The Serious Empiricist *by* Peter Townsend

I start from a standpoint similar to that of Wilfrid Sellars' in his 'Myth of the Given' (1997). To recap on that famous essay, he demonstrates logically that the idea of 'raw data' is impossible: either it is raw and not data or it is data and not raw. Data (Latin for 'given') has to be something usable, able to relate to other data, to fit into a coherent whole; but to be raw, the experience has to be independent of other experiences, independent of prior knowledge. To put it another way: when I report that I see an apple, that experience in its raw state is of a field of differences of colours and shades and forms. Such differences do not, at this stage, fit any schema, pattern or body of the 'known' that would qualify it as data. It gives me nothing, in that raw state. What is needed in order for those differences to become data is a way of *relating* them to other differences. My suggestion is that the way we have found is via our memory – or, rather, the abilities afforded by human memory.

In that essay Sellars says: "The essential point is that in characterizing an episode of a state as that of knowing, we are not giving an empirical description of that episode or state; we are placing it in the logical space of reasons, of justifying and being able to justify what one says."

That is part of what I have brutally cut to 'data is not raw'. The converse 'what is raw is not data' apparently leaves our sensual input hanging free, unconnected to anything that can be called 'knowledge'. He suggests that a connection can be made via our language-learning process and by something more radical – our reflexive capacity, our ability to know that we know, remember what we remember.

If I am to take empiricism seriously my starting-point has to be that blank slate; no knowledge, but some abilities. Not knowing means maximum doubting (except I have nothing to doubt, yet!). The title of this talk is not a defence of empiricism against rationalism; it is an attempt to discover, by assuming nothing, just which abilities are actually *needed* in order to get from the fact of experience to where we are and how we function.

First, consider the ability to experience, via the senses – to hear, see, touch, smell, taste. With those in place, but with nothing else so far, I am ready to experience. But not to experience *something.* The baby in the womb sees nothing, smells, tastes and touches nothing (I don't say 'feels' nothing because how do I know?). It hears stuff though vibrations. But how could it know that it is hearing? Only because the vibrations *change* in volume, pitch, rhythm. So, its happy sleep before the world erupts has a constant background of its mother's body music. Maybe that's why babies are lulled to sleep by music.

If the vibrations were continuous and unchanging they would not be perceptible. They would be what we call 'white noise' – the perpetual background against which events and perceptions can occur.

So Descartes's famous *cogito* (1984*)* was wrong: from the starting-point of maximum doubt I cannot say 'I' because I do not know the difference between myself and not-myself, between the world's business and my own - even less the concept of 'thinking', which demands a classification of *types* of change. All I can know is that 'it changes' – whatever 'it' is.

But I have another ability, without which the rest would be irrelevant: memory. The notion of experience demands that. I remember the changes. That's not all: I find I can and do *arrange* my memories of changes. I sort them, order them by time and place and associations, by significance and use and what I later come to call 'kind' or 'type'. Is this ability to arrange and order an intrinsic part of what we call experience? Experience would be futile without the ability to recognise changes and similarities when they arise, and respond accordingly.

To be able to recognise similarities I must be able to distinguish *differences* (they are, precisely, the changes that are not similar). And to deal with them I have to remember them; because that is what changes become in memory – differences. So, my primary data is binary: similar or different. Similar equals no news; different equals news – information.

Remembering

What, exactly, do we remember? At this stage of the enquiry there is no other way than introspection, I'm afraid, much as that method has been decried. It is not true to say that my memory is accessible only to me, because I can report bits of it, describe them, discuss them. If I want to investigate its capabilities I can look at psychological investigations that demonstrate its fallibility and fabulations. But if I need to explore its possibilities, then I have to remember my memories and re-experience my experiences.

So we add the magic ingredient of reflexivity, recognising our experience of experience, our introspection into introspection, and the process becomes a giddy spin, a multi-geared mechanism for generating systems of a complexity unknown elsewhere in nature. (It is possible that this is actually what we mean by consciousness.)

On reflection I can say I remember images, events, sounds, associated feelings and emotions, smells and tastes, pains, faces, words – especially rhyming rhythmic words – and tunes, insights and understandings, dreams, stories ... maybe more. As I make that list, I become aware that different memories are recalled in different ways: smells and tastes by recognition, words by recall, sounds by imitation. As if different abilities were being called upon. Kinds of memory are sorted, categorised, by distinct abilities: images by introspection, music by mimesis, tastes and smells by association, events and facts by arrangements of words. My different senses have distinct memories too. Within each category the remembered experiences are distinguished by differences; but there are also similarities and correlations, which enable types to be organised. How?

Models of recombination

The first sceptical question that we need to answer is: can a simple system of differences and similarities (same thing) facilitate 'knowing' (which I mean in the ordinary undemanding sense of the word). We seem to be able to know so much.

The following models may help:

1. DNA: with just four bases labelled G, A, T, and C, (that is, four similarities but many more differences) DNA encodes all living forms.
2. Binary code, which guides rockets to Mars, drives robots and allows me to type anything I like, uses even fewer differences.
3. Languages make use of 40 or so phonemes, distinguished by about a quarter the number of differences: labial, dental, palatal, lingual, nasal, fricative, open, closed, rounded, spread, voiced... and so on. Yet its productivity is infinite – it certainly has not yet been exhausted, and it allows us to represent any state the universe is in, as far as we know.

So, already, with that simple apparatus – a set of limited senses, memory, and an ability to sort by difference and similarity, I have the beginnings of a way of knowing – cognition based on *re*cognition of similarities. Similarities allow us to posit, and form, concepts of both objects and regularities. Concepts are the basis of our kind of language.

There is an asymmetry between differences and similarities: whereas differences are necessary to perception, they do not give us concepts – except as similarities between differences, giving us systems of differences, like colour and number. Similarities though convert straight to concepts – of things and objects; so we may see similarities as things and differences as relations.

Naming

Language and concepts bring us to *naming***.** Naming is of great importance because it enables us to order, arrange and re-arrange experience in our minds, and to share what we have and do with others; it sorts and marks differences and similarities. It gives *form* to experience, as do other symbol-systems, numbers, models, analogies and art forms.

The ways in which we attribute names and signs vary greatly: clearly a warning is not related in the same way to what it represents (if, indeed, it represents anything at all) as my name, or the words *apple, water*, and *freedom*. All of these – whatever they are – are differently judged and measured and counted (if they are ever counted). How do we get, then, from differences to names? How do we get from the first primitive ability to distinguish to the ability to form propositions and argue about them? The vague word 'reason' is no answer, only a naming of ignorance.

Let's look at that philosophical perennial, colour. Does this approach (dis)solve the perennial colour problem? Positing the 'existence' of colours poses empirical, experimental and philosophical problems. But if our perceptions (i.e. our ideas about what is 'out there') are derived from differences and their absence (similarity), we can see colour as just one dimension of differences. I have not heard even the most persuaded denial of the 'reality' of colour or advocacy of the 'reversed spectrum' thesis include denial of difference between colours. We do not have to 'know' a colour (if there is such a thing) but simply be able to distinguish it from its neighbours and relatives on dimensions of difference. Our naming of those differences is then arbitrary: we can divide by four – as in my printer's ink cartridges – or the rainbow's seven, or by the paint-chart's 700. We can name by numbers or by evocation – 'Dawn Blush'. Colour differences are empirical; colours are what we say they are.

Learning

Man is the learning animal. Other animals are born equipped with instantly available complex abilities – to know food from non-food, prey from predator. We have to learn. Fortunately we have time for that, a multiple of the time that any other animal has. We have the ability to learn to a unique extent. To learn does not mean to *know.* Knowledge is static, learning is dynamic: it builds, adapts, is context-relevant – it seeks to be adequate for the job, not eternally true. The serious empiricist (SE) has the ability to learn, by remembering in her own peculiar way – not by merely recording, but by acting on memory. Memory is notoriously fallible (say the rationalists); but it's all we have. Anyway, how do we know it's fallible? By checking – against other memories, repeats of memories, coherence and consistence of memories (consistence is another word for similarities, coherence for similarities with similarities). By predicting, and making mistakes.

Most philosophical theories of epistemology are linear: they proceed from input to belief. It is true that thinking is linear, logic is linear – and so it may appear that 'reason' in its largest sense is also linear. But learning (which it is not unreasonable to see as part of the faculty of reason) is not: it is iterative and cyclic. It proceeds by eating its own tail, building on the lessons last learned, thus forming a virtuous spiral that, by circles, goes forward *slightly* more than backward. Imagine a factory that uses its own products as the raw material for new ones, and again and again: its only end product is improvement. (One can see this difference as similar as that between deduction and induction: deductive logic can *prove* theorems because it is static; induction learns, builds on experience.) And because the circles can loop between perceived differences and differences between differences and similarities between similarities, and the evidence of all the senses, and evidence from others, past and long past ... because of all that hugely complex interrelating and intermeshing, we are the learning animal par excellence.

The active empiricist

Just now, I said that our ability to spot the causal relation enables us to act; in fact, the enabling relation may be the other way round – our actions may enable us to indentify not only the cause-effect relation but also differences and similarities. Actions also demand the integration of several senses: sight, touch, sound, propriosensitivity. Such integration needs the concept of *object,* whose paradigm form is the manipulable thing. Man manipulates and manages the world. The 'man-' prefix derives from *manus*, 'hand', and our hands have experiences too; or rather, we have experiences of what they do and feel, and how this integrates with our other senses. Hands are active sensors, reaching out and taking apart and rearranging bits of the world, just as our thinking does - perhaps our hands model our minds. Through them we experience the cause-effect relation intimately: we can hope, expect, anticipate what they will do and how the world will react. Our hands perceive at least as much as, perhaps more than, our eyes and ears. (Nod to Heidegger [1996] here.) The *object* acts as a magnet for other experiences; even in philosophical tradition, it is as if the graspable (in every sense) *thing* must encapsulate all other kinds of similarity, however dissimilar in fact. Our cogitations cluster around it.

From the experiences of our passive sense alone, the distinction between objects and their properties is not immediately obvious – from a philosophical point of view, that is. (Experimental – empirical – psychological evidence, however, seems to show that we have some innate idea of perdurant objects, developing in early years.) The role of the hands in reinforcing such ideas as form and weight and hardness has also been largely ignored: an apple feels round before it looks round, shines when it is new and smooth and hard to the bite – all of our senses feed back into one another to coalesce into the manipulable, countable 'object'. Which, in turn, collects other properties, connotations and associations.

Using hands and eyes and ears and taste, we are *active* collectors of experience: that is a large part of our role in the world. Unlike what we may imagine the life of most animals to be, we do not just go from meal to meal, from flight to fight, but seek out, sort out, grade, remember and homogenize experiences into usable clusters – usable, maybe, for finding easier meals and better ways to fight, but at least with some idea of better and easier. Our sense of direction is astonishing in the natural world. A migrant bird flies south, an eel swims to its mother's river, an oil-drop follows a chemical gradient; but we use our experience to have an idea of *where* we're going. We feed the past into the future and change it – at least, from our point of view we do. If we are machines, we are machines for processing time by learning, not merely by measuring it.

Objectivity

All agree that our memories (and even our intuitions) can be unreliable, inevitably subjective. So the basic material of experience, the bedrock of empiricism, is on shifting ground. The SE seeks support or confirmation ('warranty'): she uses the tools of objectification. She collects the – formed and interrelated – experiences of others; she uses machines and lenses attested as reliable by others; she submits the coherence of her arguments – relations between relations – to others. In this process she feels a movement towards the comfort of certainty, from an individual belief to a collective one, solidified perhaps in texts (why else use

quotes and references?). Certainty can be understood as a sense of direction, something towards which we try to move; it does not have to 'exist'. The same goes for all Platonic ideal forms: they are tools for learning. A tool is not 'knowledge'. The paradigm of this process of *objectivization* is the peer-reviewed journal; Brian Cox described that – modestly – as 'the nearest thing to a fact we are likely to have' (2013).

But the gain in confidence is at the cost of a loss: the loss of original information, of the very experience it stems from. That loss can never be wholly recovered, for two reasons: firstly, the process of codification, of forming and making understandable, degrades the information, strips it of unnecessary detail (a description of a horse does not include the smell and stamp and flash of eye). If *all* is recalled, it is useless, an unarticulated inchoate lump; recall Sellars. Secondly, the process also distorts, in order to fit the available ready-made forms. There can be nothing entirely new and fresh about the consensus; how could we all agree about your dream, for example? Or your first love? We can't go back to the site, repeat the experiment. Objectivizing entails loss and distortion, each a form of the other. The 'objective', objectivity, is an ever-receding target, an ideal. Very useful, but only useful if we recognize it for what it is, with its limits as well as its benefits.

But, we find among poets and philosophers (an unlikely pair!) a nostalgia for the original experience, a scrabble after 'qualia', a snark-hunt with nets of metaphor. Is there any way back that doesn't tangle us up in hand-waving talk about the 'quality of experience'?

The indexical

I suggest there is, and it is – literally – close at hand; the indexical. We can't retrace our steps to our original experience of an apple – its colours, shape, texture, smell, taste. But we can point to *this* apple, and re-experience it: it is replete with information. Artists such as Chardin or Cézanne have tried to capture some of that totality, what is left over when the word has been said.

(Ironically perhaps, this is the obverse of Wittgenstein's (2009) falsification of what he calls the 'Augustinian' theory of language-learning. The pointing game alone can't get you from object to word, but it may be able to take you back, like Proust's famous madeleine.)

And the most important indexical of all to the serious empiricist is 'I'. Have you noticed that sign-language uses just that backward-directed index finger to denote 'I'? There is no mystery for the serious empiricist about who she is: it's me. The circle is complete.

Conclusion

I have said that if we take empiricism seriously – the thesis that all our knowledge comes from experience – we need certain abilities; but not many. This incredibly complex job we do can be done with only a few abilities:

1. The senses, all five, working together, confirming each other's intuitions.
2. The ability to spot differences (and therefore similarities) and the differences and similarities between them, and between them.... and so, ad infinitum.
3. The ability to order differences and similarities and the relations between them, (and the similarities and differences between them) so forming models and forms susceptible to mental manipulation.
4. Memory, and the ability to differentiate that in several ways.
5. The concomitant ability to remember, or recognise, what we are doing – reflexivity.

References

Cox, Brian 'Frankenstein's Monsters', episode 1 of *Science Britannica,* BBC Two, 19 September 2013

Descartes, René *The Philosophical Writings of Descartes*, ed. Cottingham, John, Robert Stoothoff, and Dugald Murdoch, Cambridge: Cambridge University Press, 1984. See also http://plato.stanford.edu/entries/descartes-epistemology/ for a discussion of this.

Heidegger, Martin *Being and Time*, translated by Stambaugh, J., Albany, New York: State University of New York Press, 1996.

Sellars, Wilfrid 'The Myth of the Given' in *Empiricism and the Philosophy of Mind*; with an Introduction by Richard Rorty and a Study Guide by Robert Brandom, ed. Brandom, R., Cambridge, MA: Harvard University Press, 1997. Also reprinted in deVries, W. and T. Triplett, *Knowledge, Mind, and the Given: Reading Sellars' "Empiricism and the Philosophy of Mind,"* (KMG), Indianapolis, IN: Hackett, 2000.

Wittgenstein, Ludwig *Philosophical Investigations*, ed. Hacker, P. M. S. and Joachim Schulte, Wiley-Blackwell 2009. (First 80 paragraphs.)