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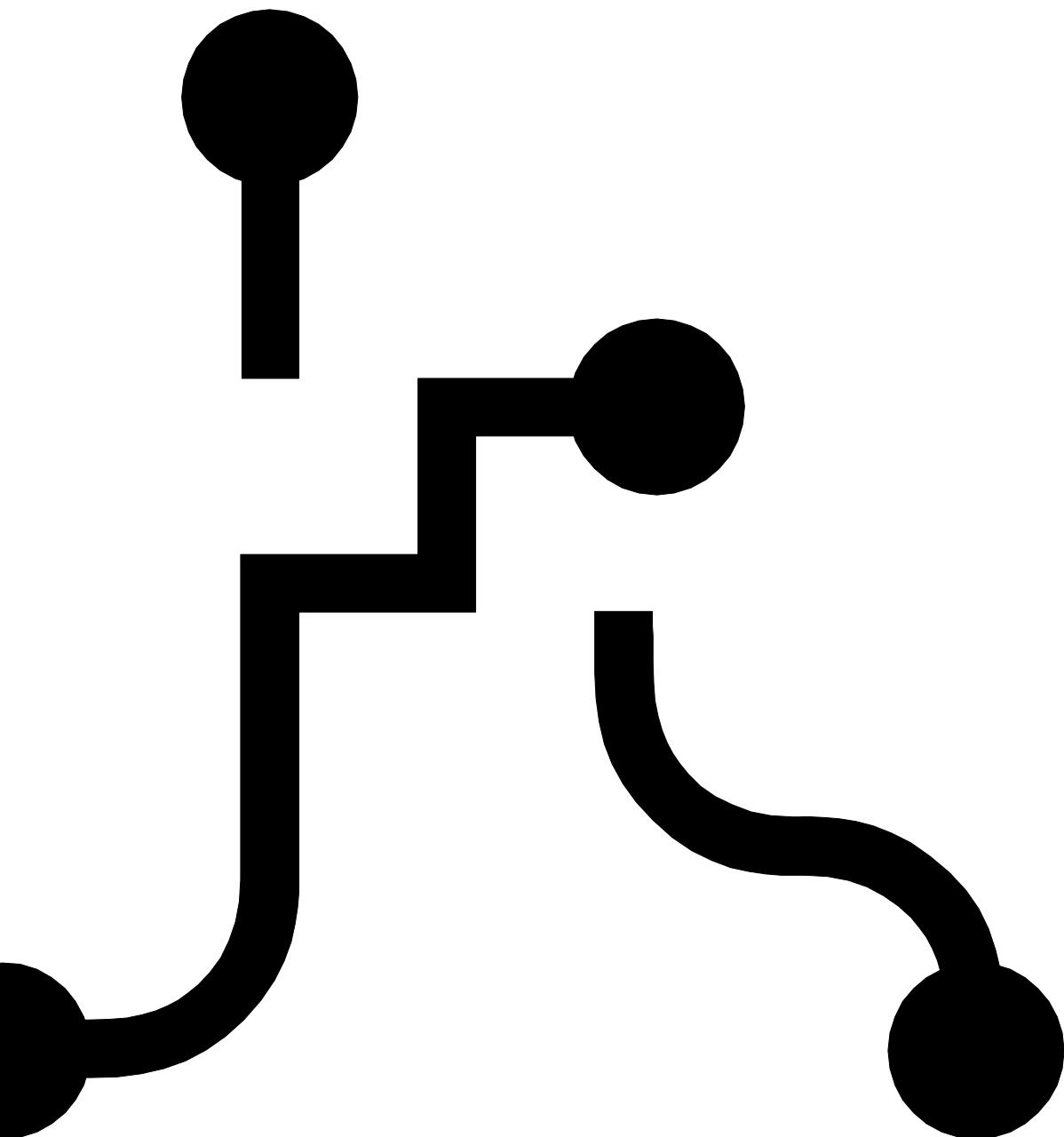
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The lexicon of Bekasi district's semiofoodscape: between tradition and innovation

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Abstract

Food plays a vital role, not only as a means of sustenance, but also as a mode of communication. Traditional foods in traditional markets are facing challenges due to globalization. The revitalization of traditional markets as a food landscape has not received much attention from a communication perspective. This study draws on the concept of semiofoodscape that integrates language, food, society, and lexicography to examine the interaction between social actors and foodscape. The empirical research employs a convergent mixed methods research design, resulting in the development of a sensory lexicon comprising flavor and texture wheels. These wheels can serve as a sensory vocabulary in various research design settings. The importance of semiofoodscape in preserving traditional food and culture is discussed and future research avenues are outlined.

Keywords: convergent mixed methods, semiofoodscape, sensory lexicon wheel, traditional markets, traditional food

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1. Introduction

Food is a category of paramount cultural and emotional value (Lee, 1957; Magdoff, 2012; Saax, 2021). In certain regions, traditional foods have become iconic (Fatimah *et al.*, 2021), and a large part of regional identity is reflected in traditional foods, which are mostly produced by small-scale farms and families (Boza and Muñoz, 2016). Many people learn recipes and how to make food in kitchens (Li and McAuley, 2020) which have been defined as gastronomic landscapes containing people, food ingredients, cooking techniques, and serving food (van der Meulen and Wiesel, 2017). The preparation and consumption of traditional dishes is a model semiotic ritual in food consumption (Finol and Pérez, 2016) in the Indonesian market (Leo, Triyuni, and Suhartanto, 2023).

Between 1999 and 2022, there was a sharp increase in supermarkets in Indonesia, and the total food market grew from 11% to 30% (Saragih and Meak, 2022). In a specific region of Indonesia, the Bekasi District, in West Java, global food propositions exhibit higher market growth compared to traditional ones (Rusham, 2016). Bekasi District is strategically located for economic development, along with the development of the surrounding area (Peraturan Walikota Bekasi, 2019). The existence of traditional markets is threatened by the increasing growth of modern markets (Nelwan, Lapian, Joyce, and Rumokoy, 2017). The decrease of traditional markets results in some traditional foods and snacks becoming obsolete (Kusumaningtyas, Wibisono, and Kusnadi, 2013).

Since the revitalization of traditional markets, physical and non-physical conditions have improved (Merlinda and Widjaja, 2020; Ujianti and Dewi, 2021; Saragih and Meak, 2022). West Java has 686 traditional markets, compared to 201 in Banten and 161 in Jakarta (BPS, 2017). Over the past five years, the number of traditional markets in West Java has increased from 686 to 817 (BPS-Statistics Indonesia, 2021). Especially in the Bekasi District, there is a diversity of alternative food plants that are traded and have potential as healthy food ingredients (Silalahi *et al.*, 2021). In other traditional markets, the revitalized market meets public expectations for healthy food (Solihin, 2015). One study showed that the revitalization of traditional markets can respond to more dynamic demand patterns (Engkus, 2021).

Previous studies on traditional markets have focused on revitalization, mostly as regards physical and non-physical place conditions for buyers and sellers (Solihin, 2015; Merlinda and Widjaja, 2020; Engkus, 2021; Silalahi *et al.*, 2021; Ujianti and Dewi, 2021; Saragih and Meak, 2022). However, studies on the revitalization of the traditional market as a food landscape are lacking or are under-represented from a communication perspective. This study proposes the scrutiny of the traditional market as a foodscape (Vonthon, Perrin and Soulard, 2020), marked by language practices and ideological operations (Järlehed and Moriarty, 2018). Through semiotic resources, social actors can communicate food

production, ingredients, symbolic stories, and their relationship with food language (Fitrisia, Sibarani and Ritonga, 2018). The linguistic repertoire is but one of a range of multisensory and multimodal semiotic possibilities that are activated, assembled, and orchestrated to create and communicate the meaning of a critical relational interplay between language, food, and society (Hua, Otsuji and Pennycook, 2017; Järlehed and Moriarty, 2018).

To explore the traditional market as a foodscape from a communication perspective, this study addresses the following research question: how does the interplay between actors, traditional food, and the market landscape in Bekasi District function as a language practice and as an ideology? The study contributes to developing new ways of thinking about language and ideology in traditional food and markets in specific regions.

2. From foodscapes to semiofoodscapes

Foodscapes, short for food landscapes or landscape for foods (Mikkelsen, 2011), refers to the visual, physical, and sensory environments in which food is produced, distributed, and consumed (Vontron, Perrin and Soulard, 2020). The concept of foodscape offers the advantage of examining food-related phenomena that exhibit spatial and contextual disparities (Brembeck and Johansson, 2010). The foodscape is a dynamic and evolving concept that illuminates the intricate connections and interactions between food and its surrounding physical, social, cultural, and perceptual environments (Hall and Gössling, 2016). Foodscapes represent a complex system that includes the physical landscape, as well as social and economic aspects that shape food production, distribution, and consumption (Dixon *et al.*, 2007).

The concept of foodscape has been applied to language studies to explore the interconnection between food and language in various cultural and social contexts. Language-based foodscape studies have examined how food-related words and expressions are used in discourse, how food practices and customs are reflected in language use, and how language shapes people's understanding of and experiences with food (Gerhardt, 2013). Several studies have applied foodscape analysis to investigate the cultural and social meanings of food-related metaphors (Rossolatos, 2023) and idioms, as well as the role of food in constructing identity and community in multilingual and multicultural settings (Brembeck and Johansson, 2010; Ayeomoni, 2011; Charron and Desjardins, 2011).

The inclusion of language and other semiotic resources is necessary to analyze the dialectical relationship between food culture and materiality. Materiality can be understood as semiotic possibilities that have not been activated. However, the material element turns into semiotic when translated into text

(Bowcher, 2018). This is evinced by the flow from content to expression in semiotic systems, where the expression or materiality of signs not only realizes content, but is also laden with ideological and contextual meaning (Ledin and Machin, 2019).

The term semiofoodscape was coined to identify the relationship between food, landscape and language (Järlehed and Moriarty, 2018). The concept of semiofoodscape was expounded as a lens through which semiotic landscapes (Jaworski and Thurlow, 2010) pertaining to food can be observed and analyzed (Järlehed and Moriarty, 2018). This concept enables the examination of how food and language move across spatiotemporal contexts where their meaning and value are constantly redefined through ongoing negotiations (Tiefenbacher and Townsend, 2019). This concept includes a variety of related food products and semiotic resources, as well as processes related to the management and production of food products. Semiofoodscape can be used as a model for evaluating relevant ideological frameworks and explaining the ways whereby food, space, and actors are related through discursive practices involving genres and semiotic resources (Järlehed and Moriarty, 2018). The present study employs the concept of semiofoodscape to analyze cake as an important product for food semiotics.

Food semiotics can be defined as the study of the signs and symbols used in the production and communication of food (Stano, 2016). Food semiotics involves the analysis of how different attributes of food, such as flavor, taste, aroma, texture, and appearance, construct meaning and communicate cultural or social messages (Parasecoli, 2011). Food acts as a medium that facilitates the expression of relationships between individuals, from interpersonal ones to global connections. Individuals use food to communicate their personal identities, gain insights about others, and convey their emotions, viewpoints, preferences, and cultural affiliations. Thus, food can function as a mode of communication in both verbal and non-verbal signs (Coff, 2013). Similar to language, food possesses a distinctive grammar, structure, and usage that vary across diverse communities (Douglas, 1972).

3. The lexicon of the semiofoodscape

The lexicon has been studied as a separate component of language alongside syntax, morphology, and phonology (Cruse, 1982; Nagy, 2017). The lexicon provides a database of words and their meanings that can be used to match keywords and concepts, to identify relevant documents, or to translate sentences from one language to another (Manning and Schütze, 2000).

Several lexicons have been coined to portray the sensory attributes of various types of food products (Suwonsichon, 2019). The sensory lexicon plays an important role as an effective communication tool for diverse audiences. Descriptive sensory analysis can be conducted using a lexicon (Chambers *et al.*,

2016; Hofmanová, Mason and Batchelor, 2020). With precisely defined, referenced descriptors, and standardized evaluation protocols, the lexicon can provide reliable and consistent information on the sensory attributes of food products (Bondu *et al.*, 2022). This information could serve as a useful guide for a range of relevant research topics, such as creating new products, enhancing product quality, tracking changes during product shelf life, and cultivating new plant varieties (Irie *et al.*, 2018; Suwonsichon, 2019).

Food-related languages operate as systems of signs and symbols that represent food and related concepts from a semiotic perspective (Riley and Cavanaugh, 2017). Lexicography can facilitate the comprehension of the language of food and its significance in food culture (Thurlow and Haudenschild, 2022). The interplay between food, culture, and language using a semiotic framework (Stano, 2016) involves investigating how the lexicon of food shapes people's perceptions and interpretations of food (Suwonsichon, 2019), and how food-related language is utilized to convey cultural values and identities (Parasecoli, 2011). This study examines how food-related signs and symbols are involved in the communication and interpretation of food, and how food-related semiotics can be used to comprehend and scrutinize food culture (Barthes, 2008).

4. Mixed methods research design

A convergent mixed-methods design was used (Ivanova, Terziyska and Trifonova, 2014; Siebert *et al.*, 2014; Dybowski and Bugala, 2016; Lam *et al.*, 2020) to identify and quantitatively segment the semiofoodscape and its attributes, as well as to qualitatively interpret the interplay between foodscape and language. The study surveyed 131 respondents using snowball sampling to identify the chain of chef and food seller networks in two specific markets in Bekasi. Previous studies have shown that snowball sampling is most often used to collect information on less conspicuous populations, such as food producers (Engle, 2014) and food sellers (Pries, 2018). The respondents were asked about their roles in food processing (chef, seller, or the integrated chef and seller), their locale (house kitchen, mobile kitchen, the integrated house and mobile kitchen, or traditional market), their cake product and selling type (wet cake, pastry, or mixed wet cake and pastry), role performance duration, time spent in the foodscape, and their relationship with the foodscape based on daily activities. The quantitative data were statistically processed with SPSS v. 22 (Bjerregaard *et al.*, 2018).

The qualitative prong of the research aimed at identifying the semiotic resources (Danielsson and Selander, 2021) used in the traditional market. Three indicators were used: cake products, sustainability of cake products, and communicative goals of cake products. Regarding foodscape (Goodman and

Jaworska, 2020), this study adapted the indicators of the type of cake produced or sold, actors' relationships with foodscapes, government regulations for cake products, and knowledge of traditional cake-making, such as cooking or serving techniques, ingredients, and creativity. After obtaining institutional review board approval (180/VI/2022/KEPK), in-depth, semi-structured interviews were conducted with the chefs and sellers (see Table 1) to further enrich the data (Abas, 2019).

Table 1. Profile of informants (chefs and sellers)

Description	Category	Chef and seller (N)	Seller only (N)
Gender	Female	12	10
	Male	11	12
Age	Below 20 years old	2	4
	21-30 years old	8	10
	31-40 years old	9	5
	41-50 years old	1	2
	Above 51 years old	1	1
Location (place of foodscape)	House kitchen	9	-
	Mobile kitchen	6	-
	Integrated house and mobile kitchen	3	-
	Traditional market	5	22
Interview session	Frequency of interview	2-3 times	
	Average interview length	30-60 minutes	

The qualitative data findings were coded as follows: (1) open coding to identify the concepts of lexicon, foodscape, and semiofoodscape; (2) axial coding to combine similar concepts from different informants, such as chefs and sellers; and (3) selective coding to develop the semiofoodscape analysis on a dataset of Indonesian wet cakes and pastries (Jamini *et al.*, 2017).

Both quantitative and qualitative data were analyzed using descriptive sensory analysis (Gulzar *et al.*, 2020). Some of the analyzed data were displayed on the sensory lexicon wheel (Pelsmaeker *et al.*, 2018; da Silva *et al.*, 2019; Suwonsichon, 2019) as regards cake flavor and texture. The flavor category consisted of bitter, salt, savory, sour, spicy, and sweet (Wertz, 2013). The adapted flavor category of this study consisted of (1) salt-savory, (2) spicy-savory, (3) sweet (4) sweet-savory, (5) sweet-salty, and (6) spicy-savory. The texture category consisted of chewy, crispy, crumbly, crunchy, fibrous, hard, and soft (Rustagi, 2020). This study adapted texture categories based on the following combinations: (1) chewy and slightly crispy, (2) fibrous (3) hard-crumbly, (4) hard-crunchy, (5) nutty-crumbly, (6) soft, (7) soft-chewy, (8) soft-crumbly, and (9) soft and slightly crispy (see Table 2).

Table 2. Cake sample (by attribute) used in the development of the lexicon

Cake attribute	Adapted category	Number of cases
Flavor	Salt-savory	9
	Spicy-savory	8
	Sweet	27
	Sweet-salty	8
	Sweet-savory	23
	Sweet-sour	7
Texture	Chewy and slightly crispy	6
	Fibrous	3
	Hard-crumbly	6
	Hard-crunchy	34
	Nutty-crumbly	4
	Soft	11
	Soft-chewy	8
	Soft-crumbly	6
	Soft and slightly crispy	4

This study applied and adapted the expression 'cake' based on phrases and on single words (Kusumaningrum, 2020). The phrase-based expressions are categorized in line with the actual name of each cake, whereas the single-word expressions are reduced to seven categories according to: (1) prefix term, (2) cooking method, (3) shape, (4) ingredients, (5) utensil for creating cake, (6) place, and (7) color.

5. Main findings

5.1 Social actors' relationship to the semiofoodscape

The study identified two types of social actors in food processing: chefs who were also sellers (68%), and sellers only (32%). The social actors who became chefs were distributed across the following foodscapes: traditional market (41%), mobile kitchen (29%), house kitchen (8%), and a combination of house and mobile kitchen (12%). The social actors who became sellers were all in the traditional market. Some actors created and sold mixed wet cakes and pastries (59%), wet cakes (29%), and pastries (12%), whereas others only sold wet cakes and pastries (63%), cakes (25%), and pastries (12%). The distribution of actors according to the duration of role performance has as follows: more than 20 years (68%), 16-20 years (20%), 10-15 years (10%), and less than 10 years (2%). Regarding the time spent in the foodscape, chefs who became sellers spent more than 18 hours (82%) and between 12-17 hours (18%) per day. The sellers spent more than 10 hours (25%), between 6-10 hours (50%), and less than 6 hours (25%) in the foodscape. Regarding daily activities, the relationship between the actors and foodscape was between very often (80%) and often (20 %) (see Table 3).

Table 3. Profile of foodscape's respondents

Description	Category	(%) N=131
Type of social actors	Chef and seller	68
	Seller only	32
Foodscape's location	Traditional market	41
	Mobile kitchen	29
	House kitchen	18
	Mobile and house kitchen	12
Type of cake product	Wet cakes and pastries	59
	Wet cakes only	29
	Pastries only	12
Sales volume per cake type	Wet cakes and pastries	63
	Wet cakes only	25
	Pastries only	12
Role performance duration	More than 20 years	68
	16-20 years	20
	10-15 years	10
	Less than 10 years	2
Time spent in the foodscape per day	Chef and seller:	
	More than 18 hours	82
	12-17 hours	12
	Seller only:	
	More than 10 hours	25
	6-10 hours	50
The relationship between the actors and foodscape	Less than 6 hours	25
	Very often	80
	Often	20

In terms of physical location choice, both chefs and sellers provided reasons, such as proximity to their residence, location convenience, location price, and relationships with relatives or friends from the same area. Proximity to residences refers to the particular location or the convenience of having a workplace close to where they live. This can make commuting easier and more efficient and provide the opportunity to quickly attend to any issues that may arise at home. Location convenience refers to the suitability of the location for the type of food production and selling. For a chef, this means a location with a large kitchen, ample storage space, and easy access to fresh ingredients. For a seller, this means a location with high traffic, good visibility, and adequate parking facilities. The cost of the location is also an important factor for the informants. They must balance the cost of purchasing or renting a space with the potential revenue generated from the wet cake and pastry business. Concerns about cost (either to buy

or rent) are also related to landscape changes. The informants were concerned that the foodscape in the traditional market could be used for only 20 years without permanent ownership. Furthermore, relationships with relatives and friends from the same area of origin could be a significant factor in the decision-making process, both in wet cake and pastry production and selling in the foodscape. A chef or seller felt more comfortable doing business in an area where they had established relationships that could help with networking, finding suppliers, and building a customer base. In some cases, these relationships may provide access to resources or opportunities that would otherwise not be available.

Regarding government regulations, the informants were concerned about 'halal food' (permissible food). The informants (sellers only) provided a banner in the street with an Indonesian linguistic code, along with the Arabic, "*Bismillahirrahmanirrahim*," with a halal logo identifying them as Muslim sellers to attract buyers. Other informants not only were concerned about the 'halal' logo, but they also considered it a health matter. Some informants provided the home industry's product health certificate numbers on product labels. During the COVID-19 pandemic, the informants followed regulations, such as health protocols, social distancing, and plastic wrapping. The informants also informed customers about the cake products by mentioning the ingredients, using emoticons for service, and promoting innovative gluten-free and egg-free diets.

5.2 The lexicon of the semiofoodscape

The study found that 82 individual cake expressions were used, consisting of 56 (68%) based on phrases, and 26 (32%) based on single words. A cake with a phrase for its name shows the real name. Cakes comprised of single words stem from various sources. First, cake names with the prefix "kue" (meaning cake), such as *kue ape*, showed that without the prefix, the word would have a different meaning. *Ape* means monkey but *kue ape* means cake like pancake. Second, the selected word refers to cooking method. For example, *bolu kukus* (steamed sponge cake) refers to a cake produced by steaming, and *dadar gulung* (roll omelet) refers to one made by rolling. Third, the chosen word is based on shape. For example, *mata roda* is a wheel-shaped cake, while *kue cincin* is ring-shaped of cake. Fourth, the word refers to ingredients, such as the *bolu kenari* cake which contains walnuts, or the *kue kacang* cake whose main ingredient is peanuts. Fifth, the word refers to the utensils for creating a cake. For example, *putu bambu* refers to a cake made using bamboo utensils. Sixth, the word refers to place, such as *serabi Solo* and *sosis Solo*, indicating a cake and pastry from Solo, Central Java. Finally, the word stems from cake color, such as *serabi hijau*, referring to the green color of the cake.

In terms of cake product sustainability, the responses from informant chefs and sellers can be divided into three categories. The first is based on the availability of raw ingredients. The sustainability of a cake is affected by the availability of and accessibility to its ingredients. For example, if a certain type of flour or sugar became scarce or too expensive, it might be difficult for a chef to continue producing the cake product. The second meaning is based on labor availability. The sustainability of cake production is affected by the availability of skilled workers. Occasionally, there is a shortage of pastry chefs due to being on long holiday breaks or out of town. Thus, chefs face difficulties in maintaining the production flow of their cake products. The third meaning is based on the demand level for a cake product. This has implications for the profitability of the business, which is necessary for its survival. If a cake product does not sell well, a business may need to adjust its production or marketing strategies to increase sales and maintain profitability.

5.3 The communicative goals of the semiotic resources

According to the informants, cake products are more than just baked goods; they often perform significant communicative goals. Through their flavors and textures, cakes can convey a range of ideas, dreams, and even personalities. Flavor is one of the most important aspects of any cake product. It determines whether a customer enjoys the cake or not, and whether they would purchase it again. In this study, we constructed a sensory lexicon wheel based on flavor. Figure 1 portrays the sensory lexicon based on flavors, grouped into 6 dimensions: sweet (33%), sweet-savory (28%), salty-savory (11%), spicy-savory (10%), sweet-salty (10%), and sweet-sour (8%). According to the informants (both chefs and sellers), the sweet flavor in a cake product refers to a taste profile that is dominated by sweetness. Sweetness is a fundamental taste sensation, perceived when the taste buds on the tongue detect the presence of sugars or other sweeteners. The sweet-savory flavor creates a delicious and satisfying taste experience that is both comfortable and unexpected, while the salty-savory flavor creates an indulgent and satisfying taste experience. The spicy-savory flavor creates a delicious and well-balanced taste experience that is comforting, exciting, indulgent, and sophisticated, while the sweet-salty flavor creates a delicious and indulgent taste experience that is satisfying and complex. Finally, the sweet-sour flavor combination adds complexity and depth to the cake, creating a more interesting and unique taste experience.

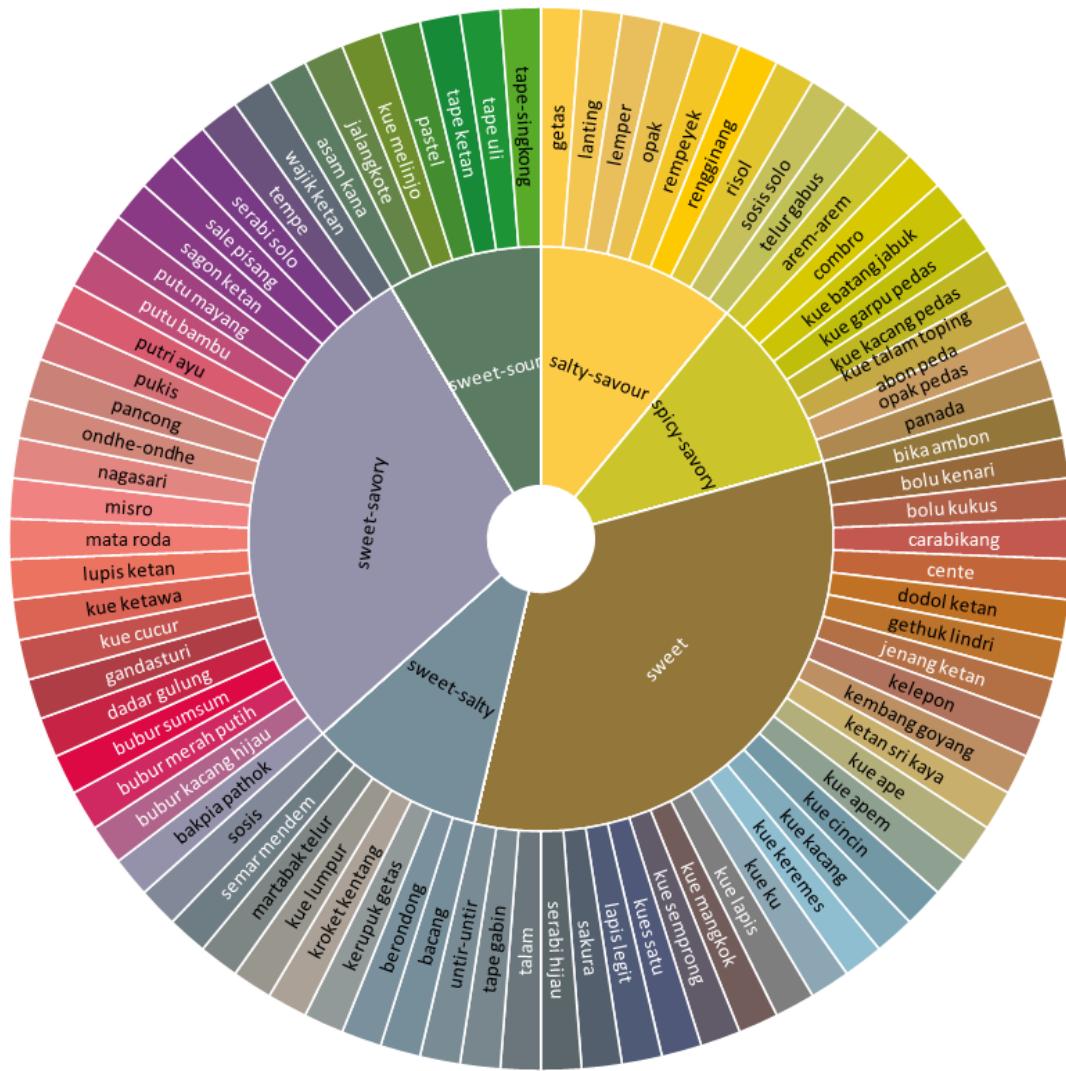


Figure 1. Sensory lexicon: the flavor wheel

In addition to flavor, the informants indicated that cake texture could be used to communicate messages. A dense, rich cake with a thick layer of frosting might suggest decadence and indulgence, whereas a lighter, fluffier cake might suggest a more casual or lighthearted occasion. Texture can be used to convey a sense of sophistication or refinement, such as a delicate sponge cake or a perfectly layered millefeuille. Figure 2 portrays the sensory lexicon wheel based on texture, according to which the cakes were grouped as follows: hard-crunchy (42%), soft (13%), soft-chewy (10%), chewy and slightly crispy (7%), hard-crumbly (7%), soft-crumbly (7%), nutty-crumbly (5%), soft and slightly crispy (5%), and fibrous (4%).

According to the informants, cake products have different textures. When a cake is described as hard and crunchy, it has a firm and crispy texture that adds a satisfying crunch and a new dimension to the taste experience. Soft cakes have a tender and delicate texture, and are easy to cut, chew, and swallow.

They are associated with light and airy sponges, fluffy angel food cakes, or tender butter cakes. Soft-chewy cakes are both tender and slightly dense, with minor resistance or chewiness when bitten into, and they are popular for their satisfying texture and rich, complex flavor. The chewy and slightly crispy cake have a texture that is both tender and slightly crispy or crunchy on the outside and is associated with rich and indulgent cake flavors. Hard-crumbly cakes are dry, brittle, and easily broken or crumbled. Soft-crumbly cakes have a texture that is both tender and crumbly, and is associated with light and airy cake flavors, whereas nutty-crumbly cakes have a texture that is both crumbly and crunchy, with a nutty flavor profile achieved through the addition of nuts to the cake batter. Cakes with a soft and slightly crispy texture have a soft and tender crumb with a slightly crispy exterior, achieved through careful baking techniques, and are associated with lighter and more delicate flavors. Finally, the fibrous texture in a cake refers to the presence of visible fibers or stringy bits in the cake, which can be desirable.

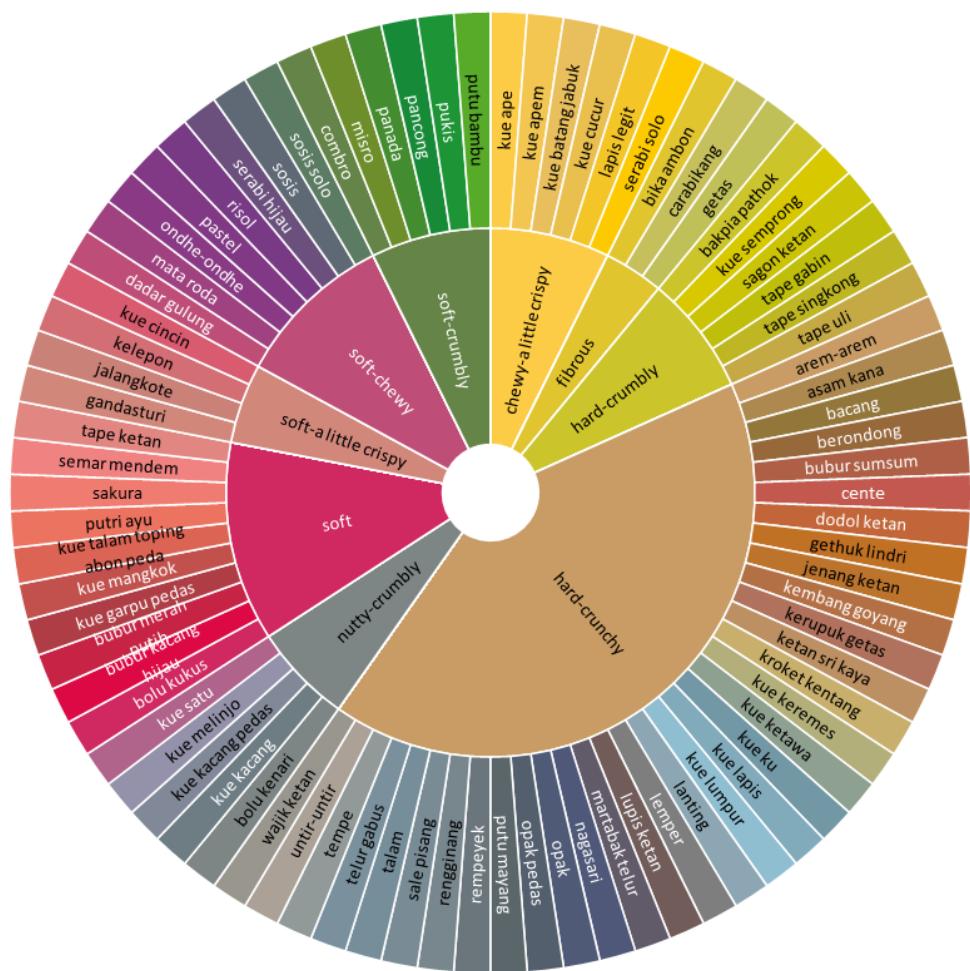


Figure 2. Sensory lexicon: the texture wheel

Complementary to the immediate context of cake production, flavors and textures can reflect the values and personalities of the baker or business owner. According to the informants, a bakery that focuses on using organic, locally sourced ingredients might use these values to inform the flavors and textures of their cakes. Similarly, chefs who are passionate about experimenting with new flavor combinations may use their cakes to showcase their creativity and curiosity. For bakeries focused on traditional foods, the combination of new and alternative flavors could differentiate the original location of the cake product.

The communicative goals of the cake products can be found in the context of traditional foodscapes. Cake products can reach local audiences and interact with customers on a personal level. As stated by the informants, the consumers of their cakes rely on their relationships with them. Many are repeat customers. Occasionally, customers develop general and specific conversations while waiting for the fulfillment of their orders. In a general conversation, the customer may ask about the informant's health, feelings, or daily activities. In specific conversations, customers ask about the process of cooking and selling wet cakes and pastries, the cake's ingredients, how the wet cakes and pastries are prepared. The informants said that they felt comfortable with the questions in both general and specific conversations.

In terms of the type of cake produced or sold, this study found that the informants produced and sold wet cakes and pastries to show their life choices, skills, and networks. According to the informants, producing and selling wet cakes and pastries are reflective of personal values. The informants believe that they can provide happiness to customers and simultaneously profit directly from having their own purpose. The informants also believe that if they follow their ancestors in producing and selling wet cakes and pastries, they may conserve the cultural heritage of their food. Some improved their skills through informal and formal training in cake production, such as food coloring, packaging, displays, and delivery. Moreover, as chefs, the informants had informal networks from nuclear and extended families, while in the traditional market, and as sellers, the informants were part of the traditional market seller association.

Finally, regarding knowledge of traditional cakes, the informants' answers can be categorized as follows: (1) cooking method, (2) serving technique, (3) ingredients, and (4) creativity in food production and sales. According to the informants (chefs and sellers), knowledge of traditional cakes is a cultural practice that is often bequeathed as family heritage. They also promised to ensure that traditions were preserved and passed on to future generations. Other informants reported that cake baking, serving techniques, and creativity in producing and selling foods were learned from their friends through experiential processes, as well as informal and formal learning. This type of learning could be particularly effective because it involves hands-on experience and the sharing of practical tips and tricks. Some informants obtained their knowledge about traditional cake production through culinary schools, vocational programs, or apprenticeships. However, others acquired their traditional cake production skills, including knowledge

of ingredients, through trial and error, experimentation, and self-directed learning. They developed their skills at their own pace and experimented with new recipes and techniques.

6. Discussion of findings

Based on the 82 identified phrases/lexemes of traditional wet cakes and pastries, two types of sensory lexicon wheels were developed. First, the sensory lexicon of flavor wheel identifies six flavor dimensions, serving as a communication tool for standardized sensory vocabularies (Asih *et al.*, 2021) of wet cakes and pastries. The current study was more comprehensive in recording and defining product flavors, including comparison products (Drake and Civille, 2003). Second, the sensory lexicon of texture wheel consists of nine textures of wet cakes and pastries. Texture pertains to the tactile sensations of food that can be experienced through touching with fingers, tasting with the tongue, feeling with the palate, or chewing with the teeth (Olaru *et al.*, 2022). The sensory lexicon of texture wheel offers a combination of sensory (Gulzar *et al.*, 2020) and gastronomic aspects (Irwansyah, 2016, 2020).

This study provides a semiofoodscape method for semiotic resources to enter the foodscape of traditional markets for traditional cakes. This study provides insights about both the preservation of traditional and modern foodscapes. In a previous study, Xu (2022) focused on the transition from the modern market to cosmopolitan foodscapes and the changing modalities of trans-local foodscapes. The uniqueness of the traditional cakes' semiotic resources is rooted in the word choices of chefs and sellers and the acceptance words of customers. This uniqueness may contribute to the sustainability of traditional food knowledge in light of the heritage-eroding forces of globalization (Kamaruzaman *et al.*, 2020). In addition, cake production and selling routines communicate to customers the life, knowledge, and traditions of their chefs and sellers who share their stories (Steinmetz, 2010). The production and selling of cakes may conserve the food-related cultural heritage of families and ancestors, passing them on to the next generation (Wijaya, 2019). This study shows that preserving the cultural heritage of food is attainable via a semiotic regime (Kress and van Leeuwen, 2006). The use of semiotic resources as part of the semiotic regime enables the regulation of linguistic terms (Cassarino, 2014) to preserve the traditional wet cake and pastries. Semiotic materials, such as language, visuals, symbols, and colors, create specific histories and narratives (Chen and Eriksson, 2019) about traditional foods.

As part of the semiofoodscape, both chefs and sellers are concerned about food ingredients and health. A previous study showed that chefs practice their production as part of their health awareness (Middleton, 2000). Semiotic resources, such as signs and symbols about healthy foods (Miklavec *et al.*, 2016) and their ingredients, encouraged sellers to buy traditional foods in the traditional foodscape. These findings

indicate that the concern voiced in a previous study about the loss of confidence in traditional foods (McAuley and Knopper, 2011) could be clarified through the use of signs in a traditional foodscape. The semiotic resources of healthy traditional foods and their ingredients could be prohibitive in choosing traditional foods that do not support healthy lifestyles and well-being (Chitra and Anbu, 2018; Singh *et al.*, 2020).

Finally, semiotic resources regarding food signs related to specific religions in the foodscape could determine the importance of displaying or communicating these traditional foods. A previous study showed that food production, distribution, and consumption contain symbols of religious practices (Giorda *et al.*, 2014). The efforts of chefs and sellers to use semiotic resources to justify their halal (permissible) food, and their respective knowledge, pointed to the connection between food and religion as an active experience shaped by the interplay of tradition and adaptation (Illman and Dahla, 2015).

7. Conclusion

The interaction between actors and the foodscape in the semiofoodscape model generates language as part of its semiotic resources. This study sheds light on the crucial roles of actors in the foodscape, including chefs and sellers, and their language in developing food culture and materiality. The introduction of the two sensory lexicon wheels for wet cakes and pastries serves as a communication tool for standardized sensory vocabularies and as a reference for texture attributes.

This study emphasizes the importance of semiotic resources, including language, visuals, symbols, and colors, in protecting traditional food cultural heritage. The production and selling of cakes concerns not only the products per se, but also their histories and narratives. Further research should be conducted to explore the role of semiotic resources in traditional foodscapes beyond wet cakes and pastries. This study can be expanded to other traditional foods in different regions and cultures to examine how semiotic resources influence the production, sale, and consumption of traditional foods as part of the semiofoodscape. Future studies could provide a better understanding of how cultural heritage and traditions have been preserved and transmitted through semiotic regimes. The development of sensory lexicon wheels for traditional foods can also be extended to other food categories to create standardized sensory vocabularies. The development of sensory wheels could use computational linguistic methods for reducing the lexicons to the identified dimensions. Further research should be conducted on the impact of semiotic resources on healthy food choices in traditional foodscapes. Examining the impact of religious practices on semiotic resources related to food production, distribution and consumption is also a major topic for future studies.

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