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Keywords

foodscapes; foodscape studies; eating out of home; food environments; settings

Abstract

The notion of foodscape is increasingly being used within health promotion, public health nutrition and food studies as a tool to describe our food environments and to assess the potential impact on food choice and food behaviour. This paper takes a closer look at the growing number of foodscape studies (FSS) and traces the origin of the idea of foodscapes. It reflects on the different contributions and discusses the applicability within food research. In particular it discusses how the notion can be applied in the growing number of studies that investigate the role that captive eating out-of-home environments (CEOE) in public welfare systems has on the health of the individual and on the sustainability of the environment. The paper concludes that the idea of foodscapes is a convenient tool that has many applications in food research. The foodscape framework offers obvious advantages in that it enables scholars to analyse how food, places and people are interconnected and how they interact. In particular the paper concludes that the foodscape notion is well suited to the study of foodscapes in CEOEs such as schools, kindergartens and institutions. I finally suggest that such foodscapes can be defined as physical, organizational and sociocultural spaces in which clients/guests encounter meals, food and food-related issues including health messages.

AIM

This paper aims to explore the notion of foodscapes and discuss its relevance in understanding determinants of food behavior in institutional out-of-home eating environments. With the notion of settings as a point of departure, it traces the origins of foodscapes and gives an account of different approaches to foodscapes reported in the literature. The paper further aims to contribute to the development of foodscape studies as a tool to understand and develop health behaviour in captive eating out-of-home environments.

INTRODUCTION

Food has an immense impact on our health. Along with sedentary behaviour, unhealthy eating patterns are the main causes of the growing prevalence of obesity and other nutrition-related disorders[1,2] and this development is increasingly threatening economies around the world.[3] Opportunities for eating out of the home are of particular concern[4,5] and numerous policy papers, including an EU White Paper[6] and the World Health Organization (WHO) Istanbul charter,[7] have identified out-of-home eating as an important arena where strategies for healthier eating and

lifestyle patterns can be deployed. Eating out of the home has increasingly become an integral part of modern life and facilities for out-of-home eating and eating on the go have become an important part of our food environment.

Along with shopping daily for food, meeting foods in different forms seems to create a 'landscape of foods'. The way that we look at and understand food has fuelled a growing interest in tools and frameworks that can be used to understand such food environments. The notion of foodscapes has become popular in art and photography, and has also spread in scientific literature over the past decade. In particular, the idea of foodscapes is being increasingly used within health promotion and public health nutrition as an analytical tool to assess the 'agency' of our food environments. The idea that food environments can be a powerful and independent determinant of food behaviour has been introduced through a number of health behaviour theories and most explicitly in the notion of obesogenicity.[8]

In addition to the more commercial environments, eating outside the home also takes place in more 'captive' environments.[9] Many governments and their agencies have implemented institutional food service as an integrated part of the public service provided in welfare systems including schools, kindergartens, institutions and worksites. Whereas institutional food service has traditionally been looked upon as a rather mundane and uncomplicated process of simply providing catering and food services to institutions, there is an increasing awareness and support of the idea that public food provision should play a much more active role in public health nutrition strategies.

Food and meals in our environment are embedded in complex physical, social and cultural contexts and there is a growing interest in studying the influence of our food environment and to understand how people, spaces and food *interact* and how this interaction *influences* our food behaviour. This paper focuses on this interrelationship in captive eating out-of-home environments by exploring the emerging notion of

foodscapes. The paper takes as a point of departure the fact that foodscapes have an impact on food choice and behaviour and that they can be modelled to support for healthier eating. It draws on recent papers from both the settings domain and a selection of recent papers that have been published by scholars, researchers and opinion makers within the field of foodscape studies (FSS).

TRACING THE IDEA OF -SCAPES
The suffix '-scape' is traditionally used to denote spatially arranged artifacts in our surroundings and over the past decades a number of new words have emerged through combining other words with -scape.[10] Most of them can be assumed to have been constructed under the influence of landscape – a specific view of a space or scenery from a given perspective. Others have moved a considerable distance in meaning from the original idea of a limited view or a pictorial representation of such a view.[10] Skyscapes and seascapes are examples.[10] Within science, the idea of a 'scape' is increasingly being used by researchers in different fields. It is primarily used in the humanities and social sciences, while use in the natural sciences has until now been limited. However, the use of the -scape approach can be helpful in understanding complex social systems in which humans, artifacts and environments interact. Food and meals in our environment and their potential interactions with humans is exactly an example of such a system. As Brembeck and Johansson[11] write, the notion of a -scape offers advantages when it comes to studying phenomena that are 'unevenly distributed in space and appear in a variety of shapes and contexts'.

Brembeck and Johansson[12] draw on Appadurai's work on 'scapes'. Appadurai[13] developed a typology of five different scapes: financescapes, ideoscapes, technoscapes, mediascapes and ethnoscapes. The idea is that we, as individuals, live in ever-changing and shifting 'worlds' – worlds in which artifacts as well as people and ideas are present and in which they interact. As such, the interconnectedness of these

are one of the important features of the -scape.

UNDERSTANDING FOOD, PEOPLE AND PLACES AS COHERENT FOODSCAPES
Within the food, nutrition and health sciences, foodscapes studies have been spreading since there is a growing interest in understanding how we as citizens and consumers encounter food, meals and snacks in different circumstances during our day and how we engage in relationships with these in particular environments. Foodscapes appear both physically and pictorially in marketing, posters, displays etc. and additionally we are capable of creating imageries and mental foodscapes in which we imagine different encounters with foods, meals and snacks.

The notion of foodscapes could at first glance be regarded as just an assembly of the two words 'food' and '-scape'. The idea of a foodscape reflects the -scape way of thinking since it underlines the relationship between food, its spatial context and the viewer – the person to which this image appears. It is worth noting that the word is not only meant as an analytical scientific tool; the idea of foodscapes is also found in fields such as painting, journalism and marketing. In science the interest comes from different domains including food choice, health behavioural and consumer studies, as well as marketing studies. A simple and straightforward definition of a foodscape is suggested by 'the actual sites where we find food'.[14]

Burgoine[15] is in line with this view and focuses on the opportunities to purchase foods in a regional environment: 'the "foodscape", or the food environment, incorporates all opportunities to obtain food within a given region.' Johnston et al.[16] also underline the importance of the built environment as well as the urban and institutional food service settings and defines foodscapes as 'the spatial distribution of food across urban spaces and institutional settings'.

SHAPING FUTURE ETHICAL AND SUSTAINABLE FOODSCAPES
The fact that food production and consumption has significant implications

on our health as well as on the environment is far from new. As such, the availability of food opportunities can obviously be looked at from an ethical point of view and it seems that the notion of foodscapes is well suited to capture the different change agendas related to healthier and more sustainable production and consumption. As Goodman[17] argues, we can speak about ethical foodscapes as 'a way of conceptualizing and engaging critically with the processes, politics, spaces, and places of the praxis of ethical relationalities embedded and produced in and through the provisioning of food.' Morgan[18] writes:

> the ethical foodscape actually consists of a wide spectrum of products, each of which espouses a set of values that claims to make a positive contribution to one or more of the following causes: human health, the environment, the local economy, poor primary producers in the global south, animal welfare and bio-diversity.

Further to this ethical perspective, King[19] focuses on the sustainability aspect and defines a sustainable foodscape as 'one that promotes community health and sustainable food security by fostering socio-ecological sustainability and resiliency within the food system'.

King[19] suggests four essential requirements as features of a sustainable foodscape. First it should be embedded in a healthy community in which both human and ecological values are recognized; food production should take place in a way that promotes human and ecological health and food consumption should encourage community dietary health.[20] Second, the foodscape should be ecologically and socio-ecologically sustainable and should foster environmental health and livelihood sufficiency and opportunity.[21] Third, the sustainable foodscape should exert resiliency by encouraging diversity, modularity and tight feedback loops in the production and consumption of food.[22] Finally, the sustainable foodscape should support sustainable food security, providing nutritional and culturally appropriate food that also fosters ecological health.[23] King[19] writes: 'A foodscape is the dynamic culinary culture of a community, as influenced by a wide variety of factors, such as region, tradition, history, social organization, and science and technology.'

King[19] furthers the dynamic features of a foodscape:

> The foodscape of a community refers to the ways in which food is produced, purchased or obtained, prepared, and consumed, and the relationship between food and the individuals of the community. Put another way, it can be understood as the food landscape of a community, when landscape is considered to have both multi-sensory tangible aspects (touch, scent, taste).

Many of the contributions to the development of the idea of foodscapes as a conceptual framework are focused on the opportunities to challenge the existing ways of food production and consumption and create different future trajectories through political and policy-oriented actions. In this context the power dimension becomes important and as a consequence foodscapes can be seen as a field where different actors battle for influence. For instance, Johnston et al.[16] argue that a foodscape:

> may variously capture or obscure the ecological sites and social relations of food production, consumption, and distribution. Foodscapes involve elements of materiality and ideology and are contested spaces where actors struggle to define the terrain of political action, including the extent of market involvement and private ownership of food.

Along this line, Johnston and Baumann[25] define a foodscape and its applications as a:

> dynamic social construction that relates food to specific places, people, and meanings. Just as a landscape painting has a mediated, indirect relationship to place, a foodscape may variously capture or obscure the ecological origins and social implications of food and consumption.

CREATING MENTAL IMAGES OF PREFERRED FOODSCAPES

Foodscapes may not be limited to the physical appearance of food in the environment and a number of scholars have suggested a more abstract meaning of the word. As Adema[24] suggests, foodscape is more complex than that and includes ideas and meanings of food. Foodscapes represent 'a marriage between food and landscape, both the conceptual notion (idea) of landscape and actual, physical landscapes.'

According to Adema,[26] the notion of foodscapes is well suited to express people's views and ideas of their surrounding food environments and how they should be: 'foodscape implicates the multiple informative historic and contemporary personal, social, political, cultural, and economic forces that inform how people think about and use (or eschew) food in various spaces they inhabit.'

Bildtgård[27] refers to mental foodscapes to describe where people would like to go to and eat – or places they would not like to go to. Bildtgård's idea is in line with the idea of certain cuisines of geographical origin and assumes that groups of people share opinions of preferred cuisines. Bildtgård's idea tends to express imaginary geographies/ imageries of food. He carried out his study in Sweden and showed that his interviewees preferred -scapes from areas such as Southeast Asia and Japan, while the USA and Eastern Europe were regarded as less attractive.

UNDERSTANDING FOOD RELATIONSHIPS THROUGH DIFFERENT LEVELS OF FOODSCAPES

Foodscape studies differ in their focal areas and, as suggested by King,[19] a foodscape 'can be personal, social, or public, reaching from the body to the community to the nation, respectively'. A slightly different typology of foodscape studies that integrates a number of them is suggested in Table 1. At the macro

level, Lake et al.[28] move beyond the physical appearance of food and introduce a distinction between micro and macro levels, stating that 'the food environment, or "foodscape", encompasses any opportunity to obtain food and includes physical, socio-cultural, economic and policy influences'.

Some writers take a macro view and look at the overall societal level, whereas others look at the meso level – the community view. Yet others take a micro view, focusing on single foods and meals. In line with this and referring to Gold,[29] Sobal and Wansink,[30] state that foodscapes 'represent the view of a particular food object, as seen in the sum appearance of the food's visual features'.

Sobal and Wansink[30] also look at foodscapes at the micro level and primarily refer to the family meal at home, emphasizing the physical appearance of foods, the plates they are served from, the table at which it is eaten, as well as the room in which it is served. According to Sobal and Wansink,[30] foodscapes 'describe the landscape of particular food items themselves, and they are represented by the facade of particular edible things.'

Sobal and Wansink[30] categorize the foodscapes in four types at the micro level: kitchenscapes, tablescapes, platescapes and foodscapes. They are primarily focused on the physical and sensory properties of the foods and write that foodscape 'parameters include size, shape, texture, colors, and other qualities and may include other attributes such as divisions or demarcations apparent on the surface of the food.'

Freidberg,[14] Burgoine[15] and Johnston et al.[16] look at foodscapes in a local or regional context – the meso view. The meso view is especially relevant when analysing urban areas for availability of foods. The notion of a foodscape is not limited to local setting and is particularly relevant in the study of how signs, pictures and texts about food influence our behaviour. Some writers refer to foodscapes as an abstract concept, as an immaterial public virtual space in which food is written and talked about, for instance in the media.[31] Although this view of a foodscape can be applied in local settings, it is probably most relevant

Table 1		
Typology of foodscapes		
Type of foodscape	**Geographical coverage**	**Subcategory**
Macro view	National level	
Meso view	Local level	
Micro view	Institutional level	
Micro view	Domestic level	Kitchen
		Table
		Plate
		Food

The literature suggests that foodscapes can be categorized into four types. This typology draws partly on the ideas of Lake[28] that distinguish between micro and macro levels, the ideas of 'sub-categorization' of Sobal and Wansink[30] and the Socio Ecological Model.[42]

at a national and global level since food production, food brands, food culture and food marketing are increasingly a global (macro) phenomenon. Appaduria's image of a mediascape might be particularly relevant to the study of 'food mediascapes'. Johnston et al.[16] take a broader perspective and underline the cultural dimension of foodscapes. According to Johnson et al.,[16] foodscapes are a 'social construction that captures and constitutes cultural ideals of how food relates to specific places, people and food systems.'

Also Brembeck's[12] work on foodscapes evolves around the cultural dimensions in which traditional existing foodscapes are challenged by foreign cultural influences and as a result change their borderlines. Using local Swedish food culture as an example, Brembeck[12] refers to the concept of frontiering foodscapes as 'the border zone where immigrant children meet Swedish food habits and encounter places for food and eating, such as shops, schools, cafeterias and fast food venues like McDonald's.'

FOODSCAPES AS SETTINGS THAT INFLUENCE OUR HEALTH

The idea of studying the food environment and that such environments

might have an impact on individual behaviour and health is not new. The settings approach that came about as part of the WHO Ottawa charter on health promotion in 1986, introduced the idea that the conditions in which we live and work influence our health and that together with these environments we produce health. Since then the settings approach has been applied in many environments such as workplaces, public institutions, local communities, retail shops and educational facilities. In particular, the school has been studied within the realms of the health-promoting school.

Within obesity research, the agency of the environment is highlighted through the notion of obesogenicity.[34] Obesogenicity conveys the idea that the man-made environment can be conducive (or less conducive) to weight gain. According to Lake and Townshend,[34] the obesogenicity of an environment is 'the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations.'

Glanz et al.[35] – although not directly using the foodscape notion – are speaking about food environment as spaces incorporating four different elements: community (type and location

of food outlets), consumer (availability of healthy options, price, promotion and nutritional information), organization (home, school and workplace) and information (media and advertising). Foodscapes have the potential to impact obesity prevalence, through, for example, the favouring of obesogenic foods – and the non-availability of healthier foods – in certain areas. This idea is also addressed in some foodscape studies. For instance, some writers refer to the notion of food deserts as 'those areas of inner cities where cheap, nutritious food is virtually unobtainable'[36] and 'large geographical areas without access to healthy and affordable foods'.[25]

FOODSCAPES AS SOCIAL EVENTS IN EATING OUT-OF-HOME

Most authors have looked at food availability in the food retail environment and as such primarily from a point of sale perspective. In this perspective, the central focus is what is purchased in shops. However, the idea that foodscapes also include the act of eating is addressed by several authors. For instance, Winson[37] includes the service as well as the consumption part in a definition of foodscapes and writes that foodscapes are 'the multiplicity of sites where food is displayed for purchase, and where it may be consumed'.

Similarly, Brembeck and Johansson[11] define foodscapes as 'signifying all the places where one comes into contact with food and eating.' Also, Wenzer[38] refers to eating as an integral part of a foodscape in that it 'designates a population of eating practices, hence the spatial flow of local sites where some actors become eaters and other actors become food.'

Dolphijn[39] moves beyond the physical appearance of food. According to Dolphijn, foodscapes are not passive artifacts waiting to be discovered – they come into being through events and are constantly changing. As Dolphijn[39] writes, foodscapes are:

how food functions in immanent structures that are always in a process of change… how food affects and is affected… how we live our lives with

food, according to food, and through food and what happens between the eating.

The Swedish tradition of providing free school meals plays a considerable role in a number of contributions to foodscape studies. For Brembeck et al.,[40] it is not only about the food and meal options but also about the more abstract food and meal realities that are communicated to children during the school day. Similarly, Johansson et al.[41] use the notion of foodscapes to capture 'all the places and contexts where children eat and come into contact with food and the meanings and associations connected to them.'

Brembeck and Johansson[11] specifically refer to the places 'where food and eating are actualised in one way or another: at home, in school, at restaurants and cafés, in shops, in advertising, on TV and the Internet etc.' Brembeck et al.[40] refer to foodscapes as 'the places where children encounter food as well as foodmessages in their daily lives.' Johnston and Baumann[25] focus particularly on the culinary aspects of foodscapes and define the *gourmet foodscape* as a space 'where food's authentic and exotic qualities appear paramount relative to formal markers of snobbery, and where the relationship to social status and distinction must be carefully analysed to reveal its latent content.'

DISCUSSION

It can be concluded that the contributions to exploring the notion of foodscapes in the academic literature have increased rapidly over the past decade, with most contributions published within the past five years. The idea of foodscapes offers a convenient framework for viewing the complex settings where we, as individuals, meet food and meals in our daily life surroundings and the notion offers a good frame for understanding and analysing the food interactions we engage in with the environment, with other individuals, with food and meals, as well as with food-related strategies, ideas, policies and meanings. The literature shows a wide variety of

contributions from both social science and humanities and, recently, natural science. Foodscape studies are in many cases concerned with a critique of existing food environments and paradigms and thus contain a normative approach to 'how things should be'. This normative approach seems to be most significant within public health nutrition and health promotion sciences, with more nutrition-friendly foodscapes being the objective. Also, within food research focused on sustainable and ethical food production and consumption trajectories, the foodscape notion has come into use with a clear normativity. Within the science of food choice, food behaviour and consumer studies, a large number of studies have contributed to the development of the foodscape idea. The wide range of contributions within have different focal areas, varying from an overall macro view over a regional and local community, to a meso view and down to a micro view, where both commercial as well as institutional food service and domestic settings act as the focal points.

There is ample evidence that the food environment impacts our behaviour and health and that abundant food options in our everyday living -scapes might be contributing to adverse health outcomes such as obesity. Since the settings approach[32] on health promotion was introduced by the WHO in 1986, the idea that the conditions in which we live and work influence our health significantly has been gaining momentum and it might be speculated that the failure of traditional models of health behaviour to effectively counteract unhealthy eating patterns and obesity is the reason for the revival of the settings approach over the past decades. Foodscape studies might prove to be a valuable contribution to the study of settings in the field of the more environmentally oriented *upstream* models. Such models stress the importance of the social, physical and organizational environment. Bandura's Social Cognitive Theory (SCT)[41] as well as Bronfenbrenner's Socio Ecological Models (SEM)[42] and the related Ecological Systems Theory (EST) have been influential and have had a great

impact on this development. In the same way as some of the literature on foodscapes do, these models highlight the 'agency' of the physical environment and assume that the environment can act in ways that are both supportive and counterproductive for a given food behaviour. For instance, studies have shown the huge impact that the availability of fruits and vegetables have on intake.[43] The notion of foodscapes, although differing from the notion of settings in some aspects, seems to fit very well in this development of theoretical frameworks that can be used within public health nutrition.

With respect to public health nutrition and health promotion, the foodscape framework might be valuable in that it enables scientists to capture both human and non-human agencies in relation to food behaviour in a way that might be able to contribute to a prediction of health outcome. One example is the idea of obesogenicity[33] that assumes that food environments can have an agency of its own. Thus the idea that environments can 'do' things in combination with active agents is gaining momentum. The idea is particularly dominant within the realms of social construction of technology (SCOT) studies. If we, for instance, regard food interventions as 'technologies', it might be possible to understand how eaters interact with these technologies. In SCOT studies such systems in which technologies and their functionalities combine with humans and their actions are referred to as socio-technical ensembles.[44] In studying the complex interrelationships between foods, people and their surroundings, the notion of foodscape studies has a clear socio-technical perspective. These studies aim at understanding how technologies are planned in the design phase and how they are domesticated and taken into use by consumers. The idea that the food environment could be designed in order to favour specific food choices and behaviours is tempting to food retailers and food service providers. Going a step further it could very well be argued that specific individuals with specific behaviours and specific genetic

dispositions to obesity might open up new ways of studying the etiological pathways of obesity and other nutrition-related disorders within the framework of socio-technical ensembles.

It might be speculated that some of the increasing evidence base on foodscapes and food environments can be attributed to the emergence of new analytical tools such as GPS and GIS. This development has given scientists a new set of tools to trace food behaviour and food availability.[45,46] Such studies have shown that urban planning and development in many cases have come to put the availability of fresh and healthy food under pressure. In addition, it has given new insight into the way in which food environments interact with people.

The notion of foodscapes seems especially well suited to understand institutional eating out-of-home occasions – the eating events and foodscapes we meet at institutions, kindergartens, workplaces and schools. In using the foodscape approach to such daily life settings, the normativity comes into play. As scientists we become concerned with if and how these settings can act and contribute to healthier lifestyles and skills, including the role that education for health and sustainability can play. In using the foodscape approach, we can draw on the experiences and evidence from the work done in schools for health. The school has been studied extensively within the realms of the health-promoting school. Much of the work has involved building on a holistic whole-school approach[47] that takes a 'systemic' approach to school health. This approach has functioned as a template for many school-based health interventions. Taking this approach to healthier eating and food at school would mean not only a focus on the food and food service itself, but also on the way in which food and nutrition is managed, organized and talked about – the school 'ethos', as referred to by Clift and Jensen.[48] Most importantly, it would mean a focus on the way in which food and nutrition are embedded in the school curriculum.

Although both the settings approach and the foodscape notion are well suited

to understand institutional settings in the context of public health nutrition, they differ in a number of aspects. The notion of settings is primarily a tool that understands health as a state of being and thus as a more abstract and immaterial fact. Whereas the settings approach is traditionally used by health promotion professionals and planners in a wide range of health contexts, the foodscape framework seems to be especially well suited for the many school health projects that are concerned with healthier eating. In this respect, the settings approach assumes a professional 'backstage' view rather than a daily life perspective. Food and eating issues differ in the way that they are embedded in our daily life and that we relate them explicitly to the act of eating several times a day, as opposed to health, which is a much more abstract notion. The foodscape framework is also well suited for a wide range of other food-related change and innovation projects at school that are not particularly dealing with health as their primary objective. Such activities include school gardening projects, local food projects and organic food procurement projects. Foodscapes as an analytical tool might be particularly interesting to the wide range of researchers with different scientific backgrounds that have begun to study the role of the school food environment in recent years.

However, foodscape studies are not limited to the study of school food contexts. These studies also have applications in welfare service provision systems, such as cost sector catering in general. They also include the food service that is being provided to an increasing extent in 'captive catering' environments, such as schools, kindergartens, workplaces, institutions etc. This sector is increasingly pointed out as arenas where action for healthier lifestyle patterns can be taken. Where the responsibility for lifestyle education traditionally was one of the individual, it is now increasingly being 'institutionalized'. More and more workplaces offer physical activity and healthy eating opportunities and public institutions are increasingly engaging in programmes where food,

nutrition and health are being put on the agenda. Where food service was traditionally regarded as a simple and mundane task of purely providing food to clients, it is now undergoing an upgrade to take responsibility for the health and lifestyle of its clients.

The notion of foodscapes offers obvious advantages in capturing and understanding such environments since food and eating has recently become much more integrated in the daily life of the institutions. For example, in kindergartens new health programmes and strategies have meant that food provision and meal services are beginning to play a more vital role in the 'kindergartenscape'. Instead of food and meals simply being provided and eaten, they are becoming embedded, talked about and intermediated by the staff in a much more complex way. As a consequence, pedagogues, teachers,

food service staff and so on can be expected to take on a much more active role as 'intermediaries' in the future.

In this respect, the intermediaries come to play a crucial role in the transition that, at least, the institutional out-of-home eating sector seems to be undergoing. These intermediaries include all the actors that are involved in producing, serving, communicating and intermediating food and meals. For future analysis of such foodscapes, the following definition is suggested:

> The institutional foodscape is the physical, organizational and sociocultural space in which clients/ guests encounter meals, food and food-related issues, including health messages.

For food research in general, the foodscape framework offers obvious

advantages when it comes to analysing how food, places and, in many cases, also people are interconnected and how they interact. Foodscapes have features that make them good analytical tools in the study of food in its different contexts. This analytical approach can obviously be taken from many different viewpoints in the same way as a landscape is always seen from a particular viewpoint by a particular viewer – a point of view. As Yasmeen[49] points out, foodscapes can be used as a valuable 'lens' in the study of food and foodways, especially in the types of food systems where spatial relationships are in focus.

ACKNOWLEDGEMENTS

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