The main thesis defended by the anthropologist Tim Ingold in his book *Making: Anthropology, archaeology, art and architecture* is that ‘making is a correspondence between maker and material, and that this is the case as much in anthropology and archeology as it is in art and architecture’ (preface 1). The author intends to ‘resolve the opposition between the theoretical and the practical’ (p. 15). The ideas developed in the book come from experiences and exchanges with his students and colleagues from different fields. He is informed by archeology, sociology, history, philosophy, and cognition theory, while also quoting poets and artists. I posit that his book can offer ideas and inspiration to professors and researchers in management, seeking to understand what managers do and who operate at the nexus of theory and practice. In this essay, I draw analogies between current-day managers and entrepreneurs and the fundamental characteristics of human action identified, by Ingold, in prehistoric humans, artists, architects, and craftsmen.

Tim Ingold was born in 1948. He received his PhD in anthropology from the University of Cambridge in 1976 with research including ethnographic fieldwork conducted among the Skolt Saami, a population group from Finland. He subsequently taught social anthropology at the University of Manchester while continuing his research on northern circumpolar peoples, reindeer ranchers, and hunters. This led him to pursue a more general interest in human–animal relations and to the publication of the book *The appropriation of nature*, published in 1986. The same year, he published *Evolution and social life*, a study of how the notion of evolution has been handled in the disciplines of anthropology, biology, and history. Ingold then became interested in the connection, in human evolution, between language and technology, resulting in a volume coedited by Kathleen Gibson entitled *Tools, language, and 1.

Unless otherwise indicated, all citations are excerpts from the book *Making: Anthropology, archaeology, art and architecture*. 2 The biography of Tim Ingold has been written based on information provided on the website of the University of Aberdeen, https://www.abdn.ac.uk/people/tim.ingold/, consulted 3 November 2017.
In 1993 (Gibson & Ingold, 1993). Since then, Ingold has sought ways of bringing together the anthropologies of technology and art, culminating in his current view of the centrality of skilled practice. Linking the themes of environmental perception and skilled practice, Ingold has attempted to replace traditional models of genetic and cultural transmission, founded upon the alliance of neo-Darwinian biology and cognitive science, with a relational approach focusing on the growth of embodied skills of perception and action within the social and environmental contexts of development.

He has received several academic distinctions. Since 1999, Tim Ingold has held the Chair of Social Anthropology at the University of Aberdeen. There, he teaches anthropology with unusual methods, such as weaving baskets on the beach as a way to experience craftmaking in its original environment.

In his latest research, he aims to forge a new approach to understanding the relations, in human social life and experience, between movement, knowledge, and description. Ingold conceives of anthropology, archaeology, art, and architecture – the ‘4 As’ – as ways of exploring the relations between human beings and the environments they inhabit. His project is to show that: (1) things are not reducible to objects; (2) things are, instead, generated within processes of life; (3) a focus on life processes requires us to attend to flows of materials; (4) these flows are creative; and (5) creative practice unfurls along a meshwork of interwoven lines.

Conventional research protocols expect the scholar to treat the world as a reserve from which to draw empirical material for subsequent interpretation in light of appropriate theory. Against this background, Ingold wants to use an alternative procedure whereby theory grows from his direct, practical, and observational engagements with matter or the material. Theoretical thinking, then, is embedded in observational practice, or knowing in being, rather than vice versa. According to him, the key in anthropology is known by studying with things or people instead of making studies of them.

**Summary of the book**

In the first chapter, entitled *Knowing from the inside*, Ingold begins by defining anthropology by distinguishing it from ethnography. Ethnography is the description of the people, whereas ‘anthropology is studying with and learning from’ (p. 3). Thus, the anthropologist is engaged in ‘participant observation, a way of knowing from the inside’ (p. 5). Ingold is in favor of an art of inquiry that ‘far from answering to their plans and predictions, […] joins with them in their hopes and dreams’ (p. 7).

Ingold also teaches this art of inquiry in his course on the ‘4 As’:

The aims of the course were to train students in the art of inquiry, to sharpen their powers of observation, and to encourage them to think through observation rather than after it. Like hunters they had to learn to learn, to follow the movements of beings and things, and in turn to respond to them with judgement and precision. They would discover that the path to wisdom lay in this correspondence, not in an escape into the self-referential domain of academic texts. And like hunters, too, they were encouraged to dream. To dream like a hunter is to become the creatures you hunt and to see things in the ways they do. (p. 11)

Thus, Ingold has an innovative vision of teaching where the teachers establish the contexts in which the students can discover and live an anthropologist’s experience. This first chapter describes an anthropological approach to data through participant observation for researchers and teachers. The participation observation is deep as Ingold recommends to dream with the observed people.

In the second chapter, entitled *The materials of life*, Ingold defines a central concept of the book – hylemorphism – as follows:

> We are accustomed to think of making as a project. This is to start with an idea in mind, of what we want to achieve, and with a supply of raw material needed to achieve it. And it is to finish at the moment when the material has taken on the intended form. […] The theory is known as hylemorphism, from the Greek *hyle* (matter) and *morphe* (form). (p. 20)

According to this theory, the mind imposes a form to the material. But Ingold is in favor of viewing human making as a correspondence, ‘a process of growth. This is to place the maker from the outset as a participant in amongst a world of active materials’ (p. 21).

To hylemorphism, Ingold opposes his conception of human making:

> Making is a process of correspondence: not the imposition of preconceived form on raw material substance, but the drawing out or bringing forth of potentials immanent in a world of becoming. In the phenomenal world, every material is such a becoming, one path or trajectory through a maze of trajectories. (p. 31)

According to Ingold, human making results from a correspondence between human gestures and materials rather than hylemorphism starting with an idea in mind imposed on the materials.

In Chapter 3, Ingold studies an archeological tool: the prehistorical acheulean biface (Figure 1). Why, he asks, has its form been stable over 3 million years and across three continents? Many archeologists argue that the stability of the biface can be explained by the existence of a pre-existing mental image in the mind of the artisan. Ingold, however, aligns with another strand of research and opts for a gesture-based and non-mental model for the biface (or handaxe):
It is very easy to create a template for the handaxe, simply by placing two hands together, palm to palm, and slightly cupped. The space enclosed between the palms almost perfectly matches the shape and volume of the biface [...] Given the musculature and morphology of the hand, the gestural dynamics of flacking and the fracture properties of the material, it is almost inevitable that a handheld core, as it is reduced through the successive removal, will tend towards a bifacial form. (p. 43)

To explain the production of bifaces, Ingold discards the hylemorphic analysis in favor of the correspondence of the human body gestures and the stone. Following this focus on archaeology, Chapter 4 deals with architecture, namely, the medieval mason and carpenter, who:

operated not with theorems but with rules of thumb, valued not for their mathematical correctness or logical consistency but for their guidance in getting the job done. The geometry of masons and carpenters [...] was carried out on site with the tools of trades, including axes and chisels of all kinds, trowel, plumb line and string along with three crucial instruments [...] pre-cut templates, straight edge and square. [...] This knowledge was both learned and passed on as a living tradition in the spoken words and manifest deeds of practitioners. (p. 52)

There are not many books describing how to make things or offering precise instructions for building. According to Ingold, the role of preliminary plans is reduced. Architects, masons, and carpenters start with unprecise sketches, and then, “they solved design problems as they went along, through the manipulation of the instruments and materials at their disposal and drawing on a fund of “tricks of the trade” [...] (p. 53).

Ingold even questions the existence of precise plans before the building of medieval cathedrals. In the Middle Ages, there was no radical division between drawing and building:

Medieval builders [...] would draw [...] the tracery for a window at full scale, on a stone tracing floor, as a way of working out particular details preparatory to their actual carving in stone. [...] Their designing, like their drawing, was a process of work, not a project of the mind. (p. 56)

Ingold concludes the chapter as follows:

The building of the Chartres did not bring to glorious completion the speculative vision of an unknown architect. No one could have predicted, while the work was underway, exactly how it would turn out, what complications would arise in the process, or what means would be devised to deal with them. Yet despite the episodic character of the work, and frequent changes of leadership, a degree of continuity was assured through the traffic of communication. (p. 57)

Beyond cathedrals, Chapter 5 discusses the sighted watchmaker and design. While the design is generally seen as a conceiving object useful for humans, Ingold sees it only as setting ‘the rules of the game’ (p. 62) (Figure 2). Furthermore, he insists on the importance of establishing correspondences in his definition of the maker as a watchmaker which is inspiring for managers and entrepreneurs:

The task of the maker is to bring pieces into a sympathetic engagement with one another, so that they can begin [...] to correspond. Peering through his eyeglass, the watchmaker inhabits a realm among the pieces, rather than above and beyond them, adjusting each in relation to the others, and serving as a kind of go-between in their correspondence. (p. 69)
Managers and entrepreneurs could adopt a watchmaker position and foresee the future according to Ingold’s words:

“To foresee […] is to see into the future, not to project a future state of affairs in the present; it is to look where you are going, not to fix an end point. Such foresight is about prophecy, not prediction. And it is precisely what enables practitioners to carry on. (p. 69)"

‘The trick […] is to be able to hold the foresight that pierces the distance like an arrow in check with the close-up, even myopic engagement that is necessary for working with materials’ (p. 72). Thus, ‘the particular skill of painters, composers and writers lies in their practised ability to keep their distance whilst in thick of the labour of proximity’ (p. 72). In this way, Ingold offers a subtle definition of foresight based on the example of the watchmaker.

Chapter 6 speaks of the mound as a mass of materials built or resulting out of the debris.

Chapter 7, entitled *Bodies on the run*, deals with the articulation between human action with materials and tools in the artistic sector. It mentions agentivity, that is to say, the capacity to act on the world and others. Quéré (2015) saw Ingold as a critic of Latour insofar as Ingold gives more importance to objects in the processes, flows, and transformations. In Latour, by contrast, objects are lifeless and are deprived of becoming. Furthermore, according to Ingold, ‘as the things they are, people too are processes, brought into being through production, embroiled in ongoing social projects, and requiring attentive engagement’ (p. 94). He goes on:

‘The living body […] is only sustained thanks to continually taking in materials from its surroundings, and in turn, discharging into them, in the processes of respiration and metabolism. Yet as with pots, the same processes that keep it alive also render it forever vulnerable to dissolution. That is why constant attention is necessary, and also why bodies and other things are poor containers. Left to themselves, materials can run riot. Pots crumble; bodies disintegrate. It takes effort and vigilance to hold things together, whether pots or people. (p. 94)"

Thus, attention and process are important in Ingold’s social life theory. Action is central in the artists’ and craftsmen’s production. Ingold summarizes the production of artifacts in a dance of agency represented in Figure 3:

The dance of agency […] is a threesome in which each partner acts upon, and is in turn acted upon by, the other two (p. 99). Partners (the potter, the clay, the wheel) take in turns to lead and be led (p. 101). Cello, toggle, kite and wheel are all examples of transducers. That is to say, they convert […] the kinetic quality of the gesture, its flow or movement […] of bodily kinaesthesia to another; of material flus (p. 102) in the form of a melody, a loop of rope, a soft clay.

Ingold sees human beings in correspondence rather than in interaction with materials:
To correspond with the world […] is not to describe it, […] but to answer to it. Thanks to the mediating work of transduction, it is to mix the movements of one’s own sentient awareness with the flows and currents of animate life. Such mixture, where sentence and materials twine around one another on their double thread until […] they become indistinguishable is of the essence of making. (p. 108)

In Figure 4, Ingold illustrates the central concept of correspondence, which he prefers to interact too close with confrontation. Making consists in a correspondence relation between a human being, materials and tools.

In chapter 8, entitled *Telling by hand*, Ingold speaks in particular about the efficacy of stories in education, because ‘they provide practitioners with the means to tell of what they know without specifying it. […] They define a project’ (p. 110). They enable an anticipatory forecast.

The last chapter, Chapter 9, is about *Drawing the line*. Referring to architects and artists, he stresses the importance of drawing in a correspondence relation:

> It is not as through the hand, in drawing, gradually empties out what first fills the head, such that the entire composition slides like a transfer from mind to paper […] both hand and mind are together complicit throughout in the work’s unceasing generation. (p. 127)

Ingold also mentions transformation in the drawing process: ‘Drawing […] is transformative. It transforms the draughtsman, in making the work, and it transforms those who follow, in looking with it’ (p. 129). Once more, Ingold rejects hylemorphism:

> The world is not assembled like a jigsaw puzzle in which every building block slots perfectly into place within an already pre-ordained totality. […] The reality, as in the case of the cathedral, is more akin to a quilt in which ill-fitting elements are sewn together along irregular edges to form a covering that is always provisional, as elements can at any time be added or taken away. (p. 132)

Ingold refers to the example of patchwork used as well by Sarasvathy (2001).

The two most important concepts in this book are correspondence and forecast. To forecast, for Ingold, consists in feeling where things go. This vague direction taking the form of sketches designed by cathedral builders enables artisans to correspond with materials and tools, to communicate, and finally to build a cathedral. To forecast, correspondence is added. In fact, every production comes from a correspondence. The human mind does not impose a form to materials but enters in correspondence with them in an attentive processual relation that transforms materials and the human engaged in action. Figure 4 is central in the book; it illustrates the concept of correspondence. The concept of forecast can be seen in the trajectory of the two crossing curves, which finally merge.

**What Ingold could contribute to management sciences**

Ingold proposes a theory of ‘social life’ in which he recommends correspondence as a relation’s mode between human beings and with materials. He juxtaposes the two paradigms – correspondence and hylemorphism – throughout this book and, more generally, in his publications. In another article, Ingold (2017b) defined three pairs of concepts to define correspondence in opposition to hylemorphism. These are, as presented in Table 1, ‘habit rather than volition, agencing rather than agency, and attentionality rather than intentionality’.

In Table 2, I propose an adaptation of Ingold’s terms from his 2017b publication, after having read his other works from 2013, 2016, 2017a, 2018, and 2019. The aim of this adaptation is to render the terms more understandable for management sciences. I retain the term volition (2017b), yet opt for ‘elements’ instead of agency, ‘plan’ instead of intentionality, ‘transformation’ instead of habit, and ‘process’ instead of agencing. I also opted for ‘attention’ instead of attentionality, as ‘attention is also mentioned in Ingold (2017b).
In the hylemorphism paradigm, another concept is that of the plan: ‘This immense cognitive capacity which enables human beings to plan, to intend, to design in their minds. To lead one’s life would mean that every action taken is the result of a plan previously designed’ (Ingold 2017a, p. 160). Ingold (2017b) mentioned intentionality in his abstract. We prefer the word plan to differentiate it from the term ‘volition’ already considered. In the management field, the plan refers particularly to strategic planning (Ansoff, 1965) and to causation (Sarasvathy, 2001).

Further, in the correspondence paradigm, in opposition to the plan, attention ‘means to listen, watch and feel. […] The key quality that makes a movement attentional lies in its resonance with the movements of the things to which it attends – in its going along with them’. ‘Attention in this sense is not consciously directed by a subject, as if shining a spotlight on the world, but is rather […] a practice of exposure […] of care’ (p. 14). Attention also implies sympathy: ‘an inner feel for each other’ (Ingold, 2017b, p. 6). Attention consists in moving forward with things, to be open to them and to react to what they offer: Ingold (2019, p. 20) also mentioned ‘a perceptual acuity’.

Thus, correspondence is the way of ‘being in relation’ while internalizing one’s actions (transformation). A person, as well as a project, is always seen as emerging in a process, and his or her attitude is attentive.

Hylemorphism is a different way of being in relation, one which consists of imposing one’s will to arrange elements according to an established plan.

Rereading the book Making: Anthropology, Archaeology, Art and Architecture, I took note of all sentences and words dealing with either correspondence or hylemorphism. I obtained a table of 4,400 words demonstrating the importance of the opposition of these two paradigms in this book. I coded this table with the text analysis software NVivo to find the concepts of Table 2. I was thus able to verify that the entire table was coded. The concepts of Table 2 enable to grasp the presence of the two paradigms of correspondence and hylemorphism.

While reading the book and searching for words describing the link between hylemorphism and correspondence, I found a link characterized by the opposition.

Finally, I can notice that Ingold’s correspondence paradigm is in line with process studies. In fact, the concepts of transformation, process, and attention components of correspondence according to Ingold can also be found in process studies, particularly in the definition given to them by Langley et al. (2013), who stated that:

From a hylemorphic perspective, a person acts according to his or her will, follows his or her mind’s intention, and imposes effects on other beings and on materials (Ingold, 2017b).

By contrast, in the correspondence paradigm, transformation can be defined as an action one is subjected to. The person acts from the inside. Each experience modifies the person acting and being subjected to (Ingold, 2018). While Ingold (2017b) used the word habit, he also used the word transformation, a term which I find more fitting for expressing the changes of the person and the project.

In the hylemorphism paradigm, another concept, agency, denotes:

- a transitory and contingent coming together of heterogeneous components that cohere only through an exterior contact or adhesion that leaves their inner natures more or less unaffected, and that can therefore be detached and reconfigured in other arrangements without loss. […] Bits and pieces that are ‘utterly heterogeneous’, as Latour (2010, p. 473) admits, will never make a whole, but at best a fragile, reversible and diverse composite material. (Ingold, 2017b)

We choose the term ‘impermeable elements’ to refer to Ingold’s concept of agency (2017b). In contrast, in the correspondence paradigm, the process is the way ‘beings or things literally answer to one another over time’ (Ingold, 2017b, p. 8). Ingold (2017b) spoke of the process to define the concept of agencying. He spoke of the life in society ‘characterised not by solidity but by fluidity’ (p. 3). The process gives a potential direction and can force the acting person to transform himself or herself. The process is longitudinal. ‘Ends are not given in advance but emerge in the action itself and are recognisable as such only in acknowledging the possibility of new beginnings’ (p. 13). To summarize this idea, I choose the word process, which was used by Ingold (2017b). Furthermore, process is familiar in the management field (Steyaert, 2007).

In the hylemorphism paradigm, another concept is that of the planned: ‘This immense cognitive capacity which enables human beings to plan, to intend, to design in their minds. To lead one’s life would mean that every action taken is the result of a plan previously designed’ (Ingold 2017a, p. 160). Ingold (2017b) mentioned intentionality in his abstract. We prefer the word plan to differentiate it from the term ‘volition’ already considered. In the management field, the plan refers particularly to strategic planning (Ansoff, 1965) and to causation (Sarasvathy, 2001).

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Process studies focus attention on how and why things emerge, develop, grow, or terminate over time. [...] Process studies take time seriously, illuminate the role of tensions and contradictions in driving patterns of change, and show how interactions across levels contribute to change. (p. 1)

The concept of change is close to the one of transformation also mentioned by Langley et al. (2013) in their article dealing with organizations’ transformation. Furthermore, according to Langley (2007, p. 271), ‘process thinking involves considering phenomena dynamically – in terms of movement, activity, events, change and temporal evolution’. In their presentation of the process studies, Bansal, Smith, and Vaara (2018) referred to the exploration of ‘phenomena as always changing’. They also noted that ‘in the extreme, the dualistic distinctions we make between the individual and the environment, the self and the other; the mind and the body absolve to focus only on their dynamic interactions’ (p. 1191). According to this conception, transformation and permeability are as important as the correspondence and hylemorphism. Furthermore, the difference between correspondence and hylemorphism is analogous to the difference mentioned by Chia and Holt (2006) between dwelling and building terms that, as in Ingold, refer to Heidegger (1962). Moreover, Chia and Holt (2006) and Chia and Rasche (2010) mentioned several other concepts that can be likened to the correspondence-hylemorphism couple, such as ‘purposive, practical coping’ opposed to ‘purposeful, rational-calculative action in organizations’.

In closing, correspondence could be regarded as a fifth member joining the four families of theories on development and change processes distinguished by Van de Ven (1992). Ingold’s notion of correspondence as a relational mode between human beings and with materials promises to bring interesting perspectives to process studies and management sciences, in particular with the concepts allowing to define correspondence with the terms attention, transformation, and process.

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