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### THOUGHTS ON THE CONCEPT OF BIOPOWER TODAY.

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What is “biopower”? In a book ostensibly devoted to the history of sexuality, *La volonté du savoir*, published in 1976, Michel Foucault included six highly provocative pages on this theme in a chapter entitled “Right of Death and Power over Life”. For a long time, he argued, one of the privileges of sovereign power was the right to decide life and death, a right that, by the classical age, had been constrained to occasions when the sovereign himself was threatened from enemies without and within. This was the juridical form of sovereign power – the right of a ruler to seize things, time, bodies, ultimately the life of subjects. It was the model of power that was codified and generalized in classical political philosophy – a model that remained essentially unaltered when the “king’s head” was displaced from sovereign to state. But, Foucault argued, since the classical age, deduction has become merely one element in a range of mechanisms working to generate, incite, reinforce, control, monitor, optimize and organize the forces under it. Whilst external wars are bloodier than ever, and regimes visit holocausts upon their own populations, he did not consider these wars to be waged in the name of the sovereign, but in the name of the existence of everyone “entire populations are mobilized for the purpose of the wholesale slaughter in the name of life necessity ... It is as managers of life and survival, of bodies and the race, that so many regimes have been able to wage so many wars, causing so many men to be killed “ (1979: 137). Power, Foucault argues, is now situated and exercised at the level of life.

Foucault promised to flesh out his sweeping generalisations in one of the six proposed volumes of the history of sexuality whose titles appear on the book’s back jacket. While that promise was not fulfilled, he did propose a rather simple and now familiar bipolar diagram of power over life. In this diagram, one pole of biopower focuses on an anatomo-politics of the human body, seeking to maximise its forces and integrate it into efficient systems. The second pole is one of regulatory controls, a biopolitics of the population, focussing on the species body, the body imbued with the mechanisms of life: birth, morbidity, mortality, longevity. He claims that this bipolar technology, which begins to be set up in the seventeenth century, seeks “to invest life through and through”

(1976: 139). And, by the nineteenth century, he argues, these two poles were conjoined within a series of “great technologies of power” of which sexuality was only one. In so establishing themselves, new kinds of political struggle could emerge, in which “life as a political object” was turned back against the controls exercised over it, in the name of claims to a “right” to life, to one’s body, to health, to the satisfaction of one’s needs (1976: 145).

At its most general, then, the concept of “biopower” serves to bring into view a field comprised of more or less rationalised attempts to intervene upon the vital characteristics of human existence – human beings, individually and collectively, as living creatures who are born, mature, inhabit a body that can be trained and augmented, and then sicken and die and as collectivities or populations composed of such living beings. And, whilst Foucault is imprecise in his use of the terms, it might be helpful to suggest that, within the field of biopower, ‘biopolitics’ designates the specific strategies and contestations over problematizations of collective human vitality, morbidity and mortality. over the forms of knowledge, regimes of authority, and practices of intervention that are desirable, legitimate and efficacious.

More than quarter of a century after the introduction of this concept, at the threshold of what some have plausibly termed “the biological century,” this contested field of problems and strategies is ever-more crucial and enigmatic than ever, yet surprisingly little work has been done to develop Foucault’s own sketchy suggestions into an operational set of tools for critical inquiry.<sup>1</sup> The term biopower has been annexed to refer to the generation of energy from renewable biological material, while biopolitics is taken up by advocates of a range of causes from environmental protection to new eco-Christianity.<sup>2</sup> In this paper we want to explore Foucault’s concepts of biopower and biopolitics, and to attempt some conceptual clarification. As a step in that direction, we propose that the concept of biopower designates a plane of actuality that must include, at a minimum, the following elements:

- One or more truth discourses about the ‘vital’ character of living human beings, and an array of authorities considered competent to speak that truth. These truth discourses may not themselves be ‘biological’ in the contemporary sense of the discipline, for instance they may be demographic or even sociological.
- Strategies for intervention upon collective existence in the name of life and health, initially addressed to populations that may or may not be territorialized upon the nation, society or pre-given

communities, but may also be specified in terms of emergent bio-social collectivities, sometimes specified in terms of categories of race, ethnicity, gender or religion.

- Modes of subjectification, in which individuals can be brought to work on themselves, under certain forms of authority, in relation truth discourses, by means of practices of the self, in the name of individual or collective life or health.

### **The limits of biopower**

We frame our initial specification in these limited terms partly in response to the ways in which the term “biopower” has been used by two of our leading contemporary philosophers – Giorgio Agamben and Antonio Negri – who have made “biopower” and “biopolitics” central themes of their recent work. These works have many merits. But they entail highly general philosophical deployments of the terms which are totalising and misleading. From our perspective, their reception in the Anglo-phone world is troubling, as it appears to be precisely these generalities, rather than the specific substantive claims, that have received attention and approval.<sup>3</sup>

#### ***Empire***

For Hardt and Negri, in *Empire*, biopower is an encompassing, totalising term. In their neo-Marxist reading, their first premise is that all the work that power does on life can be understood as the extraction of some kind of value or surplus from that life. Since, for them, this characterises all power, all contemporary politics is biopolitics: a “form of power that regulates social life from its interior” (2000: 23). In a second move, they conflate this omnipotent and all pervasive biopower serving to secure the dominion of global Empire with Gilles Deleuze’s argument that we have moved from “societies of discipline” to “societies of control.” Deleuze speculated that, in such societies of control, the management of inclusion and exclusion was not accomplished by an archipelago of disciplinary institutions dotted across the social field – asylums, factories, schools, hospitals, universities, each seeking to implant a mode of conduct into body and its correlate soul - but was immanent in the flexible, fluid and fluctuating networks of existence itself. Hence, for Hardt and Negri, biopolitics refers to a power that is “expressed as a control that extends throughout the depths of the consciousnesses and bodies of the population.” (2000: 24) And Hardt and Negri reveal that this bio-political power is exercised in the name of multi-national and trans-national corporations who, since the second half of the twentieth century have chosen “to structure global territories bio-politically.” (2000: 31)

This attempt to resurrect a revolutionary view of world history, updating Marx with Deleuze, ends with a twist of Christianity: a legend about St. Francis of Assisi who “refused every instrumental discipline, and ... posed a joyous life ... against the will of power and corruption. Once again in post modernity we find ourselves in Francis’s situation, posting against the misery of power the joy of being” (2000: 413.) Of course, it is necessary, today above all, to extend the scope of traditional analyses of economic exploitation and geopolitics to encompass their relation to the living character of the human species, perhaps to all living beings. But it is difficult to see what analytical work can be done by such an expanded concept of biopower: in the end Hardt and Negri merely provide a superficial description of certain aspects of our present, framed within the kind of towering worldview that other theorists of post modernity had proclaimed a thing of the past, simply re-described in their own terms and infused with a Manichean opposition of a mysterious global Empire to an even more phantom “multitude.” This diagram is quite antithetical to the lessons on power that they should have learned from Foucault. At this level of generality, the concept of “biopower” can describe everything but analyse nothing – it is emptied of its analytic force.

It might be useful here to remind ourselves that when Foucault introduced the term in the last of his *Collège de France* lectures of 1975-6, Society Must be Defended, he is precise about the historical phenomena which he is seeking to grasp (Foucault, 2003). He enumerates them there: issues of the birth rate, and the beginnings of policies to intervene upon it; issues of morbidity, not so much epidemics but the illnesses that are routinely prevalent in a particular population and sap its strength requiring interventions in the name of public hygiene and new measures to co-ordinate medical care; the problems of old age and accidents to be addressed through insurantal mechanisms; the problem of the race and the impact upon it of geographic, climatic and environmental conditions, notably in the town. The concept of biopower, then, is a crystallization after ten years of collective and individual research on the genealogy of disciplinary power in the eighteenth and nineteenth century.<sup>4</sup> Foucault himself had lectured on the politics of health in the eighteenth century in Japan and in Brazil; his seminar members were producing detailed historical studies of the role of medicine, town planning, royal shipyards, and a host of other sites in which experiments about how to produce and regulate ways to maximise the capacities of both the population and the individual as a target of power are being carried out. As for “discipline” so for “biopower: these concepts are not

trans-historical or metaphoric, but are precisely grounded in historical, or genealogical, analysis.

Whilst initially linking biopolitics to the regulatory endeavours of developing States (2003: 250) he recognises that “the great overall regulations that proliferated throughout the nineteenth century ... are also found at the sub-State level, in a whole series of sub-State institutes such as medical institutions, welfare funds, insurance, and so on.” (1003: 250). But this analysis in terms of biopower is not to be taken in any simple way, as a critique, if by critique one means the unveiling of hidden strategic modes of domination. It is true that in this lecture he suggests that it is “the emergence of biopower that inscribes [racism] in the mechanisms of the State ... as the basic mechanism of power, as it is exercised in modern States. (2003: 254). This is a point to which we will return. But at the same time, this is the point at which Foucault begins to develop his concept of “governmentality” to encompass the variety of ways of problematizing and acting on individual and collective conduct in the name of certain objectives which do not have the State as their origin or point of reference. And as he develops this line of thought, he distances himself from the suggestion that this power over life is unambiguously nefarious.<sup>5</sup> This is also the turning point that leads him, in what turned out to be the last period of his life, to a fascination with ancient modes of subjectification and the possibilities of freedom. And it is worth remembering that medicine is perhaps the oldest site where one can observe the play of truth, power and ethics in multiple relations to the subject, to the household, to the city, to nature, and to the possibilities of a good, or as the Greeks would have it, a flourishing, life.

### *Homo Sacer*

Giorgio Agamben, in a series of haunting books, identifies the Holocaust as the ultimate exemplar of biopower; and biopower as the hidden meaning of all forms of power from the ancient world to the present. In We admire the seriousness with which he seeks to use this concept to analyse the profound trauma of European history; like him, we consider that Holocaust is not an exceptional moment of throwback to a singular barbarianism, but an enduring possibility intrinsic to the very project of civilization and the law. For Agamben, all power rests ultimately on the ability of one to take the life of another, a phenomenon that he analyses through the metaphor of *homo sacer* – the enigmatic figure in Roman law whose crimes made his sacrifice impossible but who could be killed with impunity. For the “bare life” the simple organic life of subjects, now belongs ultimately to the public power, which for him means the State and those doctors and others who do the State’s work. Following

Carl Schmitt, Agamben believe that it is the right of the Sovereign State to declare “a state of exception” that guarantees modern rule. The concentration camps, labour camps and death camps of the Nazi’s are a materialization of this state of exception, and form, for him, the “nomos” of modernity – a fourth space added to that of state, nation and land, in which inhabitants are stripped of everything but their bare life, which is placed without recourse in the hands of power “This is why the camp is the very paradigm of political space at the point at which politics becomes biopolitics and *homo sacer* is virtually confused with the citizen.” (Agamben, 1998: 171)

Agamben takes seriously Adorno’s challenge – how is it possible to think after Auschwitz? But for that very reason, it is to trivialise Auschwitz to apply Schmitt’s concept of “the state of exception” and Foucault’s analysis of biopower to every instance where living beings enter the scope of regulation, control and government. The power to command under threat of death is exercised by States and their surrogates in multiple instances, in micro forms and in geopolitical relations. But this is not to say that this form of power – commands backed up by the ultimate threat of death – is the guarantee or underpinning principle of all forms of biopower in contemporary liberal societies. Reciprocally, it is obfuscating to use this single diagram to analyse every contemporary instance of thanato-politics – from Rwanda to the Lord’s Resistance Army in Uganda, SARS or the epidemic of AIDS deaths across Africa. To analogise all other instances large and small where life or the body or health is at stake to this one exemplar is to do a profound and politically dangerous disservice to critical thought – for the essence of that thought must be its capacity to make distinctions that can facilitate judgement and action.<sup>6</sup>

Holocaust is undoubtedly one configuration that modern biopower can take. This, as we have already implied, was also Foucault’s view in 1976: racisms allows power to sub-divide a population into subspecies known as races, to fragment it, and to allow a relationship in which the death of the other, of the inferior race, can be seen as something that will make life in general healthier and purer: “racism justifies the death-function in the economy of biopower by appealing to the principle that the death of others makes one biologically stronger insofar as one is a member of a race or a population (2003: 258). The Nazi regime was, however, exceptional – “a paroxysmal development”: “We have, then, in Nazi society something that is really quite extraordinary: this is a society which has generalized biopower in an absolute sense, but which has also generalized the sovereign right to kill... to kill anyone, meaning not only

other people but also its own people... a coincidence between a generalized biopower and a dictatorship that was at once absolute and retransmitted throughout the entire social body” (2003: 260). Schmitt argued, erroneously in our view, that the “state of exception” was the guarantee of modern constitutional power. But the articulation of biopower in the form it took under National Socialism was dependent upon a host of other historical, moral, political and technical conditions. Holocaust is neither exemplary of thanato-politics, nor is it in some way the hidden dark truth of biopower.

### *Sovereignty*

Our criticism here is linked to a difference about the question of “sovereignty.” Whilst Hardt and Negri differentiate ‘empire’ from the forms of sovereignty that emerged in the nation state, the diagram remains more or less unaltered: although “imperial sovereignty ... is organized not around one central conflict but rather through a flexible network of microconflicts”, Empire nonetheless gathers unto itself the power relations that traverse all those “elusive, proliferating and non-localizable contradictions” (2000: 201). The image of Empire thus functions as is the imaginary condensation of all those relations into a single modality of sovereign power, to which can only be opposed a radical form of alterity in the form of the multitude – the contemporary figure of the regicide who will, in eliminating the sovereign, inaugurate a kingdom in which sovereign power is re-appropriated by subjects themselves. Despite its apparent radicalism, anti-capitalists might be wary of the religious underpinnings of this eschatology of resistance.

For Agamben, sovereignty also has something of a sacred form – it exists in the capacity to establish the state of exception and to kill without murdering. The power over life exercised today by “the jurist... the doctor, the scientist, the expert, the priest” arises from the alliance with the sovereign into which they have entered (1998: 122) – it appears that, wittingly or not, like Althusser’s Ideological State Apparatuses of an earlier intellectual era, they do the sovereign’s will. Whilst this analysis may have some purchase on the specific historical situation of totalitarian dictatorships of the twentieth century, it has little purchase on contemporary rationalities or technologies of politics. Agamben considers that, however historically marginal was the phenomenon of Homo Sacer, it demands our attention as critical thinkers because it is the ordering principle of contemporary societies. Against such a “growing bio-political nightmare” the only solution seems equally sacred: no

wonder Agamben invokes the figure, taken from Walter Benjamin, of a messianic “end of time.” as one possible way out.

Since these authors take their concept and point of reference from Foucault, it is worth contrasting their postulate of a origin and beneficiary of biopower to Foucault’s remarks on sovereignty – as a form of power whose diagram, but not principle, is the figure of the sovereign ruler. Its’ characteristic is indeed ultimately a mode of power which relies on the y right to take life. However, with the exception of certain “paroxysmal” moments, this is a mode of power whose activation can only be sporadic and non-continuous. The totalisation of sovereign power as a mode of ordering daily life would be too costly, and indeed the very excesses of the exercise of this power seek to compensate for its sporadic nature. Sovereignty, in this sense, is precisely a diagram of a form of power not a description of its implementation. Certainly some forms of colonial power sought to operationalize it, but in the face of its economic and governmental costs, colonial statecraft was largely to take a different form. The two megalomaniac State forms of the twentieth century also sought to actualise it, as have some others in their wake: Albania under Hoxha, North Korea... But no historian of pre-modern forms of control could fail to notice the dependence of sovereign rule in its non-paroxysmal form on a fine web of customary conventions, reciprocal obligations, and the like, in a word, a moral economy whose complexity and scope far exceeds the extravagance of the sovereign. Sovereign power is at one and the same time an element in this moral economy and an attempt to master it. A cursory glance at the work of Jacques Le Goff – whose work Foucault knew well, or Ferdinand Braudel and the whole *Annales* project, or, for English readers, the writings of EP Thomson should be sufficient to dispel such recent mis-readings.<sup>7</sup>

For Agamben, contemporary biopolitics is state politics and the principle actor and beneficiary is a state modelled on the figure of the sovereign – it is only the sovereign who can declare the state of exception. Such an interpretation suits the twentieth century absolutisms of the Nazis and Stalin. But conceptually and historically, for Foucault, things were more complicated: on the one hand, nation states, in the limited form that they took in the classical age, in addition to their theatres of power and public display, began to be key mobilisers of the internal forces of their territories so as to secure their objectives of prosperity and security. Yet, on the other hand, the governmentalized states of the late nineteenth century took the shape that they did through the prior formation of ever-growing apparatuses of knowledge collection and problematization that formed alongside the state apparatus, in the

emergent terrain of the “social.” Sovereignty ceases to be an appropriate diagram of this modality of power; States can rule only because of the ways in which they have managed to connect themselves up to these apparatuses, which have their own logics and viscosity which, so long as regimes aspire to liberalism, exercise demands and constraints on central powers. In addition to the kinds of non-state bodies that have played a key role since the origin of “the social” – philanthropic organizations, social investigators, pressure groups, medics, feminists and assorted reformers. Since the end of the Second World War, and taking here only the example of health, a range of powerful agencies within states – such as the Centers for Disease Control (CDC) and the Food and Drug Administration (FDA) in the USA - and trans-national agencies – NGOs, multi-national corporations, international regulatory bodies like the World Trade Organization (WTO) and interventionary bodies such as the World Health Organization (WHO), have taken on a new importance. So have a host of bioethics commissions, regulatory agencies, professional organizations, patients’ groups, commercial enterprises and much more. It is important to analyse the role and powers of the State in this new governmental configuration, but it is clear that they cannot be accounted for by reference to the figure of sovereignty either as historical model or conceptual diagram of power.

### **Biopower as Concept.**

We have indicted our reservations about the utility of recent philosophies of biopower. But what would be a better way to proceed? There have been a growing number of specific, often innovative, studies of issues of genomics, health politics, reproductive technologies, etc, since Foucault originally coined. They can be taken on their own terms. But we think that it might be useful to bring them into contact with the concept of biopower, and in doing so, to attempt some work to clarify and thereby to critically limit the concept and the related domain of biopolitics.

We have suggested that the concept of biopower seeks to individuate strategies and configurations that combine a form of truth discourse about living being; an array of authorities considered competent to speak that truth; strategies for intervention upon collective existence in the name of life and health; and modes of subjectification, in which individuals can be brought to work on themselves, under certain forms of authority, in relation to truth discourses, by means of practices of the self, in the name of individual or collective life or health. Although we draw these elements from Foucault's all too brief interventions on the concept, it is worth remembering that his principal site of investigation

was the emergence of forms of power in the eighteenth century, their transformation in the nineteenth, and to some limited extent an examination of the forms taking shape at the end of the nineteenth century. Across the twentieth century, the management of collective life and health became a key objective of governmentalized states, with identifiable configurations of truth, power and subjectivity underpinning the rationalities of welfare and security as well as those of health and hygiene. Whilst the concept of biopower seems to have the capacity to render visible significant mutations in the government of life and health at the start of the twenty-first century, each of these configurations of welfare, security, health and hygiene has taken on different forms. It would certainly be misleading simply to project forward Foucault's analysis as if it could be used to mechanically map our present as well as our "near future," to use the telling phrase of Gilles Deleuze.<sup>8</sup>

We will try to contribute to this work by saying a little about a small number of topics that seem to us to condense some of the bio-political lines of force active today. We have chosen three instances: race, reproduction, and genomic medicine; no doubt others would be equally instructive.

For us, unlike Negri and Agamben, the starting point for enquiry is to question how specific sites have come to be problematized in different manners in different zones, and how other sites have, rather surprisingly, not been taken up either as zones of political and ethical contestation or as sites of intellectual engagement. What accounts for the ways in which certain developments enter into an active field of problematization at particular times and places, while others do not? It remains perplexing for example why cloning has received so much attention while smoking, at least in France, has not. Or why, after a period of intense problematization around "test-tube babies", infertility has achieved 'disease status' and treatment involving fertilisation outside the womb is now socially and ethically routinised, even if it remains personally and clinically problematic and its availability on national or other insurance schemes is a matter of dispute.

A second axis running across contemporary biopower concerns the relations and tensions between what one might term, clumsily, the macro and the micro, or following Deleuze, the molar and the molecular, poles of this mode of power. That is to say, on the one hand, the emphases and relations on ways of thinking and acting at the level of population groups and collectivities, variously defined; and, on the other hand, the individualisation of bio-political strategies. Undoubtedly, in the era of

the social state – and in those locales where such states still form the organising principle of political struggle – it was the molar that was privileged. In the twentieth century States not only developed or supported insurantal mechanisms of security, but gathered together, organised and rationalised the loose threads of medical provision, specified and regulated standards of housing, engaged in campaigns of health education and the like. Even liberal States also played their role in the battle against degeneracy, imposing immigration controls, sometimes legitimating compulsory or quasi-compulsory sterilisation, encouraging organizations giving eugenic guidance on marriage and procreation and so forth. Of course, each of these was to have its ‘molecular’ counterpart, for example in the transformation of the home into a machine for health, and the education and solicitation of mothers as ancillary workers in the health care of their children. Today, much of this configuration remains, and, indeed, some of it has been translated to a supranational level in the endeavours of the European Union, the World Bank and the like. But with the decline of the domain of the social as a privileged site of national objectivation and intervention in the ‘advanced liberal’ societies of the West, we observe new collective formations emergent everywhere, and, at the same time, new modes of individualisation and conceptions of autonomy with their associated rights to health, life, liberty and the pursuit of a form of happiness that is increasingly understood in corporeal and vital terms. Nowhere is this better exemplified than in the events that have surrounded the mapping of “the human genome.”

Of course, to place all these diverse developments within the ambit of biopower is not to imply that there is some unity at work here, or some essence – truth or falsity - that all these forms exemplify or embody. We need to recognize dispersion, contingency and virtuality, although not with deconstructionist intent. Before we can see if some general political rationality is emerging, the task of analysis is to articulate preliminary diagnoses at a smaller scale. And, placing the evidence that we see from such analyses in the framework of biopower, we think we can begin to identify and analyze elements of such a domain, though it is neither stable, total, nor already known; nor does it conform to the images provided by our philosophers. In this configuration, race, health, genealogy, reproduction and knowledge are intertwined, continually transforming one another and recombined in multiple manners and modes. By this we mean that knowledge of health transforms the idea of race, that ideas of genealogy are reframed by new conceptions of reproduction, that changing ideas of genealogy radically impact upon the politics of race, races and racism. Let us turn to explore some of these issues in a bit more detail.

## ***I. Race.***

Race, together with health, and in variable relations with it, has been one of the central poles in the genealogy of biopower. We can enumerate some moments. The so-called “war of nations” in the eighteenth century (the topic of several lectures by Foucault in *Society Must be Defended*),. The massive biologization of race in the nineteenth century, linked to pre- and post- Darwinist evolutionary thinking and applied both within states and in their colonial dominations. The later nineteenth century obsession with degeneracy and race suicide and the strategies of eugenics that spread from the United States to Japan and elsewhere in the first half of the twentieth century. In all these instances and others, conceptions of race formed a prism not just for the imagination of the nation, but also for the political management of national health and vitality, and of international competitiveness. After the Second World War, official racist discourses were discredited: by 1963, for example, the United Nations Declaration on the Elimination of All Forms of Racial Discrimination took as one of its premises “that any doctrine of racial differentiation or superiority is scientifically false, morally condemnable, socially unjust and dangerous, and that there is no justification for racial discrimination either in theory or in practice” (United Nations 1963: Preamble). Of course, racist practices hardly subsided, but a biological understanding of racial categories no longer was “in the truth” in political or policy discourse. In part due to the persistent interventions of radical critics, the link between biological understandings of distinctions amongst population groups and their socio-political implications seemed broken or at least de-naturalised. Of course, biologists still believed they encountered such differences, not least in examining the prevalence of particular diseases in different regions or the efficacy of medicines in different national populations. And some individuals and groups persisted in claiming a politically pertinent correlation between human qualities capacities and racially differentiated biological capacities in a whole number of controversies from education to criminality. Moreover, in the United States for example, race as a socio-economic category, a mark of discrimination and a mode of identification remained extremely salient socially and politically, from the allocation of federal funds to the manifestations of identity politics. Notably, although race functioned as a marker of belonging and the basis of a claim as to disadvantage, but even when groups or individuals sought to trace their “roots”, they seldom related this genealogy to a biological substrate. The same is true of the murderous racist wars that spread across Europe in the wake of the demise of the Soviet empire, from Armenia to the Balkans, and across

Africa, notably in Rwanda and the Congo. Appeals to racial identities, here, needed no justification in the truth discourse of biology.

At the turn of the new century, however, race is once again re-entering the domain of biological truth. At a certain moment, when it became clear that humans shared over 98 percent of their genome with chimpanzees, and that inter-group variations in DNA sequences were greater than intra-group variations, it appeared that genomics itself would mark the terminal point of biological racism (perhaps even species-ism). But this humanitarian dream proved to be short-lived. A new molecular deployment of race has emerged seemingly almost inevitably out of genomic thinking. Critics denounced the model of a single genome that underpinned the Human Genome Project, fearing that it would establish a white male norm. The first move here was cast as ethical: as the initial proposer of this work, Luigi Cavalli-Sforza put it “to explore the full range of genome diversity within the human family” and “to help combat the widespread popular fear and ignorance of human genetics and ... make a significant contribution to the elimination of racism” (M’charek 2000: 5-6). Despite the critics, this effort to ensure the recognition of diversity in the framing of scientific truth as an essential dimension of genomic knowledge was later adopted by the Human Genome Project (HUGO) and funded by the European Community (from 1992) and later the United States Federal government National Institute for Health. And subsequently the NIH and the British philanthropic Wellcome Trust have given considerable funds to research into the establishment of genomic differences at the SNP level. This funding has been justified precisely in bio-political terms, as leading towards and ensuring the equal health of the population in all – or some – of its diversity.

The science itself and the recognition of the variability of the human genome at the level of the single nucleotide – SNP mapping – immediately opened up and legitimated a new way of conceptualising racial difference at the molecular level. In addition to the ethical humanism of the state projects, additional pressure to proceed in this direction came in some areas from the demands of patient groups for genomic self-knowledge, and in others from the commercial aspirations of pharmaceutical companies and the biomedical industry for a genomic strategy for diagnosis, drug development and marketing. In the year 2003 multiple projects are underway to map diversity at the level of the SNP. The 0.1 percent of the three billion base pairs of the human genome seems to provide ample space for racial differentiations. This contemporary programme to identify biological differences is justified not in terms of national well-being but largely in the name of health, of

differences in disease susceptibility and responses to therapeutic molecules. It would be tempting to say that this highly sophisticated genomics has produced new complexity into the figure of humanity. But it is striking and disturbing that the core racial typology of the nineteenth century -- white (Caucasian), black (African), yellow (Asian), red (Native American) -- still provide a dominant mould through which this new genetic knowledge of human difference is taking shape, as medical researches and gene mappers specify their populations and their samples in such terms, and drug companies seek to target specific pharmaceuticals to groups designated, for example, as “African Americans.”

It is undoubtedly the case that SNP mapping will produce typologies of difference between “population groups” and almost inevitable that these population groups, in the name of health, will be coded in terms of broad cultural conceptions of race. In nations like the United States, and trans-national unities like the European Union especially as it enlarges from its initial heartland, and in organizations such as the WHO, where race is a central feature of political contestation, the interplay between political and genomic classifications of race, identity politics, racism, health inequities, and SNP mapping must take a prominent place on the agenda of critical thinking. To address this new formation requires us not to deny its’ validity in advance, nor to hold up dire warnings that it must lead to segregation, genocide and eugenics, but to be attentive to its specific complexities and contingencies. That is to say, one needs to try to identify the points and lines of tension where, because the future is not written, critical judgement, diagnosing specific new hopes and dangers, might play a part in the direction it takes.

## ***II. Reproduction.***

For Foucault, sexuality was crucial in part because was the hinge that linked an anatomo-politics of the human body with a biopolitics of the population. But today, perhaps for as long as the last fifty years, these issues have become decoupled. Sexuality has been disengaged to a degree from the symbolics and practices of reproduction, and reproduction itself has become the object of a series of forms of knowledge, technologies, and political strategies that have little to do with sexuality. From about the 1970s one can see a triple movement (Rapp, 2000). The question of reproduction gets problematized, both nationally and supra-nationally, because of its economic, ecological and political consequences – over-population, limits to growth etc. A new politics of abortion emerges, taking different forms in different national contexts. And, in the West at least, a related by different issue of “reproductive choice” begins to take shape, when a small number of couples in the West, and some doctors,

strove to define infertility as a potentially remediable medical condition, and consequently the site of legitimate interventions. All of these sites jointly, yet differentially, combined in making reproduction a problem space, in which an array of connections appear between the individual and the collective, the technological and the political, the legal and the ethical. Such a space is a bio-political space par excellence.

The new technologies and visualisation and micro-manipulation, rudimentary genetic diagnosis and selection, although they have attracted the most attention in the Anglo- American world have largely remained at the individual pole and, numerically, and have been highly restricted in their impact. Though they have been the site of a discursive explosion, the focus of regulatory attention and political and ethical controversy in many Western countries, it is hard to discern some unified bio-political strategy underlying these developments. The rhetoric of choice clearly resonates with the ethic of autonomy at the heart of advanced liberal modes of subjectification, and the transformation of infertility into a treatable illness exemplifies the re-imagining of human capacities as open to re-engineering and enhancement by medicine. But the actual procedures have been limited in number, and often unsuccessful. Bio-politically, reproductive choice in the form of embryo selection, far from being in the service of general racial improvement or even individualised “designer babies,” has been almost entirely limited to the identification of foetuses with major malformations or crippling and terminal genetic disorders. Even then, the use of diagnostic techniques has not inevitably led to termination but often to providing anticipatory information in the services of the kinds of life planning that have become intrinsic to forms of life in contemporary liberal societies. Perhaps, as many feminists have argued, the principal biopolitical achievement here lies on the axis of subjectification: these strategies exhibit the characteristic formation in which apparent choices entail new forms of ‘responsibilization’ and impose onerous obligations, especially, in this case, upon women.

Less attention in the Western academy has been paid to the “molar” pole of the management of reproduction – the campaigns for population limitation that have spread across the Indian subcontinent, China and South East Asia and many Latin American Countries. These biopolitical strategies are undoubtedly underpinned by truth claims, although they are those of demography and economics, not of heredity and eugenics. Take, for example, the publication, in 1972, of the report from the Club of Rome entitled *Limits to Growth* (Meadows et al., 1972). Using a model derived from system dynamics for its analysis, the report concluded that “If the present growth trends in world population,

industrialization, pollution, food production, and resource depletion continue unchanged, the limits to growth on this planet will be reached sometime within the next one hundred years. The most probable result will be a rather sudden and uncontrollable decline in both population and industrial capacity” (1972: ??) Fundamental to their prescription to avert this problem was birth control to stabilize population, by limiting family size to two children, especially in those countries where it currently greatly exceeded that, but even this path was no guarantee of success. “We end on a note of urgency. We have repeatedly emphasized the importance of natural delays in the population-capital system of the world. These delays mean, for example, that if Mexico’s birth rate gradually declined from its present value to an exact replacement value by the year 2000, the country’s population would grow from 50 million to 130 million. We cannot say with certainty how much longer mankind can postpone initiating deliberate control of its growth before it will have lost the chance for control.” (Meadows et al., 1972: ??) These dire warnings resonated with a raft of analogous concerns about the impact of population growth on economic wealth and the need for governments – especially those of less developed states - to introduce policies to curtail reproduction - especially amongst the poor - as a pre-requisite to modernisation. These varied from the coercive – China’s One Child Policy (Greenhalgh, 200?) or the sterilization campaigns in India are the two best known examples – to those which gradually came to adopt principles of informed consent to what was euphemistically termed “voluntary surgical contraception” in Mexico. They were based upon demographic data and algorithms linking population growth to economic performance developed by geographers and mathematicians, embedded in educational programmes for development workers and others, proselytised by numerous private pressure groups and policy advisory bodies, and built into the policies of development agencies such as the “Office of Populations” of the “Bureau for Global Programs” of the United States Agency for International Development (USAID). The “population time bomb” became part of the common sense of public opinion in the west, and a major justification for aid from advanced industrial societies to poorer countries was that this would enable them to limit their population and hence the danger that their population growth posed.

By the end of the 1980s, policies for the limitation of procreation amongst the poor stressed the importance of voluntary assent and informed choice, and argued that the aim was to prevent the misery of maternal deaths and perinatal mortality in the Third World. Robey et al (1992) report that Voluntary female Sterilization is the most prevalent

contraceptive method today, used by over 138 million married women of reproductive age compared to 95 million in 1984. There is particular controversy over the increasing use of the quinacrine pellet method developed by Dr. Jaime Zipper in 1984 but subject to later banning in some countries. Quinacrine's primary distributors are the North Carolina-based Center for Research on Population and Security, headed by Stephen Mumford; and the International Federation for Family Health, headed by Elton Kessel. Mumford and Kessel have distributed quinacrine in 19 countries around the world, including Bangladesh, Chile, China, Colombia, Costa Rica, Croatia, Egypt, India, Indonesia, Iran, Morocco, Pakistan, Philippines, Venezuela, Vietnam, the United States, Malaysia and Romania. For many critics, the contemporary successors to the sterilization and population limitation campaigns of the 1970s and 1980s, despite their rhetoric of informed choice. Indeed their dissemination of non-surgical methods repeats Nazi chemical sterilization practices. The use of quinacrine, often surreptitiously, though direct relations between NGOs and individual doctors, often aimed at particular segments of the population considered problematic or undesirable, leads critics to conclude that this amounts to global eugenics (for examples of the debate, see <http://www.hsph.harvard.edu/Organizations/healthnet/contra/topic05.html#2>).

From the perspective of biopower, however repugnant these policies, it is misleading to frame that criticism by a rhetorical association of them with the eugenics of the mid-twentieth century. If we use the term eugenics to apply to any intervention on the reproduction, morbidity and mortality of the population, it covers everything from contraception through abortion to public health, and its use becomes merely part of a general critical rhetoric. Eugenics – the improvement of the biological stock of the population – did indeed take both negative and positive forms, but in each case, it was directed to maximising racial fitness in the service of a biological struggle between nation states. The forms of biological knowledge that inform our ways of governing others and ourselves are no longer those of the survival of the fittest. Limiting population in the interests of national economic prosperity does not operate according to the biopolitical diagram of eugenics, and is not the same as purification of the race by elimination of degenerates.

This is not to say that there are no forms of eugenics around. One visible form is linked to public health. In Cyprus, as Stefan Beck has shown, there are systematic programmes of nationwide testing with the assent of the population, the church and the state, to identify and

eliminate cystic fibrosis- not by embryo selection but by marriage counselling. We can see something of the same strategy at work in practices for the control of Tay Sachs amongst Ashkenazi Jews in North America and in Israel. By any definition this is a strategy aimed at reducing the levels of inherited morbidity and pathology in a population considered as a whole by acting on the individual reproductive choices of each citizen, through various forms of authoritative calculation and guidance, sanctioned by a range of religious and secular authorities, including bio-ethicists, and approved of by the population. Although we put this example forward as a type case of biopolitics, it would be misleading to diagnose it as a form of genocide, or the re-awakening of the spectre of the camp. This development is particularly striking in a country where other forms of political violence seem endemic – political violence between ethnic groups ravages the two countries that we have cited but that violence turns on a different, non-bio-political register.

The economy of contemporary biopolitics operates according to logics of vitality, not mortality: whilst it has its circuits of exclusion, letting die is not making die. With the development of ever more sophisticated, cheaper and readily available forms of genetic testing, the biopolitics of both poles – the molar and the molecular – might well be changing. As endless conferences and books have argued, there seems to be all the difference in the world between diagnosing Down's Syndrome or foetal tube syndrome, and diagnosing intelligence. While the debate on intelligence seems to us to be on a different level, substantial, if currently inclusive research is being undertaken on a range of other conditions – from predisposition to stroke or heart disease to risks of depression or schizophrenia. Our own current research focuses on close attention to this work, the scientific and technological techniques directed at these ends. But there is no evidence to suggest that the forms of biopolitics that are taking shape around these have, as their strategic objectives, wholesale management of population qualities; rather, they seek to develop and maximise targets for pharmaceutical markets and other health care interventions. This is capitalism and liberalism, not eugenics, by either the front or back door, at least in so far as eugenics has acquired an inescapably negative meaning in our contemporary culture.

At present, then, the symbolic importance of the possibilities opened by genomic management of reproduction looms large, but in fact, large scale genetic management of the population has not taken place and is currently technically impossible. However crude the ability to diagnose embryos may well be, factors such as sex selection, that are currently feasible, may well have, and do seem to be having, molar consequences

outside Europe, whether or not this is the strategic objective of policies and practices or of individual choices in particular socio-cultural contexts. The first question, then, is whether such a project of making such micro-management of population characteristics through intervention at the point of reproduction, scientifically and technically feasible succeed, and to what extent? And the second question is, even if such wholesale genomic management of population characteristics becomes possible, the political shape it will take remains unclear, despite futurology within the academy and without.

### ***III. Genomic medicine.***

The first biopolitical strategies, in the eighteenth century, concerned the management of illness and health, and from that moment, these issues have been repeatedly problematized and intervened upon by a whole range of authorities. They have a peculiar saliency in liberal societies because they establish links among and between multiple levels of society, from the aspiration of the individual to be cured, to the management of the health status of the population as a whole. The issue of illness has, of course, also been the exemplary field for a whole series of other modes of individual and collective problematizations operating in terms of the division of the normal and the pathological. Several decades of scholarship has made this much self-evident. Understood in this sense, it is clear that the poles of this bio-political field extend from the management of collective health by means of pure water, to annual health check-ups and insurance, through preventive medicine that operates in large domains between collectivities and individuals, to the field of clinical interventions onto the body of the sick person in the name of health. And, as many have pointed out, action on the collective pole has been the main motor of increases in longevity and quality of life. Variations in the applications and financing of the technologies applied to this collective pole are the key factors determining the scandalous variations in life expectancy and life chances that we can observe today around the globe. In the vast majority of these instances, the causes and the remedies are known, and require no further scientific advance or technological innovation only political will. Even in apparently novel disorders, such as SARS, whose outbreak rapidly called forth the whole panoply of modern biological medicine including the rapid identification and sequencing of the pathogen, the preventive modes of intervention required were archaic. They were basically those of quarantine first applied to epidemic outbreaks such as plague at least since medieval times, merely updated to take account of contemporary mechanisms of

mobility and communication. And they proved highly effective without any significant contribution from genomic medicine.

It will have become clear that our diagnosis as to whether or not a new regime of biopower will take shape – that is to say, will pass a qualitative new configuration of knowledge, power and subjectivity - depends on many factors. Many of these factors depend on contingencies, others depend upon the uncertain outcome of genomic research itself. As we write, in August 2003, the most central unknown is whether the new forms of knowledge linked to molecular biology in general, and to genomics in particular, can actually generate the kinds of diagnostic and therapeutic tools that its advocates hope for. The stakes here are high, economically, medically and ethically. They lie in the presumed capacity of genomics to identify precisely some central processes involved in illness that control the manufacture of proteins, and in doing so, open these to precise intervention in order to produce therapeutic effect. It is not just some abstract knowledge gain that gives genomics its potential as far as scientists, health care systems and the pharmaceutical companies are concerned but its' capacity to generate therapeutic targets and manufactured molecules addressed to those targets; in other words to ground a new kind of "know how" of life itself. For its advocates, the genomic identification of functional pathology logically must open a path towards molecular intervention. But to the degree that this logic proves faulty, genomics will remain only one dimension of health care and biological understanding; one that gains its intelligibility within a wider field of knowledge on the aetiology, prognosis and treatment of disease.

How, then, might we begin to think through the implications of the nascent advances in molecular and genomic technologies? It is clear that the belief that something significant is at stake here mobilises the strategies and tactics of a whole variety of forces. National governments invest in genomics, set up bio-banks, and fund research into basic and applied genomic medicine. Pharmaceutical and biotech companies invest billions and employ tens of thousands of talented scientists and technicians in subtle and elegant experiments and inventions. Patient groups invest hope, political capital, their own tissue samples and money in the search for genetic treatments. So clearly a modified bio-political rationality in relation to health is taking shape, in which knowledge, power and subjectivity are entering into new configurations, some visible, some potential. This formation involves elements that have played their part in previous apparatuses, and could be seen taking shape after the Second World War: patient groups aren't new, pharmaceutical companies pre-existed genomics, and governments have invested

increasingly large sums in promoting and regulating basic and applied medical research. But alongside these previous configurations, which have by no means disappeared, we believe that something new is taking shape which is beginning to colonise and mutate the major apparatuses for the management of the health of each and of all, at least in the industrial democratic world.

Let us take two small examples of these new investments. Rabinow's research in 2003 is an anthropological investigation of Celera Diagnostics, in Alameda California. This company is an offshoot of Celera Genomics, the company that accelerated the race to map the human (and other) genome. With several hundred million dollars at its disposal, it has identified roughly a dozen major disease areas and adopted an approach that seeks to identify clusters of SNPs (single nucleotide polymorphisms) in functional areas of the genome. Hence Celera Diagnostics combines massive, expensive machine capacity, diverse alliances with multiple disease associations and university researchers, and a strategy that this will enable the diagnostic identification of predispositions to complex disease involving variations in numerous genes. Their model for polygenetic conditions moves beyond the search for "the gene for" model of the 1990s, a model that is obviously inadequate to understanding the most common disorders such as cancer, heart disease and the like. The goal is to produce diagnostic tests that would be used massively in reference laboratories in a routine fashion, to enable pre-symptomatic diagnosis and preventive interventions on a previously unimaginable scale within the next five years.

If this model were to succeed, and to be deployed widely, not only in the developed but also in the less developed world, the logics of medicine, and the shape of the bio-political field, would be altered, and new contestations would emerge over access to such technologies and the resources necessary to follow through their implications. Further, as the forms of knowledge generated here are those of probability, new ways of calculating risk, understanding the self, and organizing health care would undoubtedly emerge. The jury is out as to whether this model will work. If it does, whilst it is clear that the shape of the bio-political field would mutate, there is no technological determinism here: multiple responses are possible. And if we remember, as we always should, that even in the world's most prosperous nation, millions are still denied access to the basic health technologies and medical interventions that have been established for half a century, the political and social implications are evidently shaped more by the political side of the bio-

political than the medical side. If success is partial and patchy, if hopes are deflated, if venture capital and stock market investments move elsewhere, this still does not mean that nothing will emerge, merely that, as with so many previous medical advances, the mutations that will take place in therapeutics, will be smaller, more dispersed and their effects harder to see in the short term, though perhaps evident from the perspective of the future.

In a related but distinct area of the field, Rose's research in 2003 has focussed on the development known as pharmacogenomics, and in particular on its engagement with mental disorders. The research site here concerns the take up, principally in Europe, of the new generation of anti-depressant medication, in the context of a belief, underscored by the World Health Organization and accepted by international health management agencies, that by 2020 depression will become the second largest cause of morbidity in both developed and less developed world, second only to ischemic heart disease. There are clearly many factors that have led to this premise, which cannot be addressed here, but include the humanistic belief of doctors and others that much misery is the result of an under-diagnosed clinical condition for which safe and effective drug treatments are now available, the concern of national governments about the cost to their budgets of days lost through depression, the significance of the key indicator of suicide rates in international health comparisons; and the intensive marketing and 'educational' campaigns of the pharmaceutical companies.

What is the link between this and genomics? Firstly, it arises because the new (third) generation of anti-depressants claim to be fabricated at a molecular level to target the precise neuronal mechanisms that underlie depressive symptoms. Second because these drugs are very variable in their effects, working with some, not working with others, generating adverse effects in a third group. And thirdly because of the belief that genetic testing may enable medics to diagnose the precise subtype of depression in each case, prescribe the effective drug, minimise adverse effects, maximising compliance, hence acting not just at the individual level but also upon key financial and population health indicators. If successful, driven by the wish of all concerned, including patients, to have effective drugs that have minimal side effects, genetic testing may migrate from the genetic counsellor's office to the general practitioner, and become as routine as blood tests, opening up the population as a whole to a genetic understanding of their health, illness, and predispositions. If only partially successful, the routinisation of genetic testing prior to treatment decisions may be slow, patchy and

limited, but the genetic rewriting of mental illness will nonetheless once more enter the field of truth, not in the name of population purification and the elimination of degeneracy, but in the name of quality of life, even happiness. We have yet to weigh up the costs and benefits of these contemporary aspirations when they mobilise rationalities of biopolitics.

Perhaps in relation to both of these examples, and to the field more generally, it is necessary to mark one key difference between the forms of genetic explanation that were the target of critique of an earlier generation of radicals as well as many scientists, which rested on the belief that heredity was genetics and genetics was destiny. While this view has not completely disappeared, the genomic approach is now, principally used as a tool to identify function rather than as a total explanation. Hence critical evaluation would have to take other forms than denunciation of reductionism, individualism and rejection of the social. Contemporary genomics is principally directed at illness conditions rather than gross characteristics such as intelligence or personality. It understands most of those conditions as arising out of interactions between multiple coding regions, where gene expression can be activated and inactivated by many environmental factors at levels ranging from the cellular to the familial, the social and the environmental. It seeks not to pronounce on destiny per se, and but rather to render the future as probabilistic and thereby to open it to technical intervention.

### **Conclusion.**

One might well imagine what it might have been like in 1800 for an analyst attempting to grasp the transformative implications of the forerunners of the “birth of the clinic.” Today we are equally in a situation of major historical change whose directions are partially obscure and not yet solidified. Thus it is no surprise that it is hard to tell whether we are at the early stages of a momentous historical shift, in the middle of a process that is well underway towards stabilizing new forms, or in a conjuncture that will prove to be a dead end or at least marginal to other changes that we cannot envisage today. With that proviso, we feel that the concept of biopower is pertinent to grasping many diverse contemporary developments. But the concept remains insufficiently developed, and has not yet demonstrated its analytic mettle in sufficient cases. We would recommend that analysts attended to that task, rather than succumbing to the allure of philosophies that turn a concept into a theory or a world view.

The three elements that are brought together in the concept of biopower – knowledge of vital life processes, power relations that take humans as living beings as their object, and the modes of subjectification through which subjects work on themselves qua living beings – as well as their multiple combinations remain to be charted. We argue that analyses aimed at clarifying the bio-political rationality of the near future must pass through detailed empirically grounded inquiry into changes that are occurring at each of these three axes, and the relations and combinations amongst them.

The significance – and indeed the possibility – of the entry of genomic knowledge into the bio-political field must be situated within the shifting territorialization both beyond and across nation states – trans-national flows of knowledge are coupled with local intensifications of research sites, and with supra-national institutions from the European Union to the World Health Organization. Variable mobilizations of persons, tissues, organs and pathogens interact with the slower mobilisations of therapeutics such as generic drugs for the treatment of AIDS. Parallel motions can be identified on the level of subjectifications: cystic fibrosis groups cut across national and class barriers as do their care givers; models of patient activism spread, and are taken up and reinterpreted from Japan to Bangladesh, and from Turn to Toronto. It is important to underline that these processes are both individualising and collectivising. Who, in 1955, could have imagined depressed people as a global category, not only as targets but also as active subjects in a new biopolitics of mental health?

To carry out these mappings of the possibilities opened up in this seemingly novel formation of biopower is not to ignore the negatives – the machinations of international capital, the hyped up marketing strategies of “big pharma,” the new entanglements between truth, health and profit that characterise the relations between researchers and industry as well as the implications of intellectual property for older forms of knowledge production, the possibilities of pathogenic release with wide scale effect, the massive inequalities in access to even basic healthcare, the more traditional forms of geopolitics which will make use of these new bio-possibilities in all sorts of inventive and often reprehensible ways. That said, if in fact we are in an emergent moment of vital politics, we suggest that celebration or denunciation are insufficient as analytical approaches. One of the most pressing demands for critical thought today is the invention, enlargement and testing of an analytical toolkit adequate to the present reality. Biopower, used in a precise fashion, and subject to

inventive development, would surely take its place as a key part of such a toolkit.

## NOTES

<sup>1</sup> On the “biological century” claim see, Sydney Brenner. Gilles Deleuze in his Foucault, has a provocative appendix where he talks about the future of biopower. Rabinow and Rose have themselves written on these themes.

<sup>2</sup> For example, the Biopolitics International Organization based in Greece, which focuses on environmental protection, while in *Christian Biopolitics: A Credo & Strategy for the Future* by Kenneth Cauthen seeks to nurture “an emerging new consciousness among many potential dreamers and doers in the churches who can help provide us with the visions and the values we need to promote a movement toward an ecologically optimum world community full of justice and joy in which the human race can not only survive but embark on exciting new adventures of physical and spiritual enjoyment”.

<sup>3</sup> In France the reception of Negri has been minimal and that of Agamben has turned more specifically on his claims about the concentration camps. (provide reference).

<sup>4</sup> The same year that *History of Sexuality Volume 1* was published, and never to be returned to again, aside from a passing comment here and there.

<sup>5</sup> Cite the Social Security Interview.

<sup>6</sup> This is a point that Agamben himself makes (look at his recent book on the possibility of politics and judgement).

<sup>7</sup> References.

<sup>8</sup> Deleuze citation.