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More Fun, Less Pressure: A Conceptual Framework of Communication Goals for Healthy and Sustainable Food Choices

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One third of greenhouse gas emissions comes from the production, distribution and disposal of food. Animal products generally have a higher environmental footprint than plant-based foods, with grains, fruits and vegetables having the lowest impact and ruminant meat having the highest. Reducing meat consumption benefits the environment – but also improves health outcomes; for example, reducing the risk of cardiovascular disease and cancer. Consumers have some degree of freedom in their daily behaviour and can contribute to both planetary sustainability and personal health through their food choices. In this article, we focus on consumers as key actors in the food system and propose a framework for communication goals to stimulate changes in food choices. We argue that communication efforts need to (1) frame food choices as both healthy and sustainable (‘dualistic framing’), and (2) inform about the health and sustainability consequences of food choices. Moreover, we argue that communication efforts also need to (3) support the socio-emotional readiness to make healthy and sustainable food choices, for example by emphasizing the hedonic value of plant-based foods. The conceptual framework will be useful both to inspire future research and guide practical campaign work.

Introduction

Agro-food industrial models aiming at more sustainable and healthy diets are focused on either influencing consumption, enhancing innovative methodologies or promoting local territorial value-chains (Gonin 2025). Out of these three main fields, our article is centred on the first, as consumer food choices can contribute to both improving sustainability and health. For example, a third of greenhouse gas emissions is attributed to food and its production, distribution, preparation and disposal (United Nations 2024). Animal products generally have a higher environmental impact compared with plant products (Poore and Nemecek 2018), with a ‘clear greenhouse gas hierarchy’, in which grains, fruits and vegetables have the smallest impact, with meat from ruminants holding the highest impact (Clune *et al.* 2017). The environmental impact of foods, however, is also visible in land and water use, pesticide use or biodiversity loss (Biesbroek *et al.* 2023). In this vein, not all meat is equal – the carbon footprint depends on the animal food and feeding techniques (United Nations 2024), although Poore and Nemecek (2018) ultimately conclude that even low-impact animal products exceed the impact of vegetables.

At the same time, reducing meat consumption, especially red and processed meats, and shifting the diet towards plant-based food can extend human life expectancy (Fadnes *et al.* 2022) and reduce diseases such as cardiovascular disease, type 2 diabetes and cancer (Wang *et al.* 2023). Plant-based diets are often both healthy and sustainable, while red meats and processed meats increase disease risks and have a negative environmental impact (Clark *et al.* 2019). Clark *et al.* (2020) state that whole grain cereals, fruits and vegetables, legumes, and most nuts and seeds are clear ‘win-win’ foods (both beneficial for health and the environment), while red and processed meats are clear ‘lose-lose’ foods (both detrimental for health and the environment).

However, a clear alignment between health and environment is not always the case. Some diets with reduced greenhouse gas emissions were found to contain more sugar and less micronutrients (Payne *et al.* 2016). Examples for ‘lose-win’ foods that are detrimental to health but have low environmental impacts can be sugar and oils as long as they do not result in land use change (Clark *et al.* 2020). ‘Win-lose’ foods are good for health but bad for the environment, for example some fish and nuts, again depending on how they are produced (Clark *et al.* 2020). Notably, some food choices often labelled as ‘superfoods’, such as avocados, almonds, quinoa or açai are known for their environmental issues regarding, for example, land use change or water depletion (Magrath and Sanz 2020).

To drive transformation towards healthy and sustainable food systems, a concerted effort by citizens, NGOs and local communities, agri-food companies and governments is needed (Biesbroek *et al.* 2023). While many structural and contextual factors influence individual food choices, consumers have some degree of freedom in their daily food choices and can contribute to both sustainability and health. In this article, we focus on the consumers as key players in the system and argue that communication can facilitate change at several points of the transformation process.

While the consumers' private choices are not the sole factors for success, it is crucial to think about *what* and *how* to communicate to them. We argue that simply stating the facts (as is often the case) is not enough.

In this article, we develop a framework that describes communication goals necessary to stimulate a shift in food choices towards both healthy and sustainable diets. We propose that communication efforts (1) need to consistently frame food choices in terms of both health and sustainability ('dualistic framing') and (2) need to increase awareness about the health and sustainability consequences of food choices. We argue that these first two steps are necessary but not sufficient and that successful communication efforts also need to (3) support the socio-emotional readiness for healthy and sustainable food choices by, for example, emphasizing the hedonic value of plant-based foods. The conceptual framework presented here will serve as an open and flexible heuristic model that needs to be complemented by specific contexts; nevertheless, it will be useful to both inspire future research and guide practical campaign work.

Dualistic Framing of Food Choices as Healthy and Sustainable

The first communication goal should be to create a stable association between food, health *and* sustainability in consumers. Currently, food communication keeps health and the environment mostly separate; only few attempts are visible to associate the two.

On the one hand, recommendations for healthy nutrition exist. For example, the WHO recommendations for a healthy diet include an emphasis on fruit, vegetables, legumes, nuts and whole grains and a limit on sugar, fat and salt intake (WHO 2020). Food pyramids or circles offer visualizations of such nutritional principles. They order food groups according to the recommended amount of intake and vary from country to country to accommodate cultural aspects (e.g., singling out olive oil in the Greek and Spanish pyramids), many also highlighting water intake or physical activity (European Commission 2024). In addition, nutrition labelling on packaging is widely used to inform consumers about the nutritional value of individual products (Nohlen *et al.* 2022).

On the other hand, information about the environmental impact of food choice is increasingly available alongside food-based dietary guidelines. Gonzalez Fischer and Garnett (2016), in an overview, point out that European countries such as Germany, Sweden, the Netherlands, France, Estonia, the UK and the Nordic countries have included sustainability recommendations in the food-based dietary guidelines; for example, recommending shifts to plant-based diets, reducing food waste, drinking tap water, eating local, seasonal and organic food. Thus, although written national recommendations are beginning to emphasize the connection between healthy and sustainable food choices, the most accessible tools for consumers – such as food pyramids and product labels – continue to operate largely independently. This omission is problematic because these visual tools are widely accessible and easy to understand.

We propose that transformation efforts should include communicating health and food together. This concerns consumer information in the form of food-based dietary guidelines, food visualizations and product labels, but also specific campaign efforts. We suggest that a first step is to create a general association between health and sustainability in the minds of consumers and promote the idea that food always has implications for both and that they are inextricably intertwined. This can be a communication goal on its own.

In addition, efforts to provide a choice environment that facilitates sustainable and healthy choices by ‘nudging’ can be adapted in the same way. Nudging describes interventions in the decision situation that do not restrict the consumer choice but change something in the choice structure (Vandenbroele *et al.* 2020). Nudging interventions to promote sustainable food consumption were shown to be effective for increasing sustainable food consumption at university canteens (Pandey *et al.* 2023) and grocery stores (Bauer *et al.* 2022). Again, the goal with situational approaches would be not only to convey sustainable choices but choices that are sustainable *and* healthy.

We refer to the communicative approach of linking food with both health and sustainability simultaneously as ‘dualistic framing’. The concept of framing describes selecting certain aspects of reality and making them more salient within a specific context (Entman 1993). In our case, health *and* sustainability should be highlighted when talking about ‘food’ (rather than health or sustainability individually – or just taste, convenience or cost). What we suggest is that any communication effort about food needs to consistently and persistently engage in *dualistic* framing, thus emphasizing that food always has health *and* sustainability implications. For climate change mitigation in general, a similar approach proved to be successful (Campbell *et al.* 2023). Using a health frame for information about climate change increases positive responses to a climate change message (Maibach *et al.* 2010). Similarly, Kotcher *et al.* (2021) found that mentioning the health consequences of climate change or the health benefits of climate solutions can increase the likelihood of contacting members of Congress about climate change action. Healthy food was one of the tested health benefit frames that proved to be effective in activating people (albeit less effective than other frames).

The goal of dualistic framing should be adapted by all potential communicators, governmental, non-governmental, educational, environmental or health: advice from health agencies about healthy lifestyles should also include environmental implications. This idea mirrors approaches such as ‘Planetary Health’ (Planetary Health Alliance 2025) or ‘One Health’ (WHO 2025), which both emphasize that human and environmental health are intertwined and dependent on each other. Likewise, recommendations from environmental agencies about sustainable lifestyles should include health aspects. An example of an evidence-based guideline that considers both health and the environment is the ‘planetary health diet’ elaborated by the EAT-Lancet Commission, which emphasizes a plant-based diet with whole grains, fruits, vegetables, nuts and legumes as the main component, and meat and dairy in much smaller proportions (Willett *et al.* 2019). It is especially important that

dualistic framing does not only appear in written guidelines but also enters easy-to-access informational material such as food pyramids and product labels to improve the use by consumers. Clearly, the challenge will be to create integrated visualizations, product labels and nudges that convey both aspects and do not overburden the consumer. Research is needed to find the sweet spot between offering sufficient and effective, general and contextual information, but not too much (to avoid overload) and not too prescriptive (to avoid defensive responses).

Increasing Awareness About the Consequences of Food Choices

In many behavioural models, awareness of the consequences of a specific behaviour is a key factor for deciding between different behaviours. This is true both for health and sustainability behaviour models. In health behaviour research, a widely used theory, the Health Belief Model, assumes that behavioural change only occurs if people are aware of the benefits that a specific behaviour has for reducing a health threat; if these benefits exceed the barriers – the potential negative consequences of a health action – people will engage in it (Skinner *et al.* 2024). If a person believes that giving up red meat is good for their cardiovascular health but perceives the loss of enjoying a steak as exceeding the potential health benefit, they will continue eating red meat. The idea of considering the anticipated consequences of actions (i.e., benefits and risks of food consumption) has often been applied to food choices, as Chen and Antonelli (2020) conclude from a review of existing models.

Similarly, in research on sustainable behaviour, anticipated consequences are relevant as well. For instance, the Value-Belief-Norm Theory (Stern 2000) suggests that awareness of consequences – the perception that valued objects are under threat – leads to environmentally friendly behaviour. If people believe that a plant-based diet causes less greenhouse gas emissions than a diet that includes animal products, they are more prone to shift to a plant-based diet. Vermeir *et al.* (2020) present a comprehensive theoretical framework for environmentally sustainable food consumption, in which individuals evaluate behavioural options according to their ability to bring about a desired end state relating to the environment (e.g., biodiversity). If they positively value the environment and recognize that the actual state deviates from the original state of the environment (e.g., biodiversity is endangered by pesticide use), they will be more inclined to choose a behavioural option that reduces this discrepancy (e.g., buying organic or ‘bio’ products). Not believing that certain food choices have anticipated consequences can act as a barrier for choosing locally grown, home-cooked, meatless, and organic food, as Gifford and Chen (2017) emphasize. Ran *et al.* (2022) conclude that knowledge and awareness are important elements of sustainable food choices.

However, consumers have difficulties evaluating the environmental impact of their food choices (van Bussel *et al.* 2022). This creates an asymmetry in decision criteria: while we know immediately whether a food tastes good, how much it costs and how convenient it is to prepare, sustainability is much harder to assess.

Even health impacts may be easier to use as a criterion because the health of foods has been the topic of education and medical recommendations much longer. There is also an imbalance regarding the beneficiary of the action: If food is consumed for health reasons, the eater personally benefits. If food is consumed for sustainability reasons, the environment benefits (and the eater only indirectly).

Models that include anticipated consequences regard actions as goal-directed: actors choose the action that has the most benefits and the least downsides and try to optimize the benefit. Of course, decision situations in real life are not this simple – other factors such as taste, smell, habits, costs, food norms, food culture or availability are also important (Chen and Antonelli 2020). But anticipated consequences have an outstanding role as they are often targeted by strategic communication and informational materials. For example, food-based dietary guidelines (Gonzalez Fischer and Garnett 2016) serve the function to explain the connection between food (groups) and health consequences; in the case of the ‘planetary health diet’, the guidelines explain the implications for both human health and the environment (Willett *et al.* 2019). A systematic review indicates that empirical evidence on the effects of presenting a health-related score together with an environmental score is still very limited, and therefore no definitive conclusions can be drawn yet (Andreani *et al.* 2025).

Public discourse in media – one of the most important sources to learn about the impact of food choices – does not reflect this duality. For example, an analysis of 12 Australian newspapers between 2011 and 2021 showed that only 5% of climate change articles highlight the contributions of food systems to climate change (Atkinson *et al.* 2023). Similarly, Kristiansen *et al.* (2021) concluded in an analysis of UK and US elite media from 2006 to 2018 that the amount of news about the role of agriculture in climate change remains low (mostly under five articles published per year in each newspaper, except for *The Guardian*, which had several peaks in coverage). Confirming a low coverage, Mroz and Painter (2023) found in a sample of meat-related articles published on online news sites consumed by diverse audiences in the UK during 2019 that only 12% made a link between meat and the environment. In a comparative analysis of elite newspapers from Germany, the United States and India in the years 2016 to 2018, Brüggemann *et al.* (2022) found that the most prominent frames for food-related articles were ‘Pleasure and Art of Eating and Drinking’ and ‘Body and Health’, while the frame ‘Sustainable Living’, was more or less neglected. Similarly, Hoppe and Kleinen-von Königslöw (2023) note the lack of the topic of sustainability in Facebook comments of supermarket chain pages in Canada, Germany, the United Kingdom, United States and South Africa.

While the public discourse does not (yet) offer dualistic framing of food to larger audiences, the potential of media and communication campaigns to increase knowledge of sustainable food and problem awareness is well noted (Antonelli and Isernia 2024). However, we argue that two aspects are underestimated: (1) communication ambitions are often restricted to conveying anticipated consequences (‘good reasons’), which is not sufficient to stimulate change; (2) the need to communicate both health and sustainability at the same time creates a

complex decision situation. Potentially, this may lead to information overload and avoidance. In addition, making the decision too complex may lead to defensive reactions such as counterarguing or denial. Simple visualizations, such as a food pyramid that considers both health and sustainability, are still lacking, as are heuristics that simplify the decision situation. Therefore, we suggest that dualistic framing and increasing awareness of the consequences of food choices as communication are important but not sufficient, and propose that communication efforts need to support the socio-emotional readiness for healthy and sustainable food choices as well.

Support for Socio-emotional Readiness for Healthy and Sustainable Food Choices

Socio-emotional readiness for healthy and sustainable food choices extends beyond simply knowing what is right. Literature points to five key signals to consumers: that sustainable and healthy food (1) is socially desirable, (2) evokes positive emotions, (3) is easy to prepare, (4) tastes good, and (5) can be approached in a playful way – all without demanding a complete overhaul of existing beliefs or habits. Following this idea, we propose five goals for evoking socio-emotional readiness through communication.

(1) Shift social norms about food choice

Norms have a powerful influence on behaviour, reflected in behavioural models applied in both topics, health (Myrick 2019) and the environment (Bilandzic and Kalch 2021b). Norms can be categorized into two types (Cialdini *et al.* 1991): injunctive and descriptive norms. Injunctive norms reflect what should be done (from the perspective of relevant others such as friends, family, but also wider groups such as ‘my generation’, ‘people like me’ or ‘people in my country’). In contrast, descriptive norms represent what most other people actually do (Cialdini *et al.* 1991). In an extensive review, Farrow *et al.* (2017) found that social norms are influential for pro-environmental behaviours, and more specifically, for eating behaviours (Higgs 2015).

People form impressions of prevailing norms not only by directly observing what others do or say but also indirectly via various media. For example, television documentaries about food, or social media platforms – through posts, likes, and comments – can signal how most people think, what behaviours are desired and expected. Narratives are particularly suitable to convey norms, as they show characters in their daily lives, how their actions are approved or disapproved by others and how often they perform these actions (Green *et al.* 2019). For example, fictional films depicting eating habits or personal stories in social media can give audiences an impression of right and wrong behaviour. Storytelling by sustainability scientists could also be an attractive and vivid vehicle for explaining food system transformations (Vitting-Seerup and Matthiessen 2025).

Media exposure and communication campaigns can change social norms (Geber and Hefner 2019; Rhodes *et al.* 2020). For food communication, Mollen *et al.* (2013) found that messages highlighting a healthy descriptive food norm increased healthy food choices, compared with an unhealthy descriptive norm and the control condition. In line with this, Qin *et al.* (2025) concluded that exposure to unhealthy food content in social media is negatively related to perceptions of healthy food norms. Moreover, exposure to social norm information about plant-based diets can increase intentions for behavioural change and support for meat reduction policies (Fesenfeld *et al.* 2023). In a study by Carfora and Catellani (2023), adding dynamic norms – the information that more and more people are adopting plant-based diets – in a message administered during a mobile app intervention, made messages more effective in the long term.

However, other researchers failed to find effects of social norm messages (Alblas *et al.* 2023; Çoker *et al.* 2022). Possibly, social norm messaging has different effects on different target groups. For example, de Groot *et al.* (2021) found evidence that messages on social norms may be more effective for people with lower personal norms towards pro-environmental behaviour.

Concluding, social norm messaging seems to be a promising venue for stimulating food transformation. By serving as a ‘decisional shortcut’ (Cialdini *et al.* 1991), norms may relieve consumers from elaborate and complex decision making. However, the evidence of communication effects of norm messaging on food choices is mixed, and more research is needed to find conditions and facilitators.

(2) Create positive emotions with desirable diets

In both domains of health and sustainability, emotions play a major role. A widely accepted definition of emotions in the context of communication (Nabi 2010; Myrick 2015) describes them as short-lived internal mental states that reflect evaluations of events, persons or objects and that typically arise as a reaction to external stimuli (Ortony *et al.* 1988). Negative emotions can be responsible for unhealthy food choices such as overeating, or eating high-caloric, palatable food (Ha and Lim 2023). Emotions can also be an integral part of health or sustainability messages, for example, when a food is connected to a high risk of cardiovascular disease or contributes to greenhouse gas emissions, and emotions such as fear elicited by the message can influence risk perceptions or decision making (Ferrer *et al.* 2015).

A common strategy for using emotions in strategic communication is to include fear appeals in the messages, which represent persuasive messages highlighting negative consequences should the health advice of the message be ignored (Dillard *et al.* 1996). A typical fear appeal might look like this text from the news website Vox.com:

Rising global meat consumption, along with vanishingly little government policy designed to change diets or cut pollution from factory farms, means we’re all but guaranteed to miss even the least ambitious targets suggested by climate and agricultural scientists in the Harvard survey. (Torrella 2024)

A meta-analysis by Tannenbaum *et al.* (2015) shows that fear appeals in persuasive messages have a positive effect on attitudes, intentions and behaviours.

However, despite these documented effects, researchers and practitioners have expressed unease with the negativity of fear appeals in environmental communication and have suggested the use of positive emotions such as hope, collective efficacy, content or pride (Bissing-Olson *et al.* 2016; de Lange *et al.* 2022; Schneider *et al.* 2021). The argument is that fear-based messages can be overwhelming and may lead to complete rejection of the message. There is evidence that positive emotions are useful for message effects. A meta-analysis on hope and climate engagement showed that perceived hope was associated with greater climate engagement, and hope manipulations (for example through messaging) increased engagement – albeit with small effects (Geiger *et al.* 2023). Positive emotions seem to play a role for food choices too: Onwezen *et al.* (2022) found that positive emotions are the most relevant factor for intentions to consume alternative proteins (from fish, seaweed, insects, legumes and cultured meat).

Van Cappellen *et al.* (2018), in their upward spiral theory of lifestyle change for health behaviour, emphasize that the positive affective process plays a crucial role in supporting long-term adherence to healthy behaviours: according to this theory, when people start engaging in healthy behaviours, they experience positive emotions, which become associated with those behaviours over time. These positively valenced experiences then increase the expectancy that repeating the behaviour will also repeat the positive emotions, thus strengthening non-conscious motives to include the healthy behaviour into one's lifestyle routines. This mechanism, which highlights the reinforcing cycle between positive emotions and behaviours, is equally plausible when applied to sustainable food choices. As individuals experience the positive emotions tied to making sustainable food decisions, they are more likely to continue making those choices, gradually integrating them into their everyday lifestyle.

While more research is needed to explore the exact effects of using positive emotions in food communication, we can tentatively conclude that positive emotions are promising. The goal would be to create an association between desirable diets and positive emotions, for example, pride in contributing to greenhouse gas reduction, or hope to maintain biodiversity through one's food choices. Communication efforts can create these associations, for example, by telling stories of people who have changed their behaviours and now express their emotions about their change.

(3) Increase self-efficacy and food skills

Self-efficacy is a key construct in social cognitive theory by Bandura (1986), which expresses an individual's belief that they are capable of organizing and performing courses of action that are needed to reach a goal. Social cognitive theory describes learning processes stimulated by observing behaviours of other people; whether behaviours that were observed and retained in memory are applied in real-life situations depends on *self-efficacy*, which expresses the 'beliefs in one's capabilities to

organize and execute the courses of action required to produce given attainments’ (Bandura 1997: 3). If people know that plant-based diets are good for health and the environment, but do not feel capable of cooking a vegan meal, then they will not switch to plant-based diets. Self-efficacy originates from remembering past successful performances of a given task, receiving encouragement from others (‘verbal persuasion’) – or observing accomplishments of other people and learning through ‘vicarious experiences’. These experiences help individuals build confidence in their own ability to successfully perform the task (Bandura 1997).

Vicarious experiences are a source for self-efficacy that can be addressed through communication: by observing how chefs on television or food influencers in social media cook plant-based meals, consumers can get the impression that they could cook a meal like this, too. Typically, narratives are ideal vehicles for vicarious experiences. Personal storytelling in blogs or social media channels, in which influencers display their cooking skills or even muse about their earlier lack of talent for cooking, can provide such vicarious experience and encourage users to try for themselves. Processes of identification may support this; for example, audiences can perceive wishful identification with an admired media cook, or, they can feel similarity with an imperfect cook who tries to get better.

Notably, self-efficacy is the *subjective* belief about one’s capabilities to do what is needed to reach a goal, not the actual skills. Media interventions, however, can shape both subjective beliefs and actual skills: by showing successful examples of healthy and sustainable diets, media can increase confidence in consumers that they are able to create such a diet themselves, but also teach concrete skills in buying and preparing desirable diets. The ever-growing media discourses about food and the unwavering audience interest (Matwick and Matwick 2015) are an ideal context for such media interventions. Ideally, messages about healthy and sustainable food choices would be integrated into existing and already successful formats. The great advantage of vicarious experience interventions is that consumers do not need to be asked to imitate the behaviour – they simply watch or read the messages and integrate new behaviours into their cognitive repertoire of possible actions. Consumers learn how plant-based diets or food waste reduction can be achieved but without the feeling of being told what to do. In everyday situations they will be encouraged to perform the desired behaviour if the occasion or need arises in a specific situation. This is advantageous for communication efforts as it does not run the risk of raising defensive reactions in consumers.

(4) *Emphasize hedonic value*

Food is first and foremost related to sensory appeal – flavour, taste, smell and colour are important factors for food choice (Chen and Antonelli 2020). People often find it difficult to resist foods they enjoy, eating their favourite dishes even when they know these choices are harmful to their health or the environment. Overcoming the hedonic appeal of these foods with rational arguments about health and sustainability is notoriously challenging.

While we concluded earlier that raising awareness about the consequences of consuming specific foods is important, it may not be the only argument that consumers need for transformation. Consumers may just want to learn whether they will like their new diet. Therefore, when promoting healthy and sustainable diets, it is crucial to emphasize the hedonic value – perhaps even more than the rational arguments. This approach has the advantage of appealing to a broader audience, allowing even staunch anti-vegans to be open to trying new food ideas, rather than dismissing them as inadequate without giving them a chance.

Emphasizing the hedonic value of food implies that we *add* an enjoyable food rather than *cancel* a beloved dish. Indeed, Carfora and Catellani (2023) found that messages proposing to add a sustainable alternative to one's diet (legumes) is more effective in changing legume consumption than messages recommending to replace meat with legumes. While the result can be the same (plant-based diet), the barriers for food transformation may be considerably reduced when hedonic value is emphasized ('I gain another tasty food' rather than 'I lose a tasty food').

(5) *Encourage play*

Changing food habits is a long and challenging process, and communication efforts must acknowledge this reality without imposing pressure for immediate, radical change. A campaign that demands a 100% shift from meat to plant-based diets overnight is likely to provoke defensive reactions. Instead, the goal of communication should be to encourage exploration and experimentation, allowing consumers to try out new options without feeling overwhelmed and judged.

In addition, it is likely that food habits do not evolve and change in a linear fashion. For example, the value-belief-norm theory (Stern 2000) assumes that behaviours are preceded by a sequence of values, awareness of consequences, responsibility attribution and norms. Similarly, the goal-directed framework applied to environmentally sustainable food consumption (Vermeir *et al.* 2020) views actions as the result of a sequence involving values, perceived discrepancy between current and desired states and intentions. While such sequences are plausible, alternative pathways are also possible. For instance, consumers may try new foods, enjoy them and gradually shift corresponding values, cognitions or attitudes only after repeated trials.

This more playful/experimental/incremental approach allows for dietary change (and the targeting of such changes through communication) to occur for the 'wrong' reasons – not because the foods are healthy and sustainable, but because they are tasty and fun. What truly matters is the outcome. This suggests that a complete overhaul of habits and/or identities is not necessary; instead, consumers can start by trying new things, which over time leads to incremental changes. Since people usually try to be consistent in their behaviours and cognitions (Festinger 2001), a behavioural change can lead to a shift in how individuals think and feel about healthy and sustainable diets.

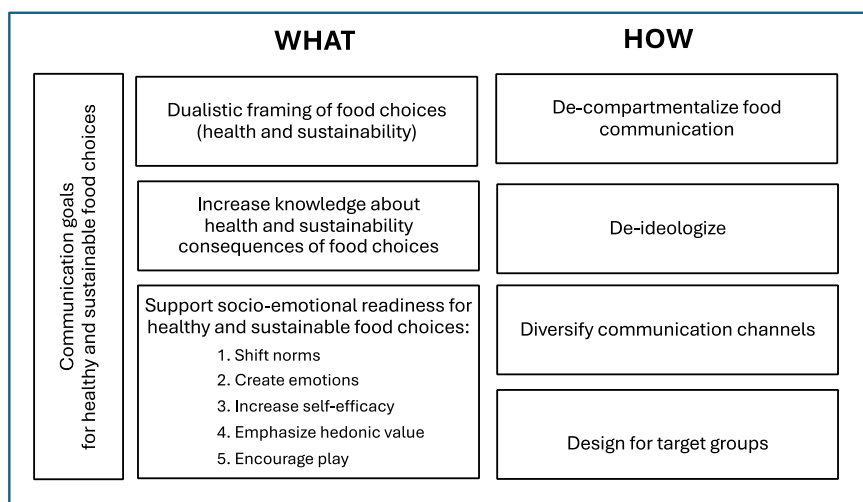


Figure 1. Conceptual framework of communication goals for healthy and sustainable food choices

To sum up, we propose to complement informing audiences with increasing socio-emotional readiness through food communication. In this perspective, informing audiences is not the primary objective, even if informational gains may occur as a by-product. The communicative challenge lies less in presenting as many facts as possible but more in sparking motivation and curiosity. Therefore, creative media formats that enable engaging, affectively rich experiences are especially promising, as well as casual, humorous presentation styles which may be best suited to achieve these goals. As we mentioned before, narratives (in social and traditional media), serial content in social media, participatory formats (e.g., challenges, interactive storylines) or channels presented by relatable influencers close to the demographics of the target group, can provide appealing options. Such formats allow audiences to feel possibilities, rather than merely receive information.

Conclusion

In this article, we proposed that communication efforts aimed at food transformation should simultaneously associate food with both health and sustainability (‘dualistic framing’) and increase awareness of the consequences of food choices for each (for an overview see Figure 1). We argue that dualistic framing and ‘good reasons’ are not enough to encourage food transformation at the level of the consumer. Putting a focus on these two factors creates unbearable complexity for the decision maker, and leads to overload and reactance. Therefore, another communication goal is to stimulate socio-emotional readiness for healthy and sustainable food choices. The maxim is not to prescribe and persuade, but to invite reflection and play. We suggested five

communication goals: (1) shifting norms, (2) creating positive emotions, (3) increasing self-efficacy, (4) emphasizing hedonic value, and (5) encouraging play.

Principles for Communication

Dualistic framing, increasing awareness of the consequences of food choices and stimulating socio-emotional readiness is what we refer to as the ‘WHAT’ of communication goals. The ‘WHAT’ is complemented by the ‘HOW’ of communication. We propose the following four principles, the ‘4 Ds’ of ‘HOW’:

(1) De-compartmentalize

Food communication should not be restricted to food-specific discourse, but woven into a wide range of media contexts. Mentions of food can appear as background elements, side remarks or narrative details in content that is not primarily about food at all, such as news, talk shows, lifestyle blogs, entertainment formats, or even niche communities (e.g., pet blogs or hobby forums). Limiting plant-based diets to vegan blogs and podcasts primarily reaches audiences already aligned with the message. By distributing food-related cues and stories across general-interest platforms, the audience naturally broadens and food communication is ‘*de-compartmentalized*’, becoming normalized, more accessible and visible.

(2) De-ideologize

Food is often linked to specific ideologies, identities and lifestyles. However, to engage people who have not yet made the shift, food communication must be *de-ideologized*. This means avoiding moral or in-group arguments, as they can easily backfire and alienate potential audiences. Instead, the focus should be on presenting food choices in a way that feels inclusive and accessible to all.

(3) Diversify communication channels

Food communication should be distributed across a broad range of channels, including social media and streaming services, and tailored to the audience’s media habits. This implies utilizing not just written content, but also videos, podcasts and social media to *diversify* communication channels to reach diverse audiences. It includes considering formats that are usually not part of informative campaigns but are highly popular in the digital space. For example, memes are a widely shared, engaging format that often go viral, reaching audiences far beyond the original target group. Users like them for their positive, humorous nature, making them an effective vehicle for spreading a message while maintaining a light-hearted tone. Another option is to create narratives about transformative journeys towards healthy and sustainable diets. An example of this is the vlog ‘Sophie’s Wild Cornwall’, in which a young student documented her hike around Cornwall, reflecting on environmental issues and nature. Finally, fictional narratives and (computer) games are also vehicles for unobtrusive yet impactful messaging that resonates with broad audiences

(Bilandzic and Kalch 2021a; Green *et al.* 2019). The goal needs to be to ‘mainstream sustainability’ (San Cornelio *et al.* 2024), integrating these messages into all kinds of everyday media experiences.

(4) Design for target groups

Messages need to account for the heterogeneity of audiences and be *designed* for the specific needs, values, interests and life situations of a group. Individuals who are only beginning to reflect on their food habits have different communication needs than people who regularly eat meat. Target-group orientation also involves choosing media channels that align with the platforms a given group actually uses, whether that is short social media posts, long-form podcasts, traditional TV formats, or online communities (such as Reddit communities or neighbourhood Facebook groups). In addition, the style of presentation, narrative framing, tone and level of complexity should be calibrated to what a group finds relatable and manageable. Tailoring both the channel and the communicative format increases the likelihood that messages resonate with the intended target group.

Further Considerations: Sequence, Timeframe and Communicators

The goals of dualistic framing, increasing awareness of food-choice consequences and supporting socio-emotional readiness do not imply a particular sequence. There is no need to wait until all consumers have developed full awareness before addressing socio-emotional readiness. Acknowledging that persuasion is a dynamic process evolving over time (Rhodes and Ewoldsen 2013), a holistic communication strategy benefits from advancing these goals in parallel. The reason for this is that behavioural change can unfold in a non-linear order. While it may seem intuitive to think of awareness as preceding change in eating habits, the reverse can also occur: individuals may first try a vegan meal – sometimes incidentally, or even without knowing – and enjoy it, develop a more positive attitude toward plant-based options, and only afterwards seek information or become more aware of the broader consequences of food choices. Likewise, there is no predetermined time scale for these communication goals. We assume that effective communication is a long-term endeavour, involving continuous media presence and diverse, recurring campaigns. Although shifting knowledge levels is generally less demanding for individuals than altering eating habits, both require sustained and repeated communication efforts.

A number of different communicators can contribute to public discourse about food. Each actor brings distinct capacities, levels of trust and target audiences. Government agencies and NGOs are well suited to provide initial impulses, such as setting the topic in public discourse, supplying evidence-based guidance and shaping normative frames, because they are often perceived as credible and mission-oriented. Building on these foundations, media institutions, journalists and social-media influencers can act as multipliers and opinion leaders who translate and contextualize basic information, reaching diverse audiences through familiar and popular formats.

Businesses may further contribute by normalizing sustainable food choices through product placement, nudges and marketing. In sum, an effective communication landscape relies not on a single authoritative voice but on a complementary multitude of communicators who reinforce and expand one another's messages.

Limitations

Our approach has also limitations. First, it focuses primarily on the individual consumer. Many factors influencing food choices are beyond consumers' control and cannot be changed through sheer willpower. For example, food choices are constrained by availabilities, financial resources and time pressures that favour convenience. Therefore, consumer-focused communication alone cannot be the sole strategy for food transformation, because it places too much responsibility on the individual and absolves the industry and policymakers of their obligations. It has been emphasized that consumer protection for food is underdeveloped compared with other areas such as tobacco (Gokani 2024).

Second, the overall picture of assessing the sustainability and healthiness of foods is more complex, including other important factors such as the soil, water and feed quality used for production, the environmental impacts of agricultural practices (e.g., use of fertilizers, pesticides, antibiotics), costs associated with transportation, packaging, processing, preparation and commercialization (including food waste management), as well as the importance of having a varied and balanced diet providing all essential nutrients. Of course, animal welfare is another important aspect of food transformation and may present a good reason for many people to change their eating habits.

Third, opposing forces against food transformation should not be underestimated. Shifts in consumer behaviour can threaten commercial interests, prompting the food industry to actively engage in public discourse to promote their products and to defend advantageous norms. Moreover, the industry may lobby against state regulations or food recommendations that could potentially undermine their profits. Another issue is that media discourse on food and food transformation can provide the context for either facilitating change or hindering it.

Conclusion

The strategies presented here are based on available empirical evidence for communicating changes in health and environmental behaviour. However, the framework also allows us to derive hypotheses which ideally should be tested in experimental media effects research. This is necessary before implementing broad (and costly) campaigns. Possibly, some strategies are more effective than others or need to be adapted according to target groups. The framework is meant to serve as a starting point for systematic research and inspire practical communication work.

Food is a deeply social and cultural issue. Changes in food culture cannot be expected to happen overnight. Nonetheless, we argue that it is crucial to carefully

consider communication strategies for consumers, even if they represent just one piece of the broader puzzle in food transformations. Thoughtful and targeted communication can play an important role in facilitating long-term change.

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Competing interests

The authors declare there are no competing interests.

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