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What about Race?

Amade M'charek & Irene van Oorschot

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Abstract

In this contribution, we zoom in on a shape-shifting object: race. We seek to demonstrate how an actor network-theoretical, non-dualistic sensitivity to concrete practices has diffracted the study of race in politically and ontologically fruitful ways by raising new questions, shedding light on ill-understood practices, and opening up the possibility of finding a language with which to do justice to novel configurations of race. As such, ANT has been instrumental in attending to race as a relational and multiple object, and in doing so has challenged us to rethink its status as either a 'fact' or a 'fiction', or as a matter of 'nature' or a matter of 'culture'. However, we not only pay attention to what ANT can do to 'race', we also want to attend to the question what 'race' does to ANT. As a shape-shifting object, race challenges certain ANT habits of thought, that is its emphasis on presence, and secondly, its emphasis on the present. With race, we are forced to think not only presence but also absence; and with race, we are required to attend not only to the here-and-now, but also to multiple histories, presents, and possible futures.

1 Something Ghostly

Let us start right where we always already are: in the middle of things.

Let us start, then, with a snapshot (see figure 1). It is a snapshot of an unknown suspect, released on the 9th of January, 2015, by the Columbia SC Police Department. It shows the face of an individual whose DNA was found at a crime scene. On the basis of this DNA, Parabon NanoLabs, a commercial company, had produced a DNA-photofit: an image of what the perpetrator would look like. Striking is the suspect's face, which is presented here in different shades (dark and light) and from different angles in a mug-shot like fashion. This face draws us in and almost distracts our attention from other crucial information provided by the snapshot. Below the three faces, the image further details the information drawn from the DNA at the crime scene, such as geographical ancestry, skin, hair and eye colour as well as the absence of freckles. Categories are explicated by bars indicating colours or a map of the world marking places of origin.

There is something *arresting* about this image: its portrait-like qualities ask us to consider the suspect's face as a singular, identifying characteristic. However, as a collage, it details and disaggregates that face into measures of likelihood on several dimensions, showing how the 'face' is assembled out of a variety of measures. It also takes us from face to place, when a link is made between the suspect's looks and his likely ancestry. It also makes a move from individual to

population, when it details the suspects' likely ancestry in the categories of West African and North West European. It connects what is within the suspect – his DNA – with the surface of his body, his face.

A lot is going on, here: both on the surface of the image, in which our eyes jump, indeed, from face to place to numbers to bars; and *somewhere else*. Something seems to be haunting the image in the jump from individual to population, from probability to typology (and back). What is made absent here? What places and times does this image implicate – fold within itself – only to produce this immediately legible surface? *What ghost is here at work?*

We propose to think of this ghost as the spectre of *race*, and this contribution is a way to untangle the many ways race flickers between absence and presence, in and out of our historical moment. With Callon and Law, we understand that which is present to be irrevocably entangled

Figure 1: NanoLab snapshot

with productive and generative absences (2004); we also understand that which is 'of the now' to be produced by intricate foldings of multiple temporalities which are never entirely lost (Latour & Serres 1995, M'charek 2014, Derrida 1993, Bhabha 1994). Thinking we this image, we contend, means thinking with the continuing and troubling realities of *race*.

This is not immediately obvious, perhaps. Since the 1951 Unesco statement on race stating that there is no scientific basis for classifying people racially, many have taken race to be a pseudoscientific concept. While the Unesco

statement has rendered some ways of understanding race quite unpopular or obsolete, we seem however to been quite unable to leave it behind (e.g. Lipphardt 2012). Indeed, as human biological difference continued (and continues) to be an object of scientific concern in e.g. practices of genetics and forensics, biological differences have become subject to novel forms of articulation and configuration (Abu El-Haj 2007, Duster 2005, Fullwiley 2007, Schramm et al. 2011, M'charek 2005, 2011). In a way, race 'haunts' these practices and makes unexpected appearancesⁱ. In this snapshot for instance, it rears its head when we consider the gap between the genetics behind some facial characteristics – hair, skin, and eye color – and the face as it is produced. The face demanding our attention is much more precise about the suspect's phenotype than the genetic data seem to allow. For instance, there is no genetic test for the suspect's hair texture, nor is there a measure of the relative thickness of his nose or lips. His interpolated West African ancestry does the rest of the work, it seems: it is that titbit of information that gives shape to his lips, nose, and hair.

Of course, race is not only a continuing (if sometimes elusive!) reality, it is also a troubling reality. Troubling in the sense that it troubles ready-made, binary distinctions with which we apprehend, and act in, the world. On the one hand, the snapshot evokes a conception of human difference as rooted squarely in our bodies, in our DNA. This is a conception of race that treats it as crucial in understanding human variation in the phenotypical sense (as in the snapshot). It is also a conception of race that has led researchers in a variety of fields to investigate to what extent distributions in genetic material influence intelligence, aggression, risk taking behaviour, or the relative risk of certain diseases (e.g. Duster 2005). These conceptions have historically been countered by emphasizing the fictional, ‘constructed’ character of race. In such accounts, race has predominantly been viewed not as a thing in and of our bodies but rather as a social construction, taken more as a matter of ideology than of ‘real’ science.

Neither of the two conceptualizations of ‘race’, however, are adequate ways to grasp race in the political sense (Nelson 2008, M’charek 2013). While the emphasis on the fictional, socially constructed character of race certainly has strategic use in some contexts (think especially of conceptions of race as historically situated outcomes of power struggles), it does have the disadvantage that it leaves us empty handed to apprehend and intervene in the burgeoning study of human difference, most crucially as it takes place in the practices of e.g. population genetics, biomedical research, or forensic science. After all, while geneticists themselves may be quick to point out that the human genome displays more similarity than difference, precisely these genetic differences assume political salience in research and discussions regarding medical practices and health care (see Braun 2002) or social order and crime (e.g. Raine 2008), while the genome has become a powerful part of our social imaginaries (Haraway 1997). Against this background, we ask: what are we to make of this picture? It is too simple to write it off as politics by scientific means – especially if that means we end up lacking a language to talk about novel configurations of race. Meanwhile, treating human difference rather as an unquestionable fact rooted in nature runs the grave risk of recuperating or reinventing racial hierarchies, most notably by grounding human difference in the body – a move that overlooks how the body itself is an effect of practices of genetic ‘corporealization’ (Haraway 1997: 141). Contending with the political, ethical, cultural, and economic impact of the rise of genetics requires a sustained engagement with the question of human difference: how such differences are made, where they become salient and consequential, and how they may be unmade.

In the following pages, we want to use the snapshot picture to demonstrate how certain actor network-theoretical tendencies have been able to generate important diffractions in the study of ‘race’. Central in this section are the distinctions between fact and fiction and nature and culture, distinctions that ‘race’ continually evokes as well as disavows. Here, ANT, and especially feminist studies of techno-science, serve as ‘tools for thinking’ (Stengers 2005: 185), that is as tools to think with, and through, the spectre of race. However, as the gesture with which we take up our conceptual tools is each time a new and *particular* gesture (id.), we concentrate in the second section on how ‘race’ required us to question and adapt our tools. With an emphasis on the

material-semiotic ‘network’, we suggest, often comes a largely unattended kind of *presentism*, prioritizing both that which is present spatially (in the network) and temporally (as a present). However, race asks us to attend not only to presence but that which is (made) *absent*; furthermore, race also requires us to attend not only to the here-and-now, but to the forgotten or erased. As ghosts are not simply ‘of the past’ nor something ‘of the present’ (Buse and Scott 1999), race asks us to consider *temporalities* of various sorts.

2   **Diffraction Race**

If the preceding responses to race have concentrated on the question, what *is* race (fact or fiction? A product of nature or of culture?), the primary contribution of ANT to the study of race has been to let go of such definitional exercises and instead ask: *where and how is race done*? It calls us to attend to images like these not as a representation, but to ask instead ask: how does this image *do* race (M’charek 2013)?

With this performative rather than representational conception of our materials of research comes simultaneously the possibility that we are not dealing with a singular, underlying reality, but instead with multiple realities. Mol’s (2002) conception of the object multiple has helped to attend to the specificity and situatedness of objects as they are made and remade in specific practices. In other words: at stake in knowledge-making practices may not be different perspectives on essentially the same objects (e.g. disease, or biological difference), but rather different ways of enacting that object, thus bringing about different versions of it. These versions may ‘hang together’ – for instance, when coordination or hierarchization takes place – yet we cannot assume, therefore, that these objects are essentially the same or suggestive of a singular referent.

The snapshot is a case in point. It shows ‘race’ to be simultaneously something legible on the surface of the body as well as a matter of genes. It shows race to be tied to place, yet at the same time treats race as a probabilistic value. We are dealing, then, with a multiplicity. Brought together in our image, they only hang together precariously. Perhaps they ‘hang together’ in this case because they are brought together in one image, offering an individual up for inspection.

But how was this image made? It is one thing to talk about the realities it enacts, but it is another to carefully scrutinize how it came about. This is another crucial contribution of ANT to the study of race: it cautions us against understanding scientific facts as simple representational statements. It prevents us from forgetting that facts were made in the first place.

Claes and colleagues (2014) are a prime example of such fact-making – which, as we will see, is also partially a practice of race-making. In their paper, which reports on the scientific work for the Parabon Snapshot-tool, they are interested in facial composite construction on the basis of 24 single nucleotide polymorphisms (SNP’s). Focusing on these SNP’s, they argue, will be able to contribute to generating an individualized image of a potential suspect. Their work is based on a study of the facial features and the genes of 592 individuals, 18 – 40 years old, clustered in

three populations: US-American, Brazilian and Cape Verdean. They report that the three populations were genetically clustered according to European and African ancestry facial forms. In this research based on the study of genetic markers and facial landmarks facilitated by 3D images, genetic ancestry is *the* pivotal operator in this face-making technology:

We first use genomic ancestry and sex to create a base-face, which is simply an average sex and ancestry matched face. Subsequently, the effects of 24 individual SNPs¹ that have been shown to have significant effects on facial variation are overlaid on the base-face forming the predicted-face in a process akin to a photomontage. (Claes et al 2014: 208)

Analyses of the 3D images of 592 individuals, the authors argue, has suggested 44 principal components (landmarks) on the basis of which all facial variation can be explained. Recombining this data the technology promises to uncover patterns that are invisible to the bare eye. Moving from the surface to the molecular, population genetics is called upon to produce a '*base-face*'. Technically this would be the average face compiled on the basis of 591 individuals (all subjects minus the subject whose facial shape is to be determined). But the analysis is not simply aimed at the individual. The 24 SNPs aimed at individualizing face are statistically accurate only when analyzed within homogeneous populations. The individual can't quite do without a population (M'charek 2000)! Hence the African and European ancestry populations. This means that the '*base-face*' is the base-face of the population to which the specific subject is said to belong (African or European). In accordance with the genetic clustering of the 592 individuals based on ancestry markers, their faces are allocated to one of these populations. The 44 landmarks can then be used to correlate and determine the base-face of one of these populations. Of course, this is an operation not dissimilar to the making of racial types. The base-face thus becomes a racial type.

Specific ways of relating DNA and face are here at work. These ways of relating DNA and face can only occur in practices mobilizing statistics, advanced genetic testing procedures, digital visualizing software – and, we note, practices mobilizing a conception of internally homogenous yet distinct populations. Here, race becomes a device that mediates between DNA and face. In that capacity, it is also a relational object: not only made *through* relations, but active in making relations *anew*, too. The DNA plays an important role in these practices: it is not mute material upon which the researchers inscribe their results nor does it wholly determine the facts made. The DNA matters – but so do the specific testing procedures, visualizing software, and typological conceptions of race. Indeed, the mobilization of population genetics in the production of an individualized face means that there might be *other* ways to make individual faces; ways, perhaps, that instead of mobilizing population types involve scalar measures (a possibility the authors themselves mention).

Materiality, relationality, and multiplicity are key concepts in ANT-inspired approaches, and mobilized in this context teach us important lessons with regards to race. Characterized by a 'pragmatic respecification' (van Oorschot 2018) of the definitional question, 'what is race?', this approach is more interested in the question: 'how and where is race done?' This gesture is indebted in many ways to feminist studies of technoscience, and in particular the non-dualist thinking of Donna Haraway, whose thought, especially her figure of the cyborg (1991), continually resists the logic of either/or that structures our habits of thought. As we will see, with this pragmatic sensibility comes a different way to attend to the reality of race, and the ways it is 'natural' or 'cultural'.

3 Realities of Race

The distinction between natural facts and social fictions (or constructions) has had a tremendous influence on conceptualizations of race. On the one side of the dichotomy, race has been conceptualized as a fact of nature, and therefore an entity out there to be uncovered by scientists. On the other side, it has been viewed as a product of human action, of social and cultural construction and hierarchical ordering of difference. This fact-fiction dichotomy has led to a division of labour, by which biological differences were to be addressed by scientists and sociocultural differences would become the object of study for the social sciences. A problematic division of labour, as many have argued (see, e.g. Haraway 1991, Butler 1990), through which the biological, the body, sex and race-differences have been left unattended in critical inquiry. Moreover, this way of approaching the biological, including race, tends to understand facts and fictions as mutually exclusive: something is either a fact, or a fiction. DNA is simply a "truth-machine" (Lynch, Cole, and McNally 2008) that gives access to the realest real of human difference. Parabon NanoLab speaks in this context of the unique 'signature' of individuals buried in our DNA - while the (discriminatory) meanings we attach to such differences are just social constructions.

The divisions between, fact and fiction, nature and culture, is not necessarily helpful in all contexts. Facts do not come ready-made, but are made somewhere, and somehow. They are the outcome of work conducted in a variety of social and material settings. However, just because facts are 'made' does not mean they are 'made up'. They are not untrue or 'mere' fiction (Clifford 1986). Similarly, while difference is 'there', in the DNA, it does not speak for itself, nor does it do so unequivocally. Race, here, is not simply a matter of adding up fact and fiction, nature and culture, but is a matter of working *through* and *with* varieties of entities. It is a nature-culture assemblage (Haraway 2003). It comes about in different, situated practices and it comes about in different configurations, in which the biological and the cultural are engaged in particular versions. The question raised, then, is how we can attend to the ways 'race' is both made and made up at the same time; how, in other words, we can understand the simultaneously factual and fictional character of race (see especially M'charek 2013).

In this context, the everyday practices of population geneticists, forensic geneticists, and biomedical researchers provide us with some ‘tools for thinking’. There, the biological and the social, the factual and the fictional, are hard to extricate from each other. In these practices, ‘there is no natural object’ (M’charek 2005: 167). There, the work of mapping genetic difference is precisely work of producing the comparability of objects of research. Various technologies go into mapping not the ‘whole’ DNA, but specific genetic markers. These markers in turn shift from being an object of attention to a technology of comparison, when they are being compared with a reference strand of DNA. These genetic markers, furthermore, may also be used as methodological devices, when they are used to distinguish between ‘good’ and ‘bad’ profiles for a specific goal at hand (M’charek 2005). A genetic marker is hence less a natural thing ‘out there’ than something enacted in practices that encompass ‘humans, technical devices, chemicals, theories, texts, and DNA,’ (id: 151). It is only because processes of *naturalization* are part of these practices that something appears at one end of the nature-culture distinction as ‘mapped DNA’. And these distinctions are not stable: they do not hold everywhere, all the time. Of course, it is precisely therefore that this emphasis on practices in which genetic difference and similarity are enacted is politically productive through and through: it aims to stay with the way realities are made in practices, and in doing so wants to attend to their ontological politics (Mol 1999). Attending to ‘this active mode, this process of shaping, and the fact that its character is open and contested’ (Mol 1999: 75) makes these practices contestable in ways that the demarcation between nature and culture, ‘hard science’ versus the social sciences, cannot. Investigating practices and what goes into making race a fact of nature (or culture in others) is hence key to understanding both its materiality and tenacity, as well as ways we might try to undo race-differences.

In treating ANT as a pragmatic sensibility characterized by an emphasis on relationality, multiplicity, and materiality, we doubtlessly gloss over distinctions other scholars may make (see for a similar point, Law 1991, Alcadipani and Hassard 2010). In a way, refusing to provide a neat definition for ANT is of course precisely our point: meaning, after all, is use. ANT is more a lever to set things in motion, a tool to be ‘passed from hand to hand’, than a theory or fixed collections of instruments (Mol 2010). Thus, as we will see, race itself sets ANT in motion, too, and particularly the emphasis, in ANT, on *present doings* and an attendant relative neglect of *absent* or *past* doings. Indeed, paying close attention to race means running up against certain tendencies in the now canonical ANT studies of laboratories, clinics and other sites of knowledge-making. These tendencies are *presentist* in that the emphasis on material-semiotic network has often led analysts to concentrate on that which is present rather than absent, and secondly, presentist in the sense that they concentrate on that which is going on ‘in the present’ at the cost of developing an understanding of networks or objects as they make, mobilize, or fold multiple histories and temporalities. In a way, ANT has not itself been impervious to a metaphysics of presence (Heidegger 1962, Law 2006), prioritizing the temporal present and what is present over

the forgotten, illusive, erased, or suppressed (Law & Singleton 2004). Both forms of presentism, we will demonstrate, handicap our thinking about and thinking with the specter of race.

4   Going Underground and Surfacing Again: Race as an Absent Presence

Scientific practices are a matter of making relations between people, things, ideas, and the recalcitrances of objects of study. The network, the oft-evoked metaphor to understand these imbrications, has been a crucial concept to attend to precisely this relationality, and has been crucial to uncover this sometimes fleeting and messy relational realities from narratives that would ‘black-box’ the network.

Reading our image in relation, as it were, to relationality, we would be able to attend to the practices taking place in-between a crime scene and the Snapshot. We would be able to ask questions about the gathering of evidence and the way legal standards of evidence collection, the distribution of tasks over officials in the chain of custody, the practices of forensic geneticists, the design of the genetic testing and the design of the software used in generating the snapshot. We could trace this image further, trying to follow it around as it mobilizes interests and is taken up in practices of identification, investigation, and legal truth-telling. Indeed, a second snapshot based on the same genetic material, this time produced in 2017, is more suggestive of its implication in forensics and, by extension, in the legal system. The individual, we learn here, has now become part of a ‘case’. Given a case-number and a phone number to call with the police. This image, more so than the first, folds the individual into a circuitry of both scientific and forensic forms of truth-making; perhaps it exists at their nexus, at the place the two circuits cross each other.

In any case, the image's implication in forensics is helpful, here. For it draws our attention to a specific way of asking questions about our research materials that can teach us not only about race, but also about the presentist limitations of ANT. In forensics, the task is to use available materials as traces and clues to that which for now tends to escape our observations (see also van Oorschot 2018); it is particularly interested in following trajectories and uncovering paths. But forensics is also a practice of making relations, of drawing lines and connections even where these seem to be cut off. Following these traces and clues may take us surprising places and actors that may not be immediately present, but do play a role in the production of this image.

Figure 2: Parabon Snapshot, updated

African' and '8% North West European', suggesting that at stake is not typological 'race' but a probabilistic categorization based on in ancestry populations. The tension is evident: 'race' flickers in and out of existence in the oscillation between these different ways to 'read' the image. In this sense, 'race' acquires characteristics of an absent-presence: it becomes present at the expense of many things that are made absent. Of course, the problem is not that things are rendered absent, but rather that this proceeds without further reflection (Law 2006) on what is

For some actants shimmer in and out of existence, are themselves 'pattern[s] of presences and absences' (Law and Singleton 2004: 12), or go underground as soon as we try to grasp them, only to appear just in the periphery of our vision (see also M'charek, Schramm, and Skinner 2014).

In our image, 'race' is shimmering just like this. In tying face to place, the image is on the one hand suggestive of race as *type*. Locating this suspects' face in 'West Africa', evoked is a world in which different populations occupy different, circumscribed spaces in this world. However, this interpretation is belied by the probabilistic measures detailing

the suspects' ancestry, which falls apart into '92% West

being made absent and to what effect. Think as an example of something that is rendered unimportant and absent, for instance, of our own modes of seeing and witnessing. Would we have readily ‘seen’ race if the unknown suspect had been white? Or is our way of seeing ‘race’ part and parcel of sedimented infrastructures of knowledge? The suspect’s blackness alerts us to race in ways that suspend questions about the ways our very ways of seeing and glancing are racialized. However, the suspect’s race does not exist in and of itself. It is relational and its presence depends on many things that are made absent. Race, always in flight, forces us to ask precisely the question: what about race?

5 Folds of Time

Studies within ANT have developed various ways to attend to the question of time, sensitizing us to how practices both take time – they have a certain duration, they are punctuated by events (discoveries, paradigm shifts!) – and make time. The notion of ‘projectness’ (Law and Singleton 2000), for instance, alerts us to the way the relations between humans and nonhumans can be given a definite shape and a pre-established duration; how, in other words, the question of chronology and phasing is crucial to the way scientific projects are narrated and imagined (see also Law 2002). The emphasis, within ANT, on the closure of controversies also tends to incorporate an insistence on the chronological temporality of controversies – even though time is not typically thematised as an active player in an of itself. Of course, in studying scientific practices, we also encounter temporalities as a salient ingredient of what we could call scientific self-descriptions: we face practices that like to distance themselves from traditions and are quite comfortable siding with ‘modernity’ in a narrative of historical rupture; or else, we might encounter a progressive teleology in which scientific advances are made standing on the ‘shoulders of giants’. That this is only one way to conceive of the way scientific practices relate to time is asserted, of course, in Latour’s *We Have Never Been Modern* (Latour 1991), in which he makes the case that modernity, and the narrative of scientific progress with it, is a poor way to attend to the actual practices of us Moderns.

The study of human difference is similarly a field in which narratives of scientific progress can be encountered. However, it is also a field that can at times come across as being haunted by histories of eugenics and colonialism. A narrative of historical discontinuity is one way to make race absent: insisting that at stake in genetics is not ‘race’ but population, for instance, is a way to enact a break between the scientific now and the pseudo-scientific, racist past. In a way, these narratives resonate with appeals to a post-racial present, in which we have moved beyond race... However, these times continue to *haunt* (Derrida 1993) what goes on in the present. In image 1 and 2, colonial and imperialist histories are evoked, for instance, as we are dealing with a Snapshot from a suspect in the US, whose geographic, genetic origins likely lie in Western Africa: a story that evokes the era of transatlantic slavery and its consequences. More insidiously, yet another history is evoked in the ‘interpretative jump’ from measures of hair, eye, and skin color on the one hand, to the phenotype presented in the image on the other: a history of phenotypical

classifications not wholly unrelated to 19th century scientific practices and imperialism. A *topological* (rather than solely linear and chronological) understanding of time allows us to understand the absent-presentness of ‘race’ as an effect of temporal cuts and folds (M’charek 2014).

A particularly striking demonstration of the relationship between scientific practices and racial histories is the so-called Anderson sequence (M’charek 2014, M’charek 2005). The Anderson sequence was, up until the late 1990s, *the* sequence of mitochondrial DNA, used widely in genetic research as a standard reference against which other strands of mitochondrial DNA could be compared. These comparisons made it possible to measure differences between populations (in their divergence from the Anderson sequence), or to correct for technical errors in the sequencing process. Importantly, it was also used to measure genetic variations in mitochondrial DNA so as to trace genetic lineage (M’charek 2005). For quite a time, the Anderson sequence was largely an unproblematic and unmarked, ready-to-hand tool in these genetic research practices. However, a closer look at its history suggests racial histories are folded into this object in intricate yet revealing ways. First of all, the Anderson sequence was and is not, if we may use the problematic phrase, ‘naturally occurring’. Instead, it is a collage of mtDNA drawn from three different sources: bovine DNA, placental tissue, and the HeLa cell line. And this cell line, used especially in cancer research, was named after the woman whose cancerous cells were taken, in 1952, to be used in medical research: Henrietta Lacks (or, as she was known by a pseudonym in the medical community: Helen Lane). Henrietta Lacks, Landacker (2000) shows, was a black woman in the early 20th century US. Her life as well as her encounters with a white medical establishment were significantly shaped by her blackness: this was a time in which doctors would routinely neglect to inform patients, especially black patients, of the exact nature of their disease as well as their proposed treatment. It was also a time in which medical tissues were taken for research without informed consent. For decades after her death in 1952, it was that tissue that would significantly advance cancer research and acquire a life of its own: the HeLa cell line proved particularly resistant to laboratory conditions, would replicate itself quickly, and offered researchers the opportunity to experiment almost limitlessly with cancerous cells. Again, however, race reared its head once when it turned out that the HeLa cell line had been contaminating a wide variety of labs worldwide, a realization that led to an uneasy discourse linking these cervical cells with racially (and sexually) charged notions of promiscuity and pollution (Landacker 2000, M’charek 2005). The HeLa cell line and the Anderson sequence with it, then, is a *folded object*: while its historicity may not be written on its surface, it is nevertheless folded into it. ‘History can be recalled in objects. History is never left behind.’ (M’charek 2014: 31).

Objects, then, can be conceived of as folds. Take another example of the relation between race and temporalities. Contrast our first snapshot with the second one presented above. While the first snapshot was made in 2015, this second one is produced more recently, in 2017. Aside from the way the image has now been more visibly implicated into a forensic circuitry, we see a few

additional changes. While the first image spoke of a suspect with 92% West African and 8% North West European ‘roots’, the second image disaggregates the suspect’s DNA in more detail. The second image tells us that the suspect still shares most DNA with people from West Africa, but he has also ancestry in other parts of Africa. It now reads: West Africa, 77.39; Europe, 6.85; South Africa, 6.30; East Africa 5.5; Indigenous Africa, 3.14. To be sure, the DNA of the suspect did not change over time. What did change was the number of entries in the database to which the DNA of the suspect was compared a few years later. The larger the collection of DNA samples, the larger the diversity in ancestry produced – which reminds us of the fact that genetic difference is not *in* the DNA but *of* the DNA. Curiously, we see that the suspect’s face, which is now based upon more precise and disaggregated measures of ancestry, has not changed one bit. Indeed, by contrasting the more individualizing specificities with the collectivizing type features, the face gains in reliability. Individuality moves front-stage, while race fades away, to become a matter of fact of diversity. Contrasting the first and the second image allows us to appreciate the image as a folded object, in which time is an operator rather than a parameter or a chronological line on which to allocate events (Rheinberger 1997). The second image works precisely as a folded object as it superimposes two moments in time, two knowledge practices that are as far apart as two years. Indeed, denying the passage of a certain kind of time is also, of course, a way of doing and evoking yet other times.

The notion of the folded object offers us a glimpse of what it could mean to treat practices as involving the partial silencing and partial mobilization of histories, within which not only human beings, but objects too are complex folds of time. Presents, it turns out, are always made by intricate foldings of different pasts (Serres and Latour 1995). As such, the incorporation of such a sensitivity to temporality and history also provides a way into the question of politics, itself the articulation of possible futures. In particular in the case of politically sensitive topics – race, sex, belonging, the nation – an emphasis on the way histories are implicated in their making offers us a way out of a presentisms or teleologies that are characteristic of scientific practices and the erasure of racial histories.

Ghostly ANTics

If race is productively refracted using the combined ANT sensibilities of relationality, multiplicity, and relationality, race has itself productively addressed a largely implicit kind of presentism within actor network-theory. Crucially, race demonstrated that objects or networks are not simply spatial entities or accomplishments, but may flicker back and forth between presence and absence, and may be themselves temporally folded. As such, thinking with the object of race also asks us to (re)consider other sites, networks and objects within these non-presentist terms. Can we have eye for different and multiple temporalities as these are folded within ostensibly black-boxed, ‘ready-to-hand’ objects? Can we allow ourselves to trace not simply what is made present in networks, but have eye for those objects that contribute to the making of networks in more ambiguous ways?

And: what would happen to our understanding of other concepts of the critical tradition using the emphasis on absences and time? Is it possible to conceive not only of race, but also of sexuality, gender, or even class in such terms? Thinking along with these suggestion, we can not only have eye, for instance, for the way sexuality is as much a matter of cultural ordering and of scientific modes of ordering and comparing bodies and objects (chromosomes, brain structures, hormones), but also for the way these modes of enacting sexuality evoke and disavow multiple temporalities, such as the progressive temporality of child-adolescent-adult as much as a transhistorical temporality of sexual essentialism, i.e. the eternal feminine... Or think of the way class is not only a matter of bodies plugged more or less securely in certain circuitries of value (money, esteem), but also something that is selectively made invisible or suppressed in networks ostensibly relying on performance. Indeed, it becomes possible to refract the matter of intersectionality as well, for can we not understand intersectional 'identities' as congealing out of highly situated patternings of absences and presences? Thinking with the spectre of race alerts us to the ways scientific practices are crucial to the making of both objects and subjects, the ways these subjects congeal and dissolve in complex patternings in and of times and spaces, the ways folds matter to the world as it is, and what it may become.

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ⁱ See for exemplars of the burgeoning scholarship that takes seriously the relationships between the life sciences and human difference e.g. Nelson (2008), Schramm et al. (2011), Koenig et al. (2008), Fullwiley (2007).