Race and Genealogy. Buffon and the Formation of the Concept of " Race "

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ABSTRACT

This article analyses the conditions of formation of the concept of "race" in natural history in the middle of the eighteenth century. Relying on the method of *historical epistemology* to avoid some of the aporias raised by the traditional historiography of "racism", it focuses on the peculiarities of the concept of "race" in contrast to other similar concepts such as "variety", "species" and tries to answer the following questions: to what extent the concept of "race" was integrated in natural history's discourses before the middle of the eighteenth century? To which kind of concepts and problems was it linked and to which style of reasoning did it pertain? To which conditions could it enter natural history and develop in it? The article argues that "race" pertained to a *genealogical style of reasoning* which was largely extraneous to natural history before the middle of the eighteenth century. Natural history was rather dominated by a different style of reasoning, a logical and classificatory style, whose principles and concepts were strong obstacles to the development of a concept of "race". To understand how the concept of "race" developed in natural history, one should understand how the genealogical style of reasoning entered natural history and modified the very principles of classification that organized it. I try to establish that it is through Buffon and some of the main authors of the "monogenist" tradition that the most fundamental conditions for the integration of a genealogical style of reasoning and the development of a concept of "race" are met. To put it clearly, in contrast to many scholars' analysis – and following some intuitions of P.R Sloan – I argue that Buffon in particular, and monogenism in general, were decisive in

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the integration and development of the concept of "race" in natural history.

«Was Buffon a racist before the term was coined?» Léon Poliakov's question[1] illustrates a more general problem in the historiography of "race": it subordinates the history of "race" to the history of "racism", that is, of a polemical concept laden with ideological presuppositions which often remain unclear.[2] Moreover, the definition of "racism" one decides to employ predetermines the way in which one views the term's history. Scholars usually give the following response to Poliakov's question: Buffon was *not* a racist for the reason that he was a *monogenist*,[3] believed in the *unity of the human species*, in the *common origin* of the different "races" and in the *reversibility* of their characteristics.[4] Such a response is based on a variety of widely held presuppositions concerning the definition of "racism" itself. To be a racist, an author must believe in the *radical alterity* of human types, that is: 1) their *separate origins* (polygenism);[5] 2) their differences being *fixed* and *irreducible*;[6] 3) such radical alterity legitimating a *desire to exclude*: racism being primarily characterized by exclusion and domination based on the dehumanization of the other.[7]

Approaching the problem in this way unfortunately brings about many difficulties. If we focus on the field of natural history during the eighteenth

[1] Poliakov, 1971, pp. 165–166.

[2] By stating that "racism" is a polemical concept, and has been so since its origins in the 1920s, I am referring to the fact that it has always been used as a tool to denounce and criticize certain ideas and practices while exonerating others. As Pierre-André Taguieff (2001, p. 81.) says, "racism" has a twofold function: it is both polemical and descriptive. I argue that its polemical function occasionally goes against its descriptive function and prevents us to study serenely the history of "race".

[3] Historians of racism usually oppose monogenists and polygenists, with the former believing in the unity of the human species and its common root, and the latter believing in the plurality of human species and their different roots. This controversy between polygenists and monogenists developed in the end of the eighteenth and throughout the nineteenth centuries in natural history, but historians often trace it back to the works of Isaac La Peyrère, Giordano Bruno and many others. For the vast majority of scholars, race and racism have their roots in polygenism. I hope to prove here that this is highly debatable, at least as far as we focus on the concept of "race" in natural history.

[4] See, among others, Roger, 1989, pp. 245–246 ; Blanckaert, 2003, pp. 134–149.

[5] See, among many others, Taguieff, 1997, p. 21.

[6] For instance, Isaac, 2004, p. 23; Fredrickson, 2002; Boulle, 2007.

[7] See Boulle, 2007; Fredrickson, 2002; Balibar & Wallerstein, 1998; Guillaumin, 2002; Taguieff, 1987.

century, limiting our observations to *discursive facts* – namely, if we consider statements in their positivity and study the way in which the notion of "race" was *actually* used – we may note that, among those authors who first defined the concept of "*race*" and who developed a science of human races, the vast majority, beginning with Buffon, De Pauw, Camper, Blumenbach or Kant, were *monogenist*. If we are ready to admit that "racism without race"[8] may be possible, it is more difficult to believe that the conditions of emergence of scientific "racism" and those of the concept of "race" are so radically different that to write the history of the former implies a systematic exclusion of those who made the history of the latter. At the very least, this fact demonstrates how important it is to separate the history of "race" from the history of *racism* because this history prevents us from serenely studying the *effective conditions of the formation of the concept of "race"*. The same remark may be applied to those historians who study the *idea* of race, conferring upon the signifier "race" the mysterious identity of an "idea": a mental reality that is supposedly expressed in various forms and contexts.[9]

To avoid this trap, I suggest we should develop a *historical epistemology of the concept(s) of "race"*, and attempt to answer the following question: what are the *epistemological conditions* of the emergence of the *concept* of '*race*' in the field of *natural history*? This entails that I will not, in this article, analyze "racism" but rather "*race*". Moreover, I will not analyze the idea but rather the *concept* of "race", that is, a notion defined through a network of interaction with other notions, forming a discursive system one can clearly identify and describe in its conditions of emergence and rules of functioning[10]. Such an analysis does not concern itself with the concept of "race" across all contexts – which would mean nothing – but rather in the context of *natural history*. In this narrower perspective, I hope to show the way in which Buffon and monogenism had a decisive impact on the formation of the concept of "race".

In order to prove this, in the first part of this essay, I will draw attention to the fields in which the concept of "race" was used before the mid eighteenth

[8] To quote Balibar's expression (Balibar & Wallerstein, 1998, p. 21).

[9] Ivan Hannaford (1996) exemplifies such a tradition. Again, such an analysis depends on the arbitrary content of what one considers to fall under the *idea* of race.

[10] I am not seeking to develop in this article the methodology of an epistemological history. See on this point Canguilhem, 1955; Davidson, 2001; Foucault, 1969.

century. In all these fields, "race" initially designated a *genealogical entity*, and pertained to what I call a "genealogical style of reasoning". I will argue, in the second part of the article, that there was no place within natural history, as it had been organized since the seventeenth century, for the concept of "race", the term being rather associated with the vocabulary of nobility and breeding. As we will see by way of an analysis of the view of Linnaeus, natural history was dominated by a *logical and classificatory style of reasoning* whose principles and concepts rather defined strong obstacles to the emergence of the concept of "race". I will especially insist on the fact that natural history did not really concern itself with the level between species and individuals, which it generally referred to as "*variae*" (that is, unstable variations and differences without any taxonomical relevance). Human differences were caught up within this both logical and taxonomical alternative between *species* and *varieties*. Within this alternative, there was no room and no need for any concept of "race". I will then argue, in the third part of this essay, that the emergence of this concept in natural history required the subordination of the logico-classificatory style of reasoning to a *genealogical perspective*. Through this reorientation, *variae* could gain relative stability as characteristics *transmitted over generations*, becoming *races*; the reproduction of characteristics became the dynamic principle determining the taxonomical status of differences and similarities. In this way, the entire grey area between individuals and the species could be differentiated and analyzed in terms of lineages and kinships; breeding and genealogy's vocabulary and problems could thus enter natural history. I will attempt to prove that it was through monogenism, and initially through Buffon, that this genealogical style of reasoning, along with all the problems and concepts it implied, was integrated into natural history and came to be considered valuable. The last part of my article will thus be devoted to a detailed analysis of the way in which Buffon integrated the concept of "race" into natural history, and how this concept was coherent with his more general reorientation of natural history via a genealogical perspective.

I. The Three Fields of "Race" before the Eighteenth Century

It may be useful to begin by recalling, in a schematic way, the fields in which the different concepts of "race" were used before the eighteenth century. We must differentiate between these fields for the reason that they define different concepts of "race" which do not precisely correspond to one another, even

though they are interlinked. A rigorous historical epistemology of "race" should thus study each of these concepts separately: the way they worked in interaction with other notions, how they were correlated with a specific field of practices and problems, and at which points they were connected. Moreover, it should examine how these different concepts transformed themselves in order to constitute the modern concept(s) of "race".[11]

First of all, "race" designated *kinships* and *lineages*: it was used to define patrilineal lineages sharing a common ancestor. In this respect, "race" described a very important reality in *nobiliary discourses*, either for different royal dynasties (in France, it was common to speak of the First, Second and Third "races") or for the nobility. For an individual to be part of a particular race meant being inscribed in a genealogy of famous ancestors and glorious deeds which he had both to imitate and prolong. Race was a reality which transcended the individual and imposed upon him certain duties. At the same time, however, it also defined him in a positive sense: to be part of a noble race created a *presumption of virtue*, and thus gave such individuals many privileges. Within the nobility, a distinction was usually made between "nobility of the race" ("noblesse de race") and more recent nobility. "Nobility of the race" did not have the same juridical status and was not dependant on precisely the same rules. More specifically, it was impossible to render it null through civil laws; only the Sovereign could act upon it (though this power held by the Sovereign over race was a subject of debate). Race thus designated a necessary condition of the transmission of juridical status and privileges; it was both a familial duty one had to obey, and also a way to evaluate, *a priori*, an individual person, who was characterized as pertaining to such or such a race – that is, to a particular lineage.[12]

This nobiliary concept of race was consistently (if not systematically) connected to another way of conceiving of the notion, wherein "race" designated the *condition of transmission* of *sins* and *spiritual status*. We need only recall that the Council of Trent firmly restated the doctrine of the transmission of original sin through *natural generation*. This entailed that all of humanity participated in original sin because all men pertained to the same "*race*", that of Adam. But we must also remember that the history of the World's different nations was understood, by way of the old tradition of

[11] I develop some parts of this research in my PhD dissertation, *forthcoming*.

[12] For a detailed analysis of the concept of "race" in nobility, see Jouanna, 1976; Schalk, 1986; Smith, 1996, and my PhD dissertation, *forthcoming*.

universal chronicles, as a process of dispersion and colonization by different *patrilineal lineages* ("*races*"), each originating in common ancestors. Each lineage and each people thus had a specific "political" and spiritual status according to their genealogy, for the reason that they inherited specific faults from their ancestors. In this respect, it was commonplace to distinguish between the races of Sem, Japhet and Cham, the ancestral faults of the latter rendering it the most degenerate. Such degeneration legitimated either slavery or serfdom. In this instance, then, nobiliary and religious discourses tend to mutually influence one another.[13]

Last but not least, we may identify a third field in which the concept of "race" was omnipresent before the eighteenth century. It is this field which we should look to in order to study some of the main elements that constituted the concept of "race" in natural history. This field, however, was also deeply connected to nobiliary practices. I am referring to *breeding practices*, and especially to *horse breeding*. Breeders considered race to be a specific object of knowledge and power.[14] Through a variety of practices, they attempted to control the reproduction of the animals they had chosen in order to produce the best descendants, thus obtaining a good race. Issues such as the reproduction and conservation of a race's qualities were thus fundamental to breeders, and in this field, "race" was mainly reduced to mere *natural* characteristics (which was *not* the case in questions of nobility). A race's improvement and preservation consequently implied taking care of the entire range of animals' natural functions: reproduction, nutrition, and living conditions.

Some of the primary problems regarding knowledge of human races were first raised in the context of breeding practices.[15] These problems were, in particular: 1) the question of the conservation of a lineage's qualities in spite of the influence of transplantation and environment; 2) the variations or alterations which, depending on climate or the blending of breeds, may affect the primitive "type" inherited from ancestors. This implies the fundamental problem of *degeneration*, a question obsessively returned to since the

[13] See, among others, Gliozzi, 2000; Braude, 1997.

[14] It is of particular importance to remember that breeding practices underwent a radical transformation and development during the seventeenth and eighteenth centuries, especially in France through the development of a state administration devoted to the improvement of the races and, in France and Britain, through the development of national and international markets of breeding animals.

[15] See my PhD dissertation, *forthcoming*; and Doron, *forthcoming*.

eighteenth century; 3) the origins of the race, of the right ancestor one had to choose as the race's initial model. A very important field of knowledge developed throughout the seventeenth and eighteenth centuries concerning the perfect type for horses, the *specific norm* from which all subsequent individuals would be evaluated; 4) the qualities and defects of the sires, the need to exclude all those from reproduction who may contaminate the race or alter the species; 5) the detailed mechanisms of reproduction and inheritance of qualities and changes in the lineage. All these questions will later appear as fundamental problems in the understanding of human races. Consequently, it is not by accident if, from Buffon to Prichard, all thinkers who elaborated the concept of "race" in natural history and anthropology took breeding and domestication as crucial points of reference. As we will see, analyzing the conditions of emergence of the concept of "race" in natural history largely means understanding how questions concerning breeding and the domestication of animals could enter the field of natural history, in which, before the mid eighteenth century, they did not have a self-evident place.

II. Race and Classical Natural History

Now that we have in mind the various concepts of "race" which coexisted at the beginning of the eighteenth century, and the type of problems they referred to, we must pose two primary questions.[16] First, to what extent did the notion of "race" have a place in the very specific discursive genre that was natural history? [17] Second, under which conditions did "race" and the problems it referred to (genealogy, kinship, lineage, transmission of characteristics, primitive ancestors, degeneration, breeding and so forth) enter the field of natural history?

I will firstly argue that "race" did not have a self-evident place within the discursive genre of natural history before the mid eighteenth century; on the

[16] One may invoke two other uses. One is the all too famous paper from Bernier, presented by almost all authors as the first usage of the modern concept of "race". I have proved in my PhD dissertation that this is a highly debatable point. The other case concerns the use of "*raza*" in Spanish for the Conversos during the debate regarding "limpieza de sangre", but I believe this case falls within the articulation of the two first concepts.

[17] By "discursive genre" I am referring to a well identified set of discourses organized by common rules of functioning, principles and problems, as well as by common rules concerning veridiction (that is, the way we define the true and the false). In my opinion, it is important to analyze natural history as a specific "discursive genre".

contrary, the type of reasoning which ruled in this field defined *epistemological obstacles* to the development of the concept of "race". Secondly, I contend that it is through Buffon, and by way of his subordination of the logico-classificatory style of reasoning (which dominated natural history) to a genealogical style of reasoning (initially outside of natural history) that race and all the problems it referred to entered natural history's discourse. To make these claims clear, I will first need to describe the styles of reasoning which dominated natural history as a specific discursive genre up until the mid eighteenth century.[18]

The discursive genre of "natural history", as it emerged during the seventeenth century, had a twofold ambition: it was both *descriptive* and *taxonomic*. As Foucault rightly claimed,[19] natural history first implied a separation between what one can observe about a thing, and secondly, everything that had ever been said about it (the tradition). Natural history, in its classical sense, first consisted in detailed *observation* of natural beings, which was then supposed to lead to a *description* of the singular being so rigorous that it would almost correspond to the individual as though it were its *proper noun*. This ambition is exemplified in the *Mémoires pour servir à l'histoire naturelle des animaux* collected by Claude Perrault between 1669 and 1676. Perrault claimed that he wanted to «show things exactly as we have seen them, like a mirror which adds nothing, but rather represents things exactly as they have been set before it» (Perrault, 1758).[20] He firmly distinguished between what had traditionally been said about things and the clear certainty one obtains through minute observation. This observation proceeded according to an analysis of the *anatomical structure of the individual being*. It led to a description of the being which was supposed to adhere to it in its *singularity*.

[18] I borrow the concept of "style of reasoning" from Davidson (2001) and Hacking (2002). From Hacking, I take on the idea that "style of reasoning" defines an historical way to perceive and construct the objects of knowledge; while I take on from Davidson, the idea that "style of reasoning" is mainly characterized by a set of concepts which are organized according to certain rules and work together (for a comparison between Hacking and Davidson's concepts, see for instance Singy, 2005). If, as I've suggested, natural history – and more specifically natural history of Man – can be defined as a well defined "genre of discourse", I believe one can study how it has been organized by different styles of reasoning coexisting together and sometimes in contradiction. Here I'm focusing on the relationships between logico-classificatory and genealogical styles of reasoning insofar as they were determinant for the formation of the concept of "race". One will find in my PhD dissertation further analyses on the coexisting "styles of reasoning" ruling the natural history of Man in the eighteenth-nineteenth centuries.

[19] See Foucault, 2002, pp. 136–144.

[20] My translation.

As Perrault (1758) stated, «we analyze things only as singular beings». It was a description not of the Lion, but of *a* lion, not of the Bear but of *a* bear. Here, knowledge precisely fitted the thing in its anatomical singularity.

Natural history, however, could not restrict itself to such a level of singularity. It had to combine this initial aim (namely, to carry out a rigorous *observation and description of the individual being's parts*) with an effort to go beyond knowledge of the singular in order to reach a *general classification of natural beings*. As Foucault (2002, p. 151) says, «for natural history to become a language, the description must become a '*common noun*'».[21] This means that description needs to be integrated into a *general system of language*, common to all the natural beings being represented, and shared by all virtual speakers, so that each description immediately manifests all the relationships between one natural being and the rest, whether they are similar or different. And these relationships were mainly *logical relationships*:[22] the natural historian looked for stable differences and similarities between beings, chose the most relevant and singular ones as specific, the most general and shared ones as generic, and so on. Natural history's common language was borrowed from taxonomy and scholastics. In this respect, it found its model in the science of *botany*, as, since the seventeenth century, botanists had developed methods to classify plants according to their visible characteristics, in such a way that it was possible to locate them immediately in a network of differences and similarities. This localization, being both a *cognitive* (producing understanding of a being) and a *taxonomic* operation (sorting such a being into a system), depended on a *practice of denomination*. Its ultimate purpose consisted in giving the particular thing a noun which would represent it adequately, precisely locating it among a system of coordinates, identifying its logical relationships with other things and establishing how it differed from them. It aimed at indicating its *necessary*, *exact* and *final* place inside a well-ordered system. A natural being was grasped according to its species, genus and class, so that it immediately occupied a well-defined space in a taxonomical system. Its "common noun", to use Foucault's term, was determined through

[21] My emphasis.

[22] Logical relationships must be understood here as referring, firstly, to the very old "division method" defined by Plato, and secondly, to the usual scholastic process of classification. Beings are sorted together according to their differences and similarities, and these differences and similarities are organized in a hierarchy according to whether they are more or less shared, and more or less stable.

logic. If this was a *family name*, such a family expressed only logical relationships. It did not express kinship or lineage.

This taxonomical system depended upon a hierarchy of logical relationships of identities and differences organized in the following order: class-order-genus-species-varieties. As Daudin said about Linnaeus' *Systema Naturae*, which we may take as the most accomplished illustration of this style of reasoning, «the number of the layered collective units had been *universally and necessarily* fixed to five: that is, from the higher to the lower, class, order, genus, species and variety».[23] The *species-genus* axis constituted the pivot of this system: classical taxonomy focused on genus and species as its fundamental units. "Varieties" (*variae*) did not count for a naturalist; they did not even define a true and stable collective unit, but rather a mere collection of heterogenic characteristics. Varieties concerned only *practical knowledge*, precisely because of their inconstancy and variability. As Linnaeus claimed, knowledge about varieties was good for chefs, doctors or farmers, but not for naturalists.[24] At a pinch, the naturalist could describe a few varieties, but he was not interested in the mechanism of their production or (even more importantly for us) *reproduction*.

The naturalist had good reasons to despise varieties. Taxonomy needed to rely on *constant*, clearly *defined* and *invariable* characteristics; alterations caused by climates, cultures or lifestyles were mere trivial variations which could not make up part of a well-ordered system. Questions of breeding, alterations of types or transmission of characteristics which varied across time and space thus had nothing to do with taxonomic knowledge. As Foucault rightly claimed, beyond the species, between the species and individuals, was an "*epistemological threshold*" which relegated everything beyond it to inconstancy and obscurity.[25] The naturalist's gaze, at least in its classificatory enterprise, did not go beyond the species. On the contrary, it took species and genus as its basis, as its starting-block in order to get to orders, classes, and so on. Varieties were only "*variae*", that is, mere variants, without any defined logical and taxonomical identity. They were disparate collections of natural

[23] Daudin, 1926-1927, p. 38. My translation and emphasis.
[24] See Linnaeus, 1750, § 306 (p. 342 of the Eng. trans.): «The great usefulness of many varieties in domestic economy, diet and medicine has made the knowledge of them necessary in common life; otherwise varieties belong not to botanists as such, but so far as they should take care of that the species be not unnecessarily multiplied and confounded». See the whole chapter on varieties in this book. As Linnaeus repeats later (§315), «*varietates [sunt] superfluae in foro botanico*».
[25] Foucault, 1969b, pp. 899–901.

beings able to be multiplied indefinitely. I contend that it is only through a *genealogical prism* that all of this undifferentiated field of varieties came to be marked out, and that it is through the fundamental criterion of *reproduction* and *kinship* that varieties became "*races*", relatively stable entities relevant to natural history.

Of course, I am well aware that *Man* constituted a significant exception to this apparent lack of interest concerning varieties. From the first editions of his *Systema naturae*, Linnaeus focused more and more on *human varieties*. First of all, he distinguished between four varieties *(Homo variae)*: *Europaeus albus*, *Americanus rubescens*, *Asiaticus fuscus*, *Africanus niger*, dividing the genus/species *Homo* into *variae* strictly correlated according to geography, and defined by way of anatomical characters (colors). In his tenth edition (1758), he added two other varieties: *Homo monstrosus*, which collected disparate monstrosities, either the natural product of a country (*solo*) such as cretins or patagons, or the artificial product of culture (*arte*); and *Homo ferus*, which collected various cases of the "wild child" encountered in European forests. Moreover, Linnaeus split the genus *Homo* into two different species: *Homo diurnus sapiens* and *Homo nocturnus troglodytes*, the latter referring to the "blafard" or albinos. It is clear that, focusing on these *varieties* in the human genus/species, Linnaeus did not fundamentally depart from his more general principles, for this question was indeed of primordial importance in deciding upon the very status of the *species* of Man[26]. In any case, is this classification of the different *varieties* of men indeed, as many authors claim, an unquestionable precedent in the science of *races*? To many historians, the answer to this question is positive, because they believe that the *classification* and *division of human kinds according to anatomical characteristics* are the two fundamental elements in the science of human *races*.

It is here we reach the core of my argument, namely that we must pay attention to the fact that "race" and "varieties" pertain to different conceptual structures and styles of reasoning, and that the introduction of the concept of "race" inside a classificatory style of reasoning was far from evident. I do not question the fact that we find in Linnaeus a *classification* of the different *varieties* of the genus/species *Homo* according to their *anatomical characters*. I do contend, however, that the way in which Linnaeus defines the problem (at

[26] See *supra*, note 25. Linnaeus claimed that varieties were to be studied only as far as they could be assimilated with species, so as to avoid the unnecessary multiplication of species.

least in his *Systema naturae*), in strict continuity with the classificatory style of reasoning of natural history, excludes not only the very *possibility* of the formation of a concept of "race", but also the *necessity* of resorting to this concept. The dimension of "race" is made entirely superfluous and invisible, caught as it is inside the *logical* alternative: species/variety. Moreover, "race" simply does not pertain to the same conceptual system and does not refer to the same set of problems. An examination of Linnaeus' use of "varieties" and "species" proves this. Linnaeus states that *Homo sapiens* varies "according to culture and place", and he describes its main varieties of color, temperament, hair and so on. But it is very clear that Linnaeus is speaking here about mere "varieties" as *logical collections of disparate variations*, without any *genealogical* relationships or hereditary transmission, when he admits in his varieties the collection of all the individual cases of the "wild child" (who, obviously, don't share any kinship) under the category *Homo ferus*, and all the heterogeneous cases of monstrosities, from utterly different places and cultures, under the title *Homo monstrosus*. We have here a perfect illustration of the fact the notion of "variety" does not necessarily correspond to that of "race", and that a classification of the *varieties* of the human species is not necessarily a classification of human *races*. Such classification of varieties would become a classification of *races* only if these varieties were understood as a *genealogical* entity, and not simply as a logical collection of characteristics (that is, if these characteristics were analyzed as being transmitted from generation to generation, introducing, into the undifferentiated realm of "varieties", differentiations and stabilities grounded in their possibility for reproduction and transmission). This implies analyzing both the concepts of "varieties" and "species" from an entirely different, *genealogical* point of view. And, as we will see, it also implies a complete reversal of the axis on which natural history had previously turned, focusing namely on the space *between the individual and the species*. It is clearly not in a Linnaean system that such a reversal can be carried out. For Linnaeus, classification can only be organized according to varieties and species as *logical* concepts. The notion of "race" has no place here. We may prove this again by noting that, when Linnaeus seeks to identify a difference in the human genus which he believes to be more profound than a mere variety – when he wants to underline a collective unit whose characteristics are more constant – he makes use of the logical notion of *species*, which he applies to *homo troglodytes* without any other meaning than its logical one.

III. Genealogical and Classificatory Styles of Reasoning in Natural History

I believe it is now clear that "race", a notion primarily used, until the eighteenth century, as part of a *genealogical* rather than taxonomical vocabulary, did not have a self-evident place within the classificatory style of reasoning which dominated natural history. We would be wrong to believe that race and classification are necessarily intertwined. We should rather believe the opposite of this, namely that classical principles of classification were important obstacles to the development of a concept of "race". Between species and variety, or between species and genus, there was no positive space for this concept. Difference was either constant and significant enough that it constituted a difference of *species*, or it was variable and trivial, and thus pertained to the undifferentiated realm of *varieties*. There was no logical space for a concept of "race", and no need for it.

The following question must thus be asked: under which conditions did *race* (rather than variety or species, temperament, climate and so on) become a fundamental reference in classification? How did this very peculiar concept of "race" come to be a pertinent tool for classification? In the logico-classificatory style of reasoning of natural history, inherited from scholastic logics and botany, this bizarre concept of "race", inherited from the fields of breeding practices and the nobility and stressing genealogical relationships between natural beings, had no place. How did a concept entirely foreign to methods of classification become a fundamental part of these methods themselves?

I believe this integration depended upon at least two conditions. 1. *The classificatory style of reasoning in natural history had to be subordinated to another way of reasoning*; in which the primary question was that of origins, lineages and descent: we may call this the *genealogical style of reasoning*. It is this style of reasoning which one finds in nobility, in universal chronicles and in breeding practices. 2. Moreover, it implied that it was thought *necessary* to define a *peculiar level of classification*, which did not exactly correspond to the level of species nor of varieties, but constituted an *intermediary category* of uncertain status. This intermediary category was more stable than mere varieties – whose inconstancy did not permit any real classification – but *less essential than specific differences*. And this second shift, I believe, was a *fundamental strategy of monogenist naturalists*, who could not be satisfied by acknowledging *logical* differences of *species* within the human genus. To put it clearly, I believe the concept of "race" was first strategically used by

monogenist naturalists as a way to circumvent the *logical* alternative between species and variety. This is why, from Buffon to Kant and Blumenbach, the main conceptualization of "races" in the natural history of man is carried out by monogenists.[27]

In this section, I will first focus on the second point, namely that monogenist naturalists used the genealogical concept of "race" in order to circumvent the logical alternative between "varieties" and "species". While polygenists were largely satisfied with the traditional vocabulary of natural history – the logical categories of "genus", "species", and "variety" – and had no difficulty to acknowledge *species* differences in human beings, monogenists used a *third concept* – that of "race" – to define a peculiar level, different from species but more constant than mere varieties. They argued that apparently specific differences between human types were actually differences of "*races*", that is mere varieties transmitted along generations through reproduction. Their strategy was to distinguish between the *logical* status of the differences and their *genealogical* status: a difference may appear to be *logically* a difference of *species*, while being, *in reality*, based on a *genealogical* common root. It was a very common argument among monogenists from Buffon to Blumenbach and Prichard to say that what appeared, nowadays, to be important differences between human types, were actually slight alterations that had became deeper and more important through the passing of time and the transmission of characteristics along generations. The "truth" about a natural being had to be sought in his *genealogy* and not in mere logical relationships. This discussion will lead us to see how the first condition we identified for the development of the concept of "race" in natural history (namely, the subordination of the classificatory style of reasoning to a genealogical perspective) has been realized also in monogenism. To this end, we will use Kant's distinction between *Naturbeschreibung* and *Naturgeschichte*. This distinction will allow us to understand how the genealogical style of reasoning could totally transform the principles of classification of natural beings and how the concept of "race" was strictly correlated to this transformation.

The existing tension between logical and genealogical perspectives on natural beings must be stressed for the reason that the historiography of racism, preoccupied as it has been by the opposition between monogenism and

[27] Voltaire seems to offer an exception to this claim, but I attempted to prove in my PhD dissertation, *forthcoming*, that this exception does not stand up to close scrutiny.

polygenism, has not paid enough attention to the fact that many "polygenists" seem, more than anything else, to be suspicious regarding the very inclusion of a *genealogical perspective into classification*. Moreover, if these same polygenists identify different *species* inside the human genus, it is primarily due to the fact that they reason according to a logico-classificatory style of reasoning. This is especially true concerning Bory de Saint-Vincent or Forster, who frequently expressed their suspicions regarding the fact that genealogical investigations brought religious biases to bear on the field of natural history. Moreover, for many polygenists, the specificity of the concept of "race" is difficult to understand: it is reduced either to a difference of *species* or to a difference of *varieties*. This is clear in the following extract from Lord Kames:

> M. Buffon ... endeavours to save his credit by *a distinction without a difference*. «[*Camel and dromedary*] are, says he, one species but their races are different and have been so past all memory». *Is not this the same with saying that the camel and the dromedary are different species of the same genus*? (Home, 1778, p. 13, my emphasis).

In Buffon's system, it is absolutely *not* the same thing to claim, on the one hand, that the camel and the dromedary are from the same species but constitute two different races, and on the other hand, to claim that they are two different species within the same genus. The reason is that, in the first case, one expresses a *genealogical relationship*, while in the second case, the relationship is merely of the *logical* kind.[28]

Many polygenists, at least until the beginning of the nineteenth century, first relied on the fact that the anatomical differences they observed had a *logical status of specific differences* and not of varieties (because they were highly characteristic and stable). It was only *secondarily*, and frequently when responding to monogenist claims, that they deduced from these logical differences a *genealogical* consequence: namely, that these logical differences of species must imply different lineages.[29] I wonder then if we should not even claim that far from being unique to "polygenism", the concept of "race" did not really have any relevance within polygenism, for the reason that it was largely superfluous. A polygenist could easily be satisfied by the two logical

[28] At least as long as Buffon did not accept the hypothesis of "natural genera". Later, things become more complex.

[29] Voltaire's analysis is a good illustration of this phenomenon. On this point, see my PhD dissertation, *forthcoming*.

categories of species and varieties, doubling them, if necessary, with a genealogical value. After all, he did not have any problem claiming that there were different *species* (even in a *genealogical* perspective) in the genus Homo: why should he have introduced any other concept? This is what Bory seems to think:

> For, up until now, we have studied the history of Man with only some precautions determined by considerations which are external to science ... the authors the most convinced of the truths I will try to expose never positively admitted that there may be various species in what was considered as *the* species par excellence, coming out of a single root. *Most of them thought they could escape the difficulty by referring to "races", most likely forgetting that the word "race", synonymous with lineage, is usually used to talk about domestic animals* (Bory de Saint-Vincent, 1825, p. 277. My translation and emphasis).

In my opinion, Bory's claim is largely true: the concept of "race" has been strategically used by monogenist natural historians to resolve the existing tension between monogenism and the observation of relatively stable differences inside human species. "Race" gave them the possibility to grasp, beyond such differences which *logically* would have made different species, a kind of *genealogical continuity*. They could escape in this way the logical alternative between species and varieties by insisting on *the historical and biological materiality of genealogy*. And Bory is right to underline the fact that "race" first originates in the context of breeding and domestication. Indeed, it is through the reference to breeding, its mechanisms of alteration and production of "races", that this historical and biological materiality of genealogy has been investigated. To the logico-classificatory style of reasoning, which in natural history was deeply intertwined with the epistemological preeminence of botany, one may oppose a genealogical style of reasoning which founded its model on breeding practices and the domestication of animals. And if Linnaeus adequately represents the first, I believe Buffon may be associated with the second.

Kant was in all likelihood the first author to make clear this tension between what he himself called two different "method[s] of thinking" preceding the determination of the object of knowledge[30] (what I call "styles of reasoning").

[30] Kant, 1788, p. 38 of the Eng. trans. Such a quotation expresses perfectly what is a style of reasoning.

Kant largely relied on Buffon, but gave Buffon's claims a decisive epistemological status. I would like to insist on this point in order to make clear the opposition between two styles of reasoning in natural history, as well as to show the way in which race pertains to a *genealogical* style of reasoning[31]. In his response to some criticisms Georg Forster had leveled at his article on the "Determination of the concept of a human race" (1785), Kant made explicit several distinctions which he had earlier proposed concerning the way natural history should be carried out. Forster accused him of establishing, prior to any investigation, «a principle on the basis of which the natural scientist might even be led in the investigation and observation of nature» (Kant, 1785, p. 38), namely, of having determined *a priori* the directions of the observation through principles. Kant's answer is epistemologically decisive: *no observation can exist*, according to him, *without a tacit principle*, without a *method* orienting the investigation. As Kant pointed out:

> Indeed, Forster himself follows the lead of the Linnaean principle of the perseverance of the characteristics of the pollinating parts in plants, without which the systematic natural description of the plant kingdom would not be so gloriously ordered and widely extended as it is (Kant, 1785, p. 38).

Forster himself follows, prior to any observation, a specific style of reasoning, which is precisely the *Naturbeschreibung*, the mere *description* of Nature, which Kant opposes to the *Naturgeschichte*, the *history* of Nature. Of course, even such "description" implies actually a method that is a set of articulated schema under which natural phenomena and their relationships are to be grasped.

Kant first described these two methods in his essay "Of the different races of human beings" (1775-1777), where he criticized (in accordance with Buffon) a method of thought separating natural beings into "scholastic species". «Scholastic division proceeds by *classes* [*klassen*] [and] divide[s] the animals according to *resemblances* [*ähnlichkeiten*] [... It] provides a scholastic system to memory [... and] only aims at classifying creatures according to labels».[32] Kant clearly referred to (and even caricatured) what I called the *logico-classificatory style of reasoning* in natural history. According to this

[31] See on this point the analyses of Sloan, especially in Sloan, 1979.
[32] Kant, 1775-1777, p. 84 of the Eng. trans. I modified some parts of the translation to be closer to the German concepts.

perspective, natural beings share logical relationships of differences and resemblances; they coexist in collective units that are merely catalogues.

Kant systematically contrasts this style of thought with another, through which, according to him, one may obtain a "*natural* division" of beings, "grounded on the common law of *propagation*".[33] We must underline this point: natural reproduction constitutes the basis of this new system, and not in its Linnaean meaning (i.e. that the anatomical parts necessary to reproduction must be fixed and static); reproduction is here understood as a *dynamic function* (with historical depth), *as a process which creates lineages, establishes the constancy of characters and sorts differences as more or less constant.* As Kant puts it, this natural division considers natural beings according to their «strains [*Stämme*] [and] divide[s] animals according to their kinships [*verwandtschaften*], with reference to their power of reproduction [*Erzeugung*]»[34]. This is supposed to lead to «the natural science of origins»[35], wherein natural beings would be studied from the point of view of their lineages, original roots and derivations. To put it succinctly, such an approach defines a *genealogical perspective over natural beings* and grounds a natural classification over this genealogy.

It is *only* in this perspective that the concept of "race" finds an appropriate place. Kant understands this point very well:

> What is a race? The word certainly does not belong in a *systematic description of nature*, so we presume that the thing itself doesn't exist in nature. However, the *concept* this expression designates is nevertheless well established in the reason of every observer of nature who, in *order to account for a self-transmitted peculiarity that appears in different interbreeding animals but which does not lie in the concept of their species*, supposes a conjunction of causes placed originally in the *line of descent* of the species itself. The fact that the *word* "race" does not occur in the *description* of nature (but instead, in its place, the word "*variety*"), cannot keep an observer from finding it necessary from the view point of the *history* of nature.[36]

Kant's analysis is of the utmost importance. As he says, in the *systematic description* of natural history (*Naturbeschreibung*), the notion of "race" does

[33] *Ibid.*
[34] *Ibid.*
[35] Kant, 1788, p. 40 of the Eng. trans.
[36] *Ibid.* I have somewhat modified the translation to be closer to the German concepts. Emphasis is mine, except for "concept" (Kant's emphasis).

not have any place. The only relevant notions are that of "variety" and "species". But the same is not true if one adopts another point of view which, beyond logical description, seeks to grasp the *historical and biological materiality* of Nature (*Naturgeschichte)*, and analyses natural beings from the standpoint of their origins and the mechanisms of transmission of their peculiarities. In this latter case, the concept of "race" appears as necessary and the level of race is clearly distinct from that of *species*. But here, the species itself does not designate a logical but rather a *genealogical* entity (Kant distinguishes between the *species naturalis*, defined by a common origin and a power of reproduction, and the *species artificialis* that is a scholastic meaning, wherein beings share common characteristics and are classified together).[37] "Race" defines a *relatively stable difference* (established through the fact that it is *transmitted over generations*) but not on the same level as that of the natural species: it remains *inside of it*. This is why it is such a strategically interesting level for monogenism: it defines a relative constancy of characteristics, transmitted over generations, *but inside a same species*. In any case, its own relative constancy makes classification possible (which is not the case with other kinds of "varieties").[38] According to Kant, this peculiar level of "race" creates a legitimate concept which is a regulative idea in Reason's attempt to make a *history* of Nature. And where do we find arguments to establish this idea? Kant is very clear on this point: we find such arguments in the "different interbreeding animals", and indeed, all problems related to *breeding* can now be integrated into the *history* of Nature.

IV. The Concept of "Race" in "Variétés dans l'Espèce Humaine"

As I have already stated, Kant explicitly derived his considerations from Buffon and especially from his *Premier discours: de la manière d'étudier et de traiter l'histoire naturelle*.[39] It is now time for us to turn to Buffon in order to

[37] *Ibid.*, p. 50.
[38] I will not insist here on Kant's particular system of "races", which have been very well studied by Sloan or Bernasconi. Kant perfectly exemplifies how the whole undifferentiated field of "*variae*" could have been marked off and differentiated according to the criterion of reproduction and genealogical perspective. See his conceptual distinctions of "*Rassen*", "*Spielarten*", "*Varietäten*" and "*Schlag*" according to this criterion in Kant (1775-1777).
[39] Buffon, 1749a, pp. 3–65.

demonstrate – how P.R. Sloan rightly argued[40] – that Buffon was at the source of the concept of "race". I hope it is clear that, in stating this, I do not mean to determine whether Buffon was (or was not) *racist*. I seek to argue, in accordance with Sloan and in opposition to other scholars,[41] that he carried out many transformations within natural history's principles that established the concept of "race" in its *epistemological possibility* and its *logical necessity*. Such a demonstration would require many pages. I can only sketch here the most important points. I will focus first on the controversial existence of a concept of "race" in the article *Variétés dans l'espèce humaine* (1749), and will then show how this concept must be understood in the context of a more general approach which one can trace through the whole *Histoire naturelle*, and which is a decisive element in the formation of the concept of "race".

According to many scholars, Buffon indiscriminately makes use of the notions of "race", "species", "varieties" and "nations"[42] in his article *Variétés dans l'espèce humaine*. I do not share this view. Even if I am ready to admit that Buffon sometimes uses "species" as a mere "collection of individuals" without any taxonomic meaning, and that he sometimes uses "race" in the same way, I believe that, in a vast majority of cases, "race" characterized a *well-defined level of reality* which does not correspond to "species", "varieties" or "nations". If this question is of particular importance, it is because Buffon's article is clearly the first article within the field of natural history in which the notion of "race" is used with such "statistical" regularity (almost 50 occurrences). Is this regularity merely a question of quantity, or is it also *a regularity of definition,* i.e. a *concept*? I would like to prove that it is the latter by highlighting four main points.

Firstly, in many occurrences, "race" is clearly distinguished from "varieties" or "nations". It defines a *certain level of similarity and constancy in characteristics despite local variations or national traits*. For instance, the different Lapps (i.e. Borandians, Zembians, Samoyeds and so on) "seem to be

[40] See Sloan, 1979, p. 118. Many points I develop in this article are close to Sloan's interpretations of Buffon, even if Sloan prefers to underline the philosophical sources of Buffon while I am stressing his importance in the introduction of the vocabulary of genealogy, breeding and nobility in natural history, a thing Sloan strangely neglects, although he describes perfectly how Buffon created the conditions of possibility of this insertion.

[41] See for instance Blanckaert, 2003. The blindness to Buffon's importance in the formation of the concept of "race" is particularly strong in France.

[42] See for instance the introduction, by M. Duchet, to Buffon, 1971, p. 32; or Blanckaert, 2003, p. 135.

of the same race" despite their differences, because they share the same general physical characters (eyes, hair, faces) and the same customs. This does not mean that there are no "varieties" among them, but rather that «if these peoples differ, it is only a question of more and less» (Buffon, 1749c, pp. 371–373).[43] The same remark may apply to all peoples from the "Tartar race", who may differ in various aspects but «*share so many similarities that we have to consider them as being part of the same race* ... the essential characters of their *race* always remain» (pp. 379–384). "Race" thus defines a *principle of resemblance and continuity which persists beyond differences* and allows one to classify different nations together. To Buffon, for instance, the Japanese, Chinese and Tartars, in spite of their notable differences, are «*similar enough that we can consider them as part of the same and unique race*» (p. 389). It is clear that "race" is an entity broader than nations or mere varieties, which is grounded on a community of characteristics.

Secondly, if race defines a principle of continuity beyond varieties, *it differentiates on the other hand some broad entities from others*. It traces *discontinuities* between peoples, even between peoples who live *in the same climates*. The Lapps for example constitute a «*race* ... very different from the others,» «examining all the peoples that live in the neighborhood of this long strip of earth inhabited by the Lapp race, we'll see that *none has any relationship to this race*» (pp. 372, 378). The same applies to the Tartars who radically differ from the Russians who live close to them, even if both peoples mixed their blood: «Tartar blood mixed ... with Oriental Russians [*but*] *this blending did not entirely erase the characteristics of this race* because one finds many Tartar faces among Muscovites» (p. 384). As we can see, what actually defines the difference of race is a *difference of blood and lineages*. Put differently, "race" may thus distinguish broad human entities according to their lineages and origins. This fact appears very clearly when Buffon analyzes the peoples of Southeast Asia. In the same climate and sometimes even on the same island, "race" becomes a principle of description and sorting of differences according to genealogies and origins. For instance, people from Sumatra and Malacca are «from the same race» while they «seem to be from a race different» to those from Java. This is because the people of Malacca and Sumatra «originate from India, those from Java from the Chinese, except for those white and blond men called Chacrelas, who must come from Europeans»

[43] Emphasis and all translations from Buffon are mine.

(pp. 396–397, 419). Moreover, concerning the American Indians, Buffon states that they all form «the same and unique race of men» because «they come from the same stem and preserve until today the characteristics of their race without great variation» (p. 510).

That "race" designates relatively constant characteristics transmitted through generations, so that it can differentiate major lineages among human species, now appears to be clear in the way Buffon contrasts Ethiopians to Nubians. According to Buffon, Ethiopians' «natural color ... is brown or olive-greenish, as South Arabians *from which they probably descend*,» while Nubians are «*real* blacks,» «*original* blacks [noirs *d'origine*]». Or, as he says, «Nubians ... are black and *originally black* ... and they will remain perpetually black as long as they inhabit the same climate and do not mix with Whites; Ethiopians on the other hand ... *come from Whites*» (pp. 449–452 & 482). As Ethiopians and Nubians are living in the same climate, it is clear that only their *origin* here constitutes their racial difference. How does Buffon reconcile such a statement with his theory of the production of races through the influence of climates and life conditions? This question is not very difficult to answer, but it is important concerning the very concept of "race". Climate and life conditions act *over time*. They are *transmitted through generations and inscribed in the body through genealogy*. For instance, «the germ of blackness is transmitted to children by their fathers and mothers so that in any country where a Negro may be born, he will be as black as if he were born in his own country.» (p. 523) Over time, relatively "constant races" are created this way. It means that, according to Buffon, history, kinships and transmission of characters over generations creates *relatively constant varieties transmitted over time*. As he says, such alterations became:

> Varieties in the species because *they became more general, more sensible and more constant* through the continued action of the same causes; because *they have been transmitted and are still transmitted through generations and generations as deformities and mothers and fathers' illnesses which are passed to their children*; and because, giving the fact they must have been produced originally by the concourse of external and accidental causes, *they must have been reinforced and have gained constancy through the action of time* and the continual influence of the same causes (p. 530).

Here, the concept of "race" understood as a relatively constant succession of varieties transmitted along generations inside the human species is clearly

enunciated. The relative constancy of these "varieties" is grounded in genealogy.

A final point must be added, which I believe to be of great importance. If it is indeed true that "race" defines a particular level of varieties, whose constancy is based on reproduction through generations, then Buffon can define *a criterion to distinguish between "race" and mere "accidental variation"*, according to the *capacity for reproduction*. This is precisely how Buffon differentiates between monstrosities or pathologies, and racial characteristics. In contrast with Voltaire and Linnaeus, for instance, Buffon does not believe that Albinos are a species. They do not even, as he puts it, «form ... a particular and distinct race»: they are representative merely of «a kind of disease» which concerns only isolated individuals «who have degenerated from their race because of an accidental cause» (pp. 500–501). The same holds true for «dwarfs and giants [...*who*] must be considered *as mere individual and accidental varieties, and not as permanent differences able to be produced by stable races*» (p. 509). While in Linnaeus, monstrosities and wild child were put at the same level with other human differences (the level of "*variae*"), Buffon clearly introduces differences of level between "*races*", that is relatively constant *variae* transmitted over generations, and monstrosities or other heterogeneous characters, considered as *mere accidental varieties*. This differentiation is of the utmost importance. As I stated previously, varieties, in order to be considered worth studying in natural history, had to be turned into races, that is, had to obtain a relative constancy throughout a genealogical process of transmission and fixation. This operation is clearly realized in Buffon's analysis.[44] He makes a very important distinction between those characteristics able to be transmitted over generations and those which will not produce a race, thus remaining merely accidental (or pathological) varieties or monstrosities.[45]

V. Race and Buffon's *Histoire Naturelle*

Having, I hope, convincingly proven that we find the concept of "race" clearly (if not unproblematically) defined in the "Variétés dans l'espèce humaine", I

[44] The fact these characters are said to be reversible over other generations (at least 8 generations for the Blacks for instance) doesn't modify anything on this respect.

[45] A detailed history should mention the works of Maupertuis to whom Buffon is indebted in these analyses.

would like to demonstrate how this concept finds its place in the broader project of the *Histoire Naturelle*. Indeed, it is not enough to establish that Buffon had already elaborated a consistent concept of "race" in 1749. We must still seek to understand how this concept could enter natural history and acquire a *taxonomical status*, in such a way that it became a basis for classification. As I previously argued, the integration of "race" in natural history required at least four conditions to be met. 1. The *subordination of the classificatory style of reasoning to the genealogical style of reasoning*, that is, the conversion of logical and taxonomical entities into genealogical ones, grounded on kinships and lineages. Common nouns in natural history must not be mere logical family names but *real, genealogical family names*. 2. The reorientation of natural history according to the *process of reproduction* and transmission of characteristics over generations, which presupposed a *theory of reproduction* to be the basis of the natural order.[46] 3. The *reversal of the epistemological threshold barring access to the undifferentiated realm between species and individuals.* This reversal concretely means that varieties may be considered as one of the main fields of investigation in natural history, and that what counts in the knowledge of nature is what goes on at the level between the individual and the species or the genus. 4. The necessity, when dealing with these questions, of referring to all *practical knowledge concerning breeding and the domestication of animals* as the touchstone of knowledge on natural beings.

It is not difficult to show that it is in Buffon's project that, for the first time in natural history, these conditions all met. Let begin with the two first ones. We may first recall that Buffon vehemently criticized Linnaeus for the *artificiality* and *arbitrariness* of his system, which Buffon compared to mere catalogues or «dictionaries where one finds nouns sorted in an order relative to an idea and, consequently, as arbitrary as the alphabetic order» (Buffon, 1749a, pp. 9 & 24). To Buffon, classical taxonomy proceeds on nothing but «truths of definition», which are relative to our understanding and define «ideal identity having no reality» (pp. 53–54). Conversely, he claims to carry out two processes in his *Histoire Naturelle*: firstly, «an exact *description* and true

[46] I will not insist here on Buffon's theory of reproduction, which is very well known, but it is clear that a coherent concept of "race" supposes the notion of the transmission of characters over generations. It is not by accident that those who, in my view, played a decisive part in the maturation of "race" as a concept in natural history (Maupertuis, Buffon and Blumenbach) are the main critics of the theory of the preexistence of germs. The case of Kant is rather more complex.

history of *any singular thing*» (p. 29). For him, *individuals are the ontological base of Nature* and «the more we multiply the divisions in natural productions, the closer we'll be to truth, because nothing exists really in nature but individuals, and genus, orders and classes exist only in our imagination» (p. 38).

I would like to underline the fact that, in this text, neither *species* nor *race* are said to be *imaginary divisions*.[47] Buffon has good reason to omit them. He too, like every natural historian, seeks to go beyond mere singular descriptions of individuals and to transform, as Foucault put it, proper nouns into *common nouns*:

> we need to elevate ourselves to something bigger and worthier [...*and*] it is here, precisely, that we need *a method* [*but...not*] *a method which merely sorts words arbitrarily: we need the kind of method that has its basis in the very order of things* (Buffon, 1749a, p. 51).

Herein lies the main difference between Buffon and other taxonomists: in order to sort natural beings into a system, Buffon does not rely on mere *logical relationships*. He seeks rather to base his system on *real* and *natural* relationships, which he calls "*physical truths*". For Buffon, these physical truths refer to a *probabilistic conception of certainty*: their units are *individual facts* and they designate the almost *infinite probability of repetition* of a fact that has always occurred up until now. That is, they are «a *sequence of similar facts* ... a *frequent repetition* and *uninterrupted succession* of the same events». So: (i) Their ontological basis is in *individuals*; (ii) Their form is the *succession over time of the similarities* in these individuals; (iii) They define a *constancy* which is *inscribed in history* and which is only a *relative* constancy, always *susceptible to deviations* or accident. As Buffon (1777, p. 48) says, «by always, I mean over a very long period of time and not an absolute eternity». To put it clearly, while classical natural history, when it sought to go beyond knowledge of individuals, had to refer to the categories of logic in order to create a general classification of natural beings, Buffon wants to stick to natural relationships between individuals, identifying these natural relationships in the

[47] Contrary to the claims of Blanckaert who said that, to Buffon, "race", "species" and even "nation" (sic) are "mere logical categories, useful boxes where one can sort the different natural objects" (2003, p. 135). Neither species, nor race nor *a fortiori* nations are considered by Buffon as mere logical categories.

relative constancy of repetition of the same facts over time. Here is the point of entry for the whole *genealogical style of reasoning* inside natural history.

Because, where are we to find such a physical truth in Nature? The answer is self-evident: in the *species*. But the species is understood here as the *relatively constant succession of characteristics along generations*, i.e. as a *genealogical and historical entity grounded in the process of reproduction*. As Buffon (1749b, p. 3) says:

> it is not the individual who is the most marvelous thing in nature but rather the succession, the repetition and the duration of species ... this faculty to produce a similar being ... this kind of unit always remaining and which seems eternal.

It is very important to stress that species, here, does not refer to a mere *logical collection* of similarities but rather to their *succession* over time. Moreover, this succession does not refer simply to a statistical repetition: it is based on the *genealogical transmission of a type*, i.e. of some characteristics, which are inherited over time from the species' ancestor. This means that Buffon's natural taxonomy will be subordinated to a *genealogical style of reasoning*, and will depend on a theory of the transmission of characteristics over time.

Reasoning this way, Buffon claims to replace the imaginary (logical) "mold" he denounced in the taxonomists' minds with a *real mold* which is transmitted from the first ancestor of the species. «The first animal, the first horse for instance, is the external model and the interior mold on which every horse, which existed and will exist, were and will be formed» (Buffon, 1753a, p. 216). This means that the natural historian has to be a genealogist and must try to find, beyond all the accidental deviations accumulated by Nature over time, «the characteristic of the primitive race, the *original race*, the mother race of all races». Speaking of dogs, Buffon (1755a, p. 193) claims that he seeks to identity the race which is «the true dog of Nature», the one «which must be considered as the root and model of the whole species». And Buffon does exactly the same thing with horses and men. For instance, to him, there is no doubt about the fact that it is in Europe that one must take the «true natural color of man»,

> *the model and unit to which all the other nuances of color and beauty are to be evaluated*, the two extremes being equally far from truth and beauty. Here live the most standardized peoples ... who are also the most beautiful and well-shaped in the world (Buffon 1749c, p. 528).

I do not want to place too great an emphasis on this question, but we must remember that, for Buffon, each species has a natural mold, which is inherited from its first ancestor, and that the various races are nothing but the *degenerations* or *alterations* from this mold that have been accumulated and transmitted over generations.

Natural history's system will consequently be organized by *kinships*. When Buffon speaks of "*succession*", we must understand this term almost in its juridical sense, that of the *succession of inheritance*. Individuals from the same species are not to be seen as sharing a mere logical collection of similarities: even the criterion of similarities and differences is subordinated to a *principle of transmission* which may establish real similarities but also *unmask* apparent ones. For instance, it is true that dogs are so visibly different that they may appear to be of different *species*, as Voltaire believed; but because they can propagate themselves together, they are actually from the same species. And even if the wolf, the fox and the dog look alike, they are not usually able to propagate together, and are thus from different species. The same goes for horses and donkeys. In Buffon's words:

> If the similarities, both external and internal, were even more important in animals than they are between donkeys and horses, it should not ... lead us to put them in the same family or to think they share a common origin; because if they came from the same root, if they were from the same family, we would be able to relate and unite them again through breeding (Buffon, 1753b, p. 383).

For Buffon, families should thus not to be understood as taxonomists usually understand them, that is as mere logical families: «these families are our own work ... we have made them in accordance with our own mind» (Buffon, 1753b, p. 384). No, a *true* family is a *lineage*; it implies degrees of kinships and a community of stock. Through Buffon's analysis, it is the whole vocabulary of kinship, the entirety of genealogical knowledge from nobiliary, juridical or breeding practices which enters natural history. For Buffon, one may even establish:

> An order of kinships between species as we allow one in families. Horse and mare will be brother and sister in species and parents of the first degree. The same for ass and jenny; but if one gives an ass to a mare, it would be only be as cousins in species and this kinship would thus be of the second degree; and the mule that they may produce, sharing both the species of the father and the mother, would be at the third degree in species (Buffon 1776, pp. 31–32).

This text is from the late Buffon. But where does he claim to take his reference for this system of kinship in species? The origin of this reference is in a «kinship which is better known: that of the different races within the same species» (Buffon 1776, p. 33). It is indeed through his analysis of "races" within the same species that all of this vocabulary of genealogy develops in Buffon's system. And its best illustration may be found in the way dogs are described. Buffon proposes a «table of the order of dogs» that he defines as «a table or, if one prefer, a kind of *genealogical tree* where one may grasp at a glance all the varieties» of dogs. To Buffon, the Sheepdog is the «stem of this tree» as it is the «true dog of nature».[48] Given the fact that these "varieties" are explicitly "*races*" (as we will see), we have here a very dense network of meanings referring to genealogy and kinships. With Buffon, the whole vocabulary of nobility and breeding becomes part of natural history. This extract on the Donkey exemplifies, for instance, this importation of the vocabulary of nobility:

> the ass is an ass and not a degenerate horse ... it is neither a stranger, nor an intruder nor a bastard; it has, like every other animal, its own family, species and rank; its blood is pure and even if its nobility is less glorious, it is as good and as old as that of the horse (Buffon 1753b, p. 391).

Now, if it is true that a species is nothing but the succession of characteristics transmitted over time from individuals to individuals throughout generations, then individuals, families, "races" (understood as lineages) and species are situated *on the same line*. As Foucault remarked concerning Darwin – but in a statement which is actually true since Buffon – individuals, races, species and (this will be Buffon's great hesitation) even natural genus are situated on the same thread or at the same level of reality, which is defined through *genealogy*. This implies that the epistemological threshold separating species from individuals is blurred, and that the thread between individuals and the species, constituted by the succession of similarities over generations, defines a fundamental field of investigations in natural history.

And it in this field that "race" came to define a *peculiar taxonomic level* distinct from both *variae* and species. This is very clear in the way "race" is used by Buffon and Daubenton in the *Histoire Naturelle*. One has to remember that what constitutes a species is a *relative* constancy of characteristics over generations. This means that Buffon can also distinguish *other levels of*

[48] Buffon 1755a, p. 225 . See the genealogical tree of dogs in annexes.

constancy between the quasi-anomic accidental variety and the quasi-absolute constancy of species. Therein lies the taxonomic level of "race". As Daubenton says about dogs: «the[ir] races are, so to speak, *acknowledged by Nature itself*, because *they remain constant along generations* and the characteristics which constitute them are the most natural to the species» (Daubenton 1755a, p. 232).[49] This means that species are not, despite what Buffon once said, «the only beings of Nature» beyond individuals: *races are too*. They define a *relative constancy* of characteristics which last for many generations, so that they form different lineages and permit *general distinctions within species*. They define a peculiar entity, a peculiar object of knowledge and a peculiar level of classification. This is why Daubenton can use them so frequently to organize his own descriptions, based on differences which are not mere individual variations but rather relatively constant types *within species*. The Pig, the Horse, the Goat and so on, show «different races [*within their*] species» (Daubenton, 1755b & 1755c, p. 75 & 125). And these differences of race are *more constant than mere varieties*: for instance, «differences and varieties of color [*in sheep*] are even more accidental than differences and varieties of *races*» (Buffon 1755b, p. 22). These characters of race are more constant because they are transmitted along generations. Sometimes, as in dogs, there is even «in the very nature of the species *a tendency to return to the characters that form the principal races*,» a «tendency to preserve and restore the characteristics of the principal races» (Daubenton, 1755a, p. 231, 233, emphasis is mine).

It seems to me very clear, in the light of such quotations, that "race" defines a peculiar level of natural reality in Buffon's *Histoire Naturelle*. I thus believe that it is quite difficult to argue, as Claude Blanckaert did, that Buffon has nothing to do with the emergence of a concept of *race* in natural history because he used only a concept of "variety", and that this concept of "variety" was antinomic with the concept of "race" as it later developed in natural history.[50] Conversely, it is precisely in Buffon's work that some "varieties"

[49] Emphasis is mine.

[50] See Blanckaert, 2003, p. 134. In truth, Blanckaert confuses, as is often the case, "race" and "*racism*". What he means to say is that Buffon's conception of "varieties" is antinomic with the definition of "racism" Blanckaert chooses to adopt – because of the reversibility of characters, monogenism and so on. But this is not the question: it seems to me unquestionable that, for human as for animals, it is in Buffon that one sees some "varieties" becoming "races" through the adoption of a genealogical point of view.

have become "*races*", that is, that they have acquired *the genealogical depth* which made "race" such a peculiar entity in natural history.

VI. Annexes: the Two Styles of Reasoning in Natural History


22 GYNANDRIA. MONOECIA.

2. TRIANDRIA.
3. TETRANDRIA.
4. PENTANDRIA.
5. HEXANDRIA.
6. DECANDRIA.
7. POLYANDRIA.

XXI.
MONOECIA

1. MONANDRIA.
2. TRIANDRIA.
3. TETRANDRIA.
4. PENTANDRIA.
5. HEXANDRIA.
6. POLYANDRIA.
7. MONADELPHIA.
8. POLYADELPHIA.
9. SYNGENESIA.

XXII.

Figure 1: Linnaeus, *Systema naturae*, 2[d] ed., Kiesewetter, 1740. Illustration of classificatory style.

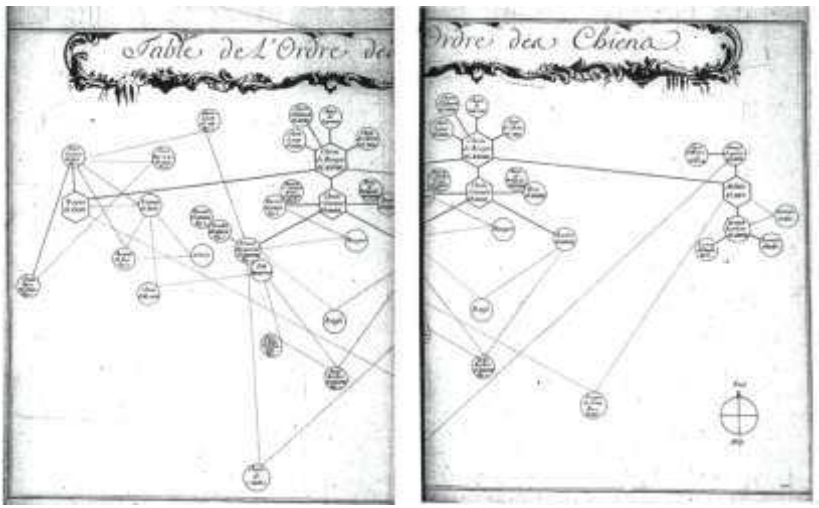

Figure 2: "Tableau de l'ordre des chiens" in *Histoire naturelle*, op. cit., *T. V*, "Le Chien". Illustration of the genealogical style. Note that to the genealogical tree is added a principle of geographical dispersion.

Figure 3: *Généalogie d'Abraham*, miniature, Saint-Sever, XIe siècle, from the *Commentaire de l'Apocalypse* of Beatus de Liebana, Paris, BNF, lat. 8878, f° 8. Compare with Buffon's genealogical tree.

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