



I can't eat that: The sociology behind the rise in food allergies and intolerances

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Abstract

This article focuses on the social and cultural aspects of the unprecedented and unparalleled proliferation of food-related allergies and intolerances. It thus aims to contribute to filling the theoretical lacunae in the current sociological approach to this fairly recent phenomenon. The article's framework is divided into four segments. First, the rise in food allergies is placed within the field of the social history and medicalization of allergies, and seeks to understand the phenomenon in the context of the industrialized modern world. The following section discusses how and why lay experts are increasingly dominating the food allergy-related discourse. Drawing on recent empirical data, it is further shown how food allergies rise along with a population's affluence and education. Third, the idiosyncrasies of food allergies and intolerances are addressed with respect to food consumption and its changing social implications. It is argued that individualization places less pressure on individuals to conform to broader social norms of food refusal, which offers the sufferers with a newly acquired sense of control over a random, scientified, and confounding food availability and provides a medium to covertly convey their educational and socioeconomic background. Lastly, the health belief model is applied in order to suggest a further potential explanation for the current increase in self-reported food allergies and intolerances.

Keywords

Food allergies, food intolerances, health belief model, medicalization, sociology of food consumption

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Introduction

Our world is ever more shaped by science. New technologies, a fast-paced informational environment and a growing sense of anonymity place swelling demands on individuals and societies to grasp, engage with and digest an expanding pool of information. In westernized societies, even our most natural and inborn habits such as eating and drinking have become *scientified*¹ by a growing urge to employ our accumulated informational and analytical skills. Equally scientific are our reactions to unbecoming food. We name them food allergies or food intolerances.

Recent research indicates that almost every fifth British citizen believes they suffer from either food allergy or food intolerance. Yet evidence suggests that the actual prevalence is far lower (Kummeling et al., 2009; Mackenzie and Venter, 2010; Venkataraman et al., 2012). Indeed, allergies are reported to affect solely one in 20 adults, and a slightly greater number of children (Schneider Chafen et al., 2010; Sicherer and Sampson, 2009). What is more, cases of life-threatening or lethal allergies are extremely scarce. In the past few years, a very small number of deaths have been proven to have been related to food allergies. Though receiving much media attention, there were approximately 64 deaths caused by food-provoked anaphylactic shock between 1992 and 2006 in the UK (Pumphrey and Gowland, 2007). A similar study conducted in China showed that from 1980 to 2007 six deaths were reported to have been caused by a so-called food-induced anaphylactic shock (Ji et al., 2009).² While it can be expected that cases of severe anaphylaxis remained unreported, the studies show that the extreme responses and the expansive media coverage are not consistent with the total of actual lethal cases.

Along with biomedicine's struggle to reach a consensus concerning the prevalence of, and the most valuable diagnostic methods to address food allergies, the question of their social roots and implications is gaining in urgency. Meanwhile, social scientists have argued for a social construction of the dominant definitions of food allergies and intolerances, the definitions of which are clearly subject to ongoing negotiation (Harrington et al., 2012; Huber, 2011; Nettleton et al., 2010). This development has triggered our interest in the phenomenon, questioning our attitude towards food (Glassner, 2007), examining the development of allergies to become the archetypal 'disease of civilization' (Jackson, 2007) and conceptualizing the social problems which arise with a food allergy or intolerance (Nettleton et al., 2010). Yet, above all, two particular questions remain puzzling: What accounts for the discrepancy between self-reported and medically diagnosed food allergies and which social and cultural aspects have led to the syndrome's unprecedented proliferation? The answers to these questions are of considerable relevance, for not only do most cases of (self-) reported food allergies lack scientific rationale, they also dilute the legitimacy of those individuals who do indeed suffer from the potentially life-threatening effects of the condition.

A modern malady

Examining the history of allergies both as a biomedical disorder and a social phenomenon reveals striking parallels to the emergence of a postmodern society. In his outstanding chronicle *Allergy: The History of a Modern Malady*, medical historian Mark Jackson

(2007) contends that whereas tuberculosis epitomized the conventional ailment of the first half of the 20th century, allergy is the archetypical disease of the 21st. Jackson's clear-cut and scholarly analysis of the allergy's transformation from a peripheral disease of the rich into a widespread malady of an entire population discloses important socio-logical, medical and economic consequences. Undoubtedly, the rise of chronic as opposed to infectious diseases, frequently referred to as *the epidemiologic transition*, has significantly transformed the domain of public health within the last century, initiating a wide variety of diversifications and conversions (Omran, 1971). While long-established practices of environmental protection and infection control persist, much consideration and emphasis is now placed on altering both social conditions affecting health and behavioural patterns which are putting individuals at risk of injury and illness (Coreil et al., 2001).

At the outset of the new millennium, allergies presented one of the five leading chronic diseases in America and Europe; and their causes are increasingly recognized as environmental (Bousquet et al., 2004; Shirey and Summer, 2000; Wright and Clough, 2007).³ The medical term *allergy* first surfaced in the early 20th century along with the advances in clinical practice and biomedical science. At the same time, the term took root beyond the medical world, quickly obtaining a dominant position in everyday language and modern culture. Soon a broad variety of modified biological reactivity was instantly cast under the umbrella of allergy. Similar to other relatively new and modern epidemics such as attention deficit hyperactivity disorder among children (Haber, 2003), obesity (Wright and Harwood, 2009), or work stress (Wainwright and Calnan, 2002), defining any form of uninvited reactivity as a medical disorder led to a reduction of individual and social responsibility. Meanwhile, medical expertise grew to be the vocation of particular individuals relying on scientific technics, and the public at large increasingly perceived the medical expert, and by implication, biomedicine per se, as the modern 'saviour of humanity' (Porter, 1997: 427). Doctors were seen as the undisputed authority, medical treatments, in turn, became the unchallenged remedies. Yet, whereas the medical profession remained unscrutinized for a long time, controversial portrayals of the medical trait were advanced in the mid-1970s. Famously, Michel Foucault's principle of the clinical gaze proposed that social control was masked within biomedical expertise, setting the care-seeker in a docile body trapped in a web of biomedical power and knowledge (Scambler and Higgs, 1998). Furthermore, it could be shown that the dramatic improvement of health standards in industrialized societies throughout the 19th century was fundamentally a result of public health measures (Porter, 1997).

In 1972, sociologist Irving Zola coined the term 'medicalization' to depict this very trend, namely the medical jurisdiction's tendency to envelope ever broader areas of the human experience. He notes that this continues many prior developments and that, indeed, psychiatry and public health in general have long been concerned with the management of society. He further argues that by increasingly interfering in social problems, professional medical authority 'is becoming a major institution of social control, nudging aside, if not incorporating, the more traditional institutions of religion and law' (1972: 487). With regard to allergies, this phenomenon is mirrored in the rapid application of the diagnosis to a broad collection of clinical conditions. Indeed, soon after the notion of allergy had been introduced, physicians such as Francis Hare (1905) started to explain

biological reactions to particular nutrients in immunological terms, implying that food allergies may form the underlying processes in various disorders such as migraine, asthma and mood disturbances.

Throughout the past century, the advance of allergies as a known and publicly accepted medical condition was mainly fostered by two factors. First, the term had become a linguistic commodity in modern culture, bearing miscellaneous cultural and scientific meanings. Whereas allergists strived to restrict the definition to immunologically induced hypersensitivity, common usage had already enlarged the frontiers of the term to include a broad range of psychological and physical conditions. In the 1960s, Milton Millman (1960), author of the book *Pardon My Sneeze: The Story of Allergy*, maintained that allergy had acquired a fluid and elastic connotation. 'The lay meaning of allergy in its colloquial form', stated Millman, 'has come to mean anything or anybody that irritates a person, physically or mentally' (1960: 3). These metaphorical ideas were integrated into more scientific reasonings. Most noticeably, both biomedical and lay interpretations repeatedly presented a remarkable tendency to presume that allergy is above all a disease of civilization. Yet, despite diluting or mitigating the biomedical interpretation of the disorder, the metaphor generated in the cultural imaginary promoted the notion of allergies being a medical condition.

Second, the transformation of allergies from a fringe malady of the upper class to a widespread medical phenomenon can also be seen as a by-product of the rise of biomedicine to become a monopoly of knowledge and expertise. Nico Stehr (1994), for instance, proposed that modern society can be portrayed as a knowledge society with a growing reliance on expert knowledge. Within this structure, the expert adopts an authoritarian role in decision-making, rationalizing and obtaining public loyalty and confidence. This adds to the parallels between the development of allergies as a widely applied and accepted medical condition and the emergence of modernity. Giddens (1990) underlines this idea by asserting that modern society is held together by 'the cement of expert knowledge and trust in the solidity of expert knowledge' (1990: 89).

Yet, while the above exploration of the historical and sociological literature on the escalating medicalization of allergies has placed vast emphasis on biomedicine, food allergies take on a somewhat different complexion. As I argue later, the distinct and volatile notions of the condition do not map cleanly to rigid 'medicalizing' views. In the following section I explain how the sufferers have thus appropriated the biomedical jargon which originated alongside the increasing universal significance and value of non-food related allergies.

The new lay expert

Are the menaces truly imagined? What accounts for the exaggerated and unreasonable responses to such a harmless thing as food? A key to understanding the salience of these questions partly stems from the insecurities surrounding food allergies and their *real* threat. While traditional allergies (e.g. hay fever) have been on the biomedical agenda for some time now, food allergies have just recently been brought into the spotlight. At present, however, all licensed treatments merely target the symptoms of allergic reactions. The allergy itself remains untreated while the development of actual immunologic and

clinical tolerance continues to be a controversial therapeutic issue and remains an area of vigorous research (Jones and Burks, 2013). Likewise, interpretations of why food allergies are increasing orbit a wide array of explanations, be they genetic or environmental. The hygiene hypothesis (Rook, 2009), for instance, posits that in order to effectively respond to a range of bacteria and micro-organisms in later life our immune system must come into contact with a variety of micro-organisms and bacteria when developing at the infant stage. In view of today's hyperhygienic environments, most children may therefore develop a tendency towards allergy early on by virtue of not being exposed to enough bacteria. Most recently, researchers have thus been looking into how *Clostridia*, a common class of bacteria naturally found inside our digestive system, could potentially help prevent allergies or be used as a source of treatment (Stefka et al., 2014). Other explanations draw on the introduction of more allergenic foods such as peanuts, pineapple, etc. or the diminishing levels of nutrients such as omega 3 fatty acids, antioxidants, or vitamin D in our diets. The high quantities of certain allergenic foods traditionally consumed in some cultures, however, refute the former premise and experiments in which pregnant women were given supplements that did not wield a consistent effect reducing the allergy prevalence in children challenge the latter (Allergy UK, 2013). What all genetic and environmental explanations share is that, while at times controversial and at times plausible, they cannot possibly account alone for the staggering increase in food allergies of the past few decades. Moreover, when it comes to treatments, the prospects at this time essentially present the patient with one sole remedy: not to eat certain foods. In the meantime, the management of the condition consists of instructing patients on how to evade the relevant allergens, to identify early symptoms of the allergy, and to instigate the suitable emergency therapy (Sampson, 2004). What is more, literature on the subject lacks a consensus on the diagnostic approaches to even the most frequent conditions, thus rendering evidence for the prevalence of food allergy deeply limited (Schneider Chafen et al., 2010).

Consequently, many different actors – including foundations, government agencies, commerce and various agents both loosely and closely tied to the food industry – have seized on this scientific vacuum, either due to the charge food allergies place on the economy or the possible earnings they generate. As a case in point, the World Health Organization joined forces with the EU-funded project EuroPrevall in 2006 to enhance its knowledge of food allergies around the world. This occurred in collaboration with the recently launched International Food Safety Authorities Network to encourage national and international information exchange.

On the biomedical side, clinicians are increasingly confronted with patients believing they suffer from food allergies, whereupon the clinician's services can often merely be reactive. This mounting tension between democracy and expertise is nurtured by the diverse terminological understandings, as the diagnostic uncertainty of the concept is matched by terminological ambiguity. Indeed, the term food allergy bears different usages and meanings for different actors, all of which are medically, socially and culturally influenced. Equally, and as mentioned in the previous section, the broader label allergy has long since become a lifeless metaphor of clinical elusiveness and diffuse scope. This circumstance has left the sufferers with both untidy and ambiguous conceptions of the condition.

Whereas the biomedical approach to tackling the food allergy phenomenon remains a source of great controversy, establishing a scientific rationale for the treatment of food intolerance engenders even more difficulties. As mentioned before, the descriptions of the disorders are far from identical; rather they vary tremendously in their biomedical and popular usage (Hadley, 2006; Jackson, 2007). Within the present medical discourse, however, a consensus as to how a food allergy can be defined has been established. In a biomedical sense 'the term refers to an adverse immune response to a protein that the immune system does not recognize as safe' (Nettleton et al., 2010: 291). From this viewpoint, once the body is subjected to the antigen, the body develops antibodies, thus becoming sensitized to the antigen. Any following exposure initiates an immunological reaction, prompting the body to reject the antigen. The ensuing immune reaction generates a certain antibody, triggering the symptoms of typical allergic responses (Asero et al., 2007). Conversely, a food intolerance is a reaction that, notably, is not immunologically induced, bearing instead pharmacological, enzymatic, or unidentified causes. This purely biomedical distinction conveys important consequences for people suffering from either food allergies or intolerances; while the former enjoy more scientific legitimacy and are hence less inhibited to disturb social values and offend social norms, the latter are more prone to scrutiny and evaluation by others (Nettleton et al., 2010). In brief, allergy sufferers are less likely to be scrutinized and questioned due to the clinical authority their condition infers.

These findings suggests that in a slightly modified form, the term food allergy has been adopted by its sufferers with little scientific proof beyond their own convictions, as indicated by the high proportion of self-diagnosed allergies in previous studies. While the medicalization of the general term allergy has undoubtedly helped to render the condition a cognitive and a linguistic commodity, it also paved the way for the predominance of lay experts in the food allergy discourse. The ambiguity that pervades the condition has not hindered the development of a new biomedical imagination and since it has hitherto been proven impossible to arrive at any sure knowledge of the condition, the lay individual is at liberty to speculate, to imagine, to create. The sufferers apply biomedical terms to give their claims an air of legitimacy, thus undermining the virtual monopoly once held by the medical profession alone. As a result, they benefit from the circumstance that due to the historic rise of undisputed scientific knowledge, their claims can hardly be challenged by religion, politics, and even less so by daily experience. They become the new lay experts, which, though in itself a contradiction in terms, alludes to the circumstance that by appropriating biomedical language once limited to only a few specialized individuals their views and accounts have become the basic currency of the discourse. This is echoed in a recent study which indicates that the food allergy-related policy discussions are being dominated primarily by affected individuals and their advocates (Harrington et al., 2012). Thus, the validity of scientific investigation is simply implied rather than paraded. As the current status of food allergies demonstrates, their emergence is not necessarily a sign that a new biomedical view is turning into the dominant one. Rather, the medical profession is organized to respond opportunistically to the claims of self-reported sufferers.

The baseline results of the previously mentioned EuroPrevall study revealed a significant variation in prevalence of family allergies in the nine participating countries. As the

authors of the study state, 'self-reported adverse reactions to food were considerably more common in mothers from Germany (30%), Iceland, United Kingdom, and the Netherlands (all 20–22%) compared with those from Italy (11%), Lithuania, Greece, Poland, and Spain (all 5–8%)' (McBride et al., 2012: 230). What is striking in these divergences is that they form along individualistic and collectivistic lines and more affluent nations appear to have notably more incidents of adverse reactions. This is true not only in cases where the difference in individualism and affluence coincides with one of nationality. The same result is shown in the figures of national statistics. A recent Finnish case-control study demonstrated that lower socioeconomic status was associated with a decreased risk for cow milk allergy in infants up to two years (Metsälä et al., 2010).

This development is mirrored in previous studies which noted that suffering from self-reported food allergies and food intolerances has been reported to strongly correlate with one's socioeconomic class (Gupta et al., 2011; Kotz et al., 2011; Sheikh and Alves, 2001), to occur more among people with a higher education (Luccioli et al., 2008; Soost et al., 2009) and increase within groups who live in relatively small-sized households (Ege et al., 2008; Al-Hammadi et al., 2010).

Looking beyond European borders, it is expected that prevalence rates in emerging and developing countries such as Brazil, India and China are lower (Boye, 2012), though some studies have found a pattern similar to the aforementioned European results. Children born in mainland China, for instance, had fewer parent-reported food allergies than those native to Hong Kong, with prevalence rates among Hong Kong's pre-school children equalling that found in Caucasians (Leung et al., 2009). Correspondingly, expatriate children in Singapore and the Philippines showed a higher occurrence of peanut and tree nut allergies than their Asian counterparts (Shek et al., 2010). And in the United States, conversely, children born outside the country suffer from fewer allergies but the prevalence rises with prolonged residence (Silverberg et al., 2013).

As I argue in a following section, this development can be partially explained with the health belief model. First, however, I now outline the particularities of food allergies with respect to food consumption and the changing social implications. I thus maintain that besides the aforementioned characteristics that food allergies share with allergies in general, the social implications attached to food and eating play a crucial role when examining the discussed phenomenon.

Variety: Spice of life or a disturbance of identity?

Despite their different definitions, both food allergies and food intolerances share one fundamental similarity: their inherent and intimate connection to food and food consumption. By and large, humans enjoy a remarkable nutritional versatility. Biologically, our bodies demand a diet that caters to all its need and supplies energy and indispensable nutrients required for us to function. Other, biologically less significant, but equally important, factors are taste preferences and availability. Yet, there is a certain paradox in the way we choose our food. Whereas, on the one hand, we are interested in varying our nutrition – which has ultimately added to our capacity to inhabit a broad area of the planet – we are, on the other hand, cautious, as various possible food sources can be toxic or polluted. Labelled the *omnivores' paradox*, our interest in novel and assorted food

(*neophilia*) is equalized by our apprehension of new food sources (*neophobia*), particularly those with a different taste from foods previously defined harmless (Rozin, 1982). The paradox appears at three separate levels, namely pleasure vs displeasure (seeking out new flavours versus the fear of distasteful flavours), life vs death (to sustain our lives other organisms need to die) and ultimately health vs illness (warranting an assorted diet but avoiding toxins) (Beardsworth and Keil, 1997).

Today, we are confronted with an unparalleled food variety. The obvious reason is that, in a globalizing and technologically advanced world, food availability is surging. It might thus seem unsurprising that the rise in food allergies coincides with a rise in food availability. Kiwi allergy in the USA or peanut allergy in countries that have recently westernized their diet are cases in point (Hadley, 2006). While indeed over 170 foods have recently been reported to cause allergic reactions (Boyce et al., 2010), comparatively few foods account for the bulk of food allergies around the world (Sampson, 2004), which speaks against the premise of newly introduced diets causing the mainstay of allergic reactions.

The basic trouble with mere biological and biomedical explanations, however, is that they are at the same time too broad and too narrow. As with numerous other conditions, we tend to wear the biomedical categories like blinders that deny us a comprehensive understanding. In food-related discourses in particular, we often fail to take account of the social and symbolic meaning we attach to what we eat. As Peter Corrigan (1997) succinctly stated, 'we do not normally eat human flesh because it lacks nutritional value but because of what it means to us' (1997: 18). Indeed, what we eat, how we eat and why we eat bears potent sociological and cultural implications. Mary Douglas (2002 [1979]), a symbolic anthropologist by trade, wrote comprehensively on the cultural significance of consumption and maintained that what we eat helps not only to define us as social beings but additionally offers a sense of control and containment over a random and confusing world. Douglas claims that by classing certain types of foods into two categories, namely the ones we can consume and the ones we cannot, we produce meaning while the boundaries establish stability in our lives. Similarly, Fischler (1988) suggests that food is 'central to our sense of identity', as alterations in food consumption as well as the simultaneous reduction of social norms regulating eating patterns all add to 'the disturbance of modern identity' (1988: 288).

What is more, the meal presents a form of cultural consumption and a process of communication. When coming together to eat – thoughts are exchanged, discussions are held, values and ideas are shared. Food is constantly present and our attitude towards food repeatedly manifests itself in the daily symbolic ritual of food consumption. When talking about food while eating, food is the subject of our discussions and the object of our consumption, thus gaining a tremendous force. As opposed to other allergies, one is persistently reminded of the disorder. If one is allergic to bee stings, for instance, one's allergy is limited to a certain time (summer) and a certain place (outside); and others might never notice the ailment. In other words, someone allergic to bee stings is only confronted with their allergy if they are stung by a bee – which might never happen or can try to be avoided – whereas a food allergy sufferer must eat. Suffering from food allergies thus becomes an integral part of one's life, which is continuously shared with others joining the meal. The allergy is bound to come up in conversation, rendering both

the sufferer and the observer aware of the malady and thus creating a division into two groups.

When sociologist Pierre Bourdieu (1984 [1979]: 3) wrote that, 'the eye is a product of history reproduced by education', the same is true for one's palate. A growing body of research now suggests that the differences in the prevalence of food allergies are strongly linked to both one's educational level and social origin. This is compounded, but by no means alone nor even principally, by the fact that what we eat is becoming fundamentally reliant on the peculiarities of scientifically, and especially biomedically driven notions of nutrition. On the other hand, how our notions of food are adapted, produced and negotiated appears to be heavily stimulated by economic considerations. As the medicalization of other conditions has continually demonstrated, pharmaceutical companies and the producers of lifestyle drugs and foods are fully capable of reaping profits by controlling and highlighting a public view of a specific disease.

Just as with any other division of a population into two separate groups, the allergy and the resulting food avoidance – consciously and intentionally or not – seem to fulfil, in Bourdieu's terms a 'social function of legitimating social differences' (1984 [1979]: 7). Simply considering biological influences in our food avoidances disguises the fact that being able to choose one's food and which food to avoid is very much a sign of one's socioeconomic class and educational background. Mirroring the transition of non-food related allergies from a marginal disease of the more affluent into an increasingly pervasive malady, food allergies appear to rise along with a population's wealth and education.

Moreover, the transformation of modern societies into knowledge societies has left us in an ambiguous and uncertain zone, in which lay accounts blur with scientific facts. Without a doubt, throughout the past century, our attitude towards food has been powerfully influenced by a growing body of scientific and pseudoscientific literature and media coverage. The rationality behind our food consumption is increasingly contingent upon the calculability of scientifically advocated nutritional values. A never ending cycle of ever changing nutritional facts has left us in a grey dietary landscape, in which we have developed a peculiarly ambiguous relationship to our diets. Besides our bodily needs, taste preferences and availability, food is increasingly becoming inextricably and intimately linked to our sense of identity. What we need to eat is fusing to our diet's apparent and objectively verifiable nutritional value with only partially conscious and culturally influenced motivations of what we choose to eat. If it has been effectively said by Mary Douglas that choosing our food offers a sense of power over a confusing world, it is also true that ruling out certain foods based on scientific facts lets us regain control over the obscure world of food and nutrition and establish food sovereignty for ourselves. In the words of Margitta Worm, Professor for Immune Modulation of Allergic Diseases, 'an allergy is often used as an explanatory model for something that you otherwise cannot grasp ... and some people use a possible allergy to show how body-conscious they are' (Grossbongardt and Schnurr, 2014: 25).

What we eat is inherently part of who we are and fundamentally connected to the world we live in. What we avoid to eat, in turn, is a reaction to the unlimited choices and perceived threats of that confusing world. The more we know the more becomes avoidable. And we use that knowledge, scientifically sound or not, to justify our actions not as

choices but medical necessities, and thus both alleviate personal blame and avoid social scrutiny.

The dualism between a large public who hold limited biomedical knowledge and political processes which determine how medical innovations and scientific insights will be socially implemented is one of critical concern. It has given the science wars and the debate over scientific rationality some of its argumentative vehemence (Heise, 2004). Yet, while science used to be characterized by exclusivity, it can in some areas no longer sustain its once unchallenged authority and the discourse between the medical professionals and the lay public is becoming more and more dialogical. The high prevalence of self-reported food allergies is providing supporting proof for that development.

Belief in health

In the previous section I discussed the importance of the various facets of food consumption when assessing the food allergy phenomenon. Drawing on the *health belief model*, I now try to combine the aforementioned aspect to draw up a further explanation as to why self-reported food allergies have become increasingly prevalent.

In the 1950s, social psychologists developed the model to rationalize a puzzling health behaviour pattern: even with pervasive publicity, governments could merely persuade a small proportion of the population to participate in vital prevention and screening programmes (Rosenstock, 1974). As a result, the model was founded on four principal health beliefs which dominate people's perceptions of their distinctive connection to a disease or its prevention. Until today, it remains one of the most commonly applied theoretical frameworks within the public health domain, and I believe it to be valuable when assessing the rise in self-reported food allergies and intolerances. The first belief comprises 'an individual's perception of his or her personal susceptibility or vulnerability to a disease', whereas the second belief addresses the severity of the condition or disease. The third key belief is the 'perceived efficacy of the behavior in dealing with the condition' and the fourth component consists of the 'perceived barriers to adopting the behavior'. By and large, the model was conceived to improve interventions for health-related behaviour change (Quinn and Coreil, 2001: 78–80).

In terms of food allergies, individuals affected by the disorder need to alter – first and foremost – their eating behaviour. As opposed to other diseases where medications can either cure the malady or leastwise reduce the symptoms, biomedicine has not yet devised an effective and enforceable remedy for food allergies. The sufferer's inclination to adopt a behaviour change, namely avoiding certain foods, is therefore of paramount importance. With no actual treatments available, food prevention becomes the only choice.

An individual's perception of their susceptibility (first belief) to a food allergy is closely related to his or her social environment. Clearly, social contextual factors are crucially important when adopting and maintaining preventive health measures (Emmons, 2000), as seen with the higher prevalence of reported allergies in higher socio-economic populations, with higher education levels, and living in smaller-sized households. Also, the notion of vulnerability plays a vital role, influencing the general susceptibility to a disease (Fitzpatrick, 1986 [1982]). Since eating remains a social event,

we exchange ideas and values and have a great likelihood to meet someone suffering from food allergy or food intolerance at some point. As described before, a food allergy is by its nature inextricably linked to food and food consumption. One is therefore likely to be confronted with the topic. This mere circumstance raises one's awareness of the disorder and may correspondingly change one's perception of one's own susceptibility. This ties into the argument MacKendrick (2010) advances when addressing the emergence of precautionary consumption, which enables individuals to enact their own precaution standards and contributes to both a flourishing market for environmentally friendly goods and healthy foods and the ongoing individualization of responsibility and risk. As emergent individualization reduces pressure to conform to broader social norms, food refusal must not lead to isolation but can well be performed during a social meal. To the contrary, it might even be seen as a display of wealth, education, or healthy body consciousness. These developments disclose a paradox, namely that avoiding certain foods on the basis of medical inevitability grants us control and revokes it at the same time. In other words, while the growing medicalization of any form of uninvited bodily reactivity offers an illustration of greater sociality and less individualization, self-diagnosing one's allergies seems to be the very antithesis of that trend. In a sense, affected individuals thus tend to underplay their role and socioeconomic background when it comes to adverse reactions and risks while overvaluing their own contributions to their health. The illness must be externally induced, the healthy lifestyle, however, is consciously and freely chosen.

Another highly influential factor is the media coverage and the public measures taken to address the food allergy phenomenon. The exposure of certain issues in the mass media or other discourses is essential in order to be considered a public issue (Dearing and Rogers, 1996). Certainly, whether people believe they are prone to a certain food allergy or intolerance may differ greatly. Yet, as Bernhard Cohen (1963) already noted in the early 1960s, 'the press may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about' (1963: 13). Our mounting exposure to media coverage and literature related to food allergies, paired with the policy changes in the food retail industry and our continuous exposure to food and discussions about food within the context of food consumption thus highly affect our perception of our susceptibility to the disorder.

The abovementioned factors go hand in hand with the perceived severity of the condition (second health belief). Along with the heightened awareness of the potential threats of a food allergy, people start to perceive certain foods as more menacing. Accordingly, the term *severity* needs to be seen as a relative term, bearing different meanings to different people. With both the media and pharmaceutical companies increasingly featuring personal stories of *real* sufferers, they create an emotional impact on the readers (Moynihan and Cassels, 2005). Reading about lethal allergy cases and the personal stories behind them as well as meeting more people suffering from food allergies and intolerances thus alters our perception of the disease's severity. Indeed, a recent meta-analysis indicated that an individual's perception of a disorder's severity was strongly linked to compliance (DiMatteo et al., 2007). Hence, a desire to comply with the common approach towards food allergies – namely acknowledging them, getting tested and avoiding certain foods – is established.

The third health belief, the efficacy of the behaviour in dealing with the condition, reveals another crucial factor. Evidence on both management and prevention of food allergies is diffuse and limited, with the mainstay of therapy remaining elimination diets. While this circumstance increases the pressure on the biomedical sector, it leaves the care-seekers with a simple and effective remedy, namely avoiding the food causing the ailment. The lack of pharmaceutical products, thus, places emphasis on a behavioural change. Hence, biomedicine's inability to both cure and treat the chronic disease plaguing a rapidly growing percentage of the population has promoted the efficacy of food avoidance. At the same time, however, increasingly more allergy tests become available (Renault et al., 2007). The patients are thus empowered, as the diagnosis becomes medicalized, yet the treatment seems to lie entirely in the patients' responsibility. They decide what to eat and what to avoid, thus experiencing the effects hands-on. As a result, proving the efficacy of that behavioural change does not heavily rely on scientific findings but rather on the patients' perceived health improvement.

If an individual perceives his or her own susceptibility, the illness's severity and the efficacy of the behavioural change to be high, the last belief determines whether the preventative health measures will be adopted. Hence, the barriers preventing the sufferer from conducting the necessary behaviour change (fourth health belief) need to be considered. These barriers may be of a financial and cultural nature, including attitudes of family and peer members (Quinn and Coreil, 2001). Given the increasing food variety, having to relinquish a certain food does not heavily impact our food choice anymore. Even for people with wheat allergies and intolerances (which considering the vast amount of foods containing wheat poses a significant hardship) an increasing number of alternative products are now available (Mackenzie and Venter, 2010). The financial burden is a different matter, as commercially produced products for allergists tend to be more costly than regular products (Dumke, 2008). And so the question as to whether people can financially afford the costs entailed by the alternative food products arises. Evidently, a family with five children and a limited budget will be apprehensive to tailor the family's diet to suit one child's food allergy. A single person, on the other hand, will face fewer difficulties. Socioeconomic status and living circumstances are consequently two important social contextual factors with regard to the burdens of a potential behavioural change (Emmons, 2000), as seen with the higher allergy prevalence reported among more affluent and educated populations living in smaller-sized households. These findings are supported by Douglas's (2002 [1979]: 69) claim that food remains 'the class of goods on which the poor spend a larger part of their income than the rich'. Accordingly, the financial burden of a behavioural, food-related change is greater for people with a lower income. When we add the raised awareness of food allergies and the authoritative scientific discourse behind food allergies, the threshold to avoid certain foods is lowered even more (Nettleton et al., 2010).

Conclusion

In summary, the health belief model can be employed to better understand the increasing prevalence of reported food allergies. The continuous medicalization of the disorder, disproportional media and literature coverage and the daily exposure to the potential risk

have added to both people's perception of their own susceptibility and the disorder's severity. Increasing food choices due to rising affluence, and the decreasing costs of making those choices, facilitate the avoidance of certain foods. Furthermore, companies are providing more and more allergen-free merchandise. At the same time, the mediation of lay experiences has conflated a wide spectrum of responses from aversions to allergies while emergent individualization places less pressure on individuals to conform to broader social norms of food refusal. The act of food avoidance provides the sufferers with a newly acquired sense of control over a random and confounding food availability and thus establishes stability in the sufferers' lives and provides a medium to covertly convey their educational and socioeconomic background. Meanwhile, biomedicine's inability to offer a cure or treatment has prioritized individual over professional solutions and has opened fertile spaces where advocates and affected individuals invest their own priorities and interpretations and have thus come to dominate the discourse.

Discussing a health-related issue is, by its nature, a contentious matter. Yet, ultimately, the question is not whether food-related allergies and intolerances truly exist or whether occasionally the sufferers are at risk of severe consequences and sensible precautions should be observed. Rather, our focus should shift to incorporating the social and contextual influences behind the rise in food-related illnesses into the debate (Christakis, 2008). The abundance of scientific information not only allows us to reap obvious benefits but also creates knowledge deficits. The challenge we face is to understand how today's pseudoscientific accounts of affected individuals and their advocates are increasingly dominating the food-related discourse, in the process redrafting central understandings of information, disease and power through an outbreak of market-driven expertise and novel anxieties. We ought to be aware of how this development is gradually impacting even our most natural and inborn habits like our daily meal.

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Notes

1. While not frequently used, 'scientifaction' as a term refers to the conversion of a previously non-scientific entity into a scientific property. In a social science context it ought to be understood as 'the growing impact of scientific and technical knowledge on facts of social and intellectual life in modern society' (Böhme and Stehr, 1986: 4). Its earliest usage in the English language can be traced back to the mid-19th century in an essay by Joseph Green (1877) published in the music journal *The Musical Times and Singing Class Circular*. Later, it first appeared in social science journals such as the *Journal of Farm Economics* in 1938 and *The American Journal of Psychology* in 1942 (cited in Bond, 2007).
2. Compared to other sudden death causes among children, food allergies present 1/200 of the rates of unnatural deaths (poisoning, violence, etc.) and 1/5 of the rates of sudden asthma deaths and unnatural deaths (Wren, 2002).
3. The notion, however, that environmental and behavioural factors underlie people's health is neither new nor controversial. Interested in chronic diseases, the chemist and physician Thomas Beddoes (1802) strived to examine the causes and possible treatments of tuberculosis. While acknowledging the heightened vulnerability of the working population due to their

limited diet and poor labouring conditions, he also stressed that the middle and upper class were similarly prone to tuberculosis. In one of his numerous essays directed at the prevalence of the disease among the affluent classes, he stated, 'It will appear manifest that the devastations of consumption proceed from domestic mismanagement, and not from the inalterable dispositions of nature' (1802: 102).

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Author biography

Tobias Haeusermann is a PhD candidate and researcher at King's College, University of Cambridge. He received a BSc. from the University of Applied Sciences Zürich in 2009 and an MPhil. from Cambridge in 2011. His current research focuses primarily on the relationship between dementia and social exclusion. He is particularly interested in how medical knowledge and care practices are interpreted differently in distinct cultural settings. Beyond these specific research domains, Tobias is also interested in the sociology of health and illness, comparative ethnographic research and qualitative research methodologies.

Résumé

Cet article porte sur les aspects sociaux et culturels de l'extraordinaire prolifération d'allergies et d'intolérances alimentaires. Il vise ainsi à combler une lacune théorique dans l'approche sociologique actuelle de ce phénomène relativement récent. Cet article est divisé quatre parties. Tout d'abord, l'augmentation des allergies alimentaires est analysée du point de vue de l'histoire sociale et de la médicalisation des allergies et cherche à comprendre ce phénomène dans le contexte du monde industriel moderne. La section suivante examine comment et pourquoi les experts laïcs dominent de plus en plus le débat sur les allergies alimentaires. En se fondant sur des données empiriques récentes, ce travail analyse dans quelle mesure les allergies alimentaires augmentent avec la richesse et le niveau d'éducation de la population. La troisième partie met en perspective l'idiosyncrasie des intolérances et des allergies avec la consommation alimentaire et ses nouvelles implications sociales. L'auteur soutient que l'individualisation exerce moins de pression sur les personnes pour qu'elles se conforment à des normes sociales plus larges de refus de la nourriture. Cela procure aux personnes allergiques un sentiment nouveau et acquis de contrôle aléatoire, pseudoscientifique et confus de la disponibilité alimentaire et leur fournit un moyen de transmettre de manière invisible leur niveau d'éducation et leur milieu socioéconomique. Finalement, en appliquant le modèle de croyance à la santé, l'article suggère des explications supplémentaires à l'augmentation actuelle d'allergies et d'intolérances alimentaires autodéclarées.

Mots-clés

Allergies alimentaires, intolérances alimentaires, modèle de croyance à la santé, médicalisation, sociologie de la consommation alimentaire

Resumen

Este artículo se centra en los aspectos sociales y culturales de la proliferación sin precedentes de alergias e intolerancias alimentarias. Tiene como objetivo contribuir a

completar las lagunas teóricas en el enfoque sociológico actual sobre este fenómeno bastante reciente. El trabajo se divide en cuatro segmentos. En primer lugar, el aumento de las alergias a los alimentos se coloca dentro del campo de la historia social y la medicalización de las alergias, y trata de comprender el fenómeno en el contexto del mundo moderno industrializado. En la siguiente sección se explica cómo y por qué los expertos leigos dominan cada vez más el discurso relacionado con la alergia alimentaria. A partir de datos empíricos recientes, se muestra además cómo las alergias alimentarias aumentan junto con la opulencia y la educación de la población. En tercer lugar, la idiosincrasia de las alergias e intolerancias alimentarias se abordan con respecto al consumo de alimentos y su cambio de implicaciones sociales. Se argumenta que la individualización pone menos presión sobre los individuos para adaptarse a las normas sociales más amplias de rechazo de la alimentación, que proporciona a los enfermos un sentido recién adquirido de control sobre una disponibilidad de alimentos randómica, científicizada y confusa, mientras proporciona un medio para transmitir de manera encubierta su educación y los antecedentes socioeconómicos. Por último, el modelo de creencias de salud se aplica con el fin de sugerir una posible explicación adicional para el actual aumento de las alergias e intolerancias alimentarias.

Palabras clave

Alergias alimentarias, intolerancias alimentarias, modelo de creencias de salud, medicalización, sociología del consumo de alimentos