



Communication Black Caviar Perturbs Reflection of Russian Geography: A Research Note of Aquaculture-Triggered Place Naming Puzzle

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Abstract: Black caviar is often thought to be a typically Russian luxurious food product. Recently, its production has extended due to sturgeon aquaculture development. The analysis of the geographical affinities of the full-cycle companies and their aquaculture-sourced black caviar implies that the majority of them employs the Russian Caviar brand and/or refers to the Russian traditions and history. However, names, brands, and/or product positioning of several companies tend to mention geographical objects associated with the tradition places of black caviar production (Astrakhan, the Caspian Sea, and the Volga River), whereas these companies are located in the other, sometimes remote places (with distances over 1000 km). Such marketing solutions of black caviar producers perturb reflection of the Russian geography. The geographical indication (place of origin) of this fish product needs improvement, which is a task for companies, state, and professional societies.

Keywords: brand; European Russia; food marketing; luxurious product; sturgeon aquaculture

1. Introduction

Some food products are closely associated with particular geographical places and countries (even if not specific to only them), and, thus, it is natural to expect from these products reflectance of the local/regional/national geographical names, i.e., their contribution to place branding. The relevant ideas are actively discussed by the contemporary researchers, and some general thoughts can be found, particularly, in the works by Blichfeldt and Halkier [1], Bosco [2], Del Casino [3], Harner [4], Lopes et al. [5], Pizzichini et al. [6], and Sanz-Cañada and Muchnik [7]. As shown by Merle et al. [8], geographical indications influence strongly on food perceptions [8]. A typical example of such a product is black caviar (sturgeon caviar), which is produced in many countries [9–12], but it associates stereotypically with Russia and, more specifically, the Volga River and the Caspian Sea (the most important natural sturgeon's ranges).

The term caviar is of Greek origin [13], and this fish product became important in the network of the Mediterranean trade in the Late Medieval and Renaissance times [13,14]. Sturgeon fishing and caviar production was a historical occupation of the population of the Lower Volga River [15]. The traditional Russian culinary of high-class cannot be imagined without black caviar, and this stereotypic vision has been replicated by many Russian and foreign books, movies, and common beliefs. To both Russians and foreigners, black caviar is a symbol of luxurious life, and, in fact, not only its exceptional nutritional and sensory properties, but demand for luxurious food drive its production and trade on the international scale [9,11,16,17]. The state of the global market of black caviar in the 21 century is characterized in the works by Bronzi and Rosenthal [9], Bronzi et al. [10], Sicuro [11], and Tavakoli et al. [2]. These indicate on Russia as one of the leading caviar-producing countries. Historically, overfishing (also for the purposes of caviar production) impoverished sturgeon resources and posed questions of fish protection



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Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). and caviar production limitation [18–20]. Recently, natural caviar production is strictly prohibited (Russia is not exclusion), and sturgeon aquaculture has become the main source of black caviar [9,11,21–24]. Various illegal issues persist [11,25,26], but these are typical to all luxurious products, and, apparently, the growth of aquaculture sustains legal market. Community-based tourism is another solution of sustainable use of sturgeon resources [27].

The objective of the present research note is to report briefly an unusual phenomenon in reflectance of the Russian geography by the aquaculture-sourced black caviar. Its producers are located sometimes far from traditional places of sturgeon fishing and caviar production, but they remain conservative in how to name and to market their product. This situation creates a notable puzzle of place naming, which deserves attention of fish food marketologists.

2. Materials and Methods

The information of the Russian black caviar producers is gathered for the purposes of the present study. The only fully-cycle companies, i.e., those involved in sturgeon aquaculture, caviar production and package, and caviar distribution and selling are considered. This is important to document the full geographical affinity of this food product, including its place of origin and positioning. The information is taken from various sources, including the on-line catalogue of the national food producers [28] and the official companies' web-pages. A total of ten companies are selected for this study (Table 1). This sample size seems to be enough because of three reasons. First, black caviar is a rare and difficultto-make fish product, and, thus, the small number of full-cycle companies is expected (also because the national market is dominated by a single big producer, which is also considered). At least, the noted catalogue [28] implies the majority of the producers are considered. Second, this sample reflects a broad range of geographical affinities of the Russian black caviar and, particularly, the entire European part of Russia (often labeled as 'European Russia'), with twelve regions and two most important hydrological objects (Figure 1). Third, although the caviar production statistics are not available, the considered companies seem to be the most important caviar producers (particularly, according to [28]), and, thus, the sample is representative to the national caviar market. In this paper, all companies are treated anonymously to avoid any occasional challenge of their reputation or unauthorized product advertizing.

Company	Business Character	Source of Caviar _	Product (Black Caviar) Relevance		
			Russian Caviar	Russian History	
А	Fish-product company	Aquaculture	Yes		
В	Agricultural holding	Aquaculture	Yes	Yes	
С	Fish-product farm	Aquaculture	Yes		
D	Fish-product company	Aquaculture			
E	Fish-product company	Aquaculture	Yes		
F	Fish-product company	Aquaculture	Yes		
G	Fish-product company	Aquaculture	Yes		
Н	Fish-product company	Aquaculture			
Ι	Fish-product farm	Aquaculture		Yes	
J	Fish-product company	Aquaculture		Yes	

Table 1. Basic information about the Russian full-cycle black caviar producers considered in this study.

Note: all companies are treated anonymously to avoid any occasional challenge of their reputation or unauthorized product advertizing.



Figure 1. The geographical affinities of the Russian black caviar considered in the present study.

The main material of this study is the information about black caviar geographical affinities. This is extracted from three sources. First, the on-line national business reference system [29] is employed. Second, the information given directly on the product (black caviar containers) is checked. Third, the official company web-pages are analyzed qualitatively. The gathered information consists of two blocks. The first block includes national geographical affinities and, particularly, the use of the brand 'Russian Caviar' and the promotion with the reference to the Russian history and culinary traditions. The second block comprises sub-national geographical affinities, which include company registration place, aquaculture enterprise place (production place), geographical element in a company name, geographical element in a company brand, and places relevant to how the product is positioned (this is usually explained on a company's web-page). The sub-national affinity is determined on the regional level (in this case, region is understood as the main administrative unit of the Russian Federation; the country consists of 85 regions). The products are often related to two big hydrological objects famous of their fish resources, namely the Caspian Sea and the Volga River, which are the most important natural sturgeon's ranges.

The analysis comprises both qualitative (interpretative) and quantitative procedures. First, the share of national and sub-national affinities is calculated to document the persistence of geographical elements associated with the considered product. Second, these affinities are arranged geographically in order to judge of their distribution within the Russian space. Third, the co-occurrence of different geographical affinities is checked; when established, this is characterized, and the distance between the places is measured.

3. Results

The majority (80%) of the considered full-cycle black caviar producers demonstrate national geographical affinities (Table 1). Significant number of them use the brand 'Russian Caviar' anticipating, most probably, that it is well-known and attractive to customers. The sub-national geographical affinities are also common (Table 2). In addition to registration and production places, 40% of the company names, 60% of the company brands, and 100% of the cases of company positioning bear geographical elements. Generally, this evidence means that the geographical affinity is very important to the considered Russian caviar producers, i.e., they find reasonable to associate their fish products with the given country and the given place within this country. As implied by the available information (Tables 1 and 2), the both national and sub-national affinities are less important or unimportant to some producers located outside the traditional areas of caviar production; in one case (company D), it is found that the national affinity is absent (Table 1), whereas the sub-national affinity is strong (Table 2).

Table 2. Sub-national geographical affinities of the Russian full-cycle black caviar producers considered in this study.

Company.	Registration	Production	Name	Brand	Positioning
А	М	Vo	-	-	Vo
В	М	Sm	-	-	As
С	RA	RA	-	-	RA
D	As	As	As	As	As, V
Е	Ко	Ко	Ко	Ко	V
F	As	As	-	As	As, CS
G	As	As	CS	As	V
Н	SP	As, RD	-	CS	CS
Ι	Sa	Sr	-	-	Sa
J	Мо	Tv	Tv	CS	CS

Abbreviations: As—Astrakhan Region, Ko—Kostroma Region, M—Moscow, Mo—Moscow Region, RE—Republic of Adygeya, RD—Republic of Dagestan, Sa—Samara Region, Sm—Smolensk Region, SP—Sankt-Petersburg, Sr—Saratov Region, Tv—Tver Region, Vo—Vologda Region; CS—Caspian Sea, V—Volga River. Note: all companies are treated anonymously to avoid any occasional challenge of their reputation or unauthorized product advertizing.

The considered producers are registered in seven regions, and most commonly in the Astrakhan Region (Table 2). Two really big companies are registered in Moscow, which is not only administrative, but also the economic center of the country registering in which is a serious business advantage. The aquaculture enterprises (production points) are located in eight regions in the central and southern parts of European Russia. The geographical elements in the company names and brands are significantly less diverse and include two-three regions and the Caspian Sea (Table 2). Finally, the caviar is usually positioned in association with four regions and two hydrological objects, namely the Caspian Sea and the Volga River (Table 2). All these tend to concentrate in the south of European Russia. This evidence implies that the geographical focus of the company names, the company brands, and the product positioning is narrower than the distribution of black caviar production in the Russian space. Moreover, this focus shifts to the country's south and includes non-regional elements, i.e., the noted hydrological objects. Apparently, some producers do not express interest in reflectance the place of origin of their products.

The collected information implies that some companies are distinguished by the cooccurrence of different sub-national geographical affinities. Two most striking examples are as follows. The company B is registered in Moscow, its aquaculture enterprise is situated in the Smolensk Region, and its black caviar is positioned as that of Astrakhan (Figure 2). The distance between Moscow and Astrakhan is ~1271 km, and the distance between Smolensk and Astrakhan is ~1460 km. The company J is registered in the Moscow Region and possesses aquaculture enterprise in the Tver Region. Although the affinity to the latter is reflected in the name, the brand and the product positioning deal with the Caspian Sea, which is located >1000 km far from the both Moscow and Tver regions (Figure 2). Additionally, some companies (E,G,H) boast geographical affinities mixing the regions of registration and production with the Caspian Sea and the Volga River. Although these hydrological objects are located within the regions of registration or production, this may or may not be known to caviar consumers depending on their basic geographical knowledge.



Figure 2. The most striking examples of the geographical dispersal of the Russian black caviar producers. The outline of Figure 1 is followed, and the explanations are given in the text.

4. Discussion and Conclusions

The development of sturgeon aquaculture in contemporary Russia [24] has stimulated production of black caviar that is consumed in the country and partly exported. This production occurs in the both traditional places (like the Astrakhan Region) and the new places (like the Vologda Region). Apparently, this geographical shift in production may be taken into account in marketing. The results of the present study imply that the Russian black caviar reflects adequately its Russian origin. However, geographical affinities are mixed on the sub-national level. Names, brands, and product positioning of some companies reflect the new places of production, whereas those of some other companies are still attached to the traditional places. Particularly, the affinity to the Astrakhan Region, the Caspian Sea, and the Volga River is often stressed. Evidently, this marketing strategy is implemented for the purpose to demonstrate that the black caviar is genuine and to make it attractive to the customers. However, the reflectance of the Russian geography is perturbed because the actual places of origin are mixed with or replaced by the traditional places of production. For instance, one can learn about the Caspian black caviar from a place, which is located very far from the Caspian Sea (Figure 2). As a result, the true geography of this fish product differs from what can be called as the promotion geography.

The reported phenomenon implies that the Russian aquaculture-sourced black caviar has a clear country of origin, but its places of origin are not defined properly in some cases. Rippon [30] suggested to define the quality of food geographical indications, and in the case of the Russian black caviar this quality is moderate-to-low. Although this can be helpful to attract customers, the latter can be also dissatisfied realizing a difference between the geographical elements in the brand and the production address. Three other negative consequences should be noted. First, the Russian sturgeon aquaculture itself needs promotion, but the latter is limited by the often preference of the traditional places. Second, the regions hosting aquaculture enterprises can be branded effectively on the national and international levels with so luxurious product as black caviar, but omission of their indication does not allow such a regional branding. Third, it is known from the study of Merle et al. [8] that local geographical indications are more attractive to consumers than those national, and, thus, the better clarity of the national geographical affinity of the back caviar produced in Russia over its sub-national affinities may be a marketing disadvantage. More generally, the geographical indications of food products can be evaluated in the economical terms [31], and, therefore, their inconsistencies can be linked to economic losses. From the 'purely' geographical point of view, the reported perturbation of geography reflection is also a serious challenge. European Russia is a vast territory (Figure 1), and mixing geographical affinities leads to its significantly incorrect perception and a kind of space shrinking.

The findings of this study indicate on the heterogeneity of the geographical indications linked to black caviar. Some companies prefer disclosure of their geographical affinity, whereas the others tend to use names of the traditional caviar-associated localities (even if these are remote from the actual production places). Indeed, the choice between these strategies is a voluntary decision of each given company, and some companies may market their products better referring to the traditional places (and they cannot be criticized for doing this). However, the entire industry of aquaculture-based black caviar production needs balanced development, and its success is linked to correct geographical indications. Moreover, the regions where these full-cycle companies are located can be interested in branding with this important, luxurious, and typically Russian product. So, the urgency of correct geographical affinities is evident.

Conclusively, this research note provides evidence of the place naming puzzle associated with the Russian black caviar. Theoretically, this seems to be interesting phenomenon linked to geographical indication of food, the production geography of which has changed recently. Practically, this finding is a signal to the full-cycle caviar producers who need to implement geographically-correct strategies. Russian caviar producers may need labels like "registered designation of origin". The state control (either on federal or regional levels) and the regulation by the professional societies of fish producers appear to be desirable. On the one hand, necessity and advantages of branding and positioning of caviar should be communicated to the business community. On the other hand, the noted labeling procedures can be developed and implemented under the state control. National and regional authorities interested in future aquaculture growth may also provide special support to producers with adequate marketing strategies. Selection of products for national and international exhibits also requires consideration of the place naming. More generally, this study stress that the food geography has many dimensions, and, particularly, the perturbation of the national geography reflection by luxurious products deserves attention and further investigations.

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References

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- 1. Blichfeldt, B.S.; Halkier, H. Mussels, Tourism and Community Development: A Case Study of Place Branding Through Food Festivals in Rural North Jutland, Denmark. *Eur. Plan. Stud.* **2014**, *22*, 1587–1603. [CrossRef]
 - Bosco, F.J. Geographies of Food: Place, Space, and Scale in Food Studies. *Geogr. Teach.* 2020, 17, 73–76. [CrossRef]
- 3. Del Casino, V.J. Social geography I: Food. Prog. Hum. Geogr. 2015, 39, 800–808. [CrossRef]

- 4. Harner, J. Teach the Geography of Food—Please! Geogr. Teach. 2020, 17, 83–86. [CrossRef]
- 5. Lopes, C.; Leitão, J.; Rengifo-Gallego, J. Place branding: Revealing the neglected role of agro food products. *Int. Rev. Public Nonprofit Mark.* **2018**, *15*, 497–530. [CrossRef]
- Pizzichini, L.; Temperini, V.; Gregori, G.L. Place branding and local food souvenirs: The ethical attributes of national parks' brands. J. Place Manag. Dev. 2020, 13, 163–175. [CrossRef]
- Sanz-Cañada, J.; Muchnik, J. Geographies of origin and proximity: Approaches to local agro-food systems. *Cult. Hist. Digit. J.* 2016, 5, e002. [CrossRef]
- 8. Merle, A.; Herault-Fournier, C.; Werle, C.O.C. The effects of indication of local geographical origin on food perceptions. *Rech. Appl. Mark.* **2016**, *31*, 26–42. [CrossRef]
- 9. Bronzi, P.; Rosenthal, H. Present and future sturgeon and caviar production and marketing: A global market overview. *J. Appl. Ichthyol.* **2014**, *30*, 1536–1546. [CrossRef]
- 10. Bronzi, P.; Chebanov, M.; Michaels, J.T.; Wei, Q.; Rosenthal, H.; Gessner, J. Sturgeon meat and caviar production: Global update 2017. *J. Appl. Ichthyol.* **2019**, *35*, 257–266. [CrossRef]
- 11. Sicuro, B. The future of caviar production on the light of social changes: A new dawn for caviar? *Rev. Aquac.* 2019, 11, 204–219. [CrossRef]
- Tavakoli, S.; Luo, Y.; Regenstein, J.M.; Daneshvar, E.; Bhatnagar, A.; Tan, Y.; Hong, H. Sturgeon, Caviar, and Caviar Substitutes: From Production, Gastronomy, Nutrition, and Quality Change to Trade and Commercial Mimicry. *Rev. Fish. Sci. Aquac. Press* 2021. [CrossRef]
- 13. Schweickard, W. Notes on word history of caviaro/caviale. Z. Rom. Philol. 2018, 134, 249-263.
- 14. Khvalkov, E.A. A regionalisation or long-distance trade? Transformations and shifts in the role of Tana in the Black Sea trade in the first half of the fifteenth century. *Eur. Rev. Hist.* **2016**, *23*, 508–525. [CrossRef]
- 15. Medvedev, V.N. The fishing industry of the population of Sarepta and Chernoyarskii District, Astrakhan Province. *Etnogr. Obozr.* **2013**, *5*, 14–26.
- 16. Baker, A.K.; Vixie, B.; Rasco, B.A.; Ovissipour, M.; Ross, C.F. Development of a Lexicon for Caviar and Its Usefulness for Determining Consumer Preference. *J. Food Sci.* 2014, *79*, 2533–2541. [CrossRef]
- 17. Mackowiak-Dryka, M.; Paszkiewicz, W.; Szkucik, K. Characteristics and nutritional value of selected caviar products. *Med. Weter.* **2020**, *76*, 690–693. [CrossRef]
- 18. Bahro, G.; Lindemann, I. Wealth at great cost: The destruction of the Caspian Sea environment. Osteuropa 2007, 57, 479–482.
- 19. Blum, D. The Russian trade-off: Environment and development in the Caspian Sea. J. Environ. Dev. 1998, 7, 248–277. [CrossRef]
- 20. Hoggarth, J. The Caspian saga. Water Environ. Mag. 2010, 15, 22–24.
- 21. Chandra, G.; Fopp-Bayat, D. Trends in aquaculture and conservation of sturgeons: A review of molecular and cytogenetic tools. *Rev. Aquac.* **2021**, *13*, 119–137. [CrossRef]
- 22. Gessner, J.; Würtz, S.; Kirschbaum, F.; Wirth, M. Biochemical composition of caviar as a tool to discriminate between aquaculture and wild origin. *J. Appl. Ichthyol.* 2008, 24, 52–56. [CrossRef]
- 23. Memis, D. A short history of sturgeon caviar production in Turkey. J. Appl. Ichthyol. 2014, 30, 1552–1556. [CrossRef]
- 24. Vasilyeva, L.M.; Elhetawy, A.I.G.; Sudakova, N.V.; Astafyeva, S.S. History, current status and prospects of sturgeon aquaculture in Russia. *Aquac. Res.* **2019**, *50*, 979–993. [CrossRef]
- 25. Van Uhm, D.; Siegel, D. The illegal trade in black caviar. Trends Organ. Crim. 2016, 19, 67–87. [CrossRef]
- 26. Zabyelina, Y.G. The "fishy" business: A qualitative analysis of the illicit market in black caviar. *Trends Organ. Crim.* **2014**, 17, 181–198. [CrossRef]
- 27. Otterstad, O.; Adina Capota, P.; Simion, A. Beluga Sturgeon community based tourism (best combat). J. Coast. Res. 2011, 61, 183–193. [CrossRef]
- 28. Black Caviar Producers Catalogue. Available online: https://productcenter.ru/producers/catalog-ikra-chiernaia-4105 (accessed on 22 February 2021).
- 29. Interfax. SPARK. Counterparty Check. Available online: https://www.spark-interfax.ru/ (accessed on 22 February 2021).
- 30. Rippon, M.J. What is the geography of Geographical Indications? Place, production methods and Protected Food Names. *Area* **2014**, *46*, 154–162. [CrossRef]
- 31. Ay, J.-S. The Informational Content of Geographical Indications. Am. J. Agric. Econ. 2021, 103, 523-542. [CrossRef]