

FRAME-BASED MODELING OF GASTRONOMIC TERMINOLOGY IN UZBEK AND ENGLISH

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Abstract: This article examines the frame-based modeling of gastronomic terminology in Uzbek and English from a cognitive-semantic and comparative perspective. Gastronomic terminology is treated not as an isolated inventory of lexical units but as a structured conceptual system in which food products, culinary actions, sensory properties, instruments, participants, communicative situations, and cultural practices are mutually connected. Drawing on frame semantics and terminology studies, the research proposes a Gastronomy Superframe consisting of five interrelated models: the Object Frame, Processual Frame, Perceptual Frame, Instrumental Frame, and Social-Communicative Frame. The study compares representative Uzbek terms such as palov, sumalak, qazi, norin, manti, chuchvara, mastava and patir with English gastronomic units such as pudding, pie, roast and scone. Particular attention is paid to the polyframe nature of gastronomic terms, since a single lexical unit may simultaneously activate information about ingredients, preparation, sensory qualities, utensils, social setting, and cultural identity. The analysis demonstrates that frame-based modeling provides an effective mechanism for revealing both universal conceptual relations and nationally specific features of English and Uzbek gastronomic terminology.

Key Words: gastronomy; gastronomic terminology; frame semantics; cognitive modeling; Uzbek language; English language; concept; polyframe structure; national-cultural semantics.

Introduction

Gastronomy is a multidimensional sphere in which language, culture, everyday experience, professional knowledge, technology, and social behavior intersect. Consequently, the terminology of gastronomy cannot be adequately described only as a list of names for dishes or ingredients. Gastronomic units nominate products and processes, but they also encode culturally established knowledge about preparation, serving, taste, hospitality, ritual, identity, and patterns of consumption. This makes gastronomic terminology particularly

suitable for cognitive analysis, because the meaning of a term is often understood through a broader knowledge structure rather than through a short dictionary definition alone.

In contemporary linguistics, frame semantics offers a productive approach to the organization of such knowledge. Fillmore's conception of frames emphasizes that lexical meaning presupposes structured background knowledge: a word evokes a system of participants, objects, relations, events, and expectations that make interpretation possible. In terminology studies, this principle is especially useful because specialized terms are embedded in conceptual systems and acquire their precise value through relations with neighboring concepts. Cabré likewise treats specialized lexical units as components of professional knowledge and communication rather than as independent labels. Applied to gastronomy, these ideas allow researchers to reconstruct the conceptual scenarios behind terms referring to food, cooking, perception, utensils, service, and culturally regulated eating practices.

The comparative study of Uzbek and English gastronomic terminology is particularly important because the two linguocultures share a number of universal culinary concepts while organizing and verbalizing many gastronomic experiences differently. Uzbek units such as palov, sumalak, qazi, norin, manti and patir are closely associated with traditional ingredients, preparation techniques, hospitality, seasonal customs and collective meals. English units such as pudding, pie, roast and scone also activate historically and culturally established scenarios, but their prototypical ingredients, meal contexts and communicative associations differ. Therefore, a frame-based comparison can show both conceptual similarity and national-cultural specificity.

The purpose of this article is to model the conceptual organization of Uzbek and English gastronomic terminology through five principal frames and to demonstrate the polyframe character of selected terms. The proposed model forms part of a broader Gastronomy Superframe in which object-related, processual, perceptual, instrumental and social-communicative knowledge is systematically connected.

Materials and Methods

The research employs cognitive-semantic, descriptive, comparative and componential methods. The theoretical basis of the study is frame semantics, especially the understanding of a frame as a structured representation of knowledge that is activated by linguistic units. The material includes representative gastronomic terms from Uzbek and English referring to food

products, ingredients, dishes, beverages, spices, culinary processes, sensory qualities, kitchen and serving instruments, participants in gastronomic interaction, places of eating, service, etiquette, rituals and traditions.

The analytical procedure consists of three stages. First, the terms are grouped according to the dominant type of knowledge they activate. Second, the internal slots of each frame are identified and illustrated with English and Uzbek examples. Third, selected lexical units are examined as polyframe terms in order to determine how several conceptual structures overlap within one nomination. The comparison does not assume that the lexical systems of the two languages are symmetrical; rather, it seeks functional and conceptual correspondences while preserving culture-specific distinctions.

For the purposes of this study, the Gastronomy Superframe is represented through five major components: (1) the Object Frame, covering food products, ingredients, dishes, beverages and spices; (2) the Processual Frame, including preliminary treatment, mechanical and thermal processing, cooking, decoration and presentation; (3) the Perceptual Frame, representing taste, smell, colour, texture or consistency and temperature; (4) the Instrumental Frame, encompassing tools for cooking, cutting, mixing, storage and serving; and (5) the Social-Communicative Frame, which includes participants, eating spaces, service, gastronomic discourse, etiquette, rituals and traditions.

Results and Discussion

1. The Object Frame

The Object Frame represents the material entities that constitute the gastronomic domain. Its principal slots may be modeled as food product → ingredient → dish → beverage → spice. These categories are hierarchically related, but their boundaries are context-dependent. A product can function as an ingredient in one situation and as an independent food item in another. For example, rice is a food product, yet within the frame of palov it becomes a central ingredient. Flour similarly functions as an ingredient in both Uzbek patir and English pie or scone, while the completed products occupy the dish or baked-food slot.

Uzbek gastronomic terminology demonstrates a highly developed system of names for culturally significant dishes. Palov activates knowledge of rice, meat, carrots, fat or oil, spices and regionally variable preparation practices. Manti and chuchvara are both dough-based dishes, but they differ in size, filling, cooking method and serving scenario. Qazi identifies a traditional meat product with a culturally specific preparation technique, while sumalak denotes a wheat-based

ceremonial food strongly associated with Navruz. In English, terms such as pie, pudding, roast and scone also represent culturally established categories whose meanings cannot always be reduced to a single ingredient or preparation method.

The comparison reveals that the Object Frame contains both universal and culture-specific slots. Categories such as ingredient, dish and beverage are broadly comparable across the two languages; however, the lexical density inside individual categories reflects the culinary experience of each community. Culture-bound terms frequently require descriptive explanation in intercultural communication because their conceptual content exceeds the information encoded by a simple lexical equivalent.

2. The Processual Frame

The Processual Frame conceptualizes gastronomy as a sequence of actions that transform raw or partially prepared materials into consumable and presentable food. Its main slots are preliminary treatment → mechanical processing → thermal processing → cooking → decoration → presentation. English terms such as wash, peel, chop, slice, mince, mix, knead, boil, fry, bake, roast, grill and steam correspond to different stages and techniques. Uzbek culinary discourse similarly contains verbs and verbal combinations referring to yuvish (washing), archish (peeling), to'g'rash (cutting), maydalash (chopping or grinding), aralashtirish (mixing), qaynatish (boiling), qovurish (frying), dimlash (slow cooking/steaming in a covered vessel) and pishirish (cooking).

Processual meaning is crucial for distinguishing apparently similar dishes. Manti and chuchvara may share dough and meat-based fillings, yet their prototypical processing scenarios differ: manti is normally steamed, whereas chuchvara is commonly boiled. The English distinction between roast, bake, grill and fry likewise demonstrates that the process itself can become the central conceptual feature of a gastronomic nomination. In roast, for example, the lexical unit may denote both a cooking process and the resulting dish, showing interaction between the Processual and Object Frames.

Decoration and presentation form the final part of the processual scenario and are particularly salient in professional culinary discourse and restaurant menus. Expressions such as garnish, arrange, serve, plate and present foreground visual organization and communicative effect. Thus, the Processual Frame does not end with thermal preparation; it extends to the transformation of a cooked product into a socially and aesthetically presented dish.

3. The Perceptual Frame

The Perceptual Frame organizes sensory knowledge associated with gastronomic objects. It includes the slots taste → smell → colour → texture/consistency → temperature. These parameters are central to the evaluation and description of food and are especially productive in menus, recipes, reviews and everyday conversation. English descriptors such as sweet, sour, bitter, salty, spicy, aromatic, crispy, tender, creamy, juicy, hot and chilled activate particular sensory expectations. Uzbek equivalents and culturally conventional descriptors similarly encode shirin, nordon, achchiq, sho'r, xushbo'y, qarsildoq, yumshoq, quyuq, issiq and sovuq qualities.

Perceptual terminology is not merely descriptive. In gastronomic discourse it performs an evaluative and pragmatic function by influencing expectations and consumer choice. Menu expressions such as crispy chicken, tender beef, creamy soup or freshly baked pie do more than identify food; they construct a desirable sensory image before the dish is consumed. Comparable strategies are found in Uzbek restaurant discourse, where terms emphasizing softness, freshness, aroma, richness or traditional preparation contribute to the attractiveness of a dish.

The perceptual structure also demonstrates the relational nature of meaning. The adjective crispy presupposes an object capable of producing a particular tactile and auditory sensation, while tender is interpreted differently with meat, vegetables or baked products. Consequently, perceptual terms acquire gastronomically specialized meanings through their connection with the Object and Processual Frames.

4. The Instrumental Frame

The Instrumental Frame includes the material tools and devices used to prepare, process, store and serve food. Its main slots are cooking instruments → cutting instruments → mixing instruments → storage instruments → serving instruments. English terminology includes pan, pot, saucepan, oven, grill, knife, chopping board, whisk, spatula, blender, container, tray, plate, bowl, cup and serving spoon. Uzbek gastronomic culture includes both general kitchen tools and culturally marked items such as qozon, tandir, lagan, kosa and piyola.

Instruments are cognitively linked to actions and products. Qozon, for instance, is not simply a cooking vessel in the conceptualization of traditional Uzbek cuisine; in the preparation of palov it is closely connected with the processual scenario and with the cultural image of communal cooking. Tandır similarly activates knowledge about a specific heat source, baking technique and products such as non or patir. In English culinary discourse, oven, grill and roasting tin also predict particular techniques and food categories.

This interaction demonstrates why instrumental terminology should not be treated as an isolated lexical field. Knowing the meaning of a culinary instrument frequently requires knowledge of its typical action, the food prepared with it, and the cultural environment in which it is used. The Instrumental Frame therefore forms a bridge between objects and processes within the Gastronomy Superframe.

5. *The Social-Communicative Frame*

The Social-Communicative Frame represents gastronomy as a form of social practice and communication. It includes participants → eating space → service → gastronomic discourse → eating etiquette → rituals and traditions. Participants may include cook, chef, waiter, host, guest, customer and family members. Eating spaces include home, kitchen, restaurant, café, canteen, banquet hall and other culturally relevant locations. Service terminology covers ordering, serving, booking, menu presentation, payment and interaction between personnel and consumers.

Gastronomic discourse occurs in recipes, menus, advertisements, culinary programs, professional documents, restaurant communication, literary texts and everyday speech. Each discourse type foregrounds different frame slots. A recipe gives priority to ingredients, quantities, instruments and ordered processes; a menu foregrounds the dish, sensory appeal and pragmatic description; everyday conversation may emphasize preference, hospitality or evaluation. Lexical items such as traditional, homemade, crispy, tender and signature are especially important in menu pragmatics because they combine description with persuasion.

The cultural dimension becomes particularly visible in rituals and traditions. Uzbek sumalak is strongly linked with Navruz, collective preparation and social participation, while palov is associated with hospitality, family events, weddings and other communal occasions. In English-speaking cultures, roast may evoke the scenario of a Sunday roast or festive family meal, while scone can activate associations with tea and particular serving conventions. Such examples show that gastronomic meaning includes knowledge about when, where, why and with whom food is consumed.

6. *Polyframe Characteristics of Gastronomic Terms*

One of the most important results of the analysis is that gastronomic terms frequently possess a polyframe structure. Polyframe character means that a lexical unit simultaneously activates two or more frames within the same conceptual domain. This phenomenon is especially evident in culturally significant dish names because the name of a dish may imply its ingredients, preparation process, sensory profile, instruments, participants and social function.

Palov provides a clear example. Within the Object Frame, it denotes a completed dish and activates ingredients such as rice, meat, carrots, oil and spices. Within the Processual Frame, it presupposes a sequence of cutting, frying, adding ingredients, simmering and final preparation. Within the Instrumental Frame, qozon is a prototypical cooking vessel. The Perceptual Frame may include aroma, colour, texture and serving temperature. Finally, the Social-Communicative Frame links palov with hospitality, collective meals, ceremonies and identity. Thus, the semantic representation of palov is substantially richer than the dictionary formula 'a rice dish'.

Sumalak is similarly polyframe. It belongs to the Object Frame as a traditional food prepared from germinated wheat, while the Processual Frame includes lengthy preparation and continuous stirring. The Instrumental Frame includes a large cooking vessel and stirring implements, and the Social-Communicative Frame is dominant because the term evokes Navruz, collective participation and ritualized cultural practices. English terms may also show polyframe organization. Roast can denote a process, a prepared food and a meal event, while pie connects an object with baking, oven use, texture, filling and particular meal contexts.

Polyframe analysis therefore prevents an overly narrow interpretation of terminology. It demonstrates that gastronomic lexical units function as access points to networks of encyclopedic knowledge. The dominant frame may change according to discourse: in a recipe the processual component may be foregrounded, in a menu the object and perceptual components become prominent, and in ethnographic or cultural discourse the social-communicative frame may dominate.

Conclusion

The frame-based analysis of Uzbek and English gastronomic terminology demonstrates that the conceptual structure of gastronomy is systematic, multidimensional and culturally conditioned. The proposed Gastronomy Superframe integrates five major components: Object, Processual, Perceptual, Instrumental and Social-Communicative Frames. Each frame contains a set of interconnected slots that organize specialized knowledge and explain semantic relations among gastronomic terms.

The comparison shows that both languages conceptualize universal aspects of food such as products, ingredients, cooking actions, sensory qualities, instruments and social interaction. At the same time, the lexical realization of these categories reflects nationally specific culinary experience. Uzbek terms such

as palov, sumalak, qazi, norin, manti and patir preserve information about traditional technologies, communal practices and cultural identity, while English units such as pudding, pie, roast and scone activate their own historically established culinary scenarios.

The polyframe character of gastronomic terminology is particularly significant for cognitive and comparative research. A term can belong to one frame at the level of its basic nomination while simultaneously activating other frames through associated knowledge. This explains why literal equivalence is often insufficient in the description or translation of culture-bound gastronomic concepts. Frame-based modeling therefore offers a useful methodological tool for terminology studies, lexicography, translation, intercultural communication and the systematic description of the English and Uzbek gastronomic conceptospheres.

References

1. Fillmore, C. J. (1982). Frame Semantics. In *The Linguistic Society of Korea (Ed.), Linguistics in the Morning Calm*. Seoul: Hanshin Publishing, pp. 111–137.
2. Fillmore, C. J., & Baker, C. F. (2010). A Frames Approach to Semantic Analysis. In B. Heine & H. Narrog (Eds.), *The Oxford Handbook of Linguistic Analysis*. Oxford: Oxford University Press.
3. Minsky, M. (1975). A Framework for Representing Knowledge. In P. H. Winston (Ed.), *The Psychology of Computer Vision*. New York: McGraw-Hill.
4. Cabré, M. T. (1999). *Terminology: Theory, Methods and Applications*. Amsterdam/Philadelphia: John Benjamins.
5. Evans, V., & Green, M. (2006). *Cognitive Linguistics: An Introduction*. Edinburgh: Edinburgh University Press.