Forgetski Vygotsky: a plea for bootstrapping accounts of learning

Professor Michael Luntley

University of Warwick
michael.luntley@warwick.ac.uk
Sociocultural approaches to learning and development are legion.¹ They are often sourced from Vygotsky whose motto might be: ‘through others we become ourselves’.² I want to argue that such approaches fail to offer any credible account of learning. They might describe features of learning that are important with respect to the enterprise of cataloguing what goes on in learning, but they offer no serious leverage on our understanding of what learning and development is. Accordingly, we should forget Vygotskian socioculturalism and embrace a thoroughgoing bootstrapping account of learning, an account that explains how learning works in terms of the abilities of the individual learner. For a radical expression of the creative autonomy of the individual see the words God speaks to Adam in Giovanni Pico della Mirandola’s ‘On the Dignity of Man’:

> The nature of all other beings is limited and constrained within the bounds of laws prescribed by Us
> Thou, constrained by no limits,.....
> shalt ordain for thyself the limits of thy nature....
> ...thou mayest fashion thyself in whatever shape thou shalt prefer³

Such a radical individualistic humanism is the foil for Prinz’s account of the social makings of agency and intentionality.⁴ But here’s the rub, the sort of social account provided by Prinz is not really at odds with the individualism that I want to defend contra Vygotsky. Indeed, in many respects, Prinz’s account is not really opposed to Pico’s at all, for once we take care to identify which question shapes our explanations of learning and which question(s) shape the descriptive enterprise of cataloguing all the contributory factors to learning and development, then I think we see that, from the explanatory perspective, we are all functionally individualists. Socio-cultural explanations of learning do not exist.⁵

To get a focus on the prescription to forget Vygotsky, let me identify the question that I think any serious theory of learning and development should answer.⁶ The question is simple:

1. How is learning possible?

This is, of course, a transcendental question. It asks for the conditions of possibility for learning. It is abstract question. Few theorists in education consider this question. Most sidestep it. Perhaps it is simply too abstract a question? Perhaps by claiming that it is the key question I am diverting theorists from their proper business into a peculiar realm of abstract philosophy? So let me re-phrase the question into a more comfortable format. I shall then spell out the simple argument against socioculturalist

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² Vygotsky (1997) p.105, see also Vygotsky (1979) p.30: ‘the social dimension of consciousness is primary in time and in fact. The individual dimension of consciousness is derivative and secondary’ and pp.29-30: ‘...the mechanism of social behaviour and the mechanism of consciousness are the same...’.

³ Pico della Mirandola (1486/1948, pp.3-4).

⁴ Wolfgang Prinz (2012), the Pico quotation is taken from Prinz’s prologue, p.xi.

⁵ It’s worth noting Prinz’s own very cautious formulation of his theoretical framework that ‘gives social facts a much stronger role for the constitution of human mentality than do traditional frameworks’ op cit, p.3. That is compatible with the role being a scaffolding role as I define ‘scaffolding’ below.

⁶ Actually the thrust of my argument is not wholly prescriptive, it is partly descriptive. When Vygotsky gets round to the detail of what makes learning work, he admits we know very little about it. I suspect that we have collectively forgotten some of Vygotsky’s own hesitance about how a sociocultural approach is meant to work. Of the key process of internalisation he says that only ‘the barest outline of this process is known’ Vygotsky (1978) p.57.
approaches to learning in the light of the comfortable question. I shall then spend the rest of the paper expanding and defending that argument.

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The comfortable version of (1). The following question poses a serious challenge to any account of learning and does so in a way that highlights an important aspect of the phenomenology of learning. The question is:

(2) How does a learner engage with things they do not understand?

Taking question (2) seriously amounts to endorsing a couple of assumptions: first, that learners engage with things, second that they engage with things they do not understand. The first assumption is that learning is a personal level activity, it involves things that persons do. The second assumption amounts to the idea that one of the things that learners do is engage with things they do not understand. This engagement is the route to acquiring the means to understand things, to acquire concepts. The activity of learning is the activity by which learners come to acquire new concepts.

Question (2) is a question that is pressing if you think that learning is transformative: learning changes the learner’s cognitive repertoire. It provides them with experiences in which they engage things for which they lack concepts and, in response to these engagement they come to acquire new concepts. That is what I mean by saying that learning is transformative. It is the activity by which learners increase the expressive power of cognition. It is because learning is transformative that questions (1) and (2) are pressing. And if we cannot answer these questions, we have no theory of learning. There is much to be said about this idea that learning is transformative. For now, let us pass on and review the simple argument against sociocultural approaches to learning.

Question (2) looks very difficult. It raises a bootstrapping problem. Suppose the learner engages with Xs. In some sense, they experience Xs, for the engagement that matters is a personal level engagement. And yet the person engaging with Xs in experience lacks a concept for Xs. That is something that they will acquire and thereby transform their cognitive repertoire. But if they lack the concept for Xs, how can they experience them, for in order to experience Xs you surely need some sort of representation for Xs? But what is a representation for Xs if it is not a concept, or at least something very close to a concept? How can you possibly engage with something within experience if you lack the means to represent it – a concept? So how can a subject who lacks the cognitive wherewithal for engaging with Xs acquire the concept for Xs, for to do that they would need to engage with Xs in experience and we have no sense of how to do that without deploying something that looks like a concept for Xs? That’s the bootstrapping problem. It looks insurmountable. Let me elaborate one further step to show just how difficult the problem is.

Here’s a natural thought that is tempting in response to (2). Suppose we accept that the learner lacks the concept for Xs; that, afterall, is why they are a learner. Suppose also that we accept the challenge to treat learning as a personal level engagement with things that the learner does not understand. What makes the bootstrapping problem look insurmountable is the assumption that the learner cannot engage with something without some means of representation. It is that assumption

7 It might, of course, include much else besides, but the bit I am focussing on is the bit concerned with the personal level activity of learning.

8 From a Fregean perspective, that question is unanswerable, for the modes of presentation by which things are made available to us in experience simply are concepts; there is no alternative way by which things can be engaged in experience. More generally, to be able to experience Xs, Xs must fall within the expressive power of cognition, otherwise cognition cannot handle them in experience. Cognitive processes are operations defined over their expressive power. There can be no cognitive process for increasing expressive power. You can only engage what you already understand.
that forces the conclusion that unless they already have the concept for Xs, they cannot engage with Xs. So all concepts are innate. The obvious way to sidestep this conclusion is to vary the assumption about what is required to engage with something. One might say that the assumption that the learner needs the concept for Xs is too strong\(^9\). Engaging with something you do not understand does not require deploying a concept, but it does require some sort of cognitive order to experience. Whatever the notion of a cognitive order to experience is, it is an order that is less than a conceptual order. So the transformative nature of learning is staged. One first encounters Xs (in a non-comprehending way) by deploying a level of cognitive order to experience that is less than a conceptual order. That accommodates the assumption that there is no such thing as engagement with Xs without some sort of order to experience that makes Xs available to the subject.\(^10\) But it says that the cognitive order necessary for engagement with Xs is less than a conceptual order.

This staging solution can seem natural and, at the same time, pretty hopeless. If the cognitive order by which the learner engages with Xs is nonconceptual, then we simply re-introduce the bootstrapping problem by asking how does a nonconceptual engagement with Xs give rise to a conceptual engagement? For the staging proposal to look serious, the notion of cognitive order at play in a nonconceptual engagement has to be quite distinct to the conceptual order that the learner is to acquire. So whatever else we say about this notion of cognitive order, we know that it is \emph{not} a conceptual way of engaging with Xs. But the bootstrapping problem was just this: how can an engagement with Xs that is not a conceptual engagement give rise to one that is?\(^11\) Informally: how can something that is not a conceptual way of experiencing something produce a conceptual way of experiencing that thing? The staging solution does not answer this question; it simply asserts that such a transformation happens.

The staging solution seems, therefore, hopeless. It is the form that any individualist bootstrapping account has to embrace. It is the form of the answer to (2) that I think we should endorse. The details of how we fill in a staging solution will, I believe, show that it is a good solution. I will sketch some of those details in my closing remarks. My task today is not, however, to provide a staging solution, but to argue against the idea that a socio-cultural model of learning avoids this problem or even manages to answer question (2). I mention the staging solution and its apparent hopelessness to forewarn you of the following hypothesis: there is no alternative to the staging solution for, in the kindest interpretation of the sociocultural account of learning, it too presupposes a staging solution. Avoiding a staging solution is not an option. At some point, we all have to embrace it. So we might as well get on with the detailed work of making the staging solution attractive.

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\(^9\) You might protest that, for sure they do not yet possess \emph{‘the’} concept for Xs, but that need not matter if they first experience it by using other concepts? That, however, does not begin to register the force of the bootstrapping issue. If the learner engages Xs in the first instance without \emph{‘the’} concept for Xs, but uses some other amalgam of concepts, then they already have the conceptual resources for thinking about Xs, so \emph{the} concept for Xs is definable in terms of the other concepts deployed in that initial engagement. So learning is not a matter of enhancing the cognitive repertoire; it is simply a matter of putting a new name – \emph{‘X’} to a way of thinking about things (Xs) that was already available to the individual. No learning in the sense of concept acquisition takes place, only the re-labelling of concepts with new names!

\(^10\) It accommodates the Fregean intuition that whenever we experience X there is such a thing as ‘the way we experience it’, but falls short of requiring that such ‘ways’ are always conceptual.

\(^11\) How does a cognitive process with no expressive power for Xs generate that out of something that lacks expressive power for Xs?
If you are struck by the problem from the last section, you might conclude that there is no learning and that all concepts are innate. Alternatively, you might conclude that you should not have asked the question in the first place! But let us persevere and take (2) seriously.

Here, in its simplest form is the outline answer to (2) provided by sociocultural accounts of learning. Our problem is that the individual learner lacks the cognitive wherewithal to engage with Xs – they lack the appropriate cognitive order that enables engagement with Xs. To answer (2) we need to know what provides the cognitive order to make Xs available in experience? The sociocultural answer is to say,

(3) Xs are made available to the learner by a cognitive order provided by others.

The thought is that although the individual lacks the cognitive order to engage Xs, Xs are made available to them by those who do have the resources to engage Xs. It is, however, utterly unclear how (3) can be an answer to (2), for all that (3) does is offer new items for the individual learner to engage with, items broadly of the form ‘others-making-Xs-available-to-me’; it does not give an account of how the individual engages with these things. If there is a problem about how the individual engages with Xs, it hardly goes away by saying that they engage with Xs by engaging with ‘others-making-Xs-available’! That does not answer (2), it merely asserts that engagement with Xs is mediated (somehow) by the way that others (who can engage with Xs) display them to the individual.

Let me put this in a sharp way. Question (2) is challenging, for it assumes that the learner is ‘cognitively blind’ with respect to Xs. That’s what it means to say they have no representation for Xs. Howsoever Xs figure in the learner’s cognition, it is not by virtue of the learner having a representation that picks out Xs. Learning is the transformative process that takes the subject from having Xs figure in cognition without a representation, to having them figure under a representation. So our problem is: how does the learner engage with things for which they are cognitively blind? The sociocultural approach says that the learner’s engagement with Xs is mediated by those who are not cognitively blind to Xs. These others are the elders. An elder is by definition not cognitively blind to Xs. So what are the elders supposed to do? Show Xs to the learner? Well that will not work, for the learner is blind to Xs, that’s what makes them a learner. If the learner is blind to Xs, how are they meant to be able to ‘see’ others displaying Xs? This sounds like just one more thing that they cannot see.

There is a real puzzle here, but it is one that can seem to go away if you take your eye of it and think about something else. Suppose you ignore (2) and consider in its place this question:

12 Locus classicus Fodor (1975) and in numerous publications since.
13 Although in psychology Matthews (2006) takes Vygotsky as answering the challenge raised by (2), philosophers on Vygotsky are much more nuanced in how they read him. Bakhurst (2007) thinks we should not press the difference between stages in development too hard, for Vygotsky’s dialectic method means that ‘everything in time must be understood in its development’, p.53 ff., see also (2011) p.82 ff. Derry (2013) is more concerned with Vygotsky’s broader philosophical inheritance than with the specific issues raised by (2), although she notes them in passing and, in similar vein to Bakhurst, says that Vygotsky’s holism, as opposed to dualism, addresses the issue (p.37). I think this amounts to not having a theory of learning.
14 The staging solution posits a level of ‘half-sightedness’ with respect to Xs. Is that any good? Whatever else that amounts to, it amounts to not sightedness, so even on the staging solution the subject remains ‘blind’ to Xs, for they fall short of the cognitive outcome that is supposed to flow from engagement – possession of the concept for Xs. For a staging solution to work we need interesting and real detail on ‘half-sightedness’. I sketch some of that in my closing remarks.
(4) What sorts of things are helpful in enabling learners to come to engage with things they don’t understand?

Any answer to (4) is very likely incomplete if we fail to note that the activities of others is key to helping learners engage with things they don’t understand. That, it seems to me, is obvious: we stand on the shoulders of those who have gone before. The range of things that we engage with, notwithstanding that we do not understand them, is massively enhanced by the activities of others who shape the environments in which we learn. And very often, although not necessarily, the others who shape that environment have a cognitive range that exceeds that of the learner and having this more extensive cognitive range is important in framing an environment by which the learner comes to extend their cognitive range.\footnote{I propose to treat it as uncontroversial that the role of the activities of others is central to how we answer question (4). But answering (4) does not and cannot answer our question (2). The answer to (4) simply asserts that, notwithstanding the fact that we engage things we do not understand, the range of such things is enhanced by the activities of others. That adds nothing to an account of how we pull off an engagement with things we do not understand, it just says that there’s a lot of it! And the range is determined in large part by the activities of others, activities that add to what we engage with without understanding but which tell us nothing about the means by which such engagement is effected. I think the difference between answering (2) and answering (4) is clear cut. But it would help if we could pin it down. We need a distinction. The terminology that I want to deploy is not always used in a precise way. So let’s proceed slowly.}

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I want to distinguish between the claim that the activities of others are constitutive of the learner’s engagement with things they do not understand and the claim that the activities of others is scaffolding of the learner’s engagement with things they do not understand.\footnote{The ‘not necessarily’ caveat is important. The sociocultural model treats learning as a transaction between novice and master – those who lack knowledge and those in the know. That leaves mysterious something that ought to be basic: learning that takes place when no-one is in the know, when we collectively extend our cognitive repertoire.} Let’s start with Vygotsky.

\footnote{‘Scaffolding’ comes with health warnings. It is Bruner’s metaphor and it is often cited as evidence in support of a Vygotskian thesis that is, I suggest, best construed as a constitutive claim. You might protest that I should not use ‘scaffolding’ for something that is weaker than a constitutive claim, but I think it worth persevering, for one of the problems in this area is the way that metaphors get deployed without clear lines of contrast in place. Bakhurst (2011) uses the concept of scaffolding in a way that seems the same as mine. See p.12 where in his account of what he calls stage 1 (pre-linguistic) the activities of others play ‘an organising role’ for the child’s engagement with things. That sounds like scaffolding, although Bakhurst thinks the concept is too one-dimensional, for, by stage 2, the adult is not merely scaffolding the child, they are ‘initiating’ them (p.12). I do not know what ‘initiation’ means, but it seems to mean precisely the thing that I think we should be able to explain: the transition for any given sortal from not having a concept to having one. At one point, Bakhurst concedes that we ‘need a compelling account of how rationality is engendered by initiation into social being’ (p.152) and that seems to indicate a willingness to endorse the project I am advocating, although the idea that the outcome is ‘social being’ blurs the force of the concession. At other places Bakhurst seems close to endorsing what I call the constitutive claim, although he distinguishes between ‘enabling’ and ‘constitutive’ (p.150) and says he endorses the former but says it concerns what ‘makes mind possible’. If that means, provides the conditions for the development of mind to be possible, it’s more than scaffolding, it’s what I call ‘constitutive’. A lot of the terminology on Vygotsky is ambiguous between an interesting and challenging claim about how the social is a necessary condition for mindedness, and a banal observation of how the social often, typically, normally scaffolds the development of mindedness. See}
Suppose that the cognitive order to experience that enables engagement with Xs is provided not by the learner but by their elders, teachers, peers, etc. Suppose that the order is already ‘out there’ as a form to apply to experience and the learner acquires it by being initiated into its use by their elders? Here is Vygotsky’s formulation of the point:\[17\]:

*An interpersonal process is transformed into an intrapersonal one.* Every function in the child’s cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (*interpsychological*), and then inside the child (*intrapsychological*).

There are two things to note about Vygotsky: (i) he clearly endorses the view that there are two separate domains, the individual and the social (*intrapsychological* and *interpsychological*); (ii) he clearly endorses the claim that the individual process occurs developmentally after the social process, the former is formed by an internalisation of the latter. Vygotsky also accepts a third claim, (iii) how internalisation works is unclear. I return to that shortly. The combination of claims (i) and (ii) is prima facie puzzling, indeed, I suspect that it is incoherent.

Vygotsky’s admission that we do not understand the process of internalisation does not undermine the substantive sense that he gives to that process. As he makes clear on the very same page, whatever else internalisation does it ‘involves the reconstruction of psychological activity’; he goes on:\[16\]

Psychological processes as they appear in animals actually cease to exist; they are incorporated into this system of behaviour and are culturally reconstituted and developed to form a new psychological entity.

Claim (i) seems to endorse the idea that the category of individual psychological processes is distinct to the category of social psychological processes and yet claim (ii) seems to suggest that processes in the latter category are constitutive of processes in the former. To be fair, given (iii), one might object that to say that social psychological processes are constitutive of the individual is to claim too much, for Vygotsky admits that the ‘barest outline of this process is known’\[19\]. Nevertheless, he does say that the process is one of internalisation and that, at least, commits him to some sort of precedence claim of the social over the individual.\[20\] Vygotsky is standardly read as offering a social account of the development of individual psychology and that is normally taken as requiring some sort of constitutiveness thesis re the relationship between the social and individual.\[21\] Other options are, of course, available.

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John-Steiner & Mahn (1996) for a strong constitutive claim re development ‘as the transformation of socially shared activities into internalized processes’ p.192, followed immediately by a potentially banal uncontentious scaffolding claim: ‘when beginning an activity, learners depend on others with more experience’ p.193; or Hedegaard (2007) p.246: ‘children appropriate concepts of tools and objects through interaction with their caregivers’, that’s uncontentious, it’s scaffolding.


\[18\] Ibid

\[19\] Ibid

\[20\] For clear formulations of the strong constitutive version of (ii) see: John-Steiner & Mahn (1996), pp.192, 193; Wertsch & Tulviste (2005) p.60: Vygotsky gives ‘analytic priority to …social processes’ and reference to Vygotsky (19790 p.30 for a strong constitutive formulation; Kozulin (2005) p.102: ‘the mechanism of social behaviour and the mechanism of consciousness are the same’; and see p.103 for a powerful statement of the idea that the social is explanatory of consciousness; Bakhurst (2007) p.56: ‘Vygotsky’s is a vision of the social constitution on mind: “through others we become ourselves”.

\[21\] In psychology, this is sometimes presented as a direct response to the bootstrapping problem, see Matthews (2006) p.296.
Let’s start with what I’ll call the obvious model of how individual and social psychological processes are related. The obvious model accepts both of Vygotksy’s claims (i) and (ii), although not in the manner he intends. The obvious model says this:

**Obv**: There’s something about human individual psychological processes that makes them apt for the social to detect and engage with and whatever it is, that something is then scaffolded in its development by that engagement; the individual psychological process is exposed to the social and by that exposure it develops.

A key element of **Obv** is the idea of exposure, the relation between the individual and the social. One thing that is distinctive of Vygotsky is the claim that this relation amounts to an internalisation of the social to produce the individual. So we need to know what internalisation means.

One might think that internalisation was a causal genetic claim of the form:

**Int**: the development of individual psychological processes is always, often, normally preceded by social psychological processes.

**Int** is, I suspect, true. Much of the development of individual psychology normally requires substantial input from others and draws upon shared psychological activity with others. Assume that is right. As an account of internalisation **Int** falls short of a substantive constitutive claim, for all that **Int** entails is that social psychological processes are scaffolding for individual psychological processes. I use the metaphor of scaffolding on analogy with how it is used of the supports for building structures. It signals a level of support that is useful but not always necessary. With many tall structures, it is not impossible to construct them without scaffolding, but it is normally easier and quicker to employ scaffolding. It is, I assume, also true that for certain heights of structures and certain levels of complexity of structure, we find it practically inconceivable how they could be achieved without scaffolding; furthermore, there might be some structures whose height and complexity is such that we would say that they are impossible to build without scaffolding. That leaves the scaffolding metaphor representative of a range of interpretations. To say X is scaffolding of Y does not entail that X is constitutive of Y such that in the absence of X, Y would be impossible. There might be some specific types of Y such that in the absence of X, Y would be impossible, but that is not a consequence of the general claim that X is scaffolding of Y. In the case at hand:

**Scaffolding**: Social psychological processes scaffold individual psychological processes if and only if some levels of development of the latter normally require prior exposure to the former.

That is a claim about the scaffolding of individual psychological processes by social psychological processes that instantiates **Int**, but which does not amount to the latter being constitutive of the former. A stronger claim than this is, however, not only what most people ascribe to Vygotsky, but also what he clearly seems to be committed to. What is not so clear is whether he has any good reason to endorse it.

Let us take the constitutive claim as:

**C-Int**: Individual psychological processes are constituted by exposure to social psychological processes.

Vygotsky holds that the transformation of an interpersonal process into an intrapersonal process takes a long time, for the ‘process being transformed continues to exist and to change as an external form of activity for a long time before definitively turning inward’ and, ‘…they take on the character of inner processes only as a result of a prolonged development’.22 That the social is constitutive of the personal is evident in Vygotsky’s idea that what is available as an individual process prior to internalisation are psychological processes that are merely animal psychological processes rather than the distinctively human psychological processes

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22 ibid
that carry meaning. The latter replace the animal processes. The model is one in which the social processes in being internalised over-write the preceding animal psychological states. Vygotsky says,23

The internalization of cultural forms of behaviour involves the reconstruction of psychological activity on the basis of sign operations. Psychological processes as they appear in animals actually cease to exist; they are incorporated into this system of behaviour and are culturally reconstituted and developed to form a new psychological entity.

He adds,24

The internalization of socially rooted and historically developed activities is the distinguishing feature of human psychology, the basis of the qualitative leap from animal to human psychology.

It is internalization that makes what is distinctive of human psychology. That’s the constitutive claim. But it is quite unclear what the argument is.

As formulated, C-Int claims that intrasychological processes are constituted by exposure to interpsychological processes, but everything turns on how we understand ‘exposure’. If it is a causal claim, then it is doubtful that it captures the constitutive thesis on offer, for a causal claim looks at best to instantiate Int, not C-Int. Nevertheless, if the claim makes sense, we are entitled to expect an answer to the question:

What is about about the individual qua individual that constitutes their ability to enjoy exposure to interpsychological processes?

Suppose the subject’s exposure to interpsychological processes figures in a causal claim, and does not warrant the constitutive thesis that such exposure constitutes their internalisation of such a process. But then we need an account of the subject’s ability to enjoy such exposure. There must be something in virtue of which they enjoy such exposure, something that makes them apt for such experiences. If there is, then the bootstrapping challenge re-appears. Nothing could give the subject the ability to enjoy exposure to the target processes that did not bring those processes within cognitive reach. In order to enjoy exposure to such processes, the subject needs the ability within cognition to handle them. Either that ability amounts to a full cognitive grasp of that to which the subject is exposed, or it’s an ability that features as part of a staging solution to the bootstrapping problem. On the former option, there is no learning; on the latter, we await detail of how the staging solution works.

That problematic applies generally, so it certainly applies to the case in hand where the items to which the subject is exposed are interpsychological states. Construed as a causal claim, internalization presupposes a prior ability to enjoy exposure to interpsychological states. No wonder Vygotsky admits that only the ‘barest outline of this process is known!25

23 ibid
24 ibid
25 Some Vygotskian scholars get close to admitting that there is an issue here. See John-Steiner & Mahn (1996) p.196 where they quote Lemke (1995) re the potential contradiction between differentiating the individual and social as distinct, but also saying the latter constitutes the former. They then say: ‘Vygotsky’s use of dialectics to unravel this contradictory relation...in which the individual constructs the social and at the same time is constructed by the social distinguishes the sociocultural perspective’ and conclude, p.197: ‘In our view, internalization is simultaneously an individual and a social process.’ If that’s dialectics, I confess I find it unhelpful, not enlightening. Bakhurst also raises some similar concerns regarding the overly passive role afforded the child in internalization. He says, (2007: p.72), ‘...the child who has “internalized” a psychological tool has “made it her own”. The child may inherit rather than construct her basic concepts, but she possesses them only when they become a vehicle of her activity.’ I do not see how this helps, for (i) it still leaves the child passive re the inheritance phase and active only after acquisition, and (ii) it says
But perhaps I under-state Vygotsky’s intent by supposing that exposure is a causal claim? But that thought, although tempting, is barely coherent. The project on offer is an account of how interpsychological processes are constitutive of intrapsychological processes. What makes the project sound a substantive claim is that we start the model with a clear differentiation between the two kinds of processes – Vygotsky’s thesis (i) above. Then it is claimed that the interpsychological process is constitutive of the intrapsychological, but how can that be if they are of different kinds? If we accept Vygotsky’s thesis (i), then surely we have to have some account of exposure, the relation between what is merely personal with that which is social? Everything turns on how exposure of individual psychological processes to social psychological processes can be constitutive of a new kind of personal process that over-writes what was previously merely animal personal psychology. That might suggest that exposure relates individual animal processes to social processes, but that cannot be right, for animal processes do not relate to social processes in any way that could bring about individual human psychology. Animals do not get it, they are not party to culturally mediated social psychology. That’s what makes them animals. So it cannot be the case that it is our animal individual psychological processes that provide us with the wherewithal to enjoy exposure to social psychological processes. There are now only two options left.

The first is that we say that it is something about our individual psychological processes that grants exposure to social psychological processes. But if exposure means exposure to cognition, how can cognition find social psychological processes within cognitive reach without the wherewithal to express such things within the resources for order already available within individual cognition. We get the bootstrapping challenge all over again. And the only way out then is to embrace a staging solution.27

nothing about what the process of inheritance is when that is the whole issue: what is the process by which the person acquires the new ability?

26 There is a separate issue that might be invoked at this stage. If the distinctiveness of the intrapsychological is that it is ‘animal’ psychology, then that suggests that it comprises processes understood purely in terms of their location within the causal nexus. Suppose now that you think that interpsychological processes are characterised by their location within a normative nexus, then you’ll be tempted to think that the distinction between the individual and social is that between the causal and the normative. I suspect something like this is at work in Bakhurst’s book, it is clearly there in Derry’s discussion of Vygotsky even though she is not really concerned with the issue about learning. There are a number of objections I would make to this move: (a) it still leaves it utterly unclear how normative processes ‘overwrite’ the causal animal processes, and why they only do this with human animals and not others; (b) it is an extraordinarily heavy does of metaphysics to invoke the space of causes/space of reasons distinction at this point in an account of learning; (c) the claim that the social and the domain of meaning and reasons is normative is, arguably, false and certainly highly contentious, see Bykvits & Hattiangadi (2007); Hattiangadi (2006), (2007); Boghossian (2003), (2005); (d) the character of normativity warrants considerable unpicking and we should not assume that the individualist bootstrapping account of learning has nothing to say about normativity – I think it has lots to say, some of what can be said about normativity within an individualistic and naturalistic framework appears in ref deleted for anonymity in press.

27 Faint hints of a staging solution can be found in the work of some Vygotskians. Kozulin (2005) follows the strong constitutive reading of Vygotsky and sees the appeal to the social as a genuine ‘other layer of reality’ in order to provide an explanation of consciousness, p.103. Although not a staging solution in my sense, this does present Vygotsky as offering an explanation (good thing) and not just a complicated description. Compare however Bakhurst (2007) and Hedegaard (2007) who both endorse similar ideas that might amount to a precursor to a staging solution approach. Bakhurst says, ‘...the child first grasps external mediated means…and then “internalizes” such techniques’; and then continues, ‘...the
The second option is the mysterious option – we bit the bullet and say that exposure to social psychological process really is constitutive of the emergence of the relevant individual psychological processes. This is mysterious, for it renders the obvious model – Obv – incoherent. Accept that Obv is the obvious thing to say. It is, also, however, the thing that we are trying to understand. To put the point as just formulated in terms of scaffolding leaves the bootstrapping challenge unanswered. The mysterious treatment of the obvious model is to say that the individual process that is engaged by the social is constituted (comes into being) by being an object of social focus! And that is mysterious. It remains an utter mystery why and how such processes can be called into being in the case of some animals – humans – and not in others. It is also, of course, metaphysically obscure what it means to say that an individual psychological process (i.e. not a social one) can be called into being by a social one. Nevertheless, many writers get very close to saying just this.

5

Bakhurst approvingly quotes the Vygotsky motto that ‘through others we become ourselves’ in his defence of the role of bildung. He says there is no conflict between this reading of bildung and autonomy, for he sees ‘initiation into culture as a precondition of self-determining individuals’. But that only holds water if we know what ‘initiation’ is. He seems to think of it, in the guise of the acquisition of Bildung, development of the higher mental functions lie in the mastery of the social practices’ p.54. Does this mean that there is a difference between ‘grasping’ and ‘mastery’? If so, what is it? Later he says, ‘We owe our mindedness, our personhood, to our appropriation of culture.’ p.56. Now, is ‘appropriation’ a cognitive engagement? If not, then learning is something done to us and ‘grasping’ is hardly the right word for the initial phase. If it is a cognitive engagement then we need an account of what it is and how it works and how it amounts to something less that a cognitive engagement that deploys a representation for what is grasped. A similar issue arise with Hedegaard. She says, ‘…learning of everyday concepts is spontaneous and takes the form of imitation in a broad sense which means imitating…a more competent person…’ p.248. Is this just a description with no explanatory leverage, something of the form: we copy and then we understand? If so, then this is the data we need to understand, it is not a theory of how learning works. Perhaps it’s a hint of a staging solution and it means something of the form: we engage with X (less than conceptual) and then come to understand X? But in that case, we need to be told what this form of engagement is and how it gives rise to understanding. At best what we have here is a hint towards a staging type account. If ‘engage’ here requires understanding, then all we have is a description; if it does not require understanding, then we need the details to fill out a staging solution. See also Wertsch (2007) pp.187-188 and the ‘episode of ventriloquation’ by which a husband says more than he understands when reporting a fault with his car’s carburetor. That suggests that there is an engagement with things we don’t understand, although Wertsch does not say what it is.

28 As noted, Bakhurst says the roots of higher mental function lie in ‘mastery of social practices’ (2007: p.54); that sounds like a mere description unless we are given a detailed theory of what sort of engagement is productive of such mastery. Compare Wertsch & Tulviste (2005: p.61) ‘…intramental is…derivative…emerging through mastery and internalization of social processes.’ But this just repeats the data that learning happens. Without an account of the process of internalization and the routes to mastery, this gets us nowhere.

29 It’s the inchoate idea that one can find in a number of idealist philosophies, although few are ever bold enough to say it clearly. A counter-example to that last claim might be Fichte who holds that self-consciousness (an individual psychological process par excellence) is constituted by the ‘summons’ of others (a social psychological process)! No, I don’t know what that means either.


31 Op cit p.74
‘as part of normal human maturation’. But that makes it a descriptive point on a par with, and arguably not much more informative than, the claim: learning happens! Indeed, he sees his project as ‘a hermeneutical project rather than a causal-explanatory one’. So perhaps his ambition is not to answer question (2)? Elsewhere, however, he characterises the Bildungsprozess as one in which, …the elders’ commitment to the recognition of mutual subjectivity is so obviously an assumption warranted by the child’s potentiality rather than this or her actual capacity….the child is addressed as a ‘you’ so that he or she might become an ‘I’ that can return the compliment. The latter part of this clearly endorses the distinction between two quite different attitudes: treating another as a rational being and, finding another as a rational being. And it seems to endorse the Vygotskian claim that the latter is brought about by the former. But if the former is appropriate as an attitude of the elders to those who do not (yet/currently) have the ability to respond and is therefore an attitude that has less content than the attitude of ‘finding the other rational’, then there is no account offered of how by deploying the former attitude we give rise to something that warrants the latter. Speaking of ‘potentiality’ in contrast to ‘capacity’ is simply a label for the belief that taking an attitude of treating the other as rational will produce (eventually, by some means we have not been told of) a finding of the other as rational. But that is not an account of learning, it is a reminder of something we knew all along. Treat young children as rational and they invariably turn out so. Do the same with other animals and they don’t. All I ask is that we explain the difference. And it is hard to see how we could begin to do that without saying something interesting about the abilities (not potentialities) of the learner that give them the wherewithal to respond to the elders. And where that wherewithal is a less than fully conceptual rational ability; it’s something that figures in a staging solution to the bootstrapping problem. The same structure of issues can be found in Meredith Williams’ work. Williams is admirable for the extent to which she takes question (2) seriously. It is her answer that I find bewildering. It smacks of the Ficthean idea of ‘reciprocal recognition.’ Williams accepts that there is a bootstrapping problem. Like Bakhurst, she sees the transition from novice requiring initiation to becoming a member of practice as a transition that crosses a line between activities bound only by causes and activities

32 op cit p.82
33 Ibid.
34 There’s another whole dimension to debates in this territory signalled by Bakhurst’s phrase ‘causal-explanatory’. I think that signals something that is important to his McDowellian inheritance and the idea of a sharp divide between causal and normative accounts of learning. As already noted, footnote 25 above, I have serious doubts about the coherence of the McDowellian material here and I think it’s a separate matter that should not be allowed to divert attention from the issue: do we or do we not attempt to answer question (2)?
35 p.63
36 This is the same point as that made with respect to the formulations discussed above, see footnote 26
37 Bakhurst notes this, see p.10, footnote 19, but it is never clear whether he endorses it or not: he quotes Franks (2005) characterisation of it as a process ‘in which a preexisting person summons a latent person to act’ but it’s not clear whether he does this to endorse the idea and the inclusion of ‘latent’ here muddies the water re the precise content of Franks’ version of the Fichtean idea. Note, in the same footnote Bakhurst quotes Lovibond’s formulation which is much more tentative and does not seem to go beyond the scaffolding idea. Lovibond says that our attitudes to children are ‘…an essential element in the business of upbringing: we are enabled or helped to make the transition to a fully human mode of behaviour…by the willingness of adults …in treating us…as being further along the path towards this mode of behaviour than is actually the case’, (2006) p.266. Enabling and helping in this context are forms of scaffolding, this is much weaker than the Fichtean idea and is, I suggest, uncontentious.
bounded by norms. Williams construes the learner with a modest set of abilities, they are bounded only by causally conceived responses and abilities. Learning involves acquiring a set of normatively bounded responses and actions. Given the poverty of the learner’s initial abilities, much stage setting is required to bring them to this goal. The stage setting is found in a social scaffolding that is constitutive of the individual’s achievement. She says.

The status of the naïve learner’s utterances (that, for example, they are taken as judgments or requests) is a function of the status extended to those utterances by masters of that practice. In other words, the initiate learner speaks, makes judgments, requests, and the like only by virtue of a courtesy extended to the learner by those who have already mastered the practice. What this position underscores is the linguistic and cognitive dependence that the initiate learner has on the teacher, and by extension the social environment. (1994, p. 194; see also, 2011)

The core phrase is the ‘courtesy extended’ by those already masters of language. In short this means that what is constitutive of the pupil acquiring normative abilities in place of the teleological abilities with which they began is that the teacher and others treat them as having gained those abilities. Possession of normative abilities is constituted by being treated as possessing them by those already masters of them! I confess that I have no idea what this can mean. Either it’s an endorsement of a speculative and rather fancy Fichtean metaphysics, or it’s a marker for the space where a staging solution needs to sit: an account that characterises those abilities, less than fully conceptual, with which the learner engages with the ‘courtesy’ being extended to them, abilities that are enjoyed only by those animals (human animals) that respond to courtesy in the way with which we are familiar.

6

We need a staging solution. As noted above, staging solutions can look hopeless, for don’t they seem to ask how to get something out of nothing? Not quite. They ask how to get something out of something a little weaker. Here are three quite different ingredients that look suitable for exploring how a staging solution to our question might go.

First, there is a wealth of material in developmental psychology that tackles our question head on and offers a range of telling insights. Carey’s work is key.38 In her work on children’s acquisition of number concepts, she has a staging solution. Childrens’ encounters with numerals is as ‘placeholders’. To say that children first use number words as ‘placeholders’ is not to say much beyond the point that they do not use them conceptually, as representations for numbers. There are, however, in Carey’s discussion, a handful of observations that open up scope for a general theory of how staging works. With numerals, she says children use these words as ‘nonsense words’, like a nursery rhyme, like the rhyme ‘eeny, meeny, miny, mo’.39 This is revealing. Much early language use with young children exploits a patterning of word use where the patterning is not a conceptual patterning, but an imaginative aesthetic patterning. It is a patterning of rhythm and rhyme. Such a sense of patterning gives rise to a sense of normativity too.40 This is the second ingredient. The child uses numerals with a sense of their fit in a sequence, a sense that it is right and appropriate to say ‘4’ after ‘3’, but without that sense of fit manifesting a conceptual grasp of cardinal order. The sense of fit delivers a sense of

38 Carey (2009).
39 Op cit p.308
40 This claim goes beyond Carey’s own formulation, but I here draw on Ginsborg’s ground breaking work on primitive normativity, see Ginsborg (2011).
appropriateness, the correctness of saying ‘4’ after ‘3’, without that implicating grasp of a semantic correctness.\(^{41}\) That comes later.

This is, I believe, a promising start to an adequate staging solution to our question. It has some surprising consequences. The bootstrapping problem challenges us to find the cognitive order with which the learner engages with things for which they lack concepts. The answer that I think is suggested by Carey’s work is that the cognitive order in question is an order supplied by the imagination, an aesthetic sense that looks for, and creates, patterns that are, in the first instance, patterns of things like rhythm and rhyme. They are patterns that lack representational content. What they lack in semantic content, they make up for with a syntactic sense of presence. We move tokens of the numerals around in abeyance to a playful sense of pattern. The role of play is the third ingredient in this sketch.\(^{42}\) To take another of Carey’s examples, think of one’s first encounter as a teenager or young adult with ‘F=ma’\(^{43}\). You handle these signs in ways that obey your grasp of the concept of identity, but you might lack much if any scope for detaching any one of these symbols and using it in another context. You might know that you can rearrange the formula with each symbol taking turn to figure on the left-hand side, but you cannot yet detach them usefully into other contexts.\(^{44}\)

Of course, how you move from playful patterns to representational patterns is a big deal. In descending to the order of play we set ourselves a considerable developmental hill to climb. But if I’m right, that is unavoidable: we need to get on with it. But taking the ability for play seriously still seems to mark out the human animal from others. We enjoy open-ended and open-textured games. It is because we play that we have the ability to join in. It is because we play that we can respond to the elder’s courtesy in thinking we are smarter than we are. Indeed, it is play that defines the first contours of our social being, of our engagement with others. But that is not a socio-cultural theorist’s posit. It is not the claim that our individual ability for play is constituted by others treating us as if we play; it’s the simple recognition that when appropriately equipped playful individuals come together we achieve a lot. But what makes this possible is our individual equipment, without which we could not come together.

\(^{41}\) Something similar might be said of the husband’s use of ‘carburetor’ in Wertsch’s example, (2007) p.187.

\(^{42}\) The importance of play is evident if you start to think carefully about Wittgenstein’s central metaphor for language use – a game. Seeing the imaginative ability for play as a contribution to the staging solution also gets Wittgenstein off what is, otherwise, a real problem. Everyone knows Wittgenstein speaks repeatedly of training. Few have noticed, however, that whatever he means by ‘training’ it falls massively short of Bildungsprozess, for Wittgensteins’ German for ‘training’ is ‘Abrickung’ and that is a very crude stimulus-response concept of conditioning. Bakhurst accepts that education requires more than training, for that concept is ‘too thin’ (p.152). That, however, sits badly with his McDowellian inheritance from Wittgenstein in support of the idea of Bildungsprozess. That idea is simply not there in Wittgenstein. So either Wittgenstein is stuck with the bootstrapping problem (How can Abrickung give rise to concept mastery and a sense of Bildung?) or he has the outlines of a staging solution that starts with the games we play with words, including the very early games in which we make, repeat and sustain patterns of rhyme and rhythm. My own view is that Wittgenstein is smart enough to have avoided the bootstrapping problem and in his treatment of rule-following has a staging solution that accommodates norms in a naturalistic setting. That, of course, for many fans of Wittgenstein, will be thought simple heresy! If so, that just reflects the confusions and complexities that abound in this territory, matters that this paper seeks to begin to unravel. The role of play is acknowledged by Vygotskians, see, e.g. Kozulin (2005) p.107, Hedegaard (2007) p.273, but only as having an instrumental supportive role, not in the foundational role that I am advocating as part of a staging solution.

\(^{43}\) Carey op cit p.519f.

\(^{44}\) Your use of ‘F’, ‘m’ and ‘a’ therefore fails to satisfy the generality constraint, a clear marker of conceptuality, cf Evans (1982) p.100
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