Volume 1

Sociobiology vs Socioecology

Consequences of an Unraveling Debate

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Sociobiology vs Socioecology
Interdisciplinarity between Biological Sciences and Social Sciences: Methodology and Theoretical Pitfalls Set

coordinated by
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Scientific disciplines are used to regularly submitting their unrefuted theses for a detailed review in order to reassess their relevance in the light of *ex post facto* data. However, when it comes to multidisciplinary theories, it is already a less regular practice. Furthermore, researchers often seem to ignore that assertions, argumentations and constructions are not the only ones requiring such reviews: protracted controversies should likewise encourage questioning by re-examining the same field where the contradictions appeared. Yet, such re-examination is very rare: disputes are put in the past as soon as possible, and then entrusted to the care of science history, whose intervention will highlight the past nature – or else solved nature – of the disagreement: a misunderstanding, a mistake, a quarrel based on pride.

Sometimes, science finds it difficult to resist the temptation of “jumping forward”, and its representatives are rushing to forget embarrassing shortcomings, as if the will to go forward should make these weaknesses disappear. It can certainly happen sometimes in connection with an unexpected epiphany. However, this wager remains uncertain, and its daring increases with the extent of bypassed opacity: in the “case” that will mobilize us here, we will see that this protracted avoidance has literally already produced disastrous effects.

In 1975, the Harvard publication of *Sociobiology: The New Synthesis* [WIL 75] triggered a massive international and multidisciplinary controversy, enraging the biology, humanities and philosophy communities. Fever increased through political and ideological implications which, whether asserted or rejected, landed at the forefront of the controversy. Sociobiology promised a reorganization of social sciences in the medium term on the basis
of the speculative game of genes in support of their proliferation in future generations. Organism itself was reduced to the necessary intermediary role of strategies: determined through an unwavering ambition of its components to increase their representation within the population.

For almost 15 years, from one country to the other, and on both sides of the Atlantic, we assisted the awakening of dormant convictions and the revival of former antagonisms, to whom flashy technical changes offered the appeal of something new. If we take a closer look, this was the last major university unrest of the 20th Century, which faded bit by bit with the rapid growth of a lethargy of commitments: students and researchers have indeed shifted toward a principled mistrust regarding conflicts, partisan attitudes and, more generally, too strong convictions. The fall of the Berlin Wall facilitated the rise of a horde of relativisms, whose varied ironies quickly reduced any contradiction to overweening verbosity, so that, in the end, the naivety of the aspirations of science itself was snubbed as a whole.

However, the stream of invectives dwindled without any dialogue taking place, without any debate being organized, and without identifying, classifying or weighing the disputed issues. No one ever started to solve any of the numerous problems then outlined in bulk and, worse, no one even thinks of complaining about it. Arguments were given to the public, but never exchanged between researchers: so they did not make any progress. Sociobiologists were in a good position: they simply rejected any objection by condemning them as philosophical or ideological imputing motives. This position of offended dignity helped them to elude purely scientific contestations, even if their phrasing did not allow any criticism. Antagonism was used as an excuse to avoid debate, and we witnessed a controversy without any discussion!

In practice, arrangements between the humanities have varied according to sectors and countries. In France, for example, we have completely ignored that ethologists, after a period of intense criticism, has joined the main stream, and that sociobiology has progressively monopolized university education on animal behavior. Likewise, we pretended not to see its infiltration within the craze of “cognitive sciences”. In the United States, the rise of postmodernism, during the last decade of the 20th Century, drove a nearly insuperable wedge between “scientists” and “relativists”: a nearly silent divide that led to the complete division of some departments of anthropology. Sociobiology used this opportunity to comfortably deploy itself within the strongholds of functionalism.
The last breath of confrontation became a yawn, without, moreover, eroding the gigantic strength of the challenges raised. A strange burn out seems to be passing through the scholarly community, but is it really tiredness? All in all, the general resignation, in which this observation of failure is immersed, threatens much more the credibility of contemporary science than the denials uttered by any relativist thinker, however inspired. If scientificity is not reduced to a decoy or arrogance, this collective resignation is partly catastrophic and partly unforgivable.

In such a context, the objective of this book goes further than a desire to reopen the debate by bringing it back to its legitimate form. We certainly present a criticism of essential arguments of sociobiology, with clear rebuttals and, for each of them, an assessment of its scope. Nevertheless, it is no longer sufficient. We must ask ourselves how and why a theory managed to adorn itself with the attire of a discipline, including the proven existence that it entails and despite blatant abuse. We should also ask ourselves how and why a discussion, whose challenges were not minimized by anyone, managed to unravel up to the point of ending in an exchange of non-receiving purposes. And finally, we should ask ourselves what means would allow us to guarantee a durable debate that does not mask its momentary insufficiencies or its illicit prevarications. Some sociobiologists blame their adversaries for behaving like “epistemological policemen”: an acknowledgment of weakness bearing something symptomatic. Our statement will indeed aim to improve multidisciplinary communication. There is nothing shocking about the implementation of an epistemological police “fining” the methodological improprieties, on which all the sciences concerned should in principle agree, even though they are not always used to uncover them.

The content of this book will progress accordingly from the exercise of strict refutation (Chapters 1–3) to the exercise of counterproposition, with this secondary divergence that the critical phase will focus on the assertions of sociobiology, while the positive part will focus on essential method points: Chapter 4 does not intend to give an idea of multidisciplinary socioecology, but rather an illustration of the way anthropology could take part in it, outside the effective control of sociobiologists on this field of investigation, and also without biology feeling irremediably “polluted”.

In fact, our will is not directed toward the elaboration of a competing theory, or even a draft: as it would come to confirm the potential relevance of the adverse construction. One of the most serious mistakes committed by the scientific contestation of sociobiology was to restrict controversy by
attacking such or such explanation supported by such or such author in order to ridicule its content. In the long run, the perverse effect of this repeated strategy imperceptibly amplified: we lost sight that the greatest danger of sociobiology resided in the idea that a general understanding of the relations between societies and their environment was already accessible. Research on the subject was barely starting, and lo and behold a miraculous key from elsewhere, an authentic *deus ex machina*, was giving the big picture in order to take control of the program of future analyses.

The main thesis that this book will defend, must then appear straight away, so that the reader keeps it in mind through all the pages to come: beyond their subconscious or non-subconscious ideological purposes, sociobiology represents before all an extraordinary inertial force against an authentic scientific project dedicated to socioecological interactions in nature, including human species. Through a clandestine creation, “behavioral ecology”, it involves a will that is indeed ideological and that curiously remains unnoticed: preventing the installation and progress of a priority sector of research, despite the numerous adjoining emergencies, under the pretext of the dazzling promises of a brilliant intuition.

In order to prevent our words from being misused, we should clarify two points. By *ideology*, we mean here a pattern of thought external (or anterior) to a scientific ambition, which is attacked head-on (denial of existence), or which is surreptitiously infiltrated in order to parasitize it. The rejection of Darwinism by creationism illustrates this first way: denial. The preorientated transformation of species, with the hunch of a hierarchy guiding the action of natural selection via a hidden constant, represents the second way. As to the possibility of *scientific revolutions* and surprising discoveries that unexpectedly disrupt the state of knowledge, we by no means dismiss them. In the case we are dealing with, reluctance is developed at another level: a conjecture, which was legitimate as an assumption to be assessed through different angles, was honored as a theory, and then crowned as a discipline through secular conviction, which had yet been destroyed at the end of the 19th Century.

This arbitrary transformation of a speculation into a “law” ruined the rise of the field of socioecology, which could have claimed to be a scientific necessity, but which, unfortunately, did not yet rely on any founding vision: only on a need. An *a priori* stifled this research.

This is why our first chapters will deal with emblematic cases put forward by sociobiology, 40 years ago: bypassing and accepting voids would come to
endorse the vice of a credibility built on nothing: the harmfulness of non-revealed faults increases with time and they, so to speak, “reproduce”. What would be the point of scrutinizing the details of an entomologic or primatological article in this wake, if it relies on triggers whose questionable making was not consolidated, nor disqualified? We refuse resignation in the face of abuse from the beginning, since the sophistications of the present depend on it. Before starting this re-examination, we glanced through the recent bibliography – starting with a key journal, Behavioral Ecology and Sociobiology – and we found that the contemporary works that are clearly affiliated to sociobiology make progress only by specializing past significant “blows”. Therefore, if a current author is criticized, they can simply transfer the responsibility on its predecessors, whose contributions were approved by the whole community: they themselves, in most cases, did not add any additional error. Sociobiology remains then under the protection of native faults that escaped discredit. The current followers will accuse us of fighting in the past and of ignoring the progress accumulated over 40 years, but we will see that these achievements come down to a decoy: in its refreshing naivety, the brief and fierce sparring of 2012 that we will mention in the following chapter between the emblematic figures, Richard Dawkins and Edward O. Wilson, utterly confirmed it.

Moreover, it is a symptomatic dispute, in that it seems to spell the end of an era. Not only did lassitude increase before the tremendous breakthrough promised by sociobiology was put off, but a fearsome competition is wakening, which would quickly render the allegory of the Selfish Gene obsolete: the results obtained by epigenetics attract more and more supporters of biological determinism, with possibly, a much larger range of action. And some sociologists already find the perspective exciting [MEL 14, MEL 16]. In 1977, when the anthropologist Marhall Sahlins published his brief diatribe against the new version of the biological reductionism produced by Harvard [SAH 77], he mocked his own speed to react in fear of seeing the incriminated theory deflating like a balloon in the near future: premonition obviously misguided. Today, the concern of ethologists in this respect would be more justified, because their ambitions are running the risk of passing under the control of an authoritative and fastidious technoscience: molecular biology.

Yet, contrary to what the reader will sense, the likely redistribution of cards that would marginalize “classic” sociobiology does not in any way reduce the interest of our work: it reinforces it. The theory here incriminated once caught off guard, a socioecology willing to incorporate, as of right,
social sciences: the lessons to be drawn from it in connection with the technical and tactical recombination that is looming on the horizon will allow us to firmly grasp an opportunity to bring to light the vital challenges that targeted the smothered field. First, it implies to not make the same mistakes with geneticists today as with ethologists yesterday. It then implies an ability to clearly and shamelessly denounce the distortions of the scientific method that determinism “temporarily” legitimizes “because of practical constraints”: the medium is going to change, phrasing too, but not the way of acting of sophisms. Finally, it implies becoming aware of what our society can lose and what it can gain in this “case”. Who will dare to publicly wish that ecology and sociology refrain forever from cooperating in order to jointly understand countless interactions associating societies and environments, which are both equally fragile structures? Probably, no one. But, on the contrary, who will have the patience that will require to overcome the obstacles?

Re-examining the past and non-disqualified faults of the sociobiology established for 40 years is a crucial condition in order to prevent a neo-sociobiology in the making – which is discreetly developed from new “laws” devoid of any link with the former ones – from benefitting from the institutional achievements of the version in distress in order to uphold without any resistance the favorable situation of biological reductionism. Throughout the coming pages, we will therefore insist, when we get the opportunity, on the contradictions regarding the inspiration in place of the “Selfish Gene” and the one of a possible social Lamarckism revitalized by epigenetics. It would be sinister and indecent to see biological determinism shape shifting, while keeping the property of the “sociobiology” mark, for the sole purpose of inheriting the university powers reaped because of the victorious sophisms of a past idea.
1.1. Introduction

As a whole, biology, which seems to oscillate between superbly “hard” sciences (mathematics, physics, etc.) and sadly “soft” rationalizations (psychology, sociology, etc.), represents a minor, and even marginal, source of inspiration for the formal schools of epistemology. The fact that Darwinism does not comply with the famous criterion of refutability laid down by Karl Popper as a dividing line separating accomplished scientifcity from less rigorous approaches probably increased the temptation for a certain avoidance. On the other hand, after the mid-20th Century, the prominent culture of naturalists attaches little importance to a regular exercise of epistemological discussion. However, especially in comparison with their colleagues attached to others fields, researchers committed to the study of living things tend to demonstrate a strange recklessness before the history of their own knowledge. Apart from a small handful of clan ancestors, such as Linné, Darwin and Mendel, common references quickly disappear, and a blatant absence of curiosity is apparent in respect of the former masters of the discipline next to it.

Yet, sociobiology represents, at first sight, an exception. It is true that the legitimacy of its problem was immediately strongly disputed from a necessarily “meta-scientific” point of view, but, even before these attacks, it had unusually taken care of justifying its program by incorporating it to the logics of a slow progression of ideas. Nevertheless, the reader will soon find that undeclared tactical calculations presided over these “pedagogic”
operations, blurring here and there an influence, or a major participation, and masking, as a result, embarrassing questions.

A commented historical summary should then allow the reader to understand, as the dates unraveled, the series of events that led to the powerful comeback of a secular conviction, as well as the decisive links between these episodes. A long technical restructuring was obstructed in order to reinforce the image of an unexpected discovery and hide what we must call the persistence of an ideological obsession. The assimilation of this sequence will greatly facilitate the reading of the following chapters.

1.2. The “social Darwinism” of the 19th Century

Our journey starts with the appearance of a category brutally adding itself to the one of naturalists: biologists, who rely on an additional skill. If an observation method is sufficient to describe things of nature, it is no longer the case from the moment we pretend to deal with living things: a theory is required explicitly or not.

1802: Lamarck and the invention of biology

The word biology was independently coined several times, in Germany and France, but the initiative of Jean-Baptiste de Lamarck in Research on the Organization of Living Bodies was the most retained, probably because of the prestige he earned through his book. Except that in this case, posterity was not duped: Lamarck insisted straight away on the double mission of the field supposed to contain botany and zoology, that is to say the complementary quest for unity and diversity of living things. Connecting both aspirations came to inscribe in science a reflection up to now reserved to theology: God no longer monopolized the responsibility of constants, and biology would work to identify them outside the initial laws of creation. The result was that “biology” implied an evolution that was likely to link unity and diversity.

Behind this attitude, which was beyond reproach in approach, the risk of a manipulation playing on ambiguity incidentally crept in: pretending that a phenomenon was biological came to put it under the authority of a unifying base, whereas the field of investigation of biology referred in priority to diversity. Thus, practical projects preferably relied on heterogeneity, while theoretical ambitions claimed to have a common nature, and the discreet reciprocation between both levels was open to numerous tactical tricks. Sociobiology used trickery even better than other schools of thought before
they did, by using diversity as a shield to justify its efforts, although the proclamation of its “unifying” law clearly preceded control by comparing the validity of its statement. We should remember this point when we focus on the “thunderbolt” of 1975: the voluminous “synthesis” published by Edward O. Wilson.

-- 1809: Lamarck, evolution and inheritance

With his Zoological Philosophy, which brilliantly finalized his work, Lamarck imposed the first full theory of evolution: marked, among other things, by the idea of a general direction going from simple to complex. One of the “laws” included in it primarily concerned here is the inheritance of acquired characteristics, according to which the action of “circumstances” can develop, or reduce, a trait from generation to generation. To some, even very reduced, extent, parents could then transmit something from the experience they lived to their descendants. Lamarck, according to some commentators, developed a widespread intuition among his contemporaries, who sensed the existence of evolution. In addition, the originality of his contribution was certainly not limited to this speculation. This door left ajar in the face of an inheritance bequeathed by ascendants through the fortunes and misfortunes experienced during their life would, nonetheless, represent the core of “social Darwinism” during the second half of the century: simply through an extrapolation of behavioral dispositions.

-- 1830 (?): Comte and “altruism”

Auguste Comte, the inventor of “sociology”, also introduced the idea of altruism, outside an evolutionary perspective. It was still unclear when it came about: probably coined in the 1930s, the word was however certified in 1852, within the “positivist catechism”. Although it was found that some representatives of “social Darwinism”, starting with Spencer, whom we will talk about in the following, read Comte, we ignore in which way and at what speed this notion spread.

-- 1855: Spencer and evolutionism

According to Spencer [SPE 87], his understanding of a general doctrine of evolution was essentially built in 1855, when he was working on The Principles of Psychology: built and unfinished, because he worked on it until his death. The significance of this landmark in time came from the fact that

1 No one is sure of the exact date. In fact, it seems that Comte spoke of altruism in 1830, but in oral lessons.
we would then remember evolutionism\(^2\) (or, from the outside and pejoratively, “social Darwinism”) as clearly preceding the hatching of Darwinian science. The parasitic influence that it will have on it, will then prove even more swift and efficient as, far from being reduced to a subservient extrapolation of the bulk, the metaphysical theory infiltrated in it an interpretation previously instructed: we are dealing with an impregnation here, not an addition.

The double conviction of an underlying progression from simple to complex, and from homogeneous to heterogeneous, highlighted the hierarchical orientation of this thought. We must add to it organicism, that is to say the double assimilation from society to organism, and from organism to society: in the 20th Century, even though it was devalued everywhere else, this inspiration would remain prominent among entomologists, who would indentify hives, anthills and termite mounds as “superorganisms”, with individuals instead of cells.

– 1859: Darwin and natural selection

The nearly simultaneous and, nevertheless, independent revelations of natural selection by Alfred Russell Wallace and Charles Darwin made quite an impression, and the publication of *On the Origin of Species* [DAR 59] had an immediate impact, which spread throughout Western Europe. Two types of debate lied ahead. The first one dominated the following decades, and concerned the unavoidable challenge of the creationist dogma of the Christian religion (and then, of the whole monotheism). The second one fell beyond this outlet: in a perspective excluding religious authority, all the thinkers understood that, from now on, a human theory claimed to be in continuity with a nature theory, and vice versa. Spencer was not the only one to consider things from this point of view: less than a month after the publication of his book, Friedrich Engels, in a letter to Karl Marx, showed his enthusiasm about the “historical development in nature” highlighted by the English naturalist [MAR 73, p. 19].

The main theory of Darwin relied on three main concepts. Each gave rise to numerous deformations: natural selection performed a synthesis of the struggle for existence, which a given species within a given natural environment faced (so identified in space and time), and it resulted from a

\(^2\) As an ideological extrapolation modifying the scientific theory of transformism. However, nowadays, numerous biologists abandon the second label and assert their scientificty as evolutionists.
place in nature. In contemporary vocabulary, this last notion is perfectly reflected by the notion of “ecological niche”, in which the struggle for existence represents “dimensions” [HUT 65]. The innovative power of Darwinism resided, in fact, in its capacity to reflect processes of evolution through ecology (which it creates) and ecological situations through the solidarity of evolutions (see [HAE 66, HAE 84], further in the book). On the other hand, “social Darwinism” would play on two levels:

– Darwin did not deny the possibility of a Lamarckian inheritance, which allows us to think that his contribution can be added to without being harmed.

– The struggle for existence that was formed between organisms and all the environmental factors to which they were exposed (climate, predators, parasites, etc.) was tacitly curtailed: reduced to the sole competitions between individuals of the same species. It only expressed social competitions and economic competitions. Consequently, nature suggested a metaphor of the capitalist market: an image, which was particularly obsessive in North America in the 20th Century.

– 1865: Mendel and genes

Everybody knows that Gregor Mendel’s experiments went unheeded for 35 years. Apart from the relatively confidential support for their publication, a probable pattern of indifference arose from the confidence granted to the Lamarckian inheritance, which was attractive and suitable to mask the challenge of the discoveries made by the botanist.

– 1866 and 1868: Haeckel and oecology

If Spencer is the undeniable master of “social Darwinism” in philosophy, Ernst Haeckel can claim the title for being the prominent figure among biologists. As he quickly understood that the quite original method presiding over the conception of natural selection requested a reorganization of life sciences, he deducted the need for a new discipline, responsible for studying the relationships between organisms and all the components (biotic or non-biotic) of their environment: oecology, simplified later as ecology. The two definitions he gave for it in 1866 and 1868 are remarkable as, despite hundreds of subsequent attempts from every horizon, they maintain the highest authority [HAE 66, HAE 84].

Yet, in the second occurrence, after having perfectly well defined the field of ecology because of a lucid reading of Darwin, Haeckel allowed himself to
inaugurate the travesty by including, a few pages further, a particular case: humankind. The comparisons he outlined brutally left the ecological field to restrict themselves to the behavioral register: this characteristic narrowing would even lead the biologists from the beginning of the 20th Century to wonder about his real objective: ecology or ethology? In reality, far from being confused, he was modifying the aim in order to deduct a “place for humankind in nature”, under the flag of Darwinian ecology, but with the tools of racial, or even openly racist, psychology, since it was true that the influence of Haeckel on biological anthropology in Germany was significant. After 1975, this reminiscence triggered hasty or basic suspicions, when sociobiology found itself in the hot seat. Racist convictions can indeed draw a certain benefit from such a revival: this does not instantly mean that sociobiology defines them by itself.

– 1871 a: Darwin and the Descent of Man

Twelve years after On the Origin of Species..., Darwin published The Descent of Man [DAR 71], an event that was lastingly experienced by the public as the expected crossing of a threshold: the admission of the human branch within the whole of the beings likely to “experience” evolution. It seemed only appropriate, but, within the turmoil of the debates, protagonists expected from “the inventor” an official commitment and the open selection of a party. Unfortunately, this point eclipsed the content of the book in other respects, except for a large part dedicated to sexual selection (“social Darwinism” made haste to sever this aspect from natural selection, artificially giving it an unseemly autonomy).

However, the worst was that the finally stated theory did not attract any interest in any way, and the author was allocated with a grossly reductionist, and even “racist”, mindset, which was eager to turn humankind into a beast and humiliate its originality in the history of nature. In addition, this lasted for more than a century; since it is in 1983 that the epistemologist Patrick Tort, relying on the argumentative logics of the text, unearthed the unnoticed conclusion, which is now concentrated in one phrase: “the reverse effect of evolution” [TOR 83]. In short, Tort clarified that natural selection, which is the guiding principle of evolution implying the elimination of the less able individuals in the struggle for existence, selects within humankind a form of social life whose progress toward civilization tends to exclude more and more qualifying behaviors through the joint use of ethics and institutions.3

3 Tort commented and detailed this theory in the preface of his publication of the Descent of Man [TOR 99] and in numerous other books.