

How Natural Selection Constrains the Space of Possible Pragmatic Theories

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Behavioural ecology is that part of the biological sciences that addresses animal behaviour, particularly from an evolutionary perspective. Its explanations can be divided into two complementary types: the functional and the mechanistic (Mayr, 1963). Functional explanations describe the evolutionary logic of why a given behaviour exists and is stable, and are often consistent across species for a particular class of behaviour. Mechanistic explanations, on the other hand, describe how that logic is manifested in a particular case. The distinction is sometimes described as the difference between the *why* (functional) and the *how* (mechanistic).

Communication is a particularly interesting case, since it requires that the interaction be evolutionarily advantageous to both participants (Maynard Smith & Harper, 2003; Scott-Phillips, 2008). This means that we can define a property, *maximal appositeness*, that a signal must satisfy if it is to be evolutionarily stable: for a signal to be apposite it must be worth both the signaller's while to produce it and the receiver's while to attend to it, and the maximally apposite signal is that which achieves these goals at the lowest cost (in terms of time, energy and other evolutionarily relevant considerations). This logic will be implemented differently in each species, but pragmatists may recognise the property of appositeness as being functionally equivalent to the role performed by *relevance* in Relevance Theory (RT) (Sperber & Wilson, 1995).

My talk will make two claims. The first is that evolutionary considerations mean that our theories of communicative behaviour must account for how our utterances come to satisfy the property of maximal appositeness. This top-down approach contrasts with the descriptive, bottom-up agenda of many pragmatists, but the need for such explanation has been recognised since the field's inception: "I would like to think of the standard type of conversational practice not merely as something that all or most do *in fact* follow but as something that it is *reasonable* for us to follow, that we *should not* abandon" (Grice, 1975, p.48, italics in original). My second claim is that RT satisfies this demand because it incorporates within it the evolutionary logic that all evolved communication systems satisfy as a matter of course. If RT is not correct, then something with a very similar internal structure must be. Put another way, Relevance Theory is the mechanism by which the functional logic of natural selection is enforced in the human animal.

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