As John Hartigan (2008) has put it, race “is gaining in reality.” This article takes stock of a growing corpus of literature on race and the “molecularization” of difference (Duster 2005; Fullwiley 2007), showing how the new genetics has simultaneously reified old categories of race and produced novel configurations of differences (Reardon 2005; M’charek 2008; Nash 2005; Abu El-Haj 2007; Fullwiley 2007; Montoya 2007). Sparked by ongoing genomic research, I contribute to the debate on race as either a biological fact or a social construction (Palmié 2007; Koenig, Lee, and Richardson 2008; Hartigan 2009), rephrasing the problem in terms of fact versus fiction. This allows me to go beyond the binary distinction between the biological and the social, not by claiming that race contains a bit of both solid biology/fact and construction/fiction, but by showing that race is a relational object. The so-called biology of race is an emergent configuration of a variety of relations that go well beyond the somatic body. Looking at race in this way shows that first, the boundary between the “biological” and the “social” is not given or stable but one that is enacted in practices. Second, and in line with this, facts and fictions themselves are not pregiven entities. Depending on the practice considered, a previous fact might become a fiction and vice versa. To be sure, as James Clifford (1986) argues, fiction has lost its connotation of falsehood. Fictions are “partial truths,” referring crucially to something both made and made up. Facts and how they are made enjoy ongoing attention in anthropology (of science) and science and technology studies (STS) while fictions are neglected. By consequence,
the relation between fact and fiction and the fluctuations between these states is seldom theorized.

This article suggests a turn to practice to examine what race is and how it is made relevant. This turn to practice is somewhat different from the turn made earlier in anthropology, notably by Sherry Ortner (1984), to which I will return below. I use insights from material semiotics (Haraway 1991; Mol 2002) to argue for the radical relationality of biological race. Material semiotics derives from the study of signs. In linguistic terms, the focus is on words and how they gain meaning in relation to one another. Words do not have an essence by and of themselves but only in relation to each other. In material semiotics, this method of juxtaposition is made to include things as well. Things, objects, entities achieve their significance in terms of their relationships. This method, virtually absent in anthropological studies of race (Montoya 2007 is an exception), allows us to study the biological without fixing or reifying it as a natural object. The material semiotic approach thus gives us a tool to think of the materiality of biological race beyond the somatic body.

The article makes two related arguments. First, race is not a singular object “out there” in nature, but a relational entity enacted “in here.” Second, following a praxiographic approach that attends to what race is made to be in practice, I argue that race is simultaneously factual and fictional, complicating the dominant takes on biological race as either fact or fiction.

**RACE AS FACT—RACE AS FICTION**

From the race is a fact perspective, race is a collection of biological markers that help sort people and cluster them in natural kinds. If we want to know what race is, we need to look into the body, to find it ultimately in the form of a blood group, a gene, a protein, or otherwise. By contrast, from the race is a fiction perspective there is no such thing as biological race. If we encounter race in science or society, it is really an ideology we are talking about, something in our heads or in our institutions.¹ No matter how real in its consequences, biological race is a fiction.

This fiction, often in the guise of social constructivism, has gained currency since the publication of the UNESCO Statement on Race in the 1950s (e.g., Palmié 2007; Hartigan 2009). This Statement famously debunks the idea of innate races and suggests that

₁ From the biological standpoint, the species *Homo sapiens* is made up of a number of populations, each one of which differs from the others in the frequency of one or more genes. (UNESCO 1967:30)
Race, according to the UNESCO Statement, is best understood as *population* in scientific research and *ethnic group* in social parlance. This conclusion has obviously led to the trivialization of the biological and the received idea that race is a fiction. But the UNESCO Statement is an ambivalent document that contributes in interesting ways to the dichotomy between the fact and fiction of race. It states that

> [t]he biological fact of race and the myth of “race” should be distinguished. For all practical social purposes “race” is not so much a biological phenomenon as a social myth. The myth “race” has created an enormous amount of human and social damage. In recent years it has taken a heavy toll in human lives and caused untold suffering.²

The statement thus suggests a spatial division between facts and fictions. The “biological fact of race” is to remain in the lab whereas in society “race” is better seen as a myth, one that needs combatting. Assigning race its proper place, namely science, and distancing it from the fiction of race in society trivializes the reality of biological differences outside the laboratory.³ The Statement was thus predominantly and widely received as alluding to race as a social construction rather than a fact. This was also the reason why a group of physical anthropologists and geneticists protested against the statement.⁴ This led to the publication of another UNESCO statement one year later, in 1951, in which the fact-ness of race was underlined. In a brief introduction the chair of the committee that had drafted the statement, the population geneticist Leslie Clarence Dunn, positioned the committee’s scientific thinking on race as follows:

> We were careful to avoid dogmatic definitions of race, since, as a product of evolutionary factors, it is a dynamic rather than a static concept. We were equally careful to avoid saying that, because races were all variable and many of them graded into each other, therefore races did not exist. The physical anthropologists and the man in the street both know that races exist; the former, from the scientifically recognizable and measurable congeries of traits which he uses in classifying the varieties of man; the latter from the immediate evidence of his senses when he sees an African, a European, an Asiatic and an American Indian together. (UNESCO 1969:37)

By contrast to the first Statement of 1950, here the fact of race is not confined to the laboratory but linked to, and located in society. The analogy to more contemporary prose is striking:
The problem is not the facts. We cannot avoid them, no matter how we might try. The facts include the manifest geographic variation in our species, variation we can see with our eyes and with our DNA sequencers. (Weiss and Fullerton 2005:168)

These quotes suggest that race is an object that exists and can be known both in the laboratory and outside. Yet something strangely interesting is going on with this fact making. The quotes suggest that different technologies of knowing race can be added up. Differences observable by sight can also be “scientifically measured” or more recently traced by “our DNA sequencer.” However, the differences between an “African” and a “European” that can be observed with the bare eye might vanish when viewed through “our DNA sequencer.” This is because no genetic variations are found exclusively in one population (e.g., Serre and Pääbo 2004).

Any genetic variation is found in all populations, only in different frequencies. If we looked at an African and a European individual with only “our DNA sequencer,” both might look alike. Clearly, different technologies, whether genetic markers or the bare eyes of the man on the street, produce different clusters of people, different versions of race. Whereas the fact-making in the quotes suggests that all technologies contribute to the discovery of the same fact and to constructing or solidifying the same boundary, in practice, the technologies may point in different directions and produce different kinds of facts.

In order to go beyond this fact–fiction divide I will redefine these concepts. As many scholars of STS have shown, facts are less about discovery and more about the making of reality by assembling heterogeneous material. The biological is not pregiven but made. Also, I contend that facts and fictions are made of the same stuff. They are performed as different in very specific practice. Fictions, I want to suggest, are performed realities that help us make sense of the facts; they can be narratives, theories, scenarios, aggregated data, etc. Fictions can thus be viewed as situated “devices” (Strathern 1987) that help to understand, rebut or communicate the facts. There is a tendency to privilege facts over fiction, but in this understanding fiction is part of truth-making and “there cannot be a choice to eschew fiction all together” (Strathern 1987:257). The cases I discuss below show that in practice, race is simultaneously factual and fictional.

GETTING PRACTICAL

Unraveling how objects are enacted in practice allows us to see that objects come in many versions. This semiotic turn to practice is considerably different
from the turn conceptualized by Ortner (1984). Whereas Ortner aimed at putting the human actor and her agency in the center of practice research, the material semiotic approach seeks to “decenter” the human actor and attend to the agency of nonhumans as well. Thus action cannot be attributed to humans alone, for human actors are “interpellated” by various other entities (Haraway 1991).

Annemarie Mol (1998, 2002) demonstrates the coexistence of different versions of the body by moving between ethnographic sites and focusing on how the body is done in different practices. She famously concludes that the body is multiple. Similarly I want to suggest that race is not singular, but multiple. The difference between multiple and plural is crucial. To say that different relational configurations make different versions of race is radically different from saying that race might assume different meanings in different contexts. As Mol has argued, in perspectivist and constructivist approaches the plurality of objects has been theorized. Perspectivalism, dominant in the phenomenological tradition, has “multiplied the eyes of the beholder of knowledge” (Mol 1998:76). Depending on who this beholder is, a different view on, or experience with essentially the same body/object is claimed (see, e.g., Good 1994; Scheper-Hughes and Lock 1987).

In another vein, constructivist approaches in STS—whether in the tradition of social construction of technology or laboratory studies—have shown that the history of an object or a scientific fact is contingent. Such approaches focused on closure and how specific facts or objects and their spokespersons overruled other possibilities. In sum, these branches of STS assume a plurality in the past that has become lost in the present (Mol 1998). For example, in his important article on how “race gains in reality,” John Hartigan (2009), while criticizing the social construction of race tradition, contributes to a certain closure in which little room is left for friction between different ways of doing race. Instead, he aligns various scientific, social, or mediatized takes in one big network, demonstrating one growing reality of race. It thus seems that various versions of race are subsumed in its novel reality. In contrast, I suggest attending to the multiplicity of race, to unravel how it is done differently in different practices. The challenge in studying race is to denaturalize without dematerializing it, and to simultaneously attend to materiality without fixing race. In what follows, I examine three cases, from medical practice, forensic DNA practice, and archaeology and genetic genealogy. These cases clarify how race is made relevant and materializes in a variety of ways, from medical sensibility to legal arrangements and tactics in criminal investigation, to national identity and historic tie making. The three cases are analyzed ethnographically, but their material differs considerably: auto-ethnography; visual evidence in a criminal
MEDICAL PRACTICE: WHEN WHITENESS BECOMES A PROBLEM

On a sunny Sunday morning Aziza was born. A healthy girl with fair skin, big blue eyes, and lots of beautiful dark hair—but this is her mother talking. Aziza is healthy and happy. Two days following her birth, however, a problem arises.

I had a question, a knowledge question, one could say. Whenever I breastfed Aziza, she turned bluish around her mouth. In the Netherlands we get eight days of postnatal care at home. Curious about the phenomenon, I asked the home help if she knew anything about it. “It’s called ‘marbling,’” she said. “We often see it in newborns, but I don’t know what it means, physiologically. I’ll call the midwife later and ask her.”

The midwife did not take my question as a knowledge question. She translated it into a medical question, not posed by a good mother asking for information but a worried mother asking for help. That day Aziza had already been fed three times, so the bluishness had also occurred three times. Alarmed by this, the midwife decided to consult a pediatrician at the hospital. The physician wanted to see Aziza immediately.

As Aziza’s father had to be elsewhere, a friend accompanied me to the hospital. We were referred to the neonatal ward. I was amazed by the strict protocols. Within a minute, two-day-old Aziza was hooked up to measuring devices and her heartbeat, oxygen saturation and breathing frequencies were displayed on a monitor.

At the ward, the knowledge question was thoroughly medicalized; Aziza had become an urgent case. Although Aziza’s values (on the monitor) were said to be excellent, the staff wanted to keep her overnight. Upon my insistence on seeing a doctor, the pediatrician told me that it was hospital protocol to keep a newborn for 24-hour monitoring.

“To what purpose? What was there to be diagnosed?” Running out of arguments, the doctor suggested that Aziza might well have holes in her heart and that they wanted to rule that out. Though unconvinced, I complied and Aziza and I stayed the night in the hospital.

That evening Aziza’s father came to visit us and also spoke to the nurse on the nightshift. The next day that nurse recounted their nice conversation. “He told me a bit about his family in Germany. Apparently they are all fair-skinned,” she said. That morning, all the worries and urgency of the day before seemed to have faded away. Aziza was the perfect baby: healthy, beautiful, strong, sociable, so different, the nurses told me. Just before leaving the hospital, while Aziza was being weighed, I asked the doctor, “So, what did you suspect?”

“Well, she was so relaxed, um . . . her muscles, we worried that she might have this syndrome . . . what’s it called again?” The doctor snapped her fingers.

“What do you mean?” I said. “A muscle disease?”
“Oh no, no. Don’t worry. I meant this syndrome, oh yeah, Down’s syndrome.”

“Oh, why Down’s?”

“Well, she has this transverse palmar crease. It’s a marker for Down’s.”

So, what does this ethnographic account teach us about race?

The transverse palmar crease (also called simian crease) has come to stand for Down’s syndrome.\(^8\) It is, however, neither exclusive to people with Down’s (it has a frequency of some 2% among people without Down’s syndrome), nor conclusive (it is found in only 45% of the cases). Yet in this case the crease was taken as a matter of fact. It was silenced because, I want to suggest, it was linked to a series of differences that could not be articulated. The palmar crease was linked to the white skin color of the newborn and contrasted with the darker complexion of her mother. Together these differences produced a suspicion of Down’s syndrome. In this context, given this coupling of differences, whiteness was pathologized. It became paleness that referred to abnormalities hidden in the baby’s body. The baby’s father, specifically his skin color, helped to untie the coupling and bracket Down’s syndrome. His skin color de-pathologized his daughter’s color.\(^9\)

Now here is the irony, indicating that race, in this case skin color, is not simply a trait of a person’s body. Dutch newborns are prescribed vitamins K and D. The prescription says the following: “Children aged 0–3 years, 5 drops a day. [. . .] children with very dark skin, 10 drops a day.” However, Aziza was advised to ingest ten drops of vitamin D per day. It seems that the advice was not so much based
on Aziza’s skin color, but on her mother’s. Whereas Aziza’s color was regarded as “too pale” in the hospital and taken as an indication of “abnormalities” hidden in her body, in the practice of vitamin intake her color was interpreted as “very dark.” To be more precise, in this practice, not hers but her mother’s color was taken as a marker and interpreted as a risk for vitamin D deficiency.

It goes without saying that the hospital physicians were following protocols aimed at the proper diagnosis of a newborn. My aim is not to cast aspersions but to show how race can become medically relevant in diagnostic and preventive practices. This example makes clear that race does not necessarily materialize in a person’s body, but also in the relations established between different bodies.10

FORENSIC DNA PRACTICE: RACIALIZING THE SUSPECT

Over the past 20 years, forensic DNA has become the champion technology in criminal investigation. Although still surrounded by controversy, it is established firmly in a network of policing and legal practices. In the process, DNA evidence has changed shape. Initially it was used primarily as an identification technology, using biological traces to establish a link (or its absence) with a known suspect. However, by the end of the 20th century it had also become a preferred tool in the criminal investigation process, aimed at generating a suspect. Different technologies arrive at the latter. The first and most often applied approach is to take the profile compiled from trace evidence and look for a possible match with known individuals in a DNA databank (Williams and Johnson 2008). A second approach is to organize a dragnet (large population screening), in the hope of identifying a suspect (Cole and Lynch 2007). Yet another approach is familial searching (Nuffield Council 2007). This controversial use of forensic DNA is aimed at cases where the profile of the biological trace is compared to the databank in a search for “near-matches.” Such near-matches might suggest that the suspect is a close relative of the person whose DNA profile is in the databank. The police will then force relatives to donate a sample for DNA profiling. Then there is the possibility to learn about a suspect’s identity by determining his externally visible characteristics from the DNA. The idea is to produce a phantom sketch, similar to those compiled on the basis of eyewitness accounts. Markers for skin pigmentation, geographic descent, and hair or iris color are targeted for possible use in forensic practice (for a review, see Kayser and de Knijff 2011).

Figure 2 shows a flattering representation of what forensic geneticists can do for the investigating police. In fact, only genetic sex can be determined with
any certainty; geographic descent as a proxy for race is probabilistic (it involves statistical chance), and other candidate markers such as skin, hair and eye color are still works in process.

The Netherlands stands out when it comes to regulating the use of forensic DNA. From 1994 onward, it has produced stacks of laws, ranging from restrictive regulations aimed at securing the rights of the suspect to fairly liberal ones enlarging the use of forensic DNA (M’charek 2005a; Toom 2010). In 2003, the Netherlands was the first country in the world to legally regulate the use of externally visible traits, even if the technology was not yet available. Article 151d, section 2 of this legislation reads as follows:

DNA research can only be applied to determine sex, race or other (to be pointed out) externally visible traits through an Order in Council.
If we take into account the targeted markers (e.g., ethnic descent, skin, hair color, facial characteristics) it is obvious that race is at the heart of the inference of visible traits (e.g., Ossorio 2006; M’charek 2005a; Sankar 2010; M’charek et al. 2011). Yet, since biological race was almost an anathema at that time (2003), it is mildly surprising to find this concept in the Dutch Criminal Code. So, how did race enter that text? In a document presented to parliament, the Minister of Justice suggested excluding the category of population and retaining the category of race, as follows:14

Dutch law does not have a definition of the notion of ‘race’. This notion is primarily applied to assess cases where citizens should be protected against discrimination. To do so—in accord with the International Treaty to eliminate all forms of race discrimination, and, with jurisprudence—the notion is broadly defined and includes skin color, ancestry, national or ethnic descent. Given this broad interpretation, ‘population’ is a species of the notion ‘race’. For reasons of coherence in terminology, it seems to me right to comply with the usual explanation of the notion of ‘race’. The aim of the present regulation, to find out about the identity of a potential suspect of a severe criminal assault, also justifies the broader interpretation. I have therefore decided, by government amendment, to abandon the observable physical trait ‘population’ and to connect with the broader notion of ‘race’.

Here we have a case, which actively undoes the historical work of the UNESCO Statement on Race, dismissing population and reapplying biological race. And more: the Minister mobilized regulations in the Dutch Constitution and the specifications necessary to apply these in legal practice, that were designed to protect citizens against racism, to insert biological race into the Criminal Code. DNA-based inference of visible traits, so the law prescribes, can only be used in severe criminal cases and only when other investigative tools have been exhausted. The general idea is that a DNA-based “composite drawing” of the suspect will be broadcast on television and other media to solicit information from the public about the potential suspect. Since the technology is not yet at hand, it has not been used in a criminal investigation.15 However, to demonstrate how this technology might work in practice and what the inference of race might entail, I briefly consider a case, not of DNA-based visible characteristics but of CCTV pictures. One could say that these CCTV pictures are upgraded versions of what DNA visible traits might look like. They are information-dense compared to DNA-based “images.”
MURDER IN CENTRAL STATION, BRUSSELS

On April 12, 2006, in the main hall of Brussels Railway Station, Joe van Holsbeeck (17) was murdered. Two boys about his age were interested in his mp3 player. Joe did not want to part with it, so one of the boys stabbed him with a knife. A number of people saw the two suspects run away and observation cameras registered them in and outside the hall. Two weeks later, the police released the CCTV video to the media and asked the public to help identify the suspects. They claimed, based on the video, that the suspects are of North African, probably Moroccan descent.\(^{16}\)

It was striking to see how much attention the media paid to the suspects’ clothing, Nike sneakers and sweatshirts, but also body movement, and to hanging around in a specific location, Central Station, a place you would normally pass through. It seemed that the suspects’ Moroccan-ness was not just a matter of externally visible traits, their physiological appearance. Rather, it was based on a series of links established between location, clothing, and appearance as well as the framing of this all through the invested technology of CCTV, a technology that is, as it were, criminalized and often racialized (Walby 2005).\(^{17}\)

All these markers were mobilized and connected by eyewitnesses and others, such as investigating police, the authorities and the audience of the mediatized footage and pictures, to confirm that the suspects’ belonged to the Moroccan minority (e.g., Werdmölder 2006). And, of course, all of this was linked to various prejudices about Moroccans and their propensity to commit crime.\(^{18}\)

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\(^{18}\) Since publicizing the CCTV recording did not generate much information, the police investigators called in the help of teachers. Shown better quality photos, one teacher recognized
a 16-year-old boy of Polish descent as one of his pupils. The next day the police arrested this boy and a few days later the second suspect was tracked down in Poland by his mobile phone. The news that the suspects were not of Moroccan descent was received as a shock in Belgium.

Whereas in the first case race was enacted as a relation between different bodies and their color, in this case the relations that mattered were between bodies on the one hand, and clothing, bodily movement, positioning in space and location, as well as public prejudices, on the other. I chose the CCTV case for thinking about DNA-based visible traits because I contend that in principle there is no difference between the two practices, except perhaps that CCTV pictures will likely be of far better quality than any phantom sketches emerging from DNA profiling. This example is useful since it underlines that there is no immediate way of establishing race from a picture. Similarly, race is not a ready-made object when it comes out of the laboratory in whatever version. A DNA profile could look like this:

Male suspect, likely to be of Mediterranean ancestry; likely to have brown eyes; unlikely to have red hair.

Such a profile needs to be translated into the categories of persons that can be found in a particular society, a society with particular concerns and anxieties. The CCTV pictures were read as Moroccan in Belgium, but could have been read as Latino in the United States or as Tunisian in France. Given that the inference of identity is a technology that requires the public in order to be used in criminal investigation, it is even more crucial to attend to the kind of relations that are established and the entities that are involved in producing a particular identity. It is thus vital to take account of technologies that create similarities and differences.

ARCHAEOLOGY: HOW TO DO IDENTITY WITH BONES AND DNA

On March 13, 2002, Nico Arts, city archaeologist of Eindhoven, discovered a grave dating back to the 13th century. It appeared to be the grave of a 10-year-old child. Based on DNA retrieved from the teeth, the Eindhoven skeleton was identified as that of a boy who came to be called Marcus. The skull was used for a facial reconstruction. The excavation of Marcus’s remains pointed to a far greater discovery, namely a collection of 700 graves of burials spanning from the 12th to the 18th century. Archaeologists, genealogists, and geneticists soon collaborated on the Eindhoven project. The benefit of collaborating with geneticists was learning
more about genetic genealogy and thus about the identity and history of Eindhoven and by extension, the Netherlands. ¹⁹

The reconstructed skeleton of this young boy became a key figure in the Eindhoven project. Marcus became a genuine star. He had his biography written (Arts 2003), his reconstruction was exhibited at various locations where he was viewed by thousands of visitors, and he figures in many publications on the Eindhoven project. One article was cast as a quasi-interview by Marcus, conducted with his “father,” Nico Arts. The entire “interview” is highly engaging, but I refer to only two short instances.

Marcus opens the interview as follows:

*My father Nico...*

*Ever since the emergence of human beings, great importance has been attached to the relation between father and son. Ecclesiastical history begins with a Father, who long after that origin sacrificed his Son for the benefit of humanity. For me, too, a ten-year-old whippersnapper from the 13th century, this relation is pivotal. So I am happy that I can turn to Nico Arts, city archaeologist and my spiritual father to ask some pressing questions. After all, he gave the history of Eindhoven a face. My face.*
The case of Marcus is interesting; in him, time is crumpled (Serres and Latour 1990). Practices as distant as eight centuries apart are folded together in a surprisingly engaging story. The young age of Marcus did not allow for sex determination based on archaeological techniques; that is, by studying the bones. His sex was determined by DNA analysis. DNA was also used to determine his genealogical descent, in terms of belonging to a specific population. The city archaeologist reports that “[t]he results indicate a relationship with population groups found across the central Mediterranean and North-West European regions” (Arts 2003:63). To be sure, such DNA analyses are probabilistic and do no guarantee that an individual stems from one population or another (e.g., Serre and Pääbo 2004; M’charek 2005a). Yet, given the mention of Mediterranean as well as North-West European populations, it is striking that Marcus’s facial reconstruction led to a fair-skinned boy with red-gold hair. Or, in the words of his makers, “[n]eutral colors were chosen because we have no information about the actual hair, eye, and skin tones” (Arts 2003:100). One could say that to make Marcus into the face of Eindhoven, that is, a passage point into the history of this city, Marcus had to become somebody who the mainstream Dutch audience can identify with—a beautiful, “neutral” white boy.

**Marcus:** What kind of boy was I in former times?

**Nico Arts:** You were buried at an important spot in Eindhoven: near the altar of the old Catharina church. On your body, we found a silver coin, probably a souvenir of a crusader. [. . . ] You are a child who stems from an important and wealthy family. You did not have a nice life, though. You were often ill, since your teeth are not fully grown. You suffered from anemia and during your first life, there was no cure for that. You died far too young: only 10 years old. Maybe you never had a chance to play outside and spent most of your days in bed.

Again, Marcus’s complexion makes us wonder. A chronically ill medieval child who probably never had a chance to play outside does not match the facial reconstruction that Marcus has obtained. We see a young boy with chubby face and ruddy cheeks, in the peak of health. This suggests that Marcus brings about more than his own life story.

In his biography, Marcus is connected to a whole range of historical figures involved in the crusades of the 12th century (Arts 2003:74). The coin found on his body evoked that history. It was identified as a coin from Venice, one stamped with a portrait of St. Mark: hence the name Marcus. The link between St. Mark
and Venice had not always existed. St. Mark was imported into Venice around the year 828. At the time, the Venetians felt that they deserved a more prestigious patron for their prosperous city, so they cast their eyes on St. Mark. His skeleton was, however, in Alexandria. So the Venetians had it stolen, and smuggled the relics out of Egypt. “Their excuse was that the Muslims wanted to put the church that contained the relics of St. Mark to a new, non-Christian use” (Arts 2003:66). The story tells that the smugglers covered the relics with pork, forbidden food for Muslims. This history is not left behind. The opening of the interview sets the stage for a link between Marcus of Eindhoven and his relevance in the “here and now” to the history of the crusaders, the presence of St. Mark’s skeletal remains in Venice, and the historical conflicts between Christian and Muslim societies. In Marcus they are drawn together in a “topological fold” (Serres and Latour 1990) reflecting the proximity of alleged distant histories and places.

Anthropologists such as Marilyn Strathern (1992) have a long tradition of linking genealogy, kinship, and nation. Recently, given the renewed contribution of genetics to studies of genealogy and kinship, race has moved to center stage in these analyses (Wade 2007; Nash 2005; Schramm, Skinner, and Rottenberg 2011). Marcus, I suggest, draws together the history, present and future of Eindhoven and beyond. His race contributes to what Dutch-ness is made to be, a racialized identity. The example of Marcus makes clear that race is not a matter of DNA. It also adds something to the previous examples, namely that the different interlinked entities, bodily material, objects, and places, carry with them history and culture. The investedness of such entities can be and were mobilized in Marcus, and they helped enact race.

CONCLUDING REMARKS AND DISCUSSION
On Relational Objects

In this article I have used a material semiotic approach to investigate the materiality of race. Attending to practices, I have shown that race does not materialize in the body, but rather in relations established between a variety of entities, including bodies. In the first case race was enacted as the color of the skin. Skin color by itself is not inherently racialized. In this case it was done by linking the skin color of the infant to her palmar crease and the color of her parents, as well as to epidemiological knowledge and the suspicion of Down’s syndrome. This series of differences helped to racialize color. Color thus became the material form that race took. In the second case, race was not enacted as color but as a broader cluster of physical characteristics. Here we saw that these characteristics were linked to national
descent (Moroccan-ness), the clothing of the suspects, their body movements, and the locations in which the bodies were found, as well as a narrative about crime and criminal behavior. And finally, in the third case we encountered race as a national identity. Again, this identity is not always or in itself racialized. In this case it was linked to DNA, physical appearance, local histories and religious accounts about a distant past. Dutch-ness was racialized through these interconnections and materialized in the body of Marcus.

These cases make clear that race cannot be reduced to one marker of difference. Race does not inhere in skin color, physical characteristics, a palmar crease, DNA, clothing, national identity, or the like. It is a configuration, an effect of relations between differences. It is thus that race is a relational object.

**On facts**

How to talk about the materiality and the factness of race without embracing a naive version of “the biological”? And what is the factness of race? In addition to examining race as a relational object, we can take stock of work that has been conducted in the field of STS on the production of knowledge and scientific facts. Detailed ethnographic accounts of laboratory studies have shown that the biological is not discovered, but made (Latour and Woolgar 1979; Rheinberger 1997; M’charek 2008). These studies made clear that facts are heterogeneously configured from diverse material (theoretical hypotheses, specific methods and technologies, available biological material, scientific networks, etc.). Facts are essentially nature-culture hybrids.

Above I have argued that the DNA profile of the externally visible characteristics of the suspect is not finished when it leaves the laboratory. That particular fact of biology is not fully fixed, but fluid and in the making as it travels from laboratory to society. Since laboratory scientists are not in charge of biological fact making, we might take the insights of laboratory studies to society, to study how facts are made there. The cases described here are examples thereof. Still, these cases could be misread as examples of things going wrong with race, examples of race as “fiction” rather than fact. But I suggest not seeing these cases as odd, but as extraordinary cases. Cases where more general, everyday ways of doing race are articulated and made available for scrutiny. What becomes clear, especially in the first two cases is that facts are not always fixed in a durable (material) form. Race was initially made into a fact, in the first case a fact of skin color and in the second of externally visible characteristics. But these facts became more fluid and unfixed. When it became clear that the alleged national descent of the suspects could not
be inferred from visible characteristics—that fact was unfixed—this did not mean that race became a fiction. As the facts did not hold, race stopped being either fact or fiction. It became irrelevant. Race does not become irrelevant everywhere and all the time, but through very specific practices.

These cases therefore index a much broader phenomenon in which we encounter race as oscillating between a presence and absence between relevance and irrelevance, or between it being above the surface and beneath it. Taking notice of these transient moments of race making is important, not only because they obviously have effects, but also because some of these configurations might take a more solid or durable form, for example if they find their way into standards, databanks, forms, protocols, etc.

On fiction

The praxiographic approach followed in this article aimed to show that race is simultaneously factual and fictional, and that fiction is an inherent part of making fact (Strathern 1987). Understanding this as “race is a bit of biology and a bit of construction” would miss the point. As argued above, facts and fiction are made of the same stuff. In short, a fact can be enacted as a fiction and the other way around. Their difference at a particular moment in time might be outlined as follows. A fiction is a partial truth, both “made and made up” (Clifford 1986). The made up-ness of fiction, however, does not connote untruth or falsehood. It is fruitful to see it as a collection of devices that help to situate facts. A fact, by contrast cannot afford to be “made up.” As Latour and Woolgar (1979) have shown, the factness of facts depends on their ability to disconnect themselves from the practices that helped produce them. However, facts have to be narrated, related and situated into fiction in order to make sense and to become relevant. A fact, and its status of factness, thus depends on its relation to fictions (“key scenarios,” to borrow loosely from Ortner). This factness of facts can either become fixed when in accord with an operating fiction, or unfixed when in contradiction to it.

For example, it is a fact that skin color differs. It is also a fact that paleness might indicate illness. But how to determine the line between illness and health? The first case showed that medical practice is organized around fictions—scenarios of health and illness. This is not to discredit fictions. Fictions are real and relevant, yet they are not specific to medical practice but based on aggregates: a mingling of epidemiological knowledge, narratives, and discourses on health and illness. Thus, medical gaze (a fiction) combined with the relational facts of color helped to enact race in the context of medical diagnosis. The case analyzed above showed
that the facts (paleness, the palmar crease) were initially deemed in accord with fictions/scenarios about Down’s syndrome. But once Down’s was ruled out, the fact of color became simply irrelevant. To be sure, epidemiological knowledge is not always part of a fiction and can be enacted as factual in a different setting, for example in an epidemiological paper. So factness and fiction-ness do not inhere in the kind of knowledge produced, but in practices where knowledge is put to use.

Finally, I want to suggest that fictions help to “clean up the mess,” that is, the coexistence of different facts in tension or in conflict with one another. Fiction can contribute to an illusion of a whole by subsuming differences. For example, the grounds for Marcus’s (racial) identity, his alleged membership in the Eindhoven regional nobility, have become somewhat shaky. The fact that the skeleton was found in front of a church altar suggested this social connection. However, a more recent excavation has indicated that the floor plans of the church have been somewhat displaced since the Middle Ages. It seems that Marcus was not buried before the altar but outside the original church. This discovery would suggest a different narrative (fiction) in the making of Marcus into the personification of Eindhoven and of Dutch-ness. However, here we see that the fiction, a coherent noble identity, is stable enough to hold contradictory facts about the location of the skeletal find together. As the city archaeologist insists, Marcus’s identity is stable.

Donna Haraway (1991) has argued for the relevance of fiction in feminist science studies. The cyborg, so she taught us, is a condensed image of fact and fiction; its identity is relational subjectivity and an effect of partial connections. Scholarship is showing, as I have here, that differences are of the body, not in the body. This distinction, which prevents us from locking differences up in the body, is crucial for our thinking about biological race. Attending to practice and studying race as a spatial relation that goes well beyond the somatic body provides an effective way to denature racial differences.

**ABSTRACT**

What is biological race and how is it made relevant by specific practices? How do we address the materiality of biological race without pigeonholing it? And how do we write about it without reifying race as a singular object? This article engages with biological race not by debunking or trivializing it, but by investigating how it is enacted in practice. Discarding two dominant and mutually exclusive notions, race as fact and race as fiction, I follow a praxiographic approach to present three ethnographic cases that show race is a relational object, one that it is simultaneously factual and fictional. I conclude that fiction needs to be taken more seriously as an inherent part of
fact making. [race, material semiotics, relationality, fiction, medical practice, forensic genetics, genetic genealogy]

NOTES

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1. The literature in this tradition is endless and more nuanced and diverse than my rendering of it here. But the bottom-line of work conducted in critical race theory (e.g., Henry Louis Gates), cultural studies (e.g., Paul Gilroy), and social constructivist approaches (e.g., Jonathan Kahn) is geared toward debunking the category of race.

2. The issue of race was urgent to UNESCO, because of the history of eugenics and the dramatic form it took in Nazi Germany. On the history of scientific racism in the United States and the United Kingdom and its relation with anthropology, see Baker 1998; see also the classic study by Stocking (1968). For the impact of the document on “race thinking” (Gilroy 2000:30) in science and society, see Haraway 1989 and Müller-Wille 2010.

3. As David Skinner (2006) has suggested, the issue is to see that anti-racist politics is a struggle over biology rather than against it.

4. As many as 93 scientists wrote letters of protest. All these letters were published as an appendix to the 1951 statement.

5. In their article Weiss and Fullerton argue that race is a “social construction” based on biological and cultural facts. This version of social constructivism, namely that biological differences are the result of genes and the environment, is gaining pride of place (Hartigan 2009). A heated debate began due to a publication by the geneticists Risch, Burchard, Ziv, and Tang in which they claim to have made the case for racial categorization; see Koenig, Lee, and Richardson (2008); Hartigan 2009. To be sure, social constructivism has many different guises: ranging from ones that trivialize the biological completely, to others that say both are equally important, to yet others that take the biological on board as a not-so-dominant element that is tamed/silenced by culture (the sex-gender approach has long been an example of the latter).

6. Latour and Woolgar (1979) is the classic, but for an example on genetics and race in laboratory practice, see M’charek 2008.

7. Similarly, in a beautiful analysis of a Lisbon fish market, Fikes (2005) draws attention to the infinite moments during a day in which race crystalizes as something different.

8. Not surprisingly, the transverse crease has been racialized and criminalized in history, see Lombroso 2006:173.

9. To be sure, I do not explain the emergence of race by referring to the motives or prejudices of the doctor, but rather to the spacial arrangement in which the doctor, the patient and other bodies are found. See also Montoya (2007) on race as both a constitutive and problematic object in biomedical practice. Similarly to my claim here, Montoya shows that processes of racialization may well occur independently of the intentions of the actors involved.

10. See also Johnson (2003) on the materiality of race as a performance. He analyzes his (African-American and non-African American) students performing “black” texts and argues that the boundaries of race, class, and gender are blurred in these very enactments.
11. Even with genetic sex there are quite a number of possible problems (see Toom 2010).
12. Research in this area is well funded and developing swiftly. The Netherlands-based researchers Manfred Kayser and Peter de Knijff are doing quite well in this respect and are now working on the validation of the genetic markers for iris color (see Kayser and de Knijff 2011).
15. In two instances, the Marianne Vaatstra case and the case of Malika van Doorn, forensic geneticists have used genetic genealogy testing to provide the police with clues about the racial identity of the suspect. Neither of the cases has yet been solved.
17. In 2006 moving (CCTV) pictures were shown on TV and could be found on the internet, displaying the suspects hanging around in the central hall of the station and showing them running outside the building (near a building referred to as the Casino). These moving pictures could not be downloaded and are now no longer available on the Net.
18. It is interesting to read how the manner of death (stabbed by a knife) was linked to Muslim culture (religious sacrifice) and innate violence.
19. As with many such projects nowadays, the stakes are high. In the well-funded high-profile Eindhoven project the goals are no less than unraveling the secrets of a number of common diseases, such as diabetes, hypertension, as well as the secrets of HIV.
20. See, for a good example, the HeLa cell line so well analyzed by Hannah Landacker (2000). Elsewhere I have also shown how the racial identity of this cell line has been oscillating between presence and absence (M’charek 2005b).

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