COMMENTARY

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Leaving the path of optimality calculation: A commentary on Fenton-O'Creevy and Tuckett, 2021: Selecting futures: The role of conviction, narratives, ambivalence, and constructive doubt

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What do we do if we cannot know what is best to do? The question of expectation formation and decision-making under conditions of fundamental uncertainty has recently attracted considerable scholarly attention and is currently one of the most fruitful questions for the development of theories of decision-making (Beckert, 2016; Holmes, 2014; Svetlova, 2021; Taleb, 2010), Most approaches to decision-making-most strongly in economics-follow the idea of identification of an optimal decision that can be singled out by rational calculation. Sophisticated theories of probability are applied to show that optimal solutions are calculable even in highly complex situations. Uncertainty is a prominent topic in these theories, but it is treated as a form of probabilistically calculable risk.

Such normative theories of optimizing reach their limits when radical uncertainty is taken seriously. Radical uncertainty comes with different terminologies. Some scholars call it "fundamental uncertainty," others "ontological uncertainty," others "genuine uncertainty," but the basic idea is typically traced to the essential distinction between risk and uncertainty introduced by Frank Knight ([1921] 1985) in the early 20th century. There are situations of risk to which probability theory can be applied, and there are situations of uncertainty, where it cannot. These are situations that are unique, because they entail genuine novelty, where the possible choice set cannot be known, where the assumption of "ergodicity" (Davidson, 1996) is not given. Under these conditions, the identification of the optimal decision is simply not possible. Actors cannot identify all

causal effects that enter into an outcome. They cannot know the choice set and all possible states of the world. They cannot know what is best to do. Much of the economic world—though not all of it -is characterized by this kind of uncertainty. That crucial parts of the future cannot be foreknown is almost a truism and future studies have many years ago given up on the assumption that the future can actually be predicted (Andersson, 2018).

How do actors decide in such situations? Conviction Narrative Theory (CNT), as developed by David Tuckett and his co-authors, makes an intriguing suggestion: actors make decisions by making sense of the world in narrative form, coming to the conviction that an envisioned future, articulated as a narrative, has an at least good enough chance of becoming the "future present" (Luhmann, 1976). Decisions are made based on such convictions. This is not a theory of craziness. Actors consider as many factors as possible, try to find facts and clues as to where they could go wrong in their assessments. But ultimately, there is no objective proof for the conclusion: uncertainty cannot be undone. Uncertainty can only be shifted sufficiently to the back, to calm down anxiety and allow for sufficient confidence to reach a decision.

One of the crucial challenges of such a theory is to disentangle how actors actually become sufficiently confident in their narrative assessments of the situation. Tuckett's main contribution to this question is to highlight the role of emotions—an element that is often paid only scant attention. Convictions are not only cognitively

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anchored but also in positive feelings that are associated with the imaginary of the outcome that is associated with the decision to be taken. Actors look at decisions in the mode of the future past and indulge in the anticipated future that they imagine as a present—or they shy away from it in case the imagined future is unattractive to them. To create the emotions supporting decisions under conditions of uncertainty needs what Tuckett calls "attractors" and "doubt-repellors."

Though the role of emotions stands at the center of Tuckett's theory, he is enough of a sociologist and scholar of literary theory to also emphasize other elements that are undoubtedly relevant for creating confidence in a narrative: the way the story is being told, the institutional setup, the historical and cultural context are all relevant aspects. However, only scant attention is given to the power aspects of conviction narratives (Andersson, 2018). The power of the speaker or the use of manipulation techniques do not get much attention. The same holds for the role of the technological devices used in decisionmaking processes-from dynamic stochastic general equilibriummodels in macroeconomics to technology roadmaps to architectural visual representations of imagined futures (Beckert, 2021). All these "instruments of imagination" play an important role in creating conviction. Moreover, the aspects mentioned by Fenton-O'Creevy and Tuckett as being relevant for creating conviction in a narrative are merely presented as a shopping list. Little is said about how they relate to each other, under which scope conditions they are more or less important, and from which theoretical considerations they are assembled. But no scholar-to my knowledge-has succeeded (or even begun) to develop a comprehensive and predictive theory of the conditions under which stories become credible. This is a research frontier that needs to be tackled and Fenton-O'Creevy and Tuckett start doing this by writing a list.

Next to putting emotions front and center of a theory of decision-making under conditions of radical uncertainty, the emphasis on ambivalence is a second far-reaching contribution of CNT. To be convinced of something can entail being blind to important aspects the future will bring. Such blindness can either lead to foregoing opportunities or overlooking threats. A main line of critique against theories of optimal decision-making is that, under conditions of uncertainty, such theories necessarily overlook important parameters of the situation and thus will be confronted with unexpected outcomes for which they leave decision makers utterly unprepared. One only needs to think of the financial crisis of 2008 and the perplexity of economists that such a crisis could indeed happen. The answer to the Queen as to why this crisis could occur was a major embarrassment for the discipline.

But acting based on narrative convictions can entail the same danger. And a psychologically anchored theory needs to be especially mindful of this danger: it is common sense in psychology that humans have a strong tendency to suppress information that is dissonant to their beliefs and convictions. On the one hand, the "doubt-repellors" allow us to act *despite* not knowing what's best to do, on the other hand, they may keep us away from important insights. But how to avoid the development of "cognitive

monocultures" (Bronk & Jacoby, 2016) where actors are "stuck in single stories about the future" (Fenton-O'Creevy & Tuckett 2021, p. 12) and tolerate instead ambivalence (or: a "sense of dissonance" (Stark, 2009)), despite the anxieties this may produce? Again, any answer to this question needs to include, next to psychological factors, the organizational and institutional conditions which support the articulation of counter-evidence and keep a multiple set of alternative futures in play. Some techniques developed in the context of foresight studies are designed to do exactly this: widening the cognitive horizon by pointing to a range of alternative scenarios. This, however, points back to the tension mentioned above: the more alternatives are kept in play, the more difficult it might become to finally settle on a decision. When it comes to investments in start-up companies, for instance, the strategy rather seems to be to push aside any ambivalence, bet on an outcome, and either win big or fail. For processes of radical innovation, ambivalence may be less productive, while for routine processes and incremental innovation it might be more so. This would also entail a testable hypothesis.

A fruitful way to think about the tension between conviction and flexibility might be a processual perspective along the lines of pragmatist thinking. John Dewey ([1922] 1957) saw action as an inquiry where actors hold revisable convictions about ends and means. In the course of action, they encounter resistances, evidence that contradicts their narrative. These contradictions bring them into a mode of reflection and to eventually revise the narratives they hold, a creative adaptation that allows the action to continue. This is thought to be a recurring process where the action is not unfolding teleologically as following a preset goal, but where the setting of goals and the decision on means are endogenous to the action process itself. Any conviction regarding the future is provisional. Undoubtedly, a crucial element of this on the personal level is what Fenton-O'Creevy and Tuckett (2021, p. 9) call an "integrated state."

David Tuckett and his colleagues are contributing to an innovative understanding of decision-making under conditions of uncertainty which has many important implications for organizations and policy making. Leaving the trodden path of single exit optimization opens up a plethora of questions and research frontiers. For most of them, we are standing at the very beginning, many have perhaps not even been identified as questions. But despite these difficulties this new research finally confronts the implications of something that probably only few would seriously doubt: that our important decisions take place under conditions of fundamental uncertainty and that the idea that we could identify optimal decisions under such conditions is insufficient.

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