves a blend of imaginative and analytical lenses. Getting the mix right can be quite a challenge, though we often do so without certainty about the how's and why's of our practice. Uncertainty is present in some shape or form throughout this process, but it is far from a predictable quality. In fact, its very unpredictability is what makes it such a human quality. As Åsa Boholm observes: "In real life situations, the boundary between certitude and uncertainty is of course seldom razor-sharp, and vagueness and ambiguity tend to be the rule rather than the exception" (Boholm, 2003: 168). Eisenberg (2001: 534) goes so far as to suggest that our primary challenge as human beings is "...living in the present with the awareness of an uncertain future." I witnessed the value uncertainty provided to the informants in my research and started to examine more about the many faces of uncertainty in everyday and work settings. In so doing, I found myself drawn into the literature exploring what Boholm refers to as an "anthropology of uncertainty" and "culture of risk". That journey informs this paper.

In the current economic climate, it is difficult to imagine uncertainty having a positive or productive face. Notions like "risk" and "uncertainty" permeate media reports and even everyday conversations, but we seem to be in a moment where words like these are framed in very negative ways. Instead, "certainty", "assurance", "reasonable risk", and "measured risk" seem to be increasingly sought after in so many parts of our lives and our society. For me this is a worrying trend, because it would seem that, if we adhere to Boholm's claim that uncertainty is a necessary feature of our existence, then we need to acknowledge that working with and through uncertainty is an everyday experience. More than that, there is much evidence to suggest that uncertainty and curiosity are so closely linked that were we to reduce the uncertainties in our worlds, we would in effect be closing the door on the opportunities for innovation and creativity that are desired in so many sectors of our society.

The productive faces of uncertainty have intrigued me ever since I encountered them as part of the two-year ethnographic exploration of scholarly researchers I undertook as part of my doctoral research. During that time, I witnessed the creative/analytical tensions experienced by my informants as they crafted their research. Dealing with the uncertainties present in their work and in their everyday settings figured prominently. That early research enabled me to collect empirical evidence of the many faces of uncertainty present in the creative practice of scholarly researchers. In some instances, uncertainty was a motivating factor in driving the researchers to break new ground, to explore unknown terrain. The experimentation and risk-taking needed for innovation were present in such encounters. There is, however, a limit to our capacity to deal with uncertainty. In that first study, for instance, the presence of uncertainty could also stifle the creative process, causing my informants visible frustration as they struggled to deal with a particular situation. This face of uncertainty caused the scholars to stop following unknown pathways, to be less adventurous and stay with the known, the safe options.

Uncertainty impacts the whole self, though it is not always a positive experience. As a consequence of my study of uncertainty in that academic context, I found myself wondering:

- Why is it that uncertainty can be an enabler in some situations, but an obstacle in others?
- What is it that allows us to tolerate uncertainty in some instances, but not in others?
- Can we learn to manage our reaction to uncertainty?

- Can we build on the positive effects and limit the negative effects when we encounter them in our practice?

This paper explores some of the research that can help answer these questions. I am particularly interested in the productive contribution that working with and through risk and uncertainty can have in our lives. How might we allow ourselves the space to be creative and inventive in our worlds? In this paper I hope to explore uncertainty and risk in terms of the role it plays in human behaviour – starting with an exploration of its role in terms of individual behaviour, and then closing by looking at the wider implications for us as families and communities.

The risk/uncertainty connection

Uncertainty and risk are often grouped together in our conversations and imaginings. For instance, the following phrases from our everyday language all represent uncertainty and risk to some degree, though some have more positive or desirable connotations than others: good luck, good fortune, mishap, catastrophe, coping with uncertainty, calculated risk, managing risk, going out on a limb, creative leap, imaginative leap, running the risk, having a go. Some of these representations appear positive, others appear negative; some seem desirable, others undesirable. How we frame uncertainty and risk has much to do with where we are at a given moment and what we are experiencing. Essentially, it is the perception of risk or uncertainty that is at issue. Both are socially constructed phenomena, intersubjectively produced and culturally located.

Boholm (2003) and Malaby (2002) suggest we need to view risk in more nuanced ways, as neither simply objective nor subjective. Boholm, for instance, draws on a sociological definition of risk as “...a situation or event where something of human value (including humans themselves) has been put at stake and where the outcome is uncertain” (Rosa, 1998: 28 as cited by Boholm, 2003: 166). Risk and uncertainty are linked – when something of value is at stake, uncertainty can relate to the chances of a negative outcome and the nature of the outcome itself. People work on ways to overcome, manage, or deal with the uncertainty and risk experienced in their lives on a daily basis. Malaby positions risk and uncertainty as an important element of our sociality: “... it is through the engagement of indeterminacies, rather than their minimization or resolution ... that one may socially demonstrate one’s place vis-à-vis chance, and by extension, one’s place in relation to others in the world” (Malaby, 2002: 284 as cited by Christensen and Mikkelsen, 2008: 113). This perspective is a critical departure from assuming risk is necessarily dangerous or destructive or that uncertainty needs to be avoided or eliminated.

This anthropological stance helps us to appreciate that everyday life is characterized by uncertainty – and that uncertainty can bring unexpected pleasures as well as pain. Uncertainty is presented as a fundamental experiential realm of human existence associated with tolerance and risk-taking. In fact, it is through the experience of risk and uncertainty that we learn to identify how much we can individually endure.

When uncertainty is good – the link to creativity

What does all this have to do with creativity? Risk taking at individual and collective levels propels us forward as creators, adventurers and discoverers. It is therefore a worry to see an increased pursuit of certainty, assurances and risk avoidance in so many sectors of our society. Is the fear of risk killing

creativity, innovation and imagination? In this section of the paper I build on work from psychology and social anthropology showing that experiencing risk and uncertainty nurtures our creative and innovative practices.

Intellectual curiosity drives discovery. As writers and academics we have an intuitive appreciation of this statement. My research of academic practice (Anderson, 2006) provides an illustration of this connection. Interestingly, we can see similar appreciation in discussions of science and exploration. Take as an example the comments made around the time the Large Hadron Collider (LHC) was about to be launched. In the press at that time there was a great deal of talk about uncertainty and risk and passionate scientists involved in the project who explained that the “need to know” was a major driving force that made the risk worthwhile for those involved. A browse of the project’s blog (LHC Facts, 2008) for example presents the following explanation:

Q: Would scientists purposefully risk danger to Earth?

Scientists have been willing to take calculated risks in the past. CERN scientists believe that the Large Hadron Collider is an extremely important experiment and they might be willing to accept some level of risk.

Curiously, on the same page findings from various public opinion polls about the risks associated with the LHC show that many sectors of the public did not share the scientists’ perception that it was a risk worth taking. In this one example we have an illustration of risk and uncertainty as potential drivers of discovery – but equally we see the perceptive power of these notions. As the distinction between the scientists’ vision of the need for risk-taking and the public opinion polls show, there is no inherent judge of good or bad in this context. It is all a matter of perception and perspective. The sense of control that we feel we have or need can have a great deal to do with how we perceive risk and uncertainty. The locus of control may explain why so many people consider flying riskier than driving, even though statistics would suggest otherwise. Conversely, when we can make the decision to push ourselves to the limit, in thrill seeking or adventure sports, for example, risk can become a fun or pleasurable experience.

Before discussing these pleasurable qualities, it is important to recognize that there are risks and uncertain situations that seem to have little creative potential. Risks to family security (e.g.: job loss, housing concerns), to health (e.g.: surgery, illness), or to personal security (e.g.: crime, terrorism) are examples that many of us can appreciate. However, even in such circumstances, individual judgments vary with regard to where to draw the line in terms of threats to our security and acceptable risks. A review of research into terrorism threats, for instance, found great variance in terms of the perception of risk and potential terrorism threats within different communities at different points in time (Maguen, Papa & Litz, 2008).

Perception is a powerful determinant when it comes to developing a tolerance of risk and uncertainty in society collectively and in our own lives. There is a powerful social element at play in the way we approach risk, for instance. Our sense of self and the way we wish to see ourselves in relation to particular social groups informs the way we approach risk and uncertainty. It can lead to productive forms of risk taking (Eisenberg, 2001; Zaloom, 2004). While uncertainty or risk is not inherent, research suggests that when an individual threshold is reached, the negative emotions can overpower us. At moments when uncertainty and risk seem too much to bear, these powerful emotions diminish any opportunity for exhilaration and the pleasures of uncertainty (Wilson, Centerbar, Kermer & Gilber, 2005).

Research shows that emotionally, intellectually and physically, humans need some form of risk and uncertainty for motivation, interest, excitement and intellectual curiosity – all of which are ingredients for innovation, creativity and imagination. How do we keep from cocooning ourselves and avoiding all risks and uncertainties? To look for answers to this question, we can look to research that draws attention to the productivity of risk and uncertainty in our lives.

Research in social cognition (Wilson, et al., 2005) draws attention to ways that uncertainty can prolong pleasure. We are highly adaptive in situations when we encounter new information – predictable or known elements become background so that our attention can remain uncluttered and prepared to deal with the unexpected. Wilson, et al., explain that predictable events evoke less intense emotions than unpredictable events, which can lead to a pleasure paradox: we are driven to understand the causes of events in our lives in order to make them more predictable, but trying to make sense of positive events can also make them less enjoyable.

Sense making (working to explain an event to ourselves) reduces the emotional power of events – positive as well as negative. It turns an extraordinary, attention-demanding event into an ordinary one that no longer requires attention and consequently no longer triggers intense reactions. When we face the uncertain, we respond with intellectual curiosity and behaviours associated with “making sense”. Certainty reduces the pleasure associated with a positive event, but because this isn’t often recognized by us in some circumstances we actually diminish the pleasure by looking for certainties rather than accepting the uncertainties that can actually prolong the pleasure. Wilson and colleagues (2005) speculate that we don’t always resolve this paradox optimally because uncertainty is so often associated with anxiety, worry, and difficulty in adapting to new environments. This emotional response is one reason we often strive to reduce uncertainty in our lives. People who succeed in reducing uncertainty about traumatic events, for instance, do better emotionally and physically than people who do not. Writing or talking about it is often part of successful sense making in such situations. Clearly in a traumatic situation we want to do this – this human capacity to make sense speeds recovery. But what of the positive events that might bring pleasure and joy? Wilson and colleagues found that in situations where the ability to make sense of a positive event is inhibited, the pleasure surrounding an event could be prolonged.

At such times a moderate amount of uncertainty is beneficial, but because notions of positive and negative are subjective to a degree, the intensity of the response varies. Each of us will interpret events differently – but managing and even tolerating rather than avoiding uncertainty is shown to be productive.

Risk reaps reward and so there are many examples of the productivity of risk in human practice. There are people who make the choice to actively engage with risk, some physical (e.g.: extreme athletes) and some economic (e.g.: financial speculators). Zaloom (2004) explored the productive life of risk through fieldwork on the trading floor of the Chicago Board of Trade, a major global financial futures exchange. Zaloom describes the “fine balance necessary to work with risk” (p382) and explains that it involves working with norms of risk management that are generated (in her context) on the trading room floor to the extent that self-definition and group-formation co-evolve: “Active engagements with risk are a locus of self and space in contemporary economic and social life” (Zaloom, 2004: 384). Here we find a conundrum of risk and uncertainty and the mixed bag of perceptions of both across

situations and cultures. The concept of risk can be understood as a framing device – allowing us to transform it from “...an open-ended field of unpredicted possibilities into a bounded set of possible consequences” (Boholm, 2003:167). Risk can be conceptualized and managed in different ways across communities, cultures, organizations. Looking at the productivity of risk draws attention to ways that some people see it fitting into their work and their self-defining behaviours.

Given the cultural dimensions of risk and uncertainty, it is worth considering how uncertainty and risk might figure in the creative landscape – both in terms of the individual qualities of a creative practitioner and in terms of the environments that would support and sustain creativity. John Keats is quoted as saying that artistic achievement is possible when people “... are capable of being in uncertainties, Mysteries, doubts, without any irritable reaching after fact & reason” (as cited by Wilson, et al., 2005: 6). Eisenberg (2001) speaks of building a mystery. The process of “being in uncertainties” is, such work would suggest, an important factor in creative practice. Lowenstein (1994) suggests that the act of satisfying curiosity – working through the mysteries so to speak – is pleasurable but not without risk. Does this suggest that developing an awareness of and being in the uncertainties of the everyday and of our practice is a critical condition in any creative landscape?

Taking a holistic view of uncertainty we begin to appreciate that thresholds exist along a certainty-uncertainty spectrum. Positive or desirable uncertainty is necessary for making sense of the world. For the informants in my ethnographic research, for instance, like the CERN researchers involved in the LHC experiments, not knowing motivates them and compels them forward. However, too much “not knowing” can overwhelm. At such a point, an individual might be said to be experiencing undesirable uncertainty. This type of uncertainty – which we can label unproductive or negative – is associated with the frustration associated with communicating a message, information overload, unmanageable uncertainty, and risks beyond the tolerable. My own research on uncertainty (Anderson, 2006) has shown that positive and negative forms (as experienced at any one moment) are inextricably intertwined but one key to working through any kind of uncertainty is developing a tolerance for it. As Boholm and others contend (and I agree) risk and uncertainty are extremely contextual. In fact, it seems that desirable uncertainty appears to emerge through the interplay between positive and negative forms in our individual practices. Thus, working with and through the uncertainties that we experience plays a critical role in creative, innovative activity.

Closing thoughts about the implications for creative practice

Creativity and innovation are desired in many parts of our lives. We value it in business, policy, science and technology as well as in the creative arts. We value it in our children and in ourselves. If we are to encourage innovation in all sectors of our lives (individually and collectively), the lessons learned through research like that which I have discussed in this paper suggests we have to be tolerant of ambiguity and uncertainty in our lives and in our society. We have to be able to see the productive potential of risk. We have to learn to manage risk and uncertainty rather than seek to avoid it altogether. We can't handle too much, but we need some risk and uncertainty in our everyday practice. Thus we need to have conversations about how we can ensure our (collective) capacity to tolerate risk and uncertainty. We need to experience uncertainty and risk and talk about how we go about learning to manage it all. We need to learn how to handle “imperfect information” about situations and how to reconcile with not knowing the outcome, all the choices or all the probabilities of particular outcomes in our own lives and in our society.

If research shows that uncertainty and risk have productive faces, why are these beneficial qualities not more visible at present and why do current events seem to present us with overwhelmingly negative views of uncertainty and risk? Boholm helps us understand how public talk of economic and political uncertainty and a generalised aversion to risk can shape our personal perception. She writes about risk communication and “medialisation” of many risk issues as global media outlets bring many risk issues to our attention. It can be emotionally challenging to learn through personal experience when we have to contend with assessments of risk that are part of “...global information deriving from the generalized knowledge of distant expert communities” (Boholm, 2003: 172).

The current climate can make it difficult to see the positive, productive faces of risk and uncertainty. Eisenberg (2001: 550) observes we need to “...develop new ways of living in a world without foundations.” The challenge comes in terms of overcoming the fear of the future and all the unknowns in a time when there is so much flux. Wallerstein (1998), an historical social scientist who has written extensively about change and dynamics in global systems, has something to contribute to this exploration of uncertainty and its role in human experience. His observations about human social systems in periods of transition, a characterisation he contends describes our current age, suggest that fear and panic kicks in when we perceive our situation to be precarious, individually and collectively. This fear can be brought on by the major impact that seemingly small inputs can have on our stability (Wallerstein, 1998: 320). The cascading effect of the sub-prime credit crisis seems to confirm his assessment. In such times it can be difficult to find a balance between desirable and undesirable uncertainty that we can live with, but I want to encourage us to think about ways to do so. I want us to remember that in times of upheaval, creativity and risk taking can become tools for moving from old ways into the new ones necessitated by change. I want us to take heart in Wallerstein’s proposition for this moment in our global history, when he writes that:

“...uncertainty is wondrous, and that certainty, were it to be real, would be moral death. If we were certain of the future, there could be no moral compulsion to do anything. We would be free to indulge in every passion and pursue every egoism, since all actions fall within the certainty that has been ordained, then the future is open to creativity, not merely human creativity but the creativity of all nature. It is open to possibility and, therefore, to a better world” (Wallerstein, 1998: 322).

When we don’t know, we must imagine.

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