

A New Look at Creative Problem Solving

It is the conjecture of this paper that the strict linear nature of rational thought is fundamental to creativity but that its importance lies in the difficulty of escaping from its rigid and powerful nature. In so escaping we are able to form connections outside of rational thought and so expand our understanding in radical and creative ways. Creativity will be spelled out as the interacting of two different mechanisms one strictly linguistically rational, one spatially rational. Along the way I will try explaining some of creativities most puzzling features; how is it possible to think things that have never been thought before? What is the role of the unconscious i.e. why do we have so little first person access?

I will begin by outlining Margaret Boden's account of conceptual space and her definition of creativity as a process where by conceptual space is transformed. I discuss why Boden's accounts of transforming conceptual space are insufficient. This will focus on here mechanism of rule changing. I propose that since we should consider rule changing itself lies within the scope of our rational conscious consideration then Boden's distinction between novel and creative products breaks down. Instead I propose a new distinction that relies on seeing novel products as originating from within a rational space and creative products originating from outside such a space.

My own account will take Poi care's four stage account as its starting point. Poi care's four stages include, the preparatory phase where conscious rational thought processes deployed. There is an effort of concentration or will in trying to find a solution. In cases where an answer is not forthcoming we enter a second stage incubation. Here cognitive process are taking place but at the unconscious level. Here the creative product is produced. In the third Stage illumination the product is suddenly presentation into consciousness as a new insight. Finally verification heralds a return to the conscious rational processing of stage one.

I provide new account that utilizes spatial reasoning understanding how creative products are produced in incubation and translate talk of unconscious/conscious processes I terms of Dennett's Multiple Draft model. This account will hinge around the relationship between two distinct ways of thinking. Rational linguist reasoning will be contrasted with Church's concept of spatial reasoning. Spatial reasoning can be characterized as a relatively primitive form of reasoning available to none human animals. In spatial reasoning beliefs may be presented in purely spatial form. That is they are held and understood within three dimensions. I suggest that since spatial reasoning functions in a different way from linguistic reasoning it can provide creative solutions to dilemmas by providing answers outside the space of rational reasoning.