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The Two Environmentalisms
: Reflections on Nature and Culture since the 1960s

Bellomy, Donald C.*

<Abstract>

A momentous shift in American intellectuals' understanding of humanity, culture, and nature began in the 1960s and 1970s. Symbolic of the transition was a gradual substitution of primary definitions of the term *environmentalism*, from the malleability of human values, knowledge, and goals due to the overwhelming importance of culture, to the care and respect for the complex web of relationships across the diversity of species. The significance of environmentalism in its earlier definition was eroded as the post-World War II intellectual consensus pairing cultural environmentalism and human distinctiveness unraveled for a number of reasons, including the appeal of biological arguments to segments of the left coalition as well as questions raised by the debates about behaviorism and linguistics. In retrospect, it also seems that the shift in definition to the ecological sense of environmentalism was itself a stimulus rather than simply a symptom of the transition. As humanity assumed a new position as part of rather than separate from and dominating the natural world, a new characterization of environmentalism underscored the new message encoded in the changes in biological and psychological research.

[Key words] environmentalism; hereditarianism; ecology; sociobiology; evolutionary psychology

* Bellomy, Donald C. (E-mail : dcbellomy@yahoo.com)
Ph. D. earned at: Harvard University
Affiliation: Visiting Professor, Honam University
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I: Shifting Meanings for Environmentalism

The heyday of Thomas Kuhn from the late 1960s through the 1980s saw the early signs of at least one significant paradigm shift among American scientists and the broader intellectual community, the scope of which can be suggested by a telling mutation in primary definitions for the term "environmentalism." At the beginning of this period the belief that human activities were shaped overwhelmingly by the cultural environment, mediated (if at all) only by the most rudimentary and vague biological drives, had become what later critics would call the Standard Social Science Model (Tooby and Cosmides 1995). Indeed, the 1980 edition of Webster's New Collegiate Dictionary (378) offered only one definition of environmentalism: it was "a theory that views environment rather than heredity as the important factor in the development and esp[ecially] the cultural and intellectual development [sic] of an individual or group." In an extreme but influential statement of the assumptions undergirding this definition, which for the sake of convenience I will refer to as Environmentalism I, Ashley Montagu argued that "the single trait which is alone sufficient to distinguish man from all other creatures is the quality of educability – it is the species character of Homo sapiens" (Montagu 1956, 9, emphases in text). In a volume promising an analysis of the "biosocial nature of man," Montagu acknowledged only the most basic biological needs required for physical survival (food, sleep, waste elimination, etc.); even sex did not qualify, because he considered it "a biological drive the expression of which is much influenced if not entirely determined by cultural factors" (Montagu 1956, 51).

By 2000, however, the fourth edition of the American Heritage Dictionary of the Engli sh Language listed first under the term "enviro nmentalism" a more recent usage denoting "Advocacy for or work toward protecting the natural environment from destruction or pollut ion," relegating the word's original definition (given here as "[t]he theory that environment rather than heredity is the primary influence on intellectual growth and cultural developme nt") to second place. Other sources cited by Dictionary.com in 2004 continued to emphasi ze the original definition if the intended audien ce was primarily the medical and psychologic al communities, or reversed the primary and secondary definitions to give precedence to anti-hereditarianism, but my own sense of predominant usage agrees with the arbiters on the American Heritage board ("Environme ntalism" 2004).[1] I will refertothislaterascenda

1) I have maintained the definitions as offered by Dictionary.com in 2004 because there is no entry as such for environmentalism in 2016, only a mention of it as an alternative form of

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ntdefinitionasEnvironmentalismII.

The displacement of the original definition in part marked the sudden rise in interest in safeguarding our natural surroundings, especially the integrity and diversity of the biosphere, from unnecessary human intervention, but it also signaled a diminishing confidence in the theory summarized by the original sense of the word. My reading suggests that fewer writers and teachers used the term except to criticize the views of its former proponents; the intellectuals who inherited many of the underlying intellectual and moral preferences of the earlier "environmentalists" seldom used the term to describe themselves, and preferred, in place of "hereditarians," the expected antonym for environmentalists in Environmentalism I ("Environmentalism" 2004), the phrase "biological determinists" to describe their opponents.

But until relatively recently the appeal of Environmentalism I ran deep. On a personal note, I can remember my excitement when introduced to it in high school during the early 1960s by two Mentor paperbacks from the pens of central figures in the tradition: Ruth Benedict's Patterns of Culture and Ashley Montagu's Man: His First Million Years. From them I learned that, as Benedict argued, human societies differed from insect societies in that the creation, sustenance, and variability of patterned activity was due in the former entirely to culture, and in the latter entirely to genetics (Benedict 1946 [1934], 11) – that, in Montagu's words, "Human nature is not what a man is born with, but what he becomes under the organizing influence of the socializing environment into which he is born" (Montagu 1958 [1957], 88)

And as an anti-racist student in the American South, I could dimly appreciate the broader historical and moral context in which Montagu's words were written, although I did not then know that Montagu's blistering Man's Most Dangerous Myth: The Fallacy of Race had helped make World War II an ideological confrontation with Nazi racism (Montagu 1952 [1942]). I did not realize that Montagu had co-authored, with Theodosius Dobzhansky, a classic article in Science in 1947 that had argued for a unitary human mental evolutionary process distinguishable from the somatic variations between races that had developed through natural selection and genetic drift (Dobzhansky and Montagu 1975 [1947]). I would only later learn that he had been instrumental in drafting, and then in popularizing for a wider audience, the first UNESCO Statement on Race in 1950, hammered out by a committee chaired by the African-American sociologist E. Franklin Frazier in the building that only a few years earlier had served as German military headquarters in occupied Paris (Montagu 1972 [1951], x, 1-4).

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the basic noun which is now assumed to be environmentalist. This shift is itself probably a reflection of the dominance of Environmentalism II, which is the reference point in all the recent examples drawn from the Web on offer in Dictionary.com ("Environmentalism" 2016).

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But I had sufficiently imbibed the environmentalist ethos that I can remember anguished late-night bull sessions with other like-minded undergraduates at the University of Virginia as we worried about the political implications of some of the recent anti-environmentalist trends in ethnology, psychology, and biology. For despite the apparent domination of Environmentalism I within the behavioral sciences and biology, the tension between heredity and the environment, between nature and nurture, that Donald Fleming called the "Great Polarity" in modern science (Fleming 1976) had not dissolved, but was assuming new forms and claiming a new urgency.

II: Environmentalism I on the Defense

The aspects that Fleming chose to emphasize were the diverging paths within comparative psychology. One led from Jacques Loeb's reflexive tropisms to the behaviorism of J.B. Watson and B.F. Skinner, whose Beyond Freedom and Dignity had reached the bestseller lists in 1971, five years before Fleming's essay appeared. The other moved from evidence collected initially by Lloyd Morgan and E.L. Thorndyke of the ability of inherited drives to select and shape responses to stimuli towards the ethology of Konrad Lorenz and recent popularizers like Robert Ardrey, Desmond Morris, and Lorenz himself, whose On Aggression had its own sally into American bestsellerdom in 1966. The ethologists were, as Fleming notes, "engaged in an aggressive updating of hereditarianism" that "insisted upon the extremely limited malleability of human nature and the virtual impossibility of transcending man's animal origins" (Fleming 249).[2)]

Similar challenges to Environmentalism I were emanating from psychologists like Arth ur Jensen and Richard Herrnstein who laid out the case for the heritability of intelligence. In Jensen's case, a major furor arose when he decided that the evidence he was collectin g in what had initially been an attempt to explain in standard Environmentalism I terms the scholastic difficulties of "low-SES" (socioe conomic status) minority children seemed ins tead to point in the opposite direction. This led him to assert, in an toxically controversial article published in 1969, that "It seems not unreasonable, in view of the fact that intellige nce variation has a large genetic component, to hypothesize that genetic factors may play a part in" in the widely acknowledged discrepa ncies in IQ test results by race (Hunt 1999, 65-81, quotation on 72). Other research with possible implications for undermining aspect

2) On Aggression was the title chosen for the English-language translation of Lorenz's Das sogenannte Böse (1963), which as Fleming notes (244) would have been more accurately rendered as The So-Called Evil. On Lorenz see also Richards 1987, 528-536, Burkhardt 2002, and Burkhardt 2005. For an anthropologist's response to the ethologists' assault on Environmentalism I, see Alland 1972.

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s of Environmentalism I became regular fodd er for the press, sometimes in grotesquely exaggerated form, as in the brouhaha about the extra male chromosome (XYY), inevitably labeled “the gene for criminality” (Davis 1986, 141-146, reprinting an essay from 1976).

But the most vituperative debates were set off by the publication in 1975 of Sociobiolo gy: The New Synthesis by Edward O. Wilson. In cruel riposte to Ruth Benedict’s dichotomiz ation in Patterns of Culture between genetics-dominated insect societies and culture-forme d human societies, the leading American exp ert on social insects posited that genetic predi spositions and needs, above all the evolution ary requirement to pass along as much of an individual’s DNA as possible, governed significant portions of the social interactions of both ants and higher primates, including mankind (Wilson 1975b, 3-6, 547-575). It cou nted for little that Wilson tried to signal that he was, to the extent that he thought in politica l terms, a classic Southern liberal. For exampl e, arguing that human success depends on a wide variety of traits of which IQ is only one ingredient and that no simple correlation exists between economic ascendancy and genetic endowment, he distinguished his own hereditarian position from the views typically associated with IQ specialists like Herrnstein and Jensen (Segerstråle 210-211). Neverthel ess, Wilson represented a more potent and worrisome threat to the scientific, political, and moral claims of Environmentalism I even than the “IQ Wars” precisely because he was explicitly touting sociobiology as a new, altern ative paradigm for the social and behavioral sciences (cf. Wilson 1994, 327-329).

A regular reader of the major US book reviews and journals of political commentary during the first decade or so after the publicati on of the hereditarian heresies of Herrnstein, Jensen, and Wilson might be forgiven for assuming that Environmentalism I came thro ugh its ordeal of fire relatively unscathed. As was to be expected, many social scientists leapt to the defense of the disciplines as they had been defined in recent decades, or even since their inception at the turn of the twentiet h century. For example, the anthropologist Marshall D. Sahlins retorted that sociobiology “is completely unable to specify the cultural properties of human behavior or their variatio ns from one human group to another” (Sahlins 1976, xi). On a less theoretical level, he warne d that, if researchers switched to a sociobiolo gical paradigm, “We should have to abandon all understanding of the human world as mea ningfully constituted, and so the one best hope of knowing ourselves” (107).[3)]

Perhaps more surprisingly, the nastiest skirmishes often seemed to be occurring within the natural sciences and psychology, in full view of lay audiences. In particular

3) On the relatively recent creation of the social and behavioral sciences as members of each of the disciplines except economics understood them as the debates about Environmentalism I began in the 1960s and 1970s, see, for example, Ross 1991. For a salutary reminder of countertrends in early American social science usually abandoned after World War II, see Cravens 1978.

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Robert Silvers, the tutelary spirit of The New York Review of Books, typically preferred critiques of the new developments in biology and psychology from a select group of well-placed dissenters usually in the same or closely aligned fields for the numerous review articles published in its pages analyzing books related to sociobiology, the IQ controversy, and other aspects of the "Great Polarity" (Lewontin 2001 [2000], xvi-xvii). Among them was the paleontologist Stephen Jay Gould, who from the beginning to the end of his career as the most prolific and warmly regarded popularizer of science in late twentieth-century America made genetic explanations of human traits a regular target of his essays and books, from Ever Since Darwin (Gould 1977, 237-267) through the posthumous The Hedgehog, the Fox, and the Magister's Pox (Gould 2003, 189-260). Richard Lewontin joined Gould, his fellow Harvard biologist, in attacks often focused on another member of the same department, E.O. Wilson. The title of one of the works that Lewontin has co-authored, Not in Our Genes, took on an added frisson because of his status as one of the country's most important geneticists. Although Lewontin had scientific and philosophical bases for his attacks, the political implications often seemed foremost on his mind (Segerstråle 2000, 101-107), as in the charge that "The general appeal of sociobiology is in its legitimation of the status quo" (Lewontin, Rose, and Kamin 1984, 236).

In addition to the many attacks on the new alternatives to Environmentalism I (cf. Segerstråle 2000; Hunt 1999, especially 29-176; and Davis 1986, especially 43-159 and 257-324), the bad historical associations of hereditarian thought in America received a drumroll of publicity in books timed to offer salutary warnings against repeating past mistakes. Especially significant in helping to shape attitudes in this regard were The Mismeasure of Man (Gould 1981), Stephen Jay Gould's history of efforts to quantify and establish the heritability of intelligence that won the National Book Critics Circle Award, and In the Name of Eugenics, an account of the historical interrelationships between genetics and eugenics that earned Daniel J. Kevles an American Book Award nomination (Kevles 1985; see also Kühl 1994 and Black 2003).

Moreover, aspects of the new "Great Polarity" dichotomization slanted into other discourses nurtured in the cultural politics of the period, the network of postmodernist concepts and approaches that individually or in the aggregate seemed to offer added aid and comfort to Environmentalism I defenders with mindsets matured in the humanities or the more humanistically oriented traditions in the social and behavioral sciences. Among the network's principal nodes were social constructivism, deconstruction, Michel Foucault's equation of knowledge and power, "truth-deflationist" neo-pragmatism, and the new interpretative frameworks for interpreting scientific thought, both the "externalist" school of the history of science with its emphasis on outside

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social and economic forces shaping and sele cting scientists and scientific work, and the Kuhnian perspective of shifting paradigms demanding individual decisions irresolvable in terms of “proof.” Pragmatically, these conc eptions not only provided weapons against scientists claiming the authority of objective data for results with significant political and ethical implications and, perhaps, dubious political motivations, but also closely parallele d the Environmentalism I emphasis on the dominant, for all intents and purposes exclusi ve role of culture in shaping humanity and its artifacts (Segerstråle 2000, 333-347; Jum onville 2002).

The resemblance signaled a familial tie, for in many respects the network of humanist ideas and approaches dominant from the 1960s in many academic circles derived, often through a Heideggerian medium, from the anti-positivist traditions of the late nineteenth and early twentieth centuries. These traditions in turn typically drew on the sharp divisions between human and animalistic existence formulated by late nineteenth-century scientists and philosophers, including Wilhelm Dilthey (1989 [1883]), Lester Ward (1968 [1911, 1883]), and Thomas Huxley (1899, 1-116), anxious to bracket humanity from the rest of the animal world, so uncomfortably close to the human race after the triumph of Darwinian evolution. The revival of the “Great Polarity” debates also meant that the questions of the nature, capabilities, and self-determination of humanity had been reopened.

III: Why the Environmentalism I Defense Cracked

Yet despite the apparent stakes of the struggle – despite the dominance of the foes of hereditarianism in the presentations of the issues within critical sectors of the American intellectual establishment – it seems clear from the vantage point of the early twenty-first century that the defenders of Environmentalis m I have lost, with its interlocking underlying assumptions dwindling in importance alongsi de the original signification of the word. The exultation in the title of The Triumph of Sociobi ology (Alcock 2001) should not be taken to mean that the science has achieved, at least as yet, the central position envisioned by Wils on in 1975, but it suggests the relief felt by participants that over the course of a quarter of a century the new discipline had weathered the scientific, political, and moral assaults of its enemies. The title selected by John Alcock also demonstrated the self-confidenc e of a field that had established itself as a respected locus of significant new questions and sophisticated research. Alcock, a biologi st specializing in animal behavior at Arizona State University, even puckishly wondered whether, “when critics tag sociobiologists as genetic determinists, they may, ironically eno ugh, be tapping into an evolved enthusiasm for free will and freedom of action, attributes that make many receptive to the depreciation

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of sociobiology" (45-46).

A year after the appearance of Alcock's book, Steven Pinker, a psychologist then at MIT whose well-received accounts of How the Mind Works and The Language Instinct had won him the kind of plaudits that used to accrue to Stephen Gould, launched a broad side against the environmentalists in The Bla nk Slate. In its pages he recounted, with consi derable exasperation, the evidence for heredi tarianism in linguistics, psychology, and hum an interaction that Environmentalism I advoc ates preferred to sweep under the rug (Pinker 2002). Pinker's dyspepsia may be as unconvi ncing to true believers within the Environment alism I ranks as Alcock's triumphalism, but his record as a researcher and theoretician on visual and verbal cognition in the field increasingly known as evolutionary psycholo gy again demonstrated the momentum that more heredity-oriented approaches have atta ined. As part of the wider recognition of Pinke r's leadership position in the field, in 2003, the year after the publication of The Blank Slate, he moved his office across Cambridge to an endowed chair at Harvard.

However, because direct participants on either side of a disputed research area can be expected to defend their turf tenaciously, perhaps the most telling evidence of an intelle ctual sea change had appeared a decade earlier. After tracing the history of the conflict between environmentalist and hereditarian positions from the late nineteenth century to about 1990, Carl Degler's In Search of Huma n Nature treated recent developments like sociobiology sympathetically, concluding tha t "the movement that began three decades ago to follow out the implications of Darwinian evolutionary thought and to restore biology to the definition of man seems likely to persist and, perhaps, to advance further in the directi on Darwin had pointed, a direction which still delineates a conception of human nature mor e radical than many can accommodate" (Degl er 1991, 349)." Degler's credentials to offer this judgment were unassailable, both profes sionally, as a past president of the Organizati on of American Historians and the American Historical Association, and politically, as the author of key historical texts, open-minded but undeniably liberal in outlook and goals, in the areas of racism (notably Neither Black nor White, his Pulitzer Prize-winning analysis of comparative development of racial concept s and race relations in Brazil and the United States) and feminism (especially At Odds, his history of women and the family in Americ a).

In analyzing why the paradigm might have shifted, we need to keep in mind that, no matter the direction or strength of our predilec tions, the weight of new evidence would proba bly have eventually told against Environment alism I, since it had chosen a more difficult terrain to defend. Neither side in the "Great Polarity" debate typically claimed that nature or nurture exclusively shaped human existen ce. However, the environmentalists, probably from the urgency of their political and moral needs, allowed themselves to be boxed withi n a small corral with little maneuvering room:

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they had to depict as “genetic determinism” almost any relatively specific, non-trivial biolo gical contribution to human consciousness and activity, while their opponents needed only to establish a significant (meaning simply non-trivial) proportion of hereditability for an important trait or type of interaction. Pinker’s summary of research on biological versus adoptive siblings found a range of heritability values “generally between .25 and .75,” but this broad compass provided all the wiggle room he needed. On its basis he could assert that, regardless of the imprecision, “about half of the variation in intelligence, personalit y, and life outcomes is heritable – a correlate or an indirect product of the genes” (Pinker 2002, 374). He could shrug off the other half (or one quarter, or three quarters); the environ mentalists from their vantage point did not have that luxury.

But beyond the difficulties of their chosen battleground, the environmentalist defenses proved much shakier than most observers would have predicted in the 1960s or 1970s. Without prejudging whether one side was more “right” than the other in the debate, it is important to look at possible reasons for the difficulties faced by Environmentalism I in the last third of the twentieth century and the early twenty-first.

One factor almost certainly was battle fatigue due to the number of fronts on which the war was being waged – not only IQ and sociobiology, but also the extent to which aggression is innate or learned behavior, the nature and extent of sexual differences, the nature and extent of racial differences, the relationship between genetics and criminal behavior, the possibilities of genetic intervention as a retooled eugenics, and, for some doughty warriors, the human genome project (Hunt 1999, 29-176). Each new compilation of refutations of one of the anti-Environment I approaches seemed barely to gather dust on library shelves before another on a new front, sometimes with some of the same contributors, often in the early years edited by the near-ubiquitous Ashley Montagu (for example, Montagu 1975 and Montagu 1980).[4)]

Perhaps even more dispiritingly, environmentalist social and behavioral scientists and their counterparts in biology departments often had to refight battles on the same terrain, like First and Second Bull Run. Especially virulent was the second go-around for the battle over IQ occasioned by the publication in 1994 of Richard Herrnstein and Charles Murray’s The Bell Curve, with its implied warning that, in Murray’s words, “America’s discussion of social policy since the 1960s has been carried out in a never-never land where human beings are easily changed and society can eventually become a Lake Wobegon where all the children are above average” (Herrnstein and Murray 1996 [1994], 574). The pessimistic policy implications from

4) Montagu also weighed in with volumes on the human aggression and sexuality issues. Caplan 1978 was somewhat exceptional in its attempt to cover both sides of the sociobiology issue.

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Herrnstein and Murray's treatment of issues related both to race and class led to an even more blatant political cast to the discussions about The Bell Curve than to almost any of the earlier battles (see, for example Fraser 1995, Devlin, Fienberg, Resnick, and Roeder 1997, and Gould 1996, a revision of The Mismeasure of Man now billed on its cover as "the definitive refutation to the argument of The Bell Curve").

What many saw as the book's "profound fatalism and austere elitism" (Fraser 1995, 2) led some to view it as a manifesto of the "Brave New Right" (Lind 1995). This raises a question about the diminishing centrality of Environmentalism I that tormented its proponents almost from the start of the new "Great Polarity" wars, for the conflicts seemed to coincide with what they tended to regard as a dispiriting resurgence of conservative politics. The conservative resurgence first gained traction in reaction to the civil rights and antiwar movements, the Great Society legislation, and the counterculture during the Nixon years, then blossomed in the broader conservative counterrevolution that since the election of Ronald Reagan in 1980 has kept the Republicans near the political throttle in the United States. It is obvious that the new hereditarianism could, for some, bolster a sense of the constraints on the human capacity to effect meaningful change that fit well with an anti-utopian strain in conservatism dating back at least to Malthus. Herrnstein, for example, had earlier collaborated with the neoconservative political scientist James Q. Wilson, then his colleague at Harvard, in a study on Crime and Human Nature (Wilson and Herrnstein 1985).

Moreover, the heavily politicized conflict pushed apolitical or essentially liberal hereditarians into retaliatory rhetoric that dismissed critics as naïve Rousseauist primitivists at best (Pinker 2002, 6-8 and passim), but all too often cynical Marxists putting their ideological agenda above the canons of science (Wilson 1978, 190-191). The friction generated by constant scraping against what seemed an entrenched academic and intellectual establishment sometimes leant the articulation of anti-Environment I positions the bruised, belligerent, rancorous tone typical of the conservative position in the culture wars about postmodernism and multiculturalism (Jumonville 2002; see, for example, Pinker 2002, 272-273).

But the political climate seems to have played only a relatively minor role in the declining fortunes of Environmentalism I. Despite the ferocity and sometimes bitterness of the debate and occasional threats or acts of violence like the pitcher of iced water dumped on E.O. Wilson's head at the symposium on sociobiology at a meeting of the American Association for the Advancement of Science (AAAS) in 1978 (Wilson 1994, 347-350; Segerstråle 2000, 22-24), in reality few impediments to the expression of views existed on either side of the controversies. No political

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establishment imposed narrow parameters on scientific endeavor, like the state-sponsored Sozialbiologie of racism and eugenics in Nazi Germany or Lysenkoist genetics in the Soviet Union. It is true that some of the harshest opponents of sociobiology equated the term with Sozialbiologie and that Konrad Lorenz's detractors could point to "race purity" themes in some of his writings in Germany during World II, while hereditarians occasionally tried to tar the defense of Environmentalism I with the memory of the life-or-death stakes for scientists during the dominance of neo-Lamarckian biology in the Stalinist era (Segerstråle 2000, 26, 207, 226-234; Burkhardt 2005, 231-280). However, the liberal tradition in American politics, the consensus favoring academic freedom in research, and the scientific ideal of untrammeled research, however frayed each might have seemed during the heat of battle, by and large held.

More to the point, the rise of the right in American politics did not directly reinforce the defense of Darwinian and hereditarian positions and contributed only obliquely to the broader debate – and it would have been odd if it had played a more activist role. In purely political terms, Republican politicians or appointees could not publicly endorse biological arguments that might antagonize the vociferous evangelical, anti-Darwinian elements in their coalition. A cover of the New Republic in 1982 depicting the three-stage evolution of an ape into Ronald Reagan (The New Republic 1982) would have disturbed the anti-evolutionist President more than the advertised scholarly exegesis by Robert Reich of Reaganite policies in terms of the so-called "Social Darwinism" of Herbert Spencer and William Graham Sumner (Reich 1982). Later, at a point when many scientists felt that the George W. Bush presidency demonstrated a distaste for unbiased research canons recalling, even if less thoroughly or perniciously, the excesses of Sozialbiologie and Lysenkoism (Union of Concerned Scientists 2004), the Bush White House did not choose to exercise this bias against the tenets of Environmentalism I.

Nor was this avoidance on the right of sociobiological arguments purely tactical, for a major strain of neoconservative thought exhibited a pronounced discomfort with the naturalism unleashed into contemporary culture by narrowing scientific worldviews – above all, it was held, by Darwinian evolution (Himmelfarb 1968 [1962, 1959]). Indeed, despite the acrimony displayed by both sides during the "culture wars," the postmodernists and their critics, whether traditional liberal academics or aggressive neoconservatives, shared considerable common ground as humanists dedicated to the unique force of culture, however defined, as a source and shaper of the truly human. This convergence sometimes extended Environmentalism I, so that a lament for The Dehumanization of Man co-authored by a leading environmentalist like Ashley Montagu (Montagu and Matson 1983) often reads like a neoconservative

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screed on a par with Allan Bloom's The Closing of the American Mind (Bloom 1987).

Probably more problematic for Environme ntalism I than the rise of the right were the rifts created by the appeal of biological argum ents to segments of the liberal-left coalition and of the American population as a whole. A particularly touchy point turned out to be the etiology of disorders and other particular conditions and situations experienced by a minority of individuals, because the "environ ment" in which they presumably developed, in accordance with the tenets of Environment alism I, would have been the most intimate of all human relationships, the family – in particular, mothers, charged by both biology and the culture with their rearing. For exampl e, when autism first raised Americans' anxieti es about their young in the late 1950s, it was in the context of interpretations of its origins by Bruno Bettleheim and others that focused on mothering practices. Parents of affected children therefore greeted subseque nt research placing as much of the disorder's origins as could be discerned (a knotty proble m when its nature and extent proved so difficul t to tie down) within the realm of genetics rather than the result of insufficient displays of adult affection for the afflicted (Silverman 2012, 32-
47, 61-92, 141-166; Shapin 2016).

In other cases it was not parents but the individuals themselves who felt constrained and unfairly stigmatized by the assumptions of Environmentalism I. A large number of gay Americans have embraced the idea of inheritable tendencies toward homosexuality and, to a lesser extent, lesbianism because it made them feel "natural" in a way that cultural explanations, with their inherent bias toward conceptualizing minority behaviors as abnormal, could not. It also served pragmatic purposes in the politics of gayness, for it escaped the psychoanalytical emphasis on the role of the family environment in shaping sexual predilections, especially relationships between sons and mothers during early childhood, and countered the claims of the religious right that sexuality is a matter ultimately of individual choice and willpower (LeVay 1996; Wilson and Rahman 2008; LeVay 2011; and Patterson and D'Augelli 2013 passim). Although the latest research does tend to support the genetic hypothesis (Sanders et al 2015), the question remains open within the gay community, some of whom continue to hold that sexual identity is a social construct in which "the reality of a particular sexuality is dependent on and inseparable from the different words we use socially to describe it" (Katz 2007 [1995], viii). However, even the doubters tend to appreciate why the genetic argument has proved so popular among many gays and their liberal allies (e.g., D'Emilio 2009), and decline to enter the lists to defend the purity of Environmentalism I.

The concept of ingrained biological differences between the sexes was far less appealing in feminist circles, but growing in importance since the woman's movement's era of pure egalitarianism in the 1960s and

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early 1970s. Many feminists at first feared the implications of sociobiology, especially after Wilson hypothesized in 1975 that the persistence over millennia of a gendered dichotomy of men hunting and women staying at home suggested a "genetic bias… intense enough to cause a substantial division of labor even in the most free and egalitarian of future societies" (Wilson 1975a; Segerstråle 2000, 211). Many female scholars and feminist leaders also excoriated Julian Stanley and Camilla Benbow for the circumlocutionary conclusion to their 1980 study of differences in math testing, that it "seems likely that putting one's faith in boy-versus-girl socialization processes as the only permissible explanation of the sex difference in mathematics is premature" (Benbow and Stanley 1980, 1264; Hunt 1999, 119). However, Carol Gilligan's In A Different Voice (1982) showed how an argument for fundamental sexual differences, in this case in moral reasoning, could appeal to many feminists as long as it was cast in a non-invidious light – her "different voice" probably purred more soothingly because it was more descriptive than analytical, without ascribing causality to the sexual differences described (Gilligan 1982).

By the early twenty-first century, however, a body of solid research in psychology and neuroscience, often by women in what Steven Pinker has advertised as "perhaps the most bi-gendered academic field I am familiar with" (Pinker 2002, 342), had apparently established a solid base of demonstrable differences between the sexes usually explicable in evolutionary terms, while new groups and generations of feminist theoreticians have embraced the notion that equality does not presuppose indistinguishability (contrast Hunt 1999, 105-132, with Pinker 2002, 337-371). Meanwhile perhaps even sociobiology has shown its usefulness for feminism by contrasting "demonic males" waging war among chimpanzees and homo sapiens with their cousins the bonobos coexisting in sexual co-dominance and polymorphously perverse hypersexuality (Wrangham and Peterson 1996).

On a separate but related issue, a major crack was developing in the defenses around Environmentalism I with perhaps even more ominous implications for its viability, in that the fissure threatened to detach cultural environmentalism from the broader humanism with which it had been associated since the terms of the "Great Polarity" were first set in the late nineteenth century. The villain of the piece was B. F. Skinner, the behaviorist psychologist who functioned as the reflexologist counterweight to Konrad Lorenz in Donald Fleming's account of the nature vs. nurture division in the early 1970s. With proclamations like "What we need is a technology of behavior" (Skinner 1971, 5), Skinner was bound to raise hackles among contemporaneous readers attuned to counterculture values, but his blend of positivism (basically the nineteenth-century variety, with some coloring from the

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contemporary logical positivists) and environmentalism generated a broad range of detractors across the humanistic disciplines and well beyond (Bjork 1996). Indeed, by choosing the title Beyond Freedom and Dignity for his philosophical credo, Skinner seemed to be going out of his way to reinforce the doubts of humanists, including many social and behavioral scientists, about the behaviorist project.

Yet his message also seemed to parallel the core theme of Environmentalism I, for to Skinner the environment, previously the unconscious shaper of human behavior, could now be manipulated by scientists to elicit consciously selected ends. As he summarized the case, humans must "now accept the fact that all control is exerted by the environment and proceed to the design of better environments rather than of better men" (Skinner 1971, 82). Similarly, he joined the Environment I social scientists in viewing culture as the predominant type of environment in which human beings were immersed and therefore needed to control (Skinner 1953, 415-449; Skinner 1971, 127-183; Skinner 1974, 189-206). Skinner, it is true, paid obeisance to the memory of Darwin as the progenitor of selectionism and denied that behaviorism undervalued innate genetic characteristics (Skinner 1974, 68, 223-224). However, his call-and-response approach to evolution partook more of Lamarckian direct environmentalist action on the environment, while his "genetic endowment" remained unspecified and never seemed to get withdrawn from the sperm bank.

The many foes of Skinnerian psychology found a champion in Noam Chomsky. In his 1979 work Language and Responsibility Chomsky recalled that Skinner's views on language as verbal behavior were "quite the rage" when he arrived at Harvard for research in 1951, but that he had rejected them as soon as he began to study them (Chomsky 1998 [1979], 129). He brought his two-decade-long sparring match with Skinner to the intellectual equivalent of Madison Square Garden with a scathing indictment of Beyond Freedom and Dignity as science and as philosophy in the New York Review of Books (Chomsky 1987 [1972]). At least for left-leaning academics with the customary views about the Vietnam War, still raging during the height of the contretemps about Beyond Freedom and Dignity and behaviorism, their champion's political credentials were impeccable, as were his vigorously expressed views on the race and IQ issue. Although Chomsky noted that some degree of variability in "intellectual capacities and their specialization" would be unsurprising, he declined to go looking for them, at least at the racial level. "In a racist society," Chomsky asserted, "inquiry into race and IQ can be expected to reinforce prejudice, pretty much independent of the outcome of the inquiry," and therefore, he strongly implied, such research should not be even initiated, or perhaps allowed. "The scientist has no unique right to ignore the

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likely consequences of what he does" (Chomsky 1987 [1976], 198, 200, 201).

However, Chomsky otherwise stood outside the principal tradition of Environmentalism I research, which is probably why he could attack Skinner with an aplomb that more environmentalist researchers could only envy. By the time he reviewed Beyond Freedom and Dignity, Chomsky had been recognized for more than a decade as a pioneer in linguistic theory for postulating a "deep structure" within the brain facilitating language acquisition through a series of ingrained syntactical rules. Shunting aside the view common in liberal and leftist circles that the prospects for substantive social reform required a malleable humanity overwhelmingly shaped by the cultural environment rather than the species' comparatively trivial biological endowment, Chomsky argued that "'What little we know about the human brain and about human cognitive structures suggests a very different assumption: a highly constrained genetic program determines the basic structural properties of our 'mental organs,' thus making it possible for us to attain rich and intricate systems of knowledge and belief in a uniform manner on the basis of quite limited evidence" (Chomsky 1987 [1976], 197).

In the best-case scenario for Environmentalism I, Chomsky's genetic explanation for significant aspects of a crucial human trait like language somewhat extended the scope of the "non-trivial" biological base. But it also threatened to neutralize potential allies in the "Great Polarity" wars, as the members of the Sociobiology Study Group, the focus for left-leaning anti-hereditarian activity in the Boston area, learned to their regret when they invited Chomsky to a meeting. While their guest agreed with the socialist goals of spokesmen like Lewontin, he rejected their dismissal of a relatively stable, genetically secured human nature (Segerstråle 2000, 204-205).[5]Worse still for the long-term fortunes of EnvironmentalismI, Chomsky's argument helped crystallize anawareness that environmentalist egalitarianism too often seemed to foster a "tacit premise that people's rights or social reward are somehow contingent on their abilities" (Chomsky 1987 [1976], 198-199, quotationon199), while Chomsky's example stimulated younger researchers in language development and cognitive science like Stephen Pinker to push their research in a self-consciously anti-Environmentalism I direction.[6] Although

5) Segerstråle, at the time a graduate student in sociology who had selected the sociobiology controversy as a dissertation topic, was present at the meeting as an invited observer.

6) Cf. the praise of Chomsky in Pinker 20 02, e.g., 36-38 and 146-147. However, Pinker acknowledged that "Chomsky's t heory of human nature, though strongl y innatist, is innocent of modern evolu tionary biology, with its demonstration of ubiquitous conflicts of genetic intere sts," and therefore lacked the "darker view of human nature" with which Pink er was more comfortable (301). For his part, Chomsky, in an interview with Se

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Pinker's approach is not without its critics, the context is typically not a return to the political and intellectual assumptions of Environmentalism I, but from within a biologically informed psychology with a genetic basis(cf.Buller2005). For this, Pinker can probably thank Chomsky.

By the 1980s and 1990s, almost every intellectual alternative confronting the advocates of Environmentalism I had become a Hobson's choice. For example, the principal alternative in developmental psychology to strong inborn genetic patterns became connectionist theory based on neutral networks, with strong associations with ongoing research in computer science, especially artificial intelligence – not necessarily the most desirable of allies for humanists (Pinker 2002, 78-100). From a different direction, emphasizing the apparent congruence of Environmentalism I with post-modernist social constructivism might turn out to be a "poison pill" strategy, for while environmentalism within the social and behavioral sciences served many of the same epistemological and political purposes as the humanist approach (Jumonville 2002), it also involved the possible inconvenience, always looming on the horizon since the 1970s, of falsifiability.

gerstråle in 1982, had expressed doubts regarding the extent of knowledge about human nature achievable by cognitive science (Segerstråle 2000, 205).

IV: The Rise of Environmentalism II

Meanwhile, as the fortunes of environmentalism in its original meaning of Environmentalism I were on the wane, the term was picking up its new and soon dominant signification. To return to the personal note, I can recall being swept up in the excitement of the emerging science of ecology during my high school reading. My classmates in our beach resort town understandably recommended Rachel Carson's The Sea around Us, which in the edition we would have read added to the book's poetic evocations of the "encircling sea" (Carson 1989 [1961, 1951], 199-212) warnings about the effects of human pollution of the ocean, especially the dumping of radioactive wastes (1961 preface, xi-xiii). One of my own discoveries was John Storer's The Web of Life, a little Mentor paperback offering "what has largely been forgotten in our machine age – how all living things fit together into a single pattern" (Storer 1956 [1953], x). But as products of the early 1950s, neither book could quite prepare me for the convergence of ideas, ideals, and attitudes from which emerged Environmentalism II. Storer's text emphasized the conservationist ideal of efficient resource management (e.g., "the basic ingredient of our story" was that "resources can be renewed and made more productive with use," 125); on the other hand, the insert of photographs by the author seemed more often to make an emotional case closer to the preservationist goal of maintaining the sanctity of as much of pristine nature as possi

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ble. For her part Carson felt constrained to include a chapter in The Sea around Us (185-197) on the economic potential of the oceans, including the prospects for offshore oil drilling.

An early but astute analysis of the "extraordinarily diverse concatenation of impulses" generating the new crusade for "conservation" (at the time it appeared in 1972 the author did not yet have "environmentalism" available as an option) cited, among other factors, the Transcendentalist legacy at work in figures like Carson; the more complex approach to wildlife management championed by Aldo Leopold; the emergence of ecology, which shaped key environmentalist tracts by both Leopold and Carson, most dramatically her indictment in Silent Spring (1962) of the chemical industry's disruption of food chains through its toxic pollution of the environment; the dissolution of the medical consensus in favor of disease eradication led by the bacteriologist René Dubos; the desire to rein in atomic power and escape the reductionism of post-double helix biology that combined to pull Barry Commoner into environmental politics; the perception that overpopulation was already straining the earth's resources and should be countered in rich nations by a reduction in GDP growth; the anti-big business bias of the era that focused on pollution by major corporations; and the distaste for technology linking older prophets like Lewis Mumford with counterculture youth (Fleming 1972, quotation on 7). Another historian has attempted to generalize the new aspects of the environmentalist movement vis-à-vis the earlier conservation ethos by focusing on the broader shift from production-oriented to consumer-oriented issues in American politics and society (Hays and Hays 1987; see also Worster 1994, especially 256-433).

Many participants in the new environmentalist movement in the late 1960s and the 1970s viewed it as congruent with the assumptions of Environmentalism I, and expected the two to remain closely linked in the years to come. For young activists in particular, the issue at hand in both forms of environmentalism was the moral requirement to confront the supposed control of the environment, whether natural or cultural, by an entrenched establishment, usually viewed as racist, sexist, and/or capitalist. This establishment, it was felt, could manipulate the political and social environment to account for individual differences and group variations in achievement by its invidious discriminations by race, gender, and class, while it either thoughtlessly or with profit-driven intent disrupted non-exploitative environments by decimating the wilderness, by polluting natural and human habitats, and by destroying primitive peoples (more "natural" peoples like the Native Americans were typically given higher marks for their ecological perceptiveness). But with so many other aspects of American intellectual culture conspiring to undermine the earlier consensus favoring Environmentalism I, it behooves us to ask whether the shift in definition to the ecological sense of

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Environmentalism II might itself have been, in its relation to the diminishing traction for the assumption that the environment culturally generated the most critical human traits, a stimulus rather than simply a symptom of change.

One way of looking at the problem would be in terms of ecological niches: in the changing environment of left and liberal politics in the 1960s and 1970s, Environmentalism II turned out to fit better than Environmentalism I, and in essence took over its niche. Although Environmentalism I theorists were by and large as upset by the implications of Skinnerite behaviorism as anyone else, the fact remains that a manipulative impulse had often been present in left-liberal interpretations of environmentalism in the United States from the days of Lester Ward, and necessarily so, for the Environmentalism I mindset hoped to serve reformist ends by allowing major change in individuals and society over a shorter time span than if major aspects of humanity were locked into the longer, largely uncontrollable genetic changes of biological evolution. But someone, often someone in the government by the early twentieth century, had to direct the changes in the environment necessary to achieve the reformist goals, even if the manipulation was through relatively unobjectionable means such as the power of persuasion and skill in democratic education.

The New Left, however, was often as suspicious of government interventionist activity as the New Right, and targeted Big Government alongside Big Business as collusive managers of the status quo. Power should reside in smaller, less coercive, more "natural" democratic communities. This new attitude melded well with Environmentalism II – as well it should, because the two developed in tandem. Although Environmentalism II never spawned the strong "green parties" in America that briefly transformed left politics in much of Europe, it arguably played as crucial a role in setting new goals and modes of activity in the American context. There were no Social Democratic parties in the United States from which to take votes – but there was an earlier sense of environmentalism from which to leach its relevance.

In a broader, non-political context, the new definition of environmentalism could, because of its foundation in ecology, coexist better than the anti-genetic, often anti-biological version, within the new era of biology that continues in full force today. If regular coverage in the Science section of the New York Times is any indication, the science of life in all its varieties and ramifications has tended to dominate public consciousness of science since about 1950, when the race to decipher the DNA molecule coincided with the recent completion of the modern synthesis of Darwinian natural selection and Mendelian genetics (Fleming 1969; Bowler 1984, 289-316). Both the biochemical and the neo-Darwinian strands required an acknowledgement of the

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probable genetic bases of a wide variety of human traits; the first would ultimately climax in the hopes and fears raised by the human genome project, the second in sociobiology and evolutionary psychology. Steadfast proponents of Environmentalism I had had to ignore much of what was going on in the biology buildings across campus and in the news media. Environmentalism II, on the other hand, could nod toward the new biology in its least threatening form: the interrelationships across life forms within ecosystems.

In both of these examples, Environmentalism II did not so much directly refute any central tenet of Environmentalism I, but rather supplanted it as more appropriate to the issues and concerns of the last four decades. In another aspect, however, Environmentalism II was revolutionary in a way that closely paralleled the biological arguments wielded against Environmentalism I. One of the novel elements in Environmentalism II that required a new name to differentiate it from the older conservation ethic was its naturalistic attitude toward the human species. A central impetus for many of the new environmentalists was a desire to dispute the claims of mankind to a privileged position in the natural universe: the human species too is part of the web of life, and must recognize its place within a larger system of relationships on which it has no inherent right to impose its will. But this attitude ran directly against the fundamental animus of Environmentalism I, which had been built up from the desire to insulate humanity from the animal world from which it may have evolved, but which culture had allowed it to leave incommensurably behind. In their common project of displacing humanity back into its natural biological context, sociobiology and the new environmentalism, it seemed, might after all share much of the same intellectual DNA (for a critical analysis linking sociobiology and ecological environmentalism as "Superbiology," see Ross 1994, 237-273).

At least Edward O. Wilson seems to have thought so. Formerly one of the most controversial scientists in America for his espousal of hereditarian sociobiology, Wilson had, without forsaking his ambitious effort to encompass biology and social science, become by 2012 a more benign figure in intellectual culture, eliciting cover blurbs for The Social Conquest of Earth from Oliver Sacks and Stephen Greenblatt, a Renaissance and Shakespeare scholar holding an endowed chair in the humanities at Harvard, as well as the biologist James D. Watson (Wilson 2012).[7] The turning point in Wilson's reputation seems to have been

7) Readers with an awareness of past battles at Harvard may have been less surprised to see the name of a member of the university's English Department gracing the back cover of a book by Wilson than, on the front cover, the name of a former colleague in the Department of Biology. In his autobiography, the best that Wilson could say about James D. Watson was that "I have been blessed with brilliant enemies" (Wilson 1994, 218); more waspishly, he found Watson "the Caligula of biology" (219).

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the 1990s, when he began to win wide respect for the new focus on environmental issues in his later works such as The Diversity of Life and The Future of Life.

Wilson emphasized how biodiversity woul d expand to fill available niches until geologic al or climactic change reshuffled the niches. If the change were too radical, the disruptions in the food chain and other elements of the ecosystem would generate one of their period ic great extinctions of life forms. Humanity, however, has become the modern equivalent of antediluvian comets, for it has triggered through its activities “one of the great extinctio n spasms of geological history” (Wilson 1992, 280; cf. Kolbert 2014). By the time he publishe d The Future of Life in 2002, Wilson could preface the book, without generating critical surprise, with an open letter to Henry David Thoreau expressing his gratitude for the Tran scendentalist’s early conceptualization of env ironmentalism and bemoaning the extent to which “The natural world in the year 2001 is everywhere disappearing before our eyes – cut to pieces, mowed down, plowed under, gobbled up, replaced by human artifacts” (Wil son 2002, xxii).

Nor was Thoreau the only patron saint of the new environmentalism to be publicly thanked and praised by Wilson in 2002, for in the fortieth anniversary edition of Silent Spring, Wilson provided an “Afterword” noting that human beings “are still poisoning the air and water and eroding the biosphere, albeit less so than if Rachel Carson had not written” (Carson 2002 [1962], 357-363, quotation on 363). In this endeavor, Wilson obviously feels that he has not abandoned his original sociobiological quest, for he once again summarized what he believes to be its implications for humanity in a volume published between The Diversity of Life and The Future of Life, and then extended his argument in The Social Conquest of Earth after their publication (Wilson 1998; Wilson 2012). Rather, he is completing the naturalistic project of Environmentalism II, reminding humanity of both its roots in nature as well as its continuing place within and responsibilities to nature.

On Aggression was the title chosen for the English-language translation of Lorenz’s Das sogenannte Böse (1963), which as Fleming notes (244) would have been more accurately rendered as The So-Called Evil. On Lorenz see also Richards 1987, 528-536, Burkhardt 2002, and Burkhardt 2005. For an anthropologist’s response to the ethologists’ assault on Environmentalism I, see Alland 1972.

On the relatively recent creation of the social and behavioral sciences as members of each of the disciplines except economics understood them as the debates about Environmentalism I began in the 1960s and 1970s, see, for example, Ross 1991. For a salutary reminder of countertrends in early American social science usually abandoned after World War II, see Cravens 1978.

Montagu also weighed in with volumes on the human aggression and sexuality issues. Caplan 1978 was somewhat

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exceptional in its attempt to cover both sides of the sociobiology issue.

Segerstråle, at the time a graduate student in sociology who had selected the sociobiology controversy as a dissertation topic, was present at the meeting as an invited observer.

Cf. the praise of Chomsky in Pinker 2002, e.g., 36-38 and 146-147. However, Pinker acknowledged that “Chomsky’s theory of human nature, though strongly innatist, is innocent of modern evolutionary biology, with its demonstration of ubiquitous conflicts of genetic interests,” and therefore lacked the “darker view of human nature” with which Pinker was more comfortable (301). For his part, Chomsky, in an interview with Segerstråle in 1982, had expressed doubts regarding the extent of knowledge about human nature achievable by cognitive science (Segerstråle 2000, 205).

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On Aggression was the title chosen for the English-language translation of Lorenz’s Das sogenannte Böse (1963), which as Fleming notes (244) would

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have been more accurately rendered as The So-Called Evil. On Lorenz see also Richards 1987, 528-536, Burkhardt 2002, and Burkhardt 2005. For an anthropologist's response to the ethologists' assault on Environmentalism I, see Alland 1972.

On the relatively recent creation of the social and behavioral sciences as members of each of the disciplines except economics understood them as the debates about Environmentalism I began in the 1960s and 1970s, see, for example, Ross 1991. For a salutary reminder of countertrends in early American social science usually abandoned after World War II, see Cravens 1978.

Montagu also weighed in with volumes on the human aggression and sexuality issues. Caplan 1978 was somewhat exceptional in its attempt to cover both sides of the sociobiology issue.

Segerstråle, at the time a graduate student in sociology who had selected the sociobiology controversy as a dissertation topic, was present at the meeting as an invited observer.

Cf. the praise of Chomsky in Pinker 2002, e.g., 36-38 and 146-147. However, Pinker acknowledged that "Chomsky's theory of human nature, though strongly innatist, is innocent of modern evolutionary biology, with its demonstration of ubiquitous conflicts of genetic interests," and therefore lacked the "darker view of human nature" with which Pinker was more comfortable (301). For his part, Chomsky, in an interview with Segerstråle in 1982, had expressed doubts regarding the extent of knowledge about human nature achievable by cognitive science (Segerstråle 2000, 205).

Readers with an awareness of past battles at Harvard may have been less surprised to see the name of a member of the university's English Department gracing the back cover of a book by Wilson than, on the front cover, the name of a former colleague in the Department of Biology. In his autobiography, the best that Wilson could say about James D. Watson was that "I have been blessed with brilliant enemies" (Wilson 1994, 218); more waspishly, he found Watson "the Caligula of biology" (219).

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