

## The Living Future in Philosophy

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### 1. Introduction: Everyday Futures

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How do we, in contemporary Western society, understand the future? Our awareness of what our present aspirations are tells us what the future *should be*, and how we should act to realise them. Time is short, so we must make the best use of what little we have. By planning our desired future and negotiating with others a path towards it, we also think of ourselves as having *chosen* one possible future over all others. Our plans and actions select from the possible outcomes of any given situation.

In this everyday frame of mind, then, the future is the place where we expect our desires to be realised. From within this frame, the future is always yet-to-come. What is real is the present, and the past's continuing influence on it. This individual and collective attitude to the future is reflected in scientific practice. The capacity to plan, choose and act manifests itself in scientific predictions, and in new technologies. But science diminishes the constraints placed on our possibilities in the present in direct proportion to the possibilities presented to us by technological development. The more technologically-enhanced possibilities presented to us, the more open the future seems. As a consequence, we feel even more that the future can be decided by us as we see fit. Our feeling that we possess a *right* to our desired future expands.

This understanding of the present and future distinguishes the unreal from real, and this distinction influences our considerations about what we should do. Our common-sense understanding of time is therefore both *ontological* and *ethical*. This makes it of interest to philosophers. In this chapter, we shall draw on various philosophical theories to ask whether our everyday assumptions about the difference between present and future capture important features of our experience. We shall also ask whether a philosophical distinction between an *abstract*, empty future, defined in relation to our everyday understanding of the present, and a *living* future conceived on its own account, will help us understand better the role played by the future in our lives.

### 2. Time as a Timeline

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Let us first examine our sense of what the difference between present and future *is*. The present is where our plans for the fulfilment of our desires are formed. It is in relation to this present that the future is a resource, and it is in this present, the time of decision and action, that choices are made about which future we want. It is by thinking of the present and future in these terms that we typically make sense of ourselves, the world that surrounds us, and how things should be. We frame the future as an *abstraction* from the present, and imagine it as a storehouse of presents which do not yet exist. Our first concern here is to ask what this picture of the future assumes about our everyday experience of the world, and then to ask whether these assumptions produce a merely partial picture by crowding out other aspects of our experience.

Let us examine a typical method we use to understand our experience of time, the construction of a *timeline*. Consider a child playing with plastic bricks. Suppose that, sitting beside her bucket of bricks, she begins by deciding to build a tower – rather than, say, a house or a castle. Following this, each time she places a brick, a choice needs to be made as to where it should go, based on her past experience of building towers. The tower grows, level by level, its form given shape by the child's knowledge of what makes towers of plastic bricks topple over rather than stay in place, by her sense of what a tower *should* look like, and by her taste for colours. Finally, when the tower is complete, the child tells her mother about the history of her tower. 'I wanted to build a tower...', 'then I...', 'then I...'. She shows she can give an account of her actions based on a linear timeline marked out in punctual moments, from conception to goal.

Told in this manner, the story exhibits a particular temporal structure. The narrative depicts the tower as having its origin in a desire and an *idea*, an image of a possible future moment. On this basis, a narrative of action can be constructed, one typical of our accounts of our everyday

actions: it leads the listener from an initial sketch of a possibility to its final realisation, passing through intermediary moments that gradually add to the sum of reality possessed by the originally desired object. Finally, the possibility emerges fully into reality: the tower is a real present, having begun as a merely ideal future.

The meaning of the future in the narrative is fixed. The *past* of the narrative can be framed in different ways, with a lesser or greater reach, but the future can at each stage only be referred to as an empty space, one whose role is only to be occupied by the realised idea. The possibility of the tower harnesses the empty future to it as a set of empty future presents to be colonised, moment by moment, by the realisation of the initial plan.

So the girl's story places her, the narrative subject, in the role of an active agent, responsible for the creation of in-formed actuality out of unformed possibility. The story is a *timeline* of decisive instants, each one containing an action. The girl is at once the heroine of this story, the observer who watched it unfold, and now the storyteller. The timeline is a series of points that mark events in which she both participated and did not participate, and which, she feels, have an existence outside of her awareness of them. Even once one of these events is over, we are aware of it having been lived in the present, and so it enters the timeline upon which we locate ourselves and retains a certain reality. We are aware that previous events persist in their influence on our 'now'.

Thus our everyday understanding of the past, present and future in terms of a timeline relies on the idea of *instantaneity*. We can imagine our timelines as a series of instants qualitatively differentiated as past, present and future, with the whole being something like a conveyor belt moving from future to past. Unformed future instants pass into the window of the present, take form, like a blank being stamped by a die, and are used up.

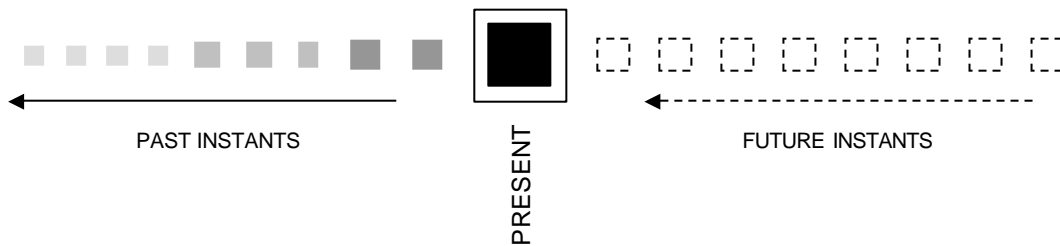


Figure 1: Timeline as Series of Instants

The qualitative difference between present and future is most marked, given that the concepts we use to distinguish them tend to harden into an opposition.

<b>Present moment</b>	Visible, tangible, objective, real, full, intuited, possessed, determined, here-now
<b>Future moments</b>	Invisible, intangible, subjective, possible, empty, conceived/imagined, exploitable, open, not-yet

Table 1: Qualitative Distinction between Present and Future

### 3. *The Unreality of the Instant*

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The model of instantaneity, and the idea of a timeline which presupposes it, support our understanding of the difference between past, present and future: as already-filled instants, the moment of filling, and instants yet to be filled – the ‘not yet present’ portion of a timeline. This distinction supports in turn the method we use to make narrative sense of our lives, telling stories in which we appear both as the actor manipulating events, and the observer who watches these events and composes the reports. The idea of time as a series of instants is reflected everywhere around us in contemporary society: in the mode of operation of machines, in the ubiquitous representation of time by clocks, and in our sense of time as a resource under pressure.

However, we can ask just how much of our experience of the present is really grasped by this model, and whether we need to think differently about the relation between past, present and future in order to understand this experience. Despite being apparently intuitively correct, the model also has something counterintuitive within it: it represents our experience of change, which we feel as a continuous flow, through a medium of discontinuous units.<sup>1</sup> We see, hear and feel change as continuous variation. The extent to which the model of instantaneity distorts our experience is revealed by the example of a neurological condition called akinetopsia or ‘motion blindness’, which can result from a stroke. Sufferers find they can no longer experience change as continuous motion.<sup>2</sup> Instead, to a greater or lesser extent they experience the world as a set of discontinuous presents. As a result, they are unable to continue to make sense of their experience as they did before, and find themselves unable to live independent lives.

In fact, if we consider the idea of an instantaneous present more closely, it proves to be incoherent. Our experience of the present generally relies on a fairly elastic concept of present-ness, which William James called the ‘specious present’,<sup>3</sup> a sequence of events covering a certain interval of time, but which we group together as being more or less simultaneous. Generally speaking, the notion of instantaneity we work with is also quite elastic, as the exact length of an instant is determined by what we consider the significant points in a series of events, and could if we wanted be divided further. But logically, the limit of any such process of division is the *t*-state, a durationless moment of time, the shortest possible ‘now’. If the present is durationless, then it is truly instantaneous. But the problem with this sense of present-ness was articulated by Saint Augustine over 1500 years ago:

If an instant of time be conceived, which cannot be divided into the smallest particles of moments, that alone is it, which may be called present. Which yet flies with such speed from future to past, as not to be lengthened out with the least stay. For if it be, it is divided into past and future. The present hath no space.<sup>4</sup>

The instantaneous present appears not to exist at all, as it is entirely without duration. But if it were to possess duration then it would be a specious present, made up largely of elements of the past.

Further, the common-sense view, as we saw in Table 1 above, assumes that what happens in the present is accessed directly through the senses or intuition. We think that in the moment when the existence of an object is intuited, the world *presents itself* to us through the senses. Bertrand Russell called this ‘knowledge by acquaintance’, a basic, non-derivable foundation for the rest of the items within our inventories of knowledge. ‘By acquaintance’ signifies that this variety of knowledge is not reached by any form of reasoning, whether inductive or deductive. Instead, it is thought of as unmediated and entirely passive on our part, and therefore as fully given to us in the moment its content presents itself. However, this moment of ‘presenting’ is elusive. If we try

<sup>1</sup> Cf. Barbara Adam, *Time* (Cambridge; Malden, MA: Polity, 2004), p. 113.

<sup>2</sup> Charles A. & Zihl Heywood, Josef, “Motion Blindness,” in *Case Studies in the Neuropsychology of Vision*, ed. Glyn W. Humphreys (Hove: Psychology Press, 1999), pp. 3-6.

<sup>3</sup> William James, *The Principles of Psychology*, vol. 1 (New York: Dover, 1950), p. 609.

<sup>4</sup> St Augustine, *Confessions*, trans. Henry Chadwick (Oxford: Oxford University Press, 1991), 11.15.20.

to isolate the present, we find it slipping out of our grasp entirely even as we move to grasp it. Every time we name a moment as *present*, we find ourselves only pointing at an already *past* moment.

In modern philosophy, this problem of the vanishing present has been posed in terms of 'intention' and self-consciousness. In the *Phenomenology of Spirit* of 1807, G.W.F. Hegel shows the impossibility of attempting to grasp the present through the conscious effort to 'point it out' to ourselves. If, when considering something within our visual field, we say consciously: '*this* tree', and, moving our gaze, '*that* house', we know there have just been two 'nows', *this* one and *that* one. But if we consider these 'nows' as instances of the *present*, we find the very idea of the present is contradictory:

The Now is pointed to, *this* Now. 'Now'; it has already ceased to be in the act of pointing to it. The Now that *is*, is another Now than the one pointed to, and we see that the Now is just this: **to be no more just when it is.**<sup>5</sup>

Every time we isolate a 'now', we find ourselves in a new 'now', from which we look back at the old one – and so on, *ad infinitum*. There is a moment when we consciously attend to the tree by demonstratively naming it ('this is a tree'). However, in performing this linguistic act, we are trying to explicitly register the *presence* of the tree in intuition, and this registering of a discontinuous instant can only be done after the event. Writing of the difference between the present in which we perform an action and the present as it is fixed in the moment when we become conscious of it and tag it linguistically ('this...'), Alfred Schutz notes that:

But what we grasp by the *reflective* act is never the present of our stream of thought and also not its specious present; it is always its past. Just now the grasped experience pertained to my present, but in grasping it I know it is not present any more.<sup>6</sup>

The story told by the little girl to her mother of how she built her tower is an example of this. Although it is in essence a timeline along which are strung a series of presents ('...and then a red brick, and then a yellow brick...'), the putting-together of the sequence of events itself *can* only be performed once the events she selects are past. As an observer, conscious of standing apart from the action, and conscious of a timeline of events, we have always already performed the act of naming the present as past which Hegel and Schutz describe. In fact, such a linguistic act would be necessary in order to construct an ordered narrative at all, as we must at least be capable of distinguishing between *this* first brick and *that* second brick in order to describe the building of a tower. But in becoming conscious of the present as *this* or *that* discontinuous moment, we only know the present as a *particular* present once it is past, and part, at most, of the specious present. We never *know* a discontinuous present *in* the present. Our everyday sense that the present is the most real, most objective dimension of time is therefore illusory. The present, Hegel and Schutz both suggest, is that which passes *continuously* while we are immersed in it. In order to even be conscious of a particular, discontinuous present, we have to consciously lift ourselves out of our immersion in the continually passing present in which we live and act and place ourselves in the position of non-participating observers. So to become conscious of a discontinuous present at all, we must orient ourselves towards the past, but as soon as we do this, the possibility of this present being truly *present* to us is erased. Our everyday sense of now-ness undoes itself, showing itself to be a construct produced through the linguistic act of naming the present. We now need to ask whether we need to think differently about the relationship between past, present and future in order to grasp the experience of continuous change that underlies our sense of the discontinuous present. As we shall see, this will require a concept of the future that does not imagine it as an abstract, empty image of the present, but as already *real* and alive in its own right.

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<sup>5</sup> Georg Wilhelm Friedrich Hegel, *Phenomenology of Spirit* (Oxford: Oxford University Press, 1978). Bold emphasis added.

<sup>6</sup> Alfred Schutz, *The Problem of Social Reality*, ed. M. Natanson, vol. 1, *Collected Papers* (The Hague: Martinus Nijhoff, 1971).

#### 4. Heidegger and Human Futurity

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At this point, qualities commonly associated with the future have attached themselves to the discontinuous, instantaneous present: an imagined dimension of time, something which is never directly present to us, something always beyond us. Our sense that the future is an abstraction derived from our experience of the present – a reserve of moments that currently lack present-ness – is beginning to be replaced by the idea that the discontinuous present *itself* is an illusion. Our understanding of the future would therefore be based on a misunderstanding of the present.

Hegel and Schutz propose that the idea of the *instant* is parasitic upon another kind of experience, that of the continuous present. But if we unpack this notion of continuity, then, as we shall see, the continuous passing of this present has to be conceived in terms of the future – that it is the future which *makes* the present pass. The idea that the future is ‘with us’ already, and has an effect on the present, will concern us for the rest of this paper. Instead of the discontinuous present being ontologically real, it will be argued that the *future* is ontologically real. Further, it will be suggested that the future is ontologically real not only from a human standpoint but for the whole of nature, and that the reality of the future has important ethical implications.

Our little girl is still engaged in building her tower. If we consider the events from her mother’s point of view, then we get a different sense of the relationship between past, present and future. The mother feels pride in her daughter’s developing abilities to interact with the world, observing how the child builds the tower, step by step, with care and growing skill. But aside from this continuing present, which contains the past within it, her sense of the future is not one of an empty space. Instead, she understands the meaning of the future through the possibilities that already belong to her daughter, and her own possibilities. Reflecting on what she wishes for her daughter and on what she already knows of her potential (through her schoolwork, her circle of friends, and so on), she finds the future already exerting a certain pressure on the present. She experiences the *pull* of the future within the present, and the force this exerts is the force of a feeling of responsibility. There is a sense of a close, continuous relation between present and future.

We now need to further consider this idea of continuity. Jacques Derrida has famously called the idea that only the discontinuous present is truly real, and can serve as the foundation for our understanding of reality, the ‘metaphysics of presence’.<sup>7</sup> In our everyday lives, we engage in practices like the little girl’s narrative that assume meaning is always fixed in relation to some original instance, which gives a secure reference point for our concepts.<sup>8</sup> The little girl’s story of the tower makes sense because each sentence that constitutes it refers to a *moment* to which an intuition of an event is assigned. But in making any kind of narrative meaningful, Derrida suggests, more than just a discontinuous present is involved. In his essays on Edmund Husserl’s philosophy, collected in *Speech and Phenomena* (1963), Derrida notes that even in Husserl’s account of self-consciousness, which is based on the idea that all intuition is a ‘source-point’ for fixing meaning, there is an admission that consciousness is not possible without what Husserl calls ‘retention’ and ‘protention’.<sup>9</sup> Any intuition carries a reference backwards to what something has been, and also refers forwards to what something might become. It is only because of what is *not* present, a ‘fringe’ of past actuality and future potential, that we can become aware of something as present in the first place. For the girl’s mother, her relationship with her daughter is not something simply present: it only exists for her because of the *reference* the current events she witnesses bear to their past together, and to their foreshadowed future. This is true of all our experience of the world, Derrida suggests. If we focus on the girl’s experience of building the tower, it is evident that the meaning of each brick is different, depending on when it is placed (‘...just three more to go...’). We can conceptually pare down the present to a discontinuous instant, but when we consider the way we experience and understand the world, we find it is only meaningful for us because we understand it within a context of past and future.

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<sup>7</sup> Jacques Derrida, *Speech and Phenomena : And Other Essays on Husserl's Theory of Signs* (Evanston: Northwestern University Press, 1973), p. 51.

<sup>8</sup> *Ibid.*, p. 53.

<sup>9</sup> *Ibid.*, p. 64.

The present is therefore not in the first place a discontinuous unit, an instant. It has to be thought of differently, as a necessarily contradictory concept. We are only aware of this present as *just* this present because we understand it within a context of past and future: in other words, the future and past of something are part of what define its present. Martin Heidegger's philosophy of time is an attempt to understand this, and is particularly interesting for our theme here because it lays greatest emphasis on the role of the future.

Heidegger wants to distinguish an understanding of time as we actually experience it from our abstract image of time. In his lecture *The Concept of Time* (1924) he notes the idea of the discontinuous present takes its meaning from a certain interpretation of the notion of eternity. Eternity is a single moment, the *nunc stans* or 'standing now', that encompasses all the events that we experience as successive, the timeless time of theology. For Heidegger, what mostly happens when everyday common sense and philosophy try to conceptualise the present that we live is that this instant of timeless time becomes the image through which we understand our living present. So as beings who know themselves and their world only as continually changing, we tend to think of the reality in which we live as an image of eternity.<sup>10</sup>

What is missing, Heidegger argues, is a true understanding of time from the standpoint of a being that does not know eternity – one whose primary way of encountering the world is as a continuous, ceaseless process of becoming. In his first published work, *Being and Time* (1927), he analyses the temporality of human existence in order to characterise what it is to be human, defining it as a particular mode of being he calls *Dasein* ('being-there'). Human beings are, Heidegger proposes, the kind of being whose experience is always of a *world* – a significant whole into which they are inserted at birth, and within which their lives gain meaning. Our primary everyday concern is our day-to-day interests, and it is on this basis that we assess the significance of the objects and people around us. Concentrating on the short-term, we tend to equate reality with what we see and hear in our immediate vicinity, and our confidence in our immediate perceptual access to things places us in the position of an observer, who is able to 'step out' of the continuous flow of time, extracting events from this flux, and placing them in their correct order. From this privileged position, we are able to understand the course of things and to intervene in it when appropriate.

This is comparable with the position of what the ancient Greeks called a *theoros* – one who is capable of observing, of 'pure beholding' without directly participating.<sup>11</sup> From this point of view, writes Heidegger, 'Being is that which shows itself in the pure perception which belongs to beholding, and only by such seeing does Being get discovered'.<sup>12</sup>

But as we have seen, this viewpoint is only possible because of the continuous flux of the living present, which we then disavow in conceptualising the present in the image of eternity. It may be useful, and even sometimes necessary, to adopt this perspective. However, it ultimately remains a distortion of a more basic reality. For Heidegger, the more fundamental structure of the way we experience the world turns on how the world is *disclosed* to us. What this means is that we do not observe the world from an idealised point outside it, from where it is possible to objectively reconstruct the course of events. 'Disclosure' signifies that the world is always only revealed to us in relation to what is possible for us to accomplish.<sup>13</sup> To be human is always to be concerned with one's 'to-be [*zu Sein*]'.<sup>14</sup>

We always understand what we encounter within a halo of our own future potentiality. It is for this reason that Heidegger writes that '[t]he primary phenomenon of primordial and authentic temporality is the future'.<sup>15</sup> Both the little girl and her mother embody this future-orientation, the

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<sup>10</sup> Martin Heidegger, *The Concept of Time*, trans. W. McNeill (Oxford: Basil Blackwell, 1992), p. 62.

<sup>11</sup> Hans-Georg Gadamer, *Truth and Method*, trans. Joel Weinsheimer & Donald G. Marshall (London: Sheed & Ward, 1993), p. 124.

<sup>12</sup> Martin Heidegger, *Being and Time*, trans. John Macquarrie & Edward Robinson (Oxford: Blackwell, 1998), p. 215.

<sup>13</sup> *Ibid.*, p. 33.

<sup>14</sup> *Ibid.*, p. 67.

<sup>15</sup> *Ibid.*, p. 378.

girl in the construction of her tower, and her mother in her concern for the fulfilment of her hopes for her daughter. Their understanding of their present presupposes a foreshadowing of their future possibilities: the girl's present takes shape in relation to the possibilities for play this afternoon, and within the future horizon marked by dinner and going to bed, while her mother's is formed within the horizon of the distant future and her daughter's adulthood. Our primary relationship with the world is thus *constitutive*: we do not passively take in, moment by moment, the world as it is objectively. Because the world *matters* to us, and matters to us because it is the *mise-en-scène* where our possibilities will be played out, we are active in forming the meaning of the things and people in it.

Let us consider this constitutive relationship further. Human being is *Da-sein* because all human life is lived in some 'there' (*Da*-) or other: a viewpoint from within which the world is revealed and becomes meaningful. The girl's 'there' is not her mother's, and vice versa. This is because every human being is not just 'ahead of itself', but is what Heidegger calls a 'thrown possibility'.<sup>16</sup> Our 'there' is always characterised by 'thrownness [*Geworfenheit*]', a sense of being cast into the midst of a world that we are ultimately not responsible for creating. The world comes to us already loaded with the interpretations and meanings into which the possibilities of others have coalesced before we were born. Our 'there' can therefore never *really* be that of the *theoros*: no one can ever be outside of the active interweaving of the past, present and future of a collectivity within which the significance of the world is experienced.

So the challenge human beings face is understanding the *meaning* of a world made by others. This depends on three 'existential structures', which correspond to the three interrelated modes of time, past, present and future. These are our state-of-mind or mood (*Befindlichkeit*), discourse (*Rede*) and understanding (*Verständnis*). Our mood is the stance from within which we encounter the world, and which makes it *matter* to us in a particular way. Everything within the narrow temporal horizon in which the tower is being built has significance to the little girl because of her state of excitement and sustained concentration. Conversely, being proud of her daughter and also musing concernedly about what the next few years might hold mean that everything in the mother's present will take on a different significance than it would if she were awaiting her daughter's return from school, becoming angry with her, or finding herself physically exhausted at the end of the day. It is only a state of mind that can make the world meaningful for us at all, and only within a state of mind that we can articulate what the world is like for us. An attitude of pure contemplation such as would belong to a *theoros* would not permit the world to be intelligible at all, as it would not allow the world to affect us, to matter to us in any way.<sup>17</sup>

Moods enable us to *discourse* about the world, giving us an 'angle' on the meanings into which the past possibilities of others have solidified, making us *attuned* (*gestimmt*) to things. Discourse is not identical with language, however: it is the capacity for 'carv[ing] up overall intelligibility into parts that signify'.<sup>18</sup> As such, it uses language, but might also use other media, such as the visual arts. Discourse allows us to experience the world as *making sense* to us in the present. The parts of the world can only make sense *in relation* to each other: the significance of the individual bricks in the tower is determined by their relationship with the others, and the meaning of the tower is unique only in relation to the girl's previous successful and unsuccessful attempts at building.

But *Dasein* does not just make sense of the world as already meaningful, bearing the imprint of other humans past and present. Whatever we do, we are also always attempting to *understand* from our position within it, what the world and we ourselves might become. This requires a mood, in which we become attuned to the potential of our situation— but every mood brings with it an understanding of where this potential might lead and what significance the outcome might have for our *own* potential.<sup>19</sup> The meaning of what we encounter in the world is not something that is

<sup>16</sup> Ibid., p. 183.

<sup>17</sup> Ibid., p. 177.

<sup>18</sup> Leslie MacAvoy, "Meaning, Categories and Subjectivity in the Early Heidegger," *Philosophy and Social Criticism* 31, no. 1 (2005), p. 25.

<sup>19</sup> Heidegger, *Being and Time*, p. 182.

simply presented to us in a snapshot. Instead, it is constantly being woven with what is disclosed to us of its past and what we understand of its likely future. The different ways we become sensitised to the past of something change our appreciation of its potential, just as our understanding of its possibilities alters the state of mind through which we become attuned to it, and how the world matters to us.

Mood, discourse and understanding are inseparable strands of human existence, without which nothing could have meaning. We are thrown into a world that comes loaded with a past that we cannot get behind, but which concerns us. It concerns us because we understand the significance of the things we encounter in relation to our own futures. This changes the state of mind in which things appear to us, and so on. Together, these three aspects of human existence mark us out as the kind of beings that *care* about the meaning of the world. In the widest sense possible, we are concerned for 'what might become of things' in the future. Everything we do is shaped by this basic orientation.

For Heidegger, this basis would underlie both the girl's play and the mother's pride and worry. Human beings are essentially *projective*: they understand the world by seeking the significance of past and present events for their potential future, not by passively receiving information about the state of things 'out there'. Importantly, the future cannot be understood in relation to a pre-defined present, as an abstract and empty 'beyond'. Rather, it is a dimension of our existence in the living, passing present, and so is a *living* future. We are constantly *beyond* ourselves, striving to understand our potential so that we can understand what we are becoming in the present. We 'stand out' or '*ek-sist*' within time, projecting ourselves into our future, which we know will be incomplete, for part of our future horizon is our understanding of ourselves as mortal. To make a very Heideggerean pun, we 'stand out' within time because there is always something *still outstanding* in our lives, something which has yet to be settled – our own death.<sup>20</sup> What makes us beings that live in and through the future is the fact that we can never be *complete*, in the sense of realising all our possibilities. Whatever we become, achieve and produce, our impending death cannot be realised without bringing our becoming as *Dasein* to an end. This is why we can never occupy the standpoint of eternity, or even understand what eternity means, for Heidegger. It is because the idea of the eternal present that belongs to God alone is one of completion: God is unchanging and perfect. What it would be like to experience a moment that is truly present because it is *complete*, is beyond us, even though, whenever we adopt a perspective on our world that is imagined as that of a non-participatory observer or *theoros*, we are seeking a simulated version of it in which we are separated from the world of change and becoming.

In Heidegger's work, death is therefore the ultimate horizon within which the world takes on significance, the 'possibility of the absolute impossibility of *Dasein*'.<sup>21</sup> For him, the mother's understanding of her daughter's potential is rooted in her knowledge that the significance of childbirth, and of the life of the child, derives from the child outliving her parents. What it is like to be a parent pulsates with this understanding of the future. Rather than being an experienceable event, death is the root of the mother's way of being and defines the limit of her possibilities.

For Heidegger, then, we always interpret the present from within a standpoint that has a horizon of futurity, laid out by our understanding of what we might become. Therefore the future is not empty. Instead, it casts both light and shadow on the present, changing the way the world appears to us. The future is not therefore objectively *known* or predicted: our viewpoint on the world does not, and cannot, present the future to us in this fashion. What it *does* do, however, is to make us creatures that are intrinsically incomplete, and always possess a sense of 'something still to be done', which is constitutive of the core of being human, our experience of a living, continuous present composed of ceaseless change.

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<sup>20</sup> Ibid., p. 179.

<sup>21</sup> Ibid., p. 294.

### 5. Aristotle and Jonas on the Futurity of Nature

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Heidegger shows us how futurity is not simply an abstract and ideal dimension of time that waits to receive the onward march of the present into it, but that it actively helps form the flux of the present. Our everyday sense of ourselves as observers of discontinuous presents is therefore *parasitic upon* our future-orientation. If the continuous present of change and becoming we experience is only possible because of our future-orientation, what about the processes of change experienced by other entities? Do Heidegger's insights have still further ontological implications for nature?

One way of approaching the idea of continuous change in nature is by investigating the theories of Aristotle. His conception of change involves the relation between form and matter, where the form of something – the way in which its material parts are structured or organised – is conceived of as a process rather than a snapshot, 'an actualisation of a potency originally immanent in the subject of the process or movement'.<sup>22</sup> Form draws on the potential for change present in its constituent material parts, and continuously metabolises those elements within its environment upon which it is dependent (oxygen, water, nutrients), all in the service of its development upwards to maturity. In this way, the organism *strives* to unfold and support its potential structure, and is what Aristotle calls a final, teleological cause. On this model, the *telos* or purposiveness of a thing is seen as inseparable from its existence. The present of a creature cannot be understood without an appreciation of the way that its *telos* in-forms all the processes of change and development that constitute its life.

The future of an organism is therefore not empty. Instead, it is an implicit structure which 'pulls' the organism towards it, unfurling its form along the way as it strives to realise itself. If the future of the organism has this implicit structure, then the existence of a living organism necessarily comprises futurity alongside its living present. But this future is not fully determined, no more than the little girl's mother's concern for her daughter's future means that she knows what her daughter will look like when she reaches twenty years of age. The *telos* or purpose of an organism is a 'space' of potential forms that it can occupy, by virtue of the kind of organism it is. But what the individual organism finally becomes is, from the point of view of its potential form, contingent, influenced by the environment it inhabits. The acorn will not become a beech tree, but the exact shape of the mature oak it will become is in no way pre-determined.

The philosopher Hans Jonas has developed some of Aristotle's concepts further. In Jonas' view, all organisms share with humans a sense that the world *matters* to them. This is because all organisms have *interests*, a sense in which things can go well or badly for them.<sup>23</sup> If they have interests, then they have futurity, as they strive after what furthers their interests and avoid what is detrimental. All organisms possess a kind of 'sense' or power of consciousness by virtue of their specific (Aristotelian) form, which is adapted to pursue what is beneficial for them. They are able to perceive differences in their environment, distinguish beneficial things from bad, and orient themselves within their environment to strive after these beneficial things. Their interests therefore make certain aspects of their environment perceptible and *salient* to them. For a male tick clinging to a leaf or branch, what is salient is the chemical butyric acid, given off by warm-blooded animals, the pheromones of female ticks, and the presence of unusual degrees of warmth that indicate a warm animal passing underneath. This allows the tick to orient itself in space and time: the tick will drop from an overhanging branch when a dog passes beneath. Sense is what constitutes the subjectivity of a creature, its viewpoint on the world. In this sense, all subjectivity, not just that of humans, is an active 'interpretation' of the world rather than just a passive receiving of discontinuous bits of data.

If sense constitutes subjectivity as a complex of salience and directionality, then it also constitutes the lived time of a creature, its *intensive* awareness of the living present, into and out of which the dynamics of evaluation and action extend. Jonas writes that:

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<sup>22</sup> Alfredo Ferrarin, *Hegel and Aristotle* (Cambridge; New York: Cambridge University Press, 2001), p. 7.

<sup>23</sup> Hans Jonas, *The Phenomenon of Life: Towards a Philosophical Biology* (Chicago; London: University of Chicago Press, 1982), pp. 84-5, p. 126.

while mere externality is, at least can be presented as, wholly determined by what it was, life is essentially also what it is going to be and is just becoming: in its case, the extensive order of past and future is intensively reversed.<sup>24</sup>

If we adopt a point of view that considers an organism purely 'extensively', that is, as a set of more or less disconnected material components whose systemic relationships can be isolated in a series of punctual instants  $t_1$ ,  $t_2$ , etc., then, Jonas suggests, linear, mechanical causality provides a framework. But this assumes, as Heidegger suggests, a particular interpretation of time, which seems to leave out a whole dimension of temporality. What the Aristotelian perspective suggests is that, instead of adopting an explanatory standpoint that operates by reducing the complexity of the world to what are conceived of as its smallest discontinuous constituents, 'we must let ourselves be *instructed by what is highest and richest concerning everything beneath it*'.<sup>25</sup> Jonas suggests the concept of future-orientation, which Heidegger uses to elucidate the meaning of human being, could be used to understand what it is to be alive as such.

We do not need to stop with organisms, however. Nature is both organic and inorganic. We can imagine the continuity that links the mother and her daughter with their pet gerbil, with the runner beans in the vegetable plot and the cypress trees in the neighbouring park, with the insects skating on the pond around which they grow, and even with algae blooming in the water. The attribution of some degree of sense to all these organisms might not overstretch us. But is there anything that links what it is to be human with the silt at the bottom of the pond, or the rotting vegetation that mixed with it, other than certain chemical elements? Can we meaningfully say that a chemical element possesses a 'viewpoint' on the world, in which future-orientation enables it to 'interpret' and 'experience' its environment?

## 6. Virtual Life

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This idea is not unknown to contemporary biology and chemistry, in which the development of complexity theory has introduced a conception of change which does not fit the Newtonian model:

We meet in rather simple chemical systems a kind of prebiological adaptation mechanism. To use somewhat anthropomorphic language: in equilibrium, matter is 'blind', but in far-from-equilibrium conditions it begins to be able to perceive, to 'take into account', in its way of functioning, differences in the external world (such as weak gravitational or electrical fields).<sup>26</sup>

This concept of matter takes us close to Jonas, who suggests we should extend the idea of striving (*conatus*), and therefore sense, to inorganic matter:

Admittedly a 'psychic' aspect always adheres to striving as such. And why not? 'Psyche' and 'selfhood' are not identical, and the first may, in a generalised form be an appurtenance of all matter, or of all material aggregates of certain forms of order, long before it attains individualisation [...].<sup>27</sup>

Even matter is always beyond itself: heavy with potential, and with a horizon of futurity. To extend the idea of continuous becoming and with it future-orientation 'all the way down' to inorganic matter is a goal of the work of Gilles Deleuze and Félix Guattari. As we saw, Heidegger questions what forms the basis of our experience of the world: this experience turns out to be fully

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<sup>24</sup> Ibid., p. 86.

<sup>25</sup> Hans Jonas, *The Imperative of Responsibility* (Chicago; London: University of Chicago Press, 1984), p. 69 (emphasis in original).

<sup>26</sup> Ilya & Stengers Prigogine, Isabelle, *Order out of Chaos: Man's New Dialogue with Nature* (New York: Bantam Books, 1984), p. 14.

<sup>27</sup> Jonas, *The Imperative of Responsibility*, pp. 72-3.

active and *participatory*, rather than a series of observances accompanied by occasional interventions. Our interpretation of our own possibilities forms our experience of the present.

Deleuze and Guattari approach future-orientation differently, by considering how we as material, embodied beings participate in change. Deleuze agrees with Heidegger that 'there is no theoretical subjectivity, and that there cannot be one[...]'.<sup>28</sup> The observer and the discontinuous present she observes are useful idealisations, but these concepts do not grasp our lived reality. Deleuze and Guattari consider two models of our participation in the world: the architect and the artisan. In order to understand how these can help us, let us return to the little girl. We can picture her – as, indeed she pictures herself – as the architect of her project, beginning with a mental plan before surveying her materials, a pile of bricks which, in comparison to the imagined tower, lacks any order. Rummaging through the bricks in search of the ones she requires, the girl begins fitting them together. As previously noted, this is when we would typically consider the tower as beginning to take on reality. As the tower becomes more real, the girl's pleasure in her achievement increases. From the little girl's point of view, the bricks represent a shapeless mass of material that is an obstacle to the realisation of her idealised future present, and so also to the forming of the as yet unformed future. To the girl, overseeing the process, her fingers and hands appear as willing slaves to be pressed into service, given orders that will see them working on the formless pile they have been given, and transforming it into the desired form which she initially contemplated. In this way, the girl has an *architectonic* image of a hierarchical relation between her mind and the matter she works on:

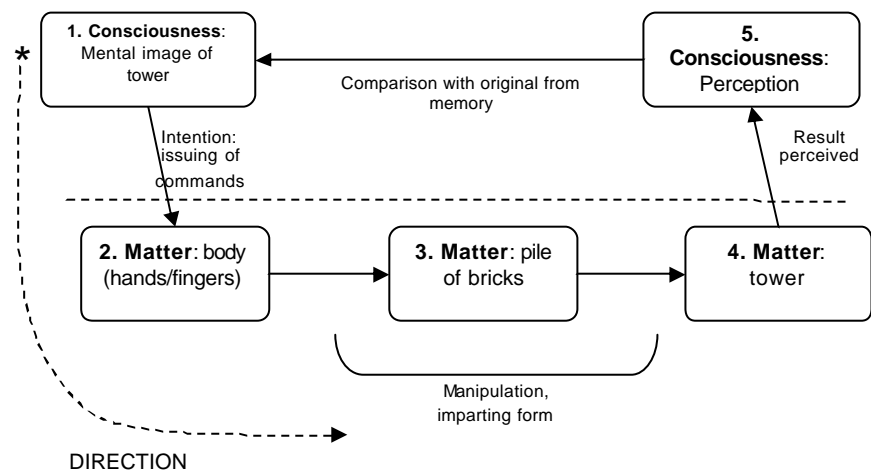


Figure 2: The Architectonic View

In stages 1, 2, and 3 of this model, a passive material is organised from 'outside'. Firstly, the girl's body responds to her intentions. Then, she selects those bricks she likes best. She imagines her mind issuing directives to her body, which instruct it in how to best act upon the material in order to realise her goal. At stage 4, this material is formed, and at 5, the results are compared with the initial plan, and so on until the tower is built.

As we saw earlier, the concept of the discontinuous present supports such an image of ourselves as observers of and interveners within reality. Now we can see that this image is also bound up with a specific understanding of matter as that which is moulded in accordance with a blueprint. The ultimate cause of the shape of the end result is the idea the shaper begins with, and the adequacy of this result is really down to how well the shaper issues instructions to the agents that do the work for her. The architect governs the process from a distance, and the actual work is

<sup>28</sup> Gilles Deleuze, *Empiricism and Subjectivity: An Essay on Hume's Theory of Human Nature*, trans. Constantin V. Boundas (New York: Columbia University Press, 1991), p. 104.

done by something else. Our everyday understanding of our relationship with the world often places us at a distance *from* the world, as we observe and act upon it. The temptation, that Heidegger noticed, to picture our temporal experience of the world in the image of God's eternal present, is reflected in our sense of ourselves as *architects* of our lives.

One of the earliest recorded philosophical (as opposed to religious or mythological) stories of creation is Plato's *Timaeus*. Plato's narrative concerns the method according to which the universe was created by a god from unformed matter, using an idea of a perfect universe as a model. The method is mathematical, proceeding by measuring and division to create an image of solidity and permanence in a material which is unstable and constantly changing. In other dialogues, Plato describes the role of an architect in very similar terms. The architect must possess the correct *techne*, a set of rules that can be set down and taught, and which consists largely of knowing how to *command* matter, using a measured process of division and allocation.<sup>29</sup> Plato explicitly distinguishes this kind of skill from what John Protevi calls 'artisanal sensitivity', the 'knack' that a skilled carpenter or stonemason has of forming a shape from material by following its internal structure.<sup>30</sup> As this skill results from the prolonged training of the artisan's body, and has a method that cannot, unlike a *techne*, be precisely formulated, it is denigrated by Plato. For Plato, the artisan is a passive source of labour-power whose activity must be informed by the architect's commands, and the real power behind any creative process is an idea.

Neither the creator-god nor the architect truly participate in what they create: they direct things from a distance. Our typical self-awareness contains an element of this (non)relationship: like the little girl telling her story, our capacity for self consciousness separates us from the action even as we place ourselves at the heart of it. We attribute a special dual role, like that of Plato's god-architect, to this separate consciousness: knowledge of the proper way to do things, and the capacity for directing action. It is up to this autonomous consciousness to understand the past, and to perceive and act in the present to produce the future. The future thus appears to be waiting to be occupied. It is not yet actual, but only possible; it is subjectively imagined, not objectively existent (see Table 1 above).

If we consider the girl's imagined tower as an architect's blueprint, it is apparent that it represents one possible future. The girl also has to choose this future, for the not-yet is nothing real in and of itself. The bricks could be a house, a man, or an animal, but the girl opts for a tower, selecting one of many possible forms. On this model, what makes the difference between a future becoming real and not becoming real is therefore both the presence of an idea of it, and its being chosen. The choice begins the process of infusing the blueprint with reality. By understanding ourselves in this way as architects of an external reality we imagine ourselves as fully in charge of the events of our lives.

Just as Heidegger undermines this image by suggesting it is, at most, a useful idealisation of a more complex temporal reality, so do Deleuze and Guattari, but by pointing out how the image of the architect separates us from matter, and from the futurity inherent in it. Suppose we imagine a process of construction from the standpoint of the artisan who works under the overseer. The artisan, Deleuze and Guattari write, is a practitioner of a 'nomad' science, as opposed to the 'royal' science of the architect, a distinction the meaning of which they develop from a variety of sources, including anthropology.<sup>31</sup> Royal science always tries to impose form from outside,<sup>32</sup> and therefore assumes it is possible to occupy a standpoint separate from that which is to be formed. In this sense, it is *hylomorphic*, in that it presupposes a dualism of matter (*hyle*) and form (*morphos*).

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<sup>29</sup> John Protevi, *Political Physics: Deleuze, Derrida and the Body Politic* (London; New York: Athlone, 2001), pp. 127-8.

<sup>30</sup> *Ibid.*, p. 122.

<sup>31</sup> Gilles & Guattari Deleuze, Félix, *A Thousand Plateaus*, trans. Brian Massumi (London: Athlone, 1988), p. 361.

<sup>32</sup> *Ibid.*, p. 363.

Nomad science, on the other hand, is so called because nomads, unlike architects, do not so much impose form on space as *inhabit* it.<sup>33</sup> Nomad societies function by distributing people and animals within a landscape, and do this by following significant features of the landscape – which may be the patterns of growth of good pasture on the steppes, or the patterns of pack-ice formation out on a frozen sea.<sup>34</sup> Whatever they do, they organise themselves by *following* the patterns of salient *traits* within their environment, to which they are sensitive. Similarly, artisans carve or sculpt by ‘inhabiting’ their material, that is, by following the significant traits of the block of marble or wood upon which they work. To be a skilled sculptor, one has to be sensitive to the internal structure of stone. The process of forming is two-sided, determined both by what the artisan does and the precise nature and direction of the material’s resistance. If I carve a piece of wood, I have to respect what the wood offers me: the way its fibres twist together, and the position of knots and how these alter the ‘flow’ of wood. I need to develop a Jonasian ‘sense’ for the world of wood which I inhabit in woodcarving, and to fully participate within this world, using all my powers of sensitivity and perception.

The difference here is between the assumption that matter is a dull mass, passively awaiting form to be given to it from outside, and the idea that any given form is always immanent in matter itself, which, independently of any ‘blueprint’, is ‘always a positive contribution to order’.<sup>35</sup> The evolution of a form is an ongoing interplay of forces deployed against each other from within already organised bodies, and is not determined by an idea that exists before the process begins. Instead, the emergence of form begins when bodies come together to constitute what Deleuze calls a *problem*. A Deleuzian ‘problem’ is not a problem in the usual sense, i.e. a task which someone gives us (‘make me a tower of plastic bricks’), and which we have to solve by selecting the correct blueprint or pattern to follow. A teacher might *set* us a problem in this sense by asking a question, such as ‘what is the sum of these two fractions?’, but our ability to solve this sort of mathematical problem is always a matter of our knowledge of a set of rules, a *techne*, that allows us to reach what we have been *told* is the correct solution.<sup>36</sup> A problem in Deleuze’s technical sense, however, is the potential for change and becoming implicit in the form of an entity or a collection of entities, and is the key to understanding why ‘projection’ is the way in which all entities, and not just human beings, *live* the future.<sup>37</sup>

The nomads and their environment constitute a problem: how will the nomads survive? The existence of this problem involves a complex constellation of forces and compulsions, generated through rhythms of change, e.g. the passage from day to night in the wilderness, the change of seasons and weather patterns, the metabolism of the nomads and their need for shelter. The nomads bring skills to their environment, which enable them to perceive and follow its salient traits, and find food and shelter. These skills change as the environment changes: migrating to the mountains, new modes of perception are required. As they travel, the forces at work leave behind their traces: new paths are carved into the terrain, and cairns left behind to mark the resting place of the dead. The environment takes on new traits just as it influences the development of new traits in the nomads.

Turning back to the little girl, we can think of her as an architect who understands the rules of tower-building well enough to turn her idealised tower into present reality. But this ignores the process by which the girl became a tower-builder. This process was the solution to a ‘problem’ constituted by who and what she is, and the environment she inhabits. What created this ‘problem’ was the very first time she played with the bricks she received as a birthday present. Discovering how the bricks fit together, understanding how far structures can work against gravity before they collapse – this process by which the girl became a builder of towers is how the problem is solved. From an ‘architectonic’ point of view, the picture of a tower on the box the

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<sup>33</sup> Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (London: Athlone, 1994), pp. 36-7.

<sup>34</sup> Deleuze, *A Thousand Plateaus*., p. 380-2.

<sup>35</sup> Protevi, *Political Physics: Deleuze, Derrida and the Body Politic*., p. 138.

<sup>36</sup> Deleuze, *Difference and Repetition*., pp. 157-8.

<sup>37</sup> Deleuze, *A Thousand Plateaus*., p. 362.

bricks came in might be a 'blueprint' for her tower, and might lead to her imagining a future moment in which she will have built one herself. But this has little to do with how the problem is solved. In fact, to think of it in these terms is, in Deleuze's terminology, to state the 'problem' badly: if one thinks having an idea of the tower is enough to understand the problem of tower-building, it is hard to see how one could ever learn to build.<sup>38</sup>

Learning to build is, like the relationship between the nomads and their steppes, a process of negotiation between the girl's body and its environment. Manipulating the bricks is done through trial and error, fine-tuning motor skills that have been developing since birth. It is a way of training her body to deal with the demands of gravity, just like learning to walk. It is also a new way of learning to understand and negotiate with the force of her emotions, as when she gradually begins to control the feeling of frustration that flares when the tower collapses. Solving the problem requires a new aesthetic sensitivity: the girl learns by being an apprentice artisan. She has to understand the inherent traits of the material with which she works, just as the woodworker or the nomad does. She cannot simply make the bricks do what she wishes: she has to work with them, and in so doing, finds herself developing new capacities. She passes from a state of *disorganisation*, where she is unable to manipulate and place the bricks, to a state of *reorganisation*, where she has achieved a new accommodation with the forces in her environment.<sup>39</sup> The 'problem's' solution issues from *the material elements of the situation*, without the need for a pre-existing idea to direct the process. Everything happens through a continuous process of bodily training of which the girl is not explicitly conscious. This includes the sense of being an *architect*, which emerges after much repeated training, and is an effect of success in solving the problem, an idealised account of a series of discontinuous steps that purport to show how the problem was solved, without having any reference to how it *actually* was solved.

The nomads and the girl change what Aristotle called their form by developing new capacities. Aristotle's concept of the form of an organism is based on an understanding of an adult animal, which possesses fixed capacities. The capabilities of individual animals are determined by their form, the organisation of their parts. As individuals of a particular species, these are fixed: birds fly, people don't. But Deleuze's theory of learning suggests that the development of form is always the emergence of capacities that were not there before, and there is no reason to suppose that there is any final, fixed distribution of capacities between species. What is vital is the relationship between organism and environment, which can always pose new problems. In evolution, this relationship is essential. Humans have evolved the additional ability to evolve at faster rates through a socialised process of learning (culture). But even the form of inorganic elements can change: the evolution of complex molecules is one case.

Future-orientation is referred to by Deleuze as the *virtual* dimension of things. For the architect, things change because of a moment of choice that starts the process of their development. But for the artisan, things change because their actual configuration emerges from out of their virtual potential. Crucially, both virtual and actual aspects of a thing are real – just as, for Heidegger, futurity is as real an aspect of human being as the continuous present. But for Deleuze, virtuality is in all things, and is the capacity to enter into unforeseen relationships with other material entities, and to change and be changed as a result. It is the potential of a particular material system for becoming something else in combination with other material systems. This potential is provided by its specific form: a hen's egg, for example, needs nothing other than the biochemical constituents within it, together with a suitable external environment, to produce a chicken embryo. But there is no sense in which the form of the chicken embryo comes beforehand, and acts as a blueprint for the egg.

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<sup>38</sup> On 'badly stated problems' see Gilles Deleuze, *Bergsonism* trans. Hugh Tomlinson & Barbara Habberjam (New York: Zone Books, 1988), pp. 17-19; on the idea that stating a problem adequately leads directly to its solution, see the remarks on the mathematician's understanding of problems in Deleuze, *Difference and Repetition*, pp. 177-81.

<sup>39</sup> The idea that unity, stability and what biologists and information theorists call the *homeostasis* of systems are phenomena that are *not* fundamental, but are on the contrary special cases of local order amongst more general patterns of disorder is a fundamental tenet of anti-reductivist biology, along with complexity and chaos theory. See for example Richard & Lewontin Levins, Richard, *The Dialectical Biologist* (Cambridge, Mass.: Harvard University Press, 1985), p. 277, Prigogine, *Order out of Chaos: Man's New Dialogue with Nature*, pp. 286 ff.

The virtuality of an egg, or of the nomads on the steppe, or the little girl, is their *immanent* capacity for reorganising themselves, for taking on new capacities. Matter is, for Deleuze, therefore inherently artisanal: it is always combining and recombining forces and traits, and producing new forms which *express* these traits in novel ways. This emergence of new form, whether it occurs from within the relationship between egg and nest, nomads and steppe, or girl and bricks, proceeds by way of *hesitation* and *improvisation*: for instance, the little girl learns to build a tower by trial and error, trying out different ways of proceeding, each tiny failure or success training her body in the skills it needs, until the negotiation with matter reaches a state where stability is attained, and she can manipulate and place the bricks with confidence. Each attempt anticipates and foreshadows the problem's solution, becoming an *actual* tower-builder. In this way, the process of becoming a tower-builder is crucial, and the tower, the end product, almost an afterthought. This is what differentiates Deleuze's concept of the virtual from the architect's concept of possibility: the process of building is a continuous, ongoing one that implicates within itself other processes that are part of the continuum of the girl's development – learning to pick up objects, learning to walk, learning to talk, but also future processes yet to emerge which it creates the virtual potential for. For Deleuze, 'becoming is the final reality',<sup>40</sup> and discontinuity, presence and instantaneity are effects of processes of becoming.

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### 7. Conclusion: Virtuality and Responsibility

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What Heidegger, Jonas and Deleuze all announce is that the future is more than 'not yet'. They propose instead that in the continuous, changing present we experience, the future is already real, but in a specific way. For Heidegger, as humans we 'stand out' into the future, and interpret our present through our anticipation of what we might become: we are always *beyond* ourselves. Jonas and Deleuze extend this sense of futurity further: the directionality and virtuality of matter mean that there is never stasis in nature, except as a by-product of processes of becoming. Any material system has the potential to become something else, and the 'virtual space' of this potential development is of unforeseen and unknowable extent. Just what and who the little girl might become is by no means settled by the fact that she has learnt to build a tower of bricks, but the future processes of becoming into which she will move have already been virtually prepared. So virtuality is not 'virtual reality', in the sense of a dematerialised simulation of what is real: it is, instead, the latent dimension of that which already exists, and which is always at work, creating the patterns for the future. As such it is imperceptible, but is nonetheless entirely real and effective: it is always already on the way to becoming actual. This is the future as already *living*.

If the future is real and always already with us, but in virtual form, then our relationship to it is misunderstood if we think of ourselves as colonisers of an empty future ready to be occupied. The question of how we *should* relate to the future is addressed by Heidegger, speaking of our unique responsibility to our own futures. If the future is virtual *and* real, then we are its artisans, and the relationship between an artisan and her material is also one of responsibility. Carving the wood entails being sensitive to the traits of the wood and to their futurity, rather than ignoring them in attempting to realise a blueprint. It is only in this way that carving is possible. Similarly, the little girl's mother feels the future at work in her daughter, and feels also her responsibility to the virtuality she embodies. The woodworker is not the architect of the figure she carves, and nor is the mother the architect of her daughter. Their relation to the future of the objects of their concern is one of responsibility, in which they seek, through their sensitivity for what might emerge, to accompany the virtual potential of the living present to its full emergence, and beyond.

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<sup>40</sup> Todd May, "When Is a Deleuzian Becoming?," *Continental Philosophy Review* 36 (2003), p. 143.

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