It has been my contention that Dickens's conception of how personality is formed changed throughout his career, evolving from the strict determinism of the early novels to a looser model of development in his middle period, until finally in the last three novels he discards heredity entirely as a factor in the formation of the self. In this chapter, I would like to examine the three novels which Dickens wrote after 1859 – the year in which Darwin's *The Origin of Species* appeared – to see what effect Darwin's book had on Dickens's understanding of heredity.

Dickens's declining interest in heredity as a way of explaining personality is an anomaly. In general, the effect of Darwin's theory on European and American fiction of the late nineteenth century was to intensify interest in heredity as a literary theme. In fact, one might easily argue that hereditary determinism becomes the major philosophical motif of the latter part of the century. For writers of the Naturalist School, for Hardy, Wilde, Zola, Ibsen, Strindberg, Dreiser, and others, hereditary issues become a central and nearly obsessive concern. It is clear that this new emphasis was in large part a response to Darwin's theory of evolution. It is therefore ironic that Dickens's initial reaction to Darwin is to blot out heredity altogether from his conception of human development and to replace it with the formative effects of environment. Those aspects of evolutionary theory which Dickens does extract from the *Origin* reflect a new concern on his part to accommodate external factors within the developmental pattern of the individual. It is as if Darwin's theory allowed Dickens to shake off his earlier adherence
to heredity as a way of explaining personality, and in this way to escape the determinism of his own earlier portrayals.

One reason for Dickens's slighting of the hereditary aspects of Darwin's theory may well be that Darwin himself was so vague about how heredity worked. In the Origin, Darwin admitted that "the laws governing heredity are for the most part unknown."\(^1\) Despite this, hereditary transmission is the sine qua non of evolutionary theory, representing the mechanism by which successful variations are integrated into the developmental pattern of a species over time. Yet neither Darwin nor his contemporaries had any clear idea of how hereditary transmission worked. At first, Darwin was content to account for the causes of variation by ascribing them to chance, or to unknown factors. Then in 1868 he published The Variation of Animals and Plants under Domestication in which he tried to fill the gap by reviving the ancient Greek idea of pangenesis.

Hippocrates had been the primary exponent of this theory in classical times, arguing that each part of the body of each parent sheds some aspect of itself into the blood. When these "pangenes" are collected together, they form a kind of reproductive fluid or seed, blending the characteristics of the parents to construct the child.\(^2\) (This is the theory which Aristotle rejected, when he argued instead for a "single seed" model, in which the male provided the blueprint for the embryo, while the female provided the raw matter.)

Darwin's early writing had betrayed a willingness to accept "soft" heredity. Soft heredity is the belief that what a parent transmits to his or her offspring is subject to modification by external causes. But soft heredity posed certain problems for Darwin's evolutionary theory, since if environment can affect heredity, there would be little variation, all individuals in a given population having absorbed and reacted to similar influences. To make selection a viable theory, Darwin had to abandon soft heredity in favour of hard heredity - the belief that what each individual inherits from his or her parents is inviolable, and not subject to modification by external factors.\(^3\)

Pangenesis, Darwin's version of hard heredity, is essentially another form of blending, where the offspring represent a fusion or average of the parents' characteristics. Blending was the most commonly accepted explanation for hereditary transmission among Darwin's contemporaries. Darwin's version of this theory was to posit that physical traits were carried by "gemmules," defined as granules or atoms, which issued from the cells of the body and