



The Ends of the Humanities

Perspectives from the Humanities and Social Sciences

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The forbidden candyfruit

Or the dilemma of wanting tasty foods and a slim body at the same time

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The forbidden candyfruit

Or the dilemma of wanting tasty foods and a slim body at the same time

Recently, I changed planes at one of the largest airports of the world, in one of the richest countries of the world. In addition to the usual abundance of duty-free chocolates, the shops were filled to the brim with local sweets and pastries. When looking up from all the sweet temptations, a TV screen caught my eye: it was advertising bariatric weight-loss surgery at a private health clinic. What a perfect illustration of the plight people in affluent societies are faced with today. The environment we have created encourages us to enjoy high-calorie foods and strive for slimness at the same time. While most of us successfully navigate the pitfalls this dilemma creates, an increasing number of people suffer from its adverse health effects, for example in the shape of eating disorders or obesity.

Current statistics on overweight and obesity show dramatic increases in worldwide obesity rates over the last decades (WHO 2019). In Europe, over 50 percent of the population are currently overweight or obese, corresponding to a body mass index (BMI) of 25 or higher. Obesity alone, i. e. a BMI of 30 or higher, affects 20 percent of the European population (WHO 2013). As a consequence, terms such as “global obesity epidemic” and “obesogenic environment” have made the headlines. For an increasing number of people, energy-dense foods are easily available and ubiquitous. The changes over the last 60 years have been dramatic. As an example, Marteau and colleagues (Marteau et al. 2015) analysed average portion sizes offered by fast-food restaurants in the 1950’s versus the 2010’s. The results are staggering: Hamburger sizes have tripled, servings of fries almost so, and soda sizes have increased six-fold. In combination with an increase in sedentary activities at work and during leisure time alike, it has become very easy to end up in a situation, in which energy intake exceeds energy expenditure, and body fat increases (Hill/Peters 1998).

And yet, not everyone living in Europe is obese. Overweight and obesity are caused by a complex interplay of a multitude of environmental factors, such as social, economic, and political factors, interacting with (epi-)genetic, physiological, and psychological factors (Keith et al. 2006; Platte/Vögele/Meule 2014; Wright/Aronne 2012).

An example for an important psychological factor concerns attentional bias towards food (Meule et al. 2014; Werthmann/Jansen/Roefs 2015). Attentional bias towards food denotes a preference for food over neutral information. The brain singles out food cues already 200-300 ms after their appearance (Wolz et al. 2015). This is especially the case for food high in calories. Think of a dinner buffet: Spontaneously, would you be more attracted to the desserts or the salads? On average, the answer would be: to the desserts. An important brain network in this context is the so-called “reward system” (Berridge 1996). This brain network is particularly active when we encounter high-calorie food cues when hungry (Pursey et al. 2014). In other words, the brain says: “Eat this now, it will increase your chances for survival”. Interestingly, this response is stronger in people with obesity, and also occurs when they are satiated (ibid.). The more attention

is directed towards high-calorie foods, the more of them are consumed (Werthmann et al. 2015). For tens of thousands of years of human existence, the preference for energy-dense foods was a survival strategy in environments, in which food resources were scarce. What used to be an important advantage to safeguard survival has now turned into a risk factor in a fundamentally altered environment.

So what, if we all put on a little extra weight? Surprisingly, the body ideal over the last 50 years shows a development in the opposite direction. As an illustrative example, the average U.S. American woman was getting heavier over the second half of the 20th century. Over the same time period, Miss America winners were getting slimmer (Spitzer/Henderson/Zivian 1999). The same phenomenon has a slightly different aspect in men. For the male beauty ideal, it is not merely slimness, but muscularity with low body fat content, which counts. Pope et al. (1999) compared action figure toys for boys from the 1970's to toys from the 1990's. Over these 20 years, muscularity had increased dramatically and reached physiologically impossible proportions (as unrealistic as the proportions of popular girls' toys [Norton et al. 1996]). Across the planet, people in regions with higher socio-economic status prefer slimmer physiques, while lower socio-economic status goes along with more voluptuous beauty ideals. This effect is strongly linked to Western media exposure (Swami et al. 2010). A unique set of studies followed the introduction of Western television in Fiji in the 1990's. From these studies (e. g. Becker 2004), it became clear that being slim was not just about being slim. Rather, for teenage girls in Fiji, being slim was associated with being a strong, popular, and successful independent woman. Slimness was seen as a symbol for what it takes to live a successful life in a Westernised society. Western television introduced the concept that one's body, as well as one's future, can be reshaped (ibid.).

In the 21st century, media exposure has taken on a new dimension with the Internet, tablets, smartphones, and particularly social media. Thin-ideal exposure is no longer as passive as the term "exposure" suggests. For example, body challenges encourage participants to lose weight until they achieve the goal of the challenge. This could be a pronounced thigh gap, or making the waist disappear behind a sheet of paper (A4, portrait orientation), among others. As part of the challenges, dieting tips and tricks are shared among participants, progress is documented, and success ensures the general approval of the challenge-community. Thus, thin ideal exposure has become interactive. Instead of secretly wishing to have a body like Miss America, one can show the world how disciplined one is and that one can achieve her look (if physiologically possible), for which, ultimately, reward can be expected by social approval. This makes striving for the thin ideal even more attractive.

If obesity is a global epidemic, then so is body dissatisfaction. As an example, the 2013/14 Health Behaviour in School-Aged Children survey of the WHO showed alarming results for Luxembourg (WHO 2016). Among 15-year-old girls, 56 percent perceived themselves as being too fat and 29 percent engaged in weight-reduction behaviours. Only 15 percent were actually overweight or obese. Among boys of the same age, 33 percent thought they were too fat and 17 percent engaged in weight-reduction behaviours, with 21 percent being overweight or obese. These numbers confirm that although body dissatisfaction is more pronounced in girls, it is by no means an all-female

phenomenon. Both the overweight and body dissatisfaction rates found in this study give rise to concern. The adverse long-term health consequences of overweight and obesity are well known, such as type-II-diabetes and coronary heart disease (cf. Thompson et al. 1999). Therefore, one might be tempted to think that dieting would improve health outcomes. This is true for professional, evidence-based weight-loss interventions (cf. Franz et al. 2007). Dieting without professional support, however, is one of the best-examined and most well-established risk factors for eating disorders (cf. Jacobi et al. 2004).

As human beings, we have an extraordinary capacity to self-regulate. We are able to alter our predominant responses to conform to standards or ideals, and to achieve long-term goals (cf. Baumeister/Vohs/Tice 2007). Faced with tempting foods, many decide to exert cognitive control over their eating behaviour with the aim of influencing their body weight or shape. This is called restrained eating (cf. Herman/Polivy 2011). Cognitive control over eating behaviour is fragile, however. An entire line of research has been devoted over the last 40 years to the identification of the various factors, which make restrained eaters lose control and overeat. These include eating more than ones dieting rules permit (cf. Herman/Mack 1975), experiencing negative emotions (cf. Herman et al. 1987), and smelling palatable food (cf. Fedoroff/Polivy/Herman 1997). When restraining their food intake, people remain caught between two conflicting goals: weight control and eating enjoyment. Depending on which goal is activated more strongly, dieting rules are either adhered to or abandoned (cf. Stroebe et al. 2013). In some cases, the balance tips so dramatically to one side that obesity and eating disorders are the result.

The current Diagnostic and Statistical Manual for Mental Disorders (DSM-5; cf. American Psychiatric Association 2013) lists three eating disorders: Anorexia Nervosa, Bulimia Nervosa, and Binge-Eating Disorder. These are characterised by altered eating patterns, with strict fasting prominent in Anorexia, binge eating in Binge-Eating Disorder, and an alternation between binge eating and purging (e. g. self-induced vomiting, fasting, excessive exercise) in Bulimia. A common characteristic of all three eating disorders is body dissatisfaction and overvaluation of shape and weight, though not reflected in the diagnostic criteria to an equal extent (cf. Grilo 2013). Body dissatisfaction is only one aspect of body image disturbance (cf. Gleaves et al. 1995). Other aspects include a distorted experience of one's own body dimensions (cf. Cash/Deagle 1997). The perception of body-internal states, such as hunger, satiety, and physiological changes associated with emotions, can also be altered (cf. Lutz et al. 2019). Lastly, body-related thoughts and behaviours can be affected, most prominently seen in the excessive weight-loss behaviours expressed by most individuals with Anorexia and Bulimia Nervosa. Body image disturbance is not only a risk factor for eating disorders (cf. Jacobi et al. 2004), but also an important prognostic factor for treatment outcome (cf. Garfinkel/Moldofsky/Garner 1977; Slade/Russell 1973). Given this prominent role of body image in eating disorders, it is not surprising that their occurrence has been linked to exposure with media promoting a slim body shape (cf. Becker 2004).

Conflicting information from our environment, which promotes both the consumption of high-calorie foods and the quest for a slim body, causes difficulties for an

increasing number of people. This raises the question: How can we get out of this trap? In today's Western societies, not only unhealthy foods, but also healthy foods are easily available. To facilitate healthy eating, we need to understand the psycho(-physio-)logical mechanisms underlying eating behaviour, such as attentional bias for food and body (dis-)satisfaction. Yet, these always need to be interpreted in the context of the socio-cultural background and its historical development. In addition, change involves more than interventions targeting the individual. If the individual is caught between palatable foods and slim media images, he or she is also caught between a billion dollar food industry and a billion dollar weight-loss industry. Therefore, political and socio-economic involvement is required to sustainably facilitate healthy eating. In short, a multi-disciplinary approach to the promotion of healthy eating and body satisfaction is indispensable for the prevention of eating and weight disorders.

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