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Parsing the Peanut Panic: The Social Life of a Contested Food Allergy Epidemic

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Abstract

As medical reports over the last decade indicate that food allergies among children are on the rise, peanut allergies in particular have become a topic of intense social debate. While peanut allergies are potentially fatal, they affect very few children at the population level. Yet, peanut allergies are characterized in medical and popular literature as a rising "epidemic," and myriad and broad-based social responses have emerged to address peanut allergy risk in public spaces. This analysis compares medical literature to other textual sources, including media reports, legislation, and advocacy between 1980 and 2010 in order to examine how peanut allergies transformed from a rare medical malady into a contemporary public health problem. I argue that the peanut allergy epidemic was co-constructed through interactions between experts, publics, biomedical categories, and institutions, while social reactions to the putative epidemic expanded the sphere of surveillance and awareness of peanut allergy risk. The characterization of the peanut allergy problem as an epidemic was shaped by mobility across social sites, with both discursive and material effects.

Keywords

USA; peanut	allergies; i	food al	lergies; n	ew epide	emics; o	disease	classification	

Introduction

Peanut allergies represent charged terrain in medicine and in society. Deemed a population epidemic by some physicians and a case of population hysteria by others, peanut allergies have become the focus of much social activity and controversy. For instance, during the last decade, schools have banned peanut butter, segregated lunch tables based on the presence of peanuts, and evacuated school areas when peanuts have been found (Christakis, 2008; Kalb, 2007). This so-called peanut panic occurs in many educational or day care settings (Kilanowski et al., 2006) and has even extended to higher education in the form of nut-free dormitories (Ahmed, 2008). Airlines and baseball parks have instituted peanut-free zones; and, since legislation in the early 2000s, we can reliably expect in the U.S. to ascertain whether a processed food product came into contact with peanuts during manufacture, or whether it contains peanuts, by reading package labels. Signage indicating the same is now regularly posted in food vending spaces.

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Peanut allergies are commonly referred to as an "epidemic." A simple review of media headlines and medical titles over the past decade impresses the point that the population suffering from a peanut allergy has expanded. Contemporary books and articles aim to alert lay readers to the idea that an allergy to the peanut (a legume, not a nut) is indeed a troubling epidemic (Fraser, 2011), highlighting the vexing nature of its rise as a medical and public problem (Groopman, 2011). Yet, how big is the problem?

The U.S. National Center for Health Statistics states that the prevalence of reported food allergies among children rose 18% from 1997–2007 and that currently four out of every hundred children have a food allergy (Branum & Lukacs, 2008). Medical experts claim that cases of peanut allergies, in particular, doubled among children around the turn of the twenty-first century (Sicherer et al., 2003). However, the peanut allergy affects, at maximum estimates, a little over 1% of children in North America and the U.K. (Ben-Shoshan et al., 2010; Sicherer & Sampson, 2007). Children often outgrow other types of food allergies, but the peanut allergy appears to remain more stable and more severe than other food allergies (Sicherer & Sampson, 2010). Furthermore, although peanut allergies are not medically-contested in their extreme, or "true," form (an IgE-mediated allergic, or anaphylactic, reaction is a clear immunologic response that can lead to shock, difficulty in breathing, or death without an injection of epinephrine, or adrenaline), it is difficult to diagnose a true allergy, and this is something the medical establishment has wrestled with since the peanut allergy phenomenon began its rise.

Undoubtedly, people with peanut allergies or sensitivities have long existed; yet, the peanut allergy did not comprise a pronounced medical research agenda prior to the 1980s, nor did it appear in media headlines with much frequency. At that time, an allergy to peanuts was considered a rare malady and presumably not infused with as much social meaning as it is today. Some medical and cultural commentators call the current public responses to peanut allergies unnecessary and overstated (Broussard, 2008; Sanghavi, 2006), suggesting a case of "otherwise healthy people in a cascade of anxiety" (Christakis, 2008: a2880).

This paper examines how a scarce illness became considered a conspicuous public problem, even an epidemic, and the ways in which this process inflected the tenor of social responses to peanut allergies. I look at medical literature on, and social responses to, peanut allergies both before and after they were considered a significant public health issue. By using the characterization of the peanut allergy "epidemic" as an analytic pivot point, I examine the aggregation and deployment of new ideas about an emergent health and social problem. By also analyzing the social activity around the emergence of the peanut allergy as an epidemic phenomenon, I show how reactions to this putative epidemic expanded the sphere of surveillance and awareness of peanut allergy risk.

New Epidemics and the Production of Social Order

Health fears in developed countries now focus more on chronic disease than on infectious disease (Rosenberg, 2009). While health epidemics are still usually thought of in terms of contagious diseases, scholars have recently paid close attention to the social rise of non-communicable chronic diseases deemed "epidemics," such as autism, obesity, or breast cancer (see, e.g., Eyal et al., 2010; King & Bearman, 2011; Lantz & Booth, 1998; Paradis et al., n.d.; Saguy & Almeling, 2008).

Paradis and colleagues, in their analysis of the use of "epidemic" in the medical literature, reveal an "epidemic of epidemics" during the second half of the twentieth century; they argue that the invocation of the term "epidemic" has, over time, served as a rhetorical strategy to unearth symbolic struggles over disease attention (Paradis et al., n.d.). Boero (2007) uses the term "post-modern epidemics" for contemporary medicalized phenomena

that take on monikers of more "traditional epidemics;" as Rosenberg (1992: 278) writes, the term "epidemic" is today used in a multiplicity of ways, often in a metaphorical manner, "moving it further and further from its emotional roots in specific past events."

Much of this literature on the "new epidemics" focuses on the emergence of new disease categories and how classificatory schema are entrenched in institutional and methodological decisions about relevant criteria and diagnoses. In this paper, I take these insights from the history and sociology of medicine and blend them with the rich literature in science and technology studies (STS) that focuses on the complex interactions among experts, institutions, publics, and other entities in the emergence of novel disease categories and spheres of social awareness and surveillance. Taking such a theoretical and methodological approach can shed light on the social processes at play in the emergence of new epidemics, as these epidemics may reflect an intricate social course by which a disease classification emerges within an interactive relationship among medical categories, people, institutions, knowledge, and experts (Hacking, 1999; 2007). The creation of knowledge about epidemiology and the creation of new social practices in conjunction with this new knowledge may be seen as co-producing (Jasanoff, 2004) or co-constructing (Taylor, 1995) science and social order. How experts and publics interact vis-à-vis this new knowledge, and how scientific knowledge percolates in the public arena, is also of critical importance in the social life of new diseases or conditions that impact public health (Epstein, 1996; Wynne, 1996; Yearley, 1999). Scholars have shown that whenever new population health imperatives emerge, there are credibility struggles that permeate science and the public (e.g., Epstein, 1996; Hilgartner, 2000). As new ways of positioning and classifying diseases matter for what we come to know as "normal" (Bowker & Star, 1999: 326), there are potential material effects of the ways in which social processes, social practices, and disease categories interact.

Meanwhile, several social scientists have paid express attention to the analytical leverage provided by empirical analyses of food allergies. Nettleton et al. (2009) call for a sociological agenda with reference to food allergies and note that while the epidemiology concerning food allergies is contested, "what is certain is that there is growing media, public, scientific, commercial and policy interest in food allergies and food intolerance" (2009: 648). Due to the debatable, and thus socially contingent, definitions and categories with regard to food allergies, in addition to the myriad social responses to them (Nettleton et al., 2009) and lack of etiologic understanding of them, a high level of uncertainty surrounds contemporary food allergies, in general, and peanut allergies in particular (Lauritzen, 2004; Pansare & Kamat, 2009).

One of the only sociological examinations of the rise of peanut allergies focuses on new regulatory measures in Canadian schools that have resulted in a type of morality governance invading the public space of the school system (Rous & Hunt, 2004). More empirical and comprehensive work is necessary to unpack the social problem of peanut allergies. In this article, I am interested in examining how a relatively rare ailment emerged as a conspicuous public problem and how it sparked such social responses in the first place. In doing so, I will highlight the evolution in characterization of the peanut allergy as an "epidemic" and examine the complex interactions between experts, publics, biomedical categories, and institutions in the shaping of a population health problem.

In what follows, I focus both on the moment of emergence of the peanut allergy phenomenon and on the subsequent or co-occurring social reactions. I show when the peanut allergy phenomenon emerged in the medical literature and how public, expert, and institutional reactions to the emergent epidemic expanded the sphere of social awareness and surveillance of peanut allergy risk. I will argue that the category of the peanut allergy

"epidemic" was co-constructed and deployed through interactions among various social worlds. Highlighting the social mobility around this contested epidemic, including the calibration of public discourse and the reorganization of social space, I consider the discursive and material effects of the new phenomenon.

Data and Methods

Focusing here principally on the period 1980–2010, I report on a multi-site analysis of print materials, in which I follow the object of the peanut allergy in salient social worlds (see Clarke, 2005). A key component to this analysis is to examine the emergence and meaning of responses to peanut allergies as a medical and public problem, as revealed by medicine, media, advocates, parents, and institutions (Nettleton, 2009). I began with a targeted literature search in the PubMed database for medical and clinical journal articles with keywords of peanut* and anaphyl*, or peanut* and allerg*, or peanut* and hypersens* for all years through 2010 (n=1345). I read article titles and abstracts of these results and then conducted a LexisNexis Academic search for English-language news with peanut* and allerg* in the headline between 1980 and 2010. I read headlines and lead paragraphs of newspaper reports (n=779) and news broadcast transcripts (n=64). For recent social discourse on peanut allergies, I analyzed the website of a major trade association of the peanut industry, the American Peanut Council, as well as the online materials of arguably the highest profile food allergy organization in the U.S., the Food Allergy & Anaphylaxis Network (known as Food Allergy Research & Education since 2012).

Employing a specific case of a debate over the implications of the rise in peanut allergies, I examined the U.S. federal Department of Transportation's 2010 proposed rule (DOT 2010) on "Enhancing Airline Passenger Protections," which included an express objective to increase access to commercial air travel for those passengers who suffer from peanut allergies. On the site <regulations.gov> I searched "peanut allergies" limited to the Department of Transportation. This list returned comments from the airline industry (n=17), advocacy groups (n=4), consumer groups (n=2), the peanut industry (n=1), and individual citizens (n=1013). I analyzed the small population of comments from groups and industry; I then sampled the comments from individual citizens by taking every third comment (n=337), resulting in analysis of 361 public comments to the DOT proposed airline peanut regulations. I also reviewed the Massachusetts Department of Early Education and Care guidelines for food allergies, since Massachusetts was the first state to publish statewide school guidelines for food allergies. Finally, I reviewed an NIAID (National Institute of Allergy and Infectious Diseases, National Institutes of Health) report on food allergies that was released at the end of this study period (Boyce et al., 2010).

For all scripts, I analyze when, if, and how these print materials framed a narrative around peanut allergy in social life. Because I am concerned with the interaction of these sets of data, I paid attention to overlap; for example, I took note when an author of a medical article was affiliated with an advocacy organization and when a medical article received attention in numerous media outlets. The materials were also coded inductively to examine discursive themes in the arena of peanut allergies as a social and medical phenomenon (Bryant & Charmaz, 2010; Charmaz, 2006). Generated themes included discourse about risk, responsibility, and disease prevalence, which are central to the analysis in this paper.

The Emergent Epidemic

Pre-epidemic

Prior to 1980, articles that mentioned peanut allergies were mostly part of a broader discussion of food anaphylaxis. In 1976, peanuts were listed in a physician's journal as one

of the common food "offenders" and one that may sometimes cause a remarkably severe reaction; but, food allergy in general was characterized not as an imminent problem but rather as a source of "low-grade, chronic illness" and something that is "seldom a threat to life" (Speer, 1976: 106). Anaphylactic deaths due to peanuts were formally reported in the medical literature in the late 1980s, and one article warned that peanut allergies are "probably the most common cause of death by food anaphylaxis in the United States" (Settipane, 1989: 271). As an example of the rising clinical attention paid to peanut allergies, the *British Medical Journal* devoted several pages for letters to the editor regarding the seriousness of peanut allergies in 1990, and medical journal articles detailed more severe and anaphylactic reactions to peanuts during this time period. *Pediatric Annals* warned that "peanut allergy is the most worrisome food allergy issue confronting the pediatrician today because of all the potentially allergenic foods, peanut appears to be the most dangerous" (Schwartz, 1992: 656).

Co-occurring during this time period was the formation of advocacy organizations as more cases of severe allergic reactions to foods were reported. Anne Munoz-Furlong started the U.S. advocacy group Food Allergy & Anaphylaxis Network, regarded as one of the leading food allergy advocacy organizations, in 1991 after her daughter was diagnosed with egg and milk allergy. Anaphylaxis Australia was launched in 1993, and The Anaphylaxis Campaign in the U.K. was founded by David Reading in 1994 following the deaths of four people, including his daughter, from allergic reactions to nuts (Jackson, 2006). Organizations continued to sprout as food and peanut allergies became an increasing concern in the developed world. Parent advocacy in New Zealand became official in 1999 with Allergy New Zealand. Anaphylaxis Canada was founded in 2001.

The origin of these collectives occurred along with rising public awareness of food allergies and their potential deadly reactions. While not a popular topic of media coverage in the 1980s, by the mid-1990s newspapers were not only reporting fatalities to peanut allergies but were also reporting "almost deaths" to peanut allergies. One article's headline read "Nut Allergy Girl's Terror; Girl Almost Dies from Peanut Allergy" (Daily Mirror, 1995). The *Wall Street Journal* ran a story in 1995 with the headline "Peanut Allergies Have Put Sufferers on Constant Alert" (Chase, 1995). This amplification of risk continued over the next decade, positioning the risk of (deadly) peanuts in public spaces as quite pronounced.

During what I designate as the "pre-epidemic" phase of the peanut allergy problem (i.e., the idea of the peanut allergy problem as an epidemic had not yet gained salience in medicine, media, or the public imagination), some researchers and clinicians remained wary of the growing attention to peanut allergies and the potential conflation of "intolerance" and "allergy." Notwithstanding contestation in the medical literature, it is clear that lay people were attuned to the potential risk of peanut allergies. For example, one media piece in *The Times* (U.K.) in 1994 covered the story of a mother who saved her baby after she "guessed" that the baby was allergic to peanuts (Milton, 1994). Given the emergence of reporting in the U.K. press of peanut allergy deaths and the proliferation of advocacy groups, it may not be surprising that this mother was aware of the possibility of the category of the peanut-allergic child. The contemporaneous occurrences across these social worlds affected discourse and material reality regarding children's health and the risk of peanut allergies.

Moving Toward an Epidemic

While in the early 1990s medical articles and media stories were speculating about rising prevalence of peanut allergies, the first confident statements from medical experts appeared in 1996. Based on an analysis of 62 patients at one clinic in the U.K., an article in the *British Medical Journal* made an epidemiologic claim that the prevalence of peanut allergies was increasing (Ewan, 1996a). Hugh A. Sampson, a prominent food allergy researcher in the

U.S., concurred in an accompanying editorial that this statement corresponded with American data and that "with this rising number of individuals at risk for potentially lethal reactions, aggressive intervention in both prevention and treatment is essential" (Sampson, 1996: 1050). Sampson called for more infants to be identified as "at risk" for peanut or nut allergy and for more pressure to be put on government agencies to regulate food labeling, a clear example of discursive interaction among social worlds. As food labeling laws did indeed materialize in the U.S. (with the Food Allergen Labeling and Consumer Protection Act of 2004), the presence of peanuts and their associated risk entered the public sphere to a greater degree, altering how individuals interact with institutions, spaces, and products.

At the same time, professional discourse in the medical literature brought into focus the contested meaning of measurements leading to the proclamation of the peanut allergy as a growing problem. The British Medical Journal published claims-clashing correspondence among physicians, in which some practitioners expressed skepticism regarding the increased prevalence (Jones & Jones, 1996; Wilson, 1996). One letter noted that that the "supposed" evidence given in support of the claim of increasing prevalence was faulty, resting on the author's "impression that the increased incidence of peanut or nut allergy is real" (Jones & Jones, 1996: 299–300). In a formal reply, the author of the initial report conceded that heightened public awareness may have played a role in the rise of clinic referrals during the early 1990s (Ewan, 1996b: 300). Indicating interaction among experts, publics, and disease categories in the growing awareness of peanut allergies, this rise in referrals occurred at the same time that the topic was gaining traction among parent advocates and within the media and medical literature. Published in the British Medical Journal soon after, another paper on peanut allergy prevalence within families did not mention the term "epidemic" in the abstract or body of the paper; however, the language of "apparent epidemic" was included as a key message of the paper in a sidebar text box (Hourihane et al., 1996: 521). The marginal marking of articles with the term "epidemic" signals how discursive work may burnish the public and medical idea of an epidemic.

The Epidemic Catches On

Amid debate in the medical community, more studies were being conducted on the prevalence of peanut allergies. In publications, noticeable agreement emerged over the peanut allergy increase, including recognition of a troubling decrease in the age of onset in small children. The U.S. was considered to have an "epidemic problem" of peanut allergies, according to some researchers (Senti et al., 2000). In 1999, the Journal of Allergy and Clinical Immunology issued a rapid publication of a study of self-reported peanut and tree allergies in the U.S., in which the authors estimated the prevalence at 1.1% of the general population (Sicherer et al., 1999). Another study out of the U.K. (Grundy et al., 2002) showed an increase in peanut sensitization over time and a strong trend, though statistically insignificant, in reported peanut allergies over time. The allergy researcher Hugh A. Sampson gestured to the "relative epidemic of peanut allergy" in a New England Journal of Medicine featured clinical practice article (2002: 1294). In March, 2003, that journal declared that the "prevalence of peanut allergy is increasing" in an issue that included articles and editorials on the phenomenon, indicating that legitimate medical attention was being paid to the subject. Additionally, a 2003 study by Scott Sicherer and colleagues found an increase in reported allergy to peanut among U.S. children, from 0.4% in 1997 to 0.8% in 2002. While this finding received significant public play in the media and elsewhere as evidence that peanut allergies recently doubled among children, the data actually point to the doubling of self-reported peanut allergies rather than clinical presentations of true peanut allergies. By 2007, medical articles were using the term "epidemic" in the title to refer to the rising prevalence of peanut allergies (de Leon et al., 2007; Sicherer & Sampson, 2007).

In short, in the 2000s, a set of academic physicians tended to believe that "the rise in peanut allergy [had] been well documented" (Burks, 2008: 1538), thus lending expert knowledge to the mounting belief of this epidemiologic "fact." Medical reports of rising prevalence were based on lay people's reporting of their reactions to peanuts; the ability to report identification as a peanut-allergic person was perhaps based on social knowledge of a problem that was growing in popularity over this short time period. In a move that put peanut allergies on the national research map, the National Institutes of Health released a statement in 2005 that its new food allergy consortium would focus on peanut allergies (NIAID, 2005). The consortium would be led by Dr. Hugh A. Sampson, and one of the main studies would be led by Dr. Scott A. Sicherer, both prolific publishers on peanut allergies and whose studies were and continue to be regularly cited in the media.

Feeding and Flouting the Fear

Amplifying and Attenuating Risk

Social responses to the rising problem were myriad. Experts in the medical literature fueled knowledge and raised consciousness about social situations deemed risky, such as accidental exposures to peanut butter craft projects in classrooms (Sicherer et al., 2001), hidden peanut allergens in food products (Schäppi et al., 2001), and the problem of peanut residue as it relates to any social event like playing cards (Lepp et al., 2002). While the media did not use the specific term "epidemic" often, they did use tactics to signify a rising health problem. Representative is a headline such as "Peanut Allergies Soar," citing a study which claimed that the number of children with peanut allergies tripled in the past decade (CNN, 2010). During the 2000s, media also clearly amplified coverage of the escalating risk posed by peanuts through employing provocative language and imagery; headlines included trigger words like "lethal" and "scary" in depictions of peanuts and analogized peanuts to "bombs" in social spaces.

The broadcast media, in particular, used risk amplification (Hooker, 2010; Pidgeon et al., 2003) strategies to a large degree. For example, one ABC World News broadcast started off a story on peanut allergies in this way: "There was a story that caught our eye about peanuts, a nutritious snack for some, a potential death sentence for others." During the segment, the narrator offered the sensationalist analogy that "living with peanut allergies is like living in a minefield" and ended with a family's wish for a day "when their daughter no longer had to eat in fear" (ABC, 2007). One prominent example of media hype over the risk of peanut allergies occurred in November, 2005, when it was widely reported that a Canadian teenager had died after kissing her boyfriend. She was allergic to peanuts; he had just eaten a peanut butter snack. Despite the subsequent autopsy report that revealed no connection between the young woman's peanut allergy and her tragic passing, the "kiss of death" story initially filled all major news outlets. The discourse reverberating within and beyond media reports of peanut allergies was filled with anxiety and fear, and this coexisted with the activities of parent groups and the percolation of medical studies documenting the rise of the problem.

By contrast, the peanut industry carefully worked to attenuate the risk posed by the peanut allergy epidemic. As just one example, The American Peanut Council, the trade association for the peanut industry, has devoted for the past several years a full web page on allergy indicating that the Council works closely with consumers and other organizations to address growing concern:

Research indicates that all allergies, not just to food, are increasing. It is difficult to determine, however, if the increased reports of food allergies in general and peanut allergy in particular are due more to actual increases in incidence or reflect increased awareness among consumers and health professionals. It is likely a

combination of the two. Self-reporting studies are the basis for the current high American prevalence figures and these are inherently biased to over reporting (APC, 2013).

This statement invigorates the contested nature of the peanut allergy phenomenon, pointing to whether the "epidemic" is actually because of increased prevalence or increased fear and awareness. Certainly, there is a commercial interest present here in allaying the fears of consumers, and fervent social debate about the meaning of the epidemic and the risk of peanut allergies in public spaces has taken place in other institutional settings, such as airlines and schools.

For example, the U.S. Department of Transportation (DOT) first alerted airlines in 1998 to consider peanut-free zones on airplanes. After pushback from lawmakers from peanutproducing states, Congress nullified the measure (James, 1999). In 2010, citing persistent public advocacy and awareness at the national level, the DOT revisited the peanut problem within its proposed "Enhancing Airline Passenger Protections" rule. Part of this proposed rule aimed to address "greater access to air travel for the significant number of individuals with peanut allergies" (DOT, 2010). On June 8, 2010, the DOT formally requested public comments on the new rule to either a) ban peanuts completely; b) ban peanuts when an allergic person is on board; or, c) require buffer zones for medically-documented allergic persons. A review of the formal open comments reveals that two distinct groups emerged in the comment sample: those for and those against airline accommodation of peanut allergies. People, mostly individual parents, advocating for airline accommodation described peanuts on planes in dramatic terms, appealing to the sentiment of a spreading epidemic. Here is one example: "It's necessary for our family to travel by airplane sometimes; and it is not without great fear. Please consider the growing number of children who suffer from peanut allergies when voting on this ban." Other responses downplayed the risk to children and population prevalence: "I don't think it's reasonable for an allergy that affects so few in the population to result in the complete ban of a common and popular food from all airplanes at all times." Using the proposed airline rule as one proxy for public debate about peanut allergies, it is clear that both the notion of the peanut allergy epidemic and its acute risk were contested, and contestable, topics. By June 25, 2010, the DOT's proposed rule was amended to clarify that no action can be taken without a peer-reviewed scientific study substantiating the risks of peanut allergies on airplanes, formally delegitimizing the current population risk of peanut products in shared spaces.

States in the U.S. also responded to fears about food products in social spaces. For example, in 2002 Massachusetts became the first state to enact guidelines for the management of food allergies in schools through the Commonwealth's Department of Education guide for "Managing Life Threatening Allergies in Schools." The document advises that in some situations a "peanut-free" table should be given as an option to students because the peanut is "an extremely potent allergen and often a hidden ingredient" (Massachusetts DOE, 2002: 16). Numerous schools and day cares today now have specific policies pertaining to the presence of peanuts. Rousing "parent wars" (Warner, 2007) have stemmed from food bans, particularly on peanut products, in schools and daycares in the last decade. These clashes are not only occurring among parents; other recent media reports and medical studies have cited cases of children in schools sabotaging or ridiculing the lunches of their peanut-allergic peers (Landau, 2010; Lieberman et al., 2010). The rise of the putative epidemic, and its corresponding association with public risk, has initiated both discursive and material changes in social dialogue and social spaces with regard to the presence of peanuts.

Reining in the Contested Epidemic

The early medical literature on peanut allergies focused on anaphylactic and serious reactions to peanuts, not basic aversions. But as experts sought to define population rates of peanut allergies, they relied on self-reporting. In 2010, systematic clinical guidelines for food allergies were organized and distributed to the medical community (Voelker, 2011), bringing forward the debatable nature of changes in reporting and criteria of food allergies. There was much conflation of the terms "intolerance" and "allergy" within both the medical community and the lay public in reported allergies. RAND Health conducted a systematic review of all food allergy literature as part of a commissioned report for the National Institute of Allergy and Infectious Disease. The report, which never uses the word "epidemic," revealed that the compounding confusion over the prevalence and severity of food allergies is the problem of "anecdotal self-reporting" (RAND, 2010: 15). It seemed that in order to properly establish prevalence, the discursive effects of the peanut allergy phenomenon had to be addressed. The report found only two U.S. studies of peanut-allergy prevalence; these were cross-sectional, not longitudinal, studies. The report also identified two studies of prevalence changes in peanut allergies over time, neither of which presented conclusive findings (RAND, 2010: 70). One of these studies (Grundy et al., 2002) has been used repeatedly as evidence of the "epidemic" of peanut allergies (Sampson, 2002; Sicherer & Sampson, 2007). The NIAID expert panel thusly recommended new clinical guidelines that sought to objectively confirm "reports" of parents and patients of food allergies because "50% to 90% of presumed food allergies are not allergies" (Boyce et al., 2010: 1111).

Following the social activity around the characterization of the peanut allergy problem, those with food intolerances and those with true allergies but with no reactivity were influencing allergy prevalence numbers and fears of risk in public places, especially when it came to peanut allergies. Experts here were attempting to rein in the classification that they suspected had gone awry and clinically standardize the confirmation of food allergy diagnosis (cf. Timmermans & Almeling, 2009; Timmermans & Berg, 1997), potentially downplaying the presence of an "epidemic" and its risk to individuals and publics.

Discussion and Conclusion

In this paper, I take up Nettleton et al.'s (2009) call for increased scholarly attention on food allergies as a social phenomenon and examine the intricacies of the emergence of the peanut allergy as a contested epidemic. I find that the interaction among social worlds in this arena eased the emergence of the very classification "epidemic" and precipitated the subsequent social responses to the problem. Indeed, the problem emerged and spread in a range of interactive ways and materialized as a salient social problem given the myriad routes through which it affected small parts of people's lives, from airline policies to segregated school lunch tables. The idea of the peanut allergy as a population health risk and the social organization of the response to this risk were co-produced, changing the way that people, particularly children, interacted with, and were governed within, the familiar social spaces of schools, airlines, and medicine (Jasanoff, 2004). Moreover, experts, publics, and institutions interacted to a great degree, influencing the evolution of definitions and classifications with regard to a specific population health problem (cf. Epstein, 1996). The infusion of the epidemic and risk discourses in various social worlds produced new ways of interfacing with, and debating about, the condition's actual prevalence and attendant risks.

Although this paper's narrative is presented in chronological order, it is not in fact linear; rather, all of the activity was co-occurring and interacting within social spaces and with other social discourses during this time. While media used risk amplification tactics to promote the story of the peanut allergy phenomenon, medical researchers hedged but still advanced the prevailing narrative by using phrases like "apparent epidemic." And while

airlines and schools, nudged by fearful parents, scrambled for new policies regarding peanuts in public spaces, corporations downplayed popular perceptions of risk. By 2010, the purported epidemic and its responses seemed out of proportion, as experts reined in the population definition and prevalence numbers of all food allergies.

In highlighting the discursive mobility of a medical category, I show that the peanut allergy phenomenon reveals the significance of interactions across social sites over time in amplifying risk and reconfiguring social worlds. For example, while previous scholarship unearths how media magnify health risks and influence public discourse about social problems (see, e.g., Boero, 2007; Conrad, 1997; Conrad, 2001; Saguy & Almeling, 2008; Saguy & Gruys, 2010), the current study demonstrates that media outlets represent but one location where risk amplification takes place in the social life of new epidemics. As an analytic angle, discursive mobility treats one kind of site not in isolation but rather in dynamic conversation with other significant sites. This interactional lens may help to reveal why and how discourse about certain disease classifications, and not others, becomes portable and mutable within and among various social realms, garnering the attention of medicine, media, legislation, lay advocacy, and other spheres. Thinking in terms of discursive mobility – how meanings shift and interact across multiple sites and over time – as a methodological approach may at the same time yield new theoretical and comparative insights in medical sociology about the social purpose of disease categories that can fruitfully be applied to related phenomena, such as additional allergies or celiac disease, among other new epidemics.

A pressing and important question for future empirical inquiry remains: why peanuts? While eight foods account for over 90% of food allergy reactions, including milk, eggs, peanuts, tree nuts, fish, shellfish, soy, and wheat, the peanut allergy has arguably received the largest share of medical and social attention. For example, the number of seafood allergies in America is almost double that of peanut allergies (Christakis, 2008). Culturally, peanuts and peanut butter have long served as a staple snack for kids, especially in the U.S., and have been expectedly served in public spaces (e.g., on flights, in schools, and at baseball games) on a regular basis. With newfound awareness of peanuts as a health risk and problem, particularly for children, the social characteristics of this "normal" food are changing. A mundane food substance such as the peanut garnering this much social attention may speak to broader anxieties about food safety and risk in contemporary culture (Nestle, 2003).

Future studies should also examine whether individuals suffer from stigma as a result of the social evolution of the peanut allergy epidemic. In a recent study of families of a child with a peanut allergy, researchers found that parents report being treated as "faddy" or "neurotic" (Pitchforth et al., 2011). In one study that distinguished those with food allergies and those with food intolerances, Nettleton et al. (2010) found that respondents without medically-defined symptoms realize their condition as more of a social problem that those with a medically-conferred diagnosis of allergy. Recent technological advances have been made in molecular testing for peanut allergies; and, as availability of diagnostic screening becomes more pervasive, especially for young children, studies should scrutinize the uncertainty that this type of screening presents for families (Timmermans & Buchbinder, 2010) in a world in which the category of peanut-allergic child has gained social purchase partly via its characterization as a category of epidemic proportions in a risky world.

Moreover, social scientists could further investigate whether and how the illness label of peanut-allergic, now infused with so much discursive and social meaning, has material individual and social consequences. For instance, the increase in reported peanut allergies could be the result of what Christakis (2008) calls a "feedback loop" or what Hacking (1999) calls "biolooping," in which the classification feeds back to change not only how

individuals identify with a category but their biological sensitivity to the particular condition. Christakis (2008) argues that new social policies of peanut avoidance may have a counterproductive bio-effect, in which more actual and reported cases of peanut allergies emerge among children because widespread avoidance leads to greater allergen sensitization at the population level. Social scientists could examine more directly how social life interacts with this disease and vice versa (cf. Timmermans & Haas, 2008).

In many ways, the peanut allergy phenomenon is an exemplar of how an individual medical problem becomes a public problem. No doubt a severe and serious individual health crisis when anaphylaxis occurs, the peanut allergy as a population health problem has become contested ground. More than a story of panicked parents and sensationalist media, peanut allergy discourse was co-constructed by multiple actors and institutions over time, with a range of social consequences. This discursive mobility serves as an illustrative case for apprehending the evolution and application of disease categories and perceptions of health and illness in the social sphere.

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References

- ABC News. Peanut Allergies: Allergen-Free Peanuts in the Works. World News with Charles Gibson. 2007 Jul 25
- Ahmed, F. The Wellesley News. Wellesley, MA: 2008. Cazenove nut-buster Hilary Allen '11 discusses the job, Caz and food.
- APC (American Peanut Council). Food Allergy FAQs. 2013 http://www.peanutsusa.com/MainMenu/Food-Safety/Allergy-Information/Peanut-Allergy-FAQs.html.
- Ben-Shoshan M, Harrington DW, Soller L, Fragapane J, Joseph L, St Pierre Y, et al. A population-based study on peanut, tree nut, fish, shellfish, and sesame allergy prevalence in Canada. Journal of Allergy and Clinical Immunology. 2010; 125(6):1327–1335. [PubMed: 20451985]
- Boero N. All the News that's Fat to Print: The American "Obesity Epidemic" and the Media. Qualitative Sociology. 2007; 30:41–60.
- Bowker, GC.; Star, SL. Sorting Things Out: Classification and its Consequences. Cambridge, MA: The MIT Press; 1999.
- Boyce JA, et al. Guidelines for the Diagnosis and Management of Food Allergy in the United States: Summary of the NIAID-Sponsored Expert Panel Report. Journal of Allergy and Clinical Immunology. 2010; 126(6):1105–1118. [PubMed: 21134568]
- Branum, AM.; Lukacs, SL. Food Allergy Among U.S. Children: Trends in Prevalence and Hospitalizations. Hyattsville, MD: National Center for Health Statistics; 2008. NCHS Data Brief, No. 10.
- Broussard M. Everyone's Gone Nuts: The Exaggerated Threat of Food Allergies. Harper's Magazine. 2008 Jan.:64–65.
- Bryant, A.; Charmaz, K., editors. The SAGE Handbook of Grounded Theory. London: SAGE Publications; 2010.
- Burks AW. Peanut Allergy. Lancet. 2008; 371:1538-1546. [PubMed: 18456104]
- Charmaz, K. Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis. London: Sage Publications; 2006.
- Chase M. Peanut Allergies Have Put Sufferers on Constant Alert. Wall Street Journal. 1995 Mar 24.

Christakis NA. This Allergies Hysteria Is Just Nuts. BMJ: British Medical Journal. 2008; 337(a2880): 1384

- Clarke, AE. Situational Analysis: Grounded Theory After the Postmodern Turn. Thousand Oaks, CA: Sage Publications; 2005.
- CNN. Peanut Allergies Soar. CNN Newsroom. 2010 May 14.
- Conrad P. Public Eyes and Private Genes: Historical Frames, News Constructions, and Social Problems. Social Problems. 1997; 44(2):139–154.
- Conrad P. Genetic Optimism: Framing Genes and Mental Illness in the News. Culture, Medicine & Psychiatry. 2001; 25(2):225–247.
- Daily Mirror. Nut Allergy Girl's Terror; Girl Almost Dies from Peanut Allergy. 1995 Nov 18.
- de Leon MP, Rolland JM, O'Hehir RE. The peanut allergy epidemic: allergen molecular characterisation and prospects for specific therapy. Expert Reviews in Molecular Medicine. 2007; 9(1):1–18. [PubMed: 17210088]
- DOT. Notice of Proposed Rulemaking: Enhancing Airline Passenger Protections. Federal Register. 2010 Jun 8.75(No. 109)
- Epstein, S. Impure Science: AIDS, Activism, and the Politics of Knowledge. Berkeley: University of California Press; 1996.
- Ewan PW. Clinical Study Of Peanut And Nut Allergy In 62 Consecutive Patients: New Features And Associations. BMJ. 1996a; 312(7038):1074–1078. [PubMed: 8616415]
- Ewan PW. Peanut and nut allergy: Author's reply. BMJ. 1996b; 113(7052):300.
- Eyal, G.; Hart, B.; Onculer, E.; Oren, N.; Rossi, N. The Autism Matrix. Cambridge, UK: Polity Press; 2010.
- Fraser, H. The Peanut Allergy Epidemic: What's Causing It and How to Stop It. New York, NY: Skyhorse Publishing; 2011.
- Groopman J. The Peanut Puzzle. The New Yorker. 2011 Feb.7:26. [PubMed: 21728267]
- Grundy J, Matthews S, Bateman B, Dean T, Arshad SH. Rising prevalence of allergy to peanut in children: Data from 2 sequential cohorts. Journal of Allergy and Clinical Immunology. 2002; 110(5):784–789. [PubMed: 12417889]
- Hacking, I. The Social Construction of What?. Cambridge, MA: Harvard University Press; 1999.
- Hacking I. Kinds of People: Moving Targets (British Academy Lecture). Proceedings of the British Academy. 2007; 151:285–318.
- Hilgartner, S. Science on Stage: Expert Advice as Public Drama. Stanford: Stanford University Press; 2000.
- Hooker C. Health scares: Professional priorities. Health. 2010; 14(1):3–21. [PubMed: 20051427]
- Hourihane JOB, Dean TP, Warner JO. Peanut allergy in relation to heredity, maternal diet, and other atopic diseases: results of a questionnaire survey, skin prick testing, and food challenges. BMJ. 1996; 313:518–521. [PubMed: 8789975]
- Jackson, M. Allergy: The History of a Modern Malady. London: Reaktion Books; 2006.
- James JM. Airline snack foods: Tension in the peanut gallery. Journal of Allergy and Clinical Immunology. 1999; 104:25–27. [PubMed: 10400835]
- Jasanoff, S., editor. States of Knowledge: The Co-Production of Science and Social Order. London: Routledge; 2004.
- Jones S, Jones I. Peanut and nut allergy: Study was not designed to measure prevalence. BMJ. 1996; 313(7052):299–300. [PubMed: 8704559]
- Kalb C. Fear and Allergies in the Lunchroom. Newsweek. 2007 Nov 5.
- Kilanowski J, Stalter AM, Gottesman MM. Preventing Peanut Panic. Journal of Pediatric Health Care. 2006; 20(1):61–66. [PubMed: 16399483]
- King M, Bearman P. Socioeconomic Status and the Increased Prevalence of Autism in California. American Sociological Review. 2011; 76(2):320–346. [PubMed: 21547238]
- Landau E. Food allergies make kids a target of bullies. CNN.com. 2010 Sep 28.
- Lantz PM, Booth KM. The social construction of the breast cancer epidemic. Social Science & Medicine. 1998; 46(7):907–918. [PubMed: 9541076]

Lauritzen SO. Lay voices on allergic conditions in children: parents' narratives and the negotiation of a diagnosis. Social Science & Medicine. 2004; 58(7):1299–1308. [PubMed: 14759677]

- Lepp U, Zabel P, Schocker F. Playing cards as a carrier for peanut allergens. Allergy. 2002; 57(9): 864–864. [PubMed: 12169192]
- Lieberman JA, Weiss C, Furlong TJ, Sicherer M, Sicherer SH. Bullying among pediatric patients with food allergy. Annals of Allergy, Asthma & Immunology. 2010; 105(4):282–286.
- Massachusetts DOE. Managing Life Threatening Allergies in Schools. 2002 (http://www.doe.mass.edu/cnp/allergy.pdf).
- Milton C. Mother saves baby with peanut allergy. The Times. 1994 Jun 14.
- Nestle, M. Safe Food: Bacteria, Biotechnology, and Bioterrorism. Berkeley: University of California Press; 2003.
- Nettleton S, Woods B, Burrows R, Kerr A. Food allergy and food intolerance: towards a sociological agenda. Health. 2009; 13(6):647–664. [PubMed: 19841024]
- Nettleton S, Woods B, Burrows R, Kerr A. Experiencing Food Allergy and Food Intolerance: An Analysis of Lay Accounts. Sociology. 2010; 44(2):289–305.
- NIAID. New Food Allergy Research Consortium Focuses on Peanut Allergy. News Release, June 24, 2005. 2005 http://www.niaid.nih.gov/news/newsreleases/2005/Pages/farc.aspx.
- Pansare M, Kamat D. Peanut Allergies in Children—A Review. Clinical Pediatrics. 2009; 48(7):709–714. [PubMed: 19380883]
- Paradis E, Albert M, Byrne N, Kuper A. An Epidemic of Epidemics? A Systematic History of the Term "Epidemic" in the Medical Literature, 1900–2010. Author's Files. n.d.
- Pidgeon, N.; Kasperson, RE.; Slovic, P., editors. The Social Amplification of Risk. Cambridge, UK: Cambridge University Press; 2003.
- Pitchforth E, Weaver S, Willars J, Wawrzkowicz E, Luyt D, Dixon-Woods M. A qualitative study of families of a child with a nut allergy. Chronic Illness. 2011; 7(4):255–266. [PubMed: 21846662]
- RAND. Prevalence, Natural History, Diagnosis, and Treatment of Food Allergy: A Systematic Review of the Evidence. Working Paper prepared for the National Institute of Allergy and Infectious Diseases; 2010.
- Rosenberg, C. Explaining Epidemics and Other Studies in the History of Medicine. Cambridge University Press; 1992.
- Rosenberg C. The art of medicine: Managed fear. Lancet. 2009; 373:802–803. [PubMed: 19278033]
- Rous T, Hunt A. Governing peanuts: the regulation of the social bodies of children and the risks of food allergies. Social Science & Medicine. 2004; 58:825–836. [PubMed: 14672596]
- Saguy AC, Almeling R. Fat in the Fire? Science, the News Media, and the "Obesity Epidemic". Sociological Forum. 2008; 23(1):53–83.
- Saguy AC, Gruys K. Morality and Health: News Media Constructions of Overweight and Eating Disorders. Social Problems. 2010; 57(2):231–250.
- Sampson HA. Managing Peanut Allergy: Demands aggressive intervention in prevention and treatment. BMJ. 1996; 312(7038):1050–1051. [PubMed: 8616395]
- Sampson HA. Peanut Allergy. The New England Journal of Medicine. 2002; 346(17):1294–1299. [PubMed: 11973367]
- Sanghavi D. Peanut Allergy Epidemic May Be Overstated. The Boston Globe. 2006 Jan 30.
- Schäppi GF, Konrad V, Imhof D, Etter R, Wüthrich B. Hidden peanut allergens detected in various foods: findings and legal measures. Allergy. 2001; 56(12):1216–1220. [PubMed: 11736754]
- Schwartz RH. Allergy, intolerance, and other adverse reactions to foods. Pediatric Annals. 1992; 21(10):654. [PubMed: 1408408]
- Senti G, Ballmer-Weber BK, Wuthrich B. Nuts, seeds and grains from an allergist's point of view. Schweizerische medizinische Wochenschrift. 2000; 130(47):1795–1804. [PubMed: 11130145]
- Settipane GA. Anaphylactic deaths in asthmatic patients. Allergy Proceedings. 1989; 10(4):271–274. [PubMed: 2676717]
- Sicherer SH, Furlong TJ, DeSimone J, Sampson HA. The US Peanut and Tree Nut Allergy Registry: characteristics of reactions in schools and day care. The Journal of Pediatrics. 2001; 138(4):560–565. [PubMed: 11295721]

Sicherer SH, Munoz-Furlong A, Burks AW, Sampson HA. Prevalence of peanut and tree nut allergy in the US determined by a random digit dial telephone survey. Journal of Allergy and Clinical Immunology. 1999; 103(4):559–562. [PubMed: 10200001]

- Sicherer SH, Munoz-Furlong A, Sampson HA. Prevalence of peanut and tree nut allergy in the United States determined by means of a random digit dial telephone survey: A 5-year follow-up study. Journal of Allergy and Clinical Immunology. 2003; 112(6):1203–1207. [PubMed: 14657884]
- Sicherer SH, Sampson HA. Peanut allergy: Emerging concepts and approaches for an apparent epidemic. Journal of Allergy and Clinical Immunology. 2007; 120(3):491–503. [PubMed: 17689596]
- Sicherer SH, Sampson HA. Food allergy. Journal of Allergy and Clinical Immunology. 2010; 125 Suppl 2(2):S116–S125. [PubMed: 20042231]
- Speer F. Food Allergy: The 10 Common Offenders. American Family Physician. 1976; 13(2):106–112. [PubMed: 946156]
- Taylor P. Building on Construction: An Exploration of Heterogeneous Constructionism, Using an Analogy from Psychology and a Sketch from Socioeconomic Modeling. Perspectives on Science. 1995; 3:66–98.
- Timmermans S, Almeling R. Objectification, standardization, and commodification in health care: A conceptual readjustment. Social Science & Medicine. 2009; 69(1):21–27. [PubMed: 19464781]
- Timmermans S, Berg M. Standardization in Action: Achieving Local Universality through Medical Protocols. Social Studies of Science. 1997; 27(2):273–305.
- Timmermans S, Buchbinder M. Patients-in-Waiting. Journal of Health and Social Behavior. 2010; 51(4):408–423. [PubMed: 21131618]
- Timmermans S, Haas S. Towards a sociology of disease. Sociology of Health & Illness. 2008; 30(5): 659–676. [PubMed: 18564975]
- Voelker R. Experts Hope to Clear Confusion With First Guidelines to Tackle Food Allergy. JAMA. 2011; 305(5):457–457. [PubMed: 21285419]
- Warner J. Mean Grown-Ups. The New York Times. 2007
- Wilson JA. Peanut and nut allergy: Serious adverse reactions to adrenaline are becoming more likely. BMJ. 1996; 313(7052):299. [PubMed: 8704558]
- Wynne, B. Misunderstood misunderstandings: social identities and public uptake of science. In: Irwin, A.; Wynne, B., editors. Misunderstanding Science? The Public Reconstruction of Science and Technology. Cambridge University Press; 1996.
- Yearly S. Computer Models and the Public's Understanding of Science: A Case-Study Analysis. Social Studies of Science. 1999; 29:845–866.

Highlights

• Peanut allergies affect few children but have been the source of broad debate

- This study examines the rise of peanut allergies as a public problem
- The peanut allergy has transformed from a rare malady into a contested epidemic
- The phenomenon was co-constructed through multiple interactions across social sites.