Concepts, a Critical Approach

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Introduction

If you want to know about concepts, and go looking in a bookshop for a book on concepts, then you will probably come up with something on the Psychology of Concepts, written within the genre of Cognitive Psychology. Concepts are also discussed by linguists, learning theorists, historians of science and culture and philosophers. Each of these give their own take on the topic, some taking concepts to be something which exists in the mind of an individual person, and others taking concepts to be something with a social and cultural existence, implicit in the literature, technology and activity of a community. But in general, amongst modern studies of concepts, it is only the Cognitive Psychologists who get right down to brass tacks so to speak. With a few notable exceptions, other currents of research are content to either leave the hard questions to psychology or accept that no-one can really know what a concept is. But the work of the Cognitive Psychologists is very naïve and narrow in its vision, from the standpoint of historians of science, linguists and learning theorists, all those who actually work with concepts.

Our aim here is to briefly review what has been established in the work of current researchers and by previous generations, with special attention to Robert Brandom, and then focus more extensively on two writers: Hegel and Vygotsky, finishing off with a very brief summary of what I believe a concept is.

Part One of the book reviews a range of contemporary disciplines which contribute to our understanding of concepts: Cognitive Psychology, briefly including the sociocultural turn and 'situated cognition'; the 'narrative turn' in the human sciences, which poses narrative as an *alternative* to conceptual rationality; linguistics and the idea of metaphor as the foundation for concepts; models and analogies in the study of conceptual change, both in learning theory and the history and philosophy of science, and touching on the critical views of Ludwig Wittgenstein. The first part concludes with a review of the work of Robert Brandom, an analytical philosopher who has made concepts his special topic. Brandom corrects many of the problems which I have identified in Cognitive Psychology, and offers a plausible answer to the question of what a concept is, from the point of view of analytical philosophy.

Every one of the diverse currents of contemporary research on concepts contributes something to our understanding of concepts. It is

as if a group of your friends all reported on their recent visit to London. One spoke of the theatres, the other work opportunities, another the historic buildings, another the ethnic melting pot, and so on. Each of them thinks that they have the last word on what London is, but none of them can tell you what it is about London which offers all of these aspects to different visitors. This is an all too typical problem with the sciences today, divided as they are into disciplinary silos. While I think that all of the current research projects describe something real, a concept is not just the aggregate of all these different views, but rather a concept *unifies* its divergent realisations. In order that an interdisciplinary approach to concepts may have any chance of overcoming this fragmentation, it is necessary to make an excursion into the history of philosophy.

Part Two is a schematic history of modern philosophy from Descartes to Hegel, in which I look at how philosophers came to grips with what a concept is, culminating in Hegel's major work, the "Science of Logic." Hegel gave us an entire theory of the concept but this was as far as idealist philosophy could go. The excursion into the history of philosophy provides us with four things. (1) An approach to the transcending mind-matter dichotomy and dualism which still plagues analytical science, (2) Hegel's logic, which offers an alternative to the analytical method and formal logic as well as a speculative anatomy of the concept, and (4) the developmental method of analysis and a conception of concepts as processes rather than products.

After Hegel, however, further progress could be made only by means of a break from philosophical speculation and a turn to scientific experiment and observation. Marx's critique of Hegel made a start, but the formulation of a scientific psychology able to address the problem of concepts would take more than 50 years.

Up until the mid-19th century, psychology was a topic within philosophy, a speculative science. From the beginning of the 20th century, psychology would be part of experimental science. By means of a series of biographical sketches, the Part Three traces how, mainly during the second half of the nineteenth century, the study of concepts made the transition from philosophy to the human sciences, without abandoning what had been gained by philosophy. This was a difficult transition which saw most of the field turn its back on the very real gains of philosophy and to a large extent, regress to common sense approaches to concepts, with science firmly under the sway of the dominant analytical philosophy.

Part Four focuses on the work of the Soviet psychologist, Lev Vygotsky, whose impossibly difficult situation in Stalin's Soviet Union also gave him the opportunity to synthesise the various disparate strands of thought on the problem of concepts. Vygotsky combined the gains of German philosophy as transmitted through Karl Marx with a critical appropriation of the tradition of experimental science, strongly represented in Russia at the time.

Finally, Part Five briefly develops what Vygotsky was able to give us, with further insights from Activity Theory, to answer the central question: what is a concept? This still leaves open innumerable projects for further research, but it is hardly possible to make progress with research on concepts without settling what a concept is, in a manner which makes sense for psychology, sociology, linguistics, philosophy and all the specific sciences which have taken an interest in this problem.

The Diversity of Concepts

A concept is generally understood to be a thought form which constitutes a unit of our knowledge of the world. Let us review the kinds of things of which we may have concepts.

Firstly, suppose you are sitting in the train, going in to work in the morning. Your mind is occupied perhaps with anticipating what awaits you at work. But as you sit there, buildings, crossings, pedestrians, clouds, domestic animals, advertising signs, ... flash by. You pay no attention to them and you have no control over them, but they do register at some level in your consciousness. One of the buildings is painted pink, and you wonder what sort of person paints their house such a colour. The sign for "Richmond" flashes by and you know there is only one station to go. ... These images which come before the mind, one after the other without even gaining your attention, are hardly what we have in mind when we speak of concepts. But in some sense they are also the simplest kind of concept, and perhaps we should be taking the seriality of syncretic thought forms as our starting point? Or perhaps we need to have a clearer idea of what we really count as a concept first?

These syncretic thought forms are not what we mean by concepts, and it can hardly be useful to take them as a *model*. Animals and human infants undoubtedly experience thought forms of this kind at least, but they have few of the characteristics that we will find to be characteristic of conceptual thought. But on the other hand, they *are* forms of thought, and in particular, there is reason to believe that they

not only form part of the early ontogenetic development of concepts, but that they continue to be part of the thinking of a healthy adult person. Arguments about border lines are invariably fruitless, so let us call these 'syncretic concepts', understood to be the stream of impressions which are not reflected upon and not under the person's control, but just passing by, so to speak.

Let us suppose you find an unusual object in a kitchen drawer and you have no idea what it is. So you phone up your partner and list its attributes: it's got black plastic handles, opens like a nutcracker, it's made of flat shiny metal and each arm has 7 or 8 curved, serrated edges. What is it? The very fact that you don't know what it is, you don't know what it's for, what it's called, who it belongs to and where it came from, is testimony to the fact that you have no concept of the thing, at least, no concept properly so-called. But in a certain sense, such a list of attributes, completely specifies the object and for some it is the very model of a concept. Let us accept that this bundle of attributes, this *description* of something, counts as a concept; it is not a true concept, but it is functionally sufficient for basic recognition and communication. Your partner responds by saying "Aha! You're talking about the cuisipro!" Your partner knows that the cuisipro is used for opening a wide range of jars and was invented for people with arthritis and belongs to your mother. Even if you don't know what a cuisipro is, you can at least talk about it: "Where's the cuisipro?" "It's in the top drawer."

This type of concept, which amounts to a description of the thing, I will call a "pseudoconcept," because it is not a true concept, but it is sufficient to allow you to talk about it with someone who does have a concept of it, with confidence that you are talking about the same thing. You both use the word with the same *reference*, but not with the same *sense*. Even though a pseudoconcept, as is implied by its name, is not a true concept, you would normally be able to recognise something by means of a pseudoconcept, before you had acquired a true concept of it. A pseudoconcept may go so far as knowing what something is used for, that is, its place in activity, and how the thing fits into the culture in its relation to other things. I will use the idea of pseudoconcept most generally as a kind of inventory of what can be *said of* something, and uniquely specifies it, but still does not get to the thing itself. Of course you must have the name for it if your concept is to have any stability, but knowing what a thing is called hardly amounts to having a concept of it either.

In general, it is likely that any of the concepts we acquire in everyday life, we will first encounter in the form of passing impressions (syncretic concepts) and descriptions (pseudoconcepts) before we have a true concept of them.

Let us reflect on the wide variety of things of which we may have a concept, and which a critical approach to concepts has to be able to account for. Just as familiarity with rat-racing is a poor basis for a claim to knowledge of human psychology, surely familiarity with the concepts people use to sort coloured blocks into sets is a poor basis for a claim to knowledge of the psychology of concepts.

Let's take 'the Moon'. In suitable weather, we can readily recognise it in the sky, and it can be defined as an individual thing – the Earth's only satellite (though the concept of 'moon' predates that of satellite by millennia), but such definitions do not convey the fact that all the people of the Earth since time began have gazed upon the Moon. As a result of this long history, the Moon has been at the centre of mystical beliefs about lunacy, fertility, plant behaviour, romance, its supposed attraction for water and its putative effect on people's emotional condition, its association with women and its place in the Copernican Revolution, scientific ideas about gravity and geopolitical struggles for supremacy between the USA and the USSR.

Let's take 'atom'. The concept of atom was known in antiquity while even in the late nineteenth century, many educated people did not believe that atoms really existed, regarding them rather as a mathematical construct, in much the same way string theory is regarded today. Nothing about the attributes of atoms, as they have been proposed at various times, and which are outside immediate sensuous experience, makes an atom what it is, even the very existence of atoms. 'Atom' is a concept utterly lacking in attributes. If we were to ascribe different attributes to atoms than those we know from natural science, we might be wrong, but we would not thereby miss the *concept* of atom, which predates the description of them by modern physics.

Let's take 'interface'. This concept entered the language from the defence industry which had acquired it from the electronics industry where engineers had been wrestling with the problem of 'interfacing' their computers with each other and with peripheral devices. It is now a concept in everyday life, but carries an aura of science and the implication that the things being 'interfaced' are self-sufficient systems which do not normally 'talk to each other'.

What about 'The Virgin Mary'? Doubtless a child raised in a Catholic neighbourhood will be able to point out Mary in the portraits in hallways and the statue in the local church. But it will take them a lifetime to acquire a true concept of the mother of Christ, a concept which underpins attitudes to relations between the sexes, family life, community, and a good life and which, along with concepts like the Holy Trinity, scripture, communion, sin, faith and so on, constitutes an entire way of life.

What about 'American'? Is it limited to US citizens or does it cover land, movies and social mores as well? When does someone become American? Is it to do with culture, ethnicity, citizenship or politics? Is it limited to WASPs or can Latinos and immigrants be American, too? Native Americans? And what about when the word is used by a French person angry at the intrusion of American commercialism, or with glowing pride by a redneck American patriot? And what has apple pie got to do with it? And are all these the same concept? or different concepts having the same reference?

What about 'space-time', a concept which originated in an esoteric branch of modern physics, though it is now widely referred to amongst the general population? Understood? Well, in some kind of way, but hardly in the way it was understood by those who were led to this concept by the surprising results of some experiments on light and gravity. And what about 'phlogiston', the supposed substance emitted by bodies when they burn? In the 18th century phlogiston was an integral part of the natural science of the time and used by all educated people to explain why it was hot near the fire; but now no-one believes that it exists at all, and the idea belongs only to the history of science. But we still have the concept.

What about 'differential', as in the 'dx' in: $\int e^{-x}.dx = 1-e^{-x}$? Anyone who has done high-school mathematics knows what it *looks like*, and even how to operate with it, but how many know the *concept* of the differential, as in: $\lim (\Delta x \rightarrow 0)\ \Delta y/\Delta x$, and so on?

What about 'horse', the animal *Hard Times*' Mr. Gradgrind demanded his students define by cataloguing the size, colour, number of teeth, and so on, of a horse. Does this kind of check box definition tell us how horses have accompanied human migration, war and settlement down the ages, mankind's companion and life-support, symbols of strength and nobility. And how all does this relate to the concept of a horse of someone with practical knowledge of caring for horses? Does the concept of 'horse' differ from that of 'donkey' only by the donkey's long ears and ee-aw? And what *is* the relation between

Equus ferus caballus and the cluster of meanings it has in human literature and history?

And concepts are by no means always things. An ‘ambush’, for example, is a kind of script, an event which presupposes certain circumstances, intentions and states of mind on the part of those involved. And the old favourite, that a tomato is a fruit not a vegetable. It was an Irish rugby player who said: “knowledge is knowing that a tomato is a fruit; wisdom is knowing not to put it in the fruit salad”? And Wittgenstein’s favourite: ‘game’: is ‘game’ a concept or just a polysemous word? It is concepts, not words, that is our topic here.

What about ‘seat’. How many legs does it have? What is it made of? It is used for sitting on, but is it still a seat if I use it for piling my books on? It is made for sitting on. But what if I use an up-turned apple crate as a seat, is it not a seat nonetheless? What about a key? Children can recognise a key very early, but do they know that a key unlocks mysteries as well as doors and may be made of brass but could be a series of numbers used to licence software. Does the child who knows what the key looks like, which door it fits and where to find it and pretty well everything that can be said of the key, really have the concept of key?

What about ‘the market’ or ‘the economy’ or ‘the monarchy’ or ‘the state’? Objects whose very existence depends on how people understand and act towards it, but are nonetheless as real as the ground we stand on.

And are concepts really ‘cold’ things? Objects of pure knowledge which are separate from emotion? Think of concepts like ‘intifada’ and ‘holocaust’. Is it possible to read these words without a rush of emotion? Do these words have any meaning at all separate from the baggage of hatred, prejudice and suffering that they carry?

I could go on, but it should be clear that everywhere we turn, new and challenging problems arise in simply saying what a concept is, far less getting started on a psychology of concepts. I will take it as read that the laboratory practices of getting people to sort blocks into groups or tick boxes on a word list are not adequate bases for a psychology of concepts, properly so called, even if such laboratory work can give us answers to some well-aimed questions. There is no reason to suppose that concepts like those mentioned above are ‘like’ concepts of common objects but ‘more complicated’? We need to be able to investigate not only syncretic concepts and pseudoconcepts of the kind described earlier, but trace the development of concepts up to and

including *true* concepts. The most important concepts originated in ancient institutions, have been honed through societal experience and passed on by elaborate forms of tuition and criticism. Real concepts are grounded in social experience, moderated through interaction. merging with the general culture of a community and used by people who are consciously aware and critical of the concepts they use.

Why Concepts Matter

The fragmentation of communities and the dissolution of social bonds which has become a pervasive characteristic of contemporary life has had its impact in philosophy and the human sciences generally. The critical review to follow will bring out problems in the theory of concepts which reflect this crisis in contemporary life. These issues will be dealt with immanently, rather than as a critique of ideology, but some general observations are in order to preface what is to follow.

It can hardly be a surprise to any social theorist that the natural scientific approach to the human sciences remains predominant in the psychology of concepts. Failing to grasp the character of humans as social beings who create their own ecological niches, such approaches can only serve at worst to advise marketing and the other industries of social control, or at best assist in the development of prosthetics. But this is hardly new.

The most challenging problem is that otherwise critical currents of social theory, in their quest to rid themselves of metaphysics, are turning to *interactionism*, but because interaction is conceived of without mediation, are abandoning the very idea of a concept. This turn in theory has the effect of reinforcing the disintegrating social tendencies which led to the error in the first place. All human interactions involve language and concepts, which are cultural and historical products, already existing prior to any particular interaction. Efforts to summon up concepts from interactions between individuals are simply an expression of individualism. Concepts are the pre-eminent social bond, in fact. Concepts are not just thought-forms but forms of social life. Efforts to reduce concepts to products of face-to-face interactions both reflect and promote a view of social life which is to say the very least poisonous.

Dualism has been around for a long time, and not only in the form of mind/matter dualism. One of the most persistent and debilitating forms of dualism today is the dualism of the *individual and society*, supported by sciences devoted exclusively to one or the other domain. Since concepts are units both of cultural formations and individuals

minds, a theory of concepts confronts this head on. Individual/society dualism springs from awareness of being an individual utterly powerless in a world governed by vast institutions beyond the horizon of friends and family, in which the individual has no more say than they have in the law of gravity or the orbit of the moon. Of course, the relative powerlessness of individuals in society is nothing new. Perversely, it is because of the presence of world affairs in the family home thanks to modern communications that this dichotomy looms so large in contemporary consciousness. Once again the institutionalisation of this dogma not only reflects an aspect of our plight, but consolidates its hold over us. The development of the human sciences along two parallel paths, one concerned with human consciousness, the other concerned with social and political phenomena, can only serve to place barriers in front of people's efforts to intervene in the affairs determining their own life. By understanding concepts as units of both consciousness and the social formation, I aim to create a counter to this disempowering dogma.

The mind/matter dualism of days gone by, nowadays takes the form of *brain/world dualism*. The location of the self in one organ of the body has become a universal dogma. Science journalists talk about brains talking to one another and MRIs giving images of thoughts. Brain/world dualism promotes a vulgar materialism which is in turn a justification for cynicism in public life. This pernicious doctrine requires for its support the prejudice that concepts are just 'more complicated' versions of the reactions of animals, and a critical theory of concepts can tackle this claim head on.

The market is probably the most powerful and most characteristic institution of our times, but we also live in exceptionally bureaucratic times. Our lives are dominated by bureaucratic procedures which oblige us to endlessly tick boxes on survey forms and ballot papers, fill out loan applications while legions of market researchers categorise us into endless demographics and niche markets. This leads to the dominance of *formalism*. Formalism has long been the dominant mode of thought, but the ubiquity of bureaucratism in our lives has made the 'art of handling concepts' a lost art. Concepts do not fit together like the tiles of a mosaic, and nor can they be categorised into various types. They refuse to behave as if they were entities of any kind, even with blurred edges. These troublesome facts are often taken as reasons for abandoning the whole idea of concepts. Tackling this problem will be a major objective of this work and it is

to be hoped that a critique of formalism in theory will contribute to the real criticism of bureaucratic institutions.

Goethe said: "The history of science is science itself" (Goethe 1810/1988: 161). He understood that the history of a science is not simply an explanation of what the science contains, but the only means by which the objects and concepts of the science can be grasped. Once the concepts of a social formation are taken, not as fixed, fast-frozen relations, but as processes of development and realisation, then the whole formation is open to critique.

So much for the social roots of problems in the sciences of concepts. In what follows, I will review the current theories of concepts, so far as possible, in their own terms. But I will treat disciplinary boundaries with cavalier disregard. Whether viewed from psychology, logic, history, social theory, anthropology or linguistics, there is something called a 'concept' and I believe that it can only be grasped by approaching it from multiple points of view and this I intend to do, as best I can.