



PRESS RELEASE

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The Swiss identity smells like chocolate

There has been very little research on the psychology of our olfactory system, especially when compared to our visual and auditory systems. A few decades ago, some researchers would have considered that the sense of smell is significantly predetermined. However, others would have considered it is our environment and our culture that impact our sense of smell. What is the connection with our social identity? Psychologists at the University of Geneva (UNIGE), Switzerland, in a partnership with New York University, have been looking into the human olfactory system and its potential modulations. They have selected the Swiss population and chocolate for this project. They observed that bringing out the sense of Swiss identity amongst the Swiss heightens their perception of the odor intensity of chocolate. The results have been published in the *Scientific Reports* journal.

How does our social identity influence how we perceive the world? For the sense of smell, this is still a mystery. Géraldine Coppin, a researcher at the UNIGE Faculty of Psychology and Educational Sciences, and her colleagues questioned whether the way we portray ourselves in a social group influences our sense of smell and makes us smell certain odors differently. Géraldine Coppin explains that 'For our research, we decided to examine Swiss identity and the odor of chocolate. These two factors are tightly linked. We compared the odor perception of chocolate to that of popcorn, a food product that is not associated with the Swiss identity'. The group from Geneva partnered with Jay Van Bavel's New York University team to then analyse whether social identity impacts the sense of smell, whether Swiss noses smell the odor of chocolate more intensely.

The importance of social identity

For this study, the researchers formed four groups of about twenty people. The researchers brought out a specific aspect of social identity in these people by asking questions relating to this identity. The first group was composed of Swiss participants whose Swiss identity was brought out. The second group was composed of Swiss participants whose personal identity was primed. For the third group, the researcher did not bring out any particular social identity. Lastly, the fourth and last group was composed of people who are not Swiss but who have been

immersed in Swiss culture for a long time. The psychologists brought out their Swiss identity. Three aspects were then analysed: the hedonistic aspect (how pleasant is this odor for you?), the intensity (how strong is this odor for you?), and familiarity (how familiar is this odor to you?). The participants then were exposed to the odor of chocolate and popcorn in turn, before and after this procedure.

Chocolate and the Swiss nose, an intense affair

The decisive measurement of this research was the odor intensity of chocolate for the Swiss subjects in the first group, whose Swiss identity was primed. Indeed, when humans are exposed to an odor, a habituation process is triggered: The odor progressively becomes less noticeable, and may sometimes even completely disappear. This is what happened in the last three groups. However, in the first group, the sense of smell and the odor intensity of the chocolate only slightly diminished. These impacts were not observed with the popcorn odor. Géraldine Coppin adds that 'This shows that the sense of smell is flexible and that social identity can modulate it. Social identity can thus affect areas that were almost unknown until now, such as the sense of smell!'

In this study, social identity was the only factor that was brought out. However, psychologists now envisage turning social identity into a positive or negative factor, to observe whether the odor of chocolate could become more or less pleasant as a result of this. They also wonder which mechanisms alter the perception of the intensity—how social identity influences information processing. To be continued.

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