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# Immigration, American Historians, and Sociobiology: Seeking a Synthesis

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*travellers . . . i.e., ducks making long flights, often migrating*[1]

In 1959, the British novelist and philosopher of science C. P. Snow delivered the Rede Lecture at Cambridge University. He titled it, and the book that followed, "The Two Cultures and the Scientific Revolution." Both the lecture and subsequent book have generated controversy ever since, receiving equally great acclaim and condemnation. Although Snow was intending to address the social, economic, and political inequalities that divided the industrialized and the developing worlds, the phrase "two cultures" quickly became almost a cliché or shorthand way of referring to a serious intellectual disconnect in the modern Western world between a humanistic and a scientific way of conceiving the world and of thinking about the nature of thought, the nature of knowledge, and the relationships among different disciplines and kinds of knowledge.

Since then, many analysts have responded that Snow's formulation, and the common understanding of it, are overly simplistic and ignore other kinds of knowledge, especially that of the social sciences. But while Snow's critics have seriously wounded his argument and diminished its authority, his fundamental question remains valid. What is the nature of the relationship between "hard" science and scientific knowledge on the one hand and the humanities, social science, and humanistic knowledge on the other? How can they be reconciled, or can that even be done?

These questions are tantalizing but exceedingly difficult, if not impossible, to answer. They are almost certainly more challenging in some areas than others. For example, to take what is probably the most vexing and contentious example in our society today, how can

biblical literature and theories of evolution be reconciled and made mutually coherent?

However, there are certain questions that interest both scientists and also humanists and social scientists and that seem more susceptible to analysis. One of these is migration, a subject that draws the attention of both historians and of biologists concerned with animal movement. An examination of several studies of immigration to the United States and some references to studies of animal migration suggests that the two subjects have much in common and that they should be brought together and their insights mutually explored. Both deal with the movement of animal life; both deal with the definition of migration and why it occurs.

In the late 1990s, Donna Gabaccia, the Charles H. Stone Professor of History at the University of North Carolina, Charlotte, published several provocative and timely articles about immigration to the United States. She built questions into their titles, wanting to know "Who is an Immigration Historian?" "Do We Still Need Immigration History?" and, "Is Everywhere Nowhere? Nomads, Nations, and the Immigrant Paradigm in American History." Additionally, she wrote a critique of another historian's article on the same subject that she called "Liberty, Coercion, and the Making of Immigration Historians."[2]

In each of these articles, she used a derivative of the word "immigrate" as an adjective; she referred to "immigration history," "immigration historian" or "immigration historians," and "immigrant paradigm." She used these words in the same way that historians have always done. When historians write about people moving to the United States from other countries, it is customary to call them "immigrants" rather than migrants. Looked at in another way, *com*ing to the United States has usually been perceived as more important than *leav*ing some other place. Getting *to* the United States is thought to be more significant than departing *from* another place. Phrasing it still differently, crossing political borders and adopting new homelands are considered central aspects of human migration.

Of course, Gabaccia is by no means the first or the only historian to have thought this way; historians have almost always written about "immigrants" to the United States, rarely if ever about migrants. In fact, Gabaccia is unusual among historians in challeng-

ing the traditional way of thinking.[3] In "Is Everywhere Nowhere? Nomads, Nations, and the Immigrant Paradigm," she explicitly used the word "nomad" and called on historians to study immigration without considering national borders. She pointed out that borders are artificial and constantly changing, and she went on to explain that everyone born in what we now call Italy should not be called an Italian. There have always been non-Italians in Italy; in fact, the mythology of the ancient Romans traces their origin back to migration after the fall of Troy. Even today, we distinguish the ancient Etruscans from other inhabitants of the peninsula. More than that, some parts of Italy today were not part of Italy a century ago. Some places considered part of Italy then are not part of Italy today. Furthermore, every location in the Italy of either yesterday or today is not the same as every other such location. Regional differences have always been significant enough to make different parts of "Italy" unlike each other, inhabited by distinct groups of people who cannot be tossed together in a single group. In fact, as Gabaccia points out, Italy as we know it today did not even exist a hundred years ago, and differences among the peoples of the various city-states have often been recognized.[4]

Gabaccia's answers to the questions she asked in the titles of her articles reflect a growing uneasiness with the concept of immigration history. That concept seems flawed to Gabaccia and others at least partly because of demographic changes in the American population. The United States no longer contains nearly as large a percentage of immigrants as it once did. In the federal censuses taken between 1870 and 1920, the average foreign-born percentage of the population was 13.8, and the percentage ranged every ten years between 13.1 and 14.7. But in the censuses conducted after the Immigration Restriction Laws enacted in the early 1920s, those numbers plummeted. In the censuses from 1930 to 1990, the average foreign-born percentage of the population was only 5.7. The percentage declined every ten years, from a high of 11.5 in 1930 to a low of only 4.7 in 1970. Then it began to climb again, reaching 6.2 in 1980 and 7.9 in 1990.[5] This is not to say that immigrants were any less significant than they had been, or that immigration was a less important public issue, only that to historians and the population generally, as immigrants comprised a smaller proportion of the total population, they attracted less attention.

At the same time, the percentage of the native-born population descended from immigrants of the late nineteenth and early twentieth-centuries was increasing. As the immigrant percentage of the total population, and also the absolute number of immigrants, was declining between 1930 and 1970,[6] and, as immigrants and their children had offspring born in the United States, the critical questions in the country no longer concerned the nature of immigrants or the relationships between immigrants and the native-born. Instead, the critical questions now concerned the nature of ethnic groups and the relationships among ethnic groups. This is especially true of the relationship between that ethnic group loosely conceptualized as WA-SPs and every other ethnic group, although the issue of the relationships between other ethnic groups has occasionally emerged as well, between Jews and African Americans or between African Americans and those of Korean descent, to mention two important contemporary examples.

One result of this demographic change in the American population has been to cause a re-thinking of the concept of Immigration History as a central part of American history. This can be illustrated in many ways. One is Gabaccia's questioning the history of immigration and her advocacy of transnational history. It is also revealed by the decision of the Immigration History Society several years ago to rename itself the Immigration and Ethnic History Society. [7]

However, one wonders whether actions like these are an entirely appropriate or satisfactory way of dealing with the issue. Although the number of foreign-born declined to 7.9 percent of the total population in 1990, the percentage had begun to increase in the 1970s. The absolute number of immigrants rose from 9.6 million in 1970 to 19.6 million in 1990. The percentage of the American population that was born out of this country increased from 4.7 percent in 1970 to 7.9 percent in 1990.[8] To abandon the history of immigration as a field of historical investigation, even to replace it with ethnic or transnational history, as important as they are, suggests that there is, and will be, no significant difference between these recent newcomers and their offspring born in the United States. It also ignores both the similarities and the differences between contemporary immigrants and the earlier ones from whom so many of us are descended.

Another idea lurks behind these comments. That is the very

idea that a single category of "immigrant" exists and that all immigrants can be aggregated meaningfully into a single group. Oscar Handlin implicitly presented this idea in *The Uprooted* [9] more than fifty years ago, at first to great plaudits. When *The Uprooted* appeared in 1951, it received glowing reviews. In newspapers and magazines ranging from *The New York Times*, to the *New Yorker*, to the *Nation*, to the *Christian Science Monitor*, it was called "an outstanding book," "a most unusual book," "a book of great poignancy," "a narrative that sweeps through the centuries," and, according to the *New York Times*, it was "history with a difference–the difference being its concern with men's hearts and souls no less than an event." The accolades continued the following year of 1952, and Handlin himself was called "imaginative, sensitive, understanding," an author who had performed "an act of piety," and "an able scholar" who "reveal[ed] a mastery of historical data and understanding."[10] All of these encomiums seemed to be justified and validated later that year when Handlin and *The Uprooted* received the Pulitzer Prize.

Occasional disagreement did temper this early praise. Karen Brown foreshadowed later criticism in a review that appeared in the *American Historical Review.* In it, she contested Handlin's portrayal of immigrants and immigration and contended that his interpretations applied not to all immigrants but only to peasants from Central and Eastern Europe who came to the United States.[11]

Brown's criticism might have been the first to make this argument about the book, but it was certainly not the last. Of all the critics who posed this point over the next decade or so, perhaps the most forceful and highly regarded was Rudolph Vecoli, a young historian of immigration at the beginning of a distinguished career. In 1964, he explicitly subtitled an article in the *Journal of American History* "A Critique of The Uprooted,"[12] and he showed that Italian immigrants to Chicago did not fit Handlin's model. Whereas Handlin had depicted alienation, dissatisfaction, and despair as typical immigrant responses to life in the United States, Vecoli questioned their importance among Italian immigrants. Where Handlin had described the destruction of European communities in the United States, Vecoli illuminated their survival and re-creation. Where Handlin portrayed all immigrants as belonging to a single group, Vecoli emphasized group uniqueness and argued that the dis-

tinctiveness of groups needed to be recognized and acknowledged.

While the argument made by Brown, Vecoli, and many others certainly has validity–Italians definitely are not Russians, and Swedes are assuredly not Chinese–in some fundamental way this argument misses the central point. Handlin was implicitly saying that there is a particular behavior called immigration and that, at the broadest level of generalization, all immigrants share certain common characteristics and experiences. *The Uprooted* was an attempt to explain and understand those commonalties. One can readily argue that Handlin might not have gotten the concept of immigration exactly right, and that his argument might have needed modification, but his attempt to understand the experience of immigrants and immigration as a whole was nevertheless splendid and noble. Few others have been willing even to make the attempt.

In ways, this is a problem of perspective. It's the old problem of bottles–are they half full or half empty? For the past forty-five or fifty years, almost all historians of immigration have disaggregated the history of immigration to the United States and tried to analyze the experiences of specific groups of immigrants, generally defining them by ethnicity or place of birth. There are excellent studies of Poles, and Italians, and Chinese, and Mexicans, and countless other groups who immigrated to the United States, but there are few, if any, studies of immigrants as a single group. This absence is reminiscent of another kind of study that has also disappeared during the same years–the study of American culture or American national character. In all these cases, the emphasis has been focused on specifics rather than generalizations. When historians study Polish Americans, or Greek Americans, or Korean Americans, or any other kind of something Americans, they focus on the "something" rather than on the "American" part of the term. And when they study immigration, they do the same thing–focus on the characteristics of each national or ethnic group rather than on examining what groups have in common. This is not to say that those endeavors are wrong; it is not meant to criticize them. Both are necessary, and the diversity of the American population is almost universally recognized. However, one can't understand the specific and its uniqueness without also understanding the general and what exists in common. The two go hand-in-hand.

There is at least one way of beginning to see that in the field of

immigration history. In order to perceive this way of thought, one must enter a world rarely visited by historians, social scientists, or humanists: the world of biology, and especially behavioral ecology or sociobiology.[13] In 1975, Edward O. Wilson, an entomologist who, like Oscar Handlin, was an eminent professor at Harvard University, published *Sociobiology,*[14] a book that, like *The Uprooted*, has received great praise and also great criticism. When it appeared, it was reviewed in mainstream, semi-scientific, and scholarly journals and newspapers, including *Harper's*, *The National Review*, *The New Statesman*, *The New York Review of Books*, *The New York Times*, *Scientific American*, and *Science*. In evaluating its contributions, different reviewers called it "new and stimulating," "definitive … [and] certain to become a classic," and "for years to come … the basic text for anyone interested in the biological foundations of society." According to *The New York Times*, the book was "an evolutionary event in itself, announcing for all who can hear that we are on the verge of breakthroughs in the effort to understand our place in the scheme of things."[15]

Although the first reviews, especially those in the scientific literature, were generally positive, criticism was also leveled. The year after *Sociobiology* was published, *The American Journal of Sociology* commissioned reviews from three eminent scholars. While each praised the book, each of them also criticized it severely. Perhaps the mildest review said that Wilson was "selective and biased" and "had not read much of the empirical work in sociology." His views were "overstated." A second review characterized the book as "an excellent survey of empirical studies of animal social behavior, probably the most comprehensive work of its kind." But this review also said that the chapter on human beings was "disappointing," and that some of it was "trite … value-loaded … or wrong" and that Wilson himself was "uncritical in his use of data." The third review offered greater praise, but leavened it with even greater criticism. The reviewer began by calling the book a "major study of social behavior" and "huge and technically splendid" but quickly reversed course when he said that he had finished reading it "with the feeling that for Wilson 'the perfect society' is that of the ants" and that he, i.e., the reviewer, was "uneasy and skeptical." [16]

The criticisms of *Sociobiology* were voiced not only in reviews of the book but in other places and contexts as well. In one of the

most infamous and scandalous events, Wilson and sociobiology received public criticism and condemnation in a letter appearing in *The New York Review of Books*. Under the heading "Against *Sociobiology*," two of its most prominent signers were colleagues of Wilson at Harvard University who actually had offices in the same building as his own, Richard C. Lewontin, a geneticist, and Stephen Jay Gould, a young paleontologist at the beginning of his own distinguished career.[17]

These protestors were dissenting from Wilson's assertion that all animal social behavior has a biological basis. While Gould, Lewontin, and the others who signed the letter were genuinely persuaded that human behavior is determined by individual psychology, learning, and social conditioning rather than by physiology, anatomy, and genetics, they were also reacting in part to fears and anxieties produced by some of the possible political and social implications of sociobiology. If human behavior is genetically determined like that of other animals, they wondered, then how can people be held responsible for their actions? If behavior is triggered by immutable biological impulses, how can anyone be culpable of wrongdoing? If there is no free will, how can people and society fairly be held accountable for what they do?

At the same time, the Civil Rights and Feminist Movements were aiming their own barbs at sociobiology and sociobiologists, especially Wilson. When sociobiologists attributed behavior to biology, members of the Civil Rights Movement heard them saying that different races have different abilities, tendencies, and proclivities which make some groups inferior or superior to others, thus seeming to verify what American racists had been saying for several centuries and to sanction the diatribe of Adolf Hitler and his minions a few decades before. Feminists thought (and some still do) that sociobiology implies, or can be used to propose, that male domination and female repression result naturally from biological factors which cannot, and perhaps should not, be changed.

The most famous objection was expressed one evening in February 1978. Just as Wilson was preparing to address the annual meeting of the American Academy for the Advancement of Science, about a dozen protesters charged the podium shouting, yelling slogans, and charging him with racism, genocide, sexism, Fascism, and Nazism. Before the demonstrators could be restrained, one of their

party raced over to Wilson and proceeded to dump a pitcher of ice water over his head.[18]

Wilson vigorously tried to rebut the social and political allegations being made against sociobiology and *Sociobiology*. In December 1975, shortly after *The New York Review of Books* had published the condemnatory letter, he offered a rejoinder. In it, he termed his opponents' correspondence "an openly partisan attack on what the signers mistakenly conclude to be a political message" in *Sociobiology*. He protested what he called an "ugly, irresponsible, and totally false accusation." In perhaps his most eloquent statement, he cited a passage he had written shortly before the *New York Review* published the original attack on him and his work.

> The moment has arrived to stress that there is a dangerous trap in sociobiology, one which can be avoided only by constant vigilance. The trap is the naturalistic fallacy of ethics, which uncritically concludes that what is, should be. … To an extent not yet known, we trust–we insist–that human beings can adapt to more encompassing forms of altruism, and social justice. Genetic biases can be trespassed, passions averted or redirected, and ethics altered; and the human genius for making contracts can continue to be applied to achieve healthier and freer societies.[19]

Wilson strongly believed that he and *Sociobiology* had been slandered and victimized by misrepresentation, misinterpretation, and calumny. If his response is placed in the context of his actual definition of sociobiology ("the systematic study of the biological basis of all social behavior"),[20] his rejoinder becomes more than a mere defensive statement; it was actually a restatement of his original point. His definition of sociobiology did not say that social behavior is determined only by biology; it said that social behavior has a biological basis, but clearly implied that behavior can have other origins as well. Wilson did not say that specific genes are responsible for altruism or monogamy or musical ability or any other behavioral characteristics as they are for eye color or Tay-Sachs disease or hemophilia or sickle cell anemia. Rather, he was arguing that behavioral characteristics result from complex combinations of genes whose interactions produce hormonal, chemical,

neural, or other physiological reactions that we are only on the brink of beginning to understand. Putting it another way, any social behavior like migration does not result from the presence or absence of a specific gene that inevitably produces or inhibits particular actions. There is no simple genetic determinism at work. An organism possesses some combination of genes that gives it physical and physiological characteristics that predispose and enable it to behave successfully in certain ways under appropriate ecological conditions. However, it is the existence of other, non-biological characteristics, characteristics like culture or society or the surrounding environment, and especially changes in culture, society, or the surrounding environment, that stimulate and activate these genetic behavioral possibilities. Moreover, morality, ethics, and values can mitigate genetic behavioral tendencies, or even change them.

Wilson explained all of this in his next book, *On Human Nature*,[21] for which he, like Oscar Handlin, received the Pulitzer Prize.[22] In it, he referred to an analogy first posed by Conrad H. Waddington, a distinguished geneticist. According to Waddington, the evolution of a specific behavioral characteristic can be compared to a ball rolling down a hill. In the case of a relatively simple characteristic determined by a single gene, for example eye-color, one can imagine one wide, deep trench down which the ball must inevitably roll to reach the bottom. A single route reaches a single destination. But, when thinking about a much more complex behavioral characteristic, such as left- or right-handedness, one must imagine two trenches going down the hill, one of them deeper and wider than the other. The broader trench produces right-handedness; the narrower, shallower one produces left-handedness. Here, into this lesser ditch, the ball drops. If left completely alone, the ball stays in this ditch and rolls down the hill. But, if external forces such as parental insistence or social mores or peer pressure are applied strongly enough, they can divert the ball from its natural path into the other, the one for right-handedness, and the ball proceeds down the hill along that course.[23]

Perhaps an even clearer understanding of the biological basis of behavior and the interactions between biological and social/cultural bases of behavior can be obtained by thinking for a moment about sex. Probably no other activity quite as clearly exhibits the complex mixture of genetic, hereditary, or biological causes mixed

with cultural and social ones. Except in rare circumstances, every person who is not too young has the appropriate anatomical, physiological, hormonal, and neural structures needed to engage in sex. However, despite the enormous range of variations that occur (and perhaps more than a few of the fantasies), no one has ever had nonstop, continuous sex. In fact, it is safe to say that people spend much more time not having sex than they do having it, perhaps more time thinking about it than doing it.

What then determines if and when a person will or will not have sex, not to mention what kind of sex? On one level, this is certainly a physical question. At any one moment, a person's body must produce the proper chemicals and neural transmissions needed for sex to occur. But, whether or not a person actually does have sex depends not only on physical readiness and ability. It also depends on the social or cultural context of the moment–one's current location, the presence of a willing partner, one's exposure to erotic images, one's experience of erotic thoughts, or the existence of social and cultural conditions that demand a behavior ranging from celibacy to licentiousness, for example.

As John Alcock, himself a well-known sociobiologist, wrote in a recent book

> studies of how cellular mechanisms and system-operating rules influence behavior are classified as proximate research, which examines the immediate causes of the traits of interest. In contrast, questions about the adaptive (reproductive) value of behaviors are labeled ultimate questions, not because they are more important than proximate ones but because they are different, dealing with the long-term historical causes of the special abilities of species.[24]

In the quarter of a century since Wilson published *Sociobiology*, the field has grown and developed as a distinct branch of biology despite continued criticism, skepticism, and distrust. Some still tend to brand sociobiology as racist, sexist, or contrary and threatening to morality. But true sociobiologists do not argue that single genes control every behavior, and they have convincingly argued that Wilson was correct and that behaviors do have biological bases. Since *Sociobiology* was published in 1975, a number

of scholarly journals have been established that present the latest research in the field, including *Behavioral Ecology and Sociobiology*, *Evolution and Human Behavior* (formerly called *Ethology and Sociobiology*), *Human Nature*, and *The Journal of Social and Biological Structures*. Sociobiology has become so widely accepted and so significant a discipline that it has generated subdivisions or related disciplines, and some scholars now distinguish sociobiology, behavioral ecology, and evolutionary psychology from each other. One noted biologist was so confident of the correctness of sociobiology that he titled a recent book *The Triumph of Sociobiology*.[25] In 2000, Harvard University Press took the unusual step of commemorating the twenty-fifth anniversary of the publication of *Sociobiology* by issuing a special 25th Anniversary Edition. And, in the last few years, not just one, but two major commercial publishers have issued books by noted authors that rest on sociobiology and the idea that human behavior has a biological basis.[26]

If Wilson and other sociobiologists argue correctly that all social behaviors have biological origins, and one of those social behaviors is migration, then it logically follows that migration, including human migration, has a biological origin that needs to be determined, examined and investigated. And, if that is the case, then all migrants (and here I cease to use the word immigrants) belong to a group whose members share a common biological trait. That proposition, however, is yet to be tested. Although it has been demonstrated that the migration of other organisms occurs in response to physiological, hormonal, and neural agents,[27] the same demonstration has yet to be made about human beings, even though argument by analogy suggests that is the case.

But before that kind of exposition can even be contemplated, all students of migration, whatever their specific fields, must agree on a common vocabulary and word usage. At present, historians, social scientists, and humanists use the word migration and its derivatives very differently from sociobiologists. For them to reach any common understanding of the phenomenon of migration, they need to know exactly what they are talking about and what their words mean.

Begin by thinking about the words “migrate,” “immigrate,” and “emigrate.” Although they are conceptualized differently, they are really not all that different. As *Webster’s Dictionary of English*

*Usage* puts it, "*emigrate* and *immigrate* make a case in which English has two words where it could easily have made do with only one. The two words have the same essential meaning–'to leave one country to live in another.'"[28] The only difference is point of view–whether the emphasis is on the place of departure or the place of arrival. And, once it is seen that no difference distinguishes "emigrate" and "immigrate," the realization quickly emerges that no difference distinguishes those two words from the word "migrate." According to *Merriam Webster's Collegiate Dictionary,* to migrate is "to move from one country, place, or locality to another."[29] The definitions are as similar as the words themselves.

Of course, it is obvious that the words have different connotations, but if the goal is to conceive a common physical behavior that characterizes migration, and a common definition of migration that will be useful to sociobiologists, historians, social scientists, or humanists who are trying to understand the phenomenon, it is essential to agree on some common definitions. As it happens, sociobiologists rarely if ever use the words "emigrate" and "immigrate," almost certainly because as far as anyone can tell few life forms other than humans have ever established nations or countries that are ruled or administered by governments (although one could consider ant colonies or bee hives to be somewhat analogous to political institutions). But, as far as has been established up to now, nothing like national boundaries separate the geographic habitations of animals from each other, although the importance of territoriality cannot be overlooked.

An even closer examination of the words "emigration," "immigration," and "migration" reveals another problem with terminology and the meaning of these words. All three words imply something about residence and changing residential location. A migrant, an emigrant, and an immigrant are all people who move from one place to another, and move not just temporarily but move permanently (at least theoretically). Once again, sociobiologists mean something else when they use the words. In fact, they don't use two of them at all–emigrant and immigrant. To a biologist, when a whale travels back and forth between the Arctic Ocean and the Equator, eating in the North and giving birth in the South, or when a wildebeest makes an annual circuit through different sections of the Serengeti Plain in Kenya and follows water during the annual rain

cycle, these animals are migrating. But are they in human terms? Can migration be temporary and recurring? If a person travels from Singapore to San Francisco and goes back and forth annually, would that be migration as it would if the subject was some non-human animal?

Or, consider transhumance, the movement of flocks and herds of animals and their keepers from low pastures to high hills or mountains to seek food in the summer and then the return annually every winter. Is this migration? If it is, what is its biological origin? Did the practice, once common everywhere in Europe, begin with humans leading or following their animals up and down in search of pasture? And, if transhumance is not migration, why is the circular movement of whales called migration? Or, should it be said that both the people and the whales have two residences, or dual citizenship, or are circular migrants? Or, is temporary migration of either humans or other animals a different kind of movement and a different phenomenon from permanent migration that does not have the same biological basis?

Putting these questions into a familiar example drawn from contemporary human society, most college students go back and forth between their family residence and their college residence at least once a year, frequently more often. But this regular, repeated movement of going back and forth between home and college is unlikely to be called "migration." Is it consistent, then, to use the word when referring to the wildebeest or the whale? And, if it is argued that there are similarities between the student and the wildebeest, should it not be said either that both are acting in response to the forces of biology or that both are acting in response to the forces of culture and society?

Once the case of the peripatetic student is raised, other qualifications and limitations leap to mind–the reason for a migration, the distance traveled, the length of a migrant's absence, a migrant's intent before making a journey, and crossing international boundaries–or, to put it on a daily level, going to work, going shopping, going to the doctor. Are those activities migration? Are all the other conditions and qualifications just mentioned central to understanding the biological origin of migration? What, if anything, is the difference between biologically determined movement and any other kind of movement? Or, is there any at all?

At present, not enough is known to answer the question of what constitutes migration and how migration differs from other forms of movement, if it differs at all. Not enough is known to say whether all movement has the same biological origins, or if one kind of movement can be separated from the others. Since the location of a line between the biological and the social or cultural causes of migration has never been determined, seeking the biological origins of migration is more than daunting. While it seems clear that the ability to move from one place to another is a central characteristic that defines any organism belonging to the animal rather than the plant kingdom, it is not known where biology ends and culture begins. Is there a biological reason why most of us move around on a daily basis, going from home to store or school or office, or are those movements solely the result of culture and society? Almost certainly *where* people go is a function of culture and society; people have learned to go to grocery stores for food and to their offices for work. But what about the very act of moving itself? Are there biological reasons that explain why people go from place to place? Or that they change their place of residence? Or that they move out of a country? Or that they travel to distant places on vacation? Have these acts of movement been produced solely by society and culture, or do they have a biological basis?

Before migration can be fully understood, and why migration takes place, and the consequences of migration, and anything else that concerns migration, we need to know what is meant by that word. We need to look at such factors as the length of time a person is gone, the distances traveled, the destinations, the purposes, and so on. And, we need to know how those qualifications relate to migration as that word is defined. Only after we have settled on exactly what is meant by "migration" and the differences between it and other forms of movement, can we attempt to discover if it has biological origins, what they are, and where the line between the biological and social/cultural causes of migration lies exactly.

## Notes

1 "traveller," *Oxford English Dictionary On-line,* quoting J. W. Long, *Amer. Wild-life,* I, 21.

2 Donna R. Gabaccia, "Do We Still Need Immigration History?" *Polish American Studies*, 55 (1998), 46-68; Donna R. Gabaccia, "Is Everywhere Nowhere? Nomads, Nations, and the Immigrant Paradigm in American History," *Journal of American History*, 86 (1999), 1115-34; Donna Gabaccia, "Comment: Ins and Outs: Who is an Immigration Historian?" *Journal of American Ethnic History*, 18 (1999), 126-135; Donna R. Gabaccia, "Liberty, Coercion, and the Making of Immigration Historians," *Journal of American History*, 84 (1997), 570-575.

3 While I am referring specifically to historians of the United States, the same statement can be made about historians of migration to and from other countries. It is customary for all historians of the modern world to write about emigration and immigration rather than migration.

4 Gabaccia, "Is Everywhere Nowhere?" *Journal of American History*, 86 (1999).

5 U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970.* 2 vols. (Washington, DC: 1975), vol. 1: 8, 14-5; U.S. Bureau of the Census, *Statistical Abstract of the United States: 1991*. 111th ed. (Washington, DC: 1991), 40; U.S. Bureau of the Census, *Statistical Abstract of the United States: 1992*. 112th ed.. (Washington, DC: 1992), 47.

6 U.S. Bureau of the Census. *Historical Statistics*, vol. 1: 14.

7 Gabaccia, "Ins and Outs," *Journal of American Ethnic History,* 18 (1999), 126.

8 U.S. Bureau of the Census. *Historical Statistics*, vol. 1: 8, 14-5; U.S. Bureau of the Census, *Statistical Abstract: 1991*, 40; U.S. Bureau of the Census, *Statistical Abstract: 2000*, 47.

9 Oscar Handlin, *The Uprooted; the Epic Story of the Great Migrations that Made the American People* (New York: 1951).

10 *Chicago Sunday Tribune*, December 16, 1951; *Library Journal*, 76 (October 1, 1951), 1559; *New York Herald Tribune Book Review*, December 9, 1951; *Survey,* 87 (December 1951), 545; *New York Times*, October 7, 1951; *Annals of the American Academy of Political and Social Science*, 281 (May 1952), 221; *Chicago Sunday Tribune*, December 16, 1951; *Library Journal*, 76 (October 1, 1951), 1559; *New England Quarterly,* 25 (March 1952), 119.

11 Karen Brown, review of *The Uprooted*, in *American Historical Review*, 57 (1952), 703.

12 Rudolph J. Vecoli, "Contadini *in Chicago: A Critique of* The Uprooted," *Journal of American History*, 51 (1964), 404-416.

13 As late as 1982, seven years after the publication of *Sociobiology*, Daniel Scott Smith was able to write that he knew of only one article

by a historian which attempted to apply the concepts of sociobiology to the historical study of human behavior even though, as Carl Degler pointed out in the article cited below, history and evolutionary biology have much in common since both attempt "to explain human behavior by reference to the past." Smith also pointed out that while the 1980 edition of *Social Science Citation Index* listed 170 entries under the topic of sociobiology, only 37 similar entries appeared in comparable indices for the arts and humanities. Daniel Scott Smith, "Sociobiology and History," *Journal of Interdisciplinary History*, 13 (1982), 301-310; Carl N. Degler, "Can a Historian or Social Scientist Learn Anything from Sociobiology; an Attempt at an Answer," *Historical Methods,* 14 (1981), 173-79. Since that time, more than twenty years, the two major sources for abstracts of historical journals and other works, *America: History and Life* and *Historical Abstracts*, respectively contain only 25 and 39 references to sociobiology, many of them being duplicates of each other, many of them being references to book reviews, and few of them being attempts to use the insights of sociobiology to explain human behavior.

14 Edward O. Wilson, *Sociobiology, the New Synthesis.* (Cambridge, Mass.: 1975).

15 *America*, 133 (August 16, 1975), 73; *Library Journal*, 100 (October 1, 1975), 1834; *National Review,* 27 (October 10, 1975), 1128; *New York Times Book Review,* July 27, 1975.

16 Review Symposium in *American Journal of Sociology*, 82 (1976), 692-706.

17 Steven Pinker, *The Blank Slate; the Modern Denial of Human Nature* (New York: 2002), 109; "Against Sociobiology," *New York Review of Books*, 12 (November 13, 1975), 43-4.

18 *New York Times,* February 16, 1978. The literature concerning the debates and conflicts about sociobiology is voluminous. One recent, passing look at the bibliography of the History of Science uncovered more than 200 titles under the listing of "sociobiology." A sampling of the more useful includes W. R. Albury, "Politics and rhetoric in the sociobiology debate," *Social Studies of Science*, 10 (1980), 519-536; Carl N. Degler, *In Search of Human Nature: The Decline and Revival of Darwinism in American Social Thought* (New York: 1991); Donna Haraway, *Primate Visions: Gender, Race and Nature in the World of Modern Science* (London: 1989); Harmon R. Holcomb, "The modern synthesis and Lewontin's critique of sociobiology," *History and Philosophy of the Life Sciences*, 10 (1988), 315-341; Howard L. Kaye, *The Social Meaning of Modern Biology : from Social Darwinism to Sociobiology* (New Brunswick, NJ: 1997); Philip Kitcher, *Vaulting*

*Ambition: Sociobiology and the Quest for Human Nature* (Cambridge, Mass.: 1985); R.C. Lewontin, "Facts and the factitious in natural sciences," *Critical Inquiry*, 18 (1991), 140-153; Richard C. Lewontin, Steven Rose, and Leon J. Kamin, *Not in our Genes: Biology, Ideology, and Human Nature* (New York: 1984); Michael Ruse, *Sociobiology: Sense or Nonsense* (Dordrecht, Netherlands: 1979); Marshall Sahlins, *The Use and Abuse of Biology: An Anthropological Critique of Sociobiology* (Ann Arbor, Mich.: 1976); Ullica Segerstråle, "Colleagues in Conflict: An 'in vivo' analysis of the sociobiology conflict," *Biology and Philosophy*, 1 (1986), 53-87; Ullica Segerstråle, *Defenders of the Truth: the Battle for Science in the Sociobiology Debate and Beyond* (Oxford, Eng. and New York: 2000); Roger Smith, *The Norton History of the Human Sciences* (New York: 1997); V.B. Smocovitis, "Talking about sociobiology*," Social Epistemology: A Journal of Knowledge, Culture, and Policy*, 6 (1992), 219-230.

19 Edward O. Wilson, "For Sociobiology," *New York Review of Books* (December 11, 1975).

20 Wilson, *Sociobiology*, 4.

21 Edward O. Wilson, *On Human Nature* (Cambridge, Mass.: 1978).

22 Wilson and a co-author also received a Pulitzer Prize in 1990. Bert Holldobler and Edward O. Wilson, *The Ants* (Cambridge, Mass.: 1990).

23 Wilson, "For Sociobiology," *New York Review of Books* (December 11, 1975).

24 John Alcock, *The Triumph of Sociobiology* (Oxford, Eng.: 2001), 12-13. Alcock himself borrowed this distinction from the evolutionary biologist Ernst Mayr. See, Ernst Mayr, "Cause and Effect in Biology," *Science*, 134 (1961), 1501-1506; reprinted in Ernst Mayr, *Evolution and the Diversity of Life: Selected Essays* (Cambridge, Mass.: 1976), 359-71.

25 *Ibid.*

26 Steve Olson, *Mapping Human History; Discovering the Past through Our Genes* (Boston, Mass.: 2002); Steven Pinker, *The Blank Slate; the Modern Denial of Human Nature* (New York: 2002).

27 The most efficient way to illustrate this point is to examine the "Table of Contents" of any recent issue of *Behavioral Ecology and Sociobiology.* Nearly every issue has one or more articles demonstrating the biological bases of some type of animal behavior.

28 [Meriam-Webster, Inc.], *Webster's Dictionary of English Usage* (Springfield, Mass: 1989), 389.

29 [Merriam-Webster, Inc.], *Merriam-Webster's Collegiate Dictionary,* 10th ed. (Springfield, Mass.: 1996), 738.