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Guns, Germs, and Steel and the Birth of the Gods[1]

Jared Diamond's undertaking in his bestseller, Guns, Germs, and Steel, is to explain how it came to pass that, in the Age of Discovery, Europeans were able to extend their range and influence over the whole of the globe. Specifically, he asks, how was it that, in 1532, the Spanish conquistador, Pizarro, captured Atahuallpa, the god-like ruler of Inca nation in Peru? Why do we not find, instead, Incas invading Spain and capturing Pizarro's ruler, King Charles I? In answering this question, Diamond demolishes the usual range of suspect assumptions, such as that it was a matter of race or the superior characteristics of a temperate climate. But in addition, he supplies an intriguing answer, which at its core is akin to the explanatory principle in chaos theory: sensitive dependence on initial conditions.

Oddly, however, the initial conditions Diamond considers are all, broadly speaking, material conditions, and he excludes from his account the effects of psychological conditions. This strange lacuna will be the focus of this essay. How can it be that an account of the phenomenal rise of our species since the last ice age can do without the most extraordinary thing about our species: our conscious minds? Had human psychology no part in all this? The distinctive thing about humans as a species is that our consciousness makes it possible for genetically quite similar individuals to behave in radically differing ways. Anthropologists will tell you, for example, that

[1] This essay addresses two recent books: Diamond, Jared (1997), *Guns, Germs, and Steel* (New York, W. W. Norton & Co.) and Cauvin, Jacques (2000) *The Birth of the Gods and the Origins of Agriculture* (Cambridge, U. K., Cambridge University Press).

different societies, living side-by-side in virtually identical circumstances, can adapt wholly divergent survival strategies. In dealing with human factors, Diamond takes an essentially Marxist economic stance. He concludes that "in the long run and over large areas" (p. 154) people will recognize that which is useful to them and take advantage of it. Because those who have environmental advantages will naturally exploit them, these advantages will be dispositive. This proposition converts economic determinism into environmental determinism. But in a given environment might not some psychological stances serve better than others? Could Diamond's environmentally grounded hypothesis, for all its elegance, be merely another "Just So" story?

A contrasting take on recent archaeological discoveries in the Near East places the focus on an altogether different set of initial conditions obtaining at the point where things really began to take off: the inception of agriculture. These conditions hint at the first introduction of religion into human culture. As it happens, they square with Jungian findings from depth psychology on the formation of consciousness. Taken together, these insights give quite another twist to Diamond's tale.

According to Diamond, the Americas were first settled around 11,000, B.C., and quickly filled up with people. With the occupation of these, the last continents to be populated, "most habitable areas of the continents and continental islands, plus oceanic islands from Indonesia to east of New Guinea, supported humans" (p. 50). These were peoples fully evolved physiologically, with all of the same genetic equipment as modern humans. Moreover, all peoples everywhere were hunter-gatherers. Thus, Diamond concludes that at that time everyone was at the same starting point. The bulk of the book is an explanation of what happened next, and why. The heart of the explanation lies in

three decisive advantages attaching to the world's largest landmass, Eurasia, from which the Spaniards launched themselves. These factors invite credence at first blush, but the way they work themselves out to produce the effects we observe are sometimes interestingly indirect. The Fertile Crescent in the Near East was, as every schoolchild knows, the place where agriculture first developed. But agriculture also developed spontaneously in several other locations. What apparently gave the Fertile Crescent priority, along with and in part in consequence of a Mediterranean climate and a varied topography that favored a diversity of plant life, is that it was home to an overwhelmingly large proportion of the world's indigenous large-seeded grass species. The development of agriculture came relatively easily and flourished readily in the Fertile Crescent.

It happened, also, that Eurasia was home to large animals amenable to domestication. Diamond shows that only fourteen large animal species the world over were domesticated before the twentieth century. Of these, all that grew to worldwide importance, the cow, sheep, goat, pig, and horse, were domesticated in Eurasia, and subsequently distributed elsewhere. Seemingly suitable animals in other regions turn out, somewhat surprisingly, not to be domesticable: for example, the Zebra, which is just too contrary by nature to be kept under control. And it was much easier for Hannibal's trainers to tame a wild elephant than to try to breed one in captivity, and then wait, interminably, until it was born and grew of an age to be useful. The third factor is Eurasia's east-west orientation. Of the world's three great landmasses, Eurasia alone lent itself to the ready transmission across its longest axis of the means and methods of food production. Africa and the Americas are oriented on north-south axes, along which, owing to the climatic zones that band the northern and southern hemispheres, the spread

of crops and livestock from one area to other suitable areas was less natural and rapid. Moreover, north and south in Africa are separated by the Sahara Desert and in the Americas by the narrow, mountainous Isthmus of Panama. These further geographical circumstances likewise tended to inhibit the spread across the respective landmasses of materials, methods, and technology.

We can now see where the guns and steel of Diamond's title are going to come from. Those peoples benefiting from more or less chance environmental circumstances so as to get a head start in food production and to profit from exchanges in innovation across distances reached a state where population concentrations, the division of labor, and the accumulation of excess were possible. In consequence, they launched themselves upon a technological advance that in time enabled some of them to reach in force and dominate peoples of distant continents and islands. We also know that the germs of the title played a major role in European domination of the Americas, and this was the case also in other places they sought to colonize. The Europeans had resistances to certain diseases, such as measles, tuberculosis, and smallpox, which the peoples of the places they sought to colonize did not. In consequence, in the New World as an example, Europeans wiped out vastly more indigenous peoples by transfer of disease than by deployment of guns and steel.

Whence these resistances? Diamond points out that the germs that proved capable of such lethal effect have their origins in animals. Peoples living in close proximity with domestic animals picked up and ultimately developed resistances to animal diseases that other peoples did not. Thus it is that the development of stockbreeding had an unpredictable secondary effect in the eventualities under study:

stockbreeders carried diseases against which others were utterly defenseless. But there are yet further twists in the story of how domestic animals, and, as well, their germs, came within the ambit of only certain peoples. Long before stockbreeding occurred, Eurasians had lived side by side with the animals they ultimately domesticated. Over the course of centuries an evolutionary arms race took place; as humans developed their hunting skills, the animals developed a wariness of humans and various means of avoiding human predation. In Africa, too, humans and large animals seemed to have evolved together, so that large animals developed a healthy fear of humans, even as humans were developing the means to kill them. It just seems to have happened that African large animal species did not lend themselves to domestication. They still don't.

By contrast, in locations at which humans arrived later in the evolutionary scheme, outfitted with enhanced hunting skills and weapons, large animals, having no inbred fear of them, experienced mass extinctions more or less simultaneously with the onset of humans. Diamond charts large animal extinctions, coincident with the dispersal of human populations around the globe, in Australia/New Guinea, New Zealand, Madagascar, Hawaii, and the Americas. These extinctions no doubt account in part for the relatively small number of natively domesticated animals outside of Eurasia (with which Diamond includes, in respect of large animals, parts of northern Africa), and also for the fact that Europeans would later decimate peoples encountered around the world through the transfer of germs to which the resident populations had had no previous exposure. Though this is not the point of the story, fittingly perhaps, it seems that large animals did to human populations through their germs what human populations had done to them through their killing tools. In any case, the upshot of all this is that the

Europeans proved not to be in any way innately superior to other peoples, but rather simply the beneficiaries of a combination of favorable circumstances.

Before leaving the point, one should add Diamond's explanation of why peoples at the other end of the Eurasian landmass, notably the Chinese, were not the ones most triumphantly to carry their arms and culture to far away lands. Diamond argues that the answer lies in the fact of China's substantial cultural unity over the last two thousand years. Europe, by contrast, has been chronically fragmented culturally and politically throughout its history. Turning again to geography, Diamond observes that China's coast is a long, relatively unindented arc, while the coastal outline of Europe is markedly serrated, with peninsulas jutting out all around. This latter configuration fostered a pronounced cultural diversity, with the consequence that new ideas had more opportunities of finding practical expression. Diamond uses the example of China's mighty treasure fleets, seven of which were launched between 1405 and 1433 and which ceased to sail when the faction in the Chinese court associated with them, for other reasons, lost sway. Columbus, by contrast, was able to go, a few years later, to European court after court until he finally secured the means of putting forth the three tiny ships that presaged the opening of the New World.

Diamond recognizes that the human capacity for innovation is a powerful factor in the progress of societies. What he disputes is that there are peoples who are innately more capable of, and receptive to, innovation, and peoples who are less so. Indeed there seems to be no evidence of any such native disparity among peoples around the world. On the contrary, Diamond makes the case, after a thoroughgoing analysis in his Chapter entitled "Necessity's Mother," that the capacity to achieve innovation, and a

receptiveness to it, varies enormously from society to society on the same continent, and, indeed, from time to time in the same society. So far so good, but at this point Diamond, clinging to his environmental determinism, takes a rather grand leap. He implies that, in the broad sweep of history, differences in human creativity come out as a wash.

> The myriad factors affecting innovativeness make the historian's task paradoxically easier, by converting societal variation in innovativeness into essentially a random variable. That means that, over a large enough area (such as a whole continent) at any particular time, some proportion of societies is likely to be innovative (p. 254).

Diamond sees useful invention more in terms of a cumulative process than of the heroic breakthrough. Also, he argues that external factors -- typically unforeseen by the person with the breakthrough idea -- and not a manifest need for a new solution are the drivers in the implementation of innovation. Thus, he downplays the likelihood of great leaps forward as an outgrowth of human ingenuity. Even so, human inspiration does have an effect, and it tends to come in fits and starts. It is also often unique and may just happen to come in one place and not in another. If time were not a factor, Diamond's reliance upon the broad sweep of history might be made to hold. But the question Diamond has posed is one of priority, and priority within a finite span of time.

One could persuasively oppose Diamond's hypothesis with an argument that, not environmental determinism, but rather cultural evolution charted the course of human development. Indeed, once the door is opened to taking into account the emergence of the human consciousness, it is very hard to deny it precedence among the forces that carried human beings from the status of Upper Paleolithic hunter-gatherers to that of conquistadors in Peru. Guns, germs, and steel were, after all, brought to play their part by psychologically motivated human beings. Diamond opens this door by invoking

"evolutionary reasoning" (p. 288) to suggest that there exists a natural competition among societies, in which those whose collective psychologies are best suited to their environments prosper at the expense of less well adapted neighbors. There doesn't seem to be much of a vogue, nowadays, for psychological studies on the grand scale. One harkens back to Freud and Jung for encompassing psychological theory; and yet their theoretical undertakings have no doubt seemed to modern scrutiny too speculative, more given to sweeping conjecture than hard scientific investigation. Consequently, psychology today is mostly directed toward therapy and clinical research. Interestingly enough, however, Carl Jung postulated exactly what Diamond is talking about.

To fit Jung into this picture, a quick review of his essential ideas insofar as they pertain to our subject may first be in order.[2] From his researches in depth psychology, augmented over time by collateral studies in mythology, alchemy, Gnosticism, and Eastern mysticism, Jung worked out the theory of the collective unconscious. Now there should be nothing radical or surprising to modern minds in the notion that we have in common a certain portion of our psychological make-up. The scholarly world has not rushed to embrace such a concept, but we can be comfortable with it simply by referring to it as human nature. As Jung points out, it would be implausible to expect that a creature such as the wolf, which evolved sharp teeth and tearing claws, should not also have evolved to go along with them a ferocious disposition. By the same token we must recognize that humans have clearly evolved, to go with our physical equipment, a corresponding psychical apparatus. As the two evolved together they are appropriately suited to each other.

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[2] This discussion, with appropriate citations, is drawn from a yet to be published book, Lawson, Carl Jung, Darwin of the Mind.

The collective unconscious, as Jung posits it, goes beyond the purely instinctual. It is structured by what Jung called "archetypes." These may be seen as an heritable disposition to generate certain kinds of images in response to certain kinds of situations. These images, or the unconscious analogues to them, direct our instinctual functions and also unconscious functions that reach beyond the instinctual – say, keeping one's car on the road on the way home from work, while one's conscious mind remains back at the office. The collective unconscious is a part of the genetic make-up of all humans and was in place 13,000 years ago when Diamond begins his tale. There has been scant time for much in the way of further genetic development since. But what has happened since is a dramatic story indeed. Humans have gone from collections of hunter-gatherers thinly spread around the globe to the varied cultural array we behold today, with a few hunter-gatherer populations functioning in the shadow of extremely large and highly organized societies, many of them benefiting from the output of a truly astonishing panoply of technological marvels.

In Jung's theory, consciousness gradually emerged from the unconscious, gathered steam, and then in the last 5000 years, with the onset of civilizations, simply exploded. No one, of course, can say for sure how consciousness actually came to be. Jung posits that psychic contents gradually gathered into autonomous complexes within the unconscious and that ultimately one complex attained to centrality. That complex is the ego. That we still retain other autonomous unconscious complexes that drive certain behaviors -- notwithstanding the ego's best intentions to the contrary -- can be demonstrated; they are the daily grist for the psychotherapist's mill. The collective unconscious is genetically predisposed to generate an ego, but at some point the ego takes

off on its own, though still directed by the archetypes. We must imagine, historically, that individuals somewhere along the way began to be aware of ideas and intuitions as they presented themselves from the unconscious to a formative ego. Some of these ideas and intuitions were transmitted to the group and were preserved by it in the form of myth and ritual. Thus began the collective phenomenon that evolved along with consciousness: culture. Occasionally an individual's new idea would seize the collective imagination and become the spur for cultural change. And so we are off to the races. Suddenly we have a fast-track means of evolution, an evolution free of the dead weight of the genes.

One of Jung's most notable successors, Erich Neumann, elaborating on Jung's findings, succeeded in tracing a recognizable course of the evolution of human consciousness (Neumann, 1954). According to Neumann, as consciousness evolved, expressions of the archetypes became more differentiated and personalized. Thus a direction of developing consciousness could be established through the progressive manifestations of the archetypes, which can be traced through the art, myth, and religion of successive cultures. This brings us back to Diamond's suggestion of a sort of evolution among societies. In some societies the store of preserved ideas, which taken as a whole amounts to a cultural worldview, is better suited to the environment than in others, and consequently the former societies prosper and eventually unseat the latter. We have, that is to say, a non-genetic natural selection among societies in which the fittest survive. The mechanism for change is the new idea formed in the mind of the extraordinary individual, which ultimately becomes incorporated into the cultural pattern.

Let us consider a development central to Diamond's thesis: the origin of agriculture. In the Diamond scheme, something like the following might have occurred. A few thousand years after the last ice age some hunter-gatherers in the Near East noticed certain wild grasses -- whose seeds had served as food during the wanderings of the preceding year -- flourishing in the area of a former latrine. It occurred to them then to bury some of the seeds in a fertile area during the present year. Compare this with a scenario more congenial to Jung and Neumann. A primitive hunter-gatherer, perhaps a *shaman*, in response to a mental image, or perhaps a dream -- in either case a manifestation from the unconscious that he took as divine command -- formed the irrational notion of burying some seeds in a special place. And, lo, the next spring they sprouted. There followed in time adoration, worship, and propitiation of Her who had instilled the idea of the planting and had subsequently guided the harvest. Some such origin would square with the universal myth of the corn goddess. The great goddess annually sacrifices her son and lover, who then, come spring, is born again anew. With variations on this essential theme the great early anthropologist, Sir James George Frazer, filled the twelve volumes of The Golden Bough. That is how powerful the imagery associated with agriculture is, and this very potency suggests that such imagery must lie at the heart of the agricultural enterprise.

The idea of cultural priority in the birth of agriculture draws support from a book of about the same vintage as Diamond's: The Birth of the Gods and the Origins of Agriculture, by Jacques Cauvin (Cauvin). Cauvin, like Diamond, draws upon recent archeological findings and discoveries in botanical genetics to trace the beginnings of food production in the Near East. As this is Cauvin's specialty, however, and the whole

of the focus of his book, Cauvin's treatment of the subject is more thoroughgoing than that of Diamond, whose broader theme requires that he cast a wider net. In any case, Cauvin comes to a conclusion strikingly different from that of Diamond in terms of what is cause and what is effect in setting humankind out upon its course to date:

> From [subsistence production] began the rise in the capability of humanity of which our modernity is the fruit. We have rejected an economic causality as an explanation for its emergence, since the change was in the first instance cultural (p. 207).

Scrutinizing carefully the background out of which food production first arose, Cauvin finds no climatological, food supply, or population causes that might have pushed hunter-gatherers away from their eons-old mode of living and toward a sedentary life grounded in subsistence production. Indeed there seems to have been available to the peoples of the Fertile Crescent at the time in question an ample plenty of the resources on which their traditional way of life depended. Not only was that the case, but the resources and conditions necessary to the birth of agriculture had been in place -- unexploited -- for several thousand years before agriculture actually developed. There is, therefore, in Cauvin's view, no explanation for why agriculture did not make its arrival more promptly other than that human culture simply was not ready to receive it. Thousands of years more might readily have passed save for one singular occurrence. Just on the eve of agriculture's birth, when it was perhaps in gestation in the human psyche, we find evidence of a momentous shift in the way humans looked at themselves and the world. Humans, it seems, came for the first time to view themselves in relation to a divine principle. It was this radically new orientation that became the source, according to Cauvin, of the psychic energy that launched the human race upon what is called the Neolithic Revolution.

Cauvin points us to recent discoveries of art objects dating from the period preceding the advent of subsistence production, and he sees in these objects evidence of a cultural reorientation that appears to have anticipated that development. It is through art that we most readily glimpse the symbolic systems of cultures. Since art cannot change the world in the practical sense, when we view a culture's art we penetrate to the psychological or spiritual means by which that culture sought to bring itself into relation to the world. An interesting thing about the prehistoric cave paintings of western Europe, widely celebrated for their sophistication and elegance, is that they suggest nothing in the way of a religious belief system. Dating from times long before the onset of food production, and widely removed from it in space, the Franco-Cantabrian paintings were devoted to the more or less realistic depiction of animals. Such, likewise, was the nature of the art objects produced in the Fertile Crescent, up until a few centuries before the emergence of village-farming societies there. In the four or five hundred years preceding their emergence, however, a shift occurs in the art of the Fertile Crescent. There for the first time, in the place of objects depicting animals, principally gazelles and deer, there appear representations of human forms, exclusively female. And with the arrival of these forms, zoological representations of the previous sort disappear. The most telling of the finds of objects of the new sort, made at the site of Mureybet in the Euphrates valley, dates from between 9500 and 9000 BC, on the eve of the appearance in that region of an agricultural economy. The Mureybet site yielded eight female figurines in stone or baked clay, most with pronounced sexual markers. Similar figurines from subsequent dates have been unearthed throughout the Levant. With the build-up of examples, this female figure takes on the unmistakable stamp of a goddess. Within a short time she comes to be

found in association with another figure, that of a bull. The bull appears to be an attribute of the goddess -- the symbolism of later divinities was, of course, typically augmented by association with attributive animals -- and over time is humanized into a masculine figure. The figures also carry a clear association with fertility, that being obvious enough in the bull, and emphasized by an exaggerated lower torso in the goddess. This goddess, or Great Mother, to give her the name of the Jungian archetype, is to hold sway in the subsequently developing religious pantheons of the Near East and Mediterranean for thousands of years, until a dominant masculine deity first presents Himself to the Hebrew nation in Palestine. The Great Mother can also be found to reign in spontaneously generated religions across the whole of the world.

Cauvin's scientifically based findings square precisely with those of Jung, which were grounded in the insights of depth psychology. It is reasonable, indeed, to conclude that Cauvin has pointed us to the time of the first emergence of consciousness as we know it. In Jung's conception, the image of the Great Mother presented itself to an incipient consciousness as a symbol of the awesome power of the collective unconscious, from which consciousness was struggling to free itself. The emergence and growth of consciousness in humankind is tracked by the same process in each individual. As the infant rises out of the lap of the mother, so does the infant consciousness. The background symbolism for the nascent consciousness takes the form of the infant's first and crucial experience of the external world, the experience of the all-embracing mother. Culture, in its art and ritual, records this experience of individuals, and thus the cultural record is that also of the symbolism by which consciousness reacts to the images of the

unconscious. It is for this reason that we find, in early religions, the ubiquitous Great Mother or corn goddess.

The bull images present in the Fertile Crescent at the advent of agriculture correspond to what in subsequently developing religions becomes the embodiment of the archetype of the Son-Lover. The arrival of the Son-Lover is inseparably bound up with the springing to life of new vegetation, and thus he will become closely associated with the agriculture on the verge of taking form. As with the budding plant, which has its roots in the dark soil, the Son-Lover both arises from and is a part of the Great Mother. Though her lover, he is by no means her equal, and shortly he must be sacrificed to her power. He, like the grain at harvest, must be cut down, later to be reborn. Son-Lovers are to be found in the multitude of goddess religions that were over time to grow up in and around the area of the archeological sites on which Cauvin relies. Examples include Attis, Tammuz, Osiris, Dionysus, and Adonis.

By following this line of association, we may be brought to see that the archetypes as posited by Jung are vehicles for certain kinds of images that shaped the behavior of early humankind. These images or ideas, in minds not yet conscious, were projected onto the environment, leading the individual and the group to react to them as if they were external realities. Thus spirits -- unconscious contents projected upon the surrounding world -- inhabited all things: the sky, the forest, the river, the spear, the quarry. The individual's recourse was to conjure them by magic. This was the level of the *participation mystique* described by the nineteenth century French anthropologist, Lucien Levy-Bruhl. The individual was psychically undifferentiated from, and interlocked with, the natural world. As a complex of unconscious contents coalesced into

an ego, a distinction was established between the ego and its surroundings, and consciousness took form. Gradually, bits and pieces of the unconscious were assimilated to the ego. Psychic contents previously projected outward became, rather, internal predicates of awareness. The group, through ritual and myth, consolidated this hold on reality, reinforcing the fragile ego. Religion replaced magic as the means of placating and imprecating the imperious forces of nature. These forces were personified as deities, beings that were more or less understandable, if not altogether manageable.

The shredding apart of the flesh of a human being does not, so far as we know, actually ensure that spring will return and the crops will grow. Yet, by working internal images out in the real world in sacrificial fertility rites, early societies gave expression to the things that were going on in the unconscious psyche. Rituals were observed with great devotion and at no small cost to the celebrants, without having the least effect on the immutable processes of nature. Yet their psychological effects were profound. The external rites replicated and reinforced the psychological processes by which consciousness was coming to life. They substituted intentional action for unwitting impulse, and so served to strengthen the conscious system. The separation of the Son-Lover, representing incipient consciousness, from the Great Mother of the unconscious was brief and impermanent, but assurance was gained of his return. One need only observe the sacrifice around which the Christian sacrament of The Lord's Supper is built to be reminded how deeply etched in the human psyche these images are.

Before the emergence of consciousness, the evolutionary impetus lay at the genetic level. But consciousness introduces a new, nongenetic factor into the evolutionary scheme. It provides the means for rapid changes in adaptive behavior.

Without it, a species that finds itself at odds with its environment is at the mercy of chance. If the limited changes in behavior that fall within the compass of the species' instinctual set will not suffice for adaptation to new conditions, the species is doomed unless a new adaptive wherewithal happens to be furnished through the chance occurrence of genetic mutation. Genetic change is the work of millennia; yet conscious individuals may devise in a relatively short time a form of clothing or a type of shelter, to take some obvious examples, as a means of adjusting to environmental conditions. Cultural forms can alter quickly if the psychic climate is right, and thus the human race has been able to try an endless variety of cultural styles as a means of adaptation, without having to wait upon genetic selection. Successful strategies are reinforced and passed on. Over time, groups with better adapted strategies win out over their neighbors, and accordingly an evolutionary process is set into play. It is an evolution of cultures rather than genes. If this model is accurate, cultural evolution must be seen as a dynamic process constantly producing new forms. And, indeed, history seems to present us with a succession of powerful individuals, ideas, and cultural strategies lapping one over another in wave-like fashion.

Against such a background, the tendency of Diamond's model to push human factors into the background seems insupportable. No doubt the environmental factors he identifies were powerfully significant in bringing us to the European imperialism of the fifteenth and sixteenth centuries, but the cultural evolution to which he gives but a passing nod must be taken as likewise playing a major and potentially determinative role. Consider that, as Diamond recognizes, only in the fifteenth century did Europe overtake the societies of both China and Islam. Before that, the latter were the superiors of

European societies in art, learning, technology, and warfare. Might not cultural factors rather than environmental ones have determined that it was to be Europe that projected its power around the globe? Neumann makes an interesting Jungian point concerning what happened in the West at just this point. At the end of the fifteenth century, Copernicus, Gutenberg, Luther, Columbus, Michelangelo, and Leonardo all surfaced, with their differing, but collectively profound, contributions. Neumann sees their arrival as accompanying a shift of dominant archetypes: a return from those of the Father to those of the Mother (Neumann, 1959). The images of the father archetype tend to be of the skies or heavens; they implicate the spiritual. Their apotheosis is the Gothic spire, stretching skyward. Typical mother images are of earth and water. The focus upon the earth that inspired the Renaissance found expression in the spanning of the globe in geographic exploration, in perspective-based naturalism in painting, and in the emergence of science. Science became the dominant development in the West in the ensuing era. The scientific spirit seeks to know the earth and grasp it in its most intimate detail. This is also true in respect of the heavens, but in the material, and not the spiritual sense. The materialism that characterizes Western society today is a natural concomitant of the scientific spirit, and, arguably, of dominant mother imagery.

It should be observed at this point that the foregoing speculations in no way undo the point that Diamond seems most concerned to make. The arguments by which he attacks glib assumptions about the natural superiority of certain peoples or climates are tellingly delivered, and he has advanced a compelling description of the underlying environmental factors upon which the human drama has been played out. It may be, nevertheless, that Diamond has gotten the environmental cart before the psychological

horse. Viewed the other way around, the unfolding of human history is likely to appear a great deal more complex than his account would make it.

Toward the end of his book, Diamond makes a pitch for the development of human history as a science. He would bring it in line with other disciplines with historical grounding, such as astronomy, geology, and evolutionary biology. One pauses to wonder whether this objective might not be accomplished through a new perception of psychology, the discipline called by Nietzsche "the queen of the sciences." The element of the subjective is even more deeply intrinsic in psychology than it is in history. Nonetheless, we have perhaps reached the place, if we are truly to understand the world about us, where we must devise the methodology for understanding important aspects of human experience, notwithstanding that the very nature of the process is such that subjectivity cannot be eliminated from it. This is a position for which Carl Jung stood, and whose day may perhaps be coming.

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