

# Chapter 1

## An authentic life for process thinking

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### Introduction

Jason Brown started his career as a neurologist specializing in language disorders, perceptive illusions, and impaired action. But beyond his activity as a physician he is a man of genuinely theoretical appetite. As satisfying as it is to help improve the situation of sick fellow humans, this alone does not characterize him well. Those who know him closer know his insistent urge to find a philosophical framework for his clinical practice and research, together with his desire for a more humane society. Those who do not know him will see this immediately when they read his most recent book *Process and the authentic life* (Brown 2006).

This is, in a nutshell, how and why Brown came to look into process philosophy, as an alternative to philosophical systems focusing on substances such as the Cartesian *res cogitans* and *res extensa*, on which science and technology are essentially based. Process philosophy holds some radical deviations from these systems, and may be regarded as complementary to them (Roemer 2006), although any such convergence is hotly contested (e.g., Bickhard 2004). Best known among adherents of a process worldview is Whitehead with his opus magnum *Process and Reality*.

Brown's approach is clearly in the spirit of Whitehead's. However, due to his medical and psychological background it differs in motivation, and consequently it differs in the way it is carried out. While Whitehead, originally a mathematician, tried to be as precise and detailed as possible in his definitions, arguments and conclusions, Brown strives for his humanistic goal more directly. His accounts are based on examples rather than formal inferences, everyday experiences rather than abstract constructions.

Ultimately, the project of process philosophy will need both components in the right balance to be successfully developed further.

Because there are so many notions of process, covering the range from a natural-language term to sophisticated formulations in mathematical physics, our contribution begins with an attempt to clarify some general points concerning process and time, innovation and creativity. First, a brief analysis of the relation between process and time is presented, emphasizing irreversibility and temporal holism as crucial for a processual worldview. Following this, in section three, we emphasize the notions of instability and transience as two of the key concepts of a truly processual worldview. In addition we sketch some ideas for developing concepts such as creativity and freedom in terms of stability arguments.

In sections four and five, the concept of personhood, central for an understanding of an “authentic life” (Brown 2006), is discussed under the perspective of how it is conditioned both biophysically and socioculturally. In addition to much present work concerning the emergence of personhood from the body and brain of an individual, we argue that future work also must explicitly address the role of the sociocultural domain in the constitution of persons.

An important condition making this possible is a domain-relative ontology, i.e. an ontology defined relative to particular domains of reality, allowing us to take different domains equally seriously. This implies a rejection of reductionist points of view in favor of emergent states and properties within the domains considered. The traditional unidirectional hierarchy from biophysical to psychological and finally sociocultural levels is replaced by non-hierarchically organized domains with multidirectional emergence relations among them.

### **Process and time, process and innovation**

From a contemporary point of view, the concept of a process cannot be discussed without the concept of time. In a first approximation, and from a somewhat naive point of view, one might say that processes develop over time. It remains to be clarified, though, which of the two is to be considered logically prior with respect to the other. The radical process view ascribes priority to process and introduces time as a derived notion. An early well-known example of such a position is Aristotle.

On the other hand, the usual way to define processes in current science is based on functions of time  $t$ ,  $t \rightarrow f(t)$ , where  $f$  usually represents the state of a system or (one or many of) its properties. In this view, the con-

cept of time is a precondition to describe a process as a function of time. Time in this framework is a so-called parameter time, universally preset and independent of the particular process which it parametrizes. Time in this sense is defined by clocks of different degrees of sophistication, from sundials and hourglasses to quartz clocks and atomic clocks.

Physics distinguishes two classes of processes depending on whether or not the time-reversal invariance of fundamental laws is broken. Roughly speaking, a process is time-reversal invariant if  $f(t) = f(-t)$ : watching a movie of such a process does not allow one to distinguish a particular temporal direction in it. Processes of this kind are time-symmetric or reversible and rigorously apply only to isolated systems. Reversible processes do not provide true novelty. Novel facts, which cannot be undone once they have happened, require the time-inversion invariance of the process to be broken.

These important limitations raise the question of how realistic reversible processes are. Any system interacting with its environment cannot be isolated but needs to be treated as open. Interactions of a system with its environment are known to break the time-reversal symmetry of reversible processes. As a consequence, two directions of time arise, one from past to future (forward) and another from future to past (backward). The emergence of two temporal directions due to the breaking of temporal symmetry is a rigorous mathematical result which is free from additional ancillary arguments.

In remarkable contrast, the selection of one of those two directions of time as relevant cannot be justified by purely mathematical or physical arguments alone. A typical non-physical, epistemological criterion for selecting the forward arrow of time is causality: causes precede their effects (see, e.g., Primas 1992). This type of causality corresponds to Aristotle's *causa efficiens*. Backward causation, alluding to teleological aspects of goal-oriented processes (as in Aristotle's *causa finalis*), would violate physical causality and is usually disregarded.

The irreversibility of temporal evolution is a crucial feature of many situations in everyday life (hot coffee cools down rather than spontaneously heating up) and of our psychological experience of time. Tenses like past, present, and future structure our experience in such a way that we distinguish between memories of the past, anticipation of the future, and the transition between them at present. Future, contingent events become irreversible, past facts when they happen. Without this irreversibility there is

no innovation (or novelty). Both contingency and innovation (among others) are crucial categories for an appropriate understanding of process.

Causal or functional connectedness of some kind is often assumed to characterize the concept of a process in a broad sense. “The successive stages of a natural process are not a mere juxtaposition of arbitrary, unconnected factors ... They are united by a systemic causal or functional agency under the aegis of a lawful regularity” (Rescher 1996:39). However, random (Markov) processes, consisting of sequences of just such uncorrelated events, are very useful tools to describe processes as well.

Moreover, it is now well established that the distinction between random and lawful processes is a matter of description rather than a feature of reality (Gustafson 1997). Systems exhibiting deterministic chaos are an important case in point. After all, the criterion of causal or functional connectedness is not so simple and may be very subtle in complex systems.

A more relevant, and at the same time more sophisticated, candidate to characterize processes is the concept of temporal holism, sometimes also called temporal nonlocality, which has been studied in the physics of quantum systems (Mahler 1999) and chaotic systems (Misra & Prigogine 1983, Atmanspacher 1997). This concept is in the spirit of the radical process view and goes beyond the idea of a connectedness of successive stages of a process in a decisive way. Its essence is that successive stages cannot even be distinguished (within some system-specific time interval). Such temporal holism is a challenging candidate to serve as a significant feature of and viable criterion for a truly processual world view.

If processes are considered as temporal wholes without successive stages then it becomes inadmissible to speak about causal or functional connections between such stages. This is highly relevant to understanding temporal patterns (such as rhythms or melodies) as wholes rather than sequences of stages. From a psychological point of view, the concept of temporal holism provides the possibility to conceptualize the notion of an experienced now with non-vanishing, finite duration (Pöppel 1997). In the neurosciences, ideas like this are currently discussed as possible solutions for the problem of intermodal binding, i.e. the capability to merge perceptions of one and the same object across different sensory modalities.

Limited time intervals of presence, within which temporal wholes persist, are a key to James’s “specious present” and to Whitehead’s “actual occasions” or (later) “actual entities”. The idea of discrete portions of time does not contradict neurocognitive mechanisms generating the impression

of continuity. For instance, Pöppel (1997) proposed semantic content as a crucial connecting factor between otherwise separated lumps of now.

The Swiss novelist Max Frisch offers a speculative, though highly inspiring perspective on our understanding of time and process. In his diaries, Frisch (1950:15, quotation translated by HA) writes:

Time? It would be just a magic tool unfolding and making visible our essence by disentangling life, the omnipresence of all possibilities, into successive stages; only therefore it seems like a transformation to us, and therefore it urges us to assume that time, the successive, is not essential but apparent, an ancillary tool, an unwind that shows us in succession what actually is interleaved, a simultaneity which we cannot perceive as such, as we cannot perceive the colors of light when its rays are not refracted and spectrally decomposed.

### **From transience to freedom**

It is generally difficult to avoid non-processual, substance-oriented concepts to describe processes, but this can be severely misleading. Considering a process as a sequence of states is an example insofar as a state of a system is a distinctly substantive denotation. On the other hand, there is a very basic problem if one wants to go without any substantive connotations. The core of this problem is the inevitable concreteness of processual experience. Any intention to abstractly conceptualize it is dangerously close to Whitehead's "fallacy of misplaced concreteness."

In this sense, terms such as stability and transience become highly significant. James's famous chapter 9 on the "stream of thought" in his *Principles of psychology* employs these and related concepts extensively. In his particular terms, James refers to stable categories as "substantive parts" of the stream of thought, or "nuclei of perception," and to processes connecting stable categories as "transitive parts" or "fringes of perception." In a non-processual world view, the latter are often regarded as unavoidable by-products of the former, but neither as significant nor as desirable features in themselves.

James (1950:243-244) has some very illustrative remarks addressing this problem:

Now it is very difficult, introspectively, to see the transitive parts as what they really are. If they are but flights to a conclusion, stopping them to look at them before the conclusion is reached is really annihilating them. Whilst if we wait till the conclusion be reached, it so exceeds them in vigor and stability that it quite eclipses and swallows them up in its glare. Let anyone try to cut a thought across in the middle and get a look at its section, and he

will see how difficult the introspective observation of the transitive acts is. ... The results of this introspective difficulty are baleful. If to hold fast and observe the transitive parts of thought's stream be so hard, then the great blunder to which all schools are liable must be the failure to register them, and the undue emphasizing of the more substantive parts of the stream.

So what does process philosophy offer to avoid this “undue emphasizing”? In one understanding, transience eventually means loss, since that which is left behind is usually not left behind light-heartedly. However, transience is also a major and mandatory requirement for anything like emergent novelty or creative work, fundamental cornerstones of process philosophy. Not even the simplest act of understanding is conceivable without the ephemeral instant of a so-called aha-experience -- the hallmark of insight. In terms of a stability analysis of the corresponding process, it is straightforward to identify the mental state at this instant as unstable (Atmanspacher 1992).

Remarkably, scientific approaches dealing with unstable states and transient processes have recently received increasing attention in the study of complex systems. These approaches are successfully applied to describe neural and cognitive processes. But they also figure prominently in highly interdisciplinary approaches to address meditative states (Atmanspacher & Fach 2005) or studies in literature and philosophy (Feil 2007).

From this perspective, instability becomes a concept which needs to be welcomed together with transience and change. If value is confused with permanency, and importance with endurance, creativity is blocked. Under circumstances in which everything is done to stabilize against change and insure against loss, novelty is impossible. The dilemma here, of course, is a deeply innate psychological tendency to respond to instability with resistance and anxiety.

Could it ever be possible to re-educate human reactions to instabilities? A fascinating move would be to consider unstable states not as hazardous departures from a stable world view, but rather as states enabling liberation from immobile and inflexible categorial schemes. Creativity has a lot to do with liberation. A corresponding conception of freedom is very attractive: it does not contradict any scientific determinism because the fundamental laws of nature are inapplicable to transient behavior. This point is largely unexplored in the vast literature on free will as it is conceived in Western civilization. In this regard, Eastern philosophical and spiritual traditions offer a variety of alternatives which await critical discussion.

But we do not necessarily have to look into other cultures to find this issue addressed. The Danish philosopher Kierkegaard refers to the tension between anxiety and freedom with particularly deep and dense words (Kierkegaard 1844):

One can compare anxiety with some kind of dizziness. He who must look down into a deep abyss will feel dizzy. But what is the reason for this? It is both his eye and the abyss – because what would be had he not stared down? In this sense, anxiety is that dizziness of freedom which occurs if the spirit [Geist] is about to set the synthesis. Freedom now looks down into its own possibility and, then, seizes finiteness in order to stick to it. In this dizziness, freedom sinks down. This is as far as psychology can reach out, and it does not want to reach out further. In this instant everything is changed, and when freedom rises again, it recognizes that it is guilty. Between these two moments lies the leap which science neither has explained nor will be able to explain.

### **A person is more than a conscious individual over time**

There is no doubt that the process approach offers great potential to new vistas in philosophical psychology. Yet there is more to it, and the influence and significance of sociocultural issues for the formation and definition of personhood and authenticity are as widely overlooked (or underestimated) as the role of biophysical issues is overstated in many approaches. Of particular relevance within the area of sociocultural factors is the context of interpersonal interactions. This has occasionally been related to the topic of second-person perspectives in addition to the much discussed first- and third-person accounts.

But what about us, the first person plural? It is typical for Western science and philosophy that all these issues are usually, without further justification, addressed in terms of first, second, and third persons singular. This reflects an implicit bias toward a basically individualistic viewpoint as opposed to ideas of togetherness, collective or community. In many approaches, even in process thinking, this bias is not sufficiently reflected. For this reason, individualist accounts are not in proper balance with the sociocultural dimensions of the problem. If our understandings, experiences, and values are considered purely individual, their holistic embedding within a larger whole will always be treated as derivative, as subordinated, and their thoroughly ontological dependence upon an encompassing reality will go largely ignored.

A certain kind of holism, processual or otherwise, has much to recommend it with respect to the irreducibility of persons to their obvious

physical, chemical, and biological requirements. Recently, Bennett and Hacker (2003) introduced the notion of “mereological fallacy” to characterize cases in the neuroscience literature in which properties of wholes (i.e., selves, persons) are erroneously deduced from or even identified with properties of their parts (i.e., brain areas, neuronal assemblies). They insist that a system as a whole typically exhibits features that are unique to its corresponding universe of discourse. It would be ridiculous (but obviously not impossible) to believe that issues such as the authenticity of a person’s life can be successfully addressed without considering the ontological status of the sociocultural domain of reality and its relation to psychology. In this context, one can observe that mereological fallacies abound in discussions of the relation between communities and individuals as well.

If one extends the criteria for what is real to include discernable influence in addition to some acceptable method of “observation” (e.g., Bhaskar 1989), room is created at the ontological table for both interactive and constitutive sociocultural-psychological relations. Interactive relations include processes of learning in which the social consequences of actions hold important consequences for one’s sense of and beliefs about self. Constitutive relations include those linguistic practices in a particular sociocultural context that are indispensable for meanings and assumptions concerning personhood. Vygotsky (1986) or Harré (1998) provide ways in which the sociocultural constitution of personhood can be treated seriously and in detail.

### **Tiered ontology and emergent personhood**

One possible option is to understand both the sociocultural and the biophysical as ontologically real and interacting within a tiered system of domains of reality. Such a conception can be traced back to the 19th century philosopher Hartmann (1935).

Quine (1969) and, more recently, Putnam (1987) have proposed similar approaches in terms of an ontological relativity which allows us to think about different domains of reality as “equally ontological.” This approach rejects any strong reductionist scheme of thinking in which only one (basic) domain (or level) of reality can be of ontological relevance, while all others are reducible to it. As was demonstrated for physical examples by Atmanspacher and Kronz (1998), a particular kind of emergence is a significant feature of an ontology relative to particular domains of reality. In this framework it is assumed that emergent states and properties of a system cannot be strictly derived from “lower level” states and properties.

“Lower level” states and properties provide necessary but not sufficient conditions for “higher level” states and properties.

Concerning the processual emergence of persons, corresponding arguments have recently been proposed by Emmeche et al. (1997, 2000) and Martin and Sugarman (1999, 2002). They treat persons as biophysical individuals whose active immersion and participation in the sociocultural world (from birth) allows them to develop as persons equipped with self-understanding, agentic capability, and personal identities that give a psychological connectedness to their lives. Although there is much to be worked out in these models of emergent personhood, they seem to make useful distinctions between sociocultural and biophysical relations and processes with respect to the emergence of personhood in ontogenesis, without falling into substance forms of dualism. In such alternative processual systems, processes and relations of meaning at sociocultural and psychological domains of reality are not ontologically subordinated to those natural and evolving processes and relations that form their undisputed biophysical requirements. And yet, there is no mysterious mind outside of these sociocultural and natural, physical processes, and both sociocultural and psychological domains of reality are clearly embedded within, yet not reducible to, the biophysical domains of reality. Such theorizing, and the very possibility of the kind of ontologically real emergence it assumes, clearly requires a process metaphysics.

Returning to the important matter of time, many theorists of personhood have considered psychological continuity or connectedness as the central criterion of personhood. The basic idea in such Lockean approaches is the notion of “person stage,” defined as a momentary slice of time in the history of a person (e.g., Parfit 1984). A series of person stages is psychologically continuous if later psychological states of the series develop, in certain characteristic ways, from earlier states of the series. This form of psychological continuity has been held to occur across memory, agency, reason, intentionality, self-consciousness, reflection, and experience, amongst others. Of course, the obvious critique of continuity theories of personhood is that they are overly simplified, and seem to assume the exact kind of temporal-experiential unifier they are intended to clarify.

For many, this problem has been seen to arise because of the assumption in continuity (process) theories that the locus of personhood is intrapersonal. Alternatively, both biophysical and sociocultural extensions to the basic notion of psychological continuity have been proposed. For example, Strawson (1959) argued that persons, as basic particulars of the

human world, are bearers of both physical and psychological properties. For Strawson, personal concepts like identity and self require the embodiment of a biophysical human being active in the physical and social world arrayed in time and space. Others, like Taylor (1989) and Harré (1998) have extended the sociocultural bases of personhood to include historical, cultural, and moral requirements that are to be added to the criteria of psychological continuity or connectedness and physical embodiment. For these theorists, persons are unique embodied beings, with distinctive life experiences, agentic capability, and self-understanding who may be called to moral account as responsible actors. In such formulations the emergence of persons requires a co-constituting emergence of social and psychological reality within an unfolding cultural history.

More recently, Martin et al. (2003) have defined persons as embodied beings with social and personal identity, self, and agency, and provided additional definitions for the various aspects of persons thus defined that emphasize the historical, sociocultural, and moral constitution of persons. Such persons are capable of extending backward (memory) and forward (anticipation/purpose) in psychological and physical time, possessing commitments and pursuing projects that give a rich continuity to their lives. It is this kind of personhood that is truly worth having, and it is this kind of personhood that process theorists should have in sight as a complex whole to which their talk about processes somehow must aspire. Most importantly, when such a view is taken, it seems to require that human history, society, and culture be granted a constitutive reality that physicalist accounts of personhood cannot sanction. An important challenge for future work on the emergence of personhood, both ontogenetically and phylogenetically, is to comprehend processes of interactivity that enable the sociocultural constitution of persons as social and psychological beings within, and with the support of, biophysical bases and processes.

In conclusion, should we want to maintain the traditional distinction between the life and the work of a person, then this person's being in the world cannot be appreciated in its entirety. However, we are in the lucky situation that we can point to an alternative: Jason Brown's work about "the authentic life" mirrors his work as intrinsically tied to his life.

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