



## Personhood and Subjectivation in Simondon and Heidegger

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### Abstract

Twentieth century philosophers such as Simondon and Heidegger propose theories of subjectivation that inform our thinking about the definition of personhood and how it arises, including in the potentially wide-ranging context of personhood beyond the human. Simondon's theory of transindividuation unfolds as a series of decenterings that provides a context for future persons that is a dynamic world of processes without fixity or attachment to any one kind of subject. Subjects participate in but do not cause individuation, and they exist on a spectrum of capacity for action with other living beings including animals, human persons, and possibly a variety of future persons. The role of collectivity in the form of the other has been an important aspect of individuation, however I claim that the function of alterity need not be provided exclusively by a self-similar subject. Philosophical individuation theories serve as a foundation for an approach that opens up greater possibility for individuation in the context of future persons by identifying and alternatively fulfilling the underlying functionality required by individuation.

### Introduction

In considering the topic of personhood beyond the human, one of the most fundamental aspects is developing an understanding of personhood, and how the process of subjectivation occurs for contemporary persons and might extend to future persons. Subjectivation is a typical topic taken up by philosophers, and several have proposed theories of subjectivation. One of the most robust, well-known, and referenced within the discipline of philosophy is Simondon's theory of individuation (really transindividuation). However, from the viewpoint of personhood beyond the human, even Simondon's theory of transindividuation may seem of little use since it has been developed as a descriptive account of the one historical example of human persons that we have had. Far from useless, though, I show the many ways that the concepts, presuppositions, and explanations of the individuation process are portable to the consideration of a robust and diverse context for future persons. A key area of concern has been the necessity and role of the collective (e.g.; others) in individual subjectivation, but perhaps this can be

rethought. My method is to identify twentieth century philosophers who present well-known theories of individuation (primarily Simondon and Heidegger, though also discussing Spinoza and Kierkegaard), articulate these theories, and see how the key themes of these theories can be applied to a conceptualization of the subjectivation of future persons.

### **Simondon – Theory of Transindividuation (Individual and Collective)**

Gilbert Simondon (1924-1989) has one of the most respected theories of individuation. Individuation typically refers to the process of formation into distinct entities like human beings. Simondon means individuation this way too, however importantly further understands individuation to be an ongoing process that is never complete. He invokes the concept of metastability to denote a temporary moment of stability that is fragile and susceptible to changing conditions. There are different kinds of individuations. First at the physical level, there is a biological individuation into a living being. The living being then maintains its existence throughout its life through a series of continuing individuations. Prior to individuation, a being has preindividual potential which is essentially energy available for individuation. The idea of preindividual potential comes from the pre-Socratic definition of nature as the reality of the possible (nature is *apeiron*, infinite preindividual potential that is not yet a phase of being) (Combes 2013, 29). Following an individuation, a being is comprised of individuation (the aggregation of all previous individuations) plus the remainder of non-individuated preindividual potential that is never fully incorporated, and ready for subsequent individuations.

After the biological or physical individuation, two individuations occur that are in reciprocal relationship to each other: one interior to the individual (called the psychic individuation), and the other exterior to the individual (called the collective individuation). Individuation always creates both an individual and a collective subject which individuate themselves together. Through these individuations, the living being becomes a subject. The subject is a result of the process of individuation; the subject is an effect, not a cause. This is different from many other theories of individuation in that here the individuated subject arises as a result of the individuation process, not as the instigator. Already we start to see Simondon's systemic view of reality where the subject is just one element, not the center. The reciprocal relationship of the psychic and collective individuations that occur in the transformation of the living being to subject is called the transindividual relation.

### ***Psychic Individuation: Emotion and Perception***

The internal dimension of individuation is psychic individuation which is composed of individuations of emotion and perception. For Simondon, perception is defined as an act of individuation operated by a living being to resolve a conflict with its milieu. The relation between subject and world is a system in tension where the subject's role is only one part of the ensemble. A living being is continually facing incompatibility problems with the milieu (e.g.; world or environment) such as discomfort, hunger, and emotion. The compatibilization of the living being to the milieu includes both somatic (physical) and psychic (mental) aspects. Perception is a process where the subject invents a form (e.g.; a model) with the goal of resolving a problem of incompatibility between itself and the world. The psyche is not exclusively interior or exterior; it is a progressive individuation within the individual constituted between the relation to the world and others, and the relation to self. This relation between self-world and self-self operates in the individual as individuation through affectivity and emotionality. Emotion operates the self-world and self-self relation. For Simondon, individuality is situated in affectivity and emotionality. This is different than other theories of the subject which often rely on a theory of the subject's structure or theory of consciousness (a subject is conceived as a substance of thinking or consciousness).

## ***Spectrum of Capacity-driven Theories of Subjectivation***

Simondon conceptualizes living beings as existing on a spectrum, where the human-animal difference is one of level not of nature. The notion of a spectrum accommodates different kinds of life or persons, where future versions of personhood could be mapped onto the continuum per the same parameter of differing by degree (like temperature) not nature (like geometry forms). Simondon's qualities of dynamism and process are present here too, as any placement on the spectrum is only metastable (e.g.; ephemeral), based on the present snapshot moment of individuation which is always expanding. This is a flexible structure that can include and productively organize different kinds of future beings, whether determined by personhood, intelligence, augmentation, or other parameters. The notion of an Individuation Spectrum (based on both preindividual capacity for individuation and realized individuations by type and number) motivates a definition and understanding of future personhood based on capacity for individuation. Different instantiations of future persons could have greater levels of capacity for individuation. Levels of capacity for individuation could be the simple organizing parameter for a potential society of diverse future persons. The framework of degrees of capacity for individuation is extensible: it could also be multi-dimensional, as future persons may evolve capacity for other types of individuation beyond Simondon's psychic and collective individuations.

Spinoza also has a capacity-driven theory of subjectivation, where the subject is defined on the basis of the capacity to affect and be affected. The difference between having an internal sense of freedom and slavery is the difference between affects that either increase or decrease a subject's power of action. To Spinoza, consciousness does not indicate a stable, autonomous entity with free will, rather consciousness is a property that varies as a function of the overall sum of forces between active and passive affects within the subject (Combes 2013, 30). So there are similar themes in Spinoza and Simondon: first, subjectivation is based on capacity where the subject is dynamically situated on a spectrum of capacity for individuation, affect, or power of action, and second, the subject is in a collective context.

More broadly Spinoza (1632-1677) is important as one of the strongest alternatives to Descartes (1596-1650) and the persistent Cartesian hold on thinking through mind-body dualism. For Descartes, sentient man was an exception (the famous cogito: "I think, therefore I am"), and mind and body are composed of two different substances (ergo mind-body dualism). Spinoza on the other hand, in *Ethics*, proposes the notion of a universal substance that emanates both mind and body which are in different modes, but not fundamentally different. In Spinozist reality, the physical and mental worlds are interconnected and derive from the same substance. This means that sentient man is not an exception, and therefore that many kinds of persons could potentially exist as different formulations of the universal substance on the spectrum of having capacity for power of action. The Spinozist view robustly supports a spectrum of diverse future persons.

### ***Anxiety: The Subject discovers that it exceeds its Individuality***

For Simondon, the idea of unrealized preindividual potential is crucial. We are more than individuals; our being is not reducible to our (already realized) individuated being since as subjects, we are constituted by ongoing but already realized individuations and the preindividual potential for new individuation. Since the subject is both individual and more than individual, it means that it is incompatible with itself. Anxiety is the experience of the individual discovering this incompatibility, that it has within it that which exceeds it. This could sound deeply hopeful and liberating, the fact that such potentiality is a fundamental constitutive dimension of the subject, however, the lived experience of this can be a hideous conflict. The tension can only be resolved within the collective not the solitary subject because the solution would be to individuate all remaining preindividual potential at once, which is impossible, or would be death. In some sense then, anxiety is "the highest achievement that a being on its own can attain as a subject (Combes 2013, 33), since it promulgates action-taking by the subject toward the collective, and results in

individuation. The collective is required for the individuation of the individual: “In the absence of any possible encounter with others, the one who discovers itself to be a subject strives desperately to resolve within it that which exceeds its individuality but it is an attempt bound to fail: we cannot show any more clearly how subjectivity cannot contain itself within the limits of the individual” (Combes 2013, 33). The link to the collective through the transindividual relation is therefore how the individuated-preindividual tension can be resolved.

### ***Simondon’s Collective and Transindividual Disindividuation***

An important dimension of Simondon’s work that is of interest to social and political theorists and beyond is the link between the individual and the collective, which he understands at the fundamental level through individuation. Assuming that future persons would be within some sort of society, Simondon’s conceptualization is applicable to developing an understanding of future persons in a collective context. Articulating the collective in more detail, Simondon thinks that functional social relations can be an obstacle to the discovery and effectuation of preindividual potential. What is needed is an exceptional disindividuating event to strip a subject of its usual social function and reveal its preindividual potential to others. A classic example of this is in Nietzsche, where Zarathustra sees a tightrope walker fall and die. This is a jolt out of the ropewalker’s usual social role as a performer, which allows Zarathustra to see the ropewalker’s preindividual potential, and through that, his own preindividual potential. An observer of an event sees the preindividual potential in the other at the moment of the shift in functional social relations, which causes the subject to become aware of its own preindividual potential, and thus become engaged in the ordeal called forth by this discovery. This process disindividuates the subject: the transindividual disindividuation process loosens the subject’s constituted individuality, which is engulfed by the preindividual, and conditions a new individuation. The break with functional social relations is important not only to abruptly show the other in a non-usual role, but also to strip the sense of one’s own belonging to a social community so that an ordeal of transindividuality through solitude for self-constitution can be effectuated.

Regarding origination, individuation cannot be volitional. It occurs through unforeseeable events that are provoked externally: “the failure of the functional relation to the other cannot lie in a voluntary decision by the subject” (Combes 2013, 38). Through the disindividuating relation to the other, the subject is able to appear to itself as a subject and capable of having a relation to itself. Notably, it is the other (an exteriority), that provokes the relation to the self, not an internal process that produces the self-self relation. The other, not the self, is required for the self to have a full relation to itself. How this happens is that when the other is no longer encountered on the basis of its function, it becomes that which puts the subject into question, forcing the subject to no longer perceive itself through the intersubjective representations of sociality but nakedly as preindividual potential. This is the sense in which the presence of the collective is already within the subject, it is in the subject in the form of unstructured preindividual potential, and constitutes a condition for the relation of the subject to itself. The transindividual subject is only capable of having a relationship to itself (to an inside) by being turned toward the outside.

The collective, the transindividual relation of subjects among themselves, is the self-constituting relation of subjects to themselves that happens through their own disindividuating encounters with the other. We remember that in the process of individuation, the subject is the result, not the cause. Likewise with the process of transindividuality, it is not the relation to self that comes first and makes the collective possible, but the relation of the self’s preindividual potential communicating without mediation with the preindividual potential in the other (Combes 2013, 41). Preindividual potential is what links individuals to one another in the collective. It is because of preindividual potential that constituted individuals can enter into relation with one another in a collective (Combes 2013, 46). The collective is not a result of the relation; it is the relation that expresses the individuation of the collective. The collective is a sort of linkage of preindividual potential across the social fabric of individuals: “the collective arises through the

preindividual zone of subjects that remains uneffectuated by any functional relation between individuals” (Combes 2013, 38).

### ***The Reciprocal Relation of the Transindividual: Individual and Society***

Now it is possible to understand the reciprocal nature of the transindividual relation of the psychic (internal) and collective (external) individuations. Transindividuality is not interior or exterior to the individual, but constituted in the interaction between exteriority and interiority. Reciprocally, the interior is exteriorized and the exterior is interiorized. They are separate but connected in an ongoing system of relations. The transindividual is a new way of understanding the relation between the individual and society. The traditional approach from psychology and sociology is that the individual and society are in a relation as one term to another. However this is static and one-dimensional. The real relation is that of a reciprocal environment of exchanges of information and causality in a system that individuates. Through the reciprocal nature of the transindividual relation, the relation is not as one term to another but in the complexity of overlap where “the individual only enters into relationship with the social through the social” (Combes 2013, 43). The most relevant relational activity between the individual and society is individuation. A group is not characterized by a sense of social belonging or an assemblage of individuals, but the movement of self-constitution of the collective that “comes into existence when the forces of the future harbored within a number of living individuals lead to a collective structuration” (Combes 2013, 43). Grouped individuals become group individuals through individuation. Individuation makes the relation between the individual and society thinkable on a new basis, as one of dynamic processual emergent potentiality. This notion of system that individuates through ongoing dynamic relations is a supportive and flexible paradigm for a world of diverse future persons that may have many different kinds of configurations and types of interactions between individuals and groups.

### **Heidegger – *Mitsein* and the Relational Process with Others**

Simondon’s theories are immediately noticeable as being parallel to those of Heidegger (1889-1976) and Kierkegaard (1724-1804). Simondon’s individuation process proceeds from a moment of anxiety at realizing that the self is greater than itself, followed by a transindividual disindividuation of self-constitution in solitude away from sociality. Heidegger’s process is similar: there is a moment of dread or anxiety that is a wake-up call from the conscience, calling the individual away from the crowd voice or ‘the they,’ that gets a subject to acknowledge its own finitude and choose whether to live authentically or inauthentically into this finitude. Authenticity applies to both the individual and the collective in Heidegger’s notion of *mitsein* (communality) which is living authentically together with others (Heidegger 1962). Likewise, Kierkegaard is focused on the fear and dread of one’s existential existence (e.g.; the possibility of life having no meaning, and in any case having to construct one’s own meaning). His solution is to tune into subjective experience, specifically to establish faith in something (spiritual or purposeful) and to focus on the subjective experience of that dedication (which is not communicable beyond the self) (Kierkegaard 1985). Focusing on subjective experience is also the means of subjectivation for Deleuze and Bergson, in their respective concepts of the virtual (Deleuze 1995), and experience as doublings: quantitative (external/objective) and qualitative (internal/subjective; duration for example as the subjective experience of time) (Bergson 2011).

A second reason that Simondon is like Heidegger is that both are ‘process philosophers’ in the sense of seeing reality as an intersection of dynamic processes rather than in fixity. One of Heidegger’s central projects is rebuilding metaphysics. The Western philosophical tradition ever since Socrates and Plato and running through Aquinas, Kant, and Nietzsche has focused on the static aspect of reality as a presented presence. Instead, Heidegger returns to the more fundamental envisioning of *fusis* (nature, or presencing) per Heraclitus (535-475 BCE) as a dynamic process (Heraclitus 1912). Any living thing presents itself in

the full dynamism of its process and life cycle of growing and dying. Simondon and Heidegger both have a view of world as dynamic process.

A third reason that Simondon parallels Heidegger is that for him too subjectivation requires collectivity, e.g.; it is not something the being does on its own but rather in reference to exteriority. For Heidegger, becoming oneself is opening to relevant foreign others (persons) so as to progress towards the true self. The subject passes through the foreign where “the foreign is known and acknowledged in its essential oppositional character so that two may conjoin in distinction” (Heidegger 1996, page 54). The relation between the foreign and the own takes up its own life such that later the authentic own and the authentic other are not the same as at the beginning (e.g.; there is a reciprocal process by which both own and other are changed).

Concluding on Heidegger, he and Simondon have similar viewpoints that are important in considering the situation of future persons: the human subject is not the center of being and reality, the world is a dynamic process, an affect-driven process (through anxiety) is required for subjectivation, and the collective is a necessary dimension of subjectivation.

### **Critique, Argument, and Implications for Future Persons**

There are two lines of reasoning found in Simondon buttressed by Heidegger that are most relevant to a discussion of future persons. First is the new understanding of world and the spectrum of living beings as dynamic non-anthropocentric processes. Second is the more profound understanding of subjectivation through individual and collective individuation. Regarding world and the spectrum of living beings, I propose that Simondon’s ideas can be organized into a linked series of decenterings that create an overall climate for the consideration of future persons. The first decentering is that of the subject in the sense that it is a result not a cause of the process of individuation. The subject should be seen as one element in the ensemble of world. The second decentering is rejecting a focus on static endpoints in favor of ongoing processes such as individuation, transindividuation, and the relations between things. Any moment is only metastable or ephemeral as one element of a process. The third decentering is deprivileging the focus on the nature of the human subject in favor of seeing a multiplicity of life forms existing on a spectrum of capacity for individuation and power to action. A capacity spectrum includes any and all forms of life: animal, human, and future persons. This series of decenterings (decentering the anthropocentric subject in favor of the tableau of world, decentering static end states in favor of process, and decentering fixed ability in favor of capacity for action) provides a context for future persons that is a dynamic world of processes without fixity or attachment to any one kind of subject.

Regarding subjectivation through individual and collective individuation, it is clear that it is a complex and intricate process. Summarizing Simondon, the process for a living being to progress to being a subject is a transindividuation relation that connects the psychic (internal) and collective (external) individuations. There is a transindividuation process through which a being becomes aware of its own preindividual potential in anxiety. The individuated-preindividual tension of a subject realizing that it exceeds itself cannot be resolved internally but only through the collective. A transindividual disindividuation occurs where an unforeseeable external event disturbs functional social relations such that one subject sees another’s preindividual potential, and through that, its own. It is not the relation to self that comes first and makes the collective possible, but the relation of the self’s preindividual potential communicating without mediation with the preindividual potential in the other. Each individual goes through a transindividual transformation to arrive at the collective. The collective, the transindividual relation of subjects to themselves is constituted by each individual’s own disindividuating encounter with another. Shared preindividual potential remains in social interactions beyond functional relations, and constitutes the collective as a shared fabric of potentiality.

To apply the Simondonian concept of transindividuation to the situation of future persons, I provide two critiques of the individuation process (non-volitionality and the question of singulars), and a deeper discussion about the collective and preindividual potential.

### ***Non-volitionality***

The first critique concerns non-volitionality, the fact that the subject cannot take the volition to begin the individuation process. Simondon (and Heidegger) set forth the parameters for authentic enlightened being, a way for subjects to exist in a way where their potential is maximized. This happens through the process of the subject experiencing an affective moment of anxiety, dread, or fear, after which the subject individuates through a solitary ordeal, possibly consciously choosing to live in authenticity. The lack of volition is that the subject must wait for these affective moments of anxiety to spur the individuation process. How could such a crucial process for the development of the individual not be in the subject's own hands? The response to this is that even asking and structuring the question like this indicates still being stuck in subject-centric thinking. There are no grounds for the assumption that the subject should be able to volitionally start the individuation process. The view of the subject as the locus of action-taking is so predominant that it is hard to see the subject in its bigger context of world. Even to think that volition is an obvious component is to not understand the decentered subject as an element of the dynamic processes of world. Some fault Simondon and Heidegger for being merely descriptive and not prescriptive, however their descriptions can be congruently deployed as prescriptive. Understanding the process of individuation, subjects can try to propitiously catalyze these moments, placing themselves in environments where the possibility of individuation is greater (colloquially, going beyond one's comfort zone). Stacking the environment, and de-centering the focus on self, is a proactive stance that is logically congruent with Simondon and Heidegger.

### ***The Question of Singulars***

The second point of critique concerning Simondon's individuation process is the question of singulars. Preindividual potential is a fundamental quality existing in each individual, but is it something more profound than just the shared qualities across a species inculcated by biology and culture? For example, humans generally share affective qualities like fear, shame, finitude, embarrassment, guilt, redemption, chagrin, validation, acknowledgement, love, etc. These affects are experienced individually but they are singular not individual, meaning that most humans have them to one degree or another. In seeing the ropewalker fall and die, Zarathustra is perhaps merely getting a sense of his own finitude, not connecting to collective preindividual potential. Simondon does not address the possibility that the preindividual may be nothing more than shared singulars. One reason this is important is that there may be classes of future persons that do not have emotion, or have the functionality of emotion implemented much differently. Future persons might have other subjectively experienced intensities as Deleuze would say (e.g.; emotion on a more fundamental basis), or they might not have these qualities, and in that case something other than emotion would need to trigger individuation. In the shorter term, there is an unrecognized benefit to how Simondon has structured preindividual potential. His assumption that preindividual potential is shared across individuals places the focus onto the form of subjective experience as opposed to the content. This could be useful in getting away from a lack of discovery in subjective experience due to a stuck focus on content or qualia, so far incomparable between humans, before even considering comparability challenges across a diversity of future persons.

### ***The Extensibility of Collective Individuation***

Collective individuation is at the core of Simondon's theory, the collective dimension is required for the individuation of the individual, but the degree to which this would apply in the context of future persons is questionable. It is easy to see how the collective is assumed to be indispensable. In the plane of history

from the past to the present, the collective has been important to human development through communality, society, sociality, belongingness, and culture. However this specific suite of functions may not be necessary for the development of other modes of beyond-human personhood. More aptly, it is possible that these and other new functions required for the development of future persons could be addressed by a wider range of mechanisms, not exclusively collective society as it has been known. It could be that Simondon's theory of individuation is limited to the historical plane. It might be an explanation for actual occurrences that would not hold in contexts where both the definition of world and person has shifted. New definitions of world could include digital worlds such as the Internet, social networks, and virtual reality, and new definitions of person could include augmentations, hybrids, artificial intelligence, etc. However, noting the potential limitation that even if the collective dimension as described by Simondon is only historically descriptive in how it has been necessary for the development of human personhood, the idea of the collective dimension opens up a framework and a slate of issues in the genesis of personhood that may be quite portable to structuring thinking about the situation of future persons.

### ***The Functionality of the Collective***

Understanding Simondon's notion of the collective more closely, it has been discussed mainly as other human persons, but there is a sense that more generally, the collective connotes others that are like the individual. We know from human psychological analysis that the collective is important (the quality of the peer group is the biggest determining factor in an individual's development) (Harris 1998) and that peer group may also be the key social reference point for future persons (Hall 2007). These points raise the question that in a world of future persons, how 'like' another does one have to be in order to be considered part of the collective? Eventually, as future persons start to differentiate, many discussions of likeness could ensue using standard models such as logical reasoning's genus, species, and individual; Platonic primary and secondary qualities; Duns Scotus's formal and modal distinctions, and other paradigms. These classifications are currently unnecessary and would be arbitrary absent clear vectors of progression into the kinds of differentiations of future persons that might arise. The key point from the Simondonian view would be to focus more on capacity than morphology, to see and work with subjects per their capacity for action rather than focus on classifying them.

However, a related vexing point exists regarding origins and genesis. Would it be possible for a radically different future person to develop in isolation without a context of a collective that consists of others similar to itself that promulgate its individuation? Perhaps the lack of consideration of a collective context has been preventing the development of future persons. This is a classic chicken and egg problem about what comes first, the collective or the individuation. Simondon would say that the individuation produces the collective, but there will need to be some leading edge for future persons and the collective to evolve together based on some set of initial conditions of possibility. The necessity of the collective supports the argument that there would not be a hard takeoff, at least initially, since a society of non-human future persons would need to develop slowly, initially forming as beings that are only narrowly differentiated from human.

One of the biggest questions is whether the collective must be others that are like the individual or could the collective be reduced to exteriority in general? A separate issue is what interiority and exteriority might even mean in a dramatically different context of future persons. Perhaps the function of the collective in the process of individuation can be identified and rendered unnecessary or fulfilled in alternative ways. Taking Simondonian individuation as the key developmental moment in subjectivation, identifying alternative ways of fulfilling the process could greatly accelerate the development of future persons. The same question holds for other standard features of human persons such as embodiment and emotion. To what extent are collective individuation, embodiment, and emotion necessary for the development of modes of beyond-human personhood?



The individuation of future persons may occur in a variety of environments that are not the physical world societies of human persons. This variety of contexts could be a combinatorial explosion, a multiplicity of worlds that are physical and virtual realities, and an even greater multiplicity in the dimensions and types of future persons. Some of the dimensions on which future persons could vary are in terms of form (embodied or virtual; organic, inorganic, hybrid), capability (different skills and abilities), instance (one or more copies including outdated versions), time scale (different speed-ups, non-linear time, episodically-triggered time), and many other possible parameters. The Simondonian means of classifying the relative otherness of future persons could be based on degrees of likeness or not-likeness in different capacity spectrums. Even given the anticipated ability of future persons to self-edit, their development could track into capacities that are categorically similar rather than different. This problem could be similar to other cases of potential but constrained variability like evolved body plans on Earth (which have displayed similarity across epochs) and the laws of physics generally applying across the universe. The point is that the sponsoring conditions and constraints are similar, such that future persons, even given the ability to edit their own utility functions, could produce goals within a zone of similarity onto which Simondonian capacity spectrums and notions of individual and collective individuation could be mapped.

My claim regarding Simondon's account of individuation and the collective as interpreted into the context of future persons is that a function of alterity needs to be obtained, but it does not need to come from a self-similar subject. What is needed is some sort of external otherness that can show the subject itself in a new way in a developmental moment. There is nothing in the function of alterity to suggest that it need be an 'other' that is like the subject. The traditional answer from philosophy (especially from Simondon, Sartre, and Levinas) would be that the collective context is required for subjectivation through an encounter with alterity that is an 'other' that must be like the self. However, this is only because this has been the case historically. It has been easiest and most noticeable when another human serves as a device like a mirror allowing the subject to see itself in a new way. However, it is quite possible that the alterity function could be fulfilled in many other ways that do not involve a self-similar subject. One mechanism that is already affording the subject to see itself in a new ways is quantified self-tracking gadgetry. The ensemble of these gadgets creates a fourth-person perspective, an objective means of seeing the self via exteriority and alterity that can trigger a developmental moment. There could be many alternative means of fulfilling the alterity function, and possibly of progressing beyond the alterity function as a condition for individuation.

### **Implications of Individuation for Animal Life**

Simondon sees all life, or all intelligence, as existing on a spectrum of capacity for individuation. The individuation spectrum includes animals, humans, post-humans, machine minds, and any other kinds of future persons or future beings. No one form is privileged over another or is the central reference point. One implication is that humans are not the center, and therefore not the arbiter of conferring personhood on other kinds of beings, whether animals or machines. Humans may try to read different kinds of human personhood onto other entities (animal or machine), but this would be in the scope of human interaction with these entities, not part of overall world processes for Simondon. There are no philosophical grounds for humans to be at the center, and also no practical grounds as different entities individuate differently and the schema of the individuation spectrum includes all nodes equally. No particular form of intelligence is privileged, and the individuation spectrum accommodates many possible forms of intelligence, like dolphins, chimps, humans, and machine minds. The individuation spectrum provides a structure where it can be seen more clearly that the criteria for intelligence need not be solely human-type. Thus Simondon helps to support the futurist view that the possibility space for individuation and intelligence may be quite large, with human-type intelligence being just one member of the set.

The individuation spectrum assumes that each node (i.e.; animals, humans, machines) is capable of individuation, which raises the question of how similar individuation may be for different kinds of beings. Per Simondon, the overall result or functionality of individuation may be the same across the spectrum, but the mechanics could differ for each entity. One key structural element of individuation is that all beings face incompatibilization problems with the associated milieu, and this triggers individuation. Where in humans (per Simondon) this is experienced as a moment of affect that is labeled anxiety, this may not be part of the individuation process for non-human beings. For example chimps and dolphins may experience incompatibilizations differently, and also machine minds (which may have different or non-existent implementations of affect/emotion), and still individuate. Another key structural element of individuation is the collective or exterior individuation, and this seems to persist across animals, humans, machine minds, and many potential kinds of future persons. As Josh Hall (2007) discerns, the greater attunement of any entity may likely be to its own peer group as opposed to other entities. Thus dolphins may regard their own community as the key social reference point, and similarly humans, and machine minds. Rather than trying to emulate the individuation process of other entities, individuals would be more attuned to individuations (and extending individuation capacity) within their own groups by apprehending what other group members do. However it is possible that interspecies interactions could provoke interesting new kinds of individuation for both parties. This suggests again the theme that the human individuation process (like human intelligence) is but one node in a larger possibility space, and that many different means of individuation may be possible.

## Conclusion

Concepts and frameworks from philosophy are useful for considering a potentially diverse landscape of future persons, particularly regarding the complicated issue of subjectivation. Philosophers have long been trying to define the subject and the process of subjectivation which belies this difficulty, even in the context of human subjects. Simondon's detailed theory of subjectivation helps to portray the current and future world as an environment of dynamic processes like individuation. Subjects participate in but do not cause individuation, and they exist on a spectrum of capacity for action with other living beings including animals, human persons, and possibly a variety of future persons. The role of collectivity in the form of the other has been an important aspect of individuation. However, in a potentially diverse world of future persons, the alterity function that allows a subject to see itself differently and experience a developmental moment may not need to be fulfilled exclusively by a self-similar subject. Overall, philosophy signals the criticality and nuance of individuation as a key dynamic that is likely to persist in the development of future persons. Philosophical theories of individuation inspire my approach to open up greater possibility for individuation in the context of future persons by identifying the underlying functionality required in different steps of the individuation process and fulfilling it with alternative means.

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