Abstract: Kant's Recursive Conception of Natural Ends (Abstract word count: 919)

In this paper, I elucidate Kant's neglected claim in the third *Critique* that the concept of a natural end, i.e. an organism, "necessarily leads to the idea of the whole of nature" as a system of ends, i.e. as a purposively ordered whole (*KU* 5:379). This claim has seemed too strong because while our concept of an organism might understandably *prompt* such an idea, it is not clear that it should *necessarily* lead us to it. As Eric Watkins has asked, 'why not be a biologist who is committed to understanding (the functioning of) organisms and leave it at that?' I argue, however, that Kant's claim makes sense if we problematize our pre-reflective conception of what counts as an 'individual' organism, and look carefully at Kant's account of natural ends. That account, I argue, is essentially recursive: any consideration of an individual natural end requires thinking of it as belonging to a common class (species or genus) which is then *itself* treated as a natural end. Thus, consideration of a tree compels me to think of it as belonging to a species, which I must consider a natural end in turn, and so I must consider *it* as a member of a common class (a genus), etc., until we arrive at the idea of the whole of nature as an ordered system of ends.

I begin with some well-known examples which highlight the problem of individuating living things. There is a species of aspen, for example, instances of which can look to the casual observer like a forest of individual trees, each with its own main trunk, but which are united in a common root system. For this reason, on some criteria, these 'trees' in fact constitute just the parts of a single, massive individual. I then turn to Kant's account of natural ends and their defining characteristics. According to Kant, unlike the mechanical products of nature, which are mere aggregates of matter, natural ends have the form of a system, in which the whole precedes the parts. Those parts constitute a whole in virtue of a common ground (*gemeinschaftliche Grund*), i.e. a causal power in which each shares. Kant identifies that causal power with the power of reproduction by which a natural end both generates itself through nutrition and generates another as offspring. Kant, in other words, regards the power of nutrition as "equivalent...with generation" although "under another name." Consequently, that common ground which unifies an *individual* oak tree and by which it nourishes itself necessarily presupposes at the same time the possibility of a plurality of others, all united by the possession of a common reproductive power.

I then turn to Kant's account of the biological unity of the human species in his short works from the 1770s and 1780s and show that the human species itself shares many of same characteristics he ascribes to natural ends. In those essays, Kant is dealing with perceived differences among groups of human beings and their heritable characteristics. Despite their differences, he says, the various groups of human beings all stand together in a 'system of generation' (*Zeugungssystem*) because they can all have fertile offspring with each other. Indeed, in virtue of their shared generative power they are united as a whole under a common cause (*Gemeinschaft der Ursache*). And this is consistent with what Kant says elsewhere. In the *Anthropology*, for example, Kant will speak of 'the education of the human race, taking its species as a whole, that is, collectively (*universorum*), not all of the individuals (*singulorum*), where the multitude does not yield a system but only an aggregate' (A 7:328). Consequently, just as something like an oak tree seems to be a system in which the parts are united in a common ground and animated by a common power, so also humanity seems to be a system (a whole) causally united by a common power. And again, because the generative and the nutritive powers are the same, according to Kant, that generative power uniting the species into a system is the very same power which animates each individual and gives it *its* systematic unity.

I then return to Kant's claim that the concept of a natural end "necessarily leads to the idea of the whole of nature" as a system of ends and interpret it in light of the foregoing. As we have seen, if an oak tree is a natural end, then it is a systematic whole the parts of which are united under a common generative

power. By virtue of that generative power, any adequate conception of it necessarily involves the idea of a plurality of others united in a 'system of generation', i.e. a species. Because Kant thinks that a species is itself a systematic whole united by a common generative power, there's good reason to think *it* satisfies the criteria of a natural end. As such, any adequate conception of it *also* involves the idea of plurality of others united in a system of generation, i.e. a set of *other* species (now treated as individual natural ends) falling under a common genus. Necessarily, then, this same consideration will lead one step by step to ever more general conceptions of nature as a systematic unity—as a system of ends—which is to say, as a whole grounded in a common power shared by all the individuals in it, each of which itself possesses systematic unity in virtue of that power, and thus as natural ends.

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