

# NATURE AND MIMETIC THEORY

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COVR 2004 Conference  
Ghost Ranch, Santa Fe, NM, June 2-5, 2004

First draft (May 24, 2004)

## OUTLINE

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- 3.1 These processes should be seen as taking place at the level of what is, their consequences is the transformation of the world and not simply a transformation of our image of the world (*PD*)
- 3.2 As such it is linked to modern science from its very beginning and belief that we can only really know what we can create. (*PD*)
- 3.3 Paradoxically, as J. von Neuman argued, it turns out that once our creations reach a certain level of complexity they stand before us just as uncreated nature does. Our creations become to us mysteries to be discovered. (*JPD*)
- 3.4 This adds a final twist to the identity between artifice and nature. (*JPD*)

### 4. A historical process (*PD*)

- 4.1 The artificilization of nature and the naturalization of man must be seen a something that took place progressively
- 4.2 The engine of this process is the rivalry between agents
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  - 4.2.2 Nature as exterior to the conflict will disappear and be assimilated as a tool of conflict as indifference for it will grow through the rivals' fascination with each other.

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## 1. NATURE AND MIMETIC THEORY

In view of the topic of this conference the first questions to ask, it seems to me, is: what is the place of nature in mimetic theory? The answer is very simple and clear, none whatsoever! Mimetic theory in its original form as Girard developed it does not tell us anything about nature. It speaks to us about our social relationships, our cultures, our religions, and argues that many phenomena that have traditionally been seen as reflecting man's relationship to nature are actually rooted in our relations with each other. Terrible divinities, strange prohibitions, absurd rituals should not be conceived as the expression of fear and incomprehension of natural phenomena, but as revealing an imperfect understanding of the dynamics of our interactions. If anything mimetic theory minimizes the role of nature in the explanation of social life. As an anthropological theory it is radically sociological rather than environmentalist. The only place nature occupies in mimetic theory, as far as I can see, is that the central category of mimesis is construed as a biological trait of our species. Once this debt to biology imposed by the scientific market in which we write is paid nature is no more to be seen in the theory. Even more, construed as the engine that drives the process of hominization mimesis is seen as the means through which we, humans, became something different from purely natural beings.

This said, it does not follow that there is no place *for* nature in mimetic theory. To the contrary as we will soon see, nonetheless the above remarks make it clear that from the point of view of mimetic theory, it is our relations to each other that determine our relation to nature rather than the other way around. What is nature then from the point of view of mimetic theory? That is to say, from the point of view of two agents who are engaged in a conflict, locked in mimetic competition, for that according to mimetic theory constitutes the fundamental human condition? Once the question is asked in this way in relation to an ideal model of conflict, the answer seems relatively straightforward. Nature can be defined negatively. Something is natural if it satisfies the two following conditions: 1) if it is neither an actual nor a potential subject<sup>3</sup> of mimetic rivalries, if it is a being that is not, and who cannot become a rival, and 2) if it is not the object of any actual mimetic conflict, if it is not a prize that is disputed. These two conditions correspond to rather simple intuitions. First, subjects of mimetic conflicts, rivals, adversaries are either human or divine. Perhaps another way of saying it is that they are simply subjects. The fact that they can enter into conflict with us, that they can become our rivals is precisely what defines them as agents and is the reason why they to some extent stand out of nature. Conflicts are a form of social relation. Mimesis, according to Girard, is the foundation of human social life. The second condition makes this fact explicit. It is by definition that the objects that occasion mimetic conflicts are social rather than natural objects. They are social simply because they are the occasion of our conflicts. They are not outside of our community, they exist within it. It is the opposition between the mimetic doubles that confers upon them prestige and worth. Understood in this way,

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<sup>3</sup> I do not make any difference between the subject and the model of mimetic desire. Clearly once the rivals have become mimetic doubles there is not difference anymore and as Jean-Pierre Dupuy has shown the most simple and proto-typical situation is where the subject imitates the model and the model imitates the subject, where both individuals are inconsequence subject as well as model and model as well as subject.

nature is a kind of silent third party external to our conflicts. Its size and composition, what belongs to the world of nature and what does not varies depending upon the extent and the intensity of our rivalries, of our conflicts, of our mimetic enmities.

Because it has no part in our conflicts and is exterior to them nature can be endowed with a moral authority. It speaks the truth and will not be swayed by our prayers and supplications. It is indifferent to our desires and suffering. Nature just is what it is, and heeds neither our requests nor our insults. That is why it can constitute a norm, a fair judge, a peaceful guide for our actions. Given that nature is outside our conflicts and, according to the previous definition, cannot take part in them it is necessary that nature cannot speak for itself. Someone, a social being, a poet, a priest, a scientist or an ecologist, must always stand up to be her spokesperson and deliver the truth in her name.

In the remainder of this paper we want to argue that nature does not exist anymore or at least that it exists less and less. All that is has now been engulfed, swallowed, absorbed within our economic and military rivalries. There is no outside. The ever greater number of agents claiming to speak in the name of Nature is only a further sign of its disappearance. They bear witness to the fact that nature has become a party to our conflicts, an uncertain ally that competing tribes try to enlist for their own side.

The claim that nature does not exist should not be seen as a claim concerning representation only. In fact at the level of representation nature as rarely ever been so present. Open a newspaper and you will see that nature is involved in just about every issue from organ transplant to the ozone layer, from weight watching to war, from genetically modified organism to aging and from sexuality to cultural rights. Our claim is about what is, or about what has become. To say that nature does not exist is an ontological claim. Nature is no more and therefore the question: "what is our place in nature?" does not have any sense anymore. The problem of how we should behave in the world in which we inhabit needs today to be addressed in a different way.

## **2. THE DISAPPEARANCE OF NATURE**

Mimetic theory incites us to see the growing undifferentiation of the modern world, the erasure of all differences, and the process we call globalization, as the result of the progressive secularization or desacralization of the world. One of the major instruments of that process is obviously technology.

We will focus here on the most advanced technological trend today, the so-called NBIC convergence, that is, the convergence between Nanotechnology, Biotechnology, Information and Communication Technology, and Cognitive Science. The US initiative in this domain is worth 1 billion dollars per year of Federal money. Europe and Asia are trying to keep up, and China, in particular, is a major actor.

Advanced nanotechnology, also known as molecular manufacturing, aims at a complete control of the physical structure of matter, all the way down to the atomic level. The benefits to be expected are tremendous, but no less are the risks. A novel such as Michael Crichton's *Prey* has popularized the risk of "grey goo", that is the possibility that self-replicating nanobots go haywire and obliterate all life. Few

specialists take that risk seriously, but there exist more fundamental bothersome implications of the new technology wave that have to do with their metaphysical underpinnings.

Nano-scale manipulations already allow non-living nanomaterials and living matter to become compatible and in some cases interchangeable. Living material is extracted and manipulated to perform mechanical functions and to enable the development of hybrid materials that combine biological and non-biological material. For instance, last November, scientists in Israel built transistors out of carbon nanotubes using DNA as a template. A Technion-Israel scientist said, "What we've done is to bring biology to *self-assemble an electronic device* in a test tube [...] The DNA serves as a scaffold, a template that will determine where the carbon nanotubes will sit. That's the beauty of using biology."<sup>4</sup> New feats are being flaunted every passing week. We are taking more and more control of living materials and their capacity for self-organization and we use them to mimic smart machinery or perform mechanical functions. As a consequence, the distinction between biological and non-biological material blurs.

From a philosophical point of view the big difference between the NBIC convergence and conventional biotechnology is that the latter takes the result of evolution as a given. In contrast, nanobiotechnology purports to take over Nature's and Life's job and become the engineer of evolution. Evolution so far has basically consisted in mere "tinkering". It can lock itself in undesirable paths or end states. It is therefore desirable for Man to take over the role played by Evolution and become the designer of biological and natural processes. A recent feat accomplished by an American team adding a 5<sup>th</sup> base to the four bases that make up the alphabet of the genetic code is telling. One more letter opens up tremendous consequences, new "words" [i.e. proteins] can be coined that had neither meaning nor existence before. Man can participate in the fabrication of life.

If this technological and philosophical agenda is at all conceivable, it is of course because Nature and Life have been previously redefined in terms that belong to the realm of artifacts. See how one of the most vocal champions of NBIC, Damien Broderick, rewrites the history of life, or, as he puts it, of "living replicators":

*Genetic algorithms* in planetary numbers lurched about on the surface of the earth and under the sea, and indeed as we now know deep within it, for billions of years, replicating and mutating and being winnowed via the success of their expressions – that is, the bodies they *manufactured*, competing for survival in the macro world. At last, the entire living ecology of the planet has *accumulated, and represents a colossal quantity of compressed, schematic information.*<sup>5</sup>

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<sup>4</sup> Kenneth Chang, "Smaller Computer Chips Built Using DNA as Template", *New York Times*, November 21, 2003:  
<http://www.nytimes.com/2003/11/21/science/21DNA.html?ex=1075525200&en=67948bd27029a142&ei=5070>.

<sup>5</sup> Damien Broderick, *The Spike*, Forge, New York, 2001, p. 116. My emphasis.

Once life has thus been transmogrified into an artifact, the next step is to ask oneself whether the human mind couldn't do better. The same author asks rhetorically, "Is it likely that nanosystems, designed by human minds, will bypass all this "Darwinian wandering, and leap straight to design success?"<sup>6</sup>

From its inception in cybernetics up to today, cognitive science's philosophical agenda has been, in its own terms, to "naturalize the mind". That this naturalization of the mind coincides with the artificialization or mechanization of the mind<sup>7</sup>, although a huge paradox, should come as no surprise. An enterprise that sets itself the task of naturalizing the mind has as its spearhead a discipline that calls itself artificial intelligence. To be sure, the desired naturalization proceeds via mechanization. Nothing about this is inconsistent with a conception of the world that treats nature as an immense computational machine. Within this world man is just another machine—no surprise there. But in the name of what, or of whom, will man, thus artificialized, exercise his increased power over himself? In the name of this very blind mechanism with which he is identified? In the name of a meaning that he claims is mere appearance or phenomenon? His will and capacity for choice are now left dangling over the abyss. The attempt to restore mind to the natural world that gave birth to it ends up exiling the mind from the world and from nature. This paradox is typical of what the sociologist Louis Dumont, in his magisterial study of the genesis of modern individualism, called "the model of modern artificialism in general, the systematic application of an extrinsic, imposed value to the things of the world. Not a value drawn from our belonging to the world, from its harmony and our harmony with it, but a value rooted in our heterogeneity in relation to it: the identification of our will with the will of God (Descartes: man makes himself master and possessor of nature). The will thus applied to the world, the end sought, the motive and the profound impulse of the will are [all] foreign. In other words, they are extra-worldly. Extra-worldliness is now concentrated in the individual will."<sup>8</sup>

The paradox of the naturalization of the mind attempted by cognitive science, then, is that the mind has been raised up as a demigod in relation to itself. The mind that carries out the mechanization and the one that is the object of it are two distinct (albeit closely related) entities, like the two ends of a seesaw, the one rising ever higher in the heavens of metaphysical humanism as the other descends further into the depths of its deconstruction. In mechanizing the mind, in treating it as an artifact, the mind presumes to exercise power over this artifact to a degree that no psychology claiming to be scientific has ever dreamed of attaining. The mind can now hope not only to manipulate this mechanized version of itself at will, but even to reproduce and manufacture it in accordance with its own wishes and intentions. Accordingly, the technologies of the mind, present and future, open up a vast continent upon which man now has to impose norms if he wishes to give them meaning and purpose. The human subject will therefore need to have recourse to a supplementary endowment of will and conscience in order to determine, not what he can do, but what he ought to do—or, rather, what he ought not to do. These new technologies will require a whole ethics to be elaborated, an ethics not less demanding than the one that is slowly being

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<sup>6</sup> Ibid., p. 118.

<sup>7</sup> Jean-Pierre Dupuy, *The Mechanization of the Mind*, Princeton University Press, 2000.

<sup>8</sup> Louis Dumont, *Essais sur l'individualisme*, Paris.

devised today in order to control the rapid development and unforeseen consequences of new biotechnologies. But to speak of ethics, conscience, the will—is this not to speak of the triumph of the subject?

This situation is both paradoxical and contradictory. Paradoxical, because the artificialization of nature leads to the triumph of subjectivity, as mankind accepting the responsibility for all that is. Contradictory, because the naturalization of man replaces the autonomous subject with a blind algorithm.

### **3. AN ONTOLOGICAL PROCESS**

3.1 What is involved in these symmetrical processes of the naturalization of humankind and of the artificialization of nature is not a mere transformation of our image of the world. It is true that, not so very long ago both science and philosophy represented humans as beings that were not entirely part of the natural order. The human mind it was thought, either because it contains a divine spark or because it is essentially historical, escaped at least in part the jurisdiction of natural sciences. It was also thought that what is artificial is clearly distinct from what is natural. Even if technology was seen as resting on the laws of nature that hold the world together, everyone agreed that human products were no match for nature's inventions. Our image of the world has changed; no one talks that way anymore. However, it is not only that the way in which we represent what is that has changed, it is not only that our image of the world has become less, or more accurate. The world itself that we represent has been transformed.

It would also be incorrect to believe that if the world has changed it is because our representation of the world is part of the world and therefore if it has changed so must have the world itself. Rather it is because modern science is not so much a representation of the world as it is an action, an act of creation. Vico, Hobbes and Locke all believed that politics, and mathematics, had more certainty and were more rigorous sciences than physics or natural history. The reason why this is so, they thought, is because we have made ourselves the world of politics and of mathematics, while nature was created by God. In consequence we can know politics and mathematics inside out, in the same completely transparent way that an artisan knows the secrets of his inventions. Nature on the other hand will always remain opaque to us. We can describe its behaviors and feign hypotheses to explain what we see, but we will never share the knowledge of the Great Artificer who made the world that surrounds us.

3.2 Experimental science changed all that. Through experiments at first and through technology later we became the makers of the world we studied. Nature entered our science through the narrow door of elaborate preparations and through the production of phenomena that never existed naturally, at least if to exist naturally is to exist without the help of human intervention. It is not an accident that our science gives rise to a technology that transforms the environment. It is because the laws of nature do not describe the world as it is. They gain their persuasion by determining naturally occurring phenomena as a subset of what can be produced. Using these laws we invent new phenomena, we produce new elements, we create Chimeras. There is little sense in asking whether these, our creations, are natural or not. Nature

conceived this time as the object that our sciences describe is not in any way different from those things that we create and produce. It is not something that is out there and exists by itself. The ultimate reason why nature has become an artifice is not because of what our science tells us about the world, but because what it tells us is a consequence of what we can make. It is because we understand natural phenomena through making them.

A similar argument applies to us. The naturalization of mankind is not simply that we now view culture or history as natural processes rather than as what sets us apart from nature. It is not only that we have new sciences like cognitive sciences, memetics or the epidemiology of representation that promise to bring the understanding of mind, of human actions, or of religion within the fold of natural sciences. These new disciplines endeavor to replace the old image of ourselves inherited from the humanities, by a new one that defines us as natural and as natural only. Yet the naturalization of humans is so much the transformation of the image of humankind and of its place in nature. Above everything else the naturalization of humankind it is the mechanization, the artificialization of ourselves. Just like our environment, our bodies and our mind, are more and more the products of our scientific interventions. From Prozac to pace makers, from skin grafts to genetic testing, from industrially produced insulin to artificial insemination we are inseparably nature and artifice. We are natural in the exact measure that we can become artifices, scientific products, that we can be transformed, bettered, saved, exploited using the laws of nature.

3.3. Returning to the NBIC convergence, we would like to add a final twist to the identity between artifice and nature, or nature and culture.

In her masterly study of the frailties of human action, *Human Condition*<sup>9</sup>, Hannah Arendt brought out the fundamental paradox of our time: as human powers increase through technological progress, we are less and less equipped to control the consequences of our actions. A long excerpt is worth quoting here, as its relevance for our topic cannot be overstated – and we should keep in mind that this was written in 1958:

[...] the attempt to eliminate action because of its uncertainty and to save human affairs from their frailty by dealing with them as though they were or could become the planned products of human making has first of all resulted in channeling the human capacity for action, for beginning new and spontaneous processes which without men never would come into existence, into an attitude toward nature which up to the latest stage of the modern age had been one of exploring natural laws and fabricating objects out of natural material. To what extent we have begun to *act into nature*, in the literal sense of the word, is perhaps best illustrated by a recent casual remark of a scientist who quite seriously suggested that "*basic research is when I am doing what I don't know what I am doing.*" [Wernher von Braun, December 1957].

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<sup>9</sup> The University of Chicago Press, 1958.

This started harmlessly enough with the experiment in which men were no longer content to observe, to register, and contemplate whatever nature was willing to yield in her own appearance, but began to prescribe conditions and to provoke natural processes. What then developed into an ever-increasing skill in *unchaining elemental processes*, which, without the interference of men, would have lain dormant and perhaps never have come to pass, has finally ended in a veritable art of '*making*' nature, that is, of creating 'natural' processes which without men would never exist and which earthly nature by herself seems incapable of accomplishing [...].

The very fact that natural sciences have become exclusively sciences of process and, in their last stage, *sciences of potentially irreversible, irremediable 'processes of no return'* is a clear indication that, whatever the brain power necessary to start them, *the actual underlying human capacity which alone could bring about this development is no 'theoretical' capacity, neither contemplation nor reason, but the human ability to act* – to start new unprecedented processes whose outcome remains uncertain and unpredictable whether they are let loose in the human or the natural realm.

In this aspect of action [...] processes are started whose outcome is unpredictable, so that *uncertainty rather than frailty becomes the decisive character of human affairs*<sup>10</sup>.

No doubt that with an incredible prescience this analysis applies perfectly well to the NBIC convergence, in particular on two scores. Firstly, the ambition to (re-) make nature is an important dimension of what we called the metaphysical underpinnings of the field. But secondly, and maybe more importantly, it will be an inevitable temptation, not to say a task or a duty, for the nanotechnologists of the future to set off processes upon which they have no control. The sorcerer's apprentice myth must be updated: it is neither by error nor by terror that Man will be dispossessed of his own creations but by design.

The paradigm of *complex, self-organizing systems* first envisioned by John von Neumann in the 1940's is stepping ahead at an accelerated pace, both in science and in technology. It was in the course of his work on automata theory that von Neumann was to refine this notion of complexity. Assuming a magnitude of a thermodynamical type, he conjectured that below a certain threshold it would be degenerative, meaning that the degree of organization could only decrease, but that above this threshold an increase in complexity became possible. Now this threshold of complexity, he supposed, is also the point at which the structure of an object becomes simpler than the description of its properties. Soon, JVN prophesied, the builder of automata would find himself as helpless before his creation as we feel ourselves to be in the presence of complex natural phenomena.

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<sup>10</sup> P. 230-232. My emphasis.

JVN was thus founding the so-called *bottom-up approach* aka reverse engineering. In keeping with that philosophy, the engineers of the future will not be any more the ones who devise and design a structure capable of fulfilling a function that has been assigned to them. The engineers of the future will be the ones who know they are successful when they are surprised by their own creations. If one of your goals is to reproduce life, to fabricate life, you have to be able to simulate one of its most essential properties, namely the capacity to complexify itself always more. Once our creations reach a certain level of complexity they stand before us just as uncreated nature does. Our creations become to us mysteries to be discovered.

#### 4. A HISTORICAL PROCESS

The artificialization of nature and the naturalization of humankind is a historical process, something that took place over time. At first the world was different. Nature was everywhere and humans lived in groups, isolated from each other and from the world by their mimetic obsessions. Girard's original model of mimetic desire, which was first called "triangular desire", contains three elements: the subject, the model and the object. As argued earlier, there is no place for nature in this model. Nature, as what is given, and given to all, corresponds precisely to what is left out of the dynamical model mimetic competition. Nature, *phusis*, as the ancients thought is the world of those things that happen by themselves, without the help of human intervention, and it is opposed to *poesis* and *praxis*, the world of what we do. This independence from what we do, this spontaneous appearance of phenomena in the realm of being does not indicate that there is anything special about them, but simply that we leave them alone, that we are happy to let them be.

However as intensity augments in a mimetic rivalry the conflict will tend to absorb and to mobilize more and more elements from nature changing their "nature" in the process. For the outside world of what is not yet involved in the conflict can, if properly solicited, play a fundamental role in the escalation of violence and in the outcome of the conflict inasmuch as it constitutes a reservoir of tools, of instruments and weapons, a stock of resources. As soon as mimetic conflicts are seen as taking place between finite individuals a new category of entities must be taken into account: means. That is to say, all those things that can help the agents to bring the conflict to the end they desire. Means refer to both abstract entities and to concrete material objects, to strategies and to weapons. Individual, persons can become means. They can be enlisted as allies within our conflicts, but allies can turn into rivals, and this gives them a special quality and status. Nature for its part contains means that cannot become a party to the original conflict, means that cannot transform into rivals, though they can, of course, become the object of mimetic rivalry.

Means at first are natural, a stick, a hill, a river, the quickness of mind, the strength of the sinews. These are neither subjects, nor objects of mimetic conflicts. However, from means of victory to object of desire it is but a short step. The stick becomes a shaft, the hill a fortress, the river is bridged, quickness of mind is replaced by strategy and strength by exercise and discipline. Nature progressively disappears from the scene as it is absorbed within our conflicts as a means to victory and as objects of desire and of mimetic appropriation. At first this process is hardly visible,

the vastness of what remains outside of our conflicts is such that nature is viewed as inexhaustible. Today that happy time has clearly passed away and recent books predict that conflict over natural resources will shape the new century.<sup>11</sup>

Should we conclude then that men exploit nature in an attempt to satisfy their desires and that as a result of their competition they destroy it? Is this all that mimetic theory has to say concerning our predicament? A common place as useless as often as it was repeated. Maybe not! So far what we have been insisting on is not the destruction of nature but its artificialisation and our naturalization, on the fact that nature is becoming more and more our production and we are simultaneously becoming inseparably natural and artificial.

A few years ago four important American philosophers, specialized in ethics, published a large book on the ethics of genetic engineering entitled *From Chance to Choice*.<sup>12</sup> In it they argued in favor of “positive eugenics” and of what they call a “genetic decent minimum”. The idea is that in the soon to become real world where genetic interventions will in principle be available to everyone, social justice requires that no one be left behind in the race for a better memory, a greater intelligence or a more perfect body. Equal opportunity requires they argue that every child independently of its parents’ income be able to profit from a yet to be determined sub-set of genetic intervention that will be defined as forming the “genetic decent minimum”. Such an argument illustrates the contradictory relationship to nature that characterized us more and more. On the one hand a person’s life prospects are identified with his or her genetic material, that life is thus perfectly reduced to nature. On the other hand justice requires, it is argued, that this material be manipulated, transformed into an artifact.

These philosophers place the right to genetic interventions under the heading of social justice and of equal opportunity. If we leave aside for now diseases and serious genetic defects that have a claim to help independently of all considerations of equal opportunity, it is clear that the value of genetic interventions is determined here in relation to social competition. The role of the genetic decent minimum is to make sure that no one is disadvantaged in the competition for social positions and careers. This fear of being left behind; justice understood as the equality of physical beings and of natural talents, indicates what is the interest, the value of genetic interventions, what is the point of having a better memory or a stronger immune system: it is to win the race, it is to be in front. The transformation of our body into an artifact is not a thing that is desired for itself but for what it brings in relation to others, success, victory in mimetic rivalry.

What disappears in this process is our self, our body, our nature. It disappears as something that is independent of or outside of our mimetic conflicts. All of this is to be reshaped in the name of equality and social competition. Or should we believe that “we” will remain through all these interventions and additions destined to make us better? But if such is the case, who then is the being that is the bearer of his or her own talents, psychological dispositions and physical features? Can “it” be identified

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<sup>11</sup> For example, Th. Homer-Dixon *Environment, Scarcity and Violence* (Princeton University Press, 1999).

<sup>12</sup> A. Buchanan, D. Brock, N. Daniels & D. Wilker *From Chance to Choice, Genetics & Justice* (Cambridge University Press, 2000), page 81 for the “genetic decent minimum”.

with any or all of those characteristics? Or perhaps it only exists in the eye of the beholder...

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