One

– A Social Perspective –

'Most people are other people. Their thoughts are someone else's opinions, their lives a mimicry, their passions a quotation.' Oscar Wilde's cynicism regarding identity, or rather the lack of it, is a good starting point for this exploration into what makes you feel, and be, unique. I'm going to try and persuade you that, despite the high-tech, impersonal times in which we live, there is a way we can understand identity from a neuroscientific perspective; this perspective should give added insight and ideally grounds for optimism for the future.

If the clear goal ahead is indeed to show that Wilde was mistaken, then what's needed is some kind of tangible and irrefutable proof of our individual uniqueness, ideally a physical process or mechanism or property of the human brain that constitutes the quintessence of our 'identity'. This term is bandied around with great frequency nowadays – 'identity theft', 'identity cards', 'national identity': the current sensitivity of all these concepts in our twenty-first-century life only underlines how seriously we take ourselves as unique and special beings. But what do we actually mean when we think or talk about our own, or indeed anyone else's, quintessence?

The easiest way out is simply to point to an identity card or similar documentation. The first and foremost line to fill in will be a name: yet although a name is the first enduring possession you have as an infant, and immediately aims to distinguish you as a unique member of society, names as such are rarely unique. First names are usually drawn from a relatively limited cultural pool, while surnames are similarly commonplace within national and racial norms, and there are frequent instances of individuals with the same combination of first name and surname – a scenario made less likely but not necessarily avoided by additional middle names. So what else will add that extra feature that makes *your* identity different from everyone else's?

Let's turn to the dictionary. Perhaps not surprisingly, it is of little help. 'The collective aspect of the set of characteristics by which a thing is definitively recognizable or known' is clear in its logic but supplies little inspiration. Similarly the offering 'The distinct personality of an individual regarded as a persisting entity; individuality' is really just gesturing at synonyms. Then again, there are other definitions that seem the exact converse of this special quality: 'The set of behavioural or personal characteristics by which an individual is recognizable as a member of a group'; and in a similar vein, 'The quality or condition of being the same as something else.' Here 'identity' is being used in a very different con-

text, as a collective noun that will distinguish one group from another, for example 'European identity'. The best-selling author Philip Pullman takes great exception to this use of the term.

> I feel with some passion that what we truly are is private, and almost infinitely complex, and ambiguous, and both external and internal, and double- or triple- or multiply natured, and largely mysterious even to ourselves; and furthermore that what we are is only part of us, because identity, unlike 'identity', must include what we do. And I think that to find oneself and every aspect of this complexity reduced in the public mind to one property that apparently subsumes all the rest ('gay', 'black', 'Muslim', whatever) is to be the victim of a piece of extraordinary intellectual vulgarity.

Perhaps the problem is simply that to use the term 'identity' collectively is really using it more as a metaphor, as though the collective group of Europeans or Muslims or gays in question were each indeed a single individual entity. While we may agree with Pullman that this is a simplistic and misleading assumption, the fact remains that the term is still used: but if it is, rightly or wrongly, merely a metaphor, then it is not going to help us. Rather it will muddy the waters if we need to keep acknowledging collective identity. For the time being at least, therefore, let's put this use of the word to one side, and focus on the original notion, that of some kind of individual uniqueness that sets us apart from

everyone else who has ever lived or will live in the future.

'All of us take pride and pleasure in the fact that we are unique, but I'm afraid that when all is said and done the police are right: it all comes down to fingerprints.' Banal though it sounds, is David Sedaris (in *Holidays on Ice*) not actually correct? Fingerprints have been, after all, one of the most well known and established forms of identification for over a century. In all the billions of humans that have been studied, no two individuals have ever been found to have the same fingerprints – not even identical twins. The reason is that your fingerprint is not genetically based, not an inherited trait, but a result of your unique experience, specifically your particular position in the womb before birth.

Fingerprints develop early in gestation. Between the sixth and thirteenth weeks of life, the characteristic bumps are already forming on the foetal fingers and palms. Innumerable environmental factors will now influence the formation of the one-off pattern, including the exact position of the foetus in the womb at an exact moment, and the exact composition and density of surrounding amniotic fluid that swirls around the fingers as they touch whatever they meet. The movement of the baby as he or she shifts around inside the womb and the speed and size to which he or she grows – all affect how the fingerprint patterns and ridges form and ensure that

the truly unique physical feature, which will distinguish each of us from anyone else, is never duplicated. In the entire course of human history, there is virtually no chance of the same exact fingerprint pattern forming twice, because there is no chance of an identical set of pre-natal events occurring to the same extent in the same way at the same time. And while other physical characteristics will change with age, your fingerprint remains the same right up to the grave. Touch something, and you leave on it a telling trace of your uniqueness.

But apart from at crime scenes, no one really has the time – or the interest – to examine surfaces in forensic detail. Moreover, there are other ways you can impose your individual mark on objects and people in the world, not with your fingers but by actually leaving behind some small part of your body: fluids such as semen or blood, a hair, or any small, unnoticeable, detached part of you down to just one single cell, will have within them the tell-tale DNA. DNA fingerprinting, also known as 'genetic fingerprinting' or 'DNA profiling', was developed as a technique in 1985 by Sir Alec Jeffrey. As everyone knows, it is a process now in everyday use for determining paternity and for identifying criminals or victims. While the vast majority of a person's DNA will match exactly that of any other human, obviously making differentiation between two people rather difficult, Jeffrey's breakthrough has been to use a specific type

of DNA sequence, a 'microsatellite': microsatellites are short pieces of DNA which repeat many times in the DNA of any individual, but crucially are highly variable from one person to another.

When identity is in contention, as with a paternity allegation or a crime, this revolutionary technique changes lives. But once again, as with fingerprint detection, the process requires a special effort, special equipment and training to measure something of which we would not normally be aware; so DNA can scarcely be the means by which we experience effortless, everyday awareness of identity. Surely the sign of our uniqueness has to be something more central, more obvious, and something apparent at a glance.

A still more recent technology has developed an unlikely focus: the ears. It turns out that, surprisingly, ears are unique: as long ago as 1906 a Dr Imhofer in Prague found that in a set of 500 ears he only needed four characteristics to distinguish them. Much later, in 1989, Alfred Iannarelli investigated over ten thousand ears and found no two pairs the same. During the past decades in various countries, including the United Kingdom and the United States, there have been a substantial number of cases involving evidence based on ear prints; there are even some isolated cases of video images of ears that have appeared in court and been accepted as evidence.

But sophisticated and ingenious though these methods may be, none of us would define ourselves

by our fingertips, our DNA or indeed even our ears – unless they were particularly unusual or unless perhaps we had transformed them into noteworthiness with piercings and some kind of earring. But identity through clothes and jewellery and tattoos may be an *expression* of an identity that is already there: they are artefacts that amount to a symptom, not a cause.

Surely the most obvious outward sign of identity is the photo that must always accompany any serious documentation, and which allows us in a flash to differentiate one person from another: the face. The recent sensitivity and highly controversial discussions surrounding the decision of the French government to ban Muslim women from concealing their faces with a veil is the most topical and clear illustration of the link of face with the essence of the individual, their identity.

But do we identify ourselves in complete correspondence with our faces? Is your face the very essence of all that you are? In one sense, it might seem logical that having inherited some basic components such as skin colour, nose size and so on, your evolving identity then etches itself in wrinkles and lines with gestures and grimaces and expressions that make up the personal portfolio of how you think and talk: so eventually your identity impresses itself outwardly for all to see in the sags, crevices and set of your face. But if there is a perfect equation between all that *you* are, and this impressionable face, then

what of the rare but potentially revealing cases of face transplants?

Only now is the astonishing technology for transplanting a face possible, involving some thirty different types of doctors. Although a donor is usually required, the end result is never a duplicate of the deceased individual, nor indeed a return to the patient's original appearance, but a merging of the two. So how does the individual feel about himself or herself when he or she looks in the mirror? Do they feel a different person, simply because they look different? Although there seem to be no formal reports, the press conference courageously given by Isabelle Dinoire, the first face-transplant recipient, suggested that she had a continuing sense of being herself: she didn't seem confused or convinced that she was suddenly someone new.

Similarly, the many, many more frequent cases of severe facial disfigurement that have tragically not been alleviated with new faces, such as the much publicised case of Falklands war hero Simon Weston, indicate that such individuals don't regard themselves as another person: rather they are the same person who has undergone a terrible life event, perhaps a dramatically much more extreme example of the vicissitudes of life in general. The living of life leaves its inevitable mark on our faces as we age, transforming appearance for ever, and all of us have reversals, sadness, shocks that may make us cynical,

frightened, duplicitous – but we would still see ourselves as having the same identity

Perhaps the clearest evidence that a face isn't all there is to identity is from identical twins. Although they have the same faces, their feelings provide probably the best insight into why a face isn't all there is, but at the same time is interwoven with our subjective sense of identity in the way that fingerprints and ears never could be. Here is one particularly articulate account:

> Many twins, including myself, become inextricably intertwined with their other half. Neither twin develops his or her own identity. Their identity becomes fused together, and a blurring of boundaries occurs . . . the two have become totally enmeshed, and co-dependent. Neither has his or her own voice. Rather than encourage each twin to individuate and claim his or her own identity, the significant people in their lives often encourage their enmeshment. They think the fusion of identities that goes on between twins is cute, even adorable . . . I have worked tirelessly over the years to individuate from my twin brother, and finally to claim my own identity. And I have finally arrived. While Ted and I are still close, we are also carrying on with our own lives, as separate, unique, and whole individuals. Images of faces hold little ability to communicate the totality of a personality. The essence of a personality is not something that is stored in a static two-dimensional array of dots, grains or pixels. Rather, what is stored are subtle cues which signify base personality traits, such as a curl of a lip, squint of an eye, or pursing of the lips. These can work in series or combinations to suggest complexity of description, but ultimately, amount only to a caricature.