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Conceptualizing intuitive expertise: A research agenda

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This contribution offers new theoretical perspectives on intuitive expertise with the aim to reduce the gap between “theory and practice” (Sinclair, 2020: xix). We argue that intuitive expertise is at the crossroads of two research streams: expertise and intuition, both of which have developed largely in parallel. Despite existing research, theoretical development of the concept is needed (Akinci & Sadler-Smith, 2012). Kahneman and Klein discussed intuitive expertise and the conditions for its effective use for several years, as summarized in their paper from 2009. One point they raise is that an effective use requires a domain benign for expertise and an opportunity to learn. Even though they refer to Ericsson (2006) and the concept of “deliberate practice“, they do not further engage with the literature on expertise. In our book “Intuitive Expertise and Financial Decision-Making” (Grant & Nilsson, 2023) we build on the discussion by Kahneman and Klein (2009) by combining current knowledge of expertise and intuition, and consolidate it in a framework. In the present contribution we develop the framework one step further by proposing a conceptual extension of intuitive expertise based on more detailed examinations of expertise and the boundaries of intuitive expertise.

We argue that research in expertise can serve as a solid basis for examining the effective use of intuition, specifically, intuitive expertise. An important reason is that expertise offers a firm grounding of the concept by providing explanations for why and when intuition can be effective and not (Grant & Nilsson, 2023). Furthermore, it facilitates
examining conditions for the use of both intuitive and reflective processes, and thus establishes a perspective suitable for studying practices.

Following this line of reasoning, the proposed research agenda focuses on two vital areas: (1) how expertise is developed and (2) how boundaries of intuitive expertise are defined. The research agenda is illustrated with examples from financial decision-making. We believe that examining how intuitive expertise is developed and used in practice, including its boundaries, can add valuable knowledge to our understanding of the concept and help to further develop it.

**Developing expertise – a research agenda**

The concept of “deliberate practice” (Ericsson et al., 1993) is a theoretical starting point for understanding how expertise is developed in “real-life”. This requires a long period of high quality practice within a domain, which involves feedback repetition, gradual refinement and being challenged.

There are many studies of deliberate practice in domains like nursing, sports, and music. However, not in the domains of management where expertise in terms of intuition is often reduced to stating the required number of years to acquire it (Grant & Nilsson, 2023). Such narrow definition does not take into account conditions for expertise development or contextual factors. A related question is how experts develop adaptability – an important characteristic of expertise (Ward et al., 2018). That is, how experts adapt to manage new, non-routine, low-frequency cases. For example, judging an acquisition involves a context where each acquisition has its own unique character (Grant & Nilsson, 2020). Thus, it is important to understand the expert’s adaptability in the domain to further our knowledge of experts and their performance. This, in turn will allow us to assess the appropriateness of intuition use. As a first step we need to know more about how adaptability is acquired and how it can be characterized.
Previous studies indicate that deliberate practice, for instance in financial decision-making, involves early exposure to demanding tasks and learning from mistakes, indicating that 10-20 years of experience is required. (e.g. Grant & Nilsson, 2023). However, these studies have not focused on deliberate practice and its role in the development of expertise, nor have they defined what adaptability means. Overall, there is a lack of knowledge about how expertise can be developed as well as the limits of expertise. Such knowledge would also increase our understanding of what expertise consists of in different domains.

**Boundaries of intuitive expertise – a research agenda**

To understand the boundaries of intuitive expertise we suggest two research areas with a potential to contribute to the literature. These relate to whether the domain and its tasks are benign for expertise, and if so, for what type of tasks intuitive expertise is more effective than reflective processes.

*Domain and tasks benign for expertise.* Benign domains and tasks have been described as having a high degree of predictability, being repetitive and suitable for feedback (Shanteau, 2015). Moreover, recent research in expertise adds to this by showing that adaptability seems to be a characteristic of experts in a domain (Ward et al., 2020). This means that the expert is able to show superior performance in changing contexts or based on only a few prior similar cases. The importance of adaptability has been shown in studies of investments in start-ups; a situation with extreme uncertainty (Huang & Pearce, 2015; Huang 2018).

Further investigating the boundaries of expertise in domains of high uncertainty is of interest also for intuition as it has been known to be frequently employed under conditions of uncertainty (Robinson et al., 2017). Some domains may fall outside of where expertise can be developed, for example, long-term political or economic forecasts where uncertainty is too high because future development encompass too many unknown factors and is affected by randomness (Taleb, 2007). Other domains are still to be interrogated, such as fund
management where several studies argue that share prices follow a random walk and because of that fund managers cannot over-perform in the long run.

Another line of inquiry relates to how expertise can be characterized. In our studies (Backman et al., forthcoming; Grant & Nilsson, 2023), we asked experts about how they characterize expertise in their domain. Surprisingly, most of the interviewees had difficulty in describing expertise. Still, critical judgments and decisions for certain tasks were discerned and often described, in what we interpreted, as judgments based on intuitive expertise. Since expertise affects long term performance, it is important to increase of our understanding of what it consists of in different domains and tasks. Without such knowledge it would be difficult to develop expertise by deliberate practice, and thus evaluate when it forms a solid basis for intuitive judgments.

Task characteristics. This research area concerns how experts’ intuitive and reflective processes interact and how the effective use of these processes can be described. Studies of practices typically show that both processes are used (Sinclair, 2020). Still, more detailed knowledge of how these processes interact in different practices and tasks is largely lacking (Hodgkinson & Sadler-Smith, 2018). This pertains to the question of how differences in the level of expertise (Dreyfus & Dreyfus, 1986; Gobet, 2016) affect the use and interaction of intuitive and reflective processes (Dane et al., 2012).

Research suggests that intuitive expertise is effective in tasks which can be described as judgmental, have no definitive correct answer, and are difficult to decompose (Dane & Pratt, 2007). On the other hand, reflective processes are preferred for tasks which can be decomposed and have a correct answer. This view is largely based on experimental studies (Grant & Nilsson, 2023). Although it found some support from field studies in financial decision-making (e.g. Huang & Pearce, 2015), our understanding of the effective use of
intuitive expertise is still rather limited. This includes how the level of (properly defined and evaluated) expertise affects the effectiveness of intuitive expertise.

References


