Aristotle’s theories of essentialism and classification of his logic and metaphysics demand that substantial kinds be completely distinct or discrete kinds. In his biology Aristotle adopts as a classificatory scheme the _scala naturae_, which, according to some of his expounders, is incompatible with the theories of essentialism and classification of the logic and metaphysics. According to their interpretation, kinds in the _scala_ form a continuous series in which they overlap one another, and thus it is impossible for them to be completely distinct from one another or to be discrete kinds. Arthur O. Lovejoy argues for this interpretation of the _scala_ in *The Great Chain of Being*, and several other more recent scholars adopt or argue for much the same interpretation. I shall argue that this interpretation is wrong. I shall first consider what the “continuity of kinds” might mean, and what sort of threat continuity might level against Aristotle’s

1 *The Great Chain of Being: A Study of the History of an Idea* (Cambridge Mass., 1936): 55-58. Lovejoy holds that Aristotle adopts a continuity of overlapping substantial kinds for the _scala naturae_ and that his biology provides the evidence for this continuity in the form of kinds that overlap or participate in distinct substantial kinds, and which recent scholars have come to call “dualizers” (see p. 188 and n. 12). “Nature refuses to conform to our cravings for clear lines of demarcation; she loves twilight zones, where forms abide which, if they are to be classified at all, must be assigned to two classes at once” (p. 56). Lovejoy also recognizes that a continuum of overlapping substantial kinds conflicts with Aristotle’s theories of essentialism and classification of his logic and metaphysics. He does not, however, seem to think that Aristotle gives up these theories when he adopts the continuum of the _scala_, but rather seems to think that Aristotle continues to hold them together with a belief in the continuum (pp. 57-58).

2 Anthony Preus maintains that the continuity of kinds in the _scala_ is a continuity of overlapping kinds, and he argues that, as a consequence, the biology does not conform to a version of essentialism in which kinds are discrete, which is the version I attribute to Aristotle’s logic and metaphysics, and which Preus characterizes as “Noah’s Ark Essentialism”: “Eidos as Norm in Aristotle’s Biology,” *Nature and System* 1, 1979, 80-82. The basic features of Preus’s argument for continuity coincide with those of Lovejoy’s, except
that Preus introduces the issue of hybrids. Preus holds that hybrids are evidence for a “fuzziness of the edges of the species-concept in Aristotle” (p. 81), which presumably he takes as evidence for an overlap between the kinds whose members give rise to the hybrids. Hybrids, however, would introduce such an overlap only if Aristotle holds that a criterion for membership in a kind is reproductive isolation from all other kinds, and there is some evidence to suggest that Aristotle does hold to such a criterion (e.g., GA 715b2-4). But it is doubtful whether Aristotle believes that hybrids form genuine substantial kinds on their own. In GA 738b27-34 Aristotle holds the view that hybrids after several generations revert to the form of the female that gave rise initially to the hybrid, which is a view Preus also notes (p. 82). The impermanence of hybrid kinds suggests that they do not form genuine substantial kinds independent of the kinds of their parents. In his criticism of Preus’s view that Aristotle does not hold the version of essentialism traditionally attributed to him, William Jacob refers to the reversion of hybrids, and argues plausibly that they are deformed instances of the kinds of their parents (cf. Met. 1033b29-33): “Preus on Aristotle’s *eide*,” *Nature and System* 3, 1981, 115-118. For comments on Jacobs’s criticisms, see Preus’s “Reply to Jacobs,” *Nature and System* 3, 1981, 119-121. Some of David M. Balme’s remarks in his inaugural lecture at Queen Mary College strongly suggest that he holds that a contuity of kinds brought on by dualizers arises in the biology and that it is incompatible with Aristotle’s views on essentialism and classification found in his logic and metaphysics: *Aristotle’s Use of Teleological Explanation* (Inaugural Lecture at Queen Mary College, Univ. of London, 1965): 13, 16 and 17; cf. Balme’s remarks about the *scala* in his *Aristotle’s De Partibus Animalium I and De Generatione Animalium I* (Oxford, 1972): 97 (Hereafter cited as *Arist*.’s De Part.). Yet, in “Aristotle’s Use of Differentiae in Zoology,” Balme seems to hold that dualizers do not participate in kinds that are distinct substantial kinds: reprinted in *Articles on Aristotle: 1. Science*, eds. J. Barnes, M. Schofield and R. Sorabji (London, 1975): 189-190 (hereafter cited as “Def.”). Also, in the same piece Balme holds that Aristotle does not abandon in his biology the system of classification by genus and species of the logic and metaphysics, only that he ignores it in, for example, the *History of Animals*, because he is involved in preliminary investigations necessary to the establishment of such a system of classification (pp. 188 and 192). Balme holds the same view about classification in the biology in his “Genos and Eidos in Aristotle’s Biology,” *Classical Quarterly* 12, 1962, 98. Stephen Clark holds that many kinds of the *scala naturae* form a continuity of overlapping kinds, which is due to kinds that participate in kinds adjacent in the series, and which conflicts with a scheme of classification in which kinds are discrete: *Aristotle’s Man: Speculations upon Aristotelian Anthropology* (Oxford, 1975), 31-32, 36, and 43. Jonathan Barnes seems to believe that the kinds of the *scala naturae* form a continuum of overlapping kinds, although he does not say that it is due to kinds that participate in distinct substantial kinds or that such kinds or the continuum threaten the versions of essentialism and classification in which kinds are discrete: *Aristotle* (Oxford, 1982) 62-63. G.E.R. Lloyd holds that kinds participating in distinct kinds, or “dualizers,” present Aristotle with difficulties in his classificatory scheme of mutually exclusive kinds, and that they force him to speak about a continuity of kinds in the *scala naturae*. Nevertheless, Lloyd suggests, Aristotle continues to believe that substantial kinds are mutually exclusive, and, rather than complicate his classificatory scheme through a revision that accommodates dualizers, he tolerates them as “anomalies”: *Science, Folklore and Ideology: Studies in the Life Sciences in Ancient Greece* (Cambridge, 1983), 50-52 (hereafter cited as *Sci.)*.