



What's India's Beef with Meat? Hindu Orthopraxis and Food Transition in India Since the 1980s¹

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Does development affect food practices? The nutrition transition model correlates positively meat consumption levels with gross domestic product per capita, except in India. In this article, I analyze food diets in this country since the 1980s by mapping out households' practices in animal product consumption depending on their social positions. Applying multiple factor analysis on the Consumer Expenditures data of the National Sample Survey Office, I produce a relational model of food diet segmentation to overcome the dead ends of the nutrition transition model. Two structural dimensions are highlighted. The first one differentiates beef and nonbeef meat diets and relates to the symbolic capital of caste and religion. The second one opposes diets including animal products and without, depending on the amount of economic capital. The concept of temporal homology is introduced to show that the social structure remains stable over time. This denotes the importance of sociocultural norms in food practices rather than their weakening due to "modernization" and shows how these norms are key to understand food transitions beyond linear expectations drawn from economic development.

KEYWORDS: food transition; India; meat diet; multiple factor analysis; religion; temporal homology.

INTRODUCTION

Although Indian food consumption is at times described as affected by the process of "globalization" (Pingali and Khwaja 2004), meat consumption levels in India are among the lowest in the world. This pattern is challenging social scientists since the global consensus is that meat consumption increases with the improvement of the standard of living. The nutrition transition model correlates positively meat consumption levels with gross domestic product per capita (Popkin 1993). But this approximate macro modeling is not supported in the Indian case, pushing researchers to call for the inclusion of sociocultural factors in the analysis of meat—and more broadly, animal products—consumption. Their framework is clubbed under the umbrella of the food transition model (Bruckert 2014; Fourat and Lepiller, 2015; Landy 2009).

The distrust in macro modeling has led to a greater emphasis on ethnographic analysis of meat practices changes. Anthropologists have long underlined the importance of religious and caste identities in food practices in India (Dumont

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1974)—food being an archetypical form of consumption marked by symbolic distinctions and “taboos” (Douglas 1966). Nonetheless, there is no reason not to include sociocultural factors in macro descriptions of animal product consumption and cautiously examine generalizations supposedly affecting Indian society such as “modernization” and “globalization.” In these frameworks, ascribed identities such as caste would indeed become less salient over time in favor of achieved identities. But recent studies on Indian social stratification and social mobility have rejected this paradigm and outlined how caste and religion remain important predictors of one’s social position (Vaid 2018).

A limitation of this exercise is that the cultural model of *Homo hierarchicus* (Dumont 1974) assumes that caste corresponds to a stable religious sphere, encompassing the economic and political ones. Ultimately, this leaves little room for a dynamic analysis of the social logics of food practices since caste is thought to be the overwhelming institution of the Indian social world (Khare 2011). The theoretical and empirical inquiry conducted here departs from this view and offers a temporal analysis of the social stratification of meat consumption. In doing so, it seeks to understand the social logics of food practices by taking into account the social, economic, and political dynamics of food-based social segmentation.

Two questions are mainly addressed here: What are the main lines of division in animal product consumption in India? How have these structural dimensions evolved since the 1980s? We study animal product consumption through the official Indian statistics of the National Sample Survey Office (NSSO) data on Consumption Expenditures, which provides the most detailed nomenclature of food items. We construct food diets to classify the population and mobilize the multiple factor analysis method (Bécue-Bertaut and Pagès 2008; Escofier and Pagès 1994, 2008) to map out food practices in social space (Bourdieu 1984) and their evolution over time, by introducing the concept of temporal homology, or looking at structural homology over time. The period I look at is particularly relevant since economic reforms have led to substantial increases in the economic growth, an important feature of the nutrition transition model. But it is also a time marked by a significant increase in economic inequalities (Chancel and Piketty 2017), which questions the salience of symbolic distinctions of caste and religion in a context with high levels of disparity in terms of economic capital, and with relative upward social mobility for lower castes (Vaid 2018), sustained by a stronghold in the political realm (Jaffrelot 2003).

This analysis shows how “taste is first and foremost distaste, disgust and visceral intolerance of the taste of others” (Bourdieu 1984; Oleschuk, Johnston, and Baumann 2019). Throughout the period in question, lacto-vegetarianism remains a dominant food diet associated with Hindu middle and high castes, whereas Muslims are strongly associated with beef diets, denoting a strong temporal homology. Meanwhile, partly due to economic factors, chicken consumption increases and tends to constitute a more legitimized food item both for Hindu middle and high castes, and especially for Dalits, who gradually leave beef consumption. While food economic distinctions tend to wane, this results in a stronger religious polarization toward the end of the period, where Hindus and Muslims are clearly segmented by their food diets, particularly in North India. This religious dichotomy is sustained by Hindu nationalists and high castes, which form their traditional base, and is a

means of uniting Hindus (in defiance of the diversity of the food diets of lower castes in this community) against Muslims. On the whole, this shows how Hindu upper castes' food norms, or Hindu orthopraxis, remain dominant as a way to legitimize their position in social space, and how these norms are sustained by claiming "distaste" for the tastes of a stigmatized category, Muslims. It illustrates the importance of the distinction between "class, status, and parties" (Weber 2010), such that even though the congruence of the economic, social, and political orders is being disrupted at least since the 1980s, the continuing salience of the Hindu upper caste social order remains decisive.

The next section reviews current knowledge of food segmentation in Indian society and the empirical shortcoming of economic models studying food, and justifies the study of the social structure. Then I develop the construction of my framework before describing the results. The concluding section discusses the most important distinction, related to beef eating.

THEORETICAL MOTIVATION

From the Nutrition Transition Model to the Food Transition Model

Nutritionists and economists have long insisted on the determinant part of the standard of living in animal products consumption, namely the standard of living that increases thanks to economic development. Animal products are superior goods, meaning that their consumption share in the food basket increases with the standard of living.

The model of nutrition transition hence constitutes a classic entry point to study food changes. This dynamic model links demographic transformations (demographic and epidemiologic transitions), economic development, and food consumption (Popkin 1993, 2003). Designed from the observations of industrialized countries, it seeks to be universal. Transition starts when societies exit hunger, and this first phase is characterized by an increase in cereal consumption (especially rice and wheat). In a second phase, characterized by diversification, cereal consumption relatively decreases in the household consumption basket as the consumption of sugar, saturated fats, and animal proteins (including milk products and meat) increases. A final phase, less detailed in the model, is linked to the emergence of modified food diets due to an increase in health and ecologic awareness.

The model is both simple and efficient in explaining food patterns and particularly meat consumption in industrialized countries and in a number of emerging countries. Unfortunately, it is confronted with the "exception" of a billion inhabitants when considering India, since levels of meat consumption and also of other food items do not match with the predictions (Deaton and Drèze 2009; Fourat and Lepiller 2015; Landy 2009).

Food and Caste Hierarchies

Anthropologists have indeed long recognized the importance of food prescriptions and proscriptions in the caste hierarchy, particularly among Hindus who

represent 79.8% of the total population (Indian Census 2011). *Homo hierarchicus* (Dumont 1974) offers a clear description of the main food division, food items being hierarchized following a logic going from the “pure” goods—the vegetarian ones—to the “impure” ones (or the most polluted)—the nonvegetarian ones. Nonvegetarian goods are also classified and hierarchized depending on their degree of purity. Among animal products, milk does not appear to embody “pollution”; milk is valorized among Hindus, since it is sacred in ritual Hinduism and a product of the cow considered as a “mother” (Narayanan 2018). Eggs are then the least polluted animal product, and meats themselves have differentiated statuses. The consumption of pork renders eaters particularly impure and beef all the more so because cow is a sacred animal. Hence, in this model Hindu ideology forms a “food orthopraxis” where food practices comply with a codification, united by a dharma—a sociocosmic order—that regulates social life. The food hierarchy also refers to the caste hierarchy, and in this way, according to Hinduism, food is “the fundamental link between men and gods” (Appadurai 1981). Brahmins (at the top of the caste hierarchy) promote nonviolence and thus are vegetarian; intermediary and high castes might be meat eaters but do not consume beef, whereas low castes, and especially Dalits (lowest castes), are meat eaters, including beef.

If Dumont’s *Homo hierarchicus* constitutes an attractive model of caste, it has also fed numerous critiques.³ My goal is not to assess the different points of conflicts but to outline how the present analysis distances itself from this model. The main point of contention revolves around Dumont’s rejection of “social stratification” as a model to understand caste. According to him, the social institution of caste is determined within the religious realm such that caste hierarchy is determined by the degree of ritual purity. This renders any dynamic analysis of meat consumption and caste difficult since there is no reason to account for any social change in this model. Scholarship on caste on the other hand recognizes that caste is also embedded in the economic and political realms without denying the strong association between caste and meat-based diets. For instance, Ambedkar (2017 [1948]) outlined the social logics of caste and its association with meat consumption by suggesting that the salience of vegetarianism and beef abstinence in the Indian social order was the result of conflicts between caste and religious groups for social superiority. This presents a legitimate point when examining the “myth of the holy cow” (Jha 2009), which documents a past history of beef-eating Brahmins.

Further, the diffusion of the beef proscription or of the vegetarian diet beyond the Brahmins and higher castes can then be understood as a “sanskritization” process (Srinivas 1952), where intermediary castes adopt a practice of the higher castes as a way of symbolically legitimizing their collective upward mobility from an economic and political standpoint but also more generally to integrate marginal groups by way of acculturation (Charsley 1998). Instances of the sanskritization of certain low-status communities have occurred all along Indian history, particularly in North India, notably in the early twentieth century with the Satnam Panth movement, which aimed at reforming religious practices and upgrading marginal groups, while at the same time promoting strict dietary practices, particularly vegetarianism

³ For a synthesis of debates on *Homo hierarchicus* among Indian scholars, see Khare 2011.

(Dube 1998). Similarly, the Hindu proselytism encouraged by Arya Samaj, a Hindu reformist organization created at the end of the nineteenth century promoted beef abstinence and vegetarianism to act “defensively” and preserve the Hindu community that was thought to be threatened by Islam and Christianity. The recognition of lower castes as members of the Hindu community was key in countering the conversions to other religions (Clémentin-Ojha and Gaborieau 1994). If anything, this shows how meat practices have long been salient to assert social status positions and group memberships. The extent to which it maintains its role as a social marker remains to be empirically analyzed.

Besides, the food hierarchy might be partly more idealistic than empirical. For one, food diets are not only determined by one's ascribed caste but also by other social positions discussed in the previous subsection; there has never been a perfect homology between caste and food diets. For certain Brahmin castes, meat eating has long been considered fairly unproblematic, such as for the Kashmiri Pandits, and fish is usually considered a staple food among Bengali Brahmins (Bruckert 2018). If anything, these exceptions call for an empirical study of the role of caste in food diets.

The Hindu food norms constitute the dominant food ethos in Indian society, and it may affect religious minorities as well. Jainism is, for instance, also based on ahimsa (nonviolence), and ritual norms enforce strict abstinence from animal products for its followers. Even though Sikhism does not have a unanimous stand depending on the religious tradition followed, it also prescribes nonmeat diets (without eggs). Besides, religious conversions from Hinduism to Christianity may contribute to diffuse food practices (Roberts 2016). The Hindu food hierarchy might affect Muslims as well beyond their own prohibition of pork eating, as Bruckert (2018) reports that some of his interviewees declared not consuming beef because they did not want to be considered as Dalits.⁴

In taking into account the caste and religious dimensions of meat practices, the goal is thus to better understand how meat practices are embedded in a social world where vegetarianism and beef abstinence are salient to legitimize a social position, and how this has possibly waned since the 1980s.

Changing Social Structures of Food Diets

Hence, the proposed alternative to understand meat consumption evolution is a model of “food transition,” where “cultural density,” and in particular religious and caste norms, are taken into account (Landy 2009). Nonetheless, this approach has been little formalized and a coherent macro framework lacks in the literature. This article fills this gap, analyzing food diets according to the households' standard of living, religious and caste belonging.

This justifies my use of the methodological and conceptual framework of the social space developed by Bourdieu (1984) in *Distinction*. His aim is to study the correspondence between the structure of social positions and lifestyles. In Bourdieu's social space, individuals are endowed with different social resources, mainly

⁴ According to the 2011–2012 Consumer Survey, Jains constitute 0.3% of the total population, Sikhs 1.6%, Christians 2.2%, and Muslims 13.6% (Table I).

composed of economic capital and cultural capital. Individuals are differentiated on two main dimensions: the “volume of capital” and the “composition of capital,” famously summarized as a “chiasmatic structure,” which identifies the social logics that structure lifestyles.

In my case, religion and caste can be considered as a specific form of symbolic capital that denotes resources of an individual based on prestige or honor (Deshpande 2005). This capital is admittedly correlated to other forms of capital,⁵ but to the extent that being a Hindu high caste reflects “purity” in their eyes, it constitutes one distinct important property of social space. The point of mobilizing Bourdieu’s framework indeed is to take into account the multidimensionality of the structure of food practices in the Indian case. If Hindu high castes are more likely to be vegetarians, does it hold irrespective of their standard of living?

Social space is also important because of its relational property. It features lifestyle oppositions between fractions of the social space depending on their social positions. Those in the dominant positions have the dominant tastes, as stated by the concept of cultural legitimacy, and hence lifestyles form in a power struggle. But the dominant tastes are dominant precisely if lifestyles are regulated in a common value and norm system. If food diets between religions are relatively independent from each other, they are not the product of a common cultural setting. In that case, the tastes of some fractions can be considered to reflect “cultural autonomy” (Grignon and Passeron 1989). In the Indian case, the extent to which the Hindu food ethos is the dominant one for all religious minorities is debatable.

Further, characterizing the changing social structure appears essential when one wonders whether symbolic capital is waning over time, as one would expect from the dominant theory of social change. It would be replaced by the increasing importance of economic capital or cultural capital, at least in some fractions of the social space. Besides, the relational property of the social space outlines that practices of different fractions might change over time. However, dynamics of the social space have not been much taken into account by Bourdieu (1984). We nonetheless get inspired by a familiar concept to add the time dimension to social space framework, the one of structural homology. This concept questions the relative unity of different lifestyle domains and to which extent they are structured similarly. We suggest using the term *temporal homology* to refer to the social proximities and oppositions of individuals and food practices in social space over different periods in order to interrogate the similarities of the Indian social structure of food practices over time.

DATA AND METHODS

The Challenges of Quantitative Sociology on Indian Society

My empirical analysis is based on the Household Consumer Expenditures surveys of the NSSO. They are notably used in India for establishing the poverty lines. We use micro-data for five periods from 1983 to 2012.⁶

⁵ See Vaid (2012) for a statistical analysis of the caste-class association in India.

⁶ The five surveys correspond to the 43rd round (1987–1988), the 50th round (1993–1994), the 55th round (1999–2000), the 66th round (2009–2010), and the 68th round (2011–2012). The 38th round (1983) is not included in the analysis since the education-level variable is not present.

It is worth mentioning certain difficulties one might have in collecting sample representative data in an economically emerging society as large as a billion inhabitants. For instance, the rich are more likely to be missed in these surveys, because their strategies of residential exclusion make them more difficult for investigators to reach. Also, the poorest, who do not have a fixed abode, might be missed by investigators. These issues can still be corrected by an accurate weighting of the sample (Deaton 2001). More worrying, Lee (2015) reveals, based on an ethnography of census investigators (who often belong to high castes), that they sometimes modify their respondents' answers to fit their own conceptions. The extent of such a bias is hard to quantify, but regarding meat consumption, it might be problematic. Indeed, Natrajan and Jacob (2018) attempt to compare aggregate beef consumption levels with production levels and conclude to important underreporting issues in the NSSO data.

For this analysis, it is hardly possible to correct these biases. But recalling them highlights that the social tensions regarding meat eating are present in the survey collection itself. In a word, the necessary reflexivity adopted by the sociologists when mobilizing data reinforces the interest they might have on the topic, while concluding more cautiously on their results. Overall, the biggest challenge they face is to be able to mobilize relevant statistical categories to make sense of the social world they observe.

A Typology of Nine Meat Diets

Based on the monthly household budget records, we have constituted nine meat diets differentiated by the consumption of foods of animal origin—that is, the consumption of milk, eggs, fish, chicken, mutton,⁷ pork, and beef.⁸ Figure 1 shows the distribution of the diets in the population. This typology is based on the consumption of goods from animal origin that are consumed within the household.⁹ Hence, our classification misses the consumption of animal products outside the home (e.g., in restaurants or *dhaba*, roadside restaurants).

That being said, the home food diets distribution reveals that lacto-vegetarians (vegans eating milk products) are the most numerous over the studied period from 1983 to 2012 and form about a third of the population. On the other hand, ovo-lacto vegetarians (vegetarians eating both milk and egg products) remain in low proportions (between 1.7% and 3.1%). On the contrary, the proportion of the population that does not consume animal product diet clearly diminishes over the period (from 12.3% to 3.6%), which suggests a massification of the consumption of animal products, to be put in perspective given the stability of the lacto-vegetarian diet. It is important to see that the nonanimal-product diet, as will be demonstrated later, refers more to the forced deprivation of animal proteins due to a lack of

⁷ In the NSSO methodology, “mutton” refers both to the meat of goat and sheep.

⁸ In the NSSO methodology, “beef” refers simultaneously to the meat of cow, bullock, and buffalo, although it is the third that is the most largely consumed.

⁹ This typology is based on the typology developed by Fourat (2015) that we have completed since she was focusing on Hindus and Jains.

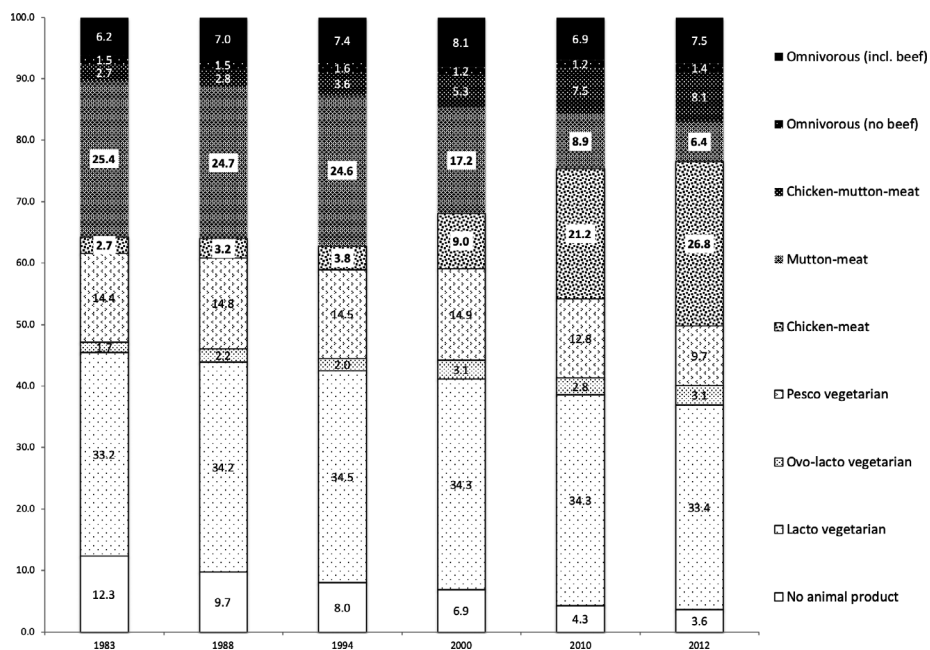


Fig. 1. Distribution of Food Diets by Year
Source: Consumer Expenditure Survey, NSSO.

economic resources rather than to an informed and consciously food lifestyle—the vegan movement, which is barely spread in India.¹⁰

Whereas the share of chicken-meat diets (diets that include only chicken as meat) increases over the period (from 2.7% to 26.8%), the share of mutton-meat diets (diets that include only mutton as meat) decreases, which is consistent with the literature suggesting a symbolic inversion of status between mutton and chicken (Bruckert 2018). Finally, the share of omnivores with and without beef (households that might consume all animal products) is remarkably stable over time, but the share of chicken-and-mutton-meat diets (diets that include both chicken and mutton but not pork or beef) increases over time (from 2.7% to 8.1%).

In the end, this broad description of animal-product-consumption practices shows that even if there are important variations in the meat diet distribution over time, the transition from vegetarianism to nonvegetarianism can be relativized thanks to this more precise typology.

Caste, Standard of Living, Education, and Residence Area

My analysis focuses on four social position variables, summarized in Table I with their distribution in the last surveyed period. Caste is apprehended statistically

¹⁰ This is partly explained by the fact that vegan diets with proper caloric intake and proteic balance remains expensive; see “Going Vegan Is a Healthy Option, but It Won’t Work for Much of Middle-Class India,” *Scroll.in*, December 30, 2018 (<https://scroll.in/article/901720/going-vegan-is-a-healthy-option-but-most-indians-cant-afford-to-give-up-chicken-for-almond-cheese>).

Table I. Summary of Social Positions in 2011–2012

Variable	Modality	Share (%)
Religion/caste	<i>Hindu middle/high</i>	56.1
	<i>Dalit</i>	17.6
	<i>Adivasi</i>	7.8
	<i>Muslim</i>	13.6
	<i>Christian</i>	2.2
	<i>Sikh</i>	1.6
	<i>Buddhist</i>	0.6
	<i>Jain</i>	0.3
	<i>Unknown</i>	0.2
	Residence area	<i>Urban</i>	28.6
<i>Rural</i>		71.4
Education	<i>No schooling</i>	45.5
	<i>Primary/Middle</i>	27.6
	<i>Secondary/Higher</i>	18.2
	<i>Graduate+</i>	8.6
	<i>Unknown</i>	0.1

Source: Consumer Expenditure Survey 68th NSSO 2011–2012.

by the record of official categories that benefit from reservation policies in India—namely, the Scheduled Tribes (which correspond to the Adivasis, low tribal castes), the Scheduled Castes (which correspond to the Dalits), and the Others (which I call here the middle and higher castes),¹¹ and I use these categories to segment the Hindu population.¹² This classification appears quite limited, but a more refined caste nomenclature from large-scale statistical surveys is not available. In particular, it does not differentiate Brahmins from other castes and it aggregates the “twice-born” (it includes three varnas: Brahmins, Kshatriyas, and Vaishyas), symbolically “purer” and the lowest varna (the Shudras); however, running my analysis on this simple segmentation already offers interesting insights. Other religions include Muslims, Christians, Sikhs, Buddhists, and Jains.

The second variable measures the standard of living, captured by the household total expenditure level divided by the number of household members (MPCE stands for monthly per capita expenditure), a common measure in surveys in developing countries (Deaton 2001). This variable is divided in deciles for practicalities. Although it is not a perfect proxy,¹³ in absence of income variable it is certainly the

¹¹ For precisions on reservation policies in India, see Jodhka 2015. For the debates on the inclusion of caste in statistical surveys, see Deshpande and John 2010. The category of the Other Backward Classes is not included in the analysis since it is available only from 2000 onward in the survey.

¹² I prefer the more common terms *Adivasis* and *Dalits*, rather than *Scheduled Tribes* and *Scheduled Castes* which are more administrative categories. I am aware that caste segmentation and official categories are not limited to the Hindu population, but it is less relevant when looking at food practices, which is why Dalits and Adivasis are here only Hindus.

¹³ Three issues can be outlined in the use of the MPCE variable. The first one is that the consumption unit does not take into account the different consumption needs depending on the family structure and on age of individuals. However, since no conventional scale has been mobilized in India, I do not implement any (Deaton and Zaidi 2002). The second one is that since I measure standard of living through consumption, I do not capture well the wealth gaps between the richest fractions who save a higher proportion of their income. The third one is that MPCE can be considered to a certain extent as an endogenous variable when working on consumption practices. Bearing all these issues in mind, I still rely on this variable, convinced by my results.

most appropriate to measure the economic capital of households (Deaton and Zaidi 2002).

The third variable captures the education level of the household head, which is a measure of institutionalized cultural capital. For one, the massification of education in India needs to be acknowledged and so does its growing importance in social mobility (Vaid 2018), redefining social status ladders. Finally, the fourth variable differentiates households depending on their residence area, rural or urban.¹⁴ The residence area also marks a specific disposition in food practices since it is clearly linked to the structure of opportunities: urban households have easier access to animal-product shops and living in an urban setting is associated with modernization.

Mobilizing Factor Analysis for Temporal Homology of the Social Space

In order to measure temporal homology in meat-eating practices in the social space, I mobilize a version of multiple factor analysis (MFA) (Bécue-Bertaut and Pagès 2008; Escofier and Pagès 1994, 2008). This method has rarely been used in sociology except for the recent empirical investigation of structural homologies between different cultural domains in the French context (Robette and Roueff 2017). Drawing from this research, I mobilize it here to observe the temporal homology of the food diets and the structural transformations between the social positions and the food diets.

As in classical factor analysis, I analyze tables where rows are individuals and columns are variables. Here, individuals are not the households of the different surveys but a classification of the households based on the four social variables that the literature stresses on to differentiate food habits—namely, the religion and the caste, the standard of living, the education level and the residence area. By intersecting the modalities of these different variables, I obtain a common classification (of 787 items) for all the studied period.¹⁵ The columns are the nine meat diets. Hence, the table on which the analysis is performed is based on the stacking up of the five contingency tables obtained on the five successive iterations of the survey, as sketched out in Table II. In addition, supplementary rows are added by calculating the diet distribution for each modality of the single column variables.

The particularity of MFA is that columns are structured into groups (here, the groups are the five different years of the analysis). Separate factor analyses are conducted on each group (here, Correspondence Analyses [CA]). The MFA combines the different groups on the same factorial space by performing a weighted principal component analysis (PCA) where variables of each group are weighted by the square root inertia of the first dimension of each CA. This procedure allows the comparison of the different factorial spaces in a common space, called global space.

¹⁴ Note that geographical differences (regional segmentation) are accounted for as supplementary variables in the presentation of the results.

¹⁵ Several checks have been conducted to see whether the classification is robust for the study of the populations. I have conducted the analysis by removing the rows that had the lowest weights in the population, or by taking into account only the rows that represented more than 90% of the population. All of the analyses lead to the same results. The R code used for this analysis is available on request.

In addition to the usual statistical indicators mobilized in factor analysis, specific tools help to observe the homology between the different year spaces. First, the RV statistic, an indicator of the degree of homothety between two factor clouds (Escofier and Pagès 2008:191), measures the association between the dimensions of the global space and the separate year spaces. Second, the position of partial individuals—that is, of individuals computed only in relation to one year group—are also plotted on the global space. This allows me to check whether two individuals who are structurally similar according to one year group are also similar according to another year group, and inversely, whether two individuals, structurally opposed according to one year group, are also opposed according to another year group—in other words, whether the main lines of food diet segmentations are changing over time.

RESULTS

A Bidimensional Structure of the Social Space

The first two axes account for 65.2% of the variance in the original tables. Axis 1 is clearly the strongest dimension, summarizing 45.3% and Axis 2 summarizing 19.9%, and so I concentrate on these two axes to interpret the social space. On each of the figures (Figs. 2 and 3), the column modalities (food diets) that have a contribution higher than the average contribution are plotted in bold.¹⁶ Since plotting all row modalities (classification of households) would lead to illegible factor spaces, I plot the supplementary modalities computed from each of the single variables.

Symbolic Capital: “Pure” and “Impure” Food Diets

The first axis (Fig. 2) distinguishes between the lacto-vegetarian diets (left) and the omnivorous diets with beef (right) for each period. This axis contrasts a “pure” diet with an “impure” diet in the sense of the Hindu orthopraxis—that is, in the eyes of the culturally dominant Brahmins. We would therefore expect to see an opposition between the Hindu high and low castes. However, this is not exactly the case here since the axis reveals more a religious than a caste opposition. We find the Hindu middle and high castes on the left, but on the right are located Christians and Muslims, and to a lesser extent the Buddhists. Moreover, we also observe that the most extreme left-located positions are Sikhs and Jains.

In fact, we can well interpret this axis as the expression of Hindu orthopraxis, acting as symbolic capital, insofar as the ethos of the Hindu diet constitutes the dominant ethos. Lacto-vegetarianism, a diet combining no meat protein but

¹⁶ Robette and Roueff (2017) prefer an interpretation of the association of modalities with the axes using the “rule of thumb” of Le Roux and Rouanet (2010), where the most associated modalities are those whose coordinates on the axis exceeds 0.5 in absolute value. This criterion is not privileged here, because I consider that using the contribution does not pose a problem if the groups are balanced in their contribution, while the use of the coordinates is more arbitrary, even if the interpretation does not differ substantially in either case.

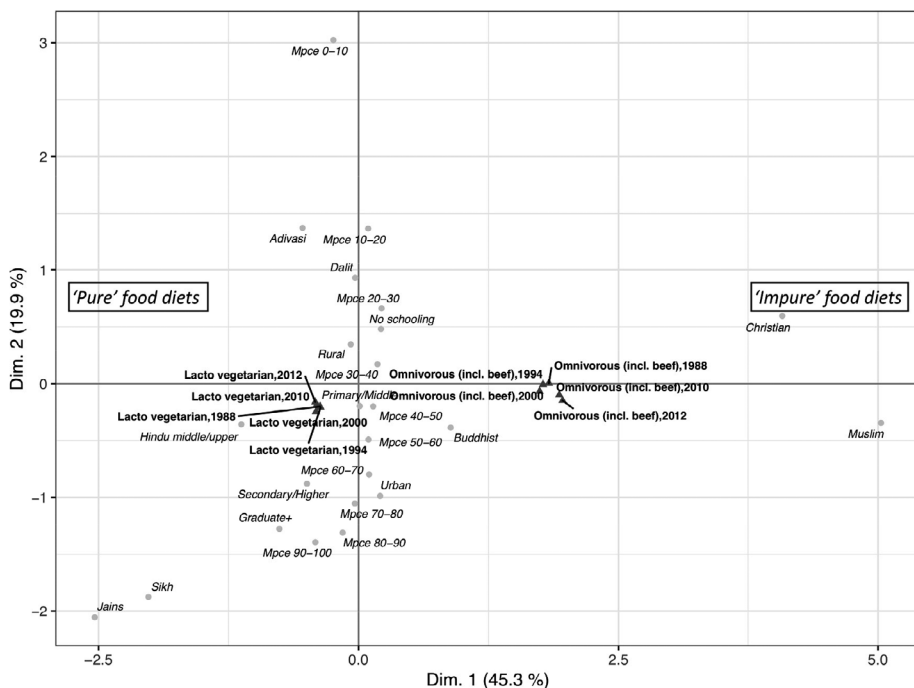


Fig. 2. Social Space With Food Diets Most Contributing to Axis 1
Source: Consumer Expenditure Survey, NSSO.

providing animal proteins by dairy products, constitutes the modal diet Hindus of high castes.

Interestingly, Muslims, Christians, and Buddhists are much more distant from Hindu middle and high castes than Dalits and Adivasis. Slightly more than one-third (34.2%) of Muslims were eating beef in 1983; they are 42.0% in 2012. Religion here points to a certain cultural autonomy (Bourdieu 1984)—that is, Hindu food values do not appear to influence other religious food diets, since religious and food diet positions are so distant from each other. On the contrary, the barrier of untouchability marks a distinction among Hindus, even though much less important than religion. Notably, Dalits (and also Adivasis) seem to be between two worlds; on the one hand, they are more often meat eaters than other Hindus (in 2012, 51.0% eat meat as compared to 41.5% of Hindu middle and high castes), but on the other hand, they are far more often vegetarian than Muslims or Christians (49.0% of Dalits are vegetarians as compared to 15.6% of Muslims and 17.9% of Christians).

Overall, this axis outlines how the cow has become a “potent symbol of religious difference” (Chigateri 2008) and how lacto-vegetarianism is a social marker of Hinduism. Since the nineteenth century, beef meat abstinence has become a rallying call of Hindu nationalists, who conceive Indian nationality to be conflated with being Hindu. With the cow being one of the few common symbols of Hindus, caste

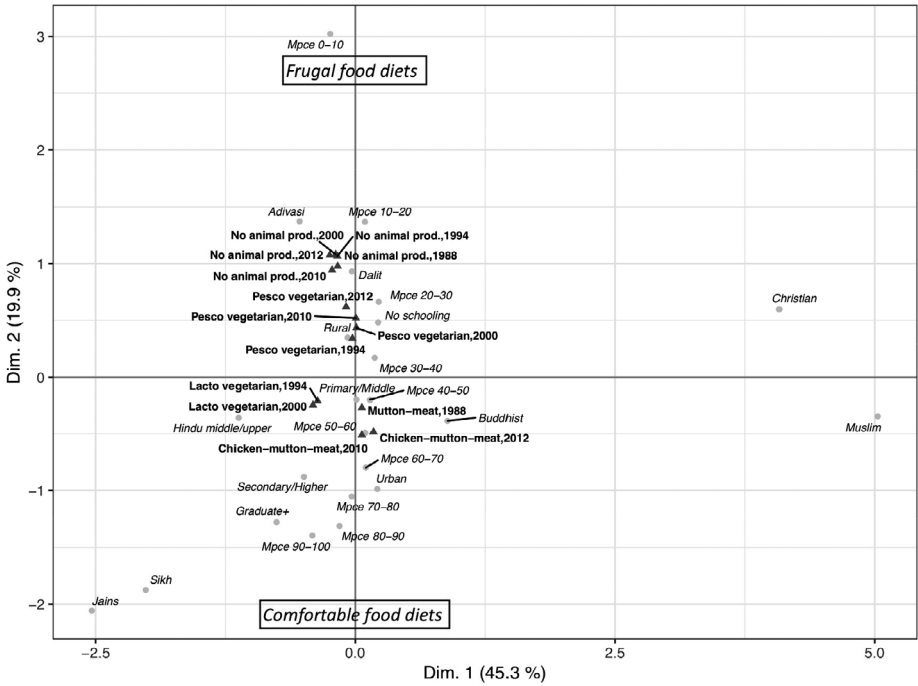


Fig. 3. Social Space With Food Diets Most Contributing to Axis 2
 Source: Consumer Expenditure Survey, NSSO.

distinctions related to food seem to be less salient and religious polarization is more visible. Meat is indeed the container of “disgust” based on the stereotypical diets of Muslims by Hindus, which fuels their stigmatization (Muslims are portrayed as the ones slaughtering animals and are thus considered as cruel) and might become a justification for violence toward Muslims (Ghassem-Fachandi 2010). But the Hindu discourse of animal nonviolence, unified by this “hyperbolic vegetarianism,” is based on the moral and cultural values of high castes.

Economic Capital: Low-Cost and Expensive Food Diets

The second axis (Fig. 3) is very clearly linked to the standard of living, the poorest households being at the top and the richest at the bottom. The observed differences are higher between the lowest deciles and particularly between the first and second decile, indicating that dietary differences are more socially marked at low levels of economic capital. Moreover, the Adivasis and the Dalits are linked to this dimension, the distinction between them and Hindus of intermediary and high castes being more visible on this axis. This is not surprising since the former have poorer socioeconomic situations than the latter (Deshpande 2005). This position reminds us that the distinction between castes is not only a question of symbolic capital but also of extremely strong economically based distinctions.

Besides, this axis is also correlated to the cultural capital and to the residence area (at the top, rural and less educated households tend to be less affluent, and it is the opposite at the bottom), which is consistent with the analysis of the social space of household budgets in India (Ferry, Naudet, and Roueff 2018).

Finding cultural capital correlated to a different axis than symbolic capital also shows that religious and caste differences are also present at higher education levels. As illustrated in an ethnography of the Indian Administrative Service school,¹⁷ whereas the formation promotes the development of an “esprit de corps,” social ritual distinctions reappear precisely during eating times with the vegetarian and nonvegetarian divide characterizing commensality (Benbabaali 2008). Hence, educational institutions do not provide food cultural legitimacy, as one could expect in the modernization scenario where achieved status would matter more than ascribed identities, but rather religious status matters more. A similar interpretation can be drawn from the urban-rural orthogonality with caste and religion: even though one would assume that urbanization as a key process of modernization would be associated with a lower rate of conflation between ascribed identities and food, this is not the case.¹⁸

This second axis distinguishes between the nonanimal-product diet and pesco-vegetarian diet at the top for all the periods (except in 1988 for the pesco-vegetarian diet) and vegetarian diets including mutton meat (in 1988), lacto-vegetarian diets (in 1994 and 2000), and omnivorous diets (though without beef and pork, in 2010 and 2012) at the bottom. The axis thus distinguishes between diets without animal product (except for fish, a low-cost source of protein) for those households with low economic capital and diets including animal products for households with high economic capital. On average, households who do not consume any animal product or are pesco-vegetarian spend less money on their food basket than mutton meat eaters, lacto-vegetarians, and omnivorous households (in 2012, 628 and 551 INR in a month per capita versus 738, 743, and 911 INR), which confirms that the former diet reflects a more frugal way of living.

Interestingly, it is on this axis and for the richest households that one finds a greater variety of food diets depending on the period, spanning both the bottom-left (with the lacto-vegetarian diets) and the bottom-right (with the meat diets) corners. This shows that diets are relational in the social space, since different diets distinguish the richest in the 1980s and the 2000s.

The Geography of the Social Space

Do symbolic and economic distinctions hold irrespective of the regions of residence on the Indian subcontinent? Is the geographic space correlated to a certain extent to the social space just described? To answer these questions, I plot the combination of the region of residence with the caste and religious identity

¹⁷ Indian Administrative Officers are senior civil servants, highly prestigious positions accessible after passing a competitive examination.

¹⁸ See notably “Vegetarianism in India Has More to Do With Caste Hierarchy Than Love for Animals,” *Scroll.in*, April 6, 2017 (<https://scroll.in/article/833178/vegetarianism-in-india-has-more-to-do-with-caste-hierarchy-than-love-for-animals>).

(Fig. 4). Irrespective of their region of residence, Hindu middle and upper castes, Jains and Sikhs, on the one hand, and Muslims on the other hand, are all located on opposite sides of the symbolic distinction axis. On the contrary, northwest and west Central Dalits, Adivasis, Christians, and Buddhists are located further on the left of this axis than their corresponding religion and caste mates living in the south, east, and northeast of India. This shows that Dalits, Adivasis, Christians, and Buddhists tend to be lacto-vegetarians more often when they reside in the northwest and west central regions as compared to the south, east, and northeast regions. Hence, depending on their region of residence, these social groups are differently affected by the social norm of Hindu orthopraxis. This suggests that the Hindu orthopraxis norm is more salient in the northwest and the west central regions—that is, in the Gangetic plains and its surrounding areas. This results in a more vegetarian northwest and west central India as compared to the south, east, and northeast of the country. Indeed, in the north and northwest, diets are more homogeneous and tend to be more lacto-vegetarian (61.0% and 37.8% of inhabitants in the northwest and west central regions, respectively, whereas it is only 5.2% in the northeast, 11.9% in the east, and 13.3% in the south).

On the whole, the portrait of the diet social space appears more precise when looking at the geography of diets: symbolic and economic distinctions are more or less salient depending on spatial location. The geographic divide on the salience of Hindu orthopraxis is reminiscent of the different ways lower castes have historically aimed at improving their social status: either by emulating the practices of the Brahmins, reinforcing Hindu orthopraxis, or by claiming practices departing from the dominant norms, and hence contesting this social order. In other words, it highlights the distinction between the processes of “sanskritization” more prevalent in the north, which does not challenge Brahmin dominance, and “ethnicization” in the south, which contests hierarchical values of caste (Jaffrelot 2000), through counter-cultural discourses among Dalits, primarily based on Ambedkar’s work as a Dalit leader, advocating and celebrating beef consumption as a cultural right (Chigateri 2008; Natrajan 2018).

The Upholding of Religious and Caste Practices Irrespective of the Standard of Living

The analysis also allows me to plot the combination of religion, caste, and standard of living positions on the social space (Fig. 5). Several points deserve to be commented here.

First, whereas Jains and Sikhs remain located in the same corner irrespective of their standard of living level, all other religious and caste groups are subject to variations of positions depending on their affluence. Indeed, Jains and Sikhs are almost all lacto-vegetarians (more than 98% of them all over the period). Jains do not appear to rely on nonanimal-product diets as supported by Jain activists but rather to incorporate animal proteins through milk products in their diets. On the contrary, other groups are clearly distinguished in their food diets by economic capital, between diets with and without animal proteins.

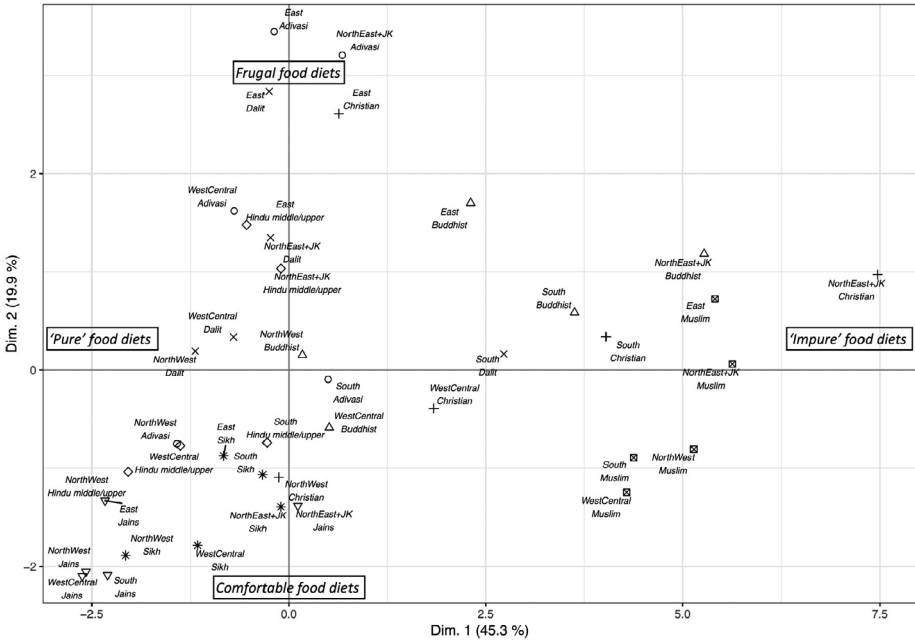


Fig. 4. Projection of the Region of Residence by Caste and Religion. Regions are divided between Northwest (Delhi, Punjab, Haryana, Rajasthan, Uttar Pradesh, Uttarakhand, Chandigarh, Gujarat, Himanchal Pradesh), West Central (Maharashtra, Goa, Madhya Pradesh, Chhattisgarh), East (West Bengal, Orissa, Bihar, Jharkhand), South (Tamil Nadu, Kerala, Andhra Pradesh, Karnataka), and Northeast (Sikkim, Assam, Manipur, Tripura, Mizoram, Nagaland, Arunachal Pradesh, Meghalaya, to which Jammu and Kashmir has been clubbed).
Source: Consumer Expenditure Survey, NSSO.

Second, moving from the poorest to the richest households, the distance between religious groups appears to be increasing on the symbolic dimension. This suggests that symbolic distinctions between Christians, Muslims, and Buddhists on one side, and Hindus on the other, are the most important for richer households, or that cultural autonomy is in fact more visible at these levels of affluence precisely because basic needs are satisfied. Caste groups remain equally distant on the second axis irrespective of their standard of living level.

This needs some qualification, though. Indeed, for the richest deciles, Muslims and Christians are not that distant from Hindu middle and upper castes (the distance on the right reduces by 0.62 SD¹⁹ for Muslims and by 0.52 SD for Christians, but the distance with Hindu middle and upper castes remains higher than 6 SD). This trend is also visible for Dalits and Adivasis, although the trend is not as clear (and lower than 0.5 SD). This suggests that these groups would tend to comply with the dominant norms of Hindu lacto-vegetarianism when they are richer, and hence

¹⁹ A distance of 1.0 for column categories equals a distance of 1.0 SD between the same mean category points for row categories. As a rule of thumb, a distance higher than 0.5 is deemed large and higher than 1.0 is very large.

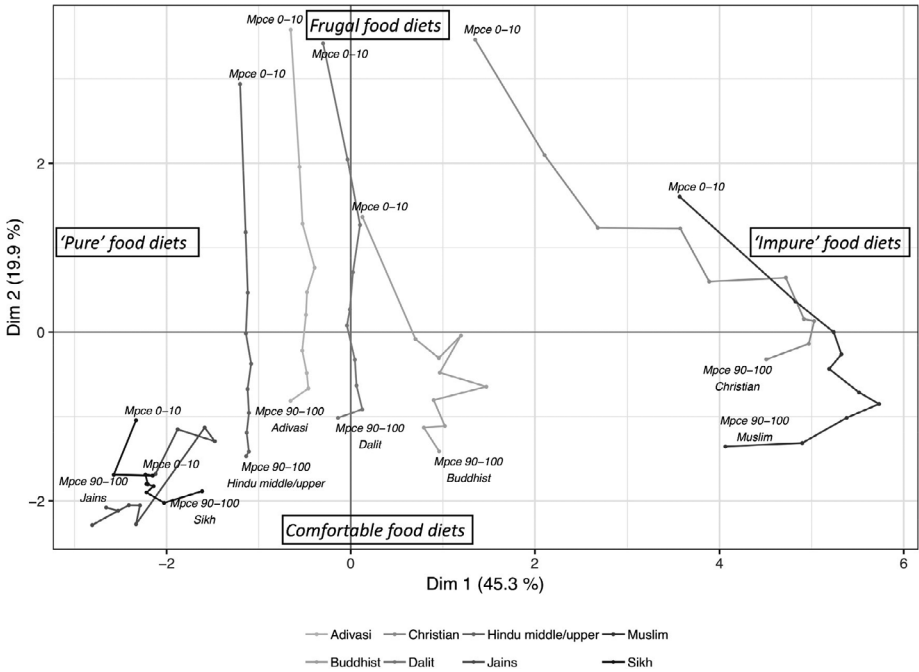


Fig. 5. Projection of MPCE Distribution by Caste and Religion
 Source: Consumer Expenditure Survey, NSSO.

my assumption on religious cultural autonomy needs to be looked at depending on the affluence level.

A Changing Social Structure of Food Diets Over Time?

Since the most distinguishing food diets are the same for each period except for the households with higher economic capital, this hints at the stability of the social structure of food diets over time. This is confirmed when examining two indicators specific to the MFA (Table III). The RV statistic is close to 0.9 for all the periods, showing that the representation by the factor analysis of the association between the food diets and the social positions is consistent for the whole period. Examining this social structure more specifically on the first two axes, we observe that the correlation is very high and stable on the first axis of symbolic capital and diminishing slightly over time for the second axis of economic capital, although remaining high.

This is consistent with the fact that distinctive food diets are changing for the richest households over time. In the meantime, we have noticed how the non-animal-product diet is typical of the most impoverished households, which cannot afford any protein. Since the share of this diet in the population diminishes over time, thanks to a relative improvement of living standards of households over time and to a better access to the distribution of animal proteins, and in particular of

Table II. Simplified Table Used for the MFA

	Group 1988			Group 2012		
	Diet 1	...	Diet j	...	Diet 9	...
<i>Active rows</i>						
Household type 1	$f_{(1,1),1988}$		$f_{(1,j),1988}$		$f_{(1,9),1988}$	$f_{(1,j),2012}$
...						
Household type i	$f_{(i,1),1988}$		$f_{(i,j),1988}$		$f_{(i,9),1988}$	$f_{(i,j),2012}$
...						
Household type 787	$f_{(787,1),1988}$		$f_{(787,j),1988}$		$f_{(787,9),1988}$	$f_{(787,j),2012}$
<i>Supplementary rows</i>						
MPCE 0-10	...		...		...	...
...						
MPCE 90-100	...		...		...	...
Other supplementary rows	...		...		...	...

$f_{(i,j),Year}$ represents the frequency of type i households that are classified within the diet j category in the given year.

Table III. Indicators of Temporal Homology

	RV	Correlation	
		Axis 1	Axis 2
1988	0.903	0.956	0.955
1994	0.936	0.974	0.971
2000	0.931	0.972	0.966
2010	0.879	0.951	0.917
2012	0.879	0.950	0.883

The RV statistic is the normalization of the Lg coefficient, between 0 (no association) and 1 (full association), to measure how all the variables of a group are linked to the others. The correlation coefficients are the coordinates of the partial analyses (CA) in the weighted PCA.

milk products (Kumar, Staal, and Singh Dhirak 2011), it is also a reason for the relative waning of the economic capital dimension.

But if temporal homology is extremely high in terms of symbolic capital, this is mainly due to the relative stability of Muslim diets. Dalits on the other hand seem to be gradually adopting the dominant Hindu food diets, providing empirical ground for sanskritization of Dalits. Indeed, whereas in 1983, 6.8% of Dalits were eating beef, this share has reduced to 4.2% in 2012 (as a point of comparison, Hindu middle and high caste beef consumers remain very few, between 0.5% and 0.6% during the whole period). These changes may be linked to the economic structure. The logic of eating beef for Dalits (and to some extent also for Adivasis and Muslims) is partially linked to their position in the caste structure, where traditionally they are in charge of taking care of dead cattle in villages as it is an “unclean” occupation (Jodhka 2002). Their economic vulnerability leads them to take advantage of this task by salvaging as much as possible from the animal, including the flesh. Although this traditional structure still exists, it is clearly diminishing partly due to agriculture mechanization and growing fluidity (even though limited) in occupational traditions (Vaid 2014). But we also note that Dalits’ withdrawal from beef consumption has been higher in urban areas (from 7.5% to 3.0%) as compared to rural areas (from 6.7% to 4.5%). This puts the occupational shift explanation into perspective, and it also points out that in the anonymous environment of an urban setting, Dalits might conform to the beef abstinence norm and wear the “masks of purity” (Waghmore and Contractor 2015), by adopting food practices from the culturally dominant upper castes. Again, contrary to an understanding of urbanization as linked to modernization and an increase of meat consumption, this suggests that ascribed identities of caste and religion are very salient in urban settings, where the symbolic distinction of vegetarianism is still very dominant.

Besides, while beef meat remains a by-product of a largely decentralized milk production industry and mutton and goat meat production remain decentralized as small-scale animal husbandry that can hardly be industrialized, chicken production has seen a considerable industrialization since the 1980s, from local farm production to a government-subsidized poultry industry dominated by three large corporations (Sugana, Shanti, and Vencky’s) (Bruckert 2018; Mehta and Nambiar 2007). As a consequence, the relative price of chicken meat has reduced, becoming a highly

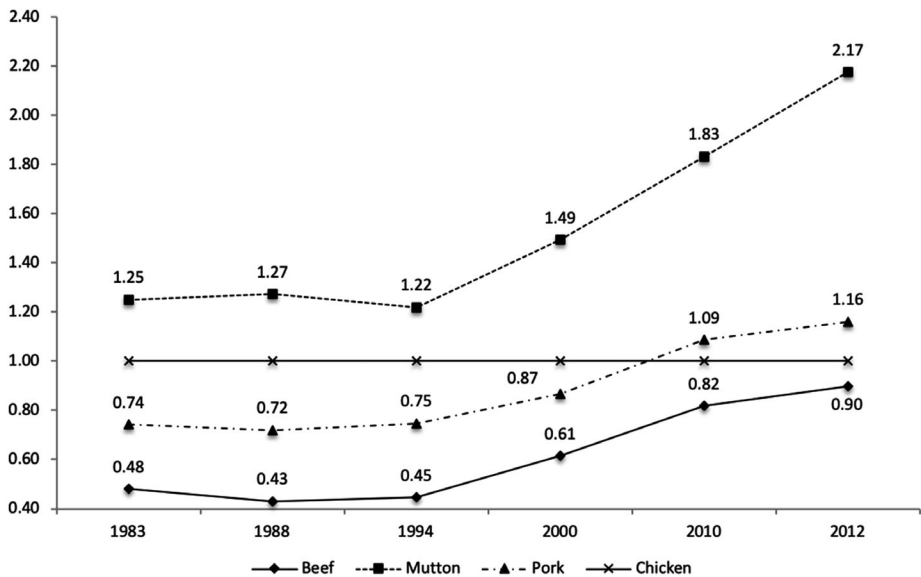


Fig. 6. Relative Price of Meats as Compared to Chicken for Each Year

In 1983, one kilogram of beef cost 0.48 times less than one kilogram of chicken, as compared to 2012, when it cost 0.90 times less. The relative prices are computed using the NSSO data by dividing the quantity of meat consumed by the amount paid, setting this value to 1 for chicken.

Source: Consumer Expenditure Survey, NSSO.

competitive economic choice. Although beef and pork have long been known to be the cheapest sources of animal protein, they have become less so since the 1980s (Fig. 6). Mutton meat, which was already more expensive than chicken meat in the 1980s, became relatively more than twice as expensive in 2012. Although the middle position on the second axis of the social space (and its lower contributing level) of the chicken meat diet marks it as a ubiquitous diet, the share of chicken consumers has increased over the period, and more so among Dalits (from 4.0% to 40.4% for Dalits and from 4.7% to 34.7% for Hindu middle and high castes). This shows a catch-up effect due to substitution in animal protein origins for Dalits. The economic attractiveness of chicken over mutton also partially explains the relative waning of mutton consumers (Fig. 1). Should we then ultimately conclude to the preponderance of material factors over symbolic ones? Both operate, in fact, simultaneously such that consumption practices are the products of structures of production and of the dynamic construction of social tastes. Indeed, for Hindus, chicken was until the 1980s associated with Muslims and was devalued because of its own omnivorous diet, but possibly because of the more global health-positive valuation of “white meat,” it is getting “deritualized” (Bruckert 2018). Meanwhile, the devaluation of mutton and goat meat as smelly, hence noticeable, and engendering “disgust,” associates it more evidently with a stigmatized Muslim diet, although not as much as beef (Ghassem-Fachandi 2010). But mutton and goat meat remain a prestigious food item (Bruckert 2018), as emphasized by their relative price. Hence, the observed dynamics are linked to changes in the economic structure, whereas at the

same time they are themselves the product of the symbolic distinctions of meat consuming.

CONCLUDING DISCUSSION

My contribution provides an analysis of the social structure of food diets taking into account the food transition model. In doing so, it suggests a framework studying social space homology over time. The symbolic distinctions and budget constraints both affect food diet segmentation on the lines of religion, caste, and standard of living. Two oppositions, one between beef and nonbeef meat diets and one between diets including animal products and without, segment the social space. These structural dimensions are largely stable over time.

The homology is so strong between beef eating and Muslims that it tends to squeeze all other socially segmented food diets. Beef consumption is both the most structuring and the most permanent distinction in the Indian social space of food diets. This explains why beef is symbolically mobilized to target minorities. Symbolic violence, if not physical violence, hence characterizes social relations to enforce cultural legitimacy. While Indian society is undergoing transformations of its social structure, with a relative upward mobility of lower castes (Vaid 2014) and increased power in the political realm since at least the 1990s (Jaffrelot 2003), the social status of middle and high castes can appear as threatened. The stigmatization of Muslims due to their food diets (Ghassem-Fachandi 2010) constitutes a manifestation of the permanent struggle for the Hindu middle and high castes to claim a Hindu cohesive identity, while maintaining their high position in the social order (Weber 2010).

Since 2010, at least 96 lynching attacks against caste and religious minorities have occurred in India based on the suspicion of beef slaughtering or eating. Perpetrated by *gau rakshaks* (cow protectors), these aggressions reveal a renewed use of the “sacred cow” symbol by high-caste Hindus at the expense of dominated populations and in particular Muslims, which have been the targets of 51% of incidents. If distance in the social space suggests cultural autonomy of food diets between religions, these attacks are precisely attempts from Hindu middle and upper castes to impose their food practices as the dominant ones (Ferry 2018). These attacks have been happening more often in the Gangeitic plains of North India, where we have outlined the predominance of the symbolic distinction of, which confirms our notion that this violence is a way to enforce cultural legitimacy. These attacks nowadays are intricately linked to the political agenda of Hindutva, a concept acknowledging Hindu supremacy over other religious minorities. Among the Sangh Parivar, the political family joining a galaxy of organizations supporting this ideology, political members have been vocal about placing vegetarianism and beef abstinence at the core of Hindu ideology—and by extension, the Indian identity. For instance, Manohar Lal Khattar, chief minister of the northern state of Haryana and part of the Bharatiya Janata Party (a party belonging to the Sangh Parivar) declared in 2015,

“Muslims can live in this country, but will have to give up eating beef.”²⁰ This, then, solidifies the assertion that Muslims are the “new untouchables” and that Dalits may, at least temporarily, be considered “pure” in the current situation (Waghmore and Contractor 2015), highlighting the dynamic social struggles reflected by meat practices.

In understanding food changes, social norms and social structure have been largely ignored by the transition models except for a few exceptions (Fourat and Lepiller 2015). Conversely, time is sometimes a challenging dimension when focusing on the social structure. Nonetheless, the articulation of both is indubitably necessary if one wants to better qualify “modernization” and how it differently affects societies. In particular, processes underlying it might well accommodate an existing social structure where symbolic capital is not bound to wane. Such a reading complicates a linear story of development but appears as a tremendous field for social stratification research to overcome the dead ends of models that prove inefficient in the current situation.

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²⁰ “Audio: Muslims Can Live in This Country, but Will Have to Give Up Eating Beef, Says Haryana CM Manohar Lal Khattar,” October 16, 2015 (<https://indianexpress.com/article/india/india-news-india/muslims-can-live-in-this-country-but-they-will-have-to-give-up-eating-beef-says-haryana-cm-manohar-lal-khattar/>).

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