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Mixed Diet in Europe

A Historical Overview

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Abstract

Aims: Successful health promotion in Europe depends on an adequate knowledge of everyday nutrition. An analysis of consumption structures and eating patterns is therefore a basic scientific task. This paper has two main aims: on the one hand it gives empirical data on European food consumption during the last 50 years. On the other hand it stresses the scientific problems of constructing and reflecting a 'diet' or 'everyday nutrition'. Methods: The paper starts with a discussion on the different levels of a 'diet' and gives some hints for an adequate analysis of an eating culture. Empirical data is presented, first of all consumption figures, then information on single 'national' dishes and last on meals in the former European Economic Community. Results/Conclusion: The empirical analysis shows the complex structure of European eating culture. Health promotion cannot be founded on simple consumption figures, because they do not reflect everyday nutrition in an adequate way. A successful policy needs to be founded on a detailed knowledge of dishes, meals and symbols of eating; and it has to reflect the problems of one-sided awareness of nutritionists and doctors.

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It is always a risk to read papers from different scientific cultures – terms and languages are different, theoretical background and methodological standards, too. But health and nutrition are fields too important to analyze and discuss them only from the point of view of natural sciences or applied social sciences. If we want to understand the principles of diet diversification and health promotion, we must combine resources of cultural and natural sciences.

As a historian, I am not only interested in empirical information on mixed diets in Europe. This topic is interesting, too, because we – as scientists – can reflect on the way we are constructing a specific understanding of food and eating patterns, which is often far away from everyday experience.

What Is a 'Diet'? Some Remarks on the Complexity of Eating Culture

What is a 'diet'? And what does it mean, when we are talking about 'diet in Europe'? It seems obvious that geography matters, but it is obvious, too, that this is only one criterion of characterizing a diet [1, 2]. To define the term in an adequate way, we must be aware of very different levels of eating patterns. The most common criteria of differentiation in modern societies are social ones. The diets of a manager, of a teacher, of a laborer or an unemployed citizen are different, but they are different on a comparable level. Other factors such as time could be added. On a personal level, this means the age or the generation of persons, while on a structural level, we must differentiate between seasons, feasts, weekdays and times of day. However, eating culture, of course, is even more complex. The different structures of households and families must be mentioned, as well as different religion and gender. Geographical or better regional criteria are another important group of factors in the complex world of eating culture. If we want to understand and explain diet diversification in Europe, if we want to improve health promotion, we must reflect on our analysis first of all. For this reason please have a look at figure 1:

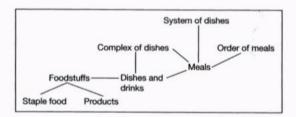


Fig. 1. Levels of analyzing a diet.

Figure 1 gives us terms, which constitute a diet in total. Perhaps you will miss terms normally used by nutritionists and doctors, especially calories and nutrients. But we have to recognize that from a cultural point of view, only specific elements of reality must be mentioned: human beings do not eat calories. Diets are not selected based on proteins, carbohydrates and fats. The regional differences of caloric intake in Europe are relatively low. They vary – with the exception of extreme climatic zones – only by some hundred calories [3, 4]. Diets may be founded on natural conditions, but at the same time they are always an expression of culture, of practical activity of man. Diets follow a specific cultural logic – which normally is different from scientific logic of nutritionists.

Diets are based on foodstuffs. These are no longer only stable foods, which were harvested, bought and prepared, cooked and eaten in our households. Today, most of them are products, a term, which stands for processed food sold through commercialized supply chains. Products and foodstuffs mostly become dishes, which implicates, that they are ready to eat. Dishes do not consist of foodstuffs only. The way of preparation, cooking and preserving techniques must be mentioned, the variations of ingredients, of spices, the preferred taste, the form and texture of dishes, and at least the linguistic expression. For example, it makes a difference in Austria, if you order Schlagsahne or Schlagobers cream. Dishes depend on the cultural context of their preparation and consumption. Drinks are dishes, too. And it is obvious that although we use only single terms, the number of variations is high. The regional structure of beer tastes is a good example [5, 6].

Dishes normally must be grouped for analysis. Then we have to look either to complexes of dishes, for instance of meat, milk or cheese dishes or we can explore systems of dishes, for instance, the wedding meal or the sweat bread at breakfast.

Complexes and systems of dishes consist not only of dishes, but of meals, too. Meals are based on the kind, number and sequence of dishes, which means objects, but most of all, the acting of human beings. This human acting can be, for instance, a specific form of behavior or communication. Meals are varying, because they are depending on the richness of human life, by being a part and expression of lifestyle. However, for analysis and comparison we can and must group and order meals. Then we can look, for instance, on daily, weekly or seasonal rhythms or on holiday or business meals.

Of course, it would be possible to differentiate this simple scheme. But even at this stage it can help to be concerned about different and perhaps unusual levels of analyzing a diet, levels, which often are excluded by epidemiological research. This perhaps can help to elucidate blind spots in our knowledge.

Changing Food Consumption Patterns in Europe since the 1950s

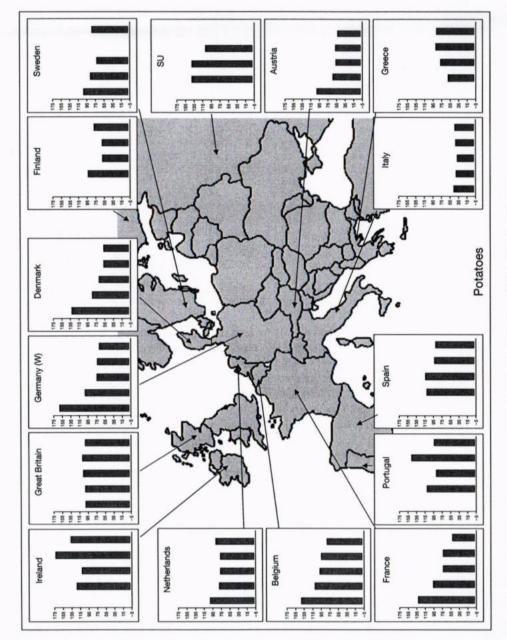
We start our historical analysis of European diets on a common level, on the level of staple foods. Diets are based on specific foodstuffs. Nations and regions are characterized by consumption patterns today and in history. Encyclopedias of the early 19th century summarized this quite simply: 'Nordic nations tend more to animal, southern more to vegetarian food. In general, southern and oriental nations tend to a relatively natural, moderate and simple

Table 1. Consumption of potatoes in Europe 1953/56-2001/02 [8-12]

State	Potatoes						
	1953/56	1970/71	1981/82	1994	2001/02		
Belgium	149.0	115.0	103	99.0	85.1		
Germany (W)	161.5	101.8	74	73.3	68.5		
Denmark	132.0	83.9	68	57.0	56.9		
Finland	n.d.	92.3	59	59.7	78.6		
France	131.7	96.0	73	72.6	50.9		
Greece	n.d.	58.9	77	87.4	86.1		
Great Britain	100.7	101.6	106	108.3	101.7		
Ireland	n.d.	123.1	111	171.9	136.9		
Italy	46.3	40.6	38	41.0	43.2		
Netherlands	106.9	84.6	82	81.8	93.2		
Austria	107.6	67.4	60	60.6	55.2		
Portugal	n.d.	109.8	89	145.5	93.6		
Sweden	102.8	86.4	72	n.d.	83.6		
Spain	n.d.	110.4	113	92.3	89.0		
SU	n.d.	138.0	138	107.0	n.d.		

way of consumption, not yet influenced by an overwhelming civilization' [7]. Although we would prefer a different language, this impression is basically right, even today. To obtain more precise information, we should use comparable data – this is our way of creating and communicating knowledge. But numbers, of course, are a specific technique of creating significance. In addition, numbers have only been gathered for a century in most European countries. Let us go back to the 1950s, when reconstruction of Western European economies was finished.

First we will analyze the consumption of three vegetarian foodstuffs; and even on a first glance we find significant national consumption differences (table 1; fig. 2a): For example, in the 1950s, Western German customers consumed 161.5-kilogram potatoes per year and head, while Italian customers ate less than a third [13]. During the last decades, potato consumption decreased in nearly all European countries, being part of a more general decline of the consumption of foodstuffs with complex carbohydrates. As a result, the national differences diminished during the last 50 years; but on a lower level they still exist and they are still important. Even today, Irish potato consumption is more than three times higher than the Italian one. In general, on the one hand we can find relatively high potato consumption figures at the British and Iberian Islands, in Middle and Northwest Europe. On the other hand the data of



Graphical representation of consumption of potatoes in Europe 1953/56-2001/02 [8-12]

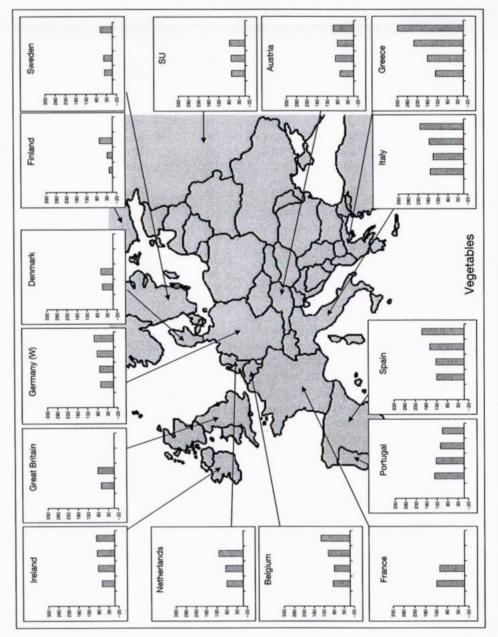
Table 2. Consumption of vegetables in Europe 1953/56-2000/01 [14-18]

State	Vegetables					
	1953/56	1970/71	1981/82	1994	2000/01	
Belgium	n.d.	85.1	79	110.7	144.9	
Germany (W)	n.d.	63.8	69	80.0	94.0	
Denmark	n.d.	53.1	61	n.d.	n.d.	
Finland	n.d.	16.1	25	63.1	n.d.	
France	n.d.	130.0	115	n.d.	n.d.	
Greece	n.d.	139.4	180	246.9	327.4	
Great Britain	n.d.	62.6	79	n.d.	n.d.	
Ireland	n.d.	62.4	82	87.7	90.2	
Italy	n.d.	168.5	154	175.4	220.2	
Netherlands	n.d.	80.6	86	118.5	n.d.	
Austria	n.d.	66.5	90	79.8	100.4	
Portugal	n.d.	141.9	134	112.9	104.9	
Sweden	n.d.	40.1	43	n.d.	58.8	
Spain	n.d.	129.2	133	162.1	198.1	
SU	n.d.	67.5	68	77.0	n.d.	

France, the Scandinavian States and the other Mediterranean states are below average.

The picture will be different, if we look at the consumption of vegetables (table 2; fig. 2b). Generally, vegetable consumption has increased significantly during the last 50 years. But we find clear south-north differences. The citizens of the Mediterranean states are consuming more than twice as many vegetables as their western and northern counterparts. Italians, for example, consume more than twice and Greeks more than a triple amount of vegetables than Germans. In France you can find an average level. Britons and Irishmen are consuming less and Scandinavians are clearly under average. In spite of all the improvements of free inner European markets and in spite of all the improvements of cold-resistant plants and glasshouses, we have to recognize that climate and regional cultivation still play an important role for everyday consumption. And it is obvious, too, that the diet of Mediterranean states is based on different foodstuffs as the diet of their Northern and Western European neighbors [19, 20].

This difference is also evident if we look at the consumption of drinks (table 3; fig. 2c). The grape product wine is consumed in significantly higher proportions in the Mediterranean states [22]. This concerns, first of all, red wine. In Scandinavia, the British Islands and in Northwest Europe, wine consumption is still something special even today. The consumption even of a wine-producing country like Germany is under the European average.



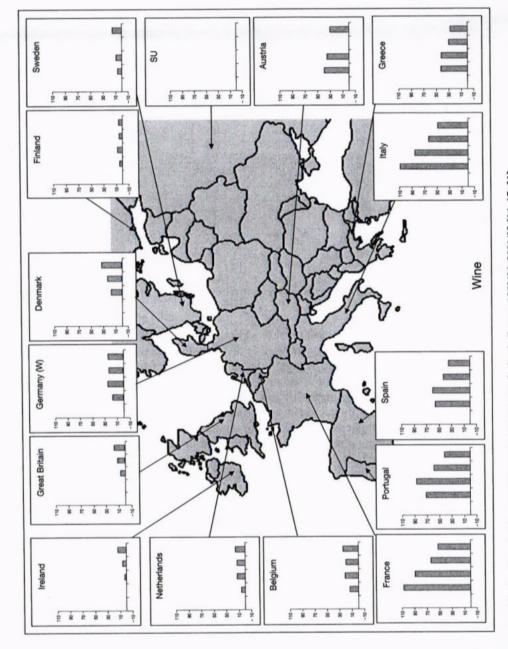
Graphical representation of consumption of vegetables in Europe 1953/56-2000/01 [14-18]

State	Wine					
	1953/56	1970/71	1981/82	1994	2001/02	
Belgium	n.d.	13.1	21	19.5	24.2	
Germany (W)	n.d.	17.5	25	23.3	24.3	
Denmark	n.d.	n.d.	17	23.1	32.8	
Finland	n.d.	4.3	8	5.5	6.1	
France	n.d.	107.4	89	63.5	52.5	
Greece	n.d.	42.4	42	30.0	27.3	
Great Britain	n.d.	n.d.	8	11.6	16.4	
Ireland	n.d.	n.d.	3	5.8	13.2	
Italy	n.d.	109.0	85	62.8	48.5	
Netherlands	n.d.	5.7	13	13.1	15.6	
Austria	n.d.	39.8	35	n.d.	30.1	
Portugal	n.d.	71.7	87	58.8	41.7	
Sweden	n.d.	6.3	9	n.d.	15.0	
Spain	n.d.	56.1	60	42.5	34.3	
SU	n.d.	n.d.	n.d.	n.d.	n.d.	

Interesting enough, the differences are decreasing relatively quickly. While in the Mediterranean states the consumption is decreasing, the figures of the other countries are increasing steadily. The trend to convergence is obvious, although the consumption patterns are still very different.

A similar development can be found if we look at the consumption of meat (table 4; fig. 2d). The great differences during the 1950s have diminished significantly. Of course we would find stronger regional differences, if we would analyze the different kinds of meat, but today meat consumption is relatively homogenous in Europe, with differences of only 58% between Great Britain and Spain in 2002.

The comparison of butter consumption (table 5; fig. 2e) shows that these convergence tendencies on a foodstuff level do not mean that there are convergence tendencies on a dish level, too. Fats play a typical and relatively traditional role in European diets. The overall consumption of fats is quite similar, but the specific fats are very different [28]. The example of butter again shows a strict separation between the Mediterranean countries Italy, Greece, Spain and Portugal on the one hand, and the other European countries on the other hand. Butter is consumed relatively seldom in Southern Europe, oils, especially olive oils, are dominating. But butter consumption is not homogenous in the rest of Europe. While consumption figures in France are on the top, the data of Scandinavian states are much lower, because of high margarine consumption.



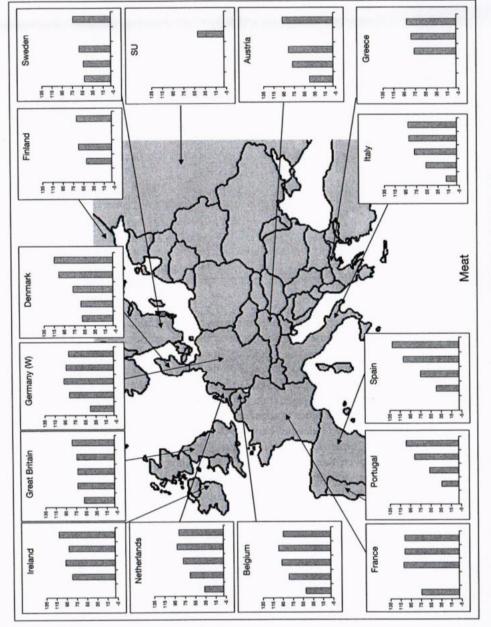
Graphical representation of consumption of wine in Europe 1953/56-2001/02 [14-17, 21]

State	Meat					
	1953/56	1970/71	1983	1994	2001/02	
Belgium	49.8	82.7	97	103.2	94.2	
Germany (W)	46.1	87.2	97	93.1	87.9	
Denmark	60.5	62.5	78	105.6	113.9	
Finland	n.d.	49.3	65	n.d.	68.6	
France	74.6	96.0	109	106.8	107.2	
Greece	n.d.	41.0	77	83.2	91.2	
Great Britain	59.8	72.3	72	73.3	82.6	
Ireland	n.d.	83.6	97	90.6	109.9	
Italy	19.4	57.3	79	89.4	90.5	
Netherlands	37.5	65.7	79	90.2	86.9	
Austria	45.3	78.7	86	n.d.	97.6	
Portugal	n.d.	33.7	57	87	103.4	
Sweden	51.2	53.8	62	n.d.	73.4	
Spain	n.d.	44.3	75	108.4	130.1	
SU	n.d.	n.d.	n.d.	49	n.d.	

Let me end my short statistical remarks on foodstuffs with a look at milk, which is both a drink and a food (table 6; fig. 2f). Again we can see decreasing consumption figures since the 1950s, but still significant national differences in Europe. But there is no reciprocal picture to the consumption of wine. Although northern and northwestern nations are consuming much more milk than southern ones, the picture is heterogeneous. In Spain, for instance, milk consumption is higher than in Germany. Although the figures are stressing specific consumption patterns of the Mediterranean nations once again, it is obvious that there is no simple north-south difference in Europe.

These findings are backed by the information of household budgets. Instead of consumption figures, they include bought foodstuffs and give a more precise picture of consumption patterns. Although it is obvious that waste figures are higher in more wealthy states, they underline the main trends of consumption, of traditional differences between European countries and the relative convergence of European diets on the level of foodstuffs [30–34]. Today the differences are much lower than after World War II, when every nation had its typical stereotyped eating patterns.

Investigations of agrarian economists show that there are dominant convergence tendencies in Europe and in the OECD on the level of foodstuffs. The consumption of eggs, meat, wine, sugar and sweets and – on a lower level of



Graphical representation of consumption of meat in Europe 1953/56-2001/02 [23-27]

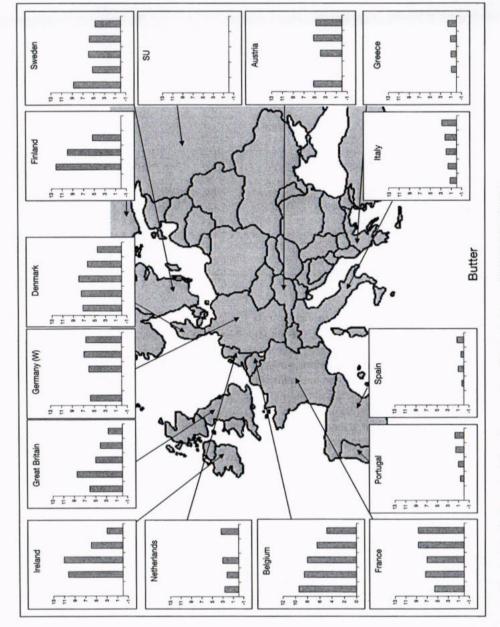
Table 5. Consumption of butter in Europe 1953/56-2001/02 [28]

State	Butter (pure fat)					
	1953/56	1970/71	1983	1994	2001/02	
Belgium	9.4	8.5	8	6.4	4.8	
Germany (W)	5.7	7.0	6	6.9	6.5	
Denmark	7.2	7.5	8	6.3	4.5	
Finland	n.d.	12.1	10	5.3	4.0	
France	5.6	7.3	7	8.6	8.6	
Greece	n.d.	0.9	1	1.1	1.6	
Great Britain	6.1	8.5	5	4.1	2.6	
Ireland	n.d.	10.2	11	5.9	2.9	
Italy	1.2	1.6	2	2.2	2.8	
Netherlands	2.6	2.2	3	6.0	3.3	
Austria	5.2	5.0	4	5.2	4.8	
Portugal	n.d.	0.6	1	1.5	1.7	
Sweden	8.8	5.2	6	5.8	4.7	
Spain	n.d.	0.3	1	0.5	1.2	
SU	n.d.	n.d.	n.d.	n.d.	n.d.	

probability – butter, vegetables, grains, potatoes, milk, vegetable fats and pork has become more similar during the last decades. Only the consumption of poultry, cheese and fruits shows growing differences of consumption in Europe [34–37].

The convergence of European diets on the level of food consumption is a fact, but the reasons are not clear yet. Often mentioned is the increasing influence of the European food regulation [38, 39]. In my opinion this is misguiding, because the convergence tendencies already started long before. We can find, too, convergence tendencies between the members of the European Union and most of the former Comecon members although the regulation was very different. Moreover, there is a regulation of culinary differences [40]. The European law may be helpful to create greater markets, but it is not responsible for a new European diet.

Furthermore, convergence tendencies are understood as a result of the products of multinational food producers, like Nestlé, Unilever, Danone or Kraft. The number of so-called 'Euro foods' is increasing. These are products, which are offered under the same brand in at least three European countries [41]. But it is misguiding to look only at the economics of size. Cost reduction with the help of mass production matters, but the food market is not a typical mass market. Most of the more than a quarter million food products buyable in the European Union are results of the so-called customer or batch production.



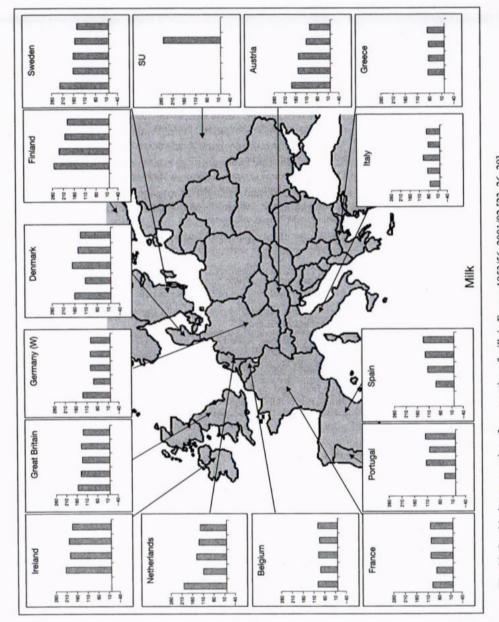
Graphical representation of consumption of butter in Europe 1953/56-2001/02 [28]

Table 6. Consumption of milk in Europe 1953/56-2001/02 [23-26, 29]

State	Milk					
	1953/56	1970/71	1983	1994	2001/02	
Belgium	91.6	78.0	88	83.4	90.3	
Germany (W)	128.0	77.4	91	92.3	90.6	
Denmark	159.6	112.5	169	143.4	133.2	
Finland	n.d.	252.6	228	201.5	190.3	
France	88.6	71.3	96	95.3	97.5	
Greece	n.d.	66.0	65	64.4	70.1	
Great Britain	155.7	139.7	133	138.5	128.4	
Ireland	n.d.	212.6	192	196.2	179.9	
Italy	52.3	66.6	89	62.1	71.5	
Netherlands	199.9	107.0	140	129.0	122.3	
Austria	178.4	148.7	148	111.1	94.8	
Portugal	n.d.	42.9	114	100.8	117.3	
Sweden	222.5	161.7	161	153.4	144.7	
Spain	n.d.	78.5	114	125.8	133.1	
SU	n.d.	n.d.	n.d.	251	n.d.	

The multinationals try to concentrate on specific brands, but normally the recipes of these products differ from region to region. Knorr (now Unilever), for example, offered 15 different minestrone soups in Europe [42]. And new products, for instance fruit yoghurt, which was introduced into the mass market since the 1970s, show immense national consumption differences: Dutch and French consumers are eating more than four times as much yoghurt than Irish or Italian consumers [43, 44]. In other words there is no regional leveling of the yoghurt market although it is a new market dominated by multinational companies.

In times of saturated markets, convergence of diets cannot be a successful business strategy. For example, the fast growing market of nonalcoholic beverages is a highly fragmented market segment [45]. Immense consumption differences exist for water, lemonades, refreshments, fruit juices and syrups. Eastern European consumption patterns stress that purchasing power is the main limiting element of market building, while traditional drinks are still important. Therefore, you can find strict and traditional differences between wealthy Western European countries. Today, the different national markets of spirits, for instance, are dominated by local specialties. Fruit spirits, cream and bitter liquors are important in France and Italy, in Germany corn schnapps and brandy and in Great Britain whiskey [46]. These traditions are promoted by the producers to survive in a decreasing market.



Graphical representation of consumption of milk in Europe 1953/56-2001/02 [23-26,

Table 7. European diet in 1927 as reflected in typical dishes [47-57]

Region/Nation	Typical dishes				
Alps	Spinach soup with milk, mushroom pudding with macaroni, Salzburger Nockerln, fillet with mushrooms, Pogatschen with greaves, cream strudel				
Bohemia	Soup with bacon dumpling, Bohemian roast, lung roast with smoked meat, cabbage schnitzel, dill sauce, cream-horseradish sauce, stuffed pancake, Powidlataschkerln, Powidla (plum jam), fruit dumpling, Schischky (potato noodles)				
England	Meat pie, pound cake, orange pudding, butterbread pudding, roly-poly, plum pudding				
France	Onion soup, cremé caramel, kidneys in Madeira, pommes frites, entrails from Bordeaux, rum pudding				
Italy	Minestrone, risotto, fritto misto, gnocchi, spinach, costolette de vitella alla Milanese, zabaioine				
Poland	Pepper carp, filled pike, calves' tongue, calves' feet, beetroot as a vegetable, mushroom sauce, Polish marron cake				
Romania	Fig pudding, eggs with chanterelle, cabbage meat, roe mayonnaise, roasted sausages, vegetable meat, vegetable dish, cabbage meat ball, cheese meat ball, nut cake, cheese and nut bread				
Russia	Bortsch, blini, shish-kebab, wareniki with cheese, fish soljanka, kasha (buckwheat gruel)				
Spain	Chicken croquettes, braised rabbit, ropa vieja, arroz catalán				
Hungaria	Caraway soup, fish goulash, veal or porc pörkölt, filled onions à la Rudnpansky, baked fish, simple nockerln				
Vienna	Soup from dried mushrooms, onions sauce, spinach pudding, red turnip, rice pudding, cheese bakery, poppy cake				

Dishes and Meals in Transition

In summary, we wonder if public health promotion will lead to changes in everyday consumption. There are clear trends, but no real explanation of human behavior, of human actions. Of course, I have some arguments, but they cannot explain very much. In such a case it is necessary, to change the level of argumentation. Until now, I have only argued on the level of foodstuffs. As we have already seen, this is only one, and perhaps not the decisive level to analyze European diets. So I have to go a step further and look at different dishes in Europe. As a historian, I will start with typical regional dishes from 1927 (table 7).

I have chosen this because its relevance surprises me. Although we would miss, for example, pizza as an element of a traditional Italian diet, the sample seems to be relatively typical. It reduces the exceptional elements of diets to some meaningful examples and creates the impression of a culinary unity.

It is important to understand the imaginations of other countries and the symbolic meaning of their diet. But were these classifications right? Did the nations and states really exist from a culinary point of view? Were these dishes really typical for their diets? Or were they not symbolic excesses, simple and easily commercialized stereotypes? We know, for instance, that national or regional dishes can even exist when the culinary practice has ended a long time ago. Dishes did not refer to real consumption patterns, but to an ideal and ordered world of past, of childhood. Their tradition and unity is often only a cultural or commercial construction.

A good example for this is the Austrian or the Vienna diet. This is mainly a grain- and pastry-based cuisine with a great number of famous meat dishes and an exquisite variety of sweets and bakery dishes. Although the small Alp republic looks proudly on its national dishes, an analysis of older cooking books show: 'Austrian cuisine is less reality, but myth, cliché, desire or marketing target' [58]. Vienna as a melting pot of very different ethnics and culinary traditions of the Habsburg monarchy was too heterogeneous for a clear-cut diet, for a typical cuisine. Even famous dishes like Vienna schnitzel or Palatschinken did not appear before the end of 19th century.

National dishes and diets normally are cultural and commercial constructs established mostly during the age of nationalism in the 19th century. They allow the concentration of specific aspects of different regional diets and the creation of a homogenous picture of an eating culture for foreigners and citizens. The German or the British examples show that national constructions have structural limits. There is no 'German' or 'British' diet; both are divided into a northern and southern part. Although the difference between eating reality and scientific construction is obvious, different attempts were made to map different European diets (fig. 3).

On a first glance, these give a well-ordered impression, which underline the fact that diets are mostly orientated at national borders. Nevertheless, in some cases, national borders are able to blur them. Thinking about these maps in a more differentiated way will lead to the conclusion that sources, analytic levels and methodology of most of these maps are unclear because they compile information of different times and social classes [60, 61].

Of course, it would be possible to add more actual maps or data, but the fundamental problem remains. The complexity of diet patterns cannot be reduced to some simple pictures [62, 63]. So I have to go one step further just to describe the direction an adequate analysis of European diets has to go. I will

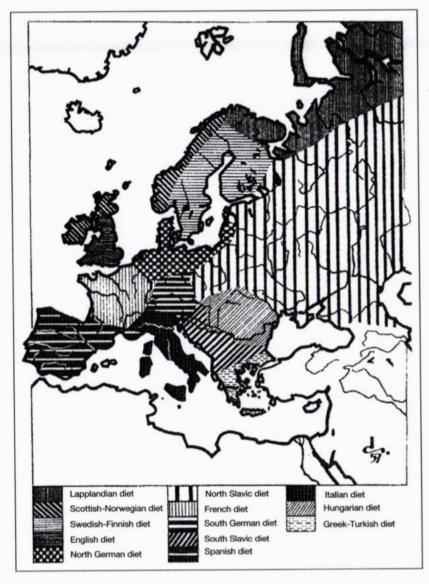


Fig. 3. European diets ca. 1920 [59].

go back to the 1960s and will follow an impressive study of German geographer Wolf Gaebe. His work was founded on household budgets and a great compilation of geographical, agrarian and economic studies. As a consequence, he analyzed not only foodstuffs and diets, but also preparation techniques, tastes and meals [64].

In Northern Germany and parts of the Netherlands, we can find heavy and relatively fat dishes. Here - in opposite to South Germany - potatoes played a significant role. This plant could be used in very different forms and preparations: boiled, with and without peel, fried or mashed, at least as a salad. In Southern Germany, preparation of potatoes was different; they were used as salad, fried or as dumplings. The smaller amount of potatoes was balanced with a higher flour and (in Southwestern Germany) pasta consumption. In West Germany, it was common to boil vegetables and meat although stews were mostly cooked in Northern Germany: 'This has two consequences for the diet. During cooking with water the added fat loses its taste value and so cheaper animal and vegetable fats are suitable. If foodstuffs were boiled, it's rational to prepare vegetables, potatoes and even meat together' [65]. In Germany, stews like this, mostly combined with fat meat, were much more common than in France, even in Northern France, and were served two times per week. In parallel, fresh vegetables were consumed relatively seldom, while green salad was eaten mostly in Southern Germany and the Rhineland.

In Germany, lunch was still the main meal – a relatively unique development. As a consequence eating breaks, gender relations and eating outside were structured in a specific way. In the 1960s hot dishes in the evening were familiar only in every fourth, today in every third, household. Therefore bread is the main foodstuff of breakfast, dinner and snacks. Bread characterized a cold meal, was eaten during a hot meal only sporadically, and – as a consequence – had strong and varied taste. The structure of snacks caused a relatively high consumption of spreads and toppings, especially fat and sausages, cheese and jam. Cheese was not eaten separately, with the exception of feasts.

In contrast the French diet is characterized by the distinctiveness of dishes. Combined versions are relatively rare. The single dishes were prepared and partly even served in a separate way. The preparation itself was very flexible and needed a lot of care. Vegetables were not boiled in water, but often steamed, while meat was grilled and fried. Fresh salads were a regular course of the meal and were not eaten as a side dish. Normally a good piece of high-quality meat was the 'piece de resistance', which was refined with a great number of herbs and spices (like parsley, thyme, tarragon or garlic). While tasty red and white wines were regular elements of French meals in the 1960s, today nonalcoholic beverages are dominant. White bread (baguette) was part of nearly every meal. It was spread only with some butter or eaten plain. Because of this it must be

fresh and crusty and must be bought daily. The meal was normally finished with either fruit or cheese, even if the whole meal consists only of one course of vegetables and meat.

Let me add some hints about the Italian diet: here, comparable to Germany, combined dishes were important although they consist of different foodstuffs (i.e., minestrone). Pasta was highly important; noodles were eaten as a starter or as a main course. They make up the fundamental part of meals. Variations came from different ingredients and sauces: olive oil and different cheese, tomatoes in heterogeneous preparations and a wide range of herbs and spices (like onions, garlic and basil) allowed very different tastes and shades. Italy – like Germany – has no national cuisine. Dishes like polenta or different rice meals can be found mainly in the North. Tomatoes are the most important vegetable, which is used in very different preparations. The taste of meals is dominated mainly by oil. Olive oil is normally used for salads, while cheaper fats dominate cooking, roasting and baking. Butter is used only rarely, margarine and lard too. Instead, tasty cheese is of high importance, especially soft cheese made from cow, sheep or goat milk. Combined with wine, they often finish the meal.

Different traditions can be found in minor elements, for example, the way of preparing coffee: 'In Germany it is drunk with small additives of milk (conventional milk, evaporated milk, cream). In France coffee is boiled in a concentrated way, and consumed either pure or as 'café au lait' with a lot of milk – normally more than half of the drink. Italians prefer – apart from milk coffee in the morning – strong black coffee in small cups. Belgians drink their coffee mostly black, while Dutch normally use milk' [66]. Coffee is part of the different meals, and it is consumed in Europe at different times. In Belgium and France it is an integral element of breakfast, in Germany and in Italy this habit is spread widely too. Instead, in the Netherlands and in northern Germany tea is the morning drink. Coffee follows in the later morning and after dinner. In France coffee is consumed after lunch, while coffee drinking in the afternoon is quite common in Germany and Belgium also.

These short hints on meals and systems of meals may show the complex structure of European diets at this level. Health improvements, which only try to change one or some of these elements, must fail because these changes are linked with a lot of different elements of everyday eating and life.

As a consequence, the relevance of scientific or public health promotion is low. The most important changes come from structural economic, social and lifestyle-related developments. A good example is the so-called Mediterranean diet. Main elements of this predominantly vegetarian diet are, as we all know, vegetables, fruits and grain products. High consumption of olive oil and wine are characteristic, too. The relatively high living expectation and the relatively low significance of cancer and cardiovascular diseases makes the Mediterranean

Table 8. Characteristics and change of regional diets [68]

Characteristics	Contemporary situation
Regional production of food	National and international markets
Meals with traditional and religious ties	Secular, deprived world
Combination of conservation, preparation, and meal patterns	Time pressure and growing supply of adding spices convenience food
Continuity of minor matters	Rationalization of time and households
Traditional taste	Innovative taste
Identity	Identities

diet an important research topic of epidemiologists and nutritional scientists who promote this diet as a healthy and tasty one. I agree with these recommendations, but as a historian I am convinced that these efforts will not be successful. This Mediterranean diet today is not practised in the Mediterranean countries any longer. It is a cultural construction built up by scientists, a lost ideal of a pure peasant diet, which has lost its relevance more and more since the 1960s [67]. As we have already seen, animal products have become more and more important, while bread, potatoes and grain consumption is declining. The increasing consumption of meat and milk led to a higher proportion of animal fats, olive oil is replaced partly by cheap sunflower or maize oil. Only the consumption of vegetables and fruits remains on a high level and has even increased. In general we must realize that the Mediterranean diet today becomes more and more like the diet in Middle or Western European countries. This long-term change has structural reasons, especially growing incomes, effects of tourism, the influence of refugees and foreign workers, the growing importance of European retail firms, the secularization and the changing role of women.

To analyze this change more precisely, we must look at the characteristics of traditional or regional diets (table 8). Six points should be stressed besides the significant questions of local identity and traditional taste: regional production structures, meals with traditional and religious ties, a systemic combination of food conservation, preparation, herbs and spices and meal patterns and, as a last point, the continuity of minor patterns. These fundamentals are breaking more and more. We can find national and international markets, a secular deprived world, growing time pressure in everyday life combined with a growing supply of different convenience food. We can find a rationalization and mechanization of household and a search for new, innovative tastes and new identities. These developments must have consequences for diet, otherwise

eating and nutrition will not be a central element of human life. Growing wealth, increasing opportunities of self-realization, intensified mobility and more and more contacts with persons from different cultures – these are important reasons for the changing European diets. Nutrition and eating culture are not primarily a problem of nutrients, metabolism and medical forms of 'health', but it is a mirror of us and our society, an expression of economic power and individual opportunities.

The result is similar all over Europe, even if the speed of change is different: The consumption of traditional stable foods is decreasing, while processed foods are pushing to the front. Modern life- and working style has deep social and nutritional consequences. The nuclear family, established in the 19th century, has lost its obligations. Outdoor eating becomes more important, while home preparation loses ground and simple dishes win significance. If we want to eat the traditional dishes, we must visit restaurants or wait until Sunday or feasts.

European Eating Habits and the Perspectives of Health Promotion

At the end of this preliminary analysis two conclusions can be drawn, which are relevant for the discussion on health promotion:

First, we have to think about the problems of constructing our topic of a 'European diet'. Scientists normally discuss these at the level of data quality or methodology. But this is not the main point, it is an internal scientific discussion, partly misleading when we look at health promotion or public communication. On the one hand the different levels of diets gave an impression of the complexity of eating patterns and everyday culinary culture. Culture and tradition matter. We must be aware that there are direct relations between these different levels. To change the foodstuffs does not mean that meals will be changed adequately. Intervention and health promotion will only be successful if we look at the whole range of diet. This is a complex task, which shows the necessity of interdisciplinary cooperation to improve health promotion. On the other hand we have to recognize that the way of eating is closely linked with the way of living. The great gap between knowledge of healthy eating and a different 'unhealthy' practise is mainly caused by this relationship. If we want to change eating patterns we have to change the world we are living in - nothing more and nothing less. But the problem is well known. For example Max Rubner, one of the founders of nutritional science, summarized in 1928: 'You cannot expect very much from public promotion in the field of nutrition in the form of public education' [69].

But there is no need for resignation. There is need for change, change of science itself, and for communication strategies. The example of 'European diet' shows that there are not only different levels of 'real' consumption, but also of 'real' eating culture. We must be aware that 'reality' consists of different levels, that images and symbolic constructions are important, too. On the one hand, this can help us to understand the relative failure of conventional forms of health promotion. Without knowing and taking seriously the world of beliefs and fears, prejudices and yearnings, we will not be able to communicate with ordinary people. On the other hand we should be able to recognize that scientists themselves are part of the game. They are constructing a reality of their own; a reality far away from everyday experiences and partly from everyday needs. Although science can be characterized as a mode of hierarchization of specific forms of knowledge and specific elements of reality, it is necessary to reflect on the unintended consequences of our work and proposals. If we are able to do this, we perhaps will be able to improve health promotion. Otherwise in 80 years another historian will reflect on your work and he will summarize it with the same words as Max Rubner did in 1928.

References

- Atkins P, Bowler I: Food in Society: Economy, Culture, Geography. London/New York, Arnold, 2001.
- 2 Bell D, Valentine G: Consuming Geographies: We Are Where We Eat. London/New York, Routledge, 1997.
- 3 Rubner M: Der Nahrungstrieb des Menschen. Sitzungsber Preuß Akad Wiss 1920:341–364.
- 4 FAO (ed): The Sixth World Food Survey 1996. Rome, FAO, 1996, pp 11, 92-94.
- 5 Tenzer E: 'Das schmeckt wie hellblauer Spiralnebel'. Wer trinkt welches Bier in Europa? Die Zeit 2003;58:No.45:30.
- 6 Beer in Europe. EPP-Report 2003, s.l., no publisher, 2003.
- Nahrungsmittel: Conversations-Lexicon oder encyclopäisches Handwörtwerbuch für gebildete Stände, vol 5. Stuttgart, Fischer, 1819, pp 5-7.
- 8 Statistische Grundzahlen für zwölf Europäische Länder mit einem Vergleich für die Vereinigten Staaten von Amerika und die Union der Sozialistischen Sowjetrepubliken. Luxemburg/Brüssel, EG, 1958, p 73.
- 9 Statistische Grundzahlen der Gemeinschaft. Vergleich mit verschiedenen Europäischen Ländern, den Vereinigten Staaten von Amerika, Japan und der Union der Sozialistischen Sowjetrepubliken, ed 12. Luxemburg/Brüssel, EG, s.a., p 108.
- Statistische Grundzahlen der Gemeinschaft. Vergleich mit verschiedenen europäischen Ländern, Kanada, den USA, Japan und der UdSSR, vol 22. Luxemburg, EG, 1985, p 236.
- Statistische Grundzahlen der Europäischen Union. Vergleich mit den wichtigsten Partnern der Europäischen Union, vol 33. Luxemburg, EU, 1997, p 262.
- 12 Statistisches Jahrbuch über Ernährung, Landwirtschaft und Forsten der Bundesrepublik Deutschland 2003, Münster-Hiltrup, Landwirtschafts-Vlg., 2003, p 469.
- 13 Messer E: Potatoes (white); in Kiple KF, Ornelas KC (eds): The Cambridge World History of Food, vol 1. Cambridge, Cambridge University Press, 2000, pp 187–200.
- 14 Grundzahlen, 1958, p 73.
- 15 Grundzahlen, s.a., p 108.

- 16 Grundzahlen, 1985, p 236.
- 17 Grundzahlen, 1997, p 262.
- 18 Jahrbuch, 2003, p 469.
- 19 Chiapparino F: Industrialization and food consumption in united Italy; in Hartog AP den (ed): Food Technology, Science and Marketing: European Diet in the Twentieth Century. East Linton, Tuckwell, 1995, pp 139–155.
- 20 Nestle M: Mediterranean diets: historical and research overview. Am J Clin Nutr 1995;61: S1313-S1320.
- 21 Jahrbuch, 2003, p 470.
- 22 Newman JL: Wine; in Kiple KF, Ornelas KC (eds): The Cambridge World History of Food, vol 1. Cambridge, Cambridge University Press, 2000, pp 730-737.
- 23 Grundzahlen, 1958, p 74.
- 24 Grundzahlen, s.a., p 109.
- 25 Grundzahlen, 1985, p 237.
- 26 Grundzahlen, 1997, p 263.
- 27 Jahrbuch, 2003, p 471.
- 28 Helsing E: Trends in fat consumption in Europe and their influence on the Mediterranean diet. Eur J Clin Nutr 1993;47:S4-S12.
- 29 Jahrbuch, 2003, pp 471-472.
- 30 Statistisches Amt der EG (ed): Wirtschaftsrechnungen der Arbeiterfamilien der EGKS 1956/57. Brüssel/Luxemburg, EG, 1960.
- 31 Statistisches Amt der EG (ed): Wirtschaftsrechnungen 1963/64. Der Verbrauch der Haushalte in den Ländern der Gemeinschaft und Griechenland. Brüssel/Luxemburg, EG, 1967.
- 32 Eurostat (ed): Haushaltsrechnungen. Einige vergleichbare Ergebnisse: BR Deutschland Frankreich – Italien – Vereinigtes Königreich, Luxemburg, EG, 1985.
- Eurostat (ed): Haushaltsrechnungen. Einige vergleichbare Ergebnisse: Bundesrepublik Deutschland, Spanien, Frankreich, Irland, Italien, Niederlande, Luxemburg, EU, 1990.
- 34 Blandford D: Change in food consumption patterns in the OECD area. Eur Rev Agr Econ 1984;11:43-65.
- 35 Herrmann R: Gleicht sich der Nahrungsverbrauch international an? Ein Meßkonzept und empirische Ergebnisse für ausgewählte OECD-Länder. Jb Absatz- Verbrauchsforsch 1994;40: 271, 300
- 36 Gil JM, Gracia A, Pérez y Pérez L: Food consumption and economic development in the European Union. Eur Rev Agr Econ 1995;22:385–399.
- 37 Ziemann M: Internationalisierung der Ernährungsgewohnheiten in ausgewählten europäischen Ländern. Frankfurt AM, et al, Lang, 1999.
- 38 Streinz R: Das deutsche und europäische Lebensmittelrecht als Ausdruck kultureller Identität? in Teuteberg HJ, Neumann G, Wierlacher A (eds): Essen und kulturelle Identität. Europäische Perspektiven. Berlin, Akademie-Vlg., 1997, pp 103-112;
- 39 Barlösius E: Bedroht das europäische Lebensmittelrecht die Vielfalt der Eßkulturen? in Teuteberg HJ, Neumann G, Wierlacher A (eds): Essen and kulturelle Identität. Europäische Perspektiven. Berlin. Akademie-Vld., 1997, pp 113–128.
- 40 Thiedig F: Regionaltypische traditionelle Lebensmittel und Agrarerzeugnisse. Kulturelle und ökonomische Betrachtungen zu einer ersten Bestandsaufnahme deutscher Spezialitäten, Weihenstephan, no publisher, 1996.
- 41 Leonhäuser IU: 'Eurolebensmittel': Mehr Vielfalt weniger Qualität? HuW 1995;43:3–9.
- 12 Internationale Marktstrategien im Euromarkt. Ernährungswirtschaft 1989; No. 1:8–11.
- 43 Steenkamp JB, et al: A consumer-led approach to marketing of foods in the EU: The case of yoghurt; in Gaukel V, Spieß WEL (eds): 3rd Karlsruhe Nutrition Symposium, vol 1. Karlsruhe, BFE, 1998, pp 274–283.
- 44 Spiekermann U: Functional Food. Zur Vorgeschichte einer 'modernen' Produktgruppe, EU 2002:49:182-188.
- 45 Rudolf Wild GmbH & Co KG (ed): Tabellen zur Entwicklung des internationalen AFG-Marktes. Eppelheim, no publisher, 1997.

- 46 Klüber-Süssle J, Haug ME: Leicht alkoholische Getränke: Eine Herausforderung für die Aromenindustrie. Dragoco Report 1998;45:70-71, 74-91.
- 47 Die russische Küche. Die Praktische Berlinerin 1926/27;24:No.1:16.
- 48 Die französische Küche. Die Praktische Berlinerin 1926/27;24:No.2:18.
- 49 Die Wiener Küche. Die Praktische Berlinerin 1926/27;24:No.3:16.
- 50 Die italienische Küche. Die Praktische Berlinerin 1926/27;24:No.4:18.
- 51 Die Englische Küche. Die Praktische Berlinerin 1926/27;24:No.6:18.
- 52 Die böhmische Küche. Die Praktische Berlinerin 1926/27:24:No.7:18.
- 53 Die Spanische Küche. Die Praktische Berlinerin 1926/27;24:No.14:18.
- 54 Die Küche der Alpenländer. Die Praktische Berlinerin 1926/27;24:No.16:18.
- 55 Rumänische Küche. Die Praktische Berlinerin 1926/27;24:No.18:18.
- 56 Die polnische Küche. Die Praktische Berlinerin 1926/27;24:No.19:21.
- 57 Die Ungarische Küche. Die Praktische Berlinerin 1926/27;24:No.20:20.
- 58 Sandgruber R: Österreichische Nationalspeisen; in Teuteberg, Neumann, Wierlacher (eds): Mythos und Realität, 1997, pp 179–203.
- 59 Schmitthenner E, Schmitthenner H: Speise und Trank in Europa. Wiss Veröffentl Inst Länderkunde 1960;NS 17/18:109-165.
- 60 Schmitthenner E: Speise und Trank in den verschiedenen Gebieten West-Europas, phil. diss. Heidelberg, no publisher; s.a. (1923).
- 61 Wiegelmann G: Ideen zu einer kartographischen Erfassung europäischen Kostunterschiede; in Ethnologische Nahrungsforschung. Helsinki, no publisher, 1975, pp 159–166.
- 62 Delamont S: Appetites and Identities. An Introduction to the Social Anthropology of Western Europe. London/New York, Routledge, 1995.
- 63 Askegaard S: European food cultures: An exploratory analysis of food related preferences and behaviour in European regions. s.l., MAPP, 1995.
- 64 Gaebe W: Räumliche Differenzierung der Ernährungsformen in den Ländern der EWG. Ein Beitrag zur Geographie des Konsums. Wiesbaden, Steiner, 1969.
- 65 Gaebe W: Räumliche Differenzierung der Ernährungsformen in den Ländern der EWG. Ein Beitrag zur Geographie des Konsums. Wiesbaden, Steiner, 1969, p 110.
- 66 Gaebe W: Räumliche Differenzierung der Ernährungsformen in den Ländern der EWG. Ein Beitrag zur Geographie des Konsums. Wiesbaden, Steiner, 1969, p 112.
- 67 Gracia A, Albisu LM: Moving away from a typical Mediterranean diet: The case of Spain. Br Food J 1999;101:701–714.
- Wiegelmann G: Historische Grundlagen der regionalen Kostunterschiede in Mitteleuropa; in Weggemann S (ed): Alte Landschaftsküchen in neuer wissenschaftlicher Bewertung. Frankfurt a.M., Umschau-Vlg., 1990, pp 4–15.
- 69 Rubner M: Die Welternährung in Vergangenheit, Gegenwart und Zukunft; Die Naturwiss 1928; 16:713–720.

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Preface

Nutrition related chronic noncommunicable diseases are considered major causes for morbidity and mortality. Unbalanced diet and malnutrition among other behavioral and lifestyle determinants are modifiable risk factors for the development of obesity, metabolic disorders, cardiovascular diseases and cancer, which cause around half of the global burden of disease.

Nutrition transition over the last few decades was characterized by different drastic dietary changes. These include a shift towards high energy density with low proportion of foods of plant origin; high consumption of fat and fatty foods and in parallel low consumption of vegetables, pulses, and cereals. Such diet profile proved to be inadequate to meet the physiological needs for various micronutrients and so provide insufficient basis for health promotion and disease prevention.

Main purpose of the 14th EANS symposium was to raise awareness and interest in the health benefits of the diet diversification and of informed food choice as determinants of promising food based dietary guidelines.

This annual EANS meeting took place at the University of Vienna on May 14/15, 2004. This issue of 'Forum of Nutrition' comprises the proceedings of nearly all relevant presentations. Therefore, I would like to thank all the authors, who helped by delivering their manuscripts in time and enabled us to publish the proceedings without major delays.

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Vienna, October 2004-10-25

Professor I. Elmadfa EANS President