

Consumers are central to any change in the food system

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Introduction

The EAT-Lancet report highlights that by 2050 a substantial dietary shift is required to ensure a healthy and sustainable future food supply (Willett *et al.*, 2019). There is much debate about the changes needed to achieve these sustainable diets, and indeed what foods are more sustainable. The consumer is said to be demanding more sustainable foods and, increasingly, they are presented with new foods, new diets, and alternative products to those they are used to. Nevertheless, mass consumer acceptance of these products should not be assumed (Bauer & Reisch, 2019).

The general opinion is that, although challenging, at a global level it is theoretically possible to develop the technology and capability to produce the food needed for a sustainable nutritious diet (Willett *et al.*, 2019). However – and here is the drawback – there will not be a shift if the consumer does not engage with the new farming systems, processing technologies and new foods, and habitually adopt them in their diet. The relationship between an individual or community and their food is very emotive and very complex (Delind, 2006), and so, if sustainable nutritional diets are to be attained, the consumer factor must be acknowledged and integrated into new food system solutions.

Liking v. wanting

People are at the centre of our food systems, and hence influencing consumer behaviour and the food contexts in which those behaviors take place is a central route to dietary change. To engage consumers with new foods, and hence shift their diet, they have to want them – not just like them, but truly want them. Liking and wanting are processed differently in the brain, and it is wanting that controls human decision making and behaviours (Berridge, 2018). Take a quick look at market trends, social media, menus in restaurants, or even asking consumers what they would

like in terms of new foods, and it appears they have already made the transition to plant-based diets in droves. However, the claims made by the consumer about what they want, and why they want it, do not always translate into behaviours. This is known as a value–action gap (Blake, 1999) and it can hinder and delay dietary shifts and behaviours.

To that end, all stakeholders need to have a better understanding of what the consumers want – really want. It is known that taking a consumer-led approach, rather than simply a market- or technological-led approach, often leads to more habitual uptake of products (Horvat *et al.*, 2019). For example, Heinz are well-known for the observational consumer-led approach, which resulted in the upside-down squeeze bottle that was much more effective at delivering ketchup (Jewell, 2018). Famously, Steve Jobs commented that ‘*the consumer doesn’t always know what they want until you show it to them*’ (Isaacson, 2011), and that can be true, but there are new ways of understanding those needs, for example, ethnography and consumer co-design activities to provide a better picture of consumers’ true wants/needs and pain points (Ares & Varela, 2018) which can help grow and develop products that deliver to the consumer in terms of the products themselves, as well as their nutrition and sustainability credentials.

Consumer drivers

What do consumers actually want where future foods are concerned? Research tells us, and it should be no surprise here, that price is a key driver of product engagement, alongside the need for human gratification, that is the food’s sensory appeal (Glanz *et al.*, 1998). Human beings are specifically designed to get a rewarding experience from food and reject it if it’s not. The foods that consumers choose need to be rewarding in some way to be adopted, both in terms of the sensory experience and other extrinsic rewards that matter to that particular consumer (Köster, 2009).

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A problem with many alternative foods developed to replace meat is that they can taste fishy, musty, beany or bitter and have unappealing textures (Tso *et al.*, 2021), and even when technologies improve that sensory appeal, the products still often come second to the products consumers currently eat in market testing. Side-by-side testing of product concepts is a necessary stage of product development to be sure that the products will win out and enable a dietary shift in the right direction.

Convenience is also a key factor for many of today's consumers (Köster, 2009), hence the emergence of convenient ready-to-cook products on the market, but it is factors such as health and nutrition, environmental impact, and animal welfare that are promoted as the reasons consumers are demanding different food products (Slade, 2018), whilst paradoxically, per capita, meat consumption still appears to be increasing. Meat consumption patterns, however, do vary, even within comparably wealthy countries (Henchion *et al.*, 2014; Tso *et al.*, 2021), highlighting the differences between consumer segments. In many studies, animal welfare ranks lower than other value-driven factors, but often above protein content where alternative proteins are under investigation (Bryant, 2019). This is where the value-action gap can be explained. Cost and sensory experience are generally more important than the values people hold. Of course, this is not true for all consumers, and different segments will have different drivers, but experience tells us that cost and sensory experience are up there for most consumers, even if they do not admit it in a survey. Many consumers may actually believe that some of these values come first for them, until they make the purchase decision, while others may be virtue signaling (Levy *et al.*, 2020), that is, saying what they think they should be saying or makes them look good. The result is the same – behaviours not matching claimed beliefs.

Understanding the relative impact of these different drivers for food choice decision making is a key element to solving the sustainable nutrition question, as global and local strategies that fit with real consumer wants and behaviours need to be developed. The cost and sensory experience of sustainably nutritious alternatives need to be what the consumer will accept.

Another key concept for careful consideration is understanding the different drivers behind willingness to purchase, that is, getting the consumer to buy for the first time, and acceptance, that is, willingness to adopt such foods habitually in their diet. For example, research by Kerry last year identified the drivers for purchase of different plant-based products, as being health (plant-based cheese & ice cream), nutrition (yogurt) and try something new (plant-based meat) (Kerry, 2019). However, when asked which attributes were most important in the purchased product, these were taste, use of acceptable ingredients, and cost. Food can be as healthy as it likes, but if it does not taste good, and is not affordable, consumers will not engage. Bad experiences with one product can then lead to delays in adoption of similar products.

Consumer perception v. reality

Understanding consumer drivers is particularly difficult in the future foods space as perception is often not the reality. Taking health and nutrition as an example, media, marketing, and some industries lead the consumer to believe that alternative products are healthier, and indeed sometimes they are. However, to date there is little evidence that replacing meat with alternative products leads to a healthier diet long term (Tso *et al.*, 2021).

Wholefood alternatives may be healthier, but is the consumer really aware that, once cooked, many of the current alternative proteins are higher in salt than the meat version? Cricket flour is higher in fat than wheat flour, for example, and a black bean burger is higher in fat, salt, and sugar than black beans on their own (Tso *et al.*, 2021). Actions industry takes to improve the functionality, processing, or palatability of the products often impact the nutritional value detrimentally. Even when consumer awareness to eat healthier is there, practical barriers such as availability, willpower, and biased brain processing can still push the consumer to the more familiar or social norms (Kahneman *et al.*, 1991).

Environmental impact is also a factor receiving more attention. The general perception is that alternative foods may offer less environmental impact, but the reality can often be the opposite, with processing of some products requiring large amounts of energy or water (Tso *et al.*, 2021). The environmental credentials of future foods will be further scrutinised by the consumer and will increasingly impact developments in the food system. Nevertheless, research shows that where sustainability is concerned, consumers will still prioritise themselves over the planet with cost, convenience and enjoyment – the sensory experience – being important (Blake, 1999). Consumers often motivate themselves to a desired rather than a logical conclusion based on their conscious values (Khan & Dhar, 2006). Of course, some consumers will act on their values, but that segment may not be very large.

There is a role here for the consumer needing to be better educated concerning health, nutrition, animal welfare, environmental credentials, and so on to make better choices, and, if all stakeholders take a role in that, the consumer will be better informed. However, awareness is only a small part of the answer and should not be seen as the only, or key strategy to ensure the consumer makes the better decisions (Bianchi *et al.*, 2018). In fact, understanding consumer behaviour and working with that will be a much more successful strategy.

The psychology of consumer personalities is an aspect that needs consideration for food system change. Some consumers may engage because of having particular personality traits, for example wanting to keep up with the latest fashion (Petrescu & Petrescu-Mag, 2015), others may be novelty seekers interested in the new sensory experiences offered by new foods (Hirschman, 1984). A key question is whether this will lead to a dietary shift long term or just be a fad. Food neophobia, and food disgust traits also have a role to play where many individuals will avoid new foods for some time – if not for ever in the case of food disgust – as these are all traits that consumers and producers may not be aware of but need careful consideration in the sustainable nutrition space (Siegrist & Hartmann, 2020). Different segments will have different drivers: for example, although those interested in organic and functional foods may both be driven by health, they are often different types of consumers, the former being more active and the latter more passive in their food habits (Goetzke & Spiller, 2014).

Consumer decision making processes

As previously mentioned, it is wanting that drives consumer behaviours, and much of that decision making process is not driven by rational thinking, but is subconscious (Kahneman, 2011). Tapping into the subconscious elements of consumer behaviours is more likely to better enable a dietary shift. This

means making foods appealing, effortless and the norm (Vermeulen *et al.*, 2020).

By appealing, it means that the sensory experience must be equivalent to or better than what they currently enjoy and be at an acceptable price. It needs to be easily available and easy to use. Finally, such foods need to become the norm. It will no doubt take time for new farm and food processing practices, as well as foods, to become the norm, but if stakeholders and advocates understand this, then the normalisation process can be quicker. Food choices are often an act of self-expression which forms part of a person's identity. Being labelled as niche because of a food choice behaviour can be segregating – for example, some people may not feel comfortable with food labelled as Vegan (some will) (Greenebaum, 2012) or food that is in a section in the supermarket or café for 'people with different diets' (Schlee (2017), as cited in Vermeulen *et al.* (2020)). Already strategies adopted by retailers and marketers that help position foods as mainstream, tap into the consumers' subconscious need to do the familiar and what is the norm and hence increase uptake. In fact, some research has already shown an increased uptake in alternative products when integrated into supermarkets (Holzer (2017), as cited in Vermeulen *et al.* (2020)).

Conclusion

Considering and working with consumers' conscious and subconscious wants, needs, and behaviours cannot be ignored when developing new foods systems focused on providing sustainable nutritious diets.

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