"Stomach's Always Going to Catch Up with You": An Interdisciplinary Approach to Emotional Eating

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Abstract
Although mainly identified as the propensity for overeating in response to negative feelings, emotional eating still remains a poorly defined construct. Based on Lovejoy and other scholars' holistic world view, the current study presents a brief analysis of emotional eating from an interdisciplinary perspective: psychology, nutrition, willpower and self-control, literature, cultural studies, macroeconomics, consumer behaviour, behavioural economics and neurosciences, behavioural-change theories, game theory and mathematics. While each area of interest will approach the topic differently, putting together all these views can open a pathway towards comprehensive studies and meta-analyses that could help solve the intricate puzzle of weight gain and poor health in connection with emotional eating. Since the purpose of any research is ultimately to serve life and benefit humankind, the current study proposes to demonstrate indirectly that sciences and humanities can provide together a bird's eye view of such a complex phenomenon as emotional eating.

Keywords: Kazuo Ishiguro; emotional eating; behavioural economics; game theory; globalisation;

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1. A Holistic Motivation for Healthy Eating

In an attempt to have sciences and literature cooperate for the betterment of human life, in a time that requires changes to how societies are run, the current study proposes to demonstrate that, in order to achieve total well-being, humans must take great care of their bodies and minds by having full control of what, how and when they eat.

Over the years, many nutritional programs have been designed, developed, implemented and assessed all around the world, yet there has always been a significant dissonance between consumers' dietary knowledge and their actual dietary choices, decisions and behaviour, for all the nudging programs initiated by diverse organisations and institutions to stimulate consumers' interest in a healthy lifestyle (Holgado, et al., 2000). This may be due to the many steps necessary to change human behaviour through self-discipline and the strengthening of willpower and self-control (Duckworth et al., 2019).

Emotional eating is usually associated with the craving for certain foods due to stress and negative feelings such as sadness or boredom, and is usually followed by feelings of guilt and dissatisfaction (Roth, 2003). Physical hunger, on the other hand, represents the biological cue for nourishment whenever there is a need for macronutrients and micronutrients, which are food molecules broken down for energy by the human body (Andersson and Bryngelsson, 2007). The body usually gives certain signals when blood sugar decreases below normal levels or when the stomach is empty. But in order to recognise them, consumers should understand their own bodies and believe that eating for replenishing nutrients is the only form of healthy eating (Roth, 2003).

All studies to date have focused on establishing the causes of emotional eating based on age, gender, ethnicity and cultural differences, as well as finding the most accurate definition of so complex a phenomenon. This proves the necessity of an interdisciplinary study that can help clarify or reconfigure consumers' perceptions and beliefs with regard to healthy eating, thereby remotivating them to overcome emotion-based eating that proves detrimental both in the short and long run.

There will always be room for in-depth research on the many factors underlying the discrepancy between theory and practice for the improvement of human life. Current times, with their frantic search for an effective virus-fighting paradigm, can prove more than ever that life functions as an integrated circuit without predetermined boundaries; its elements are inextricably linked, forming an indivisible whole in permanent growth and reconfiguration. In "Reflections on the History of Ideas", the American philosopher and intellectual historian A. O. Lovejoy acknowledges the interconnected superiority of human cognition:

> The processes of the human mind, in the individual or the group, which manifest themselves in history, do not run in enclosed channels corresponding to the officially established divisions of university faculties; even where these processes, or their modes of expression, or the objects to which they are applied, are logically discriminable into fairly distinct types, they are in perpetual interplay (1940, p. 4).

The value judgments that humanity has made over time reflect life in all its physical manifestations: behavioural, institutional, material, technological, artistic, social and psychological, to name but a few. But what undermines the evolution of life is a divided vision of all these human manifestations – that is to say, the practice of segregated introspection without consciously reassembling these existential areas like the pieces of an ever-growing puzzle: "The history of political events and social movements, of economic changes, of religion, of philosophy, of science, of literature and the other arts, of education, have been investigated by distinct groups of specialists, many of them little acquainted with the subjects and the researches of the others" (p. 3).

Is this idea of a reversed Tower of Babel[1] even possible? Lovejoy (1940) supports the cooperation of all fields present in the history of humanity – a holistic construct of all the ideas ever issued by the individual and collective mind together. Existential division could be connected to Henry James's *House of Fiction*[2] (everyone sees something else!), but also to the Matryoshka dolls[3] with their Japanese version, old Daruma.

Whether or not scientifically proved, perceptions are based on personal images of the external world (Strauch, 1999), so the need to specialise in different areas of activity is due to humans' innate boundaries. The mind cannot encompass everything at an individual level, but the collective mind can. Nonetheless, because of the misplaced emphasis on divisibility, many realities have remained long misunderstood because their complex manifestations were subject to too many areas of investigation for a single specialist to be able to understand the phenomenon as a whole (Lovejoy, 1940). Yet mental cooperation, from intuitionism to rationalism, could lead to a more complex understanding of the world's

[1] According to Genesis, the Tower of Babel is indicative of the creation of the human nations, with their specific languages. The division of people into separate nations was a God-given punishment sent to the Babylonians, who wanted to build a tower that could touch the heavens. Nowadays, the Tower of Babel is the symbol of dispersion and separation (Graves and Patai, 1986, p. 315).

[2] "The house of fiction has . . . not one window, but a million." – Henry James (2009, ix), preface to *The Portrait of a Lady*

[3] It is a set of wooden dolls which decrease in size so that they can be placed one inside the other, thus creating the effect of concentric circles. The term *matryoshka* is the diminutive of the Russian word *matryona*, which means *matron* (Woyke and Schulz, 2019).

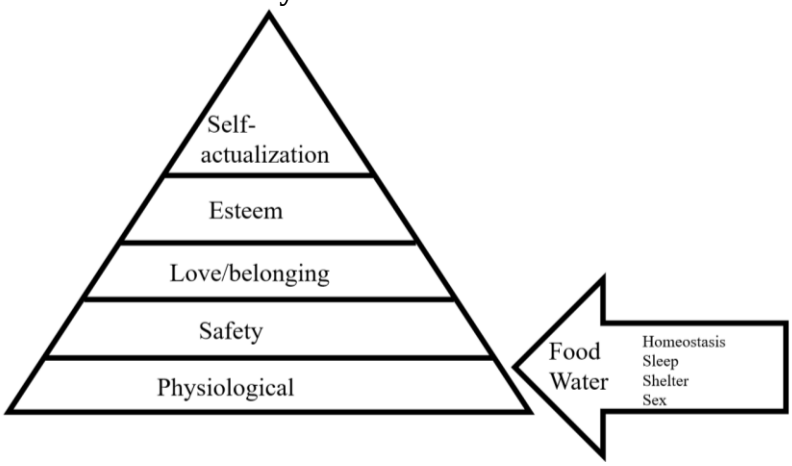
phenomenology, since "the objectivity of thought consists in being valid for everyone. To know objectively is therefore to constitute my thought in such a way that it already contains a reference to the thought of others" (Levinas, 1969, p.143).

The same might be the case with finding the real causes of emotional eating and, most importantly, the differences between self-destructive eating patterns and socially-driven culinary emotions. The majority of the studies in this field are based on participants' perceptions of themselves as emotional eaters, depending on the emotional typology and intensity experienced.

Nonetheless, emotional diversity cannot be the only variable that triggers uncontrolled eating, either individually or collectively. According to Yung (1921), the human mind is a complex-based structure – that is to say, an intricate amalgam of patterned feelings, recollections, perceptions and desires revolving unconsciously around a more powerful stimulus such as collective and personal status or power. If that is the case with the human mind, then multiple dimensions of understanding the internal and external causes of emotional eating are required.

Within Abraham Maslow's hierarchy of needs (1943), food is an essential part of our physiological needs, which constitute the foundation of the pyramidal motivators and factors influencing human behaviour. However, food choices have changed significantly over the years, depending on the main factors influencing each generation's lifestyle and priorities (Williams and Paget, 2011). Although all current generations – from the elders, belonging to Silent Generation, to Post-Millennials or Generation Z – show an overt interest in a healthy lifestyle, there are still many health issues caused by emotional eating (Guerrero et al., 2008). That may partly explain the ongoing struggle of so many individuals with weak immune systems to fight Covid-19 in a natural fashion.

Figure 1. Maslow's hierarchy of needs



Source: Author's conceptualisation according to Maslow's hierarchy of needs

An external cost of the overwhelming food freedom nowadays is the subconscious association of emotions and meals in the form of classical conditioning wherein a naturally occurring stimulus (food taste) leads to salivation, craving or both as a naturally occurring response to the presence of certain foods, regardless of nutritional value. Then a neutral stimulus (intense emotion, either positive or negative) is linked with a naturally occurring stimulus (food variety and taste) so that the salivation and/or craving response is still present. In time, the occurrence of intense feelings alone will create the same involuntary response of salivation and/or craving, because the mind has already started to associate emotion with

the comforting sight of food[4].

Behavioural change entails a close cooperation between classical and operant conditioning, given that, in the long run, emotional eating can lead to hormonal imbalances and chronic conditions as well as weight gain and obesity (Ranabir and Reetu, 2011). Unlike its classical counterpart, operant conditioning in the case of emotional eating creates a connection between a type of eating behaviour and its consequence, be it a reward or punishment. The purpose of this type of conditioning[5] is to change detrimental eating behaviour while reinforcing emotional health for the betterment of life (Dunsmoor and Murphy 73).

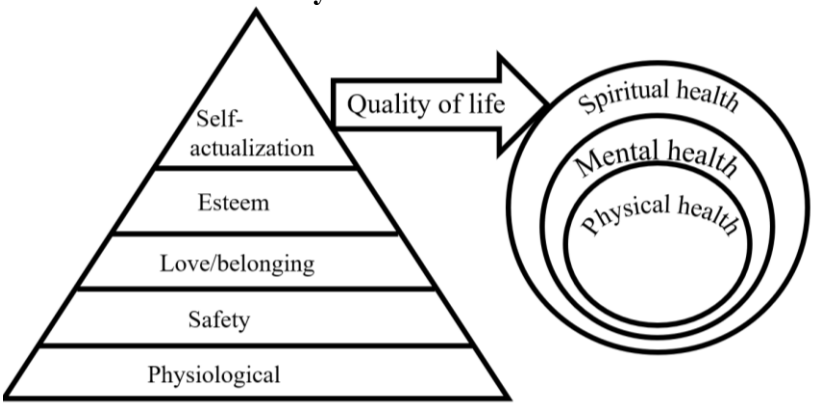
As Lovejoy, Levinas and Yung pointed out, directly or indirectly, now more than ever there should be an overt cooperation of all scientific and academic fields so as to find long-term solutions to all human problems, since only in this way can the imperfections of human nature be corrected. Therefore, an interdisciplinary approach to emotional eating could bring a holistic understanding of this controversial reality and herein could lie its healing.

There are many behavioural theories that can explain the short-term success yet the long-term failure to change human behaviour, from the theory of reasoned action (Azjen and Thomas, 1986) to the behavioural perspective model of consumer choice (Foxall, 1992). The current study presents one particular theory that could help overcome emotional eating through choice remodelling, namely the health belief model. Given that the decision-making process is such a complex phenomenon, including rational, emotional, instinctual and behavioural dimensions, the current study ultimately aims at offering a multidimensional understanding of emotional eating so that consumers can strike a balance between fighting culinary temptations, when needed, and indulging themselves guilt-free in social circumstances that pertain to the beauty of the human condition.

2. A Psycho-Nutritional Overview of Emotional Eating

According to research, reaching and preserving quality of life is quite synonymous with attaining a healthy lifestyle, which goes beyond the implementation of measures that can reportedly act upon consumers' health-related habits (Haraldstad et al., 2019).

Figure 2. Conditions of healthy life



Source: Author's conceptualisation according to Maslow's hierarchy of needs

[4] Classical conditioning was first presented by the Russian physiologist Ivan Pavlov with regard to dogs' salivating in response to a certain sound that appeared every time food was brought in (Rehman et al. 1).

[5] Operant conditioning was first presented by the American physiologist B. F. Skinner as a method of changing certain behavioural patterns by always using reinforcement or punishment after them (Staddon and Cerutti, 2003).

A healthy lifestyle should therefore be considered from physical, mental and spiritual perspectives (Faught et al., 2017). Since all three aspects of human life are closely connected to one another, any changes or imbalances in one will influence the other two, in direct relation to Maslow's hierarchy of needs.

Healthy eating patterns, as well as a nutrient-dense diet, are of paramount importance for the proper development of the physical body in all stages of human life: infant, toddler, child, teenager, young adult, adult, senior (Piaget, 1964; Brues & Snow, 1965). A balanced eating routine can also be called a healthy long-term, or even life-long, diet. Nowadays, there are plenty of proposals of healthy diets so that consumers can make their own choices based on their individual and cultural tastes (Skerrett and Willett, 2010).

According to studies, healthy food refers to any balanced diet that contains the right amounts of macronutrients (carbohydrates, proteins, fats), regular fruit and vegetable consumption, moderate portions and regular meals (Skerrett and Willett, 2010; Shepherd et al., 2006; de Ridder et al., 2017). Having three meals a day seems to have become the staple routine for healthy dieting in the long term, although most consumers nowadays, except for infants, have acquired the habit of snacking between meals.

According to most studies in the nutrition field, a healthy eating routine consists of the following major steps (Saint Onge and Krueger, 2017; Wahl et al., 2017; de Ridder et al., 2017):

- having breakfast, lunch and dinner every day, with the last meal being less nutrient-dense than the previous two
- ensuring that each meal consists of healthy macronutrients and micronutrients, taken from fruits, vegetables, whole grains, lean meats, fish, eggs, nuts and the like
- reducing to minimum the intake of saturated fats, trans fats, cholesterol, sodium and added sugars
- portioning adequately the food sizes based on the nutrient density of the foods consumed
- having fruit, vegetables or nuts as healthy snacks instead of processed sugary snacks
- establishing the right intake of vitamins, minerals and iron, if vegan or vegetarian by choice or for other reasons
- using proper methods of cooking foods like meat and whole grains
- avoiding consuming table salt and replacing it with natural rock salt or sea salt
- avoiding eating in excess when experiencing emotional difficulties like anger or stressful situations

Studies also show that a sedentary life can lead to cognitive and emotional imbalances (Ranabir and Reetu, 2011), which will trigger uncontrolled eating and, ultimately, conditions as follows:

- hormonal imbalances such as oestrogen dominance, insulin resistance
- weight gain and obesity
- chronic diseases such as diabetes, heart disease, arthritis, fibromyalgia, cancer

In short, quality of life cannot be improved without cognitive and emotional well-being. Therefore, eating the right way will help achieve not only physical, but also psychological well-being, thereby breaking the vicious circle of emotional eating (Chamberlin et al., 2018). Given that self-actualisation constitutes the highest need of human life, according to Maslow (1943), the main strategies to improve and maintain cognitive and emotional health, in accordance with consumers' world views and life purposes, are as follows (Sharma and Petty, 2006; Can et al., 2020; Corliss, 2019):

- regulating the circadian rhythm and the levels of melatonin in the pineal gland by getting enough sleep according to the requirements of each age
- relaxing regularly, either actively, through adequate exercising, or passively, through meditation and guided visualisation
- establishing realistic and healthy priorities in the short and long term
- decluttering the living space
- learning to be assertive in a non-aggressive way
- doing Yoga, Qigong and other physical forms of energy regulation
- socialising and maintaining healthy social ties
- practising mindfulness techniques on a regular basis

All in all, a diet rich in fruits, vegetables, whole grains, healthy proteins, nuts and seeds should usually meet the daily requirements of healthy nutrients. However, emotional eating constitutes both an individual and a collective response to internal and external triggers. If eating when not hungry could be an all-encompassing definition of emotional eating, then the quantity of food items consumed should come second in importance. Repeated snacking throughout the day, relaxing in front of the television with a huge bowl of popcorn on the lap after a stressful day at work, bingeing on fruit while reading a gripping book – these could all be regarded as forms of emotional eating, if real hunger is not present.

Thus, both healthy and unhealthy food could be considered comfort food whenever consumers overeat compulsively, trying to regulate cortisol levels in a mechanical way (Roth, 2003). In a similar vein, both negative and positive emotions could lead to occasional uncontrolled eating that can become a habit (van Strien et al., 2013).

There are studies of happy eating which indicate that emotional eaters can exert no control over their dietary behaviour when dealing with strong emotions of any type as compared to those in a neutral mood (Bongers et al., 2013). As regards the correlation between emotional state alteration and calorie consumption, it was demonstrated that mood improved visibly after five minutes of food intake, although no significant differences were established between emotional and non-emotional eaters. These findings indicate that positive feelings play as important a role in emotional eating as food consumption does in mood management.

Furthermore, recent studies signal that the term emotional eating may not actually cover the state of overeating in emotional eaters, since uncontrolled food intake can be triggered by diverse food-signalling cues, which makes it harder for consumers to differentiate between true hunger and eating disorder (Bongers, de Graaff and Jansen, 2016).

For all the in-depth analyses of its descriptive and explanatory psychopathology with regard to the relation between weight status and dysregulated emotions, there is still no widely-acknowledged definition of emotional eating in the scientific world (Frayn and Knäuper, 2017). By trying to find one, researchers have discovered that they could risk disregarding some important aspects of both the causality and the mechanics of so complex a phenomenon.

Emotional eating is thus mainly regarded as compulsively resorting to food intake in response to detrimental feelings such as anxiety, depression, negative self-image, social failure, which prevents consumers from recognising the physiology of true hunger cues (Geliebter & Aversa, 2003). Emotional eating has therefore been studied as either a disruptive pattern of eating behaviour or a symptom of eating disorders that lead to weight gain or loss, such as bulimia or anorexia (Kaplan & Kaplan, 1957).

However, the psychological spectrum of daily occurrence indicates that, in many cases, emotional eating can prove an efficient way of dealing with negative affect, or even alchemise it into its positive counterpart without significant, if any, side effects. This broadens the perspectives on emotional eating, turning it from culprit to a coping strategy or heuristic under difficult, stress-loaded circumstances, regardless of age and gender. For instance, one can resort to eating when not hungry while writing a very demanding report in order to meet a tight deadline, so in this case overconsumption of either healthy or unhealthy food under pressure can help get the task done on time.

However, the main relation studied scientifically is between emotional eating and weight outcomes, such as weight gain and the difficulty to lose weight and maintain a fit body shape (Frayn and Knäuper 2017; Escandón-Nagel et al., 2018; Konttinen et al., 2019) while many other studies analyse the association between stress and eating behaviour (Alalwan et al., 2019; Debeuf et al., 2018; Konttinen, 2020; Tan and Chow, 2014; Penaforte et al., 2016; Capasso et al., 2020; Choi, 2020). One study in particular offers a comprehensive review of multiple causes, thus emphasising the necessity of a many-angled approach to emotional eating as a mediator between depression and obesity (van Strien, 2018):

- dietary restraint
- poor interoceptive awareness[6]
- alexithymia[7]
- emotion dysregulation
- reversed hypothalamic pituitary adrenal (HPA) stress axis
- inadequate parenting
- depressive feelings
- genetic susceptibility

There are many self-report instruments used in most studies of emotional eating to date:

- the Dutch eating behaviour questionnaire (DEBQ) (Frayn and Knäuper, 2017; van Strien, 2018)
- the three-factor eating questionnaire (TFEQ) (Penaforte et al., 2026; Konttinen et al., 2019)
- the emotional eating scale (EES) (Frayn and Knäuper, 2017)
- the emotional appetite questionnaire (EMAQ) (Frayn and Knäuper, 2017)
- the emotional overeating questionnaire (EOQ) (Frayn and Knäuper, 2017)
- the eating and appraisal due to emotions and stress questionnaire (EADES) (Frayn and Knäuper, 2017)
- the eating disorder examination questionnaire (EDEQ) (Mond et al., 2004)
- the inventory of peer influence on eating concerns (IPIEC) (Meyer and Gast, 2008)
- the eating disorder inventory (EDI) (Meyer and Gast, 2008)
- the weight related eating questionnaire (WREQ) (Bennett et al., 2012)
- the emotional eater questionnaire (EEQ) (Bernabéu et al., 2020)

While these self-assessing reports may prove efficient in helping the researchers measure the implications of emotional eating as a dependent variable, they may fail to provide accurate statistics on consumers' moods, drives, motivators, perceptions and beliefs that have led to their emotional eating in the first place – and therein lies the failure in finding

[6] The capacity to identify, access, understand and respond properly to internal stimuli, especially in the gut and other internal organs (Price and Hooven, 2018)

[7] The inability to identify and understand one's or others' emotions, which leads to poor social interaction (Sifneos, 1973)

long-term solutions for health issues caused by emotional eating, be it regarded as a psychopathological phenomenon or a social construct, or both.

Furthermore, the surveys may not always help find a proper psychological difference between emotional eating and other eating disorders such as comfort eating, compulsive eating, occasional overeating, internal disinhibition, uncontrolled eating, binge eating. As such, these terms have been used interchangeably with emotional eating in most studies, which may lead to inaccurate identification of what constitutes food in excess; this, in turn, can distort the interpretation of internal and external causality of eating without being hungry – that is to say, the inability to establish whether stress, depression, anger and anxiety are more detrimental than the proximity of tasty junk food or the advertising of palatable treats like chocolate or other high-fat, high-sugar, high-calorie products (Bennett et al., 2013).

Food cravings can go beyond emotional and sense-based triggers, being related to certain brain areas, hormonal fluctuations and changes along with metabolic and physiological imbalances (Meule, 2020). Thus, the amygdala, hippocampus, cerebellum, prefrontal cortex, ventral tegmental area, nucleus accumbens, mesolimbic dopamine pathway and hypothalamus – mainly responsible for memory, pleasure, reward and appetite – are great craving stimulators (Georgii et al., 2017); the same is the case with PMS, pregnancy and adrenal imbalances that can lead to late-night snacks or over-consumption of salty, sugary or fatty foods due to the mixed-up signals sent by the neurotransmitters and neuromodulators in the brain like dopamine, serotonin, norepinephrine, acetylcholine, glutamate and GABA (Davis et al., 2014).

As regards exploratory qualitative research, there are few studies that have analysed food journals and in-depth interviews in order to determine why consumers deal with emotions by eating (Bennett et al., 2013). Furthermore, they cannot provide a thorough understanding of individual perception of emotional eating behaviour so long as they have been conducted on very small samples drawn mostly from college population.

Whether emotional eating should be separated from other forms of uncontrolled eating or should merely include them all, all research should aim at helping consumers understand their physicality better in order to decode correctly the signals of their bodies and minds on a regular basis. Only in this way can efficient interventions be designed to target the eating behaviour that proves truly detrimental to consumers' overall well-being.

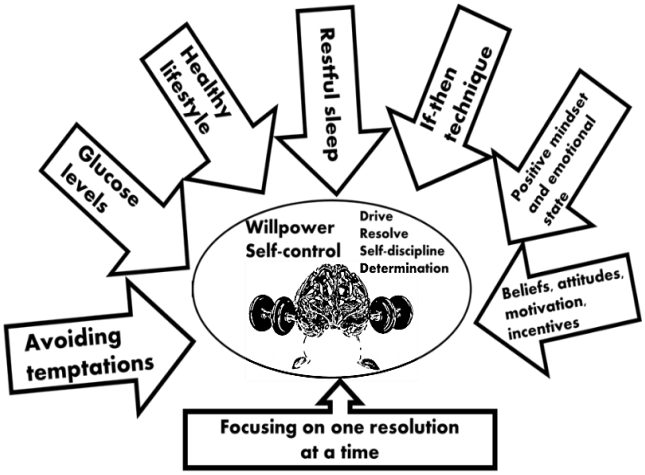
3. Relation Between Willpower and Emotional Eating

Willpower is scientifically defined as the conscious capacity to avoid daily temptations and gratifying indulgences while following long-term goals (Baumeister, 2011). Since it assists in dealing with detrimental impulses, feelings and thoughts while creating a balance between the cognitive and emotional systems, willpower plays a major role in overcoming emotional eating by helping recognise and satisfy physiological hunger.

However, studies show that willpower is a limited inner resource, which suffers depletion throughout the day. Like any physical muscle, it grows tired when overused while withstanding repeated temptations, which reduces its capacity to resist more temptations in the near future. Low willpower thus creates special cerebral patterns in people exposed to all kinds of temptations. On the other hand, regularly exercising willpower may lead to much stronger self-control in the long term (Baumeister, 2011).

All research on willpower and self-control indicates, indirectly or directly, how important a healthy lifestyle actually is to prevent energy depletion and decision fatigue. Yet it takes a lot of resolve to improve quality of life, with all the temptations out there chipping away at the self-control of even the most determined individuals.

Figure 3. Ways to strengthen willpower



Source: Author's conceptualisation according to studies on willpower

The brain functions on glucose, which may be easily depleted when exerting sustained self-control. Maintaining the right levels of glucose in the blood throughout the day, thereby avoiding insulin spikes or insulin resistance, could thus help overcome emotional eating. Willpower can also be restored by respecting the circadian rhythm and the necessary hours of restful sleep, as well as eating healthily only when hungry.

Other important ways to reboot a depleted willpower consist of consciously employing a positive mindset and belief system, adopting motivational, incentivising and planning-ahead behavioural patterns and focusing on one resolution at a time, instead of many at the same time, whenever possible (Baumeister, 2011).

According to studies among teenagers and adults, the *if-then* statement can also help consumers whose self-control is easily foiled in enticing situations to plan ahead their actions. They can thus create beneficial scenarios for emotionally challenging situations they know they will be bound to face in the near or distant future. For instance, *if* they find themselves craving chocolate at night, *then* they will have a small piece of fruit instead, as planned beforehand (Baumeister and Tierney, 2011).

According to Niemeier et al. (2007), the traditional behavioural weight loss intervention programs have proved inefficient over time in strengthening emotional eaters' willpower and self-control when dealing with weight loss challenges, hence the emergence of more realistic programs such as Mindfulness-Based Eating Awareness Training (MB-EAT), Acceptance and Commitment Therapy (ACT), Cognitive Behaviour Therapy (CBT) and Dialectical Behaviour Therapy (DBT). The latter's success consists in taking into account how realistically difficult it can be to differentiate between physiological hunger and food craving due to life schedules governed by choice overload and decision fatigue (Frayn and Knäuper, 2017). Consumers are therefore taught to embrace their weaknesses and accept the difficulty of breaking the vicious circle of emotional eating, especially when they have to resort to restraint eating in order to drop excess pounds. A frustrated mind will lash back when least expected, diverting anyone from fuelling the body in the right way – that is to say, with the necessary amounts of lean protein, soluble and insoluble fibre, simple and

complex carbohydrates, healthy fats and, last but not least, micronutrients, often referred to as minerals and vitamins.

Thus, while the decision-making process puts a toll on the daily stores of willpower, consumers can still find creative ways to avoid temptations rather than resisting them in order to preserve their energy and avoid choosing foods by impulse alone. These conscious forms of operant conditioning can only prove that the resourcefulness of the human condition, for all its frailty.

4. The Peak of Emotional Eating in Literature

Nowadays, more than ever, the alliance of all disciplines that try to find the most relevant explanations for internal and external human behaviour can create interdisciplinary codes for interpreting both real life and fiction, since there is little demarcation between the two when it comes to human experience. Regardless of the subject, literary works deal, openly or subliminally, with social and environmental interaction. Humans' thoughts, feelings, perceptions, beliefs and attitudes influence their and others' choices, decisions and actions, which, in turn, implant new insights in all mindsets and world views. It can be either a vicious or virtuous circle.

Since humans' busy schedules do not always allow them to draw a straightforward line between physiological hunger and emotional eating or to exercise their willpower in order to choose only healthy and often less palatable food, the current study proposes a literary way of re-motivation: the TV screenplay *Gourmet*, written by Kazuo Ishiguro for BBC in the early 1980s.

The Nobel-prize winning British novelist of Japanese origins mainly writes about the exhausting search for meaning through introspection and recollection of troubled pasts (Wong, 2005; Lewis, 2000). His characters are some of the sincerest embodiments of the human condition, with its weaknesses, irrationality and painful inability to accept life in its cold simplicity. They unknowingly complicate their experiences with incomprehensible or delusive theories and explanations, and most of them fail to hold themselves responsible for their choices and decisions. However, Ishiguro is determined to show his readership the relativity of the decision-making process in an ever-changing world, with shifty values, imperfect childhoods and intricate interconnections, all stemming from subconscious conditioning. When decoded in an interdisciplinary fashion, his works can assume a genuine therapeutic character – they could practically act as both wake-up calls and harmonisers for all those who have more existential questions than answers, in line with Cathy Caruth's belief in literature's psychotherapeutic powers (1995).

The short film *The Gourmet*, produced by Ann Skinner and directed by Michael Whyte, was first broadcast on Channel 4 late at night on the 4th of January 1987. Although it was rarely rescreened and never released on video, it is now available on YouTube. The movie is about 50 minutes long and stars Charles Gray as the leading character Manley Kingston, a food connoisseur with a jaded palate and an insatiable appetite for extreme tastes. The script was published in Granta's 1993 "Best Young English Novelists" issue owing to its novella-like quality (Ishiguro, 1993).

On writing *The Gourmet*, Ishiguro has drawn heavily upon his own experience with homeless people in West London during Margaret Thatcher's neoliberal regime, which was deemed responsible for extreme poverty and homelessness in the 1980s (Childs, 2012).

The Gourmet has been widely regarded as a satirical depiction of hunger with gothic influences, yet it can also be approached from a psychological angle. The opening scene depicts a dark night in 1904, with two cloaked men crossing a churchyard while "carrying something heavy between them" (Ishiguro, 1993, p. 92). The script is not supposed to belong to a horror movie and yet the scene contains macabre elements like a crypt, a murder and a doorway that, both in 1908 and almost eighty years later, is doorless, "black and ominous, like the gateway to another world" (Ishiguro, 1993, p. 92).

In the second scene, the action takes place in 1985, when the rich gastronome Manley Kingston leaves Heathrow Airport in his Rolls Royce. "Manley is in his fifties; large, formidable British upper-class presence. He wears a habitual expression of disdain and boredom, but there is also a maverick streak in his face–a hint of the decadent or criminal" (Ishiguro, 1993, p. 93).

On his way back home, Manley stops at a luxury house, where he encounters a gathering of international epicures while waiting for the master of the house, Dr Grosvenor, played by David Rappaport. Ishiguro indicates that the fifty-five-year-old man, "elegant, assured, but also with an air of depravity […] may be a wealthy doctor in private practice who performs shady operations" (Ishiguro, 1993, p. 94). Dr Grosvenor is about to help Manley fulfil his most ardent desire: to eat a ghost. He provides him both with useful information about the most suitable time and location for capturing it and with the most grotesque arsenal needed for hunting and cooking such an unearthly meal (Matthews and Groes, 2010).

Manley's willingness to taste anything, even what is not considered culturally and socially edible, is indirectly compared by Dr Grosvenor to our ancestors' survival instincts:

> In the primitive world, man was obliged to go out into an unknown wilderness and discover food. He was unbound then by prejudices about what did and did not comprise the edible. […] You, Mr Kingston, are one of the few in modern times worthy of our great pioneers in taste (p. 94).

Later in the script, on his way to the church from the first scene, Manley reminisces about the time when he was presented with the prospect of finally satisfying his epicurean hunger: He was getting bored at an outlandish gastronomic party where human flesh was allegedly being served when a Latin American gastronome approached him. Rossi, played by Alec Mango in the movie, was willing to share his ultimate experience – the eating of a spectre – with Manley, whom he considered the rightful heir to his greatest achievement. Instead of manifesting his surprise at the existence of ghosts, Manley was "stunned […] inspired and humiliated" and he could not help asking, "What–er–did it taste like" (p. 105)? Rossi's answer had Manley hooked for good: "[…] the taste is exquisite. […] Like nothing on earth" (p. 105).

Extreme boredom leads to emotional eating and so does extreme hunger for that matter.

Spiritual assistance with enduring hunger is mocked through the old and modern versions of a quote from St. Mathew's gospel, written on the gate of the London church that has been offering charity since 1908:

I was hungered and ye gave me meat	I was hungry and you gave me food
I was thirsty and ye gave me drink	I was thirsty and you gave me drink
I was a stranger and ye took me in (p. 92).	I was a stranger and you welcomed me (p. 106).

Ishiguro uses a London church as the headquarters of both types of emotional eating. On the one hand, the tramps gather outside it, consumed by physical hunger; on the other hand,

Manley goes there in his Rolls Royce to try the only thing his palate has never tasted: the spectral flesh of a ghost.

Manley is not just a fêted foodie; he is regarded by the other food aficionados as one of the few "great pioneers in taste" (Ishiguro, 1993, p. 94). He has tasted everything on earth, his culinary quest culminating with the rotting contents of a rubbish bin and the "soft, pinkish, bloody" texture of what Ishiguro indicates to be human flesh. So the only thing left to do to reach the next level and quench his unbearable boredom is to eat that which is "not of this earth" (Ishiguro, 1993, p. 105).

Manley does not eat too much; he eats too outlandishly, out of sheer boredom. His image as a hunter is grotesquely eccentric, with his trapping and cooking utensils strapped to his back or wrapped around his torso, among which a butterfly net, a stove, a wok, a saucepan, a candle and some strange powder. This is a deliberate, not an impulsive case of emotional eating, the worst of its kind (Ishiguro, 1993, p. 101).

The hedonistic obsession with food of the British upper-class takes the concept of *Homo Consumericus*[8] (Saad, 2007) to an unearthly extreme in Manley's case. For him, food is more than recreation, more than drug-like addiction; food is the antidote to the boredom of being too rich and free. His continual chase after the perfect antidote is anything but pitiful: Ishiguro makes sure that the reader and the viewer will not fall into the trap of sympathising with Manley, by creating the bleak image in the church's crypt, of the ever-hungry tramps eating their charity dinner: a roll and a beaker of beans.

Manley confesses to his driver: "I've been working on this project now for nine years. Three times before, I've tried and failed. But this time, I've covered every eventuality" (Ishiguro, 1993, p. 104). So it is that his boredom and impatience are on the verge of driving him insane. His palate has long since wearied of the traditional meaning of culinary exoticism. He must eat the ghost to stop this desperate form of emotional eating, or so he hopes at a subconscious level. The fact that the spirit belongs to a poor man who was killed eighty years ago because "some human organs were needed for research purposes" does not seem to bother the rich man at all. Yet the sordid theme seemed to bother Ishiguro, so much so that he wrote *Never Let Me Go*[9] some years later (Ishiguro, 2005).

While waiting to enter the church along with the vagrants cueing for food and shelter, Manley is unwillingly drawn into conversation with a down-and-out traveller. "David, thirty, wears a corduroy jacket and a shirt – which appear for the moment to be in reasonable condition – and ill-fitting trousers with wide flares. Like others in the queue, he looks bored and tired. To a large extent, he is affecting these looks to disguise his feeling uncomfortable and undignified" (Ishiguro, 1993, p. 106). It is this hapless man, played by Mick Ford in the movie, that Manley later teams up with, tricking him with his double talk about hunger into becoming his accomplice in his ruthless hunt:

> MANLEY: […] if you'd be so good as to assist me. I'm very hungry. […]
>
> David turns over to go back to sleep. But he remembers the times he has been hungry. Almost immediately, he looks up again at Manley, sighs and begins to get up.
>
> DAVID: There won't be anything left anyway (p. 106).

The young pauper automatically becomes the representative of emotional eating triggered by real hunger and class inequality, so all the verbal exchanges between the two men, one genuinely hungry, the other selfishly greedy, can only create a two-pole image of emotional

[8] The term will be further explained in the subchapter "Emotional eating as an example of consumer behaviour".

[9] The 2005 novel is a science fiction dystopia about cloning, human organ harvesting, recollection and love.

eating:

> DAVID: [Nodding sympathetically again.] […] So what you doing back in London then?
>
> MANLEY: [Shrugs.] Usual reason I go anywhere. Hunger.
>
> DAVID: Yeah well. You got to eat (p. 107).

A sort of climax is reached when they both speak about their experience of eating from rubbish bins. Manley's scholarly answer indicates that he has tried the contents of a refuse bin like the true artist that he considers himself to be: "An interesting process takes place inside a refuse bin. A kind of stewing pot of randomness. The chance factor often produces recipes far beyond the capabilities of ordinary imaginations" (p. 111).

> While waiting for the ghost to appear, Manley decides to disclose that on that very night eight years ago a pauper was killed right in that vestry. With no difficulty, David connects the dots, finally understanding Manley's true purpose of needing his assistance and jacket:
>
> DAVID: I get it. We're waiting for his ghost to appear.
>
> MANLEY: Very good. And I am informed it is a very reliable ghost, as ghosts go.
>
> DAVID: And you're going to . . .
>
> MANLEY: Precisely. […] And I am now quite hungry (p. 118).

Instead of the ghost he has been waiting for in the vestry, Manley comes face-to-face with a middle-aged tramp, whose small, friendly, cheeky-faced appearance then turns into that of "a dead man – staring, horror-struck, blood on the lips" (p. 121). The pauper must have really upset the Universe if his fate is to be murdered both as a human being and as a spectre. The moment Manley cooks some parts of it in the wok he has been carrying on his back under his coat is quite memorable:

> Manley's face. Impatient and lecherous, looking down at what he is cooking. He smiles in anticipation. Manley puts spices into the wok. Hissing and sizzling sounds issue from the wok. We do not yet see the contents of the wok. David, eyes blank, is still staring towards Manley (p. 123).

The result of this long-expected experience is more of a failed gratification than an anti-climax. Manley is violently vomiting his guts out the next morning, being mistaken for a regular drunk while he is waiting for his Rolls Royce to appear halfway down the underpass of a bridge, where some down-and-outs have their cardboard home. However sick he feels after his ultimate gustatory misadventure, Manley "looks at the homeless man with disdain. Then with dignity" he says "I was hungry. I ate. Now I am sick." Once again, the verbal exchange covers both poles of emotional eating:

> HOMELESS MAN: Well. We all get hungry, don't we?
>
> MANLEY: You have no idea what real hunger is (p. 124).

Unfortunately, it is the other way around, but Manley is too sick to ever realise that. He is not ill from ghost meat poisoning, but pathologically blind to the hunger of the poor he keeps encountering, to whose poverty his immoral hunger contributes directly and indirectly. Unsurprisingly enough, nobody is treated any better by the pompous eccentric. His abstracted grunt *Mmm* is a recurring way of ignoring everyone, from his fellow epicures to his wife Winnie or his poker-faced driver Carter, whose name he never deigns to get right. The unique experience of tasting something not of this earth proves to be "not quite as extraordinary as one may have expected." Manley himself is forced to admit that it was "a disappointment all in all" (p. 126).

Has the gastronome Rossi lied about the exquisite taste of such an unearthly dish? Manley will never find out. The curse of culinary non-satiety will always follow him. No exotic food will ever alleviate the hunger of the self-indulgent gastronome, who is already turning

his current disappointment into a new action plan. His next destination: Iceland. His purpose is to spend all of his life globally searching for yet-undiscovered foods, never to be satisfied with what dishes and tastes he can find (Ishiguro, 1993, p. 126).

But what does the meat of a reliable ghost really taste like? Besides Manley's emotional and physical reaction to it, the reader will receive the same answer from a hungry man. Despite its "powerful and awful" smell, David tries to taste what is left in the wok at the very end of the script, but instead he "grimaces and flings the piece of meat away. Then he sighs again and stares emptily in front of him" (p. 127). Hunger, even starvation, does not seem enough to overcome the unnatural stench and taste of that which should not be eaten.

"Life gets so dreary once you've tasted its more obvious offerings" says Manley in his Rolls Royce while planning for his next culinary adventure (p. 126). "You'll know better next time. The stomach is *always* going to catch up with you" says David some time before while thinking of his unstable future (p. 103). The former is consumed with having eaten anything, desperate to find the most unheard-of delights; the latter, by real hunger, desperate not to miss his chance to find the next edible garbage.

5. A Macroeconomic Angle on Emotional Eating

John Maynard Keynes, the founder of modern macroeconomics, states that "animal spirits", or the "spontaneous urge to action rather than inaction", can daily influence human behaviour (Keynes, 2016, p.175). He also stresses the major importance of the decision-making process, postulating that "human decisions affect the future, whether personal or political or economic" and they "cannot depend on strict mathematical expectation, since the bases for making such calculations does not exist". It is therefore "our innate urge to activity which makes the wheels go around, our rational selves choosing between the alternatives as best we are able, calculating where we can, but often falling back for our motive on whim or sentiment or chance" (p. 66). Keynes' words come to prove, once again, that replacing detrimental eating behaviour with its health-promoting counterpart has never been a smooth and easy process.

In a postmodern world, the multitude will always decide. Antonio Negri and Michael Hardt (2000) believe the same in their book *Empire*: The multitude will create new realities such as the earthly city, global citizenship, and social wages. The empire (completely different from imperialism) will have no centre of power and no fixed boundaries or barriers. It will be a form of decentralised and deterritorialised power that will slowly but surely encompass the entire physical space, creating a reality of open borders. The movement of the masses (the multitude) will lead to the designation of new spaces and residences. Free movement, beyond borders, without passports or other types of legal documents, will give rise to a new concept of space. New types of geographies will appear; cities will become more fluid, allowing free movement; temporary residences will always be legal.

According to Negri and Hardt's imperial image, these are the real networks of an actively interconnected humanity. Social interaction is the foundation of all types of transactions, since personal harmony and balance can rarely be achieved without the help of others, economically or otherwise. Network complexity and macroeconomics may be modern concepts, yet they both stem from Adam Smith's "invisible hand", and even farther back (Smith, 2009, p. 456).

However, globalisation has at least one major drawback – collective emotional eating –

since the massive economic and cultural exchange will surely lead to emotional consumption. The global food industry will invariably aim at profitable fads, so-called super foods and dietary miracles that lead to even more profitable food shows on every media channel possible nowadays. The simple purpose of food, of nourishing the body, may soon be completely forgotten. It is not unhealthy to have a passion for food, yet it can become so if both the individual and the multitude will pay little to no attention to its provenance, not caring at all about the working conditions of the farmers and all the other labourers who bring food wherever it is needed. Showing a little concern for the invisible – and most times underpaid – working chain can help heal, in time, emotional eating both at the individual and collective level.

Another matter of great concern caused by globalisation is the ever-increasing influence of two factors – peer pressure and perceived social norms – on consumers' eating behaviour. Since food is so readily available nowadays, the survival reasons for eating have been replaced with hedonic purposes. A recent study shows that women are more sensitive to high-energy foods both behaviourally and neurologically (Manippa et al., 2017). Another study shows that men and younger adults are less interested in healthy eating than women and older adults (Naughton et al., 2015).

Consumers' social life and culture can definitely influence their food choices and decisions based on emotional cues. According to Kotler (2000), there are three different social groups:

- Reference groups: people consumers want to identify with
- Affiliate groups: family and closest friends
- Paragon groups: consumers' groups of choice

Social factors are highly correlated with cultural factors such as historical values, traditions, customs, rituals, or symbols. Sociocultural factors can thus be linked to what the economist Robert Shiller's coined as narrative economy: "Narratives are human constructs that are mixtures of fact and emotion and human interest and other extraneous detail that form an impression on the human mind." They "have the ability to produce social norms that partially govern our activities, including our economic actions" (Shiller, 2017, p. 1). In the same vein, Ariely (2008) refers to social norms as "friendly requests that people make of one another […] wrapped up in our social nature and our need for community" (qtd. in Sowers, 2017).

Good collective changes should be founded on consumers' continued desire to fit in, as a positive aspect of the social conformity bias. Consumers treasure their individualities yet, at the same time, they want to belong to groups with the same set of values, beliefs and behavioural patterns. Whether it shapes itself as peer pressure or remains a subconscious urge to socialise, social conformity underlies all great changes in the course of history, be they cooperative or conflictual (Bond, 2005). This comes to support the findings of three studies spanning the period between 2008 and 2016, which indicate that the health burden determined by eating disorders is still growing worldwide due to the social implications of globalisation in high-income countries while scaling up risk in low- and middle-income teenage population (Meyer and Gast, 2008; Shomaker and Furman, 2009; Gerbasi et al., 2014; Erskine et al., 2016).

By using a multivariable linear regression model and multiple regression analyses or by exploring the 2013 findings of the Global Burden of Disease Study (GBD), the studies measured peer influence and sociocultural norms that triggered disordered eating in adolescent population more prone to the effects of globalisation. The self-reported scores of the Eating Disorder Examination Questionnaire (EDEQ), the Inventory of Peer Influence

on Eating Concerns (IPIEC) and the Eating Disorder Inventory (EDI), used in the studies, indicated that there was a statistically significant correlation between sociocultural norms and teenagers' eating disorders such as anorexia nervosa and bulimia nervosa. By extension, all age groups could be exposed to emotional food choices and eating frequencies due to peer pressure along with the need to belong to groups, especially in underdeveloped countries that take their cues from advanced economic models, at least at a formal level. That can explain why Global Burden of Disease Study data still indicate a major increase in the health burden associated with eating disorders as compared with other forms of social and individual dysfunctions.

6. Emotional Eating as an Example of Consumer Behaviour

The current study consistently uses the term consumers when referring to emotional eaters and beyond, because all human beings are engaged in the consumption of both edible and non-edible products on a regular basis. Studying consumers' behavioural patterns has always been of great interest for researchers, marketers and organisations so that they can determine and satisfy humans' needs and wants at all times. However, sensible consumption and production can regulate the compulsive nature of modern demand and supply, leading to a more sustainable facet of human existence.

The neologisms *Homo Consumericus* and *Homo Consumens* mock the Latin terms *Homo sapiens* and *Homo erectus* in order to emphasise consumerism or mass consumption as important traits of mankind, stemming as they do from Darwin's principles of survival and evolution of species: survival, mating, kin selection and reciprocity. The term *Homo Consumericus* has been used by many social scientists, especially by the evolutionary behavioural scientist Gad Saad in his interdisciplinary work *The Evolutionary Bases of Consumption* (2007), where he views all daily experiences as mainly consummatory in nature. The term is further explained in a later book called *The Consuming Instinct* (2011), which emphasises, among other things, the unpredictability and bounded rationality of the modern-day consumer. The term *Homo Consumens* was coined by the psychologist and sociologist Erich Fromm in his book *Socialist Humanism* (1965), where he drew attention upon what he called the collective pathology of consuming, which exceeded by far humans' capacity of producing stuff (Durkin, 2014).

These new approaches towards the social and economic implications of transactions can help better explain the recurrent nature of emotional eating in relation to the individual and collective decision-making processes involved in the comforting nature of buying certain foods. Consumers' needs and wants influence directly their willingness to pay for their compulsive eating, being determined, in turn, by what Philip Kotler names the Black Box – that is to say, consumers' cognition, emotion and the rest of their mental environment (2004). According to Preston et al. (2014), a unified understanding of the consumption process, beneficial to both science and society, can be achieved only through an interdisciplinary approach, which consumer behaviour mainly does by studying consumers' way of thinking, feeling and behaving. If oriented more towards eating disorders, studies in consumer behaviour and neuromarketing could throw more light on the psychology of emotional eaters, further clarifying the neural causes and implications of compulsive food choices, with special focus on preferences, rewards, memory and emotions.

These pandemic times have exponentially increased consumers' proneness to emotional

eating due to lockdown fatigue while simultaneously urging them to eat sensibly in order to strengthen their immune systems in the fight against the coronavirus and its mutations; the economic effects of quarantine can therefore prove that emotional eating can be consciously prevented through the fast-growing phenomenon of green marketing, which is the environmentally-friendly selling and buying of products and services. Since everything is interconnected, producers and consumers' care for environment, through the use of non-toxic, recycled and renewable materials along with the sensible consumption of healthy foods, can raise individual and public awareness of the long-term consequences of overconsumption (Ottman, 1992). Being conscious of setting the planet and mankind's survival at risk can "accelerate the transformation towards a climate- and nature-positive economy," highly promoted by His Royal Highness the Prince of Wales, who "has established The Circular Bioeconomy Alliance. The Alliance activities are guided by a 10-point Action Plan, co-created by a multi-stakeholder coalition with the goal to place nature back" at the core of global economy (Palahi and Adams, 2020).

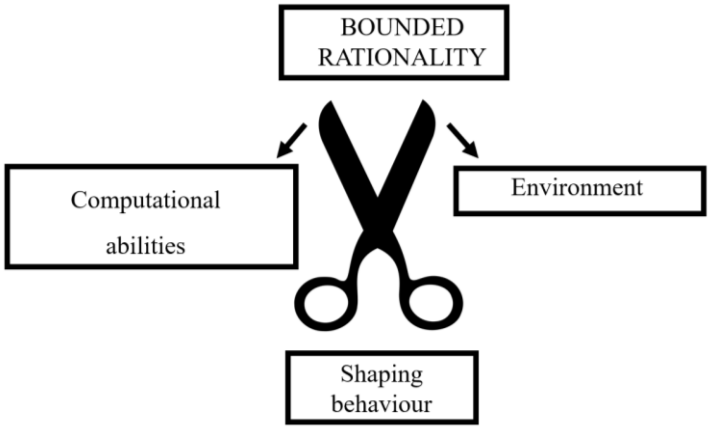
7. A Behavioural-Economic and Neuroscientific Approach to Emotional Eating

Consumers under unbounded rationality, if there are any, will invariably be able to maximise their subjective expected utility at all times. Thus, they will have access to all information available, know all potential consequences and ramifications of their actions, and unemotionally choose the most satisfactory alternative or option all the time. For instance, to calculate their personal expected utility for overcoming emotional eating on a daily basis, they should first discover all the possible outcomes of their potential decision always to eat sensibly; then they should determine the quantitative probabilities of all these outcomes, estimate their subjective utility, multiply every utility by the probability associated with it and then find out the sum of all these numbers. The procedure should then be repeated for whether they decide not to take this course of action so that, in the end, they must choose the situation that has the highest total expected utility.

However, this laborious endeavour seems highly unrealistic, as human beings are far from being able to make optimal choices and decisions all the time: Behavioural research has shown more than once that emotion prevails over reason in all the manifestations of daily life. The father figures of behavioural economics, Tversky and Kahneman (1974) have emphasised the importance of the brain sciences in connection with the decision-making process, urging that all economic and financial structures should take psychological realities such as biases and heuristics into account. Their prospect theory posits that consumers are risk-averse only in relation to gains, and risk-seekers when they have to face losses. Therefore, thinking in terms of gains and losses will help humans deal better with their poor computational abilities, as well as the constraints of time and knowledge they have to face on a daily basis. Thus, while traditional economics sees people as risk-averse at all times, if they cannot see acceptable advantages for taking risks, the phenomenon of loss aversion, connected with the prospect theory, proves that people are ready to take risks in order to avoid probable losses. For example, an overweight consumer may start to risk overeating only healthy foods because the disutility of losing their health in the long run is definitely larger than the utility of compulsively eating tasty junk food for instant gratification. This intermediary step towards completely overcoming emotional eating is far better than no step at all.

Richard Thaler (2016), another founder of behavioural economics, has also acknowledged that most consumers are emotional, irrational and prone to error, behaving in contrast to the maximisation of their levels of wealth and income. According to the economist and cognitive psychologist Herbert Simon, humans are all *satisfiers* rather than *maximisers*, as they usually appeal to intuitive decision-making procedures in order to attain economic well-being, as well as overall health.

Figure 4. Scissors-shaped rationality

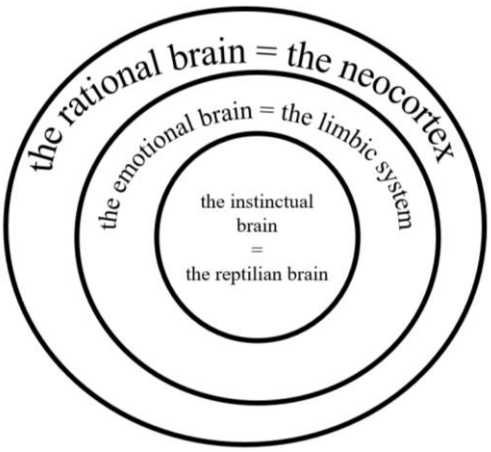


Source: Author's conceptualisation according to Herbert Simon's theories

This image of *Homo Economicus*, more realistic as it is, results from what Simon coined as bounded and procedural rationality, the former being part of the latter. Bounded rationality therefore creates the image of a behaviour-shaping pair of scissors, one blade representing consumers' computational abilities, the other, the environment in all its daily manifestations (Simon 2008).

Capturing images of the cerebral activity in order to show how the brain works and how people are neurologically involved in daily decision-making is one of the major breakthroughs of these postmodern times.

Figure 5. The three brains



Source: Author's conceptualisation in accordance with Paul D. MacLean's theories

There are many divisions of the physical brain, according to anatomy and neurosciences. However, the Triune Brain is especially important in better understanding the highly intuitive nature of humans' preferences, choices, decisions and actions: the new brain, the

middle brain and the reptilian brain, corresponding to the neocortex, the limbic system and the reptilian complex. The three brain areas are also called (1) the rational brain, (2) the emotional brain and (3) the instinctual brain, therefore it can be posited that the first brain thinks, the second brain feels while the third (old) brain decides (MacLean, 1990).

This division best highlights the dichotomy proposed by Daniel Kahneman (2011) between the automatic brain (System 1 of thinking) and the reflective brain (System 2 of thinking). System 1 is intuitive, automatic, primary and instinctive while System 2 is effortful, focused and slower, being "our conscious self, the part of us that has reason and beliefs" (p. 16). "System 1 is, in truth, the dominant system. As a rapid process of thinking, System 1 will inevitably make mistakes now and then, in which case System 2 will monitor and control the thoughts and actions of System 1 by proposing certain behaviours" (Kahneman, 2011, p. 33).

In the light of these scientific findings, only the continuous cooperation between intuition (System 1) and reason (System 2), through adaptive heuristics and biases, can be the true pathway to balanced eating, since studies have already shown that as much as 80% of brain activity (grey matter) is involved in subconscious thinking while the remaining 20% deals with conscious mental activity. This may still come as a shock, but it has already been scientifically proved that all vital bodily activities are regulated by the subconscious mind: heartbeat, lung activity, breathing process, digestive functions, glandular secretions – basically everything (Thompson, 2011).

According to the philosopher, poet and social critic Søren Kierkegaard (1960), "life can only be understood backwards but it must be lived forwards" (p. 188). His words come to support the behavioural-economic and neuroscientific concepts in their joint attempt to get consumers out of the rat-race mode: Perfect decisions can never be made as long as there are so many choices at each moment, which leads to choice overload and decision fatigue[10]. This is particularly true when the whole world is seen as an ever-growing accumulation of information. According to Moore's Law[11], information doubles every eighteen months or so, rendering everything obsolete every eighteen months. These findings alone can explain emotional eating as an everyday normality that cannot be unilaterally tackled in a world that fails to display all the information available at all times, even in this highly technological period.

Heuristics can thus be regarded as practical instruments bound to simplify the decision-making process in environments that exhibit uncertainty, limited information and bounded rationality (Gigerenzer and Brighton, 2009). On the other hand, they can be viewed as errors of judgement that indicate human irrationality, leading to biases in the decision-making process (Tversky and Kahneman, 1974). The human mind is both unpredictable and repetitive, through the continuous relationship between senses, perceptions, emotions and cognition. Therefore, heuristics cannot be regarded as separate levels of the mind, but as inherent instruments of both the subconscious and conscious levels:

Intuition <= Heuristics => Reason

One of the biases linked to failing to overcome emotional eating is the confirmation bias. Once emotional eaters have formed the belief that they can't help succumbing to food

[10] It refers to the psychological phenomenon of making poorer decisions after a long process of decision making (Tierney, 2011).

[11] Moore's Law is actually an observation made about the power of computers by the Intel cofounder Gordon E. Moore in an article published in 1965 in Electronics Magazine. According to Moore's observation, the processing power of computers doubles about every eighteen months, rendering all electronic devices more and more innovative and less and less expensive (Mollick, 2006).

temptations, they will consciously or unconsciously search for information and circumstances that confirm their belief while ignoring or rejecting anything that may prove them wrong. In other words, emotional eaters do everything in their power, most often at a subliminal level, to make their intuitive decision to overeat emotionally concur with their rational motivation for their failure to resist food temptations. Once they have chosen something under System 1 of thinking, they will want to prove themselves right after a reflective period, when reinforcing the same choice, under System 2 (Kahneman, 2011). However, this contradictory mental work usually leads to feelings of guilt and dissatisfaction subsequent to the process of consuming comfort food.

Given that the environment plays such a major role in shaping their choices, decisions and actions, emotional eaters can still find proper heuristics to avoid overeating rather than continually judging themselves for failing to exert their willpower in emotionally challenging situations.

8. A Behavioural-Change Model in Emotional Eating

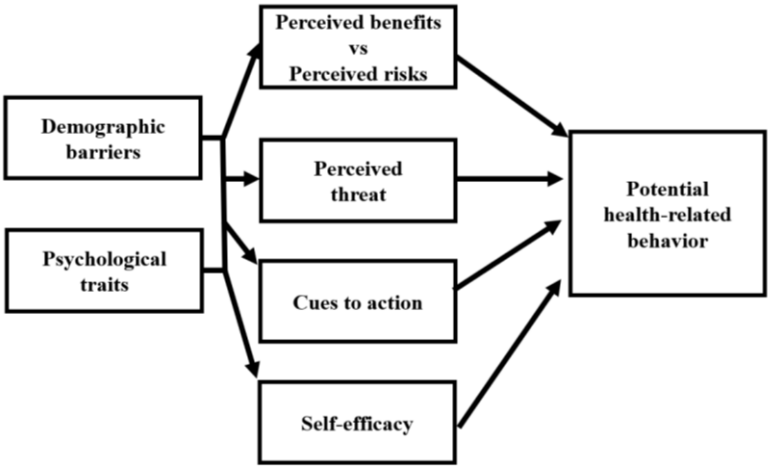
According to LaCaille et al. (2011), consumers' eating choices and decisions represent the interdependence of three major elements:

- Motivation
- Self-regulation
- Social environment

As such, the current study examines a particular behavioural-change theory that can best predict and explain consumers' decision to resort to emotional eating under stressful circumstances and to feel guilty whenever they fail to overcome their urge to overeat.

The health belief model (HBM) has been widely used in the research on health behaviour since the 1950s (Becker, 1974). Its main purpose is to show consumers the costs and benefits of a potential health decision in order to increase their knowledge and alter their attitudes and intentions in accordance with the tenets of their total well-being.

Figure 6. The health belief model



Source: Author's conceptualisation according to M. H. Becker's behavioural-change theory

The main concepts of HBM are based on the perception of threats (susceptibility and severity), benefits and obstacles along with the diverse stimuli to behavioural change (cue

to action) and the self-confidence of undertaking inspired action, also called self-efficacy (Glanz, 2001). In other words, consumers are willing to change their health behaviour, analysing the cost-benefit relation of such a decision, only if they find proper cues to take action in the face of a potential disease.

HBM can thus account for the many internal and external factors that influence consumers' decision to engage in emotional eating, being able to offer viable intervention designs to convince both asymptomatic emotional eaters and those prone to clinical risks to make healthier decisions (Glanz, 2001). Only by being fully aware of the imminence of sickness (perceived threat) could consumers take action, especially when the benefits of nutrition interventions are greater than the physical and mental obstacles to be encountered (net benefits).

9. A Game-Theoretical Understanding of Emotional Eating

Game theory can successfully explain human interaction and the decision-making process in all fields, from economics and political sciences to biology, military tactics and psychology. The science of game theory, pioneered by the mathematician John Nash in the 1950s, entails all types of strategic interactions involving at least two people, where the participants' payoffs influence each other. In other words, each player's gains or losses are influenced by the other players' choices and decisions (Barron, 2011). There are basically two types of social interaction: cooperation and competition. Emotional eating, be it collective or individual, is based on both of them: besides eating when hungry, people eat either to socialise or to prove themselves.

Although it is not yet the case, food will eventually be globally regarded as a public resource, jointly provided, non-excludable and non-competitive. In this way, famine and food waste will hopefully be stopped for good in the parts of the planet where they are still present. Therefore, food provision and consumption as a public good game will turn the contributing agents into more conscious providers and consumers, once they have understood that they unwillingly free-ride on their peers by individual and collective emotional eating.

The parable of the tragedy of the commons, related to the ecologist Garrett Hardin, refers to the medieval English farmers whose sheep grazed on free land, shared by everyone. However, once each farmer started thinking about maximising their own profits by adding more and more sheep, the resources of the shared land started to minimise to the point of destruction due to over-grazing (Surhone, 2010). Social and individual overeating may lead to the same situation by depleting the natural resources of the planet in not so distant a future. Responsible eaters will become conscious of their major role in managing food as a shared resource as soon as they have become aware of the collective effort behind bringing their foods of choice to their tables every single day.

10. A Mathematical View on Emotional Eating

For all the paramount importance of human interconnection and environmental consciousness, scientific studies indicate that human beings seem incapable of long-term cooperation, trust and fair exchange of goods and services (Surhone, 2010). One

mathematical explanation could be the chaos theory. The collective mind is such a sensitive system and, by extension, so is the entire physical world. Therefore, one individual mind can create the very change that will make the whole system behave uncontrollably. This phenomenon is called the butterfly effect: Small choices and decisions can always have large effects. A person's actions can influence the socio-economic and political advance of a country and, ultimately, of the whole world (Cambel, 1993). Since, besides water, there can be no other product than food that humans consume more frequently in order to survive, the act of substituting emotional hunger for physiological one can be regarded as an overt example of the butterfly effect.

11. Conclusion

Conventional economics regards consumers as rational, self-interested decision makers at all times, who can maximise their benefits while minimising their costs. Thus, according to the theory of unbounded rationality, consumers of all generations and races can maximise their expected utility for eating only when hungry by rationally forming their opinions and beliefs after considering all the information available about healthy eating.

This laborious decision-making process can only prove that there can be no such person as an ideal, completely informed transaction-making individual within a closed and perfectly balanced economic system. The reality has always proved otherwise, but only in recent times has economics been acknowledged as a living system, able to evolve and adapt through the bounded and ecological rationality of its agents (Simon, 2008).

All human beings use, consciously or unconsciously, heuristics and biases in their decision-making process (Ariely, 2008). They cannot verify all the information available in order to maximise their utility and make the best decisions all the time. They cannot have unlimited cognitive, communicative and temporal resources to check all the possibilities before making the decision to eat only when they are hungry. They are all *satisficers* by nature, so they should eventually accept that trying to be the opposite – maximisers – can only bring them more misery than the act of compulsive eating in the first place (Simon, 2008).

The purpose of the current research was to present emotional eating from multiple perspectives in order to signal that the world's welfare mainly stems from consumers' eating choices, decisions and actions. By acknowledging the inextricable relation between individual and collective dietary behaviour, consumers can become more aware of the role they each play in creating a new economic model – a circular bioeconomy – just by trying to eat sensibly and preserve their health even in emotionally challenging circumstances.

The standard intervention programs for improving weight loss results have not been effective in the long term and, while the mindfulness- and acceptance-based behavioural treatments have proved much more promising in preliminary research, it will take some time until they can be applied globally, let alone tailored efficiently to individual needs. As such, despite the constant dissemination of the scientific findings as well as the treatment results, a high percentage of the world's population is still overweight or obese, mainly due to overeating junk food in response to stress-induced feelings, hence the devastating effects of coronavirus worldwide.

Despite its prevalence amongst consumers of all ages, there are no other methods of identifying emotional eating than through self-report questionnaires, most of which have been named in this study. Besides quantitative research, further qualitative studies should be conducted on larger samples drawn from male and female population of all ages and races in order to provide an

accurate understanding of emotional eating behaviour. However, even a much larger variety of quantitative and qualitative methods of assessing emotional eating could yet prove ineffective given that this phenomenon still lacks an accurate definition that gives no room for subjective interpretation.

While previous research has mainly focused on the relationship between emotional eating and weight loss outcomes, an interdisciplinary approach to dietary behaviour could effectively assist consumers in managing their stress-induced emotions without resorting to compulsive eating. The current study thus attempted to provide a multifaceted perspective, integrating data from psychology, nutrition, willpower and self-control, literature, cultural studies, macroeconomics, consumer behaviour, behavioural economics and neurosciences, behavioural-change theories, game theory and mathematics, in the hope that this holistic construct will aid in the development of a multidisciplinary intervention to tackle all the health implications of this hard-to-define phenomenon. Furthermore, to the author's knowledge, it is the first time that emotional eating and the attempts to heal it have been presented as forms of classical and operant conditioning.

Emotional eating could thus be regarded as unnatural hunger driven by both negative and positive feelings whose internal and external causes require the collaboration of many disciplines to be accurately identified and explained. Furthermore, while the compulsive form of consuming food proves detrimental, physiological hunger could be regarded as a healthy form of emotional eating. Therefore, instead of denying their social nature, individuals should become aware that their eating behaviour will invariably be driven and accompanied by feelings. Future interventions could thus focus more on helping emotional eaters find creative ways to deal with chronic stress, especially when triggered by the main effects of globalisation: peer pressure and perceived social norms. While Global Burden of Disease Study data indicate that the health burden determined by eating disorders is still increasing in low- and middle-income countries as well as high-income population, research proves that avoiding and resisting everyday temptations can be the hardest decision to take in order to maintain a healthy lifestyle or to improve quality of life.

These pandemic times are the clearest indicative of how often human beings can use comfort food to cope with loneliness, boredom and sadness, which is not necessarily a sign of weak willpower (Al-Musharaf, 2020). On the contrary, it may indicate that human beings realise, consciously or unconsciously, that, apart from its nutritional benefits, food can play a major role in regulating emotional metabolism.

It is very unfortunate that in the most highly technologised era of mass communication there are still two economic extremes: consumers who suffer from dramatic lack of food and those who suffer from food boredom, as Kazuo Ishiguro points out in his allegorical play *The Gourmet*. All the same, this sadly enduring reality should not make humans feel guilty whenever they want to cook and eat something tasty along with their families and friends in order to celebrate special occasions and events.

Although social distancing is a must in these grim, virus-ridden times, humans can still find safe ways of sharing the creative and consuming aspects of their lives. Their endocrine systems will always be influenced by what, how and when they eat, so it is time they acknowledged this infallible truth of human nature – that food is the fuel of the body and ultimately of the human trinity: body-mind-soul.

All in all, emotional eating is just another way of showing the strengths and weaknesses of human physicality. Only by fully embracing their emotional selves can humans eventually develop a healthy relationship with food. That is to say, only by striking a happy medium between eating to nourish ourselves and eating to indulge ourselves can we all find

sustainable solutions to overcoming the detrimental effects of personal and global emotional eating.

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