

Happy Hens Or Healthy Eggs - A Summative Content Analysis Of How Hens Are Represented In Supermarket Egg Boxes Narratives

KRISTINE HILL

Exeter University, UK

kh458@exeter.ac.uk

ABSTRACT

How a species is represented by marketers of animal-based products both reflects and shapes how consumers think about that animal. By examining the explicit statements, and implicit messages encoded in the imagery on supermarket egg boxes, this paper explores how hens are represented by whole egg retailers. Samples were collected from supermarket chain websites in the US, the UK, and Germany during March 2017. A summative content analysis reveals two prominent narratives purveyed through eggbox imagery (textual and visual), namely those pertaining to hen welfare and human health. The latter disenfranchises hens from their products by focusing on the nutritional value of eggs, whereas the former reflects a public concern for the welfare of egg-laying hens. Although claims of improvements in welfare practices are undoubtedly exploited as marketing tools, they nevertheless serve to raise awareness and drive competitors to adopt similar practices. Welfare claims are a direct response to public concerns about the plight of hens, and may positively influence industry welfare standards. However, idyllic depictions displayed on eggboxes also lull consumers into the belief that those eggs are an ethically sound food choice, regardless of the actual standard of living experienced by the hens.

KEYWORDS: animal representation; animal-based foods; marketing narratives; eggs; hen welfare; anthrozoology

1 Introduction

Representation has real life consequences for living animals. How a species is represented will invariably impact upon how people perceive and ultimately treat members of that species (Baker 2001; Kunst and Hohle 2016). The objective of marketing food-stuffs is to promote sales, but “advertising does not just sell things, it articulates values and builds meaning” (Freeman and Merskin 2008, 78). Marketing narratives tell a story about a product – how it came to be, or what benefits it might confer upon the consumer. Because such narratives are intended to promote the consumption of a given product, these are arguably rhetoric (Tonks 2002). The contention against engaging rhetoric as a framework is that the term is often perceived to signify “empty” discourse, designed to manipulate or trick (Miles and Nilsson 2018, 1259; Tonks 2002). Although marketing professionals may avoid identifying with Tonks’ characterization of marketing as a fundamentally control-oriented, Miles and Nilsson (2018, 1262) point out that the preference for conceiving of marketing as being centered around “value propositions and co-creation partnerships” only supports the assertion by Tonk (2002) that marketing is fundamentally a rhetorical construction of values. Thus, whether they acknowledge it or not, it could be argued that marketing practitioners are engaging in rhetoric.

In “The Rhetoric of the Image” (Barthes 1964, 161) proffers all the visual elements, including accompanying text, that can be employed as connotators (signifiers). The current paper examines the imagery and text used in the marketing narratives of supermarket eggs sold in the US and Europe (UK and Germany), and explores how hens are represented in these narratives. The term “representation” is used more generally herein, but in semiotics “representations” constitute a class of meaning-relations and the semiotics of animal representations relate to “signification” and communication (Tüür and Tønnessen 2014, 4). It is unlikely that any representation of hens were chosen without careful consideration to what it signifies to potential consumers (Ampuero and Vila 2006; Steenis et al. 2017). Thus, we can ask – what is the meaning and significance of a given animal representation in terms of how that group is perceived and treated?

The prominent model for the production of animal products in the US in particular, namely large-scale, industrialized agriculture, is a major topic of social debate (Crony et al. 2012; McKendree, Crony, and Widmar 2014; Cornish et al. 2016). Similarly, the intensive farming practices in Europe, particularly in regards to the welfare of laying hens, have generated widespread public concern (Healy 2017). Consequently,

the welfare of food-producing animals has become the subject of increasing scrutiny and media coverage, and the heightened public attention has led to calls for new regulations to improve animal welfare (McKendree, Croney, and Widmar 2014; Healy 2017). Probably the biggest example of how public concern has led to changes in legislature is that of caged laying hens. Public awareness of the plight of caged hens has led to an increased interest in purchasing eggs from free-ranging hens (Appleby 2003; Harrison, Carson, and Dawkins 2013), followed by government-mandated improvements in the conditions of caged-hens farming in the EU and some US states (Scrinis, Parker, and Carey 2017; Shields, Shapiro, and Rowan 2017; Hörisch 2018). An EU-wide ban on battery-farmed eggs came into effect in 2012 (EU Council Directive 1999/74/EC). Despite these successes, improvement of animal welfare through legislation is problematic. This is especially so where trade barriers exist, leading many welfare advocates and scholars to conclude that targeting the market is the most viable strategy to improve farm animal welfare (Ingenbleek et al. 2013; van Riemsdijk et al. 2017). Indeed, it was the commodification of higher welfare standards that has led the way in both Europe and the US (Scrinis, Parker, and Carey 2017; Hörisch 2018).

Packaging presents an important opportunity for retailers to communicate with the consumer and convince them to favor a particular product (Rettie and Brewer 2000; Simms and Trott 2010). Package design elements can be broadly classified into verbal and visual elements. The former manifests through written language and explicit claims, while the latter communicates in a more implicit fashion through colors and imagery (Rettie and Brewer 2000). In the case of fruit juice (Deliza et al. 2005) and soybean oil (Carneiro et al. 2005), written communications have been shown to have the potential to influence purchase intentions of these products. Carneiro et al. (2005, 280) reported that the term “transgenic” had a negative impact on purchasing intention, reflecting consumer aversion to ingredients related to genetically modified organisms. In many instances certain terms are required by law. Terms related to egg production and laying hen husbandry in Europe must abide to strict guidelines. The EU imposes marketing standards upon which eggs can be labelled as “free range” or “barn eggs” (EU Council Directive 1999/74/EC) and labeling of food products as organic has been legally regulated within the EU since 1991 (EU Council Regulation No 834/2007). Despite this, alluding to better welfare standards may be sufficient to persuade consumers. Research suggests that the US public perceives cage-free aviaries to confer the same positive impact on hen wellbeing as free-range housing, despite these being very different housing arrangements (Ochs et al 2018; Widmar et al 2020).

The visual element should not be underestimated in respect to its power to in-

fluence consumer perceptions and decisions, as consumers invariably follow patterns of low-involvement decision making (Silayoi and Speece 2007; Connolly and Davison 1996). Even where strict marketing rules exist, there is scope for less explicit marketing narratives that invoke more palatable representations of barn-kept hens or focus attention towards the utility of eggs or human health. In addition to written statements, non-verbal communication such as color and imagery have been shown to influence consumer intentions to purchase. For example, rounded, drop-like shapes on the labels of water and vodka bottle were shown to be more appealing than angular shapes (Westerman et al. 2013). A cross-cultural study on fast-food packaging reported the color red was more often associated with “tasty”, whereas green was associated with “healthy” (Luo et al. 2019, 19). However, Theben, Gerards, and Folkvord (2020) concluded that pre-existing attitudes towards health foods are more powerful predictors of buying decisions, and reported that intention was predominantly influenced by whether consumers had a positive or negative attitude towards the product. Thus, a knowledge of consumer attitudes is required to positively impact purchases via the information presented at point of purchase (packaging of supermarket products). As such, marketing narratives likely reflect extensive market research into the values upheld by target populations.

Eggs are considered a dietary staple in the US and Europe (Kidd and Anderson 2019; Magdelaine 2011). Annual egg consumption per person is estimated at 247 in the USA, 212 in Germany, and 189 in the UK (International Egg Commission, 2013). There are an estimated 700 million laying hens in Europe and 500 million in North America (International Egg Commission, 2013). This paper examines how hens, eggs, humans, and the relationships between hens and humans are represented on supermarket eggboxes from the US, Germany, and the UK. Following a summative content analysis approach, this paper explores the narratives that are being promoted via textual and other visual imagery presented upon the egg boxes themselves. How are hens being represented in (or excluded from) these narratives, and what might this say about how hens are perceived by consumers? The emerging narratives are examined under frameworks of humans as consumers, hens as disenfranchised producers, and the commodification of animal welfare.

2 Methodology

National grocery websites, representing major supermarket chains in the UK (Tesco's, Sainsbury's), Germany (Edeka, Rewe, Penny), and the US (Kroger) were accessed in

March 2017 and the term “eggs” (or “Eier”) entered into the search function. Only un-processed hen egg products were used for further analysis. This approach yielded a total of 50 products: 19 from the UK (Tesco 9, Sainsburys 10), 23 from Germany (Edeka 12, Rewe 6, Penny 5), and 8 from the USA (Kroger 8). These represented 31 distinct brand labels, including each of the six supermarkets own brands. Caveats of this approach include the relatively small sample sizes and fact that data collection relied on the supermarkets’ own national customer websites. Regional differences in smaller brands sold via selected stores would have been missed. Although websites showed images of the front and side, important small-print information of the backside may also have been missed. *In situ* information on shelf placement and how brands were marketed in store (Hecht et al. 2020) were likewise missing. However, the data collection provides a controlled situation that arguably simulates the increasingly popular method of online shopping (Hecht et al. 2020). Furthermore, narratives adopted by nationwide supermarkets brands are most likely professionally researched and designed to appeal to supermarket shoppers.

Table 1: Content analysis of visual elements.

	Germany	UK	USA	Total	Percentage of total
Total egg boxes	23	19	8	50	100%
Imagery	Germany	UK	USA	Total	Percentage of total
Hens	18	14	4	36	72%
Silhouette	4	7	2	13	
Life-like/Photo	10	6	1	17	
Cartoon/stylized	2	1	1	4	
Chicks	2			2	
Eggs	12	6	3	21	42%
Whole	10	4	2	16	
Cracked	2	1	1	4	
Bakery item		1		1	
Humans	5	1	1	7	14%
Consumer	1		1		
Farmer	4	1			
Outdoor imagery	11	8	2	21	42%

Table 2: Content analysis categorization (columns) of written statements (rows).

Text on egg box	Hen welfare	Human health	Taste/use	Environmental	Local produce	Value for money
Free-range	X					
Cage-free	X					
Woodland	X					
No beak trimming	X					
Male chicks saved	X					
Ethical eggs	X					
Raised with love	X					
Healthy		X				
Less saturated fat		X				
Fresh		X	X			
Omega-3 source		X				
No antibiotics		X				
Organic	*	X		X		
Non-GMO		X		X		
Hand-selected			X		X	
Renewable energy				X		
Local				X	X	
Regional				X	X	
British					X	
Great taste			X			
Gourmet eggs			X			
Good for baking			X			
Extra large			X			
Value for money						X

* “Organic” could in theory be categorized as “animal welfare” but was removed as it did not align with as such within the context of the whole (other textual and visual elements).

Images of the egg boxes were saved and subjected to content analysis, similar to those previously applied to organic and health-food packaging (Chrysochou and Festila 2018; Festila and Chrysochou 2019). Images were first tallied based on predominant images, namely hens, eggs, and humans (Table 1). All 50 eggboxes examined displayed at least one explicit written message, such as “a good source of omega-3”, “from free-range hens”, or “great taste” (Table 2). Written messages were coded as belonging to one or more of six categories relating to “hen welfare”, “human health”, “taste/utility”, “the environment”, “local produce”, or “value for money” (Table 2). Other ideas were inferred from the imagery printed on the eggboxes, namely healthy-looking families, hens enjoying idyllic settings, farmers in regional dress, grass, sunshine, and eggs. These were first broadly coded as “hen”, “human”, “egg”, and “outdoor imagery”, and then sub-coded based on different subtypes, for example whether the human appears to be a consumer or farmer, or how the hens were depicted (see Table 1).

Eggboxes were scored for the presence of these elements and files saved for further contextual qualitative analysis. Content analysis has the scope to analyze differentiated levels of content, including the themes and ideas as primary content and contextual information as latent content (Hsieh and Shannon 2005). This study took a “summative content analysis” approach, which involves first coding and categorization using keywords (see Tables 1 and 2), followed by the interpretation of the underlying context (Chrysochou and Festila 2019; Hsieh and Shannon 2005). The summative phrase refers to the process of interpretation, and the focus is on discovering underlying meanings of the content (text, animal representation, and additional imagery). These are presented here as the “marketing narratives” and special attention is given to how hens and their eggs are represented within these narratives.

3 Results

Examination of the imagery (Table 1) together with the text (Table 2) displayed on the egg boxes of supermarket egg brands reveal two prominent narratives, namely those pertaining to hen welfare and human health (Table 3, Figure 1 and Figure 2). The former predominantly displays images of hens, whereas the latter more often depicts the egg products. Wholesome looking families and/or children are sometimes used to seemingly promote further the idea of eggs as “healthy.” Although both hens and eggs often are depicted together, the narratives of “ethical treatment of hens” or ‘human health benefits’ tend to be mutually exclusive (Figure 1). Grass, trees, meadows, and comfortable-looking barns are frequently used as accompanying “scenic imagery”

to emphasize the notion of “healthy and happy hens” (Table 3). Eggs are more often shown whole, but occasionally they are depicted as cracked and cooked (Table 1, Figure 2). Less frequent images include picnic-spreads or cakes, which are associated with the utility of eggs.

Table 3: Distribution of key marketing messages. Many of the egg box samples carry more than one message (see Figure 1 for information on overlap).

Marketing message(s)	Germany	UK	USA	Total	Percentage of total
Animal welfare	10	17	5	32	64%
Human health	15	2	5	22	44%
Taste	3	7		10	20%
Local	3	7		10	20%
Environment	3	2		5	10%
Value for money	1	3	1	5	10%

The absence of imagery or messages related to animal welfare or human health benefits were conspicuous on cheaper supermarket brand eggs (Table 3, Figure 1). While minimalist designs can be indicative of “luxury” brands (Liu, Yildirim, and Zhang 2018) or supportive of the “organic” message (Aigner, Wilken, and Geisendorf 2019), in the samples examined here, “value-for-money” was explicit in the accompanying text. Furthermore, in these samples, there was no less imagery on egg boxes carrying the “organic” label than those without. It is also worth noting that these brands were selling eggs from either caged or barn-kept hens, and not free-range or organically raised hens. “Organic” was written on one UK and one US sample (out of 19 and 8, respectively) but appeared on five (out of 23) German eggbox samples. This likely reflects the increased interest in organic produce in Germany (Hörisch 2018), and the fact that the sale of organic eggs account for almost 30% of all revenues from the egg industry in Germany (BÖLW 2016). In the case of the UK and US organic eggs, the marketing narrative clearly appeared to be promoting human health. Similarly, the German egg boxes coupled “organic” with “fresh” rather than “free-range.” Four of these showed eggs, and two showed only eggs (no hen representations).

Figure 1. Venn diagram showing the overlap of key messages derived from the content analysis (see Table 2). The numbers represent the counts within overlapping categories. Totals for each category can be derived from adding all numbers within or referring back to Table 3.

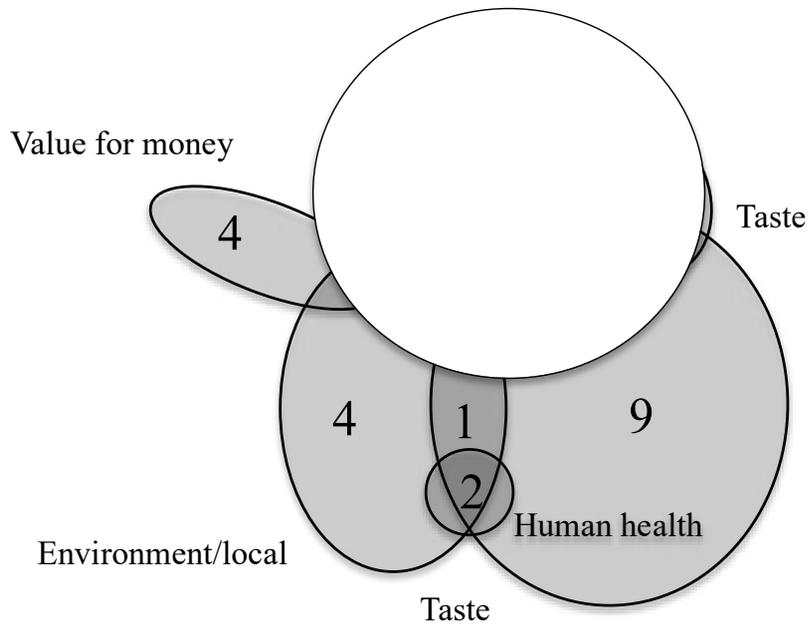
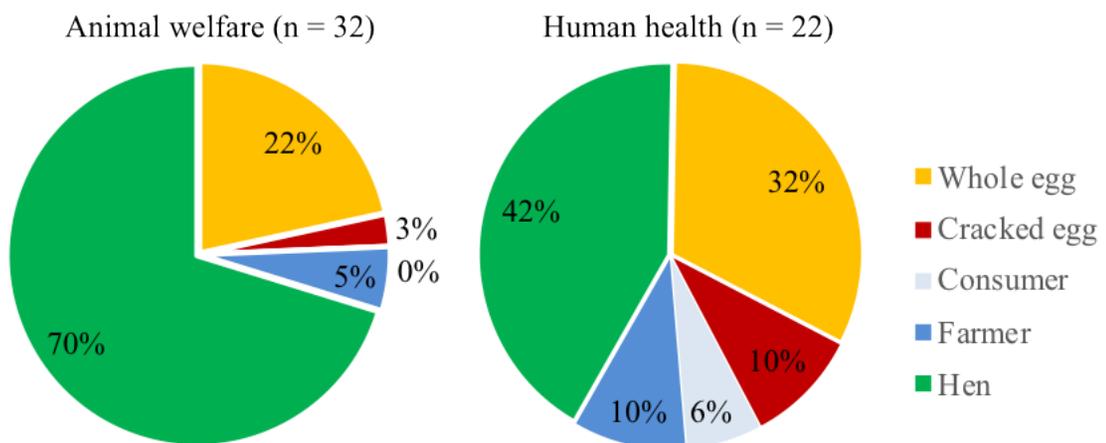


Figure 2. Pie charts show the percentages of imagery associated with animal welfare (n = 32) and human health narratives (n = 22). While these numbers are too small to draw quantitative conclusions, the distribution suggests hens are more often excluded from narratives of human health and utility.



Other explicit marketing messages include the promotion of the eggs as being “environmentally friendly”, “local/regional” (or in the case of UK eggs, “British”), “gourmet”, “tasty”, or “good for baking” (Table 3). The last three messages were grouped together under the category of “taste”, which appears to be a secondary message to narratives of animal welfare and/or human health (Figure 1). Farmers are shown in regional attire to emphasize the “local” origin of the eggs or pictured personally caring for their hens in idyllic settings. Although support for local communities and concern for global environmental issues are separate issues, the ideology of supporting local producers is intrinsically linked with sustainability and concern for the environment (Rivera-Ferre 2008). As such, it was not straightforward to determine if the message of “local” or “regional” was intended to appeal to social, environmental, or perhaps both values. Nonetheless, the combined message of “environmental/local” predominantly overlapped with messages promoting animal welfare or human health (Figure 1). Given the relatively small sample numbers, there were no discernable differences between the two European countries and the US. Although there was no explicit “taste”, “local”, or “environmental” messages on any of the eight US eggboxes, they did contain suggestive imagery, such as a cooked egg.

Humans are depicted on 14% (7/50) of egg boxes examined, and include adult males, adult females, children, and young families. An Edeka (German supermarket) brand shows a man wearing jeans and a checkered shirt, sitting outside, holding a hen on each of his knees. The man has facial hair, looks to be around 40 years of age, and is shown smiling. At his feet is a basket full of eggs and additional hens pecking around outside. The text message says “organic eggs” and the image supports a narrative of a farmer as a community member who cares about his hens and the environment. On another brand sold by Edeka, a man, also presumably meant to represent the farmer, is shown outside surrounded by hens. A brand shows a young female wearing traditional Bavarian attire, sat in a meadow with a basket of eggs. The accompanying text explicitly states the eggs are from Bayern (Bavaria). The “extra-large” eggs from the same company show a robust-looking man, sporting facial hair, surrounded by grass and what appear to be free-ranging hens. From the UK, Sainsburys “Free Range” Wood Farm eggs display a similar motif with a man shown kneeling on green grass surrounded by hens. A brand sold by Penny, Germany, shows a young male and female, playing outside with two young children. The text included “omega-3” and seems to be promoting narratives of healthfulness and wholeness. A similar message of “health” and “wholesome” is signified on a US egg box in the form of a young girl with rosy cheeks, playing outdoors, and holding up an egg and looking at it with wonder.

In many cases the eggs are shown whole, often in a basket. Egg images are found on over a third (20/50) of the egg boxes analyzed, and one quarter (5/20) of these are broken or cooked eggs (Table 1). In one case a soft-boiled egg is shown with the top taken off to expose the yellow yolk. In another case eggs are shown as cracked open, as if ready for frying (although without looking greasy). Other examples incorporate eggs in more creative ways. The Happy Egg Co (UK) sells free-range eggs and the eggbox shows an egg stylised as a chicken. Wings, feet, and a smiling face are superimposed upon a realistic representation of an egg. Another UK brand adopted a similar style, this time with an egg wearing a pencilled in hat and a humanised smile. The latter promotes eggs as “renewable energy” and shows the “egg” enjoying the rays from a pencilled in sun. A brand sold by Tesco (UK) has the term “caged eggs” in a central location, but the text is overshadowed by the much larger “Big and Fresh” lettering. The design of this label is bold and yellow and incorporates the egg yolk of a cracked egg. A brand sold by Sainsburys displays the text for “Large Free-Range Eggs” above the phrase “Baking Eggs.” The Box itself is pink and the label background looks similar to a table-cloth. The label is pink and blue in the center, it is a simple “cupcake” motif, complete with a cherry on top. One of the German egg boxes contained the phrase “6 Picknic Eier” (picnic eggs), accompanied by a cartoon of a picnic basket and blanket. Two featured a rabbit, coinciding with Easter (samples were collected March 2017 and Easter fell on 14-17 April). These examples were coded as “great taste” because the prevailing message seems to be promoting eggs as an appealing snack to take on family outings.

Hen representations can be found on three-quarters (36/50) of egg boxes examined in this study. The hens are shown as silhouettes or stylized outlines, as life-like drawings or photographs, and less frequently in cartoon form. Photographs of real hens are shown accompanying farmers or used in narratives of “happy, healthy hens” and show enjoying a “good life” outdoors in green, sun-soaked, meadows. “Gourmet eggs” tend favor life-like drawing of hens, typically depicting the special breed of which the eggs come from. The “value for money” supermarket brands tended to have minimal additional imagery, perhaps because the price and “value” text alone is sufficient to appeal to consumers most concerned with keeping the grocery bill down. However, even these typically sport some form of hen representation, most often as a simple drawing or hen shape.

4 Discussion

In the sample of supermarket egg brands examined here, humans were shown either as farmers caring for their hens, or consumers enjoying the taste or health benefits of eggs. The egg images reinforced messages of tastiness and healthfulness. Hens were represented via life-like drawings or photographs, as abstract hen-forms, or in cartoon-form. These representations are intentionally chosen to appeal to consumers by signifying “tasty”, “locally produced”, “happy hens”, or “healthy children.” Combined with explicit text, these complete the rhetoric of “happy, healthy hens”, “ethically produced eggs”, and/or “eggs as a healthy food choice.” Using the example of an advertisement for a brand of Pasta, Barthes (1964) provides a conceptual framework for understanding the relationship between images and words in cultural artefacts. These include linguistic, coded iconic, and non-coded iconic messages, such a caption and visible brand name, color choices signifying “Italianicity” and a half-open bag encoding “fresh from the market” (Barthes, 1964, 153) Arguably, the packaging used in the egg boxes examined here function in a similar fashion and are undoubtedly intentional in the messages they wish to purvey.

Anthropocentrism: consumers and producers

Human images either signify consumers enjoying eggs as part of a healthy diet, or as benevolent farmers who care for their hens, the environment, and their community. While the charge of “anthropocentrism” is not necessarily bad (Kopnina et al. 2018), the notion that humans are entitled to govern, protect, and harvest the produce of other animals is inherent to the narratives examined here. Human imagery appears to be conveying one or more of three messages, namely “eggs are healthy”, “we personally care about our hens”, or “we are local producers.” The notion of “healthful eggs” is suggested either by a wholesome-looking child or a young family. The promotion of eggs as “good sources of omega 3” is most prevalent among the US brands. This perhaps reflects a response from the egg industry to deflect some of the negative press egg consumption has received over the years. The American Egg Board (2018) recognizes the increased demand for “healthy” food options and recommends marketing strategies for retailers, including how best to package the eggs. Hen eggs are a good source of protein and micronutrients, but due to their high fat and cholesterol content have been associated with adverse health effects such as cardiovascular disease (Miranda et al. 2015). Indeed, the health benefits and/or health risks of egg consumption is a sub-

ject of conflicting results and shifting advice (Zhang et al. 2020). The egg boxes from the UK and Germany tended to use terminology such as “fresh”, “organic”, or “GMO-free” as being synonymous with “healthy.” This is consistent with Goetzke, Nitzko, and Spiller (2014), who reported that German consumers were more likely to choose the “organic” food for perceived personal health and wellbeing, than for environmental or social motivators. Intensive farming practices run counter to animal welfare, and one core aspect of organic farming methods is improved animal welfare (Brzezina et al. 2017; Hörisch 2018). However, the narratives examined here seem to be using “organic” to promote human health, environmental friendliness, and notion of local communities and humanized farmers (as opposed to faceless corporations). In the US, the growing demand for organic food is largely driven by increased environmental consciousness and the ideology of socially-conscious consumerism (Lee and Yun 2015). Therefore, it is unsurprising that another prominent usage of human subjects is associated with promoting the “human element” to egg-production, by suggesting the farmers have a personal relationship with their hens. Both male and female adults are shown holding or sitting with birds, which seemingly represent their livelihoods. This idyllic scenario appeals to consumers who want to believe their purchases support family farmers.

Cartoon animal representations may be chosen to appeal to younger consumers (Ogle et al. 2017), however, whole eggs are not a readymade “snack food” that would directly appeal to a child. This could explain why cartoon-depictions are not as common as those suggesting real hens enjoying a happy and healthy existence. The appearance of rabbit representations on two of the German eggboxes coincides with the run up to Easter (samples were collected March 2017 and Easter fell on 14-17 April) and could arguably be intended to appeal to children. Although children have less control over what they do and do not eat, their willingness to consume certain foods holds persuasive power in terms of what their guardians purchase (Cairns, Angus, and Hastings 2009). One eggbox shows a life-like pet rabbit snuggled up to a nest of colorful eggs, while the other rabbit depicts a cartoon rabbit running off with a bounty of eggs. In the latter, a life-like hen is depicted to the right of the rabbit “thief.” The associated rabbit messages appear to signify “fun” and function to promote the role of eggs in Easter celebrations.

Eggs as products: disenfranchised producers and feminized protein

The marketing narrative of the egg is that of a product that is intended to be consumed by humans. Wrenn (2017, 201) asserts that “consumption is the lynchpin of capital-

ist relations” and explains that “consumption is a practice that necessitates inequality: some will consume, and some will be consumed.” Indeed, eggs are produced by hens, but harvested, marketed, and consumed by humans for human gain. Of the 20 egg boxes displaying egg images, one quarter of these are shown as broken or cooked eggs (Table 1). The American Egg Board (2018, np) advises against images of cooked eggs because they “have the potential to alienate consumers who do not like that particular style of preparation.” It is worth noting this advice was not taken by one of the eight US samples, which depicted what might be fried eggs (or at least eggs cracked ready for frying). Most notable from the current study is that, although whole eggs and hens frequently appear together on the same box, none of the images of cooked or cracked eggs appeared together with hens. It is interesting that egg marketing seems to dissociate the consumption of the hen’s products from the animals themselves, something that Adams (1990) accuses the meat industry of doing when it dissociates the living animal from the meat on the dinner table. Once they enter our food chain, eggs no longer “belong” to the female hens that they were taken from.

Another interesting observation is how the German producer, Biohennen, markets their medium-sized and extra-large eggs. The former shows a young female in a meadow, whereas the latter depicts a robust-looking man, with facial hair. The fact that these eggs are from the same producer suggests a deliberate attempt at appealing to different consumers who may choose extra-large, or “manly” eggs, over regular-sized eggs. Sexualization of food is something that has been examined by feminist scholars, such as Adams (2004), who writes about how meat is predominantly a “masculine” food and plant-based foods deemed “feminine.” In the same vein, Freeman and Merskin (2008) accuse the fast-food industry of marketing meat to a stereotype of heterosexual males, and promoting a dichotomy of masculine and feminine food types, namely meat and plant-based food. These authors concluded the messages delivered from fast-food marketing are detrimental to social justice (for humans and other animals) and ecological sustainability. For humans, the damage comes from perpetuating stereotypes of men as “self-indulgent, womanizing carnivores”, which Freeman and Merskin (2008, 289) argue lowers society’s expectations for positive contributions of men. “Animalized protein” refers to any food derived from non-human animals, but Adams (1990, 62) asserts that milk and eggs are “feminized protein” because they are produced by females. Hens and cows are often subject to representation as negative human female stereotypes, and derogatory terms for female humans include “hen”, “bird”, and “chick” (Adams 2004, 31; Cudworth 2008; Wrenn 2017). Although it seems reasonable to assume the phrase “Girls on Grass” showed on one of the US eggboxes was intended to invoke

the image of hens living outside, from a feminist perspective it might be construed as promoting a sexist ideology. Wrenn (2017) observes that advertisements selling hens' eggs or cows' milk exemplify the phenomenon that the capitalist system is gendered. Furthermore, "although hens and cows are often anthropomorphized as 'girls' or 'ladies', their mother status is frequently concealed" (Wrenn 2017, 212). Wrenn (2017) draws attention to the absence of motherhood in relation to the dairy cow. Using the example of the "Happy Cows Come from California" television campaign for Real California Cheese, Wrenn (2017, 212) notes "these cows are shown as giggling, trivial, and carefree" rather than competent mothers. This is because the presence of calves would force the consumer to acknowledge the intended purpose of cow's milk. Wrenn (2017) also notes the absence of chicks in egg marketing, and remarks how they are replaced by pristine-looking whole eggs. This was largely the case for the eggboxes examined here, the exception being those that promoted the practice of not culling male hatchlings. Here, the narrative must move away from the illusion that hens produce a wholesome product for human consumption and acknowledge the reproductive utility of egg production.

Happy hens: representation with intention

In the examples studied here, images of hens are used to suggest "healthy" and "happy" animals, shown against idealized backdrops, and being treated as individuals by their human caretakers. The predominant choice of silhouette or life-like representations perhaps reflects the intention to associate real hens with ethical treatments. The notion of happy, healthy hens is a readily accepted narrative because it panders to consumer consciences. Because the animal is not killed during production, consumption of animal-derived products, such as dairy and eggs, presents less of an ethical dilemma for those concerned with how animals are treated. Nonetheless, egg and dairy consumption shares many characteristics with the so-called "meat paradox", which refers to how many people enjoy eating meat but find animal suffering and killing emotionally disturbing (Loughnan, Haslam, and Bastian 2010, 156; Onwezen and van der Weele 2016; Peden et al. 2020). Mechanisms to circumvent the internal conflict of the "meat paradox" are to believe animals are less worthy of concern or less able to feel pain and suffering (Loughnan, Haslam, and Bastian 2010, 157), or to engage in strategic ignorance (Onwezen and van der Weele 2016, 102). Another mechanism, related to strategic ignorance, is to convince ourselves that animal products are ethically produced and suffering is non-existent, or minimal (Onwezen and van der Weele 2016). Similarly, the

notion that animals willingly provide humans with necessary meat products and secretions (milk and eggs) in a mutualistic relationship is readily accepted (Lund et al 2016). The social construction of such narratives is reflected in the attitudes of children towards farm animals. In a qualitative study of British school children, Burich and Williams (2020, 306) reported that children tended to view farming as being mutually beneficial, with animals providing products in exchange for food and protection. Because hens do not need to be killed to harvest their eggs, the dilemma of animal suffering can be more readily circumvented with narratives of free-range hens living a full and good life. The construction of such narratives reflects consumers concerns for hen welfare, but in the absence of control measures does little more than appease concerned but passive consumers.

Concern for farm animal welfare varies across Europe, but is generally stronger in Northern countries such as the UK and Germany, and more pronounced among people not directly involved in farming (Appleby 2003; Ingenbleek et al. 2013). In a US-based survey, over 90% of respondents reported that using animals for egg production was acceptable to them, although 38% expressed some concern for the welfare of chickens (Byrd, Widmar, and Fulton 2017). The observation that the majority of egg boxes (31/50) examined in this study express some message regarding hen welfare (Table 3), reflects how the industry acknowledges this concern amongst consumers (Cole 2011). The egg boxes that were marketed as being “free-range” or “woodland” often displayed hens against a backdrop of grassland, trees, or meadows, thus signifying “happy hens.” Nordquist et al. (2017, 37) discuss the “commercial potential of animal welfare” in the form quality award labels that allow retailers to charge higher prices than unlabeled products. Welfare-standard label-awarding organizations must cover costs for controlling and ensuring the welfare level guaranteed by their label. Nordquist et al. (2017) describe this as “a win-win situation” because it not only improves animal welfare, but also provides income to awarding organizations, and higher retail values for the producers. However, Cole (2011, 84) argues that animal friendly welfare discourses attempt to “remoralize the exploitation of farmed animals in such a way as to permit business as usual”, which panders to the “ethical self-satisfaction for the consumer.”

Vizzier Thaxton et al. (2016, 2201) predict three future challenges that the egg industry will face, namely objections to the “disposal of unwanted male chicks, handling of end-of-lay (spent) hens, and beak-trimming.” The practice of beak-trimming reduces cannibalism and increases feeding efficiency (untrimmed hens peck more), but the procedure causes pain and lasting discomfort (Appleby 2003; Nordquist et al.

2017). An egg box from a German brand explicitly claims to oppose the practice of beak-trimming, and displays a close-up head shot of two hens. A recent example of how public outcry has not led to legislation change, but has positively impacted on welfare in Germany, is the practice of culling male hatchlings. Even if culling methods are deemed humane, many people object to killing surplus males based on ethical grounds because it is seen as a “waste of animal life” (Vizzier Thaxton et al. 2016, 2202). These concerns led to government funding from Germany and the Netherlands to research potential alternatives, such as dual-purpose hen breeds (egg and meat production) (Vizzier Thaxton et al. 2016). Germany’s Green Party attempted to pass a bill to ban the culling of male hatchlings (a practice that also occurs in the UK and US) (Henderson 2016). However, markets in Germany have already responded to public concern by increasing practices that do not involve culling male hatchlings. Producers are assuring consumers that their products conform to ethical practices by embracing endeavors such as the Bruder-Ei (Brother-Egg) initiative and featuring cartoon or lifelike images of “cute” chicks on their eggboxes. This was likely an intentional marketing ploy to invoke a “cute response” (Serpell 2003). The approval of a given treatment or use of an animal is often dependent on the type of animal, and how humans identify with that animal (Driscoll 1992). Certain attributes inherently appeal to our emotional response to other animals, such as being “cute” or “vulnerable” (Serpell 2004). The growing number of egg brands embracing this practice suggests that consumers are emotionally responsive to the plight of male chicks.

5 Conclusion

“Whether the animal is constructed as the radical other or someone with whom we can relate and feel kinship, describing animals in popular culture is often – if not always – a way to indirectly describe ourselves” (Tüür and Tønnessen 2014, 1). This position of the animal in relation to the self could be extended to how we feel, or want to feel about animal others. For example, to convince ourselves that our consumer choices support the welfare and happiness of laying hens, or to that hens are happy to serve. Although images of free-roaming hens soaking up the sun may not be true representations of the actual living conditions of the hens (Lay et al. 2011), it does reflect a public concern for the welfare of these animals. Jones (2017, 16) asserts that “how we, as a society, treat animals is largely dependent on what people judge to be acceptable, often driven by deep cultural beliefs and what science tells us.” The majority (94%) of EU citizens believe the welfare of farmed animals is to some degree important, and over

half are willing to pay more for products they believe to be welfare-friendly (European Commission, 2016). Although it varies across demographics, concern for farm animal welfare is also important to US citizens (Byrd, Widmar, and Fulton 2017). Frank (2006) presents a model whereby animal discomfort reduces human utility, meaning consumers will tradeoff preferences for taste or value-for-money in favor of animal welfare. However, when consumers subscribe to these ideals then claims of improvements in welfare practices can be exploited as marketing tools. Nonetheless, these marketing strategies do serve to increase public awareness and concern about certain welfare issues and drives competitors to adopt similar practices (Frank 2006; van Riemsdijk et al. 2017). Furthermore, public awareness has been a major driving force behind legislation changes (Appleby 2003). However, despite the increase in public concern and improvements in living conditions, a study conducted by Lay et al. (2011, 279) compared conventional cages, furnished cages, barns, and outdoor systems and concluded that “no single housing system is ideal from a hen welfare perspective.” Furthermore, the claim of “free-range” does not necessarily ensure better welfare conditions for hens kept in more confined housing arrangements. Lay et al. (2011) point out that even housing systems that are considered to be superior by design, relative to hen welfare, can have a negative effect on welfare if poorly managed. Because supermarket eggs are so far removed from the farm, only the most proactive consumer will research the conditions that produced their eggs. However, Cornish et al. (2016) reported that although concern for farmed animal welfare was increasing globally, it does not correlate with an increased understanding of welfare needs or practices.

Narratives used to sell supermarket eggs reflect public concern with image of “happy hens” enjoying sunshine and green grass, and depict farmers as “caring” but may simply be facilitating selective ignorance regarding how those eggs are harvested (Onwezen and van der Weele, 2016). Similarly, removing the hen completely, and refocusing attention on the utility and health benefits of eggs allows consumers to maintain a level of cognitive dissonance by not drawing attention to how the eggs were produced (Loughnan, Haslam, and Bastian 2010). Thus, how hens are represented, or not represented, has an indirect impact on how hens are perceived and eggs are produced. The growing public awareness and willingness to pay more for welfare-friendly animal products needs guidance from animal welfare advocates to ensure change is more than superficial (Frank 2006; Cornish et al. 2016; Autio et al. 2017; Alonso, González-Montaña, and Lomillos 2020). Left unchecked, marketing narratives function to appease public concerns regarding hen welfare without actually improving conditions. Marketing regulation and welfare regulation go some way towards holding producers account-

able, but the rhetoric of the 'happy hens' remains a powerful marketing tool to target conscientious consumers.

ACKNOWLEDGEMENTS

Thank you to the editor and two anonymous reviewers for the insightful comments and suggestions that strengthened the manuscript considerably.

References

- Adams, Carol J. 1990. *The Sexual Politics of Meat: A Feminist-Vegetarian Critical Theory of Meat*. New York, NY: The Continuum International Publishing Group.
- Adams, Carol J. 2004. *The Pornography of Meat*. New York, NY: The Continuum International Publishing Group.
- Aigner, Andreas, Robert Wilken, and Sylvie Geisendorf. 2019. "The effectiveness of promotional cues for organic products in the German retail market." *Sustainability (Switzerland)*, 11(24): 6986–7001.
- Alonso, Marta E., José R. González-Montaña, and Juan M. Lomillos. 2020. "Consumers' Concerns and Perceptions of Farm Animal Welfare." *Animals*, 10(3): 1–13.
- American Egg Borad. 2018. "Egg packaging best practices." <https://www.aeb.org/retail/egg-packaging-best-practices>
- American Veterinary Medical Association. 2012. "Welfare Implications of Laying Hen Housing." <https://www.avma.org/resources-tools/literature-reviews/welfare-implications-laying-hen-housing>
- Ampuero, Olga, and Natalia Vila. 2006. "Consumer Perceptions of Product Packaging." *Journal of Consumer Marketing*, 23(2): 102–14.
- Appleby, Micheal. C. 2003. "The European Union ban on conventional cages for laying hens: history and prospects." *Journal of Applied Animal Welfare Science*, 6: 103–21.
- Autio, Minna, Jaakko Autio, Ari Kuismin, Brigit Ramsingh, Eliisa Kylkilahti, and Anna Valros. 2017. "Bringing Farm Animal Welfare to the Consumer's Plate: Transparency, Labelling and Consumer Education." In *The Business of Farm Animal Welfare*, edited by Nicky Amos and Rory Sullivan, 120–36. London, UK: Routledge.
- Baker, Steve. 2001. "Guest Editor's Introduction: Animals, Representation, and Reality." *Society and Animals*, 9(3): 189–201.
- Barthes, Roland. 1964. "The Rhetoric Of The Image (Rhétorique de l'image)." In *Image, Music, Text: Essays on semiology*, by Barthes, Roland. English Translation by

- Heath, Stephen Heath, 1977. London, UK: Fontana Press.
- BÖLW, 2016. Zahlen - Daten - Fakten: Die Bio-Branche 2016. München, Germany. https://www.boelw.de/fileadmin/user_upload/Dokumente/Zahlen_und_Fakten/B%C3%96LW_ZDF_2016_web.pdf
- Brzezina, Natalia, Katharina Biely, Ariella Helfgott, Birgit Kopainsky, Joost Vervoort, and Erik Mathijs. 2017. "Development of Organic Farming in Europe at the Crossroads: Looking for the Way Forward through System Archetypes Lenses." *Sustainability (Switzerland)*, 9(5): 1–23.
- Burich, Lisbeth, and Joanne M. Williams. 2020. "Children's Welfare Knowledge of and Empathy with Farm Animals: A Qualitative Study." *Anthrozoos*, 33(2): 301–15.
- Byrd, Elizabeth, Nicole Olynk Widmar, and Joan Fulton. 2017. "Of Fur, Feather, and Fin: Human's Use and Concern for Non-Human Species." *Animals*, 7(3): 22–40.
- Cairns, Georgina, Kathryn Angus, and Gerard Hastings. 2009. "The extent, nature and effects of food promotion to children: a review of the evidence to December 2008." Report prepared for The World Health Organization. https://www.who.int/dietphysicalactivity/Evidence_Update_2009.pdf
- Carneiro, João de D.S., Valéria P.R. Minim, Rosires Deliza, Carlos H.O. Silva, Joel C.S. Carneiro, and Fabiana P. Leão. 2005. "Labelling Effects on Consumer Intention to Purchase for Soybean Oil." *Food Quality and Preference*, 16(3): 275–82.
- Chrysochou, Polymeros, and Alexandra. Festila. 2019. "A Content Analysis of Organic Product Package Designs." *Journal of Consumer Marketing*, 36(4): 441–448.
- Cole, Matthew. 2011. "From 'Animal Machines' to 'Happy Meat'? Foucault's Ideas of Disciplinary and Pastoral Power Applied to 'Animal-Centred' Welfare Discourse." *Animals*, 1(1): 83–101
- Connolly, Amanda, and Lucy Davison. 1996. "How does design affect decision at point of sale?" *Journal of Brand Management*, 4: 100–107.
- Cornish, Amelia, David Raubenheimer, and Paul McGreevy. 2016. "What We Know about the Public's Level of Concern for Farm Animal Welfare in Food Production in Developed Countries." *Animals*, 6(11): 1–15.
- Crony, Candace C., Mike Apley, Jude. L. Capper, Joy A. Mench, and Sussana Priest. 2012. "Bioethics Symposium: The ethical food movement: What does it mean for the role of science and scientists in current debates about animal agriculture?" *Journal of Animal Science*, 90: 1570–1582.
- Cudworth, Erika. 2008. "'Most Farmers Prefer Blondes': The Dynamics of Anthroparchy in Animals' Becoming Meat." *Journal for Critical Animal Studies*, 6(1): 32–45.
- Deliza, R., A. Rosenthal, F. B.D. Abadio, Carlos H.O. Silva, and C. Castillo. 2005. "Application of High Pressure Technology in the Fruit Juice Processing: Benefits Perceived

- by Consumers." *Journal of Food Engineering*, 67(1–2): 241–46.
- Driscoll, Janis Wiley. 1992. "Attitudes Toward Animal Use." *Anthrozoös*, 5: 32–39.
- EU Council Directive 1999/74/EC. "Protection of laying hens." <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:l12067>
- EU Council Regulation No 589/2008. "Rules on marketing standards for eggs." <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3A4324376>
- EU Council Regulation No 834/2007. "Production and labelling of organic products." <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Af86000>
- European Commission. 2016. "Attitudes of Europeans towards Animal Welfare." Special Eurobarometer 442. <https://doi.org/10.2875/884639>
- Festila, Alexandra, and Polymeros Chrysochou. 2018. "Implicit communication of food product healthfulness through package design: A content analysis." *Journal of Consumer Behaviour*, 17: 461–76.
- Frank, Joshua. 2006. "Process attributes of goods, ethical considerations and implications for animal products." *Ecological Economics*, 58: 538–47.
- Freeman, Carrie Packwood, and Debra Merskin. 2008. "Having It His Way: The Construction of Masculinity in Fast Food TV Advertising." *Food for Thought: Essays on Eating and Culture*. Edited by Lawrence C. Rubin, 277–293. Jefferson, NC: McFarland.
- Goetzke, Beate, Sina Nitzko, and Achim Spiller. 2014. "Consumption of organic and functional food. A matter of well-being and health?" *Appetite*, 77: 96–105.
- Harrison, Ruth., Rachel. Carson, and Marion Stamp Dawkins. 2013. *Animal Machines*, Egham. UK: CABI.
- Healy, Sally. 2017. "Consumers, Corporate Policy and Animal Welfare: How Societal Demands Are Shaping the Food Industry's Approach to Farm Animal Welfare." In *The Business of Farm Animal Welfare*, edited by Nicky Amos and Rory Sullivan, 64–72. London, UK: Routledge.
- Hecht, Amelie A., Crystal L. Perez, Michele Polascek, Anne N. Thorndike, Rebecca L. Franckle, and Alyssa J. Moran. 2020. "Influence of Food and Beverage Companies on Retailer Marketing Strategies and Consumer Behavior." *International Journal of Environmental Research and Public Health*, 17(20): 1–34.
- Henderson, Emma. 2016. "German court rules killing day-old male chicks does not contravene their animal rights." *Independent*. May 25, 2016. <https://www.independent.co.uk/life-style/health-and-families/health-news/german-court-rules-killing-day-old-live-male-chicks-does-not-contravene-their-animal-rights-a7047591.html>
- Hörisch, Jacob. 2018. "How Business Actors Can Contribute to Sustainability Transi-

- tions: A Case Study on the Ongoing Animal Welfare Transition in the German Egg Industry." *Journal of Cleaner Production*, 201: 1155–65.
- Hsieh, Hsiu Fang, and Sarah E. Shannon. 2005. "Three Approaches to Qualitative Content Analysis." *Qualitative Health Research*, 15(9): 1277–88.
- Ingenbleek, Paul T.M., David Harvey, Vlatko Ilieski, Victor M. Immink, Kees de Roest, and Otto Schmid. 2013. "The European Market for Animal-Friendly Products in a Societal Context." *Animals*, 3(3): 808–29.
- International Egg Commission. 2013. "Atlas of the Global Egg Endustry." https://www.internationalegg.com/wp-content/uploads/2015/08/atlas_2013_web.pdf
- Jones, Tracey. 2017. "The Key Issues in Farm Animal Welfare." In *The Business of Farm Animal Welfare*, edited by Nicky Amos and Rory Sullivan, 9–31. London, UK: Routledge.
- Kidd, M. T., and K. E. Anderson. 2019. "Laying Hens in the U.S. Market: An Appraisal of Trends from the Beginning of the 20th Century to Present." *Journal of Applied Poultry Research*, 28(4): 771–84.
- Kopnina, Helen, Haydn Washington, Bron Taylor, and John J Piccolo. 2018. "Anthropocentrism: More than Just a Misunderstood Problem." *Journal of Agricultural and Environmental Ethics*, 31(1): 109–27.
- Kunst, Jonas R., and Sigrid M. Hohle. 2016. "Meat Eaters by Dissociation: How We Present, Prepare and Talk about Meat Increases Willingness to Eat Meat by Reducing Empathy and Disgust." *Appetite*, 105: 758–74.
- Lay, Don. C., Jr., R. M. Fulton, Paula Y. Hester, Darrin M. Karcher, Joergen B. Kjaer, Joy A. Mench, B. A. Mullens, R. C. Newberry, Christine J. Nicol, Neil P. O'Sullivan, and R. E. Porter. 2011. "Hen welfare in different housing systems." *Poultry Science*, 90: 278–94.
- Lee, Hyun-Joo, and Zee-Sun Yun. 2015. "Consumers' perceptions of organic food attributes and cognitive and affective attitudes as determinants of their purchase intentions toward organic food." *Food Quality and Preference*, 39: 259–67.
- Liu, Zhenqi Jessie, Pinar Yildirim, and Jogn Zhang. 2018. "A Theory of Minimalist Luxury." Preprint available at SSRN: <https://ssrn.com/abstract=3246729>
- Loughnan, Steve, Nick Haslam, and Brock Bastian. 2010. "The Role of Meat Consumption in the Denial of Moral Status and Mind to Meat Animals." *Appetite*, 55(1): 156–59.
- Lund, Thomas B., McKeegan, Dorothy. E.F., Cribbin, C. and Peter Sandøe. 2016. "Animal ethics profiling of vegetarians, vegans and meat eaters." *Anthrozoos*, 29(1): 89–106.
- Luo, Dan, Luwen Yu, Stephen Westland, and Nik Mahon. 2019. "The Influence of

- Colour and Image on Consumer Purchase Intentions of Convenience Food." *Journal of the International Colour Association*, 2: 11–23.
- Magdelaine, Pascale. 2011. "Egg and Egg Product Production and Consumption in Europe and the Rest of the World." In *Improving the Safety and Quality of Eggs and Egg Products*, edited by Yves Nys, Maureen Bain, and Filip Van Immerseel, 3–16. Cambridge, UK: Woodhead Publishing.
- McKendree, Melissa G., Candace C. Croney, and Nicola J. Widmar. 2014. "Effects of demographic factors and information sources on United States consumer perceptions of animal welfare." *Journal of Animal Science*, 92: 3161–73.
- Miles, Chris, and Tomas Nilsson. 2018. "Marketing (as) Rhetoric: An Introduction." *Journal of Marketing Management*, 34 (15–16): 1259–71.
- Miranda, Jose M., Xaquín Anton, Celia Redondo-Valbuena, Paula Roca-Saavedra, Jose A. Rodriguez, Alexandre Lamas, Carlos M. Franco, and Alberto Cepeda. 2015. "Egg and egg-derived foods: effects on human health and use as functional foods." *Nutrients*, 7: 706–29.
- Nordquist, Rebecca E., Franz Josef van der Staay, Frank J. C. M. van Eerdenburg, Francisca C. Velkers, Lisa Fijn, and Saskia S. Arndt. 2017. "Mutilating Procedures, Management Practices, and Housing Conditions That May Affect the Welfare of Farm Animals: Implications for Welfare Research." *Animals*, 7(2): 12.
- Ochs, Daniel S., Christopher A. Wolf, Nicole J.O. Widmar, and Courtney Bir. 2018. "Consumer Perceptions of Egg-Laying Hen Housing Systems." *Poultry Science*, 97(10): 3390–96.
- Ogle, Andrew D., Dan J Graham, Rachel G Lucas-Thompson, and Christina A Roberto. 2017. "Influence of Cartoon Media Characters on Children's Attention to and Preference for Food and Beverage Products." *Journal of the Academy of Nutrition and Dietetics*, 117: 265–70.e2.
- Onwezen, Marleen C., and Cor N. van der Weele. 2016. "When Indifference Is Ambivalence: Strategic Ignorance about Meat Consumption." *Food Quality and Preference*, 52: 96–105.
- Peden, Rachel S.E., Irene Camerlink, Laura A. Boyle, Steve Loughnan, Faical Akaichi, and Simon P. Turner. 2020. "Belief in Pigs' Capacity to Suffer: An Assessment of Pig Farmers, Veterinarians, Students, and Citizens." *Anthrozoos*, 33(1): 21–36.
- Rettie, Ruth, and Carol Brewer. 2000. "The Verbal and Visual Components of Package Design." *Journal of Product & Brand Management*, 9(1): 56–70.
- Rivera-Ferre, Marta G. 2008. "The future of agriculture. Agricultural knowledge for economically, socially and environmentally sustainable development." *EMBO reports*, 9: 1061–66.

- Sayer, Karen. 2013. "Animal Machines: The Public Response to Intensification in Great Britain, c. 1960-c. 1973." *Agricultural History*, 87: 473–501.
- Scrinis, Gyorgy, Christine Parker, and Rachel Carey. 2017. "The Caged Chicken or the Free-Range Egg? The Regulatory and Market Dynamics of Layer-Hen Welfare in the UK, Australia and the USA." *Journal of Agricultural and Environmental Ethics*, 30(6): 783–808.
- Serpell, James A. 2003. "Anthropomorphism and Anthropomorphic Selection—Beyond the 'Cute Response.'" *Society and Animal*, 11: 83.
- Serpell, James A. 2004. "Factors influencing human attitudes to animals and their welfare." *Animal Welfare*, 13: 145–51.
- Shields, Sara, Paul Shapiro, and Andrew Rowan. 2017. "A Decade of Progress toward Ending the Intensive Confinement of Farm Animals in the United States." *Animals*, 7(5): 1–28.
- Silayoi, Pinya, and Mark Speece. 2007. "The importance of packaging attributes: a conjoint analysis approach." *European Journal of Marketing*, 41: 1495–517.
- Simms, Christopher, and Paul Trott. 2010. "Packaging Development: A Conceptual Framework for Identifying New Product Opportunities." *Marketing Theory*, 10(4): 397–415.
- Steenis, Nigel D., Erica van Herpen, Ivo A. van der Lans, Tom N. Ligthart, and Hans C. M. van Trijp. 2017. "Consumer response to packaging design: The role of packaging materials and graphics in sustainability perceptions and product evaluations." *Journal of Cleaner Production*, 162: 286–98.
- Theben, Alexandra, Melissa Gerards, and Frans Folkvord. 2020. "The Effect of Packaging Color and Health Claims on Product Attitude and Buying Intention." *International Journal of Environmental Research and Public Health*, 17(6): 1991–2001.
- Tonks, David Graham. 2002. "Marketing as Cooking: The Return of the Sophists." *Journal of Marketing Management*, 18(7–8): 803–22.
- Tüür, Kadri, and Morten Tønnessen. 2014. "Introduction." In *The Semiotics of Animal Representations*, edited by Kadri Tüür and Morten Tønnessen, 7–30. New York, NY: Rodopi.
- van Riemsdijk, Lenka, Paul T. M. Ingenbleek, Hans C. M. van Trijp, and Gerrita van der Veen. 2017. "Marketing Animal-Friendly Products: Addressing the Consumer Social Dilemma with Reinforcement Positioning Strategies." *Animals*, 7(12): 98–118.
- Vizzier Thaxton, Yvonne, Karen D. Christensen, Joy A. Mench, Elizabeth R. Rumley, Christine Daugherty, Bruce Feinberg, Molly Parker, Paul Siegel, and Colin G. Scanes. 2016. "Symposium: Animal welfare challenges for today and tomorrow." *Poultry Science*, 95: 2198–207.

- Westerman, S. J., E. J. Sutherland, P. H. Gardner, N. Baig, C. Critchley, C. Hickey, S. Mehigan, A. Solway, and Z. Zervos. 2013. "The Design of Consumer Packaging: Effects of Manipulations of Shape, Orientation, and Alignment of Graphical Forms on Consumers' Assessments." *Food Quality and Preference*, 27(1): 8–17.
- Widmar, Nicole, Courtney Bir, Christopher Wolf, John Lai, and Yangxuan Liu. 2020. "#Eggs: Social and Online Media-Derived Perceptions of Egg-Laying Hen Housing." *Poultry Science*, 99(11): 5697–5706.
- Wrenn, Corey. 2017. "Toward a Vegan Feminist Theory of the State." In *Animal Oppression and Capitalism*, edited by David Nibert, 201–30. Santa Barbara, CA: Praeger Press.
- Zhang, Xianzhuo, Meng Lv, Xufei Luo, Janne Estill, Ling Wang, Mengjuan Ren, Yunlan Liu, et al. 2020. "Egg Consumption and Health Outcomes: A Global Evidence Mapping Based on an Overview of Systematic Reviews." *Annals of Translational Medicine*, 8(21): 1343–55.