Review of Robert L. Carneiro, The Muse of History and the Science of Culture*

Stephen K. Sanderson

Indiana University of Pennsylvania

Robert Carneiro has had a long and distinguished career as one of this country's leading anthropologists. He was a student of the great anthropologist Leslie White in the 1950s and absorbed White's materialist and evolutionary approach to anthropology. As I see it, Carneiro's most important contributions fall into three major areas.

First, he has made detailed exegeses of the evolutionism of Herbert Spencer and has shown, with considerable success I think, that it should be viewed in a much more favorable light. Spencer was by no means just the social Darwinist bumbler that he is usually made out to be. Carneiro has shown that he was well ahead of his time in formulating sensible scientific ideas about the key factors in the evolutionary process. Second, Carneiro has made important conceptual and methodological contributions to the study of social evolution. He has adopted a resolutely Spencerian conception of social evolution, insisting that it involves the emergence of increasingly complex social systems from simpler ones. If the concept of social evolution means anything, Carneiro insists, then it means this. Carneiro has also tried to show that the concept of unilinear evolution, criticized by almost everyone these days, has been unfairly dismissed. Social evolution is not rigidly unilinear, but it does move along a main line when it is viewed in proper perspective. Along methodological lines, Carneiro has been an innovator in the use of Guttman scalogram analysis to identify the main

Social Evolution & History, Vol. 2 No. 1, March 2003 238–246

line of evolution. And finally, and probably most importantly, Carneiro has developed a famous theory of the origin of the early state in the centers where it was born in the ancient world: Egypt, Mesopotamia, China, India, Mesoamerica, and Peru. This theory, perhaps the best known of all state-origin theories, makes population pressure, warfare, and what Carneiro has called environmental circumscription the key factors in state evolution.

Carneiro's new book, *The Muse of History and the Science of Culture*, is in many ways a summing up and pulling together of these and other closely related themes. It is a capstone work, integrating several decades of sustained thought. What are the book's main arguments? For the most part, it is a response to those historians who claim that history is mostly a lot of noise signifying nothing; that there is no determined historical process; that history is made by individuals, especially – or perhaps only – by Great Men; and that it is human thought - ideas - that are the prime movers of historical change. I found Carneiro's argument against the causal role of ideas especially compelling. In Carneiro's words (2000: 141–42):

What are we to say about something so obvious and indisputable as that ideas precede actions? Only that if it is actually meant to pass for analysis, it is analysis of the most rudimentary, and superficial kind... *Of course*, ideas precede actions! Nothing could be simpler or clearer. Even Marxists, generally regarded as allowing only material conditions into the pantheon of behavioral determinants, readily admit this. Engels, for instance, cheerfully conceded that 'all the driving forces of the actions of any individual person must pass through his brain, and transform themselves into motives of his will in order to set him into action'.

The real question is, what gives rise to the ideas that enter people's minds and cause them to behave as they do? *Where* do these ideas come from? And unless one is a dedicated Platonist, ideas are not uncaused causes. They emerge out of antecedent conditions.

As a materialist, like Carneiro, I couldn't agree more.

Although by no means denying that historical events are always in some sense unique, Carneiro wants to play this down and to create a science of history. He wants to be nomothetic rather than ideographic. Chapter 6 of his book argues this position and tells us how to do it:

First, one must dissolve an event out of its specific space-and-time matrix and place it into a broader context, where it becomes a member of a general class *of phenomena.* Second, one must cast the net wide enough to gather as many comparable instances of the phenomenon as possible. What this second step implies is clear enough. If history is to be a science at all, it must be broadly *comparative.*

Some historians, Carneiro notes, have welcomed this approach; he mentions in particular William McNeill. But we cannot rely on historians alone to amass the amount of comparative data necessary for a true science of history. One must look to the anthropologist as well to find the needed reservoir of facts. From Carneiro's perspective, the study of history must be the study of long-term social evolution, of the broad patterns that one can discern in the historical and anthropological record of human societies.

From Carneiro's point of view, another name for the process of social evolution is the *culture process.* This is 'the matrix of ever-changing and blending circumstances - with particular individuals assumed to be its agents but nonetheless left out of the equation'. It is 'the flow of culture... as a great unitary stream, embracing every cultural tradition, in all places and at all times'. Carneiro illustrates the culture process by way of his own understanding of political evolution, especially the rise of chiefdoms and states throughout the world over the past 6,000 or 8,000 years. Carneiro then generalizes from his theory of political evolution to argue for a materialist understanding of the historical process. History is primarily determined by an ensemble of elements including the physical environment, technology, subsistence, warfare, and economy. Carneiro goes on to offer an additional example of his use of a materialist perspective: the demise of European feudalism in the late Middle Ages. Carneiro tells us that three material conditions were critical to this demise. The first factor was technological; there was the introduction and increasing use of artillery, which made castles, the traditional stronghold of the feudal lord, no longer impregnable. Second, there was an economic factor, which was the great development of commerce, which led buyer-seller relationships to outstrip lord-vassal relationships in the general scheme of things. Finally, a demographic factor loomed important - the rapid growth of cities, which greatly facilitated commercial exchange by agglomerating people in large urban centers. I have trouble not liking this

theory, for it is actually similar in several important respects to a theory of the rise of capitalism I developed some years ago and of which I am still fond (Sanderson 1994, 1999).

The penultimate chapter of Carneiro's book asks the question, 'Are there laws of history?', answering it in the affirmative, and the final chapter is an attempt to formulate several such laws. A scientific law, for Carneiro, 'is a statement of a strict regularity in the behavior of some element of nature'. The first real historical law was proposed by Leslie White in 1943 – 'Other factors remaining constant, culture evolves as the amount of energy harnessed per capita per year is increased, or as the efficiency of the instrumental means of putting the energy to work is increased'. The anthropologist George Peter Murdock years ago was able to formulate what Carneiro calls 'statistical laws' of cultural development. These laws state the probability of a certain cultural pattern emerging if a certain trait, or, better yet, a certain combination of traits is present. For example, Murdock showed that there is a very high probably – on the order of 80 to 90 percent – of lineal kinship terminology (which is the form used in the United States and other industrial societies today, as well as in many hunter-gatherer societies) being present if a society is also characterized by monogamous marriage, the isolated nuclear family; neolocal residence, and the absence of exogamous lineages or clans. Carneiro also refers to the famous law of cultural evolution formulated many years ago by the anthropologist Elman Service, the so-called Law of Evolutionary Potential: 'The more specialized and adapted a form in a given evolutionary stage, the smaller is its potential for passing to the next stage'.

But Carneiro, as one might well imagine, has not left it simply to others to formulate laws of history. He has several of his own, three of which he presents in this last chapter. The first of these has to do with societal complexity as a function of population size. Carneiro formulates the relationship quantitatively and expresses it in terms of a mathematical formula, which I, being somewhat mathematically challenged, will not attempt to reproduce here. A second law involves predicting the time it will take for chiefdoms to evolve from a set of autonomous villages. This is a function of W, the area of arable land within a circumscribed valley or island; C, the area required to provide the average person with the amount of food he or she normally obtains from agriculture over

the course of a year; P, the total population of the valley or island; and R, the average annual rate of population increase. This law is also expressed in terms of a mathematical formula. Finally, Carneiro presents a law of cultural development using Guttman scalogram analysis. This states that 'the *further apart* two traits are in a general evolutionary sequence, the more likely it is that in any given society the two will have evolved in the *same relative order'*. Conversely, the *closer* two traits are in a general evolutionary sequence, the greater the likelihood that this order might have been *reversed* in the way any given society developed them'. This law, it would appear, has been inductively arrived at by the examination of a large mass of cross-cultural data. According to Carneiro, it is no more presumptuous to call this a law than to call Boyle's Law of Gases a law. Both, he claims, are examples of statistical laws.

I agree with most of Carneiro's ideas in this book, and on a second reading I found that it contains some gems that I did not fully appreciate the first time around. (These are especially to be found in the last two chapters, I think.) He and I have long been on the same theoretical wavelength. But, since I have known Carneiro for more than a decade, and since I was a great admirer of his work before I met him, I do not want to be thought guilty of mere hagiography. So let me state some of the areas where I have some disagreement with his formulations.

First, Carneiro wants to limit the definition of social evolution to increasing complexity. Correspondingly, Carneiro thinks of social evolution as a *cumulative* process, or one in which more and more specialized features are added to social systems. There is little doubt that this is a clear trend in social evolution, identified as early as Herbert Spencer and emphasized by such sociologists as Durkheim and Parsons; to a large extent social evolution is a cumulative process. However, it is both more than that and other than that. It is a *transformative* process just as much as a cumulative one, and this is a process that is *logically* – if not always *empirically* – independent of growing complexity. For example, the Neolithic Revolution that began some 10,000 years ago introduced agriculture and settled village life into the world, and societies surely became more complex and added elements that they did not have before. Yet at the same time people were beginning to adopt *a new way of life.* There was a *qualitative* change as well as a *quantitative* one. Similarly, the transition to the modern capitalist world

that began some 500 years ago in Western Europe was characterized just as much by qualitative as by quantitative changes despite whatever growth in complexity may have occurred. People began to live in towns and manufacture goods rather than live on farms and produce agricultural goods; a capitalist-worker class dynamic began to replace a landlord-peasant class dynamic, and soon.

Second, I have some disagreement with Carneiro's theory of the origin of the state. Although this is one of the most impressive theories of state origins ever developed, I think it is missing an essential element. Carneiro's central variables are population pressure, warfare, and environmental cirumscription. Population pressure sets everything in motion. When population builds up in a region, warfare frequently results. If land is relatively plentiful people have the option of moving away into previously unoccupied land. However, when land is not sufficiently abundant, or is not well suited to cultivation, this option is not available. Enter environmental circumscription. Circumscribed environments are regions that contain fertile land but in which there are obstacles to movement beyond the region, these obstacles consisting of such things as large bodies of water, mountain ranges, or inhospitable deserts. When population pressure builds up in such regions, warfare intensifies and escalates as societies attempt to take over the land of others. Bands and tribes evolve into chiefdoms, and chiefdoms eventually evolve into states.

While Carneiro has undoubtedly identified some of the key variables in state evolution, there is an economic side to this process that he ignores. Recently I conducted several empirical analyses using data from Murdock's *Ethnographic Atlas* and Murdock and White's Standard Cross-Cultural Sample. With respect to the *Atlas*, three variables turned out to be highly correlated with a society's stage of political evolution. Community size correlated .672 (Pearson r), class stratification .657, and subsistence type .525. Political stage and these three variables were entered into a multiple regression analysis, and together the independent variables explained 56 percent of the variance in political stage. Class stratification was the best predictor, followed very closely by community size. Subsistence type was a much poorer predictor than either of these. A similar multiple regression analysis was conducted for the Standard Cross-Cultural Sample. Here the independent variables

were social stratification (a slightly better measure than class stratification), community size, population density, and subsistence type. All of the independent variables were moderately to strongly correlated with political stage, but community size and population density washed out completely when the other variables were partialed out. Subsistence type and social stratification together explained 65 percent of the variance, with stratification explaining a clear majority of this. These findings suggest to me that political evolution is to a very large extent a matter of the struggle for wealth, a process not recognized by Carneiro. This puts Marxian-oriented theories into the picture as identifying a crucial part of the process of political evolution. This does not mean that Carneiro's theory is wrong, just that the processes he identifies have to be reinterpreted. If warfare is a major part of the process of state evolution, and I suspect it is, then it should be seen as motivated by the struggle for wealth and power rather than just the struggle for more land to feed more people.

Finally, let me say something about what Carneiro calls the *culture process* and the role of individuals in historical change. As an anthropologist, Carneiro wants to make culture a central, if not *the* central, concept. No surprise there. But what is culture, what does it do, how is it formed, and how does it relate to individuals? For Carneiro, as for most other anthropologists, I fear it is a disembodied entity with a life of its own. On p. 223 Carneiro tells us that to 'grasp the causes of these great [historical] movements, it is not to individuals, with all their quirks and foibles, that we must look. Rather, it is to the flow of the culture process'. On the previous page he had told us that, '*Of course* it is the actions of individuals that constitute the ore that the historian mines', but that 'the problem arises when we try to *account for* what human beings have done'. And to account for individual actions, Carneiro seems to be saying that individuals are simply the *carriers* of cultural forces. On pp. 226 and 227 he says that [cultural] forces act by penetrating the consciousness and wills of individuals, taking possession of them, and making their human vehicles feel that those great social ends toward which these forces are inexorably pushing them are *their very own personal goals*... Being surrounded and possessed by his culture, imbibing it at his mother's breast, the individual becomes its unconscious and willing tool.

Note the language - humans are but *vehicles* for, or *unconscious tools of,* cultural forces. But then arises a crucial question: *whence these cultural forces themselves* How did they come into existence? I do not find an answer to this question in Carneiro's book because 1 don't think he feels it is a question that has to be answered. My own answer would be that cultural forces, which do indeed exist and are real enough, *are created by individuals* on the basis of their fundamental needs, goals, inclinations, tendencies, and so on, within the context of the constraints imposed on them by their physical environment and by the cultural forces created by individuals in the past. This leads us in the direction of developing a concept of what individuals are like, of human nature, if you will. I know that Carneiro doesn't want to go in this direction. But if we are truly to understand historical change in the nomothetic and scientific sense Carneiro recommends – and I fully agree that we need to understand historical change in this way – then I think that moving along this path is imperative.

In conclusion, this is a very important book reflecting a lifetime of thought by a distinguished anthropologist, even if it is not perfect. It should be read by all historians, even though it won't be, and most historians who do read it probably won't like it – unless they are among the very few who are already converted.

NOTE

* This review was originally written as a talk in an author-critics session at the annual meetings of the Social Science History Association, Pittsburgh, Oct 28 2000.

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