

Reductionism and systems thinking

My contention is that reductionism limits the ability of systems theory to explain, and that reductionism is a function of anxiety.

This certainly has been an operating assumption of mine that has developed out of my experience with my clients, supervisees and students as they do their work and we reflect on it in terms of systems theory. Recent reading of Steven Rose on reductionism in biology prompted this essay.

Reductionism is a process of simplification of perception. At a primitive level it is a very effective survival mechanism as it provides an efficient way for a living system to recognize a threat and to act to prevent elimination (Maturana – cognition).

At higher levels of brain function, namely with the use of language, the same process of reductionism works to organize understanding of complex information. This is the process of analysis through deduction. A different process of organizing information in language is that of induction where one keeps on incorporating information until a perception emerges.

The end result is similar in that one has a perception, a conclusion that makes sense out of a mass of complex information. (Also figure/ground). The processes are different, and most likely reflective of different brain functions, but they are not necessarily antithetical, as they can work together.

Problem: not allowing induction

Less adaptive as have narrower repertoire of ways of understanding so can respond (act) – structural coupling is more limited.

Related to self reflection

Anxiety re mortality

Reductionism of self – I/Self as protection

Steven Rose

Reductionism in biology