

Communication of food and sustainability in relation to food communication research

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The necessity of social understanding regarding the future of the food system has gained increasing societal and scientific attention in recent years. Using the concept of sustainability as a framework for discussion can help us reflect on the phenomenon of food in depth and to discuss how we will shape our food system and nourish ourselves in the future. The aim of the newly developing social science-based research field of food communication is to analyse the discourse of food within society and to rethink the way in which food communication in the professions and research is conceived and realized. This is in order to produce insights that will help society handle the complexity of the issues through self-reflection and to highlight possibilities for applicable communication approaches.

Food communication

Food communication is usually considered as dietary advice and other targeted communication by consumer protection bodies or health organizations. It is often underestimated that

there are many powerful channels of food communication within society, such as print media, social web or corporations dealing with food related questions which can inform the behaviour of individuals, and even the behaviour of institutions.

Systemizing the prevailing ways in which food communication is understood in the literature shows that food communication is often viewed as a secondary process in the sense of a sender-receiver model, whereby objective meanings following the "container metaphor" [1] are packed on the sender's side and unpacked on the receiver's side [2]. Such an understanding of communication can be identified in the communications of professional organizations, for example, which often convey food-related messages to lay people or consumers in the form of recommendations and dietary advice, with the intention that this kind of communication will lead to a change in behaviour. Most definitions of food communication follow this concept [3-5] and based on this, classical food communication is accused of "failure" because the messages conveyed do not necessarily lead to changes in behaviour, which is evident from the increasing numbers of overweight people, for instance. An overview of common scientific definitions of food communication can be found in ◆ Table 1. However. in order to better understand society-level communication about food and how we should act in accordance with that understanding, it is helpful to look at food communication from a constructivist point of view and classify it as a primary communication process [1]. In these societal communication processes [6, 7], the recipients are no longer seen as passive receivers of messages about food, but rather they actively contribute to the communicative construct of the phenomenon of food. Communication is understood as a multi-layered, dynamic process in which meanings are constantly renegotiated via various discourses.

Here, food communication does more than just convey information and messages - it also conveys values and attitudes, for example with regard to sustainability [8, 9].

Such an understanding of food communication is more in line with the current state of communication

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Authors	Definition	
REHAAG & WASKOW (2005, р. 12) [7]	"Food communication is a social understanding process. Depending on the actors involved and contexts of interaction, it can be differentiated into two levels of discourse: everyday communication and expert communication. Expert communication includes political, scientific, and economic communication, along with public mass media communication as the common forum for all of these."	
WILHELM et al. (2005, p. 8)[5]	"The term food communication is () used in the comprehensive sense, i.e. for a broad spectrum of very different communication channels and spheres of communication. It describes () all measures that () institutions (consumer institutions, environmental associations, educational institutions, development policy institutions, health institutions, interest groups) carry out to impart information, skills, and positive attitudes on the subject of food to different target groups."	
RÖSSLER (2006, p. 61f.) [3]	"Food communication can () be roughly understood as two main areas which can be described as product communication (presentation of food in various contexts) and process communication (presentation of processes relevant to food from cultivation and production to purchase, preparation and consumption, through to disposal). Although it is possible to find media messages on just one of these areas (e.g. product advertising and marketing, cooking shows), they are often characterized by a fusion of both components ()."	
Maschkowski & Büning- Fesel (2010, p. 677) [4]	"Food communication involves the transmission and exchange of knowledge, opinions, and feelings about food. The providers and actors of food communication include not only professional service providers such as food consultants, physicians, media, companies, governmental and semi-governmental institutions, but also private individuals who are interested in food. Transmission and exchange of knowledge can take place as interaction between people, but it can also be mediated by the media."	

Tab. 1: Scientific definitions of food communication [own presentation]

about food in society because the topic of food is omnipresent at the moment – to the extent that there is the concept of an "orthorexic society" [10], in which communication about food takes place everywhere, all the time. Due to the development of new media and communication channels, different social groups are now able to take part in food discussions. This is apparently due to the growing numbers of people becoming food bloggers, social eaters, and food journalists. The debate about food on social media, for example on Facebook, Instagram, or Twitter, is also increasingly in the foreground, which is why it makes sense to expand the concept of public food communication [7], which distinguishes between the levels of everyday communication and expert communication depending on the actors involved and interaction contexts. The concept should be extended to also include the relevant levels and systems of communication that have gained in importance with regard to food issues in the last decade due to technological and social developments. It appears necessary to examine the social negotiation contexts and the systems involved in the most comprehensive way possible if we are to do justice to the complexity of the social



Social media influencers and users are increasingly in the spotlight when it comes to dealing with food issues. They may be bloggers, food journalists, or even people who are active on Facebook, Instagram, or Twitter.

debate on food. This is because the phenomenon of food is interpreted, given meaning, and understood differently depending on the perspective or context from or in which food communication takes place.

be understood as a communication system in and of itself. Through food, humans express appreciation and their individual understanding of values and norms [13].

to Roland Barthes [12], food can

"Food" as a subject of communication

In traditional targeted food communication, food is often understood as a physiological need. Hence related communication emphasises health-related aspects of food e.g. in terms of shopping, preparation, and intake. From a societal point of view, food is understood in a broader sense and all interactions between the various levels of the food system and their side effects are taken into account and understood as thematic aspects of food (◆ Figure 1). Furthermore, according to Marcel Mauss [11], food can be characterized as a "total social fact" that is connected with all other areas of life and in which "all kinds of social institutions find simultaneous expression" [11, p. 17f.]. In addition, according

In modern society, food has developed into a kind of currency through which everyone can express their lifestyle, tastes and attitudes [10].

Food creates identity and allows people to differentiate themselves from others – it communicates boundaries, hierarchies and social rules. Furthermore, food is a traditional, socially-mediated action that is always integrated into specific individual and collective patterns of interpretation and action that aggregate on a social level to form a food culture [14]. What is to be considered desirable food behaviour is negotiated in society through communication. Food can therefore be understood both as a broad subject of communication with many

thematic aspects - i.e. as communication about food (topics) within the framework of the food system, and as communication content that is constructed - i.e. as an understanding of a healthy or sustainable diet constructed through communication. Here, ideas about correct food in connection with specific norms, values, models, etc. are generated in communicative interactions based on individual experiences and social reference frames (communication of food understandings). In addition, food can also be understood as a communication system in and of itself, i.e. communication through food (expression of identity, distinction, reproduction of food cultures). The distinction between food as subject that can be communicated, through which communication can take place, and which can be communicated about, can be understood as a division into levels of analysis. In real-life communication, these three levels cannot be clearly distinguished from one another - rather they blend into one another. This is because when we communicate about food, we always construct specific understandings of a food-related object or fact and indicate expressions of the underlying identity, distinction, or food culture.

Sustainability in food communication

Like many other fields and areas of needs in social life (e.g. mobility, energy), food can no longer be discussed without mentioning the principle of sustainability. Sustainable food behaviour makes an important contribution to sustainable development. In the era when the German Nutrition Society and "aid infodienst" (now Bundeszentrum für Ernährung (BZfE) [German Federal Center for Food]) were founded, the focus of such organizations was on tackling food insecurity after the Second World War, but today, with

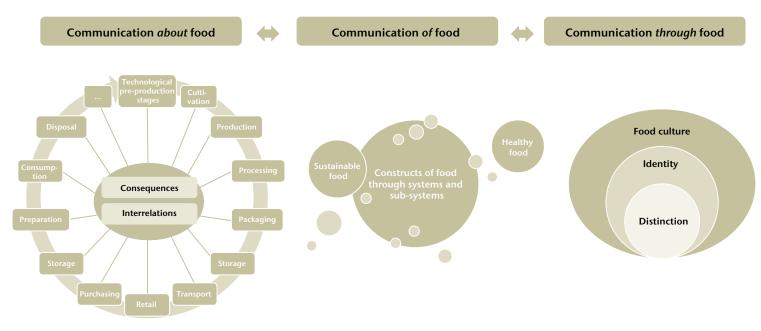


Fig. 1: Social science-based food communication research [own outline]

our industrialized, globalized food system facing the societal challenge of sustainable development, the focus is on how to feed the world in the long term. This development can be seen in all aspects of the food discussion and in all systems in which food-related issues are dealt with (*Figure 2). This is why, for example, the EU Common Agricultural Policy is now only considered relevant if it develops in the direction of a "common sustainable food policy" [15], and why the German Nutrition Society has recently started to award companies a certificate for sustainable catering if appropriate evidence is provided [16] in addition to their established practice of certifying companies for switching to a nutritionally valuable meal provision. Within the education system, topics discussed include the targeted training of teachers [17] and how to impart relevant food skills and consumer skills, such as skills related to cooking, finance, health, and media, all while taking the principle of sustainability into account [18]. In 2012, the United Nations (UN) declared the topic of food a global an-

nual priority [19] in education for sustainable development. Business organizations can no longer avoid reporting on their sustainability performance (which in the case of food corporations always relates to aspects of food), either for regulatory reasons or for reasons of normative pressure. A broad discourse on sustainability-related food issues is taking place not only at the institutional and organizational level, but also at the societal level. The significance of public communication about food is constantly increasing and the attention paid to food and eating in the media is intensifying. Public discourse about food is increasingly characterized by communicators that communicate many varying concepts of sustainable food through a variety of channels and

Discussions about sustainable food with broad social participation have shown that there is a lack of clarity about the meaning of the term itself (as in many other fields). As yet, there is no broadly accepted understanding of the concept of "sustainable food" [20, 21] and in society, the concept is tied up with many different reference frames that inform the understanding of the concept and ascribe a wide range of attributes to it, and each reference frame focuses on different aspects. With the help of systems theory [22], it is possible to determine which perspectives shape food communication in society today. Depending on the perspective from which sustainability-related food questions are dealt with, or rather depending on the code (◆ info box) through which these questions enter system processing, different aspects are focused on, and the term is regarded as an object of different system functions and programs, as shown in • Table 2. The difference between the perspectives on sustainable food and the different mechanisms used to process meaning in social systems also requires a more sophisticated approach for scientific analysis. In order to deal with this level of complexity, systematic thinking and an interdisciplinary approach is necessary. By comprehensively examining food communication in society with the theoretical framework of systems theory,

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the complexity of the processes of communication about sustainable food can be set within this framework, and the maximum number of relevant communications and negotiation contexts can be included in the analysis. The importance of communication is becoming increasingly relevant nowadays as consumers' actual experience with the production of food has become very rare.

It is no longer the foodstuff itself that leads to food related action; instead communication gives food meaning and relevance.

Communication codes

Each socially differentiated sub-system has a specific binary communication code, such as truth / untruth in science. Systems perceive information and events in their environment only in the context of their respective codes and system functions. The code thus defines the identity of systems and determines their boundaries. If information or events do not fit within the logic of the respective system code, they are excluded from the system and attributed to the environment. For example, the economy processes information under the code of pay / don't pay. If social and environmental consequences and interrelations cannot be expressed in terms of prices, the economic system cannot decide whether payments should be made in favour of more sustainable food production.

System (code)	Program/system function: sustainable food as	Example
Economy (Pay / don't pay)	deciding factor in budgets	Sustainable management, ecological production; corporate social responsibility programs
Politics (Having power / not having power)	subject matter of government and party manifestos	Food initiatives such as "Appetit auf Zukunft – Besser essen in Hessen" by the German Ministry of Consumer Protection; 2030 agenda for sustainable development, sustainable food as a contribution to world food security
Art (Harmonious / not harmonious)	something to be formed and subject matter of works of art	Exhibitions and illustrations such as "Food Revolution 5.0 – Design for the Society of Tomorrow" by the Museum für Kunst und Gewerbe in Hamburg; "Welcome to the Anthropocene" – The Earth in Our Hands, Deutsches Museum Munich
Education (Praise / criticism)	the subject of educational plans and curricula / teaching plans	United Nations Decade of Education for Sustainable Development (2005–2014); UNESCO World Action Program "Education for Sustainable Development" (2015–2019)
Religion (Immanence / transcendence)	dogma	Veganism / vegetarianism as the preservation of creation; individual food as social and ethical responsibility
Mass media (Information / non-information)	information for forming public opinion	Films such as "We Feed the World", "Good Food, Bad Food", etc.; news reports, cooking shows, food magazines and newspaper articles, documentaries
Medicine (Healthy / ill)	an aspect of preservation of health / treatment	Reduced meat consumption as a way of caring for health, as in the German Food Society recommendations, for instance
Law (Right / wrong)	the subject of legal standards and laws	Legal standards on food quality, traceability and transparency; marketing standards, labeling regulations e.g. for organic or regional products
Science (Truth / untruth)	a research object for the generation of new knowledge through theories and methods	Studies that examine aspects of sustainable food from various research perspectives, such as the study "Is good food really expensive?" by the Öko-Institut e. V.
Sport (Success / failure)	means of performance increase/decrease	Regional and seasonal foods as supplies of energy, part of fitness and training plans

Tab. 2: Processing of sustainable food in the different functional systems [own presentation]

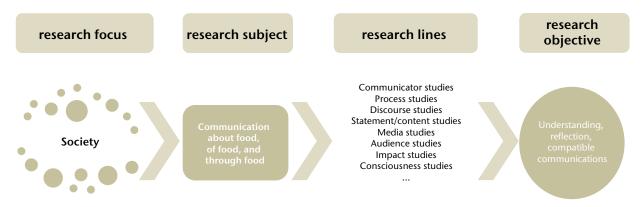


Fig. 2: Social science-based food communication research [own outline]

"Sense and meaning of experience are not values inherent in the content (the subject matter) of experience, but rather qualities that are constructed from allocation and by reference [through communication!" [23]. Communication is therefore a reference frame for the constructs of reality, making it a key parameter in food behaviour. If it is possible to communicate narratives within society that present sustainable food as aspirational, for example, then these can be used as a reference frame for one's own behaviour or for political action. The social science-based research field of food communication is taking on this complex research topic and aiming to investigate the role of food communication in shaping a sustainable society.

Food communication as a research field

Food communication is an interdisciplinary research field. A broad understanding of food like the one set out above provides a wide variety of starting points for scientific investigation of questions relating to food communication and different aspects of the phenomenon are dealt with in various disciplines, such as food science, sociology, cultural science, economics, medicine, etc. The subject area of food com-

munication research has undergone a fundamental transformation in recent years. The focus is no longer only on targeted communications, but rather it is increasingly widening to include an examination of the discussion of food in society as a whole. In order to understand the complex interrelations of food and the relevant connotations, it is necessary to consider food actions and related social discussions in the context of their allocations and relations to specific social systems.

Successful food communication depends on the ability to recognize and reflect on the different perceptions that exist in communication about food in society.

For science, this raises various questions that can be addressed by the research field of food communication as set out in ◆ Figure 2. For example, it is necessary to analyse which actors/ systems in our society communicate about food and how they do so. We need to analyse how food is framed and which meanings, metaphors, and images are used. We also need to ask what people actually know about food: what meaning do they attribute to food and why? Is health really the decisive criterion for the selection of foods? Which messages about food have actually been taken on board by the population and which are given sense in terms of day-to-day actions and are compatible within the population? What opportunities to communicate at the institutional level might be identified? How could messages become information that resonates for different systems? Do approaches such as true cost accounting1 (which converts the effects of food production - water pollution, greenhouse gas emissions, soil erosion, and pollution with pesticides - into economic costs, thus creating information that resonates within the economic system) lead to long term transformations in the food industry? This approach highlights some aspects and questions to which food communication research may provide useful insights with the

¹ The "True Cost Accounting in Food, Farming and Finance" pilot study was first published in 2017. Based on the foundation provided by the Food and Agriculture Organization (FAO) of the United Nations, financial auditors Ernst & Young and sustainability consultants Soil & More developed a suitable method and used it to carry out a comprehensive value chain analysis and an integrated profit and loss account for 9 products of the Dutch organic food retailer Eosta. This made it possible to calculate the "true" costs in a far more sustainable fashion compared to conventional value chains by also integrating the externalized costs for people and the environment into the calculation.

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use of suitable methods [24]. These challenges are also opportunities for food communication because a more differentiated understanding of the messages and their recipients - i.e. a comprehensive understanding of social food communication - may lead to communication strategies that make desirable food actions more likely.

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