

INTRODUCTION

ASSEMBLING PERSPECTIVES ON BEER

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What made you pick up this book? Was it the thought of that foaming pint while you relaxed in a British pub, a German beer garden, a Czech restaurant, an American or ‘Continental’ bar, on a beach or ski slope or in front of the television at home? Wherever your beer was purchased, in much of the world you would have been offered choice. The choice might only have been between different brand names of bottled beer, or it might have been between a wide range of ales, lagers, wheat and other beers from a cask, a keg, cans or bottles. Even people who do not drink beer will be aware of this diversity. Advertising proclaims that diversity. The brand names might enhance your enjoyment with imagined scenes stimulated by the advertisers. However, how much do you know about the marketing strategies behind the brand names? About the technologies of producing the diversity? About beer and brewing in antiquity or in non-European cultures? About the beneficial biological effects, as well as the risks of beer drinking? About the beers in societies of simple technology? About the symbolism and social importance of beer in totally different societies? About the important social roles of the conviviality engendered by beer?

This volume highlights the fact that, despite almost global commercial marketing of modern beers, beer brewed according to traditional recipes in other parts of the world can be very different from what most of us are used to. This was also the case for the prehistoric types of beer and even for beer drunk until about the middle of the nineteenth century, since these early beers were often mixed with all kinds of ingredients. It was often quite weak, with alcohol contents similar to our modern low alcohol products. This was frequently desired because beer, partially sterilised by the carbonic acid and the alcohol in it, was often drunk instead of water which could be polluted and a risk to health. It was given to children, even to pupils in schools (Schiefenhövel personal notes, and see www.ffmpeg.de/wissen/Bier.html).

The chapters of our book bring together in a novel way discussions of evolutionary, archaeological, biomedical, technical, commercial, ethnographic, social and psychological facets of the rich cosmos of beer. In its cross-cultural and cross-disciplinary approach, the volume reflects the interests of the members of the International Commission on the Anthropology of Food and Nutrition (ICAF) (<http://www.icafood.eu>, see also the Preface), but the editors believe that this collation of perspectives on beer will also intrigue many readers in the general public.

For many, thinking about beer may first suggest the quenching of thirst on a hot day, as well as happy scenes in a convivial setting. In this volume, a deeper understanding of its social role in promoting conviviality and enjoyment in company is stressed. For example, Pollock (chapter 12) writing on male beer-drinking customs in New Zealand, de Garine (chapter 13) on beer-enhanced conviviality in Northern Cameroon, and Dammann (chapter 11) on beer drinking in university fraternities, all discuss, among other topics, the social role of beer because it benefits communication. Beer is, of course, also enjoyed for its different and interesting tastes, and undoubtedly also for the effects of alcohol on the brain. McGrew (chapter 1) presents examples of little studied voluntary ethanol ingestion among nonhuman animals. It is most likely that alcohol is acting on 'dock-on' mechanisms in the brain, originally evolved to facilitate biopsychological rewards. Moderate doses of alcohol will generally make people feel well, be a bit more social, talkative and outgoing (Kaiser, Medicus and Brüne, chapter 2). This creates a group effect, a feeling of belonging, which is important for us humans as social animals. This aspect of drinking beer, because it enhances social interactions, is, in one form or another, present in almost all the contributions to this book, and a topic returned to below.

The ways in which beer is consumed, even its preferred temperature, can be very different in different societies. North Americans like it very cold, as do many people in warm and tropical countries. To achieve this, glasses may be taken from the freezer before they are filled with beer. Others, such as connoisseurs in England, prefer to get their beer served at room temperature. In Germany, the host may ask you: 'Do you want your beer from the fridge or from the cellar?' The chosen answer may be used to reflect the knowledge of a true local. Bavarians have an unusual custom: in winter or when a person is suffering from some stomach or other health trouble, he may ask for his beer to be heated.

Brewing beer is a sophisticated process of which even aficionados may not be fully aware. This book provides information about modern brewing methods and also about how beer was made in antiquity and is still made in some traditional societies today. Thomas (chapter 3) gives an introduction to the complex, sophisticated process of modern industrial beer production. Zarnkow, Otto and Einwag (chapter 4) have carried out novel experimental studies which shed light on how beer was brewed in antiquity, i.e., around the time when this important food technology was first developed in Mesopotamia.

Stika (personal communication) argues that while agriculture and growing cereals had spread to Europe from the Near East, it is likely that beer brewing may have emerged in Europe, as in different parts of the world, independently and during different periods. In Chapter 5, Stika reports on findings of archaeological research in several sites in Europe where vessels, in which ‘beerstone’ can be detected with modern chemical techniques, indicate that they are likely to have been used for repeated beer brewing. Furthermore, by presenting his findings of evidence of charred barley malt in early Celtic drying-kilns from the Hochdorf site in southern Germany, he tries to reconstruct the taste of the early Celtic beer of Hochdorf.

In many other parts of the world methods of making beer are known. In pre-European South America, *chicha* was a drink that had for centuries been made from fermented maize starch (<http://en.wikipedia.org/wiki/Chicha>) and must have been the result of independent discovery, rather than by cultural migration of brewing knowledge. Belliard (chapter 16) describes, illustrated by schematic sketches, the different steps of brewing sorghum beer in the African country, Burkina Faso.

The technical term ‘beer’ is used for any alcoholic drink which is produced by fermenting sugar-rich extracts derived from any of a variety of starchy plants. The link with bread has already been mentioned in the Preface and beers made from bread still exist in some parts of the world (Samuel 2000). The majority of beers are and have been brewed from cereal grains, e.g. wild Einkorn (*Triticum boeoticum*); domesticated Einkorn (*Triticum monococcum*, a species which is known to have been used in antiquity, e.g., in Mesopotamia); the related wheat cultivars (*Triticum* spp.) and barley (*Hordeum vulgare*) in Europe; maize (*Zea mays*) in the Americas; rice (*Oryza sativa*) and millet (various genera of grass plants, belonging to the *Poaceae* family) in China; or sorghum (various genera of *Poaceae*) in China, India and modern Africa (Hornsey 2003). Nevertheless, other starchy vegetable matter has also been used for making beer-like beverages: Lewin and Levin (1998) refer to chewed manioc being used in South America.

The beers brewed by the large multinational brewing companies, by traditional local breweries, or by small specialist microbreweries in Europe or North America today are mostly based on barley which has been malted (see Thomas, chapter 3). However, to get an alcoholic drink from grains and starchy plants is quite difficult. There is no readily available sugar in these grains, but the more complex compound, starch. The human and mammalian body has enzymes (e.g., amylase), essential in digestion, which break down the starch and turn it into glucose. Mammalian physiology can do this chemical transformation quite swiftly, but to do the same outside the body takes processing. The breaking down of the starch contained in grain is exemplified in several chapters, which describe brewing processes in different periods and in various parts of the world. Zarnkow, Otto and Einwag (chapter 4) discovered that a weak beer can be made through exposure to the sun without an additional heat source. It is thus very likely, and a new insight, that beer brewers in antiquity,

in this case in northern Syria of the Late Bronze Age, could simply rely on the sun's energy. In prehistoric Europe, on the other hand, malting was achieved by using the heat of fire, as Stika (chapter 5) describes. In a traditional African society in Burkina Faso a rich array of linguistic terms serves to identify the complex stepwise process of brewing beer described by Belliard (chapter 16), who shows how this exemplifies the local ways of perceiving this ancient craft. The chapter also includes ethnographic descriptions of how beer is consumed and its social significance.

In our own modern society beer brewing has become a 'high-tech' process. Thomas (chapter 3) explains not only the basic principles of beer brewing but also how the differences in taste are brought about. This is an important aspect for the brewing industry because the consumption of classic beers is gradually declining while consumption of wine and non-alcoholic drinks is rising. The answer of the breweries is to diversify, to produce new types of beers, beer-containing drinks and beers with low alcohol. The traditional wheat beers, *Weizenbier*, also called *Weissbier*, of Bavaria and other regions of Europe are top-fermenting beers, as was the traditional method of brewing in earlier times. These have a slightly lower alcohol content than bottom-fermenting lager beers and have experienced a recent surge in popularity, especially among women in Germany, for whom unfiltered wheat beers with high yeast content are considered particularly healthy. On the other hand, the bottom-fermentation technique requires a cooling space, cold caves in the past and refrigeration in modern times, but because of their stable quality, even after long storage, this type of lager beer (e.g., Pilsner or *Pils*) became popular internationally.

The result is that beer-making is a much more complex procedure than wine-making. It is the extraction of the sugars from grains or other starchy plants through sprouting, malting and mashing which provides the classificatory difference between those alcoholic drinks called 'beers' and those called 'wines'. The latter are derived from fermenting sugary fruits, a much simpler biochemical process which can happen even without human interference. Also technically a wine, the fermentation of a mixture of honey and water produces mead, which in pre-Roman times was very popular in Northern Europe and is currently experiencing a small renaissance. Then there are the wines made from saps such as bamboo wine and palm wine (Battcock and Azam-Ali 1998). A palm wine (*tuak*) is made and drunk in Indonesia and in New Guinea. As with all classifications, some marginal cases exist, for example parsnip wine and banana wine, as do cases where the nomenclature is misleading, such as rice wine and barley wine. Janowski (chapter 17) reports on a rice beer (*borak*) in Sarawak. Drawing upon early post-Second World War reports by Tom Harrisson and her own later research based on reports from local informants, she describes the significant social role of *borak* drinking in the traditional life of that society. However, she goes on to give reasons why *borak* was abandoned in association with religious, economic and social changes. Aquino and Persoon (chapter 18) describe a number of traditional drinks previously consumed in north east Luzon in the Philippines and go on to discuss their re-

placement by beer brewed by modern, multinational, commercial breweries and the significance of one large company in particular. What is striking in the above examples is that the drinking of alcohol of some sort is central to the social gathering and ceremonies of peoples in different societies.

Originally fermentation of wine, most likely the oldest alcoholic drink (McGovern 2003), was probably promoted by wild yeasts, such as *Saccharomyces exiguus* or *Saccharomyces minor*. The genetic variation between and within the various species of the *Saccharomyces* genus has now been studied at the molecular level (<http://www.yeastgenome.org>) and different, carefully controlled variants, are today used industrially in the production of different types of beer and wine. Bakers' yeast, *Saccharomyces cerevisiae*, is most commonly used not only for bread but also for several types of fermentation for alcoholic beverages. It is used for most ales, while *Saccharomyces carlsbergensis* or *Saccharomyces pastorianus* tend to be used in lagers, but there are variants of this genus for further diversity in the fermentation process and taste (<http://www.yeastgenome.org>). It is interesting that in making the two most important alcoholic drinks worldwide, wine and beer, the same class of microorganism has been used since ancient times.

Alcohol was and is consumed in very many traditional societies, but where it is not, some alternative forms of mind-altering drugs will usually be found. The First Nations of North America, as well as the Melanesians, Micronesians and Polynesians of the South Pacific, are examples of peoples who did not develop an indigenous technology of beer brewing, nor did they make wine, even though either would have been environmentally possible, since there were starchy or sugary plants available as raw material. South Pacific islanders traditionally made and make *kava*, a non-alcoholic but mildly hallucinogenic drink, made from *Piper methysticum* (Mückler 1996), and in many countries of the West Pacific, as well as in southern India and Taiwan, chewing betel nut (*Areca catechu*) has been very popular since pre-European times (Farnworth 1976).

These examples, together with the multitude of other hallucinogenic drugs consumed now and in the past around the world, serve to demonstrate that humans, as a species, derive pleasure in escaping from the realities of everyday life through altered states of consciousness, regardless of how bad the consequences which may later plague the body. Douglas (1987: 11) suggests that alcohol can help a drinker gain the sensation of 'an intelligible, bearable world' closer to imagined ideals.

It can thus be argued that taking some form of mind-altering stimulant has a social role. In many cases this is connected to social and religious ceremonies. Alcohol is among those substances which create a special experience, generating, in the perception of those ingesting them, psychosocial interaction and communication with the supernatural. Beer fits this pattern of a catalyst to various social activities, as is apparent from three chapters regarding fieldwork in Africa. Regarding six ethnic groups in north-west Cameroon, de Garine (chapter 13) provides a broad-ranging and holistic ethnography with information on the brewing processes and timetable and on the nutritional and intoxi-

cating effects, but what is relevant to this introduction are the local concepts with regard to mythology and religion and the social aspects, including value and the stimulation of pleasure. Van Beek (chapter 14) concentrates on beer symbolism, and with detailed fieldwork notes he compares two African societies, the Kapsiki/Higi in north Cameroon and the Dogon of Mali, with emphasis on gender roles. In chapter 15, Kutalek refers to several traditionally brewed alcoholic drinks in Tanzania, and describes in detail the ritual use of the local *pombe* beer of the Bena in South West Tanzania. She gives examples of her informants' ideas on beer production, consumption and social meaning.

In the specific context of university fraternities in USA and Germany, and in their fraternity ceremonies and rituals, Dammann (chapter 11) describes the often excessive student consumption of beer, but he also draws attention to some fraternity rules which perhaps contribute to a limitation of frequency of excessive drinking. He refers to data which suggest that a certain amount of binge drinking in youth, if not too frequent, may confer social advantages not only immediately but also later in life. The extensive range of social perspectives on why societies maintain beer-drinking cultures must remain limited in this volume, but readers should note an earlier volume in this series edited by Igor and Valerie de Garine (2001), *Drinking: Anthropological Approaches*.

Germany (in particular in Bavaria, but elsewhere too) and the Czech Republic are countries with rich traditions of beer brewing. The monasteries in these and neighbouring countries, which housed not only the academic but also the technological elites of their times, began to brew beer in the seventh century. As Meussdoerffer (chapter 6) recounts, the then newly emerging cities had their first breweries. Even though hops (a member of the *Cannabaceae* family) were known and grown for a long time, it was only in the twelfth century that the female flower of *Humulus lupulus* was routinely added to the mash. Hops made the beer more durable and tasty. This was a brewing innovation developed in monasteries such as Weihenstephan in Freising, one of the two oldest breweries still existing. Another is the brewery of Weltenburg Monastery on the banks of the Danube, not far from Regensburg (http://de.wikipedia.org/wiki/Bayerische_Staatsbrauerei_Weihenstephan). In Bavaria, the 'Purity Law' for beer was proclaimed in 1516 in the city of Ingolstadt by Count Wilhelm IV; it stated that only water, malt and hops were to be used in beer. For some reason yeast was not mentioned although it had always been an ingredient. The prices for beer were also regulated – and strictly controlled.

Meussdoerffer (chapter 6) takes an historical approach to the role of beer in German culture through the centuries, during which time it became the most popular beverage. He views it as unsurprising that Germans and foreigners perceive beer to be important in German national identity, but he also stresses the significance of the federal, rather than the unified, history of Germany and how that has led to a regional diversity in the beers for which Germany and its neighbours are famous. Parížková and Vlčková (chapter 10) write about beer in one of those neighbouring countries, the Czech Republic, where the reputation for its beer and beer drinking is also strongly linked to internal and external concepts

of the nation. The Czech Republic is one of the cradles of the art of brewing beer. The Czech cities of Plzen (or Pilsen) and Ceske Budejovice (or Budweis) have given their names to two of the most famous beers in the world.

Medina (chapter 7) points out that it is not only in central Europe but also in the Mediterranean that beer is an ancient drink. Also interested in how drinks are used in concepts of region, Medina makes the point that beer has been excluded from the classic model of the 'Mediterranean diet'. His chapter provides a discussion of the separate images of the 'beer countries' of the north and the 'wine countries' of the south within Europe, despite the brewing and high levels of consumption of beer in countries such as Spain and Italy, and despite the production of wine wherever grapes will grow in the north, reminding the reader of the wide geographic spread of wine drinkers throughout northern latitudes. An interesting perspective to add to this subject is that while the Spanish, Portuguese and Catalans use a word for beer derived from the Latin word *cervisia*, (i.e. *cerveza*, *cerveja* and *cervesa* respectively), the Italians and French (both with 'Latin' languages) use the words, *birra* and *bière*, which like the English word *beer*, and German word *Bier*, derive from an old Germanic word.

The significance of image is similarly stressed in chapter 9 by Collinson and Macbeth with regard to Britain, where local and traditional brand names are retained for beers which are in fact brewed by very large and powerful international drink companies. Both where beer is drunk and the importance of brand names are themes in this chapter, written at a time when British pubs are closing all around the country. The pub is considered to be symbolic of something essentially British, a social centre of community life in each locality, a place of communal conviviality based on the consumption of beer. The authors show how reality has changed but an image is retained as pub owners do what they can to maintain the *image* of a traditional pub central to and enhancing a local community, because that image attracts the outsiders who enable the pub to survive.

Social conviviality, image and nationality, are also highlighted in Pollock's chapter (chapter 12), as well as a gender issue, when she describes the great significance of beer in the culture of New Zealand and its link to 'blokism' (from 'bloke', a colloquial term for 'man'), rugby and (horse) racing in a country with very high per capita consumption of beer. She includes a discussion of the strong gender differences in consumption in the past, both in image and in reality, but shows that this has been changing, although the 'beer belly' is still a visible testament to the role of beer in contemporary male culture in New Zealand.

In north European society, identity might also be flagged by our choices of wines or of beers. Demossier (2004) wrote, about wine selection, that it 'conveyed a real sense of prestige. Wine can be described as a food for hierarchy'; elsewhere (2005) she argued that by choosing which wine to buy and in what circumstances to drink it, people are 'identity building'. The truth of this can be exemplified wherever seeming knowledge of fine wines is flaunted as a form of sophistication. However, flaunting sophistication is seldom relevant to the

identity building that occurs with beer, where, in contrast to the wine connoisseur, some individuals may wish to proclaim their 'common man' status by ordering beer, or they may wear their ethnicity with pride, as when a Bavarian or Czech demonstrably chooses some local beer or an Englishman travels to find a particular regional ale. In Denmark, Johansen *et al.* (2006) revealed symbols of identity linked to an underlying socioeconomic effect and/or a difference in educational level in their research on 3.5 million supermarket shopping transactions. They found a significant correlation of purchases of wine with purchases of generally more healthy foods (fruit, fresh vegetables, poultry, low fat cheeses and milk, etc.), while purchases of beer correlated with less healthy foods (chips, sausages, pork, lamb, ready-prepared meals, sugar, charcuterie, etc.). This is interesting because it might relate not only to concepts of sophistication, but also to the fact that knowledge about the cardiovascular benefits of red wine (Frankel *et al.* 1993) is more widespread than knowledge of the similar benefits in beer (Wright *et al.* 2008; Kaiser *et al.*, chapter 2), especially in those beers that include hops. On the other hand, it might just be related to prices.

González Turmo's chapter (chapter 8) exemplifies beer drinking and brewing in one of the most southern cities in Europe, Seville, and how the conviviality of the drinking place has been adapted to the traditional patterns of social life in Andalucía. As the historical components in this chapter date back about 150 years, beer drinking is shown not to be just a contemporary, modern habit in this region, with its very hot summers. The author also identifies the significant use of local brand names, despite multinational changes in brewery ownership, demonstrating that the image of locality given by brand names still has an importance in marketing. This is an issue which is reiterated in several chapters of this volume.

The brand names of beers are often carried over from the times when particular beers were produced by small, local breweries. Even though so many of these breweries have now been bought by global companies, the brand names are kept for marketing purposes, as already discussed. Chapters 19 (by Gracia Arnaiz) and 20 (by Cantarero and Stacconi) in this volume are particularly concerned with this issue of marketing and the kind of messages modern beer advertisements present, often a mix between tradition and allusion to modern life. Cantarero and Stacconi use two television advertisements for different brands of beer as ethnographic data for their discussion of the efforts that modern beer producers make in order to associate drinking their brand of beer with relaxation and pleasure. Gracia Arnaiz pursues this theme, and identifies aspects that have been changing in the relationship between producers and consumers and how those links are mediated through advertising.

However, this marketing pressure should also be reviewed for its negative effects. From the biomedical perspective taken by Kaiser, Medicus and Brüne (chapter 2), the positive physiological and psychological effects of moderate alcohol consumption must be balanced by the severe dangers of excessive drinking. The figures are quite alarming. In Germany, for instance, according to

Soyka (2001), 2.5 million people (approximately 3 per cent of the population, or 4.8 per cent of males and 1.3 per cent of females) have serious problems with alcohol. This group has their life expectancy reduced by about twelve years, and the problems create enormous costs for the country's health system. The situation can be disastrous in countries where alcohol was previously unknown or hardly known and very rarely consumed. In Papua New Guinea, alcohol (almost exclusively consumed as beer) is responsible for a variety of very severe consequences, such as poverty as wage earners spend their money on buying beer. Regularly, one sees trucks with men returning home for the weekend provisioned with large amounts of beer, bought in cartons and usually drunk before the home village is reached (Marshall 1982). This can be followed by irresponsible and outright illegal behaviour, and in particular by domestic violence against women and rape. So far, no remedy has been found.

Taking an overall view of the material presented in this volume, we are confronted with a question that parallels McGrew's opening sentence (chapter 1). Why would humans from so many cultures, so geographically dispersed, habitually ingest this potentially toxic beverage? Some of the answers are reflected in McGrew's hypotheses 3 to 7 (chapter 1) for nonhuman species, i.e., energy-seeking, health-enhancing, taste-rewarding and enhancement of pleasure or relief of pain through altered states of mind. Other chapters have extended our understanding of these hypotheses in relation to human societies. The economic dimension should never be omitted in such discussions, since a significant reason for the contemporary geographic spread of beer-drinking practices around the world is due, like the worldwide availability of Coca Cola, to the economic power of large multinational brewing companies to infiltrate every economic zone, with affordable, hygienically safe, bottled or canned beers. This is particularly demonstrated by Aquino and Persoon (chapter 18) on the Philippines. However, with humans it is essential that one should also consider far more complex sociocultural explanations along with the biological effects. What becomes clear from the contributions to this volume are the social and communal benefits of the conviviality and altered states of mind biologically engendered by beer. Beer is indeed a topic meriting cross-disciplinary insight.

Drawing this introductory chapter to a close we want to stress that beer is a truly international drink, which today is increasingly produced and marketed globally as well as still being brewed in small traditional ways. In trying to find reasons why beer-drinking cultures have been, since antiquity, and remain widespread, we found it essential to refer to perspectives from totally different academic disciplines. Yet despite the many books on beer and brewing, we know of no other volume that has brought these diverse and relevant perspectives together. The juxtaposition of these perspectives from different disciplines allows further deductions which have not so far been identified. So, we hope that the reader will discover in this volume a new range of information on brewing, marketing and drinking beer, appreciate the way in which beer is embedded into social and ritual cultures of so many societies around the world and perhaps one day illuminate a new dimension. As our volume has

no chapter that can replace the taste-rewarding hedonism of drinking beer, we recommend that it is best for readers to carry out their own participant observation of beer-drinking in the surroundings they find most congenial.

In ancient Mesopotamia, beer brewing was so important that it was the only profession directly linked to a deity. So, it is appropriate to finish this chapter with some lines of arguably the most famous beer poem, the hymn to Ninkasi, a Mesopotamian goddess, in the version rendered into English by Hornsey (2003: 89):

*... You are the one who waters the malt set on the ground,
The noble dogs keep away even the potentates,
Ninkasi, you are the one who waters the malt set on the ground,
The noble dogs keep away even the potentates,
You are the one who soaks the malt in a jar,
The waves rise, the waves fall,
Ninkasi, you are the one who soaks the malt in a jar,
The waves rise, the waves fall,
You are the one who spreads the cooked mash on large reed mats,
Coolness overcomes,
Ninkasi, you are the one who spreads the cooked mash on large reed
mats,
Coolness overcomes,
You are the one who holds with both hands the great sweet wort,
Brewing [it] with honey [and] wine,
(You the sweet wort to the vessel)
Ninkasi
...
(You the sweet wort to the vessel)
The filtering vat, which makes a pleasant sound,
You place appropriately on [top of] a large collector vat.
Ninkasi, the filtering vat, which makes a pleasant sound,
You place appropriately on [top of] a large collector vat.
When you pour out the filtered beer of the collector vat,
It is [like] the onrush of Tigris and Euphrates,
Ninkasi, you are the one who pours out the filtered beer of the collector
vat,
It is [like] the onrush of Tigris and Euphrates.*

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