

**Synopsis 4: UNDERSTANDING INDWELLING THROUGH STUDYING
INTUITIONS OF NOBEL LAUREATES AND TOP CHEFS**

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Our symposium contribution builds on two projects in which intuition emerged as an essential element of indwelling in practice. Both projects focus on ‘extraordinary’ (Dörfler & Stierand, forthcoming) practitioners, namely practicing scientists and haute cuisine chefs. In the first project, Viktor interviewed 17 Nobel Laureates, aiming to understand the cognitive complexity at the highest level of knowledge. (Dörfler & Eden, 2014a) In the second project, Marc interviewed 18 top chefs, aiming to achieve a better understanding of creativity in haute cuisine. (Stierand, 2015; Stierand & Dörfler, 2016) Now we bring these two projects together, adopting an approach similar to a qualitative meta-synthesis, comparing the emergent patterns of both projects, seeking synergies and looking for additional insights from new emerging patterns. Both studies were conducted using variants of a phenomenological inquiry, developing modes of analysis to preserve as much of the data richness as possible. (Dörfler & Eden, 2014b; Stierand & Dörfler, 2014) The similarity of the two methodological approaches is thus sufficient to allow for meta-synthesis. Here we aim for an intuitive sense-making of a large number of anecdotal observations. Particularly, we are focusing on the notion of indwelling, originally put forward by Polányi (1962a, 1962b) and we examine how our observations fit with Polányi’s assertion. Furthermore, we move from the personal to the

transpersonal level in order to understand what happens when people think together. (cf Pyrko et al., 2017) We conclude by giving an outlook to how the notion of indwelling could help understand intuition with reference to faculties other than knowledge.

Working over the last 10 years on the two projects, we already started to observe interesting similarities between how Nobel Laureates and top chefs think. In this study we particularly examine how our interviewees talk about intuition and how they use it. They always described their creative intuitions as a form of 'direct knowing'. Furthermore, they described their intuiting using the same characteristics we can find in the academic literature, namely as extremely fast, spontaneous, alogical, holistic (i.e. reasoning about the gestalt, the totality of a situation as well as summoning the entire relevant knowledge), tacit, and they often noted the feeling of seemingly unjustified 'in-built' certainty (cf Dane & Pratt, 2007; Dörfler & Ackermann, 2012; Dörfler & Stierand, 2017).

As we were comparing learning points about extraordinary scientists and chefs, we have observed a similarity that, at the first glance, we found surprising. Namely, top chefs do a great deal of work with their hands, and the interviewed chefs often felt that their intuition had a strong characteristic of embodiment. The interviewed experimental scientists felt the same way. Then, we realized that the same phenomenon could be observed in more abstract scientific disciplines as well. For instance, Yoichiro Nambu described his thinking in terms of differential equations in a way that we would call embodiment, if it was not with reference to such an abstract construct as equations, taking place entirely in his mind. Then, now consciously searching, we have looked at the statements of other theoretical physicists, economists, etc. and found very similar expressions. Apart from the interviewed Nobel Laureates, we have explored numerous examples from the history and philosophy of science, and found further references to something like embodiment taking place in the realm of mind. Furthermore, going back to the literature (academic as well as popular), we have also found

many statements of e.g. fighter pilots or Formula 1 drivers describing their relationship with their vehicles as if those were parts of their bodies. This suggested to us that we have stumbled upon something more generic, something that is like embodiment which does not necessarily need a body or can include objects besides the body. Therefore we went back to the literature, to the author who often surprises by having described already something new we have just observed: Michael Polányi. When describing personal knowledge and its necessarily tacit nature, Polányi (e.g. 1962a, 1966) uses the notion of indwelling with reference to objects, abstract notions (e.g. theory, mathematical discovery or symphony), as well as other people:

We pour ourselves out into them and assimilate them as parts of our own existence. (Polányi, 1962a: 61)

In this sense, indwelling is a generalized version of the concept of embodiment. As intuiting is a form of tacit knowing, if tacit knowing and indwelling are inherently linked, we can assume the same for intuiting:

Tacit knowing now appears as an act of indwelling by which we gain access to a new meaning. When exercising a skill we literally dwell in the innumerable muscular acts which contribute to its purpose, a purpose which constitutes their joint meaning. Therefore, since all understanding is tacit knowing, all understanding is achieved by indwelling. The idea developed by Dilthey and Lipps, that we can know human beings and works of art only by indwelling, can thus be justified. (Polányi, 1962b: 606)

When top chefs create meal experiences, they use their intuition. They do this by dwelling in the ingredients, the ambient, the atmosphere, the season of the year and even the consumers' minds. This is a contemplative experience of haute cuisine. When experimental scientists conduct their experiments, they use their intuition. They do this by dwelling not in the particular particle, molecule or fruit fly, but in the whole domain knowledge of particle physics, molecular chemistry or biology. This is the contemplative experience of science. Intuiting is that glimpse into the essence of indwelling, when the intuitor becomes one with the object of intuiting in a moment of complete immersion, when the curtains move away for

a moment allowing this essence to be experienced directly. This conceptualization makes it easier to explain why no major breakthrough in science has been achieved in any other way than using intuition and, based on our indwelling in haute cuisine, we now know that it is true there as well. Polányi emphasizes that:

A true understanding of science and mathematics includes the capacity for a contemplative experience of them, and the teaching of these sciences must aim at imparting this capacity to the pupil. (Polányi, 1962a: 208)

This leads us to another aspect of indwelling we have observed, we call it shared indwelling, which can be observed amongst others in master-apprentice relationships. (Stierand, 2015) This recognition can help explain why it seems that the only way to pass on tacit knowing is through a master-apprentice relationship, and why the master-apprentice relationship seems to be necessary for achieving the highest level of expertise. The shared indwelling between the master and the apprentice is aimed at the totality of the discipline (in our cases scientific disciplines and haute cuisine). At the beginning of the process it is the master's indwelling in the discipline, while the apprentice dwells in the master, and then, gradually, becomes an independent 'indweller' of the discipline. As this indwelling is aimed at the whole discipline, it makes it easier to understand why there is no shortcut, why the master apprentice relationship needs to be a lengthy process.

However, it is not necessary that two people dwell in the entirety of a discipline. It can also be a narrower 'topic' of interest. This is what Pyrko et al. (2017) describe as 'thinking together', which they consider to be at the heart of communities of practice (CoPs). While there are degrees of CoP membership, the 'core members', who lead the practice, engage in thinking together. Thinking together is described here as interlocked indwelling, which is distinct from shared indwelling, as the interlocking is around those problems or hot topics of genuine interest. In other words, the core members of the CoP dwell in those problems and hot topics rather than the entirety of a discipline.

There is one last relevance of the notion of indwelling for this study. We turn around our methodological argument in a reflexive way: Our meta-synthesis was aimed at our intuitive learning, rather than at the empirical data. This was not entirely a conscious decision, the only conscious decision we made was about trying to explore how the two research projects inform each other. We have achieved this by each of us dwelling in the specific contexts of our respective projects. Furthermore, as we have spent years in a master-apprentice relationship with each other, we were not strangers to shared indwelling – so we have seamlessly slipped into an interlocked indwelling about this particular topic.

Based on the two underlying studies as much as on our first-hand experience, we believe that a deeper understanding of indwelling will be exceptionally useful for future studies of intuition. However, our above argument supports this expectation only in the realm of knowledge. We believe that the notion of indwelling can help in understanding the nature of intuition better in faculties other than knowledge as well, particularly in the realm of emotions. Applying Polányi's assertion to intuition, we get a formulation that comes very close to the Celtic notion of Anam Cara (O'Donohue, 2009), the 'soul friend':

It bridges the gap between the I-It and the I-Thou, by rooting them both in the *subject's I-Me* awareness of his own body, which represents the highest degree of indwelling. (Polányi, 1962b: 606)

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