

ADVANCED READING

PASSAGE 1

It is well known that biological changes at the molecular level have morphogenetic consequences, consequences affecting the formation and differentiation of tissues and organs. It is superfluous to point out that gene mutations and disturbances of the bio-synthetic processes in the embryo may result in abnormalities in the morphology (structure) of an organism. However, whereas much is known about causes and consequences at the molecular level, and in spite of an enormous accumulation of chemical and morphological data on embryos of various kinds, our understanding of how genes control morphogenesis is still far from complete. Perhaps one reason for this is that molecular biologists and morphologists speak different languages. Whereas the former speak about messenger-RNA and conformational changes of protein molecules, the latter speak of ectoderms, hypoblasts, and neural crests.

One solution to this predicament is to try to find some phenomena relevant to morphogenesis which both the molecular biologist and the morphologist can understand and discuss. As morphogenesis must be basically the result of changes in behavior of the individual cells, it seems logical to ask morphologists to describe the morphogenetic events observed in terms of changes in cellular contact, changes in the rate of proliferation of cells, or similar phenomena. Once this is done, it may be appropriate to ask questions about the molecular background for these changes. One may, for instance, ask whether variations in cell contact reflect alterations in the populations of molecules at the cell surface, or one may inquire about the molecular basis for the increased cell mobility involved in cell dispersion.

Studies of this kind have been carried out with cells released from tissues in various ways and then allowed to reveal their behavior after being spread out into a thin layer. In many cases, such cells show the ability to reaggregate, after which different cell types may sort themselves out into different layers and even take part in still more intricate morphogenetic events. But in most cases, the behavior of cells in the intact embryo is difficult to study because of the thickness and opacity of the cell masses. The sea urchin embryo, however, has the advantage that it is so transparent that each cell can be easily observed throughout development. Thus, by recording the development of a sea urchin embryo with time-lapse photography, the research scientist might discover previously unknown features of cellular behavior. Perhaps the study of the sea urchin in this manner can provide a medium by which the molecular biologist and the morphologist can begin communicating with each other more effectively about the way in which genes control morphogenesis.

PASSAGE 2

The black experience, one might automatically assume, is known to every Black author. Henry James was pondering a similar assumption when he said: "You were to suffer your fate. That was not necessarily to know it." This disparity between an experience and knowledge of that experience is the longest bridge an artist must cross. Don L. Lee, in his picture of the Black poet, "studying his own poetry and the poetry of other Black poets," touches on the crucial point. In order to transform his own sufferings—or joys—as a Black person into usable knowledge for his readers, the author must first order his experiences in his mind. Only then can he create feelingly and coherently the combination of fact and meaning that Black audiences require for the reexploration of their lives. A cultural community of Black authors studying one another's best works systematically would represent a dynamic interchange of the spirit—corrective and instructive and increasingly beautiful in its recorded expression.

PASSAGE 3

My objective is to analyze certain forms of knowledge, not in terms of repression or law, but in terms of power. But the word power is apt to lead to misunderstandings about the nature, form, and unity of power. By power, I do not mean a group of institutions and mechanisms that ensure the subservience of the citizenry. I do not mean, either, a mode of subjugation that, in contrast to violence, has the form of the rule. Finally, I do not have in mind a general system of domination exerted by one group over another, a system whose effects, through successive derivations, pervade the entire social body. The sovereignty of the state, the form of law, or the overall unity of a domination are only the terminal forms power takes.

It seems to me that power must be understood as the multiplicity of force relations that are immanent in the social sphere; as the process that, through ceaseless struggle and confrontation, transforms, strengthens, or reverses them; as the support that these force relations find in one another, or on the contrary, the disjunctions and contradictions that isolate them from one another; and lastly, as the strategies in which they take effect, whose general design or institutional crystallization is embodied in the state apparatus, in the formulation of the law, in the various social hegemonies.

Thus, the viewpoint that permits one to understand the exercise of power, even in its more "peripheral" effects, and that also makes it possible to use its mechanisms as a structural framework for analyzing the social order, must not be sought in a unique source of sovereignty from which secondary and descendent forms of power emanate but in the moving substrate of force relations that, by virtue of their inequality, constantly engender local and unstable states of power. If power seems omnipresent, it is not because it has the privilege of consolidating everything under its invincible unity, but because it is produced from one moment to the next, at every point, or rather in every relation from one point to another. Power is everywhere, not because it embraces everything, but because it comes from everywhere. And if power at times seems to be permanent, repetitious, inert, and self-reproducing, it is simply because the overall effect that emerges from all these mobilities is a concatenation that rests on each of them and seeks in turn to arrest their movement. One needs to be nominalistic, no doubt: power is not an institution, and not a structure; neither is it a certain strength we are endowed with; it is the name that one attributes to a complex strategic situation in a particular society.

PASSAGE 4

The hypothesis of an expanding Earth has never attracted notable support, and if it were not for the historical example of continental drift, such indifference might be a legitimate response to an apparently improbable concept. It should be remembered, however, that drift too was once regarded as illusory, but the idea was kept alive until evidence from physicists compelled geologists to reinterpret their data. Of course, it would be as dangerous to overreact to history by concluding that the majority must now be wrong about expansion as it would be to re-enact the response that greeted the suggestion that the continents had drifted. The cases are not precisely analogous. There were serious problems with the pre-drift world view that a drift theory could help to resolve, whereas Earth expansion appears to offer no comparable advantages. If, however, physicists could show that the Earth's gravitational force has decreased with time, the expansion would have to be reconsidered and accommodated.