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### Journal Item

How to cite:

Stenner, P. (2007). Non-foundational criticality? On the need for a process ontology of the psychosocial. *Outlines: Critical practice studies*, 9(2) pp. 44–55.

For guidance on citations see [FAQs](#).

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Version: Not Set

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Paul H. D. Stenner

# Non-foundational criticality?

## On the need for a process ontology of the psychosocial

### Abstract

The articulation of critical dialects of psychology has typically involved a questioning of the foundational assumptions of the so-called mainstream. This has included critiques in the name of more adequate scientific foundations, but more recently these have been accompanied by critiques in the name of an absence of foundations altogether, and critiques that suggest a rethinking of the concept of foundation. These latter versions are usually influenced by the great 20<sup>th</sup> Century non-foundational philosophies of figures such as Bergson, Whitehead, Wittgenstein and Heidegger, or by related thinkers such as Deleuze, Serres, Luhmann, Butler and Stengers. In foregrounding themes of process and multiplicity such thinkers provide potent tools for critically rethinking psychological questions. Less positive has been a tendency amongst critical psychologists to polarise natural and social scientific issues and to associate the former with negative images (all that is static, mechanistic, essentialist and conservative). This can lead to a formulaic criticality in which arguments for nature are bad, and those for culture are good. Deconstruction comes to appear simply as an assertion of 'the discursive construction of' whatever phenomenon is under scrutiny. To counteract this trend, the proposed paper will discuss a process approach to ontology that welcomes contributions from the natural sciences as well as the humanities and social sciences.

"There are twenty-seven Categories of Explanation: (i) That the actual world is a process, and that the process is the becoming of actual entities. Thus actual entities are creatures" (Alfred North Whitehead, 1927-8/1985: 22).

### Introduction:

### Re-foundational, anti-foundational and reflexively-foundational criticality

This paper will deal primarily with the *epistemic* (concerning knowledge) aspects of criticality and will touch only very briefly on the equally important and highly related question of the political and ethical reasons for criticality<sup>1</sup>. The articulation of critical dialects of psychology has typically involved a questioning of the foundational epistemic assumptions of the so-called mainstream (Sampson, 1971; Harré & Secord, 1972; Holzkamp, 1972; Gergen, 1973; Shotter, 1984; Henriques et al, 1984; Tolman & Maiers, 1991; Curt, 1994; Stainton Rogers et al, 1995). That is to say, the criticality involved goes further than the usual critical attitude towards knowledge about the world that might be expected from any serious

<sup>1</sup> These two strands of critique relate to what Stainton Rogers, Stenner, Stainton Rogers and Gleeson (1995) discuss as the double-sided mission of modern psychology: its scientific agenda (progress through the accumulation of knowledge) and its humaneering agenda (progress through the solution of human and social problems). Both 'pure' and 'applied' aspects are related and mutually reinforce one another. Critical psychology responds to both aspects, but individual critical psychologists tend to be more sensitive to one or the other.

scientist or thinker. A criticism of foundations is a criticism of the very basis upon which a project like psychology projects itself.

Critical psychology in this thoroughgoing epistemological sense has included several critiques in the name of establishing more adequate scientific foundations. We can therefore call this category of critique 're-foundationalist critique'. On this basis it makes sense to include under the category of re-foundationalist critique many movements in psychology that are currently not typically thought of as 'critical psychology'. For example, I think it is appropriate to include the various claims to 'paradigm shift' that have been made for the discipline. These span from the behaviourist critique of introspection through the cognitive critique of anti-mentalist behavioural positivism up to the recent critiques and reformulations of cognitivism from the perspective of neuroscience (and possibly discursive psychology: Edwards & Potter, 1992; Harré, 2002). All share in common the dream of finally grounding psychology on solid epistemic foundations. All have nightmares about the turbulence and perturbation associated with shaky, unstable foundations.

I mentioned that many of these movements are not typically thought of as 'critical psychology'. The reason for this is that the label 'critical psychology' has for the most part been adopted by those who add a *political* critique to their *epistemic* critique, and who stress the intimate interplay between issues of power and issues of truth. For psychologists influenced by Marxism, for example, the limitations of adopting a positivistic epistemic foundation are compounded by the ideological functions of bourgeois psychological knowledge. To the extent that they offer proposals for new foundations (often derived from a combination of Freudian and Marxist ideas), it seems appropriate to talk in terms of 're-foundationalist critique' (Holzkamp, 1972; Fox & Prilleltensky, 1997; Tolman & Maiers, 1991).

To this first category of 're-foundationalist' critique I propose to add a second, although the boundaries between the two are far from pristine. This second category appears at first glance to offer a critique in the name of an absence of foundations altogether (Gergen, 1973; Shotter, 1984; Henriques et al, 1984; Curt, 1994; Stainton Rogers et al, 1995). To the extent that this is the case, we might therefore refer to it as "non-foundational criticality". 'Reality', from this broadly social constructivist and / or poststructuralist perspective, is something that is created via psychosocial processes (usually the emphasis is put on *discursive* processes) and hence not something which might underlie and support them in the way that a foundation should. Indeed, the points at which an epistemic foundation is claimed are, it is argued, likely to be precisely the points of maximal political relevance. In this way epistemic and political strands of critique are brought together in an inseparable fusion. Hence power is not just implicated in knowledge, it is exercised *through* it, and there is no pure epistemic remainder that might supply an objective, external vantage point (Foucault, 1980; Beryl Curt, 1994).

Such hints at an absence of foundations altogether are, naturally, rather controversial, and it is not uncommon to hear dismissals of 'trendy postmodernism', 'apolitical relativism', 'cynical militancy', or some such. But dismissals of this kind, as with any character assassination, conceal as much as they reveal. In what follows I will make the case that, actually, and even from an epistemic perspective, the question of foundations is rather complex and ambivalent, and that a more epistemologically subtle poststructuralist or constructivist account would confront what I will call a *foundational paradox*. I thus distinguish a cruder form of constructivism, which does indeed simply say 'no' to foundations (let us call it 'anti-foundational criticality') from a view, which would recognise, manage and work

with the foundational paradox (let us call it 'reflexively foundational criticality'). It is thus very important to escape from the impasse of a dialectic between those who simply affirm and those who simply negate foundations.

The virtue of anti-foundational criticality is that, at the very least, it opens the way to a re-thinking of the concept of foundations, and hence to the possibility of a reflexively foundational criticality. The concept of foundations, I wish to argue, has become problematic and needs to be recognised as such. We have a *troubled relationship to the question of what grounds us*. This troubled relationship is precisely what is avoided both by the kind of relativism that holds that scientific knowledge has no relationship to what is external to it (knowledge as a social construct that speaks purely of its authors or purely of the operations of power in which it is enmeshed), and by the kind of realism that assumes the possibility of objective access to the external in the form of timeless facts (knowledge as the successful capture of externality). The first denies the possibility of any *relationship* to what grounds us ('we are the facts'), the second operates with a delusory relation of dominance based ownership ('we have the facts'). What I call the 'troubled relationship to the question of what grounds us' expresses the foundational paradox that we need foundations precisely because we lack them: existence, being fundamentally groundless, must invent its own foundations. Due to this paradox, the question concerning foundations will always be an issue for us, since it is not the kind of question that can be finally *settled*. It is the kind of issue that calls for our ongoing *concern*.

To mark the distinction between anti-foundational and reflexively foundational criticality I want to draw attention to the fact that the latter would engage with some quite sophisticated philosophy and, sometimes, with some quite sophisticated science. It would be influenced by the *process* oriented thinking

of figures such as Dewey, James, Bergson, Whitehead, Heidegger and the later Wittgenstein, and by more contemporary related thinkers such as Deleuze, Luhmann, Serres, Butler & Stengers, to mention just a selection. Although it is beyond the scope of a single paper to fully address these issues, in what follows I will reflect a little upon the question of foundations in psychology and attempt to give a flavour of a *process* approach to the issues raised. I will suggest that, in falling back upon an over-extended concept of *discourse*, less sophisticated non-foundationalist positions fall short of a process conception that accommodates both what we call the 'natural' and the 'social' 'worlds'. Furthermore, in mistaking this limitation for a critical strength such positions paradoxically ground themselves in a conception of the social produced via a symbolic exclusion of natural science. Hence anti-foundationalism *illustrates* the paradox of foundations even whilst apparently denying it. A further benefit of reflecting on foundations is a clearer awareness of such processes of *foundation-by-exclusion* (cf. Stenner, 2002).

## Founding perpetuability

What does it mean to talk about the foundations of something like psychology? According to the Shorter Oxford English dictionary, a foundation is "the solid ground, basis or principle, on which anything... is founded." It is "that upon which any structure is built up." Or, once again, the "establishing of an institution, together with provision for its perpetual maintenance."

In talking of the foundations of psychology, then, we are talking about the grounds and principles upon which the discipline, as an institution of sorts, is based, and we are talking about the grounds and principles which provide for its perpetual maintenance. This emphasis on perpetual maintenance is important, since it draws attention to endurance through

time. Good foundations are important since they permit whatever is founded upon them to continue its existence in time. Perpetual in this context does not need to imply existence for eternity. It means, to use an English word that became extinct in the 19<sup>th</sup> century, that the entity or being is *perpetuable*. Namely, that it can perpetuate itself in time and therefore, unlike the word ‘perpetuable’, preserve itself from oblivion and extinction. If the notion of perpetuability evokes too much of a sense of eternal permanence, then a term such as *continuability* might be preferred<sup>2</sup>.

It should be clear that, in a common-sense way, there is a rather big difference between the perpetuability or continuability of something like a house or a stack of bricks and that of something like a discipline of psychology. A material pile of bricks appears to most of us to endure through time simply as a function of its robust ‘material’ qualities. The passing of time seems irrelevant to its material character. Or rather, it appears to exist independently in time, but time does not seem ‘internally relevant’, as it were, to it. It seems to our common-sense thinking to be substantial in-and-of itself. Although made by people and thus somehow ‘artificial’, it appears as a thing with its own reality that might be very useful as part of a foundation for a house. Likewise, a house appears substantial. It may need to be repaired once in a while, but it does not need to re-create *itself* ongoingly. It appears to us – with our limited time-scales – as static. Slightly more complex would be the mode of being of something like a spinning top. A spinning top in motion achieves a degree of temporary stability precisely through the constant spinning motion of rotation. It stays the same only in so far as it keeps moving (cf. Serres, 2000). It does need, of course, occasional input from a child to keep it spinning and thus to ensure its con-

tinuability as a spinning thing. The being of something like psychology is yet more complex. To endure in time it precisely needs to re-create itself ongoingly, and in this it is, to our common-sense judgement, more like an organism or a cell than a pile of bricks or a house.

The discipline of psychology, that is to say, is more than a set of buildings on a set of university campuses. It includes the specific and distinct set of thoughts, acts and communications that ‘haunt’, as it were, that material architecture. It includes a distinct yet evolving set of thoughts, acts and communications that circulate in a perpetuable manner, and thus ensure its own continuability. Not only does psychology ‘haunt’ architecture, we might also say that it haunts the physical bodies, the brains, for example, of those psychologists who carry it on through time, passing it from one year to the next and from one generation to another. We would thus be mistaken if we thought of these material bodies as the *foundation* of psychology. They are conditions of its possibility – it could not exist without them – but they do not *establish* it or determine its *perpetual maintenance*. The same buildings and the same human bodies could just as well form a department of chemistry. They are essential aspects of its *environment*, we might say, but they are not *it*.

We need a way of thinking of these kinds of relationships that shifts us away from the common-sense metaphor of a truly-real-because-independently-substantial material base and a psychic or discursive superstructure located spatially ‘above’ this base. Such a metaphor places a highly distorting emphasis on *space* to the relative neglect of *time*. One thinks of ‘constructionism’ in the light of a building site in which brick is laid upon brick. In fact this spatialising metaphor will not suffice even when dealing with what might pretentiously be called the ‘being of bricks’. To a physicist whose powers of perception and whose sense of time-scale has been technologically

<sup>2</sup> I thank an anonymous reviewer for suggesting this alternative.

and scientifically enhanced, a brick may be revealed as a raging mass of molecules more comparable to a billion or so highly regulated spinning tops than to a layperson's sense of a static brick. This is not to de-value the practical and everyday use of bricks in the building trade, which has managed for at least 2000 years without physics.

## Allopoiesis and autopoiesis

Biologists have invented a useful distinction that sheds some light on what I have just described as the difference between the mode of being of something like a house or a pile of bricks and that of something like a cell, an organism or, perhaps, a discipline of psychology (cf. Zeleny, 1981). The former mode of being is *allopoietic*. Human made artefacts and machines are allopoietic in that they are produced and maintained by something else – i.e. people, and not by themselves. The brick, the house and the spinning top are, in this sense, *allopoietic*. *Autopoiesis*, on the other hand, literally means “self-production”. It is a term that was coined by the Chilean biologists Maturana and Varela (1975) when they were struggling to define the nature of biological life. It names the way in which self-referential systems reproduce themselves from out of their own elements. A cell, for instance, can be seen as a complex production system. As Zeleny (1981) discusses, the macromolecular population of a cell is renewed about  $10^4$  times during its lifetime. Through this staggering turnover of matter the cell maintains its unity as a cell. That is to say, although it produces lots of components, more fundamentally – *it produces itself*.

Now in some senses something like a discipline of psychology is produced by people and therefore more like a machine or a building than a cell. But this is only a superficial reading. In a more profound sense it is a self-producing project that is more like a cell than

a machine or a house – more autopoietic than allopoietic. If Psychology can be conceived as a specific and distinct set of communications and practices then it can be characterised as that kind of being that produces and processes ‘scientific’ Psychological communications (cf. Luhmann, 1990). It is a network of communications – teachings, research practices, journal articles and so on – that recursively reproduces itself. It is perhaps just as accurate to say that Psychology produces psychologists as to say that psychologists, as people, produce Psychology. The discipline of Psychology, with all its internal complications and external connections, is a creature of process. Its history is the genealogy of a becoming: a unity borne of the real concrescence of many potentials, but borne nonetheless. To understand its mode of ‘continuability’ we must move away from spatial metaphors of stacked substances and towards metaphors of ongoing processes of self-creation in more or less sustainable social, organic and physical environments that are themselves in process<sup>3</sup>.

## Stasis and process

I hope to have raised a major difficulty with the metaphor of foundation. Like the concept of construction, it is a metaphor that evokes rather physicalist images of building sites. As a metaphor, it lures us into thinking of perpetuation in terms of a stack of brute present-at-hand objects: bricks that remain. As Henri

<sup>3</sup> As a brief aside that I will not develop, this last qualification is important and points to a potential weakness of Maturana and Varela's autopoietic theory: its overemphasis of a sharp distinction between the living, the non-living and the social. The non-living physical universe is not just a brute material something that spatially ‘is’ in contrast to a living entity which endures only through the creation of its own mode of time, and the social is not a realm of rationally created ‘allopoietic’ institutions. The boundaries are blurred and it is always a question of the *degree* of allo or auto-poiesis.



Bergson (1896/1991) might have said, this is a classic example of the *spatialisation* of things. Or as Heidegger (1926/1962) might have said, time is removed from the picture of Being. Alfred North Whitehead – author of *Process and Reality* – named a related set of problems the “Fallacy of Misplaced Concreteness” (Whitehead, 1927-8/1985: 93). Each of these philosophers, in their own way, deconstructs this spatialised, static, ontic conception of being with a conception based upon the notion of *process*. Perpetuation in time is an open-ended process of production. It takes time and it makes time. Life, said Wittgenstein, is a “weaving... stream” (see Schatzki, 1993). Or, as Whitehead put it in *The Concept of Nature*: “If we are to look for substance anywhere, I should find it in events which are in some sense the ultimate substance of nature.” (Whitehead, 1920: 19).

In articulating a broadly process-based philosophy, this impressive collection of thinkers – Bergson, Whitehead, Heidegger, Wittgenstein – were explicitly engaged in a thoroughgoing critique and re-thinking of the place and nature of received scientific knowledge and practice. Their turn to questions of ontology or cosmology constituted a questioning of the foundations and limits of scientific knowledge. In so doing, it also constituted a deep questioning concerning the concept of foundations itself, and the role of the theoretico-experimental sciences in consolidating this concept. Since I have written on Heidegger and Wittgenstein elsewhere (Stenner, 1993; Stenner, 1998), I will here say just a few words about Whitehead in this respect. This will be a partial and highly selective usage, and readers looking for something more comprehensive must consult the original texts (which themselves vary significantly in terminology and approach in ways that I will not even broach here).

For Whitehead, the profound scientific developments of the 17<sup>th</sup> century served to sediment a powerful conception of ultimate and

fundamental reality as brute material stuff absolutely subject to anonymous laws. Fundamental reality, as he puts it, came to be conceived as a “succession of instantaneous configurations of matter” (Whitehead, 1926: 63). As stated in *Science and the Modern World*, the “fact that the material is indifferent to the division of time leads to the conclusion that the lapse of time is an accident, rather than of the essence, of the material. The material is fully itself in any sub-period however short. Thus the transition of time has nothing to do with the character of the material” (Whitehead, 1926: 63). The conception that Whitehead is here challenging involves a very abstract view of time as pure succession and a very abstract view of ‘truly real reality’ as that which exists in a material form independently of the succession of time. The implication is that the truly real things that might act as the foundation of knowledge are pure configurations of matter that fully exist in a given instant of time (“simple occurrence” 1927:38) and in a particular and specifiable region of space (“simple location”<sup>4</sup>).

Like Bergson and Heidegger, then, Whitehead was concerned, amongst other things, with a certain de-temporalisation of Being that had been accomplished by the highly influential physical sciences. Process had been removed and cast as epiphenomenal, leaving the machinations of static substance as ultimate reality and hence, foundation. The result of mistaking this abstraction for concrete reality<sup>5</sup> is what he called the “bifurcation of

4 “To say that a bit of matter has *simple location* means that, in expressing its spatio-temporal relations, it is adequate to state that it is where it is, in a definite finite region of space, and throughout a definite finite region of time, apart from any essential reference of the relations of that bit of matter to other regions of space and to other durations of time” (Whitehead, 1926: 72).

5 “And yet – it is quite unbelievable. This conception of the universe is surely framed in terms of high abstractions, and the paradox only arises because we have mistaken our abstraction for concrete realities.” (Whitehead, 1926: 69).

nature” into mind and matter, the latter being cast as the real, underlying foundation (Whitehead, 1920, chapter 2), and phenomena such as colour, sound and smell (‘secondary qualities’) being consigned to the ‘subjective’ world of the perceiving mind. This is why the ontological question assumes so much importance: what is the world made of? As Whitehead so clearly argues, the answer modern science gave to the question of the fundamental elements of nature<sup>6</sup> was that “the world is a succession of instantaneous configurations of matter” (Whitehead, 1926: 63). That nature “is a dull affair, soundless, scentless, colourless; merely the hurrying of material, endlessly, meaninglessly.” (*op cit*: 69).

Now this foundational ontological assumption of a material foundation beyond an ideal gloss had profound practical implications since it served, amongst other things, as the institutional foundation for modern systems of knowledge. Whitehead is again worth quoting on this:

“In the first place, we must note its astounding efficiency as a system of concepts for the organisation of scientific research. In this respect, it is fully worthy of the genius of the century which produced it. It has held its own as the guiding principle of scientific studies ever since. It is still reigning. Every university in the world organises

itself in accordance with it. No alternative system of organising the pursuit of scientific truth has been suggested. It is not only reigning, but it is without a rival” (*op cit*: 69).

In this way, ‘process philosophy’ draws attention to the self-referentiality of the foundations of modern science. The discipline of physics grounds itself not in the ‘physical world’ but in the abstract conceptions of the physical world that its practices make available. To the extent that these conceptions are robust, reliable and valid, physics provides itself with firm foundations and can become in turn the foundation of further productive activity.

However, as Whitehead points out, the ‘hard’ sciences have changed a good deal since the 17<sup>th</sup> century. The concepts of simple occurrence and simple location which sustained the notion of reality as a succession of instantaneous configurations of matter no longer apply in a post-Einsteinian and post-quantum physical world of *energy* in which the whole universe is conceived as an interrelated field of physical *activity* stretching from one’s immediate environment to the most remote galaxy. There is no such thing as a self-contained region of matter existing fully formed in any given instant. In fact, at an instant, there is nothing that would resemble a primary entity. There are interrelations ‘all the way down’ and all involve *transition* from an inherited past to a future in process of actualisation by way of the next *event*. The event (which Whitehead later develops as the ‘actual occasion’) is the actualisation of inherited potentialities, and hence the distinction between, and dynamic between, the *actual* and the *potential*, rises to great importance (Whitehead, 1927-8). The notion of process thus replaces the notions of brute matter, of secondary ‘mind’, and of time as pure succession. If one begins with process, then “the actualities of the present are deriving their characters from the process, and are bestowing their characters upon the future. Im-

6 “We cannot wonder that science rested content with this assumption as to the fundamental elements of nature. The great forces of nature, such as gravitation, were entirely determined by the configurations of masses. Thus the configurations determined their own changes, so that the circle of scientific thought was completely closed. This is the famous mechanistic theory of nature, which has reigned supreme ever since the seventeenth century. It is the orthodox creed of physical science. Furthermore, the creed justified itself by the pragmatic test. It worked. Physicists took no more interest in philosophy. They emphasised the anti-rationalism of the Historical Revolt. But the difficulties of this theory of materialistic mechanism very soon became apparent. The history of thought in the eighteenth and nineteenth centuries is governed by the fact that the world had got hold of a general idea which it could neither live with nor live without” (Whitehead, 1926: 64).



mediacy is the realization of the potentialities of the past, and is the storehouse of the potentialities of the future” (Whitehead, 1938: 99).

Thus the spatial ‘stack’ foundation metaphor of a static substance with its predicated qualities must be replaced with a notion that affirms the rootedness of being in time. Not an image of one brick placed on top of another, but an intuition of an immediate present conforming to the actualities of its immediate past and thus supplying potential for the immediate future in process of becoming. In jettisoning the spatial notion of foundation we do not thereby announce a libertarian scenario in which ‘anything goes’, since the future can only arise from its creative engagement with the stubborn facts of past actualities. The ‘self-creation’ of autopoiesis – to the extent that it occurs in a non-negligible manner – is always already conditioned and occasioned by what is inherited as stubborn fact.

## The natural and the social

It hardly needs saying that the foundations modern Psychology articulates for itself are scientific foundations. That is to say, Psychology, since its emergence, and whatever its practical and applied connections (Danziger, 1990), has explicitly articulated itself alongside or above the more fundamental natural sciences, particularly biology and physics. On the basis of these foundations, the discipline of psychology proceeds to ground itself, and to successively re-ground itself via re-foundational episodes, in the conceptions of psychological life that its practices make securely available (Kuhn, 1970)<sup>7</sup>.

Here, the classic foundational model at play is that of a tree. This, of course, is a thoroughly spatial model. To be part of the tree of scientific knowledge, psychology needed to invent a demonstrable and reliable way of passing from the trunk of already established fundamental physical knowledge to the branch or twig of more specialised scientific knowledge. As put by Isabelle Stengers, “passing from the fundamental “trunk” to the tiniest branch should ideally pose technically complicated questions, but not fundamental ones” (Stengers, 1997: 7).

Since its inception, however, modern psychology has been criticised – both internally and externally – for failing to convincingly demonstrate this technical access. Also, the notion that such passage does indeed raise fundamental questions has been put forward recurrently. From here the two possibilities described earlier as ‘re-foundationalism’ and ‘anti-foundationalism’ take off. On the one hand, one can proceed along re-foundationalist lines, arguing for the invention of new and better forms of scientific passage from trunk to twig. On the other hand, one can argue for dispensing with these *natural scientific* foundations altogether. Typically this has meant concentrating on notions such as ‘meaning’, ‘interpretation’ and ‘intentionality’ and making arguments to the effect that such a focus does not require a connection with the *natural scientific tree-trunk*.

These recurrent criticisms are hardly surprising once we realise that psychology deals precisely with the kinds of questions that tend to fall on the ‘mind’ side of the mind / nature division inherited from classical physics (and its various forms of philosophical ‘digestion’

<sup>7</sup> This is not to deny the very important fact that the continuability of Psychology is inextricably tied up with its highly profitable ‘applied’ career as a ‘humaneering mission’ (Stainton Rogers, Stenner, Stainton Rogers, Gleeson, 1995). The *social demand* for psychological intervention in many social spheres (education, industry, war, advertising and health to name just the

most obvious) has long bolstered the development and proliferation of the discipline. One does not need to be a Foucaultian to recognise that the applied ‘tail’ wags the ‘pure’ dog.

and settlement). The responses to foundationalism we have outlined are thus intimately entangled with Whitehead's bifurcation of nature. That is to say, on the one hand, one can argue that we simply lack the right means of technical access to the "instantaneous configurations of matter" that do indeed constitute (or at least underlie) psychological reality, just as they constitute all reality, according to the materialist scheme. Or one can argue that the difficult passage from trunk to twig is a fundamental problem that is not open to technical resolution since radically incommensurable modes of being and hence modes of analysis are at play (e.g. intentionality and mechanism; understanding and explanation; teleology and efficient causation). This second solution thus provides reasons for giving up on the ambition of a twig-to-trunk grounding in the realm of the natural sciences. In this way, the bifurcation of nature remains not only intact but *reinforced* by a division of labour between the natural and the social sciences, and psychology occupies the unstable and explosive territory between these two tectonic plates of settled cultural practice (Curt, 1994).

Here we arrive at one of the paradoxes mentioned earlier. Anti-foundationalism can thus be construed as an attempt to *ground* (critical) psychology within the collective of *social sciences* and humanities that has its own issues with foundations (Silverman, 1993). Associated with the 'textual turn', anti-foundationalism has been central to some of the most thoroughgoing critiques of Psychology (Gergen, 1994; Edwards & Potter, 1992). The fundamental distinction that it draws upon between the natural and the social sciences is in turn predicated upon, amongst other things, Wilhelm Dilthey's (1883/1989) observations concerning the distinct *Verfahrungsweisen* of the *Geisteswissenschaften* and the *Naturwissenschaften*. The critical question of the appropriateness or not of a 'scientific methodology' is, and always has been, a key

problem of the social sciences, and their own issues with foundations are not unrelated to this question (Curt, 1994). This troubled relationship has been particularly acute for psychology, since, as Dilthey was well aware, our discipline straddles his distinction. Subsequent reformulations of the distinction, such as that between the ideographic and the nomothetic (Windelband, 1894/1998) were also formulated with the peculiarities of psychology very much in mind.

This long historical predicament informs the recent tendency amongst psychologists critical of the foundational assumptions of the mainstream to adopt an anti-scientific stance. For example, this tendency manifests itself as a series of polemics that focus on phenomena that have been taken as natural, only to reveal them as social, cultural, historical and political in nature (cf. Hacking, 2001). This procedure, however necessary it may be, entails the reiteration of a staged polarisation of natural and social scientific issues in which the former is associated with negative images (all that is static, mechanistic and essentialist). Although this approach to deconstruction has some obvious virtues, it can lead to a rather formulaic criticality: arguments for nature are bad, and those for culture are good. Deconstruction comes to appear simply as an assertion of 'the discursive construction of' whatever phenomenon is under scrutiny.

In short, both re-foundationalism and anti-foundationalism tend to share an acceptance of the old spatially oriented notions of substantial foundation and hence reproduce the bifurcation of nature instead of reframing it in terms of a process ontology. Yet it is precisely these more fundamental foundations that are targeted by the thinkers of process. A reflexive rethinking of the troubled concept of foundations which does not rely upon a fundamental nature / society distinction is required.

## Self-referential foundations

I have suggested that the emphasis on process rather than state or substance (Stengers, 1997:67) has far-reaching implications for how we conceive of foundations. In this final section I wish to return to the notion of self-creativity suggested by the biological distinction between *allo-* and *autopoiesis*, and to use this to touch upon the theme of a reflexively foundational criticality. In a very real sense, an autopoietic system is *its own foundation*. This is the foundational paradox. How can a person pull themselves up by their own bootstraps? And yet an autopoietic system must do just this: it must create itself from out of its own elements: it must produce, maintain and reproduce itself in the flow of real time<sup>8</sup>.

To put the paradox differently: the fact that nature is groundless means that it must invent its own grounds. Or rather, that it must have found a way of inventing its own grounds, and hence of creating itself. The same applies to those forms of nature that we call consciousness and communication (Luhmann, 1995, Stenner, 2004). 'In the beginning' or 'at the origin' we not find not the serene stability of timeless laws or Platonic forms but the turbulence, noise and multiplicity of the untamed vortex. Order (in von Foerster's terms) or complexity (in those of Atlan) emerges like Venus from a sea of noise (von Foerster, 1960; Atlan, 1981). We do not begin with stability and order and add multiplicity and chaos to this – the opposite is the case.

To explore this issue in Whiteheadian terms would require an exegesis of his notion of the *actual occasion*, which we can do no more than hint at here. The concept of the actual occasion cuts across biological, psychological and sociological 'levels' since these lev-

els are alike composed of particular kinds of actual occasion, and actual occasions are, for Whitehead, "the final real things of which the world is made up" (Whitehead, 1927/28: 18). Whitehead's masterwork *Process and Reality* is effectively an attempt to unfold the concept of the actual occasion (or 'actual entity') at a highly general level of abstraction. It must suffice for present purposes merely to say that for Whitehead the transformation of potentiality into actuality in an actual occasion is nothing less than the self-creation of that actual occasion. The many potentialities of the concrete past are integrated into a unified moment of actuality. This means that 'the many' are leant a novel quality of 'unity' that the actual world may previously have lacked. "The many become one, and are increased by one" (Whitehead, 1927-8: 21). This process of creative unification is the process of self-realization. As implied by the distinction between the potential and the actual, it arises because *some* of the potentialities of the past are neglected and excluded and some included in the occasion: in short, a *decision* is made<sup>9</sup>. This is the core of the notion of foundation-by-exclusion, and it points to a profound limitation of the vision of 'pure creativity'. The past is not the 'foundation' for the present and future, but it does supply the 'data' or the 'given' to be worked with. "Thus the immediate present has to conform to what the past is for it, and

8 Wilhem Dilthey shared this intuition – albeit in the more limited context of life – when he argued as part of his *Lebensphilosophie* that *life* is the absolute beginning (cf. Schatzki, 1993).

9 Here "decision" must be heard in the sense that Whitehead gave it in *Process and Reality* (43): "The word 'decision' does not here imply conscious judgement, though in some 'decisions' consciousness will be a factor. The word is used in its root sense of a 'cutting off'... 'decision' cannot be construed as a casual adjunct of an actual entity. It constitutes the very meaning of actuality. An actual entity arises from decisions *for* it, and by its very existence provides decisions *for* other actual entities which supersede it... Just as 'potentiality for process' is the meaning of the more general term 'entity,' or 'thing'; so 'decision' is the additional meaning imported by the word 'actual' into the phrase 'actual entity'. 'Actuality' is the decision amid 'potentiality'."

the mere lapse of time is an abstraction from the more concrete relatedness of ‘conformation’... whatever is settled and actual must in due measure be conformed to by the self-creative activity” (Whitehead, 1927: 36).

If it is correct that groundless nature must invent its own grounds, then this means that what applies to psychological forms of life also applies to the forms of knowledge that take psychological life as their object of study. Both must find ways of ‘carrying on’ through and with time. Both must be perpetuable or continuable processes. From this perspective, the distinctions created by Dilthey and Windleband between the natural and the social, the nomothetic and the idiographic are not simply philosophical concepts, they are ‘living’ foundational gestures. But they are foundational gestures only in the sense suggested by a reflexively foundational criticality. That is, as discursive gestures they contribute to the production of unity that asserts itself as an actuality pressing into the future. Likewise, when social constructionist and discursive psychologists implicitly and explicitly predicate their work upon a rejection of what they present as a natural science approach, they reiterate this gesture of foundation-by-exclusion. They make a decision as to the nature of their discipline that, if communicatively accepted, presses into the future. That is to say, they engage in the ongoing *process* of communicatively re-creating their own foundations via their exclusions and inclusions. The natural sciences thus remain foundational, but foundational by negation: the gesture of their exclusion unifies and perpetuates the anti-foundationalist discourse. An acceptance of these foundations enables communication to continue, but of course it limits *what* communication can take place, and with whom.

In sum, to the extent that such constructionist approaches argue for an absence of foundations they occupy the interesting paradoxical position of founding themselves with

a re-iterated non-foundational argument. As I have argued elsewhere (Stenner, 2002), the constructionist structure is thus built – in part, at least – upon a negation of natural science. This negation is an integral part of the process through which its positive perpetuability is ensured. This is why “the naïve realist, the backward looking positivist, the unreconstructed cognitivist are routinely laid out on the altar of the introductions to constructionist and discourse analytical publications in psychology” (Stenner, 2002: 55).

And yet, just as scapegoats rarely deserve their cruel treatment, these negative and functional constructions, as I hope to have partially indicated in this paper, do not exhaust the possibilities offered by these ‘hard’ sciences. But to say so, if I am right, is to question anti-foundational foundations which are foundations of a sort none the less. Forms of life are lived on their basis, and exposing them thus raises real risks, and real feelings. I raise these issues not in the *destructive* spirit of negative critique, but in the truly *de-constructive* spirit of affirming the limitations of existing knowledge claims. If all continuability is founded upon exclusion/inclusion, then we must exclude wisely. This requires an acknowledgement of the troubled nature of the relationship to the question of ‘the foundations that ground us’.

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