



Thought and Experience

David Novitz's criticisms of The Creative Mind

Mike Beaney

Maybe at this point we could bring in one of the criticisms that David Novitz has raised to your account and in particular the focus that you place on the idea of conceptual space for he reads you as saying that in order for radical creativity to occur you have first to have thoroughly explored the relevant conceptual space. And he says, and this is the first counter example he offers to your account, there are cases, for example Matisse and Picasso, where they themselves at least have not thoroughly explored the relevant conceptual space but nevertheless have effected a transformation.

Margaret Boden

Yes. Well how thorough is thorough? I mean I certainly don't think it's necessary that the person concerned, or for that matter even the culture concerned, need to have exhausted the potential of the previous space. I don't think it needs to be thorough in that sense but I do think that the more the potential, and indeed the limitations of the space have been recognised, either because they are obvious to anybody who takes a serious interest because it's just such old hat, or because it's now become obvious to the person concerned, because they have played around with that space; they have moved around in it enough to get a sense of these things. They are becoming bored. Or even if not bored, they are becoming challenged perhaps because they have noticed the limitation, which they want to get over. And they realise that without changing some aspect of the dimensions of that space they can't get over that limitation. And so they change it. So they have to understand the previous space well enough to be able to do this and they have to understand the previous space well enough to be motivated to do it so that it is not just a sort of random flailing about.

Mike Beaney

Right. David Novitz raises three objections. The third one is another counter example: that's the case of Goodyear, who supposedly discovered the vulcanisation of rubber by just accidentally dropping a piece of rubber on a hot surface with sulphur and what Novitz suggests is that here we have a very clear case of transformation. He has completely transformed the previous conceptual space of our understanding of rubber. But he says this is just accidental and so doesn't really count as a genuine case of creativity.

Margaret Boden

I would compare the Goodyear case with the Alexander Fleming case – you know – penicillin. I mean we all know the story. He saw this dirty patchy plate that somebody had left the lid off sitting on the windowsill and where anybody else would have just chucked it in the dustbin because it had got stuff on it he had the wit, which means the knowledge, he had the bacteriological knowledge to notice and to realise the significance of the fact that there were clear areas on the plate surrounding these little colonies. In other words that there was something seeping out which seemed to be killing the other living things on there. And it ended up being penicillin, the first antibiotic. Now yes, it was an accident that the stuff grew on that plate and somebody left it there with the lid off and so forth. But it was by no means an accident that he (a) recognised the possibility here and of course (b) and no doubt Goodyear did this too, although I don't know enough about him to say, but he didn't just say "Oh I have just discovered penicillin" what he said was "I have discovered something that looks jolly interesting. It looks as though it might be something that is killing bacteria", which indeed he had already been looking for interestingly, just as Goodyear had been looking perhaps for. And then he had to do a lot of very, very systematic, serious, careful experimental work (a) to verify the fact that there really was a phenomenon here and (b) to find out what it was and (c) eventually to isolate the chemical that was doing the job if you like. So in other words he had to do an enormous amount of work in the conceptual space

concerned and he had to have it at his mental finger tips so to speak in the first place to recognise the relevance of that accident.

Mike Beaney

So in a way really this reinforces the point about the importance of looking at the relevant idea or phenomenon in context. The mere accidental coming across penicillin or whatever or dropping a piece of rubber on a hot surface with sulphur, that mere act cannot itself be creative but in the broader context when there are certain issues and intentions and projects in mind and subsequent development of those ideas then one can start to call it creative. And in that sense one can bring in issues about exploration and transformation there.

Margaret Boden

That's right. And one can also bring in – I mean this business of value which was right there in my definition and I think it has to be in the definition because I think that when people talk about creativity, although they use it in very different senses, they are always thinking of it I think as something which is positively valuable. I think it really is part of the general concept and it certainly is part of my definition. But there are various things about that which make it very tricky. The first is that it's my view, of course this is philosophically very controversial, but it's my view that although science can at least in some cases explain why it is that we value certain things and not other things I don't think that science could ever in principle justify a value. And if that is true then it follows that you could not ever have a scientific theory of creativity, which justified the evaluative aspect of your calling the thing creative. It could at most explain how that artefact or idea came about, which is what I talk about in the book and perhaps as well explain why it is that human beings, or human beings in a particular culture, value this rather than that. The second thing is of course is that as a matter of fact, although some values seem to be universal and may well be rooted in our evolution, others most certainly aren't. So again the notion that there is a small set of values which we could hope to identify and once we knew what they were then we could plug them in to a theory of creativity and say "well you know anything with those things is creative but anything which doesn't have those aspects is not creative". I just don't think is on.

Mike Beaney

Maybe at this point we could turn to the final of the three objections which is in fact the second objection which Novitz himself raises to your conception of creativity and that's that as he interprets you again, radical creativity, that is creativity in the transformational sense, requires the existence of a conceptual space and he has some doubts about what a conceptual space is and he wants to suggest that there are cases of creativity which do not involve anything as sophisticated or definite as transformation of a conceptual space. Now the two examples he gives are Jenner's invention of the smallpox vaccine and Edison's invention of the phonograph. So I wonder what your response is to that final objection that Novitz raises.

Margaret Boden

Well I would say two things and the first I would say is that he is certainly right in saying that my notion of a conceptual space isn't absolutely clear. I mean we talked earlier about Schönberg and Bach and Brahms and so forth. Now you could, and in my book I do, you could talk about the two hundred years of western post-Renaissance tonal music as one musical space being explored for two hundred years, and you know explored more fully as the years went by, which is then transformed by somebody, it happened to be Schönberg, by dropping this very, very fundamental constraint about the home key. But you could say that Baroque music, within that tradition, is one musical space and Romantic music is another one. So just what are the limits or the principle of individuation if you like of a conceptual space, I think isn't clear. And it doesn't actually bother me very much really because I think that the phenomena we are talking about, namely human thoughts and human activities if we are talking about artefacts, are so rich that that sort of thing is going to happen. The other thing I would say is if you take Jenner, well Jenner it seems to me was doing what you or I are doing when we read Shakespeare's line about sleep and the knitting. What Jenner did was to notice an association, or to make an association between the clarity of milkmaid's skins, that they never seemed to get the smallpox and the fact that other people did. And then he did a bit of asking around and he found out that they got cowpox and that this seemed to protect

them. So I would say that Jenner was really doing combinational creativity rather than generative conceptual space creativity. And Edison I don't know enough about exactly how he went about it to say anything sensible. But that's interesting. It's because I don't know the detail of precisely how Edison came to those ideas that I can't say anything about it and if you don't know that detail you can't just look at the product and say oh it was creative or it wasn't.