

The Happy Hen on Your Supermarket Shelf

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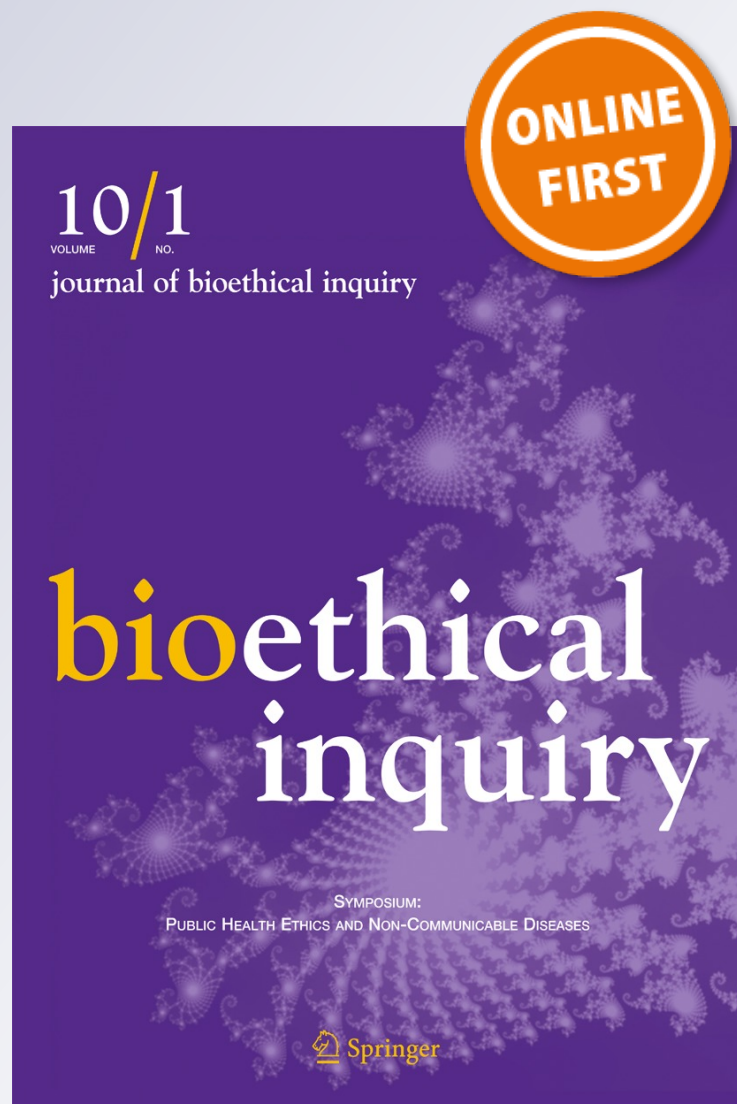
Journal of Bioethical Inquiry

An interdisciplinary forum for ethical
and legal debate

ISSN 1176-7529

Bioethical Inquiry

DOI 10.1007/s11673-013-9448-5



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The Happy Hen on Your Supermarket Shelf

What Choice Does Industrial Strength Free-Range Represent for Consumers?

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Received: 1 December 2012 / Accepted: 14 April 2013
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Abstract This paper investigates what “free-range” eggs are available for sale in supermarkets in Australia, what “free-range” means on product labeling, and what alternative “free-range” offers to cage production. The paper concludes that most of the “free-range” eggs currently available in supermarkets do not address animal welfare, environmental sustainability, and public health concerns but, rather, seek to drive down consumer expectations of what these issues mean by balancing them against commercial interests. This suits both supermarkets and egg producers because it does not challenge dominant industrial-scale egg production and the profits associated with it. A serious approach to free-range would confront these arrangements, and this means it may be impossible to truthfully label many of the “free-range” eggs currently available in the dominant supermarkets as free-range.

Keywords Animals · Ethics · Food supply

It's no coincidence that people in most peasant cultures keep chooks. Backyard chook-keeping makes sense. Hens eat the stuff you don't want, and give you eggs, meat and fertilizer in return. Everyone can keep hens even if you don't have optimum conditions, they will still be better than those that battery hens experience: crammed in small wire cages and fed with antibiotics to keep them alive. Anyone who eats eggs or hens from the battery poultry industry helps keep this system going (French 2010, 3).

Introduction

In December 2012 the Australian Competition and Consumer Commission (ACCC) (2012), Australia's federal competition and consumer protection regulator, rejected an application by the egg-producer industry body, the Australian Egg Corporation Limited, for approval of its revised and rebranded “Egg Standards Australasia” certification trademark. The proposed new certification standard generated substantial controversy and publicity, prompting the Australian Competition and Consumer Commission (ACCC) to take the unusual steps of widely calling for public submissions, meeting with a range of interested stakeholders and regulators, and even visiting three egg

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farms. The commission (2012, 42) received 1,700 submissions—all but seven arguing *against* the proposed certification. A bevy of consumer and food advocacy groups organized dynamic campaigns opposing the proposed new standard. Media coverage of the issue was high (and highly emotional), with the Egg Corporation vigorously arguing its case in mainstream and social media.

Controversy centred on the Egg Corporation's proposal to revise the definition of "free-range" eggs in its updated quality assurance certification scheme to include a maximum outdoor stocking density of 20,000 hens per hectare (or two hens per square metre). This is eight to 26 times more than the maximum stocking densities allowed by alternative voluntary accreditation and logo systems for "free-range" and "organic" eggs in Australia and internationally set by organisations such as the Royal Society for the Prevention of Cruelty to Animals and organic and free-range farmers associations (see Table 1 discussed below; see also Australian Competition and Consumer Commission ACCC 2012, 82).

The Australian Competition and Consumer Commission rejected the new certification scheme on the basis that its definition of "free-range" was out of step with consumer expectations of what "free-range" means and therefore potentially misleading and deceptive to consumers. The disallowance of the new scheme, however, left in place the Egg Corporation's earlier quality assurance certification scheme that includes the same, relatively loose definition of "free-range" (discussed below). In response to media coverage of the controversy, Coles and Woolworths—the two supermarkets that dominate 80 percent of the Australian grocery market (Ferrier Hodgson 2011) and 50 percent of retail egg sales (Australian Competition and Consumer Commission ACCC 2008, 266)—made media statements and advertisements announcing their own actions to address consumer expectations about animal welfare. Coles announced that its own label of "free-range" eggs will now have to come from facilities with an outdoor stocking density of 10,000 hens per hectare or less (still much higher than alternative schemes; see Table 1). Since 2009 both chains have also stated repeatedly that they have decreased the number of brands of cage eggs for sale and reduced the price of eggs labelled "free-range." Yet, as this paper will show, Coles' and Woolworths' low prices mean that "free-

range" eggs must generally be produced in crowded, large-scale, shed-based systems where many hens have only "theoretical" access to a poorly vegetated outdoor range.






This paper argues that the crucial question is not simply whether "free-range" eggs adequately meet consumer expectations about animal welfare. The Australian Competition and Consumer Commission was certainly correct to find that the labelling of many "free-range" eggs under the Egg Corporation's current and proposed scheme is and would be misleading and deceptive for consumers who value animal welfare (as this paper shows). The deeper issue, however, is the political contest over the setting of the meaning of "free-range" in the minds and imaginations of consumers, producers, retailers, and government policy-makers. This paper suggests that the consumer choice to buy "free-range" is not merely the expression of preformed personal values. It is also an attempt at collective political action (Hartlieb and Jones 2009; Holzer 2006; see also Lockie 2009; Miele and Evans 2010) to change the moral, political, and economic arrangement of the production, distribution, and retail chains that create the eggs available on the supermarket shelf (Morgan, Marsden, and Murdoch 2009; see also King and Pearce 2010; Parker 2013; Weber, Heinze, and Desoucey 2008).

It is in supermarkets' and producers' interests to set the meaning of "free-range" so as to encompass consumer and activist concerns as much as possible, but at the same time to neutralise or minimise any challenge to the economic and political benefits they derive from the existing major supermarket-centred and corporation-dominated production, distribution, and retail food regime (Burch and Lawrence 2007; McMichael 2005; Smith, Lawrence, and Richards 2010). This paper suggests that it is probably not possible for intense, industrial-scale egg production and distribution for retail in major supermarkets to address the problems that "free-range" production is intended to address without radical change.

The first part of the paper briefly describes the rising significance of free-range eggs as a consumer choice in Australia and sets out the framework and methodology of the remainder of the paper for a policy-oriented political economic critique of the "free-range" eggs available in major Australian supermarkets.

The second part of the paper presents the problems of hen welfare, environmental sustainability, and human

Table 1 Summary of major accreditation standards for free-range egg production in Australia

	Egg Corporation (based on <i>Model Code of Practice</i>) 	RSPCA 	Free Range Farmers Association (Victoria) 	Humane Choice 	Australian Certified Organic 
Density inside	15 birds/m ²	7–9 birds/m ²	7 birds/m ²	5 birds/m ²	7 birds/m ²
Max birds per shed	No maximum	5,000 (rec.)	1,000	2,500	1,500
Density outside	No maximum (rotation) 1,500 birds/ha (no rotation)	2,500 birds/ha (rotation) 1,500 birds/ha (no rotation)	750 birds/ha	1,500 birds/ha	1,000 birds/ha
Ground cover required?	No	Yes	Yes	Yes (extensive)	Yes (very extensive)
Beak-trimming?	Yes	No*	No	No	No*
Induced moulting?	Yes	No	No	No	No
Cages allowed at same site?	Yes	Yes	No	No	No
Antibiotics?	Yes	Yes**	No	Yes**	Yes**
Colourant in feed?	Yes	Yes	No	Not specified	Synthetic colouring prohibited
Mostly sold where?	Dominant supermarket chains	Dominant supermarket chains	Farmers' markets/ Organic stores (Victoria only)	Farmers' markets/ Organic stores	Organic stores***
Scale of most farms accredited?	Intensive, industrial, and medium-scale	Intensive, industrial	Small-scale, alternative farmers, and medium-scale	Small-scale, alternative farmers, and medium-scale	All

* But exceptions may be specifically allowed by the accrediting organization.

** But not systematically; only for therapeutic purposes and under vet supervision.

*** Also available to a limited extent in dominant supermarket chains and farmers' markets in ACT and NSW.

health with intense, industrial cage egg production for which “free-range” is supposed to be an alternative.

The third part shows that the “free-range” eggs available for sale in supermarkets in Australia are largely the product of intense, industrial, concentrated egg production and distribution that raise many of the same problems that cage production does.

A whole new set of relationships and actions—including different farming practices, different relationships with the hens and ecology, and often different distribution systems and different retail outlets—must be created in order for a consumer to have the choice of a product that expresses different values (see Morgan, Marsden, and Murdoch 2009; Sewell 1992; Swidler 1986).

The fourth part concludes by arguing that the definitions of “free-range” created and offered to shoppers by both the Egg Corporation and supermarkets seek to “satisfice” (Simon 1956) consumers by “encompassing” (Fourcade and Healy 2007) “free-range” within the dominant intense, industrial production and distribution food regime (Arcuri 2012; Guthman 2004). The conclusion additionally establishes that such definitions also divert attention away from the need for citizens to act as citizens, not just as consumers, and to advocate for policy, law, and regulation to change the way the food system works and create alternative ways of organising the production and retailing of eggs (Roff 2007; see also Miele and Evans 2010).

The Rise of Free-Range as an Alternative to Intense, Industrial Cage Production

The Rise of “Free-Range” as a Consumer Choice

Eggs are big business: In 2011 egg production in Australia was worth \$572 million (Australian Egg Corporation Limited 2012b). Global per capita egg consumption has doubled since 1950 (Weis 2007). Australian egg consumption is rising from lows of around 140 eggs per capita in the 1980s and 1990s to 213 eggs per capita in 2011 (Australian Bureau of Statistics ABS 2011; Australian Egg Corporation Limited 2011). Most eggs produced in Australia (and globally) still come from caged hens. But “free-range” lines accounted for 28.4 percent of Australian grocery retail egg sales in 2011, up from 14.5 percent in 2005

(Australian Egg Corporation Limited 2005, 2006, 2007, 2008, 2009, 2010a, 2010b, 2011). Yet retail (carton) eggs account for only just over half of egg production, with the other half (42 percent) of eggs produced going into processed foods and hospitality and catering, where free-range eggs only form a miniscule proportion (Outlaw 2012).

Our own data collection (described below), which included photographing egg shelves in the two dominant supermarket chains in a variety of locations in the major Australian capital cities of Canberra, Melbourne, and Sydney in 2012, indicates that a consumer entering the eggs aisle of a major supermarket in the major population centres of the Eastern states of Australia will now see about 50 percent of shelf space devoted to “free-range” eggs. They will also pay a premium for these eggs. Our data collection indicates that the average price for a dozen eggs was \$4 in 2010 (Australian Egg Corporation Limited 2011). Meanwhile, a dozen free-range or organic eggs will commonly cost \$6 (free-range) and \$8 (organic) at major supermarkets (and more than \$10 when purchased at alternative organic and wholefoods stores). The growth of alternate retail spaces such as farmers’ markets (where consumers can buy eggs direct from small-scale farmers who free-range their chickens) and organic stores (that require organic certifications or otherwise verify the practices of the farms from which they buy produce) and the growing popularity of keeping backyard chickens also illustrate this trend of consumer interest regarding methods of egg production (Elks 2012).

The leading Australian consumer advocacy organization, Choice, surveyed its members and found that they bought “free-range” eggs predominantly for animal welfare reasons, presumably because they object to (battery) cage egg production, with taste, health, and environmental reasons as secondary considerations (Clemons 2012). In Australia (as elsewhere in the developed world) the popularity of free-range eggs has grown out of campaigns by animal welfare advocates to ban “battery” cage egg production; that is, the use of small, barren, wire mesh cages for keeping layer hens (i.e., hens that lay eggs, not those bred purely for meat) in small groups within large sheds in the interests of efficient management of their behaviour (see further discussion of the problems with this style of production in part two of this paper). Animal welfare advocacy organisations in Australia, such as Animals Australia and the Royal Society for the Prevention of

Cruelty to Animals, have long campaigned for the complete banning of cage egg production (see [Animal Australia n.d.](#); Royal Society for the Prevention of Cruelty to Animals 2012a).

In the European Union such campaigns have been successful to a degree: From January 2012 barren “battery” cage systems are completely prohibited and producers may use only “enriched” or “furnished” cages (where each hen has at least 750 square centimetres of cage area, nests, perches, litter for pecking and scratching, and unrestricted access to a food trough) or non-cage systems (where hens are housed in open barns with nests, perches, and litter for pecking and scratching, stocking density does not exceed nine laying hens per square metre of useable area indoors, and outdoor access may be provided but is not necessary) (Council of the European Union 1999; see also Appleby 2003; Duncan 2001; Matheny and Leahy 2007).

A number of states in the United States are moving in the same direction. California passed legislation in 2008 requiring the phasing out of production of eggs via battery cages by 2015, and in 2010 it legislated to prohibit the sale of battery cage eggs. Michigan and Ohio, both large egg-producing states, have passed similar legislation to phase out battery cage production, and Massachusetts, Washington, Arizona, and Oregon are considering such legislation. In 2011 the Humane Society of the United States and United Egg Producers (the U.S. egg industry association) jointly drafted a federal bill that would ban battery cages and allow only enriched cages or non-cage systems (H.R.3798/S.3239; see United Egg Producers 2012). The legislation would also require every egg carton sold to include information about the egg production system used.

Both a complete ban on cage egg production and sale or, more realistically, even a requirement that all cages be “enriched” (as in the European Union) have been repeatedly rejected by Australian governments (Standing Committee on Agriculture and Resource Management 2000; see also Productivity Commission 1998). When Australian governments decided not to ban battery cages they decided instead to take an industry-led consumer choice approach in which “cage,” “barn,” and “free-range” eggs would be clearly differentiated and labelled so that consumers could choose which they preferred (Standing Committee on Agriculture and Resource Management 2000, 4).

Animal advocacy organisations too have accepted that, in the absence of a ban on battery cage eggs, they should encourage consumers to “vote” with their wallets and forks, “shop for change,” and “buycott” cage eggs (Animals Australia n.d.; Royal Society for the Prevention of Cruelty to Animals 2012a; see also Pollan 2006; Roff 2007).

Egg Corporation and Supermarket Definitions of Free-Range

The Egg Corporation’s existing voluntary quality assurance certification program was the large-scale egg producers’ response to the demand for a consumer “free-range” choice. The certification program addresses general quality assurance, food safety, biosecurity, and animal welfare in relation to egg production. Its animal welfare requirements are based on the *Model Code of Practice for the Welfare of Animals: Domestic Poultry*, which is not legally binding but has been agreed by all Australian governments (Primary Industries Standing Committee 2002; see also McEwen 2011, 1–5). It allows commercial producers to use any of three different production methods for eggs—“cage,” “barn,” or “free-range”—defined in the following ways:

Birds in *cage* systems are continuously housed in cages within a shed.

Birds in *barn* systems are free to roam within a shed which may have more than one level.

Birds in *free-range* systems are housed in sheds and have access to an outdoor range (Primary Industries Standing Committee 2002, 3–4, *emphasis added*).

Caged facilities house ten thousand or even a hundred thousand layer hens in a single shed in several rows of three, four, or five vertical layers with multiple sheds on a single site ([Big Dutchman n.d.](#); Edwards, Hemsworth, and Coleman 2007; Outlaw 2012; Poultry Cooperative Research Centre 2013; Royal Society for the Prevention of Cruelty to Animals 2012c).

Table 1 summarises the ways in which the Australian Egg Corporation’s “Egg Corp Assured” scheme (and the *Model Code of Practice* on which it is based) set lower standards for “free-range” than other certification systems aimed more specifically at free-range and organic farming.

The greatest area of controversy is outdoor stocking densities. The Egg Corporation argues that its current

standard (based on the wording of the *Model Code of Practice*) sets no absolute limit on outdoor stocking density at all.¹ Indeed the Egg Corporation claims that, according to an anonymous survey, “29 % of free range egg production in Australia stocks at densities higher than 2 hens per square metre (20 000 per hectare) on the range area” (Australian Egg Corporation Limited 2012a). From this perspective, 20,000 hens per hectare would have been an improvement. Consumer advocates, food activists, the Royal Society for the Prevention of Cruelty to Animals, free-range and organic farmer associations, and leading texts on animal law argue that the wording of the *Model Code of Practice* in fact sets an absolute limit of 1,500 hens per hectare (Primary Industries Standing Committee 2002), 13 times less than the Egg Corporation’s proposal.

Similarly, under both its existing and proposed new standards, the Egg Corporation sets an indoor stocking density of approximately 15 birds per square metre for “free-range” eggs: It is half that under alternative “free-range” accreditation standards. Moreover, both the Egg Corporation’s existing and proposed “free-range” certification requirements provide for very little management of vegetation and environmental conditions on the ranging area to make it attractive for hens. They put no limit on the number of birds allowed in a single barn or site, set no requirements about the minimum time hens should have access to the

outside, and allow free-range production to use animal “husbandry” practices such as beak-trimming, toe-trimming, forced moulting, and preventive administration of antibiotics and colourants in the feed, all of which are prohibited under alternative “free-range” accreditation systems. Table 1 provides a complete summary of the differences between the Egg Corporation’s and alternative standards, showing how the Egg Corporation’s standards are less strict.

Australia’s supermarkets appear to be responding to their reading of consumer sentiment about cage egg production by making “free-range” choices more available and affordable. Woolworths pledged to reduce cage egg lines from 20 to 11 in 2009 as well as signalled the potential of phasing out battery cage eggs altogether (Gettler 2009). In 2010, rival Coles announced plans to drop prices of free-range eggs to \$4 per dozen immediately and remove its generic cage eggs brand from shelves by 2013, after an online “Coles Mum’s Panel” survey revealed that 95 percent of 2,500 customers reported cost as the main barrier to buying free-range eggs (Coles 2010; Miletic 2010; Watson 2009; see also Coles 2013a, n.d.[a]). The Royal Society for the Prevention of Cruelty to Animals showed support for Woolworths’ cuts to cage egg lines, saying it was a move toward greater hen welfare (Royal Society for the Prevention of Cruelty to Animals n.d.). Likewise, Coles was awarded a Royal Society for the Prevention of Cruelty to Animals Good Egg Award Commendation for its announcement of plans to remove cage eggs from shelves (Dunn 2010).

Coles has now announced that, as of January 2013, it will accept densities of up to 10,000 hens per hectare as “free-range” for its private label eggs (Coles 2013b). This is still many times higher than every other standard for “free-range” as shown in Table 1. The Royal Society for the Prevention of Cruelty to Animals and Animals Australia (which also previously lauded Coles’ commitment to hen welfare; Coles 2012) now both publicly doubt that Coles’ “free-range” should be labelled “free-range” at all (Fyfe and Millar 2013; Vidot 2013). The new Coles standard also allows 30,000 hens to be kept in a single shed, with inside densities of 12 birds per metre. Coles, probably correctly, sees this as an improvement on the conditions of other free-range farms that stock hens at two to three times Coles’ permitted density

¹ The *Model Code of Practice* provides in relation to outdoor stocking density:

For *layer* hens a maximum of 1500 birds per hectare.

When *meat* chickens use only some of the 10 week cycle on pasture (e.g. 4 weeks) a proportionately higher stocking density than for layers may be used.

NB: Any higher bird density is acceptable only where regular rotation of birds onto fresh range areas occurs and close management is undertaken which provides some continuing fodder cover (Primary Industries Standing Committee 2002, 28, *emphasis added*).

The Egg Corporation and some egg producers have interpreted this to mean that there can be a higher stocking density for *layer* hens where there is rotation of birds onto fresh range areas. However, the most natural reading is that stocking densities higher than 1,500 per hectare are only available for *meat* chickens

(Fyfe and Millar 2013; Vidot 2013). The ACCC has suggested that industry attempts to redefine “free-range” to include hens stocked at 10,000 per hectare are merely an attempt at profiteering and have the potential to mislead consumers (Fyfe and Millar 2013).

Discourse from both supermarkets centres around “affordability” for customers, with the big chains claiming they are “helping” consumers to make the switch to more ethical eggs (Coles 2010; Gettler 2009; Peddie 2012). A spokesman for Coles has warned that any stocking density lower than 10,000 hens per hectare would make free-range eggs unaffordable for many consumers (Peddie 2012). Similarly, the Egg Corporation has used the huge growth in consumer demand for free-range eggs to justify its 20,000 hens per hectare outside stocking density rule in order to avoid prices (for “free-range” eggs) “soaring” to up to \$12.80 per dozen (Australian Egg Corporation Limited 2012a). The Egg Corporation points out that the rival 1,500 hens per hectare figure “was created in 2001 at a time when the free range egg market was in its infancy (8 % market share in 2001), compared to the growth it is experiencing today (25 % market share in 2011), and therefore does not represent the reality of the market today and into the future” (Australian Egg Corporation Limited 2012a). The Coles and Egg Corporation argument is that high stocking densities and intensive production are necessary in order to strike “the appropriate balance between animal welfare and keeping free-range egg prices within reach of most Australians” (Peddie 2012).

Methodology: Critiquing Consumer Choice

As this discourse suggests, and the remainder of this paper will show, supermarket-strength, industrial free-range enables a perceived personal “ethical” choice for consumers that preserves the supermarket model of cheap food produced and distributed on an industrial scale. It is not about changing the current farming, distribution, and retail systems to address welfare, ecological, and health goals for the good of all animals and humans with the costs and benefits shared out as justly as possible.

On its surface, the industry-led consumer choice regulatory policy approach chosen by the Australian agriculture ministers has resulted in the clearer differentiation of “cage,” “barn,” and “free-range” eggs, the

expansion of the market for free-range eggs, and presumably, therefore, at least incremental increases in the overall welfare of layer hens. The remainder of this paper, however, critiques what the supermarkets and egg producers have made “free-range” mean in practice on the supermarket shelf and therefore what choices are available to supermarket consumers.

In particular, the supermarket definition of “free-range” obscures the difference between battery and “enriched” cage systems and between barn and free-range systems. An essentially barn-based “free-range” system is put forward as the only ethical yet commercially viable alternative to cage production. This distracts attention from several alternative possibilities, including government regulation to require enriched cages, an option that may provide quite significant welfare advantages over battery cages for industrial-scale production of eggs for supermarkets, processed foods, and catering (Sherwin, Richards, and Nicol 2010) and therefore make a difference to many more hens than simply waiting for consumers to pay a premium for free-range. Indeed there are indications that enriched cages are better for hen welfare than industrial-scale barn-based systems (Sherwin, Richards, and Nicol 2010). The availability of supermarket “free-range” also makes it appear that the dominant industrial system can offer a choice that is equivalent to the free-range eggs available from farmers’ markets, organic stores, food hubs, cooperatives, or direct from the farm. Yet the “free-range” and “organic” eggs available through these means outside the supermarket system are in fact much more likely to come from small-scale farms with radically different production methods and distribution and retail systems, as indicated by the alternative accreditations they sometimes carry, the shorter geographical, social, and economic distances between the farmer, retailer, and shopper, and the fact that they often are more likely to come from farms using more environmentally sustainable methods (see Parker 2013).

This paper uses evidence from a “visual sociology” (Richards, Lawrence, and Burch 2011) of the retail market for “free-range” eggs to critically examine the ways in which the “free-range” egg choices available to consumers are constructed and constrained by the chains of production and supply that lie behind the products on the retail shelf (Hartlieb and Jones 2009;

Lockie 2009; Roff 2007). This data collection method is recursive—beginning and ending with the consumer's view of what free-range eggs are available for retail sale. Research started with a broad sweep of what “free-range” eggs are available for retail sale and what images, information, and evidence the consumer is presented about the way the eggs were produced. First we purchased one carton of each brand of non-cage—“free-range,” “organic,” and “barn-laid”—carton eggs for sale in Canberra, Melbourne, and Sydney at 22 Coles and Woolworths stores covering a range of socio-demographic locations throughout the year of 2012 (see also Parker 2013). We bought “organic” as well as “free-range” eggs because the major “organic” certifications in Australia (Australian Certified Organic and NASAA) and other developed Western countries require hens to have free access to the outdoors during the day (see Table 1). Data were collected in the three cities (Melbourne, Sydney, Canberra) in different states because each has a different regulatory and food movement activism climate (the impact of these differences will be examined in forthcoming publications).

We took written notes (using a standard form) and photographs of how eggs were displayed for sale in their retail context at the time of purchasing the eggs. Later we also performed a content analysis of the branding and labelling on the cartons themselves and on any associated websites. We focused on what claims were made—explicitly (in words) and implicitly (in pictures, signs, and symbols and by context) in any material on the shelves or surrounding the retail display and on the egg cartons—about being “free-range” and what images, logos, and graphic elements were used to support or add to the claims made in words on the cartons. Finally, we also looked for what evidence (if any) was available to the consumer about how the eggs were in fact produced and how the production systems addressed the animal welfare, agro-ecological, and health aspects of egg production differently (and better) than intense cage production (see also Miele 2011).

Particular attention was paid to any reference to assurance and accreditation systems to ensure and evidence that the eggs were produced in a particular way. To the extent possible we sought to verify or further investigate these claims by researching the accreditation systems used; interviewing farmers and consumer, free-range, and organic activists, and representatives of accreditation systems; and investigating

documentary evidence available on the Internet about relevant egg producers, checking Google Earth photos of their production facilities and, where possible, driving past production sites. We then returned to our data about the brands and their representation on the supermarket shelves and used a grounded theory (Glaser and Strauss 1967) approach to generate a categorisation of the different ways in which the various brands of eggs visually represent their claim to being free-range to consumers. We went on to compare these visual representations with the data we gathered about how the eggs are actually produced.

We have not yet gone on to research how these representations were in fact perceived or acted on by consumers. Rather our purpose was to uncover—and critique—the ways in which the egg producers and retailers are seeking to construct the meaning of free-range through their actions. As Carol Richards, Lawrence and Burch (2011) have commented, the “visual sociology” approach used here (a combination of data collection and content analysis of visual representations and sociological investigation of the institutional realities behind the representation) is a useful way to understand the strategies and thinking of powerful corporate actors who are not otherwise accessible to sociological research. It is

a research tool which treats everyday objects as data, or texts which reflect commonsense reasoning in everyday life. In this case, “the visual” captures a moment of interaction between the supermarket [retailer or producer] and consumer, in conveying a message about a product, or in shaping a space to manipulate a certain type of interaction, transaction or experience (Richards, Lawrence, and Burch 2011, 38–39).

Problems With Intense, Industrial Cage Egg Production: What Problems Is “Free-Range” Intended to Address?

Outsiders are rarely allowed to see inside factory egg farms, and little reliable information is available on the details of egg production. However, it is clear that industrial cage egg production raises fundamental ethical questions about its animal welfare, environmental, and human health consequences.

Animal Welfare Considerations

Bare “battery” cages are commonly judged the worst egg production system for layer hen welfare (Anonymous 2001; Appleby and Hughes 1991; Matheny and Leahy 2007). Since the hens themselves cost little to buy, producers seek economics of scale by putting as many hens as possible in cages in a facility and focusing on the productivity of each cage, not the productivity of individual hens (Matheny and Leahy 2007). Sheds are atmosphere-controlled, with lighting and climate artificially set (Loughnan 2012). A conveyor belt that runs along the front of the cages delivers a grain mix to the birds, with another belt behind collecting the daily eggs laid (Loughnan 2012). After 18 months or so of efficient egg-laying at a rate of 300 eggs per year (compared to their domestic fowl ancestors who laid 60 per year; see Anonymous 2001), a layer hen is considered “spent” (Duncan 2001; Loughnan 2012) and cleared out of its cage, killed, and ground up to make chicken stock and pet food (Loughnan 2012; Royal Society for the Prevention of Cruelty to Animals 2012b). One animal welfare researcher has commented that “[o]f all the animal welfare problems faced by the poultry industry today, the disposal of spent laying hens is probably the most serious” with the process of handling, transport, and slaughter involving suffering for hens (Duncan 2001, 210).

Under the *Model Code of Practice*, Australian cages with three or more birds must provide each hen with floor space of either 550 or 600 square centimetres per bird (less than the size of an A4 sheet of paper), depending on the weight of the bird. The *Model Code of Practice* also provides that chickens must be able to stand naturally in the cage and have access to water. It includes no requirements for “enriched cages”; that is, cages with nests, perches, and access to a feed trough. Like their jungle fowl ancestors, industrial chickens spend a great deal of their time foraging and scratching for food when given the opportunity (Anonymous 2001; Appleby and Hughes 1991). An average-sized layer hen uses an area of approximately 600 square centimetres when resting (Appleby and Hughes 1991), but this space is insufficient to permit hens to spread their wings or turn around, let alone perform natural behaviours of preening, nesting, perching, foraging, and dust bathing. Dawkins and Hardie (1989) measured that spatial

requirements of layer hens for ground-scratching, turning, stretching, and flapping wings ranged from 655 to 2,606 square centimetres, with a mean requirement of 856 to 1,876 square centimetres (see also Anonymous 2001; Appleby 2003; Pickett 2003; Royal Society for the Prevention of Cruelty to Animals 2012c). Caging of layer hens “frequently result(s) in abnormal behaviour being expressed, which is either directly injurious (such as feather pecking) or indicative of severe frustration and stress (such as stereotypic pacing)” (Appleby and Hughes 1991, 121), and a range of range of poor outcomes such as high prevalence of weak and broken bones due to birds’ inability to stretch and move (Anonymous 2001; Appleby and Hughes 1991; Duncan 2001; Fleming et al. 1994; Sherwin, Richards, and Nicol 2010).

Space is not the only issue. Chickens’ beaks are “richly innervated” and used to find and eat food (Anonymous 2001), and chicken social interactions involve both friendly and antagonistic behaviour, with pecking playing a foundational role in the establishment of social hierarchy within a flock (Anonymous 2001)—leading to the common term “pecking order.” The absence of stimuli and opportunities for foraging and increased stress in cage systems or in crowded conditions in barn-based systems may lead to increased pecking (Anonymous 2001; Appleby and Hughes 1991; Sherwin, Richards, and Nicol 2010). Moreover, genetic selection of industrial hens for increased egg production leads to increased aggression in chickens and may have exacerbated this problem (Anonymous 2001). To hamper pecking, chicks in industrial systems have part of their beaks removed with a heated blade, causing trauma and often leaving birds in chronic pain (known as “de-beaking” or, more euphemistically, “beak-trimming”) (Anonymous 2001; Appleby 2003; Sankoff and White 2009).

In order to force industrial hens to continually lay, farmers employ various tactics such as “forced-moulting,” whereby a hen’s food is withheld for up to two weeks until she loses her feathers and then with the reappearance of feed she again begins laying—swiftly restoring production (Duncan 2001; Loughnan 2012)—and food substitution, which entails replacing high-protein quality feed with low-nutrient, low-energy feed (Loughnan 2012). Both significantly reduce a hen’s rest period. Forced moulting has been found to cause hens to undergo extreme suffering, with food removal resulting in “classical physiological stress response” in

the form of uncharacteristic pacing and aggression (Duncan 2001, 209). Artificial lighting is another way to increase production, sidestepping the winter months when hens lay less frequently by tricking the hens into laying like machines within the industrial food chain via around-the-clock electric lighting (Loughnan 2012).

Environmental Considerations

The intense factory farming of layer hens also raises environmental issues. The very nature of industrial animal farming necessitates the input of large amounts of feed, often produced afar, the production and transport of which are contingent upon habitat and biodiversity loss as well as the use of chemical fertilisers, pesticides, and fossil fuels (World Society for the Protection of Animals n.d.). Industrialised farming practices also affect the soil, air, and water at a local scale on and surrounding farms. On mixed, integrated farms, the faecal matter from small populations of animals acts as a fertiliser in rotation with grains, legumes, and pasture, maintaining healthy, productive soils. In contrast, on industrial-scale egg farms, the mass of chicken faeces must be collected, sold, and transported to other farms to act as fertiliser, or else it is dumped, collecting in cesspools that contaminate the surrounding land, air, and water (Weis 2007).

Public Health Considerations

The concentration of thousands and thousands of chickens in poor physical conditions in sheds also poses hazards to public health. Cesspools of chicken manure release toxic compounds into the air that can cause inflammatory, immune, and neurological problems in humans (California State Senate 2004). The development of the H₅N₁ strain of avian influenza, which can infect humans, has been linked by the Food and Agriculture Organization of the United Nations to industrial-scale clustering of poultry for food production (Nierenberg 2005; Weis 2007). Likewise, research has uncovered links between forced-moulting of industrial egg hens and the threat of *Salmonella* serotype Enteritidis (SE). Forced-moulting suppresses hens' immune systems, allowing a 100- to 1,000-fold increase of SE in the birds (Loughnan 2012). This higher prevalence of SE in chickens causes sickness not only in birds but also food poisoning in humans via the consumption of infected

eggs and meat (Loughnan 2012). Additionally, the bioaccumulation of an ever-increasing number of pharmaceuticals used to stimulate growth and resist disease in factory-farmed products such as eggs has long-term human health risks. Antibiotics that are prescribed to humans are commonly employed in factory egg-farming, which can lead to antibiotic-resistant bacteria, thus promoting the development of deadlier infectious diseases for humans and hampering the effectiveness of some medicines (McKenna 2010; Weis 2007).

Industrial-Strength Free-Range on the Supermarket Shelves

The many colourful and multifariously labelled brands on the supermarket shelves appear to give consumers a choice about the way the eggs they buy are produced. The choice of suppliers, however, is much more limited than the number of brands available suggests. This means that the chain of production and distribution behind most of the “free-range” brands in Coles and Woolworths is largely the same intensive, industrial regime, with the exception of a few local and premium brands that are not reliably available in all stores. This means that once consumers step into the supermarket they have little ability to use their purchasing power to discriminate between different meanings of “free-range.” Rather, it is the supermarket itself that “regulates” what “free-range” does and does not mean by deciding what to stock in reference to their own business model and their calibration of which stories about animal welfare and ecological sustainability they can sell consumers via the labelling on the cartons.

Proliferation of Brands but Concentration of Suppliers

During our visits to supermarkets in the Eastern capitals of Australia, we found that the same 14 brands supplied by only five companies (of which three have the vast majority of market share) are widely available in both supermarkets, in addition to Coles' and Woolworths' own private labels. Table 2 summarises these findings. A typical Australian supermarket egg shelf is pictured in Fig. 1 below.

The three dominant egg-producer companies that produce and distribute up to 50 percent of the retail (cage and non-cage) eggs sold in Australia (Outlaw 2012) supply

Table 2 Free-range and organic egg brands available at the two dominant supermarkets in Canberra, Melbourne, and Sydney in 2012

	Egg Production and Distribution Companies and Associated Brands	Labelling Strategies	Accreditation	Price per dozen (AUD)
Dominant producers: Up to 50% market share for cage and non-cage eggs	Farm Pride (4 brands)	Text;	Egg Corporation	\$5.50 – \$6.00
	Essential Foods Free Range	Happy Hens		\$5.00 – \$5.90 (10-pack)
	Farm Pride Free Range			
	Farm Pride Pink Pack Free Range			
	Hunter Valley Free Range (10-pack) (also supplied to organic grocers) (Also supplies cage eggs.)			
	Pace (3 brands)	Text	Egg Corporation	\$4.80 – \$6.40
	Pace Free Range Natural Living			\$9.00 (organic)
	Pace Omega 3 Free Range Body		Organic Food Chain	
	Pace Organic Free Range (Also supplies cage eggs.)			
	Sunny Queen (3 brands)	Egg Photos;	Egg Corporation;	\$6.00 – \$6.50
McLean's Run Free Range	Text	Australian Certified Organic (organic brands)	\$7.00 – \$7.30 (organic)	
Sunny Queen Farms Free Range				
Sunny Queen Farms Organic Free Range (Also supplies cage eggs to Coles and Woolworths and different cage and non-cage brands to smaller supermarkets and organic grocers.)				
Free-range supply specialists	Borella	Happy Hens	Egg Corporation	\$5.80 – \$6.00
	Nature's Best Free Range			
	Veggs Free Range (Also supplies a different brand of cage and non-cage eggs to smaller supermarkets.)			
	H&L Premium	Happy Hens	Egg Corporation	\$5.00 – \$5.50
	ecoeggs Free Range (10-pack)			\$4.00 – \$6.60 (10-pack)
Field Fresh Free Range (10-pack) (Sydney only)	Text			
Port Stephens Free Range (Also supplies a different brand of non-cage eggs to smaller supermarkets.)				
Manning Valley	Happy Hens	Egg Corporation	\$5.50 – \$6.20	
Manning Valley Free Range Eggs (Canberra and Sydney only)				
Private labels: Up to 50% of market	Coles Free Range	Egg photos	Egg Corporation	\$3.80 – \$4.50
	Woolworths Select Free Range			

Fig. 1 A typical Australian supermarket egg shelf



half of the non-cage brands. They are largely vertically integrated, with each company producing (or, in the case of Sunny Queen, sourcing supply), distributing, and branding eggs for supermarket sale. Two other, much smaller suppliers specialise in “free-range” eggs only (although one of these companies, Borella, also supplies cage eggs to smaller alternative supermarkets in Australia). A sixth company supply free-range eggs on a large-scale to Coles and Woolworths stores in Sydney and Canberra only (not Melbourne). In addition to these major brands, stores in both supermarket chains usually sell some local and premium free-range eggs at a much higher price than the other eggs, and these differ from store to store and region to region. Private supermarket labels represented up to 50 percent of the total market for cage and non-cage eggs in 2011, according to industry analysts (Australian Egg Corporation Limited 2005, 2006, 2007, 2008, 2009, 2010a, 2010b, 2011; Outlaw 2012), and are probably supplied by one or another of the five major companies shown in Table 2, since the supermarkets do not own their own layer hen facilities and are not allowed to import fresh eggs from overseas (no product source information is publicly available, however).

Retail sale information for particular brands is closely guarded as “commercial-in-confidence,” but if the three dominant companies and the supermarket private labels each have close to 50 percent of the market for cage and non-cage eggs, as industry analysts suggest (Outlaw 2012), the other, smaller free-range egg suppliers must represent a very small proportion of supermarket sales (albeit given the large size of the market for eggs, still quite a large turnover). The fact that the vast majority of cage free eggs sold in the supermarkets are supplied by three (or possibly five)

main companies indicates that it is not just the supermarkets that are extraordinarily concentrated in the Australian market; the production and distribution chain that supplies the two major supermarkets is also highly concentrated.

Moreover, the major supermarkets’ strategy of responding to consumer animal welfare sentiment by reducing the number of cage lines for sale and dropping the price of free-range eggs appears to be part of an overall approach that further encourages concentration and large-scale industrialisation in food production and distribution chains by driving down prices and consolidating the number of suppliers (Burch and Lawrence 2007; Dixon and Isaacs 2012; Australian Competition and Consumer Commission ACCC 2008). Indeed egg producers have claimed that when Coles and Woolworths dropped the price of “free-range” eggs, they did so by reducing the number of both cage and free-range egg suppliers they used and slashing the prices paid to those producers (Australian Broadcasting Corporation ABC 2011; White 2009). A Senate enquiry revealed that in the wake of the Australian “Milk Price Wars” (a major commercial and public debate in which the two major supermarkets have driven down the price of milk to \$1 a litre in the consumer interest but at the cost of the sustainability of the Australian dairy industry, according to many dairy farmers) a major egg producer was approached by one of the big supermarkets which it had been supplying, under the implication that eggs were the next commodity to be subjected to such a price squeeze (Senate Economics Legislation Committee 2011).

This reflects global trends of concentration of grocery retailers (Burch and Lawrence 2007; Richards et

al. 2012) and valorisation of low consumer prices (the lowest ever in human history as a proportion of income; Carolan 2011), convenience, and reliability in food consumption. It relies on large-scale, concentrated, efficient, and generally corporate-dominated production and distribution to bring the supermarket free-range egg to market (see Cornucopia Institute 2010).

Supermarket “Regulation” of “Free-Range”

It is not an ideal of “free-range” as an alternative to the ecological, public health, and animal welfare impacts of industrial egg production that defines the meaning of “free-range” for eggs produced for supermarket sale. It is the supermarkets’ business model and external commercial realities that dictate what non-cage egg choices the supermarkets make available for consumers. Supermarkets’ regulation of their suppliers focuses more on food safety (meaning safety from immediate contamination and illness), reliability, quality, and consistency of supply on a national scale and price than on the animal welfare, agro-ecological, or public health concerns associated with intense cage production discussed above (see also Richards et al. 2012). Nevertheless, our research into the accreditation of the “free-range” eggs we purchased uncovered that both supermarkets’ conditions of supply for eggs (especially for those that carry Coles or Woolworths branding) generally require that they have Egg Corp Assured accreditation, third-party auditing, and comply with the *Model Code of Practice* (see Coles n.d.[b]; Woolworths 2013). If organic, they must also carry a suitable organic accreditation.

Although most of the brands we purchased did not actually display the Egg Corporation’s (trademarked) quality assurance logo on the carton, we were able to confirm (by checking the Egg Corp Assured website) that most had in fact paid to join the scheme and be licensed to use the logo (as shown in Table 2). (Note: We could not confirm this for Sunny Queen brands, as Sunny Queen buys eggs from unnamed individual farms that would have to be accredited individually under their own names.) Some of the least expensive, and least elaborately labelled, brands have very little information or evidence available at all and may not be Egg Corp Assured.

Some egg cartons displayed non-official logos (some with a chicken that looks a little like the Free Range Farmers Association logo, as shown in Table 1),

with phrases such as “accredited free range farm” or “certified free range” (see Fig. 2). These improvised logos emphasise a claim to be free-range but do not employ the Egg Corporation’s official logo that evidences a more general quality assurance scheme. This suggests that the egg producers and distributors do not see the Egg Corporation’s logo as a particularly valuable way of differentiating their product—and its “free-range” authenticity—for shoppers in the supermarkets. Egg Corporation accreditation is the bare minimum required by the supermarket to enable suppliers to have their products on Coles and Woolworths shelves, but shoppers do not see it as guaranteeing any specific free-range claim. This means that it is important for egg producers to have the accreditation (in order to supply to Coles and Woolworths) but not to actually display the logo on their retail carton in order to provide evidence to consumers of their accreditation.

A few (premium) brands in the two dominant supermarkets displayed some of the alternative accreditations that are stricter on animal welfare and organic standards shown in Table 1 but not much additional information. In fact, our research into the brands available in alternative retail spaces (Parker 2013) indicated that a consumer who walks into a specialist organic or wholefoods store or a farmers’ market is much more likely to find brands with specific information about production conditions, including accreditation logos, than one who walks into a Coles or Woolworths. In those farmers’ markets that require all stalls to be staffed by the farmers themselves, the consumer also can ask the farmer directly about the production methods. On the other hand, the brands of eggs available at the independent and smaller supermarkets that compete with Coles and Woolworths, at urban fresh produce markets (such as Queen Victoria Market in Melbourne and Paddy’s Markets in Sydney), and at mainstream fresh produce stores were even less likely to display detailed information about production systems than the brands at Coles and Woolworths and rarely displayed any certification accreditations. Moreover, little or no information is available about how these stores “regulate” which products appear on their shelves, whether they require at least Egg Corp Assured accreditation, and whether they have any system of monitoring standards for the “free-range” claims on the eggs they sell.

The preponderance of Egg Corporation accreditation for Coles’ and Woolworths’ retailed free-range



Fig. 2 Unofficial accreditation logos

eggs and the insistence of the supermarkets and the Egg Corporation that stocking densities of 10,000 to 20,000 hens per hectare are necessary for a commercially viable supermarket industry suggest that most of the “free-range” egg brands available in the dominant supermarkets are laid by hens housed in large barns with little real access to the outside. The scale and density of birds in these intense, industrial “free-range” systems, along with the size and number of holes available for them to access the outside, makes it likely that most birds remain inside for much of their lives (Australian Competition and Consumer Commission ACCC 2012; see also Appleby and Hughes 1991; Appleby 2003). One Australian research study showed that on average on intensive free-range farms only 9 percent of hens actually use the range area (Poultry Cooperative Research Centre 2010). This is because they are cramped (sometimes in multilevel barns) to an extent that they cannot physically access the outside or are too afraid to go past other hens beyond their pecking order to do so. Appleby and Hughes (1991) note this phenomenon, whereby hens in larger flock sizes are less likely to access an outdoor range. It would be more accurate to label the eggs produced in these industrial-scale facilities as “barn-laid” or “barnyard” eggs to indicate that the hens are mostly housed in a barn with only “theoretical” access to a range or yard (Australian Competition and Consumer Commission ACCC 2012).

Moreover, with stocking densities of 20,000 hens per hectare (or even 10,000 hens per hectare), the range is likely to be very quickly stripped bare. Even if the hens went outside, they would access little or no green grass. Thus, their primary food is the grain-based feed that is provided to the egg producer from a commercial supplier, usually fortified with meat meal (to ensure the protein levels necessary for the

hens to lay the number of eggs required to make them profitable) and with colourants (to ensure the bright yellow yolk that might otherwise come from the beta-carotene in green grass) (see Australian Competition and Consumer Commission ACCC 2012; Loughnan 2012; Sankoff and White 2009; Weis 2007). Few industrial ranges or yards also provide adequate shelter and cover, leaving those that do make it outside frightened and exposed. Lastly, the eggs are probably no more local or fresh merely because they are free-range. Rather, many have probably gone through a long process of storage and distribution due to the concentrated nature of both the suppliers and the retailers.

It is this scale and intensity of farming of layer hens, not just the cages, that creates animal welfare, agro-ecological, and health impacts (Productivity Commission 1998). While cage egg production is particularly cruel to hens, as there is no option of providing foraging space nor a nest for laying (Appleby and Hughes 1991; Appleby 2003; Sherwin, Richards, and Nicol 2010; Standing Committee on Agriculture and Resource Management 2000), industrial-scale barn and free-range systems also can feature higher hen suffering and mortality due to feather pecking, cannibalism, and parasitic disease when farmed at sufficient intensity (Sherwin, Richards, and Nicol 2010; Standing Committee on Agriculture and Resource Management 2000). Good farm management can minimise these outcomes through the right combination of flock size, bird breed, and laying system design (Appleby 2003; Standing Committee on Agriculture and Resource Management 2000), but the ability to manage animal welfare well in these systems tends to conflict with the need for large-scale, intense “factory” farming required to meet the conditions of supermarket supply. The non-cage “choice” presented to consumers in the two major

supermarkets might represent a different housing system for hens but does not necessarily represent a difference in the scale of production. It is the scale of production—that is, the flock size—that is probably the major determinant of hen welfare and of environmental and public health effects related to egg production, not whether the hens have access to the outdoors (and can be labelled “free-range”). As leading animal welfare researcher Michael C. Appleby comments, “competition between producers on price, resulting in attempts to reduce costs by increasing the number of birds in a house or by reducing input of labour per bird, is likely to reduce welfare” (Appleby and Hughes 1991, 123), and “[t]here is ... a particular danger with alternative [alternative to cage] systems [for egg-laying hens] that market forces rapidly lead to overcrowding and inadequate supervision and erode any welfare advantage they might have possessed” (Appleby and Hughes 1991, 124; see also Appleby 2003).

The Australian Competition and Consumer Commission’s (2012) response to the Egg Corporation’s revised quality assurance certification schemes confirms farming density as a cornerstone issue. This does not mean that stocking density is *the* only issue of importance but, rather, that the issue of stocking density cross-cuts many of the other issues. The Egg Corporation’s proposed increased stocking density of 20,000 birds per hectare was judged by the ACCC to be inconsistent with consumer perception of free-range farming practices since, in the Australian Competition and Consumer Commission’s opinion, the term “free-range” conveys that chickens range “for a significant portion of the day,” not merely “the theoretical possibility that birds *can* range” (Australian Competition and Consumer Commission ACCC 2012, 92, *emphasis added*). With such densities of birds, there is an increased likelihood of beak-trimming being performed (Appleby 2003); ironically, as it impacts upon hens’ ability to forage and when such natural behaviours are inhibited, hens are more likely to be inclined toward feather pecking and cannibalism (Australian Competition and Consumer Commission ACCC 2012). Animal husbandry practices of beak- and toe-trimming and forced-moulting are not addressed in the Egg Corporation’s proposal. The indoor stocking density is the same as that in barn systems (30 kg/m² or approximately 150,000 birds per hectare based on an average weight of two kilograms per hen), which, when coupled with the likely scenario described above where birds pass much of their time inside,

essentially means hens living on “free-range” farms under the Egg Corporation’s new rules will be living the life of a barn-laying chicken. Other issues identified by the Australian Competition and Consumer Commission as potentially conflicting with consumer expectations of free-range include the fact that the practices of rotating birds to fresh pasture and managing the environmental conditions of the range are only recommended but not required (Australian Competition and Consumer Commission ACCC 2012). Finally, of course, the significant animal welfare issue of the “management” of the slaughter or other disposal of “spent” hens after 18 months or so remains an issue for any commercial production of eggs at 300 per hen per year.

Obscuring the Supermarket Meaning of “Free-Range”

The consumer who pays a couple of dollars more (than the cost of cage eggs) for the “free-range” eggs available at the supermarket is essentially reinforcing large-scale, industrial egg production. However, the text and graphics on the labels mostly focus on selling a story about the authenticity of the farm, the happiness of the hens, and the lifestyle values represented by the eggs. Using content analysis and grounded theorising, we identified three main branding strategies on the egg carton labels purchased, which we categorised as: text, happy hens, and egg photos. These labels do more to obscure production conditions than they do to inform the shopper about the way the eggs were produced (see Richards, Lawrence, and Burch 2011). Indeed, the variety and imaginativeness of these labelling strategies may tend to create an illusion of ethical eating while obscuring the fact that almost all the supermarket free-range options are still produced intensively on a large-scale and in crowded conditions that raise many similar welfare, environmental, and health concerns as battery cage egg production, as noted above (Appleby & Hughes 1991). In fact, some aspects of hen welfare may be worse in large-scale industrial barn and “free-range” systems than in enriched cages, where hens are protected from each other by cages (Sherwin, Richards, and Nicol 2010). The type of free-range that more effectively addresses animal welfare, environmental sustainability, and public health issues is likely to be small-scale in terms of flock size, with more labour-intensive human supervision and management of the hens, and employ mixed farming



Fig. 4 Free-range egg carton: Veggs from Borella Eggs

beautiful pastures (see Fig. 4). These chickens have clearly been posed and the photos edited to emphasise archetypical ideals of hens, pasture, and sunshine, and the images are not necessarily expected to be taken seriously as accurate representations of hens' actual living conditions. Nor does the text necessarily give the consumer any solid evidence about the connection between the egg in the carton and the actual facility where the hen laid the egg:

From free range hens fed a vegetarian whole-grain diet.* [Tick boxes show:] Free Range Hens Fed a Vegetarian whole-grain diet that contains no animal by-products*; Good source of Folate, Vitamin B12 and Vitamin E; A source of Omega 3 and Lutein.

*Our hens are free to roam our paddocks and therefore may consume natural food sources other than the vegetarian feed as they forage (Borella Eggs, Veggs; see Fig. 4).

Other “happy hen” labels do expect to be taken as accurate photographic evidence of the living conditions of the hen, its outdoor range, and its barn but still do not provide much detailed evidence. For example, one states:

The happy hens of Manning Valley Free Range Eggs are free to roam as nature intended on open pastures producing premier eggs under natural Australian conditions. The real currencies of the future [trademark], clean earth, air and water are found in abundance on properties in NSW, so we can guarantee that these eggs are produced in the most natural feeding environment possible

(Manning Valley, Manning Valley Free Range Eggs).

The website for this brand indicates that they have four farms, with photos and a webcam (available for one site only). The company's website also tells us that it runs 1,500 to 7,500 birds per hectare on average, probably better than some other brands (see [Manning Valley n.d.](#)). Close examination of the statement on the label (and many of the others), however, shows how unconnected with reality marketing statements like these are: The reference to “natural Australian conditions” may appeal to consumers' love of the Australian land, their wish to be patriotic and support Australian farmers, and/or a desire to buy food that has not travelled far and is subject to Australian quality and safety standards. It does not, however, actually specify any particular way in which the chickens are farmed that makes their welfare or environmental conditions better than any other eggs. Anyway, since fresh eggs cannot be imported into Australia, it is not surprising or unusual that they are farmed in Australian conditions.

The frequent references to sunshine and open pastures on this and other cartons also are puzzling, since chickens are descendants of jungle fowl and feel very vulnerable on open ranges, preferring the cover of low trees and somewhere to roost (Anonymous 2001). Indeed, a large project of Australia's main research facility for poultry production is concerned with working out how to get more “free-range” chickens to actually utilise their ranges by providing more shade, trees, and other ground cover so that they feel safe and have places to perch (Poultry Cooperative Research Centre 2010).

Two brands in the “happy hens” category provided more detailed and specific evidence on the carton, including logos showing, in one case, Australian Certified Organic (ACO) accreditation and, in the other, Free Range Farmers Association and Humane Choice accreditation. For example, one carton stated:

This photo shows how our birds are housed in small portable houses that are towed over the pasture. This helps protect the flock against disease avoiding the use of antibiotics and drugs. The birds are never confined in the houses. They are protected against predators by flock guardian dogs and electric fencing. The large outdoor

feeders contain grain grown on other organic farms. [And under the ACO logo:] This is your guarantee that no antibiotics, drugs, hormones, artificial fertilisers, pesticides, synthetic or Chemical feed additives have been used in the production of these eggs. Sound regeneration farming practices are used and the hens are never confined (Clarendon Farms, Organic Free Range Eggs).

These two brands (Clarendon Farms and Family Homestead) do represent a different supermarket choice for free-range egg consumers. However, they were supplied by smaller producers—not by any of the six major or specialist suppliers. Both brands also were only available in selected stores and were priced as premium lines far above that of most of the other brands for sale.

The third category, *egg photos*, involved the depiction of eggs in proximity to grass or straw—as if the eggs were laid in a nest or even on the pasture (see Fig. 5). These were often associated with fairly basic cartons that provided little information, and the Coles and Woolworths private labels all fit into this category. For example, the Woolworths Select brand includes some basic information about the meaning of free-range: “Our Free Range eggs have been laid by hens that are free to roam outdoors during the day and nest in barns at night.” So does McLean’s Run brand (Sunny Queen): “Our farms have the highest commitment to hen welfare with only 1,500 hens per hectare—that’s one hen per 6 m²!” The McLean’s Run website, like all the websites for the three major



Fig. 5 Free-range egg carton depicting eggs in a nest or pasture: Free Range from McLean’s Run

companies, has minimal specific information but does emphasise that the hens are farmed the old-fashioned way with “plenty of good food, fresh air and sunshine” (see [McLean’s Run n.d.](#)). Overall, little attempt is made to provide solid evidence of animal welfare or the living conditions of the hens. Instead these brands prominently feature the basic nutritional information applicable to all eggs that has been calculated on average testing (see Australian Egg Corporation Limited 2010b).

Conclusion

The consumer choice approach to free-range egg regulation and labelling in Australia appears to give consumers the power to “regulate” the food chain by choosing the production method they want to valorise. In reality, the “ethically competent” (Miele and Evans 2010; Vecchio and Annunziata 2012), engaged, or “reflexive” consumer (Hartlieb and Jones 2009; Roff 2007) who is willing and able to invest time, money, and social and emotional intelligence in seeking out information and shopping around will discover that generally one can only buy genuine “free-range” alternatives to the ethically fraught industrial cage egg production by patronising a niche market of organic stores, farmers’ markets, and other direct-from-farmer buying options.

The supermarkets and large egg producers appear to hope, however, that most ethically motivated shoppers will be satisfied (Simon 1956) through expressing their personal values by buying the stories on the cartons of supermarket-assured “industrial free-range” eggs. This paper has shown that those stories are generally either misleading or deceptive and that the notion of “free-range” has been industrialised and watered down so much as not to meet significant animal welfare, environmental, and public health concerns. The definitions of “free-range” adopted by both the Egg Corporation and the supermarkets seek to encompass “free-range” within the dominant supermarket-centred, industrial production and distribution food regime (Arcuri 2012; Guthman 2004). At the same time, they divert attention away from the need for citizens to act as citizens, not just as consumers, and to advocate for policy, law, and regulation that change the way producers, distributors, and retailers operate and create alternative ways of organising the

production and retailing of eggs (Roff 2007; see also Miele and Evans 2010).

In theory, an ordinary consumer might be able to research and evaluate the standards and monitoring systems used by the various accreditation entities summarised in Table 1 to determine which “free-range” eggs credibly match their ethical “taste” and, thus, purchase accordingly. This, however, puts a significant moral and cognitive burden on the consumer wishing to choose “free-range” to go beyond simply looking at a carton of eggs in a retail display and to understand how the product reached the supermarket shelf in the first place, what relationships and values are institutionalised in the food chain that brought it there, and how the laws on labelling and any accreditation schemes work. This is likely to be beyond the time and capacity of many consumers (see Miele and Evans 2010; Vecchio and Annunziata 2012). The Egg Corporation’s quality assurance system (both the current system and especially the proposed new one) plays into the effort on the part of supermarkets to provide a “new” free-range product that co-opts and conventionalises “free-range” at a price and on a scale and level of reliability and convenience that keeps egg sales within the mainstream chain of industrial egg production, concentrated marketing and distribution, and supermarket sale (see Guthman 2004).

It distracts discussion away from the possibility that Australian governments (as well as others) should be setting and enforcing higher standards for intense animal factory farming that would socialise the costs of the animal welfare, agro-ecological, and public health impacts of egg production and remove the choice of “unethical” eggs altogether (see McEwen 2011; see also Kirby 2010). In particular, it distracts attention away from the ongoing campaign to completely ban cage egg production or at least require “enriched” cages (with more space, nests, perches, litter, and unrestricted access to a feed trough). As Appleby has commented: “With regard to welfare, choice is not the important issue, it is desirable to improve the welfare of all hens, not just a small, labelled proportion” (Appleby 2003, 118; see also Appleby and Hughes 1991; Matheny and Leahy 2007). Other regulatory options might include regulation or tax incentives to encourage or ensure that hens are kept in smaller groups on larger areas of land

and waste is recycled and reused in a sustainable way. These regulatory options could move the whole market by establishing a floor for allowable practices and thereby permitting more room at the top for innovation and differentiation. Similarly, a serious policy approach to food miles or carbon outputs might significantly change the power of the large producers and retailers in the market and valorise local, pervasive egg farming (rather than pervasive egg transport). Conversely, regulation could be used to subsidise, incentivise, or set aside land for alternative farmers (e.g., tax incentives for family farms that use organic methods for egg production in a mixed farm) and alternative retail spaces that would help create new product categories and markets.

The availability of misleading supermarket free-range also diverts attention away from the possibility that the retail market can be—and is indeed being—reconstructed in such a way that people can obtain eggs at a range of alternative local, organic, or wholefoods stores, at farmers’ markets, through exchange at community food hubs or with neighbours and friends, or from their own backyard chickens, and the possibility that some people might choose to eat fewer or no animal products when they understand the full social, environmental, and health costs of intense factory farming (Safran Foer 2009).

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