

Tekst 3

Eighteen smiles – but only one is genuine

Most social animals use smell to signal to each other, but we rely on a sophisticated 50sq inches of skin and bone, writes **Jerome Burne**

1 The peacock has its tail, the thrush its song and humans have the face.

2 Fifty square inches of
5 skin and bone create one of the most sophisticated signalling devices in the animal kingdom. While most social animals use
10 smell to send messages about mating, fighting or social status, we rely on the face. This fine network of muscles that
15 shape our huge range of expressions is so dense and interconnected that anatomists cannot trace all the connections on the
20 dissecting table. The only way is on a living face.

3 As social animals, our survival depends on being able accurately to read the
25 faces of others – are they hostile or friendly? – so we are programmed to respond to them from birth. The constant visual
30 dialogue between parents and child as they mirror expressions back and forth is vital for the developing brain. What's more, babies
35 as young as two months prefer attractive faces.

4 Since the time of the Ancient Greeks beauty has been defined in mathematical terms – equal
40 thirds vertically and equal



fifths from left to right – but now we use the language of evolution.

5 45 Until puberty boys' and girls' faces have similar shapes, but under the sculpting effects of hormones, they diverge. Oestrogen, typically, gives women fuller lips and smaller chins, while testosterone lengthens the jaw. Young female faces
50 are attractive because they say "I'm fertile". But the hormonal shaping has to be symmetrical – not because it corresponds to
60 some ancient Greek ideal, but because symmetry in many species signals health. So females find symmetrical males more
65 attractive.

6 But faces aren't just features and proportions, their real signalling power comes from expressions
70 forged in an evolutionary arms race to develop bet-

ter techniques for deceiving and spotting cheaters. Persuading
75 others you are sincere when you are lying, for instance, gives you an advantage but so does the ability to tell who is
80 reliable.

7 This trade-off is reflected in the smile. Babies recognise and respond to smiles at six weeks and
85 we go on responding to them until we die. There are 18 different sorts of smile but only one is genuine. Called the
90 Duchenne smile, it needs two sets of muscles – one around the mouth called the zygomatic and another around the eyes called the
95 orbicularis. What makes it special is that, while you can consciously control the mouth muscles, the orbicularis only responds
100 to genuine emotion.

8 Good cheat detectors also watch the left side of the face. A genuine emotion affects both sides of the face equally, but when
105 the feelings are phoney there tends to be more activity on the left. A lopsided grin in response to socks again at Christmas means they probably weren't very welcome.
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- 1p **4** "we rely on the face" (regels 12-13)
Wat samen waarom het gezicht voor de mens zo belangrijk is volgens de alinea's 1 en 2.
- 1p **5** 'vital for the developing brain' (lines 33-34)
What vital skill is meant?
The ability to
A appreciate good looks.
B estimate height and distance.
C interpret what faces say.
D make clear what you need.
- 3p **6** Geef voor elk van de onderstaande beweringen aan of deze juist of onjuist is volgens de alinea's 4, 5 of 6.
1 De Oude Grieken vonden symmetrie in het gezicht niet belangrijk.
2 Een regelmatig gevormd gezicht wordt gezien als een teken van gezondheid.
3 Gezichtskenmerken kunnen dienen als teken van vruchtbaarheid.
4 Het is belangrijk om in te kunnen schatten of iemand betrouwbaar is.
5 Het is nuttig om overtuigend te kunnen liegen.
6 Naast gezichtskenmerken zijn gelaatsuitdrukkingen voor de mens van belang.
Noteer het nummer van elke bewering, gevolgd door "juist" of "onjuist".
- 2p **7** "There are 18 different sorts of smile but only one is genuine." (regels 86-89)
Wat zijn de *twee* speciale kenmerken van een echte glimlach volgens de alinea's 7 en 8?
- 1p **8** How could the sentence 'A lopsided grin ... very welcome.' (lines 108-112) also begin?
A For a lopsided grin...
B However, a lopsided grin...
C Moreover, a lopsided grin...
D So a lopsided grin...
- 1p **9** "Eighteen smiles – but only one is genuine" (titel)
Hoe verhoudt deze titel zich tot de inhoud van het artikel?
De titel
A bevat een grapje over de inhoud van het artikel.
B richt zich op een pakkend aspect van het thema van het artikel.
C vat de hoofdgedachte van het artikel samen.
D vermeldt het belangrijkste advies van de schrijver van het artikel.