Don't carry your social security card with you! Do not carry PIN or passwords with you! Carry only the cards you need! Use the post office when sending outgoing mail! Do not leave bills / checks unattended! Get a locking mailbox for your home or a house mail slot! Do not print your driver's license number or social security number on your checks! Be careful with all receipts. Take them with you for shredding. Don't throw them in the trash! Shred anything with your name, address, date of birth, SSN and all credit solicitations! Carefully review all monthly statements including; Bank, credit, telephone, cell phone etc.! If credit or bank statements are late, call bank or creditors. If you don't receive your mail for more than a couple days, check with the local post office to see if a change

of address was filed*!* Request your credit report quarterly*!* Do not release personal information over

the phone, e-mail or on unknown web

sites*!* Order your social security

benefits and earnings statement

yearly*!* Remove your name from Di-

rect Marketing Association mailing

and telephone lists*!* Consider not

listing your phone number*!* Consid-

er not using a professional title

in the phone book*!* Never have new

blank checks mailed to you*!*

Identity theft takes many forms,

but generally includes the acquir-

ing of an individual's personal

information such as Social Securi-

ty number, date of birth, mother's

maiden name, account numbers, ad-

dress, etc., for use in criminal

activities such as obtaining un-

authorized credit and/or bank ac-

counts for fraudulent means. *—FBI*

Mapping Identity: from space to digits

Anita Cooney + Gabrielle Esperdy

Initially, we approached the topic of identity in the information age from the perspective of surveillance because surveillance has such obvious spatial implications and space is one of our abiding professional interests.

At its most basic, surveillance is close observation of a specific subject, be it a person, place, or thing. The purpose of surveillance is to collect information about the target subject. This information, once gathered, can be used to map identity. Identity is commonly understood as a set of properties that define an individual, not through the properties themselves, since these are predicated on sameness, but through their unique aggregation.

Current technology allows information to be gathered—and identity to be mapped—with increasing precision at both macro and micro scales, from global positioning to genetic fingerprinting. As we began to analyze the different scales of information that are commonplace in the 21st century we recalled Charles and Ray Eames' classic short film *Powers of Ten* (1968 and 1977). Inspired by Kees Boeke's view of the universe in forty jumps, the Eameses used a continuous zoom to move from a man to outer space and back, all the way down to the scale of an atom.

Watching the film again in 2007 we were struck not only by its elegant simplicity, but by how fresh their visualization still seemed even in our over-visualized era. At the same time, we found it hard to agree with Paul Schraeder's observation from the 1970s (Film Quarterly, 1970) that "the time-space traveler of Powers of Ten thinks of himself as a citizen of the universe, an unbounded territory." In a post-9/11 world, we know only too well that we are citizens of very bounded territories and that, with enough paranoia or cynicism, the Eameses' idealistic schema of the universe looks an awful lot like a total information system.

Nonetheless, *Powers of Ten* provided us with a critical starting point for our own attempt to create a schema of the universe that we could use to map identity in the information age. These properties of identity, which can also be understood as scales of information, include those that are genetically inherited and culturally constructed, in other words, nature AND nurture. They are far from comprehensive and utterly subjective, shaped as they are by the authors and, thus, by our identities (architect, historian, white, woman, American, New Yorker, gay, straight, etc.). While acknowledging the impossibility of objectivity, we designed this map, with apologies to Charles and Ray, as a continuous zoom from the universe to the fingerprint, from space to digits.

As presented at Design Inquiry, this zoom was largely visual, with images chosen to represent our scales of information. Though these images provided critical commentary on each property of identity, in the end, they were also merely illustrational. Thus, in the following re-presentation, we have decided to rely on text rather than image. Though we still reference images and examples we find particularly potent, readers are encouraged to visualize this map according to their own identities.

Universe, solar system, planet earth, continent, country, nation, passport, local map, local place, local orientation, local culture, group social norms, individual social norms, emotional extremes, intimacy in public, public displays of affection, bodily functions, body

comportment, posture as health, posture as attitude, covering, deviant covering, normative covering, casual, professional, profession as uniform, body adornment, personal appearance, cosmetics, hairstyle, grooming, physical characteristics, hair color and type, age, deformities, body size, body type, race, gender, sex, eye color, fingerprints, DNA.

The universe is the limit of knowable and observable space containing billions of galaxies. Our solar system is contained within the Milky Way galaxy and has the sun and celestial object in its orbit. The earth is the third planet from the sun with Venus and Mars on either side. Though pictures taken by spacecrafts and satellites are helpful, because of the vastness of outer space most of us locate ourselves within the universe and solar system only in the most abstract way.

We understand our place on the planet much more precisely, from hemispheres to continents to countries. If the northern and southern hemispheres have obvious geo-climatic and geo-physical implications for identity, so too do the continents, those seven large land masses that occupy the surface of the earth. In size order they are: Asia, Africa, North America, South America, Antarctica, Europe, and Australia. The continents are divided into countries (except for Antarctica). Though some of these divisions are natural—determined by mountain ranges, deserts, or bodies of water—most country boundaries are man-made. Country is often a synonym for a nation state; currently, there are 192 nation states and 194 countries (if you include Taiwan and the Vatican, but this depends on your political agenda).

Country is a critical determinant of political and cultural identity, especially as embodied in the concept of nationality. Flags are a common symbol of the nation and national identity. They are used officially and informally to demonstrate pride, patriotism and polemics. In the case of the European Union and the United Nations, flags are intended to eliminate narrow nationalism. Far more critical as a dimension of identity is the passport, a travel document issued by the government of a nation

state or country and usually containing a photograph, signature, date of birth and nationality. The passport identifies the bearer and permits entry into a country. In some places travelers must surrender their passports until they leave the country. In other places, travelers must provide copies of their passports to stay in hotels and use the internet.

The local is frequently more important than the national in shaping individual identity. At its most basic, a place is local when it is defined at a scale smaller than the continent, nation, region, or state. Thus, to give two random examples, Los Angeles and Lagos are local places within California, the United States, and North America and Lagos State, Nigeria, and Africa. More specifically, something is local when it is characteristic of a particular place —its geography, climate, buildings, food, or people. But no single set of characteristics defines the local and, obviously, what qualifies as local changes from place to place. Horizontality more than verticality defines the local in both Los Angeles and Lagos, but in Los Angeles we think of cars more than people; in Lagos we think of people more than cars. Both places are identified by traffic congestion and air pollution.

Local orientation requires that we situate ourselves in a particular place, an act that is highly subjective. Think of the difference between an iconic view of the Manhattan skyline, i.e. skyscrapers viewed from outside the island, and Saul Steinberg's famous *New Yorker* cover from 1976, i.e. the world as viewed from inside the island: apparent neutrality gives way to ironically self-centered provincialism. Beyond point of

view, there is local culture. As markers of identity, local customs and habits are best understood on the streets and in the crowds. Do we blend in or stand out? Are we taken for locals or tagged as foreigners? Even in a single place local culture is highly complex and coded, as made clear in another well known *New Yorker* cover: Maira Kalman and Rick Meyerowitz's "New Yorkistan" map of urban tribalism from 2001.

Local culture is often predicated upon norms as determined by the

dominant social group, and emulating or defying group behavior is a critical way of negotiating identity. This is especially true in public where group behavior and individual actions can shape our perceptions and cause us to revise our notions of someone's identity. Public nudity, for example, has the power to shock, disturb, or at least draw our attention, whether it is real or staged. Think of the streaking craze of the 1970s, or Spencer Tunick's urban photographs of the past decade, or even Eduoard Manet's *Déjeuner sur l'herbe* of 1867.

Just as group behavior informs identity, so too do individual actions. The social contract, or at least the status quo, relies on a respect for the middle ground of action and behaviors. We judge people by their emotional transgressions, be they positive or negative. Excessive exuberance or anger is frequently frowned upon. Similar to reactions to emotional excess, the display of private and often internalized feelings, such as sadness, grief, and despair can cause discomfort in others. This attitude towards intimacy in public or public displays of affection may say as much about the identity of the observer as the identity of the person emoting, and social conventions governing the public revelation of private activities vary widely. What is

tolerated in one country or culture is prohibited in another. An arrest warrant was issued for the American actor Richard Gere after he kissed Indian actress Shilpa Shetty at an AIDS awareness rally in New Delhi in April 2007. A similar embrace in the United States would have gone unnoticed.

It is not surprising that individual actions inform identity and shape our perception of identity. This is true even of the most fundamental or personal actions. Think of our tolerance, or lack of tolerance, for the public display or performance of certain

bodily functions. We make assumptions about those who violate social proprieties regarding the natural functioning of the body, and there are scales of acceptability for sneezing, yawning, burping, passing gas, urinating or defecating in public. Sometimes this acceptance reflects an insistence on public manners; sometimes it reflects ideas about public health—sneezing without covering one's mouth has long been associated with the spread of airborne germs, but it is also an indication of impolite behavior.

How we comport the body also contributes to identity, especially through posture and covering. Posture can be understood in two ways, as health and as attitude. Standing up straight with one's shoulders back is generally regarded as having a positive impact on balance, breathing, and spinal and muscular conditioning. It also linked to our mental well-being, as an indicator of self-respect and self-confidence. How many of us were told to stand up straight by our elders? In addition, a person's bearing or carriage gives social and cultural cues to identity. Defiance, coolness, aggression, and boredom are all easily indicated through posture. In recent decades, this self-conscious use of posture has been elevated to an art form by members of the hip-hop nation.

How we cover our bodies can indicate social and cultural status, ideals, and attitudes, in other words, identity. What this covering means and how it is understood, of course, changes over time, which is easily understood by considering Raymond Loewy's evolutionary chart of fashion of 1936 or Andrea Zittel's Spring/Summer Uniform of 1993. Loewy documents consumerist changes to body covering; Zittel disrupts ephemeral fashion conventions.

Obviously, the way we cover our bodies is determined by conventions that we choose to transgress or respect. Depending on the context, refusing to wear a tie or a dress or insisting on wearing jeans can be a form of transgression or a form of belonging to a group. More radically, Lucy Orta's Refuge Wear City Interventions (1998) can be considered a

form of deviant covering. They are garments that promise survival to those who, quite literally, have only the clothes on their backs, whether from war, natural disaster, or economic misfortune. Even as these garments offer refuge, they are also markers of identity, since only individuals at the social margins require such apparel interventions.

Many people are satisfied with normative covering, be it casual or professional. Most societies have unofficial uniforms that enable the wearer to associate with a particular group. Of these, the blue jean is perhaps the most universal, indicating membership in,

or aspiration towards, the popular youth culture. Within this culture, different brands and types of jeans betray different affiliations, though Levi's 501 model was, perhaps, the original. If the blue jean is a badge of casual youthfulness, then the suit indicates membership in the adult world of business and professionalism. Especially for men, a suit consisting of a trousers and a jacket, with a coordinating shirt ad tie identifies seriousness of purpose and social respectability—this is true in Eastern and Western societies and in the developed and developing world.

Sometimes, normative covering gives way to an accessorized uniform. Though accessories like eyewear, jewelry, and purses frequently mark individuality, they also indicate group identity. When the architect Le Corbusier began wearing thick-rimmed, round-eyed glasses just after World War I—probably thinking they gave him a distinctive professional air—he had no way of knowing that he had started a professional trend. Philip Johnson followed suit at mid-century, and Daniel Libeskind is the standard bearer in our own day.

Accessories are essentially a form of adorning the body, though of an ephemeral nature. Other kinds of adornment are more permanent, or at least semi-permanent, and are practiced specifically as a form of cultural identity. From tattoos to piercings, these types of adornment often require context for legibility. In many societies, a woman with pierced ears is so conventional that it escapes notice, but a man with pierced ears can still indicate at least a degree of non-conformity. When television journalist Ed Bradley began wearing a gold hoop in his left ear in the 1990s it was considered edgy. Until quite recently in western societies, the tattoo was considered unacceptable within bourgeois conventions. In "Ornament and Crime" (1904), Adolf Loos famously identified the tattoo as a marker of criminals, degenerates, and primitives. Today, it is as common as pierced ears, for men and women.

The use of cosmetics to decorate the body is less permanent than the tattoo and is used to either enhance or distort personal appearance depending on how it complements, contrasts or covers skin tone and complexion. As with clothing, the impact of this form of decoration depends on one's perspective and understanding of cultural codes. Because

of its impermanence, the use of cosmetics generally allows the individual to more freely play with personal expression, as when Japanese teenager girls apply the elaborate and exaggerated *harajuku* makeup that identifies them with the street culture of Tokyo or when American youth apply the black eyeliner and dark lipstick that identifies them with the bored disillusionment of Goth culture.

Like make-up, the style and cut of a person's hair plays a key role in the so-called *first impression* of public perception. Is our perception of a man with a crew cut different

from our perception of a woman with a crew cut? The Beatles infamous mop top defied social conventions in the early 1960s; a decade later the Mohawk of the punk scene did the same thing. Today, the mop top is almost clean-cut and the Mohawk barely raises eyebrows. In a consumer society, hairstyles are quickly conventionalized, whether they are thought shocking or chic.

As an aspect of personal appearance, grooming plays a significant role in consumer society. It does not just enhance appearance; it also contributes to a sense of self. This has been increasingly true since the early part of the 20th century when, as cultural historians have noted, advertising began to shape public taste and ideals about cleanliness and hygiene and our perception of these in ourselves and others.

As a scale of information that contributes to identity, physical appearance can also be categorized through individual physical characteristics such as hair color and type. Even if we change the color and texture of the hair with which we were born, it remains an important identifier, frequently indicating race, ethnicity, and age, or our attempts to mask them. Age is the identifier that, perhaps, we most frequently try to hide. A 2004 Dove Soap advertising campaign, "Wrinkled or Wonderful," indicated the conflicting attitudes that many western societies have toward age, with beauty, ability, and suitability frequently skewed toward those who are young rather than those who are old.

The conventions of youthful beauty dominant in the west have little tolerance for bodies marked by genetics, disease, or accident—unless the so-called deformity is sufficiently severe to become a subject of curiosity and voyeuristic interest. Such was the case of Joseph Merrick, "the Elephant Man," who became a well-known figure in Victorian England. Nearly a century later, a similar voyeurism is at work in Richard Avedon's famous photograph of Andy Warhol displaying his scarred torso after he was shot by Valerie Solanas. Scars are also understood as unique identifiers, especially in criminal investigations when non-normative physical characteristics can contribute to suspect identification.

The non-normative can also extend to the entire body through size and type, which are not only important properties of identity, but can also arouse curiosity and discomfort.

Whether tall or small, fat or skinny, people with unconventional bodies are often forced to society's margins, something Tod Browning portrayed in his 1932 film *Freaks*. Extremes of body size and type can also be accorded public recognition: though Robert Wadlow died in 1940, he still holds the title of the world's tallest man at 8 feet and 11 inches. At 7 feet and 8 inches Yao Defen (born 1972) is currently the world's tallest woman.

In the first half of the twentieth century William Sheldon categorized human body types and correlated them to personality. While his research is now discredited, the stereotypes he helped codify remain: fat = merry; muscular = courageous. But the marketplace inevitably
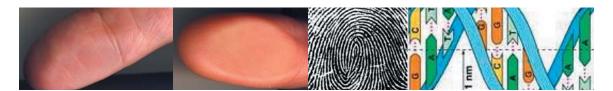

trumps science and pseudo-science, and consumerism, more than anything else, dictates norms and ideals for body type. It is only very recently, and only rarely, that "normal" or realistic body types have been regarded as acceptable in terms of consumer aspiration depicted in marketing and advertising. Within the realm of political correctness, the pervasiveness of body type stereotypes became known as "lookism," a form of prejudice akin to ageism and racism.

Though we might idealize color-blindness, few markers of identity are more critical than race—across cultures, countries, and history. As identity, race can be understood in two ways: ethno-geographically and ethno-culturally. In the 19th century, ethno-geographers regarded race as a key aspect of the evolution of civilized society. The 20th century saw more scientific approaches to race. The Human Skin Color Distribution Chart was developed in the 1940s as a way of mapping racial distribution using Von Luschan's Chromatic Scale, ceramic tiles that were numbered and colored from 1 to 36, from white to black. Despite the apparent neutrality of this scale, even the numeric coding seems to have an ethno-cultural charge. Such a charge is also found in the series of photographs that appeared in *Colors Magazine* in 1993. Manipulated photographs of famous people forced us to question our attitudes about race. What if Queen Elizabeth was Black and Pope John Paul was Asian?

Perhaps only gender and sex (or gender or sex) are as critical as race in the formation of identity, whether this is personal and private or official and public. Are we born with our sex but construct our gender? Or is it the other way around? Are the polarities of male/female and masculine/feminine still relevant or do we need a more nuanced scale for identity? Who wears pink and who wears blue? What box do you check on a medical form? What letter is on your passport and your driver's license?

Like "sex," eye color is one of the physical properties that contribute to a person's official identity, even though it is easily manipulated and can change over time. In the future, this lack of fixity may not matter if biometric identification systems using eye recognition become commonplace since iris recognition software discounts color as an identifier. If this happens, the significance of eye color, which is determined by pigment in the fibers of the iris, will be largely cultural.

Unlike eye color, fingerprints remain unchanged over time. Simply put, they are the impressions made by the inside of the thumb and the first joint of the finger as determined by the skin's ridge formation. These ridges create three basic patterns: the arch, the loop, and the whorl. Because the pattern of each finger is unique, researchers proposed using fingerprints for identification as early as the 1860s, though the practice did not become standard until after 1900. Today, while the fingerprint is the most commonplace form of biometric identification, not everyone has been fingerprinted and the practice is still typically (and negatively) associated with the criminal justice system.

Deoxyribonucleic acid, or DNA, is the molecule containing genetic instructions that govern the development and function of all living organisms. DNA is often referred to as our "genetic fingerprint" and is used for forensic identification in the same way as the finger's ridge formations. Organized into chromosomes and genomes, the genetic information contained within DNA represents identity mapped at the micro-scale.

From the universe to the genetic fingerprint, scales of information mark us as individual beings, each with a unique identity. In the 21st century, these markers are being mapped with a greater precision than ever before, with positive and negative consequences. Is identity the final frontier of the information age?