

From: Michon, J. A. (1997). The life and opinions of Mr. and Ms. Average. In J.-J. Droesbeke (Ed.), *Actualité et universalité de la pensée scientifique d'Adolphe Quetelet: Actes du colloque 24-25 octobre 1996* (pp. 211-224). Bruxelles: Académie Royale de Belgique.

The life and opinions of Mr. and Ms. Average

John A. Michon

Netherlands Institute for the Study of Criminality and Law Enforcement
Leiden, The Netherlands

Abstract

L'homme moyen, the average person as conceived by Quetelet has survived in several disguises until the present day—as a personified measure of central tendency, an ideal type, and as the spirit of the masses. Each 'model' describes aggregate behavioral outcomes as if they represent the behavior of an individual entity, which is an altogether inadmissible form of theorizing. A modern interpretation of the question what it is like to be an Average Person ought to be based on evidence about mechanisms and functions that generate behavior, rather than on the observed behavior itself.

Résumé

L'homme moyen, enfant intellectuel d'Adolphe Quetelet, a survécu jusqu'au présent sous divers déguisements, comme une personification du moyen statistique, comme un type idéal national ou régional, ou bien comme l'esprit hégélien des masses. Chaque modèle décrit des résultats agrégés—soit démographiques, sociologiques, ou psychologiques—sous un perspectif individuel. Ceci constitue une méthode de généralisation inacceptable. Une interprétation moderne de la notion d'homme moyen doit employer les résultats empiriques concernant les mécanismes et fonctions qui créent le comportement, plutôt que ce comportement lui-même.

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Introduction: A tale of two monsters

Mary Wollstonecraft, who would later marry the poet Shelley, was born in 1797, a year later than Adolphe Quetelet. With her novel *Frankenstein, or the modern Prometheus*, published in 1818, she created one of the most popular monsters that ever set foot on earth. Her “hideous progeny,” as she called it herself¹, anticipated Adolphe Quetelet’s *homme moyen*—my chosen topic for this celebration—by a margin of fifteen years. Despite this chronological gap there is an unmistakable resemblance between the two creatures. First, they were both put together from odd bits and pieces scavenged from a graveyard. In the second place their creators held the naive romantic belief that it would be possible to breathe life into these artifacts. Finally, the fate of both monsters remains uncertain: did they ultimately vanish or are they still with us, lurking in some hidden place, waiting to be reanimated again?

Let me assure you that both creatures are still around! Mary Shelley’s monster continues to scare cinema audiences. Quetelet’s child appears in situations that are more realistic and frequently more horrific than anything a movie picture will ever display. Today I will restrict myself to Quetelet’s monster and its offspring. Mary Shelley’s bicentennial, next year, will undoubtedly offer plenty of opportunities to consider the case of the other monster.

WHAT WAS QUETELET’S OBJECTIVE?

Initially Quetelet did look at his Average Person just with the eyes of a statistician. A few years later, however, Quetelet must have felt that the pieces he had dug up from the graveyard of everyday life—from the official statistical records—would not come to life spontaneously. Apparently he hoped that Hegel’s absolute spirit could animate the Average Person.

We can see this expectation grow: initially comparing the Average Person with the “center of gravity in a material body,” he went on to considering it a “type or model for a nation.” A few years later Quetelet called the Average Person a “representation of the greatest, most beautiful, and virtuous.”

¹ In the *Preface* to the third edition, 1831.

Ultimately the Average Person became a spiritual entity which sympathetically reflects the needs and sentiments of the masses.²

How serious was Quetelet about his later Average Person, brought to life by pure metaphysics? The question has been asked before. How could so sober and brilliant a scientist indulge in such a grandiose interpretation of the moving force behind $\Sigma X/N$? Some admiring commentators have simply refused to consider the case (e.g., Sylvester, 1984). Others, however, have taken a less accepting view. One of them phrased his feelings in the following, quite abrasive way:

“Frequently one will find in the most superior intelligences, in the most balanced and informed minds, an obstinate predilection for one or another manifestly crippled and untenable idea. [...] It is difficult to find a better example of this bizarre inclination than Quetelet’s attachment to his theory of the average man” (Dupréel, 1942), p. 44-45.³

The Average Person revisited

The Average Person survived in two major varieties, as the original assembly of averages and as the later idealistic reflection of group identity—as *prototype* and as *stereotype*, respectively.

PROTOTYPES

Let us consider the statistical variety first. Would I recognize the Average Person if we met? And having been assaulted by this Average Person, say, would I be able to supply the police with a sufficiently detailed description? Consider the face shown in Figure 1. It is the average of several dozens of

² L’homme ne trouve de véritable appui dans les masses, il ne parvient à se faire comprendre et à les mettre en action qu’autant qu’il se trouve pénétré, au plus haut degré de l’esprit qui l’anime, qu’il partage leur passions, leur sentiments, leur besoins, qu’il sympathise enfin entièrement avec elles. C’est ainsi qu’il est grandhomme, grand poète, grand artiste. C’est à la condition de représenter le mieux de son siècle, qu’il en est proclamé le plus grand génie. (Quetelet, 1869).

³ Il arrive fréquemment que l’on rencontre chez certaines intelligences supérieures, chez les esprits les plus solidement équilibrés et très amplement informés, un engouement obstiné pour quelque idée manifestement boîteuse ou inadmissible... De cette bizarrerie on trouverait difficilement un plus beau cas que l’attachement de Quetelet pour sa théorie de l’homme moyen ((Dupréel, 1942), p. 44-45).

photographs of human faces. This is, indeed, the face of the Average Person, in a form known among experts in the field of pattern recognition as an *eigenface*.

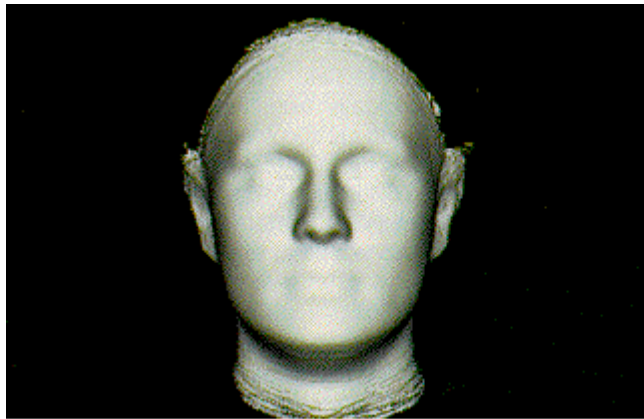


Figure 1 - The *eigenface* of the Average Person. From *Scientific American* 1996, 274(4), p. 24, with permission..

What happens if we split the population on which the *eigenface* of the Average Person is based? Figure 2 reveals that a single gender-related feature is enough to differentiate the face of Figure 1 into a prototypical male and a prototypical female *eigenface*—the faces of Mr. and Ms. Average.

Some will agree that these faces support Quetelet's claim that the Average Person expresses the idea of beauty. The faces in Figure 2 are perhaps beautiful in an abstract Platonic sense, but they lack distinctive features that would make them recognizable or, indeed, attractive. The faces of Mr. and Ms. Average cannot be categorized. Consequently we are unable to give detailed descriptions that could help a police detective. By the same token artists would have a hard time sketching a convincing caricature

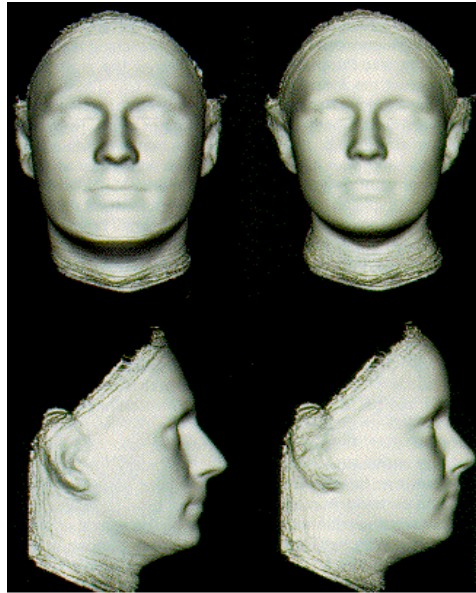


Figure 2 - The eigenfaces of Mr. and Ms. Average. From *Scientific American* 1996, 274(4), 24, with permission. The two faces differ from each other by a single feature.

STEREOTYPES

Now for the second variety. Long before Quetelet first thought of the Average Person as a national stereotype, an anonymous Styrian artist painted the *Völkertafel* or *Instructional Board of the Nations of Europe* reproduced in Figure 3.

This painting summarizes ten national stereotypes in terms of eighteen characteristics, including wit (*Verstand*), vice (*Untügent*), and favorite way of spending time (*Ihr Zeitvertreiben*). From the *Völkertafel* we learn—I choose arbitrary examples—that Germans have a sense of humor, that Belgians are oversexed, and that Russians are unreliable alcoholics. One would have hoped that in due time such stereotypes would have faded mercifully from collective consciousness. But unfortunately this is not what happened. In the socio-political debate they still play an important and frequently destructive role, bringing forth atrocities of the sort we have seen in Bosnia-Herzegovina and Rwanda.



Figure 3 - Völkertafel: “Kurze Beschreibung der in Europa Befindlichen Völkern Und ihren Aigenschaffen.” Styrian oil painting from the early 18th century. With permission of the Österreichisches Museum für Volkskunde, Wien.

The world of the *stereotype* is the world in which the Average Person is believed to provide the example of greatness, beauty, and virtue. In such a world all deviations from the average are suspect. In such a world the Average Person personifies Ortega’s “revolting masses” (Ortega y Gasset, 1927). But rather than acting as the positive force that Quetelet intended, the stereotype induces a debasement of the beautiful, the great and the virtuous and a regression to mediocrity or worse. It is Quetelet’s Average Person at its most monstrous, and it is what the women in Afghanistan are currently finding out...

SHORTCOMINGS

The preceding examples reveal a fundamental weakness of the Average Person as conceived by Quetelet. On close inspection both models—let us call them the statistical and the sociological model respectively—are essentially static,

structural descriptions, lists of aggregated traits and averages. They remain silent with respect to what is actually *moving* the Average Person—what mechanisms and processes generate the characteristic behavior and the characteristic appearance of the creature. Both manifestations of the Average Person, the statistical as well as the sociological, are snapshots and stills, as lifeless as Frankenstein’s monster before the lightning struck.

What is it like to be an Average Person?

How then should we expect the Average Person to come to life? What is it like to be an Average Person? These are the questions to which I turn now.

The original Average Person has had the bad fortune of being treated, during the past 150 years, as if he or she was a sociological reality, while the relevant developments happened in a different discipline. The appropriate framework for the Average Person as a coherent scientific concept was, in fact, established with the development of empirical psychology in the second half of the 19th century.

COGNITIVE SYSTEMS

Gradually and with good reason psychology has become focused on the human being as an *adaptive cognitive system*, a processor of information. Cognitive systems can be characterized in the following way:

- they are able to *represent* external and internal conditions, objects, and events in symbol structures;
- their activity consists of *manipulating* these symbol structures;
- the results of these manipulations are used to *control* the interactions with the environment;
- their physical embodiment imposes certain *constraints* (such as speed and reliability) on their performance (Michon, 1990).

Cognitive science (see e.g., Posner, 1989; Gazzaniga, 1995) as it has developed over the past fifty years has revealed a great number of specific mechanisms, processes and strategies for representing information and for controlling thought and action. The evidence has also revealed that the operation of the human mind/brain is largely based on evolved *functional modules*, highly specialized functions that will, for instance, warn the organism for the presence of a steep slope, deep waters, or an approaching predator (Fodor, 1983).

Characteristically these modules are highly specialized. They can do only one thing, but very reliably and fast. As a rule the actor will be unaware of the activity of these modules and it is practically impossible to influence their output. In recent years evolutionary psychology has come of age and the human mind/brain is now seen as the result of a long evolutionary process of functional adaptation to an increasingly complicated environment (Barkow, Cosmides & Tooby, 1992).

In humans most basic cognitive mechanisms and functions are not ready for use at birth. They require fine-tuning and experience. Human beings go through a protracted period of (more or less spontaneous) development. In addition they are capable of extensive learning, allowing them to add extra modules to their cognitive and behavioral repertoire. These ‘extras’ include advanced skills, such as piano playing or brain surgery, that have a tremendous added value for society. They also include many processes that assist the organism in coping with what otherwise would cause a tremendous information overload. Prototyping and stereotyping—two basic ways of perceiving and remembering things that we already met—belong in the latter category.

LANGUAGE AND THE UNIVERSAL GRAMMAR

Of all cognitive functions language arguably offers the most fascinating example of the way human beings function mentally. Do we know what language is spoken by the Average Person? If we would *average* all natural languages would that get us to the universal language spoken when the tower of Babel was under construction? Or if we average all the local tongues of a national language, does that characterize a model for nationwide proper articulation? The answer is probably No, but it doesn’t really matter! Our views on human language have fundamentally changed since Noam Chomsky introduced the concept of generative grammar in the late fifties; and averaging is not a meaningful research method.⁴

One of the fundamental insights due to Chomsky is that language is a *universal* human competence: “a visiting scientist from Mars would surely conclude that, aside from their mutually unintelligible vocabularies, Earthlings speak a single language” (N. Chomsky, quoted by Pinker, 1994).

The idea that natural language is dependent on a Universal Grammar implies that human beings are born with the ability to extract from their linguistic environment all the information they need to become ‘native speakers’ of a language during the first three years of their life. This requires

⁴ For a highly readable, up-to-date introduction to psycholinguistics see (Pinker, 1994)

the presence of an innate *grammar* that is simply waiting to be ‘tuned’ to its linguistic environment, be it English, Japanese, Swahili, or Inuit. The universal grammar consists of rules concerning elementary linguistic structures such as the default order of subject (S), object (O), and verb (V) in a sentence. Such rules describe the surface structure of a language as it is spoken, but they dig deeper than what they specify at the surface level. Thus languages, such as English, which have a standard order SVO (*man bites dog*) will have prepositions, whereas languages, such as Japanese, with standard order SOV (*man dog bites*) have postpositions. Children absorbing an SVO language will have no problem understanding prepositional expressions but they remain deaf for postpositions. This example suggests what in the mean time has been confirmed for most of the natural languages spoken on this planet, namely that underlying all human languages is one general structure not unlike the deep similarity that lies hidden under the tremendous differences between animal species that belong to a specific phylum:

“Differences among languages are similar. There seems to be a common plan of syntactic, morphological, and phonological rules and principles, with a small set of varying parameters, like a checklist of options. Once set, a parameter can have far-reaching changes on the superficial appearance of the language [sic]. If there is a single plan just beneath the surface of the world’s languages, then any basic property of one language should be found in all the others” (Pinker, *o.c.*, pp. 238-239).

SOCIALIZATION

If most children acquire command of their native language without apparent difficulty and on the basis of a comparatively limited sample of utterances, the question arises to what extent other propensities are similarly present at birth, waiting like linguistic competence to be ‘tuned’ to the environment. Is there evidence for a Universal Grammar of social interaction? The evidence seems to point in that direction. Admittedly, current trends in philosophical relativism—postmodernism and deconstructionism, for instance—seem to suggest otherwise. But then, isn’t postmodernism the artificial respirator that keeps Quetelet’s monster alive? If all social structures and conventions are relative, isn’t the Average Person necessarily a shallow representation of the potentially infinite set of such structures and conventions?

On the contrary, as I said, the evidence is pointing in the direction of a social grammar. The anthropologist Donald E. Brown (1991), searching for the common territory of social structures, “was able to characterize the Universal People in gloriously rich detail,” as Pinker aptly put it (*o.c.*, p. 413) On Brown’s list we find such universals as lying, the use of metaphor, humor, narrative, kinship categories, flirtation, docility, prestige on the basis of achievement and age, prototyping and stereotyping, and hundreds of other processes, behaviors, and relations. The ubiquity of these similarities suggests that there is indeed a faculty—a module or group of modules—of social cognition. The linguist Jackendoff (1992) is most outspoken in advocating such a faculty. Analysing primitive relations such as *owning*, *trading*, *promising*, and *ordering vs. requesting*, he concludes that there is indeed a limited number of universal social concepts that underlie widely different patterns of social behavior. Jackendoff emphasizes that, like the rules of the Universal Grammar of language,

“...the[se] primitives do not appear *as such* in any particular culture. Rather, the primitives serve as abstract components on which different cultures build different realizations. For example, the fact that the notion of social dominance hierarchy may be a primitive does not determine who is socially dominant in a given culture or how that dominance is established. But without the basic notion of social dominance, all the actions that serve to instantiate a given culture’s realization of it would be incomprehensible”(*o.c.*, p. 80).

These examples should suffice to show, at least in the context of the present discussion, that the theoretical framework proposed above offers the resources that can animate the contemporary Average Person. This embodiment of *l’homme moyen* admits the full range of propensities and behaviors that humans can display on the basis of a generic model of their mental apparatus. Importantly, it does not have to rely on arbitrary assemblies of observable features.

The Average Criminal

Discussing the life and opinions of Mr. and Ms. Average I find it impossible *not* to refer to Quetelet’s ground-breaking work in criminal statistics. Criminology had long remained a branch of social philosophy and Quetelet was arguably the first to establish a criminology based on empirical data.

THE PROPENSITY FOR CRIME AT DIFFERENT AGES

In 1833 Quetelet published his results in a small volume under the title *Recherches sur le penchant au crime aux différents âges* (Quetelet, 1833). It is, altogether, the most complete analysis involving the Average Person. In his book Quetelet described the familiar age curve, which rapidly rises between ages 15 and 25 and then gradually phases out beyond that age. He concluded that “[a]ge is without contradiction the cause which acts with the most energy to develop or moderate the propensity for crime” (*o.c.* p. 64). He also noticed that the specificity of the crimes committed is due to the opportunities that present themselves, acts of violence for instance becoming more likely when physical strength approaches its peak and child abuse being the last station:

“It is towards his decline that depraved man presents the most hideous spectacle. [...] [I]f his depraved passions have not been weakened at all by age, it is on weak children that he will seek to satisfy them” (*o.c.*, p. 60)

The age curve has remained invariant. Its characteristic shape, skewed to the right, persists, although its peak has gradually shifted from age 25 then to age 18 now.⁵ The deep fascination with the age curve shown by criminologists has not changed either. In a recent volume in which they defend their general theory of crime Gottfredson and Hirschi (1990) attribute to the age distribution of crime the status of a *law of nature*. They argue that

“the age effect is invariant across social and cultural conditions [...although] in particular cases the age effect may be to some extent obscured by counter-vailing crime factors” (*o.c.*, p. 128).

Barring this *proviso* Gottfredson and Hirschi subscribe to Quetelet’s conclusion that opportunities may influence the expression of criminality but not the propensity to crime as such. Their theory is a real age theory: it postulates that time has a causal influence. Consequently they reject ‘desistance theories,’ theories that try to understand which biopsychological and social factors and which life events can explain the age curve. Gottfredson and Hirschi maintain that no such explaining is needed:

⁵ This shift is probably caused by a combination of two factors, the earlier onset of puberty, and the changes in overall socio-economic conditions.

“The desistance theory asserts that crime declines with age because of factors associated with age that reduce or change the criminality of the actor. The age theory asserts that crime, independent of criminality, declines with age. The evidence, in our view, clearly favors the age explanation” (*o.c.*, p. 137).

The authors acknowledge that over the years opportunities may change, but they maintain that this does not reflect a change in the level of criminality of the individual, but only in the *modus operandi* through which the criminal expresses his or her propensity for crime. The position taken by Gottfredson and Hirschi differs very little from Quetelet’s position. Once more we must conclude, however, that this approach does not help us in understanding the dynamic undertow of the observed age-dependent behavior. Like the Average Person the Average Criminal is as lifeless as Frankenstein’s monster before the lightning struck.

THE PROPENSITY FOR CRIME: ARCHITECTURE AND FUNCTION

In recent years substantial progress has been made in our understanding of the processes underlying the age curve of juvenile delinquency. The program conducted by Terrie Moffitt of Wisconsin University is an important example of this line of research. Her theory opens a new perspective on the Average Criminal, well in line with the cognitive approach discussed earlier in this presentation. In what follows I rely on a review article by Moffitt (1993).

Adolescent delinquents, the population that is responsible for the peak in the age curve, do not constitute a homogeneous group. A comparatively small fraction, an estimated five percent of the age group, qualifies as life-course persistent (LCP) offenders. As young children they may already display serious antisocial conduct. Onset of criminal behavior is relatively early, usually by age 7 or 8, and delinquency, frequently of a very diverse and sometimes serious nature, may continue until late in life. As a group these offenders commit approximately 50 percent of all juvenile crimes that add up to the peak region of the age curve. The others, over 90 percent of the age group, are labeled as the Adolescence-Limited (AL) offenders. They usually start around age 11 or 12. They rarely have a history of antisocial behavior, and they usually commit only a limited number of offenses. More often than not these offenses suggest an authority conflict. In general their criminal activities rapidly subside from age 18 or 19 onward.

These are the descriptive facts on which we could easily construct an Average Criminal (or two) *sensu* Quetelet. But now for the theory. Considered as cognitive systems LCP-offenders are an outstanding group: they display a variety of neuropsychological disorders. These need not to be serious, nor do

they have to be related to specific brain mechanisms as was believed not so very long ago. The crucial point is that these deficits impose constraints—often of a marginal nature—on the information processing capabilities of the individuals who belong to this group. As a result the interaction with the environment is becoming gradually—and often marginally—but cumulatively biased towards an impoverished behavioral repertoire that turns out to be maladaptive for an increasing number of situations. Eventually the resulting inability to cope with these situations will become manifest, for instance, as low self control, as a tendency towards general deviance, and perhaps as criminal activities.

The case of the Adolescence-Limited delinquency, displayed by many and maybe even a majority of adolescents between the ages of, say, 11 and 25, is quite different. Underlying this behavior is a totally different mechanism. The antisocial behavior of these adolescents begins relatively late and seems to be preceded by a normal development earlier in childhood. There are, in other words, few reasons to attribute AL delinquency to functional deficiencies as defined above. Instead such behavior is more likely the result of a *maturity gap*, qualified by Moffitt (*o.c.*, p. 687) as “a time warp between biological age and social age.” Whilst biological maturity in our culture commences at younger and younger ages, the moment at which young people may begin playing a serious role in society has been pushed further and further away to ages well above 20 and even 25 years. In the mean time there are no serious role models by means of which these youngsters might achieve an appropriate, recognized status as an independent person, realistically or at least symbolically.

The underlying theory amounts therefore to the following. The behavior of the life-course-persistent asocial individual is guided by a combination of architectural and functional factors which, together, lead to a constrained behavioral repertoire that is inadequately tuned to the contingencies of the social environment. The result is a serious functional deficiency that has a persistent and cumulative effect on the rationality of the resulting behavior.⁶ AL delinquency, on the other hand is essentially an intentional conflict that surfaces—despite an adequate behavioral repertoire or maybe even as a result of such a repertoire—in a world in which an important existential rationale, namely to be taken seriously, cannot be realized within the context of everyday social life: a responsible social status can apparently not be derived from making one's schoolwork or cleaning grandmother's windows.

⁶ A similar dysfunctionality, albeit with different social outcomes, is left-handedness. Learning to cope with the difficulties of a right-hander world will frequently fail, leading, in this case, to clumsiness and increased vulnerability for accidents.

Conclusion

Adolphe Quetelet's *homme moyen* has traveled a long way. As a concept it has been a statistical entity, a simple vector of demographic indicators. It has been an *ideal type* of a kind that would be described only much later by the sociologist Max Weber. It has been a representation of the bold and the beautiful, and of the sentiments and needs of the masses.

In the context of contemporary behavioral science, however, the Average Person features most prominently as the principal subject of cognitive science. In this context the Average Person is seen as a cognitive system embodied in a highly flexible and adaptive biological architecture. This approach leads to a focus on the architecture and the grammar that can *generate* a person's behavior, rather than on the description of that behavior. This yields a much less romantic picture of the Average Person than the one Quetelet painted, but it is also a less monstrous one.

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