Handbook of Medieval Culture
Volume 3

Handbook of Medieval Culture

Fundamental Aspects and Conditions
of the European Middle Ages

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Albrecht Classen

Volume 3

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Roads, Streets, Bridges, and Travelers

A Transportation Systems and Society: From the Roman World to the Middle Ages

Streets, roads, mountain passes, bridges, and fords to cross rivers have always been the essential nodules in any social network, and they speak volumes about the development of a society at any given time in history (Szabó, ed., 2009). We can grasp an entire culture through a study of its infrastructure (Fischer and Horn, ed., 2014). One of the major hallmarks of the Roman Empire, for instance, was its outstanding network of roads connecting all parts of the huge territory under the possession of Rome. Those roads and bridges made possible excellent and sustainable communication over thousands of miles and so guaranteed in many ways the Romans' military superiority for many centuries. The Romans were master builders of imperial and frontier-crossing roads, which they secured at regular intervals with fortresses. Moreover, they set up huge military camps, many of which later became the foundation of future cities. And they were also responsible for significant bridges, canals, sewer systems, mountain passes, and other features relevant for the communication system all over their empire, not forgetting the large number of inns or taverns where the travelers could rest and sleep (*mansiones*) (Heinz 2003). Many roads were created to facilitate major military operations, and many continued to exist in the following centuries (Popović 2012). Calculated altogether at the height of their development, the Romans had ca. 80,000 to 100,000 km, or ca. 54,000–67,500 Roman miles, or ca. 50,000 modern miles of main roads. At any time during late antiquity, a traveler could easily travel from the Hadrian's Wall in the extreme North-West of the Roman Empire to the border of Ethiopia, ca. 4,500 miles, always on Roman roads. Similarly, at those times the Balkans were as much integrated and connected with the heartland of the Roman Empire as the Iberian or English territories (Schreiber 1961, 129–30).

This most impressive transportation system more or less survived the Romans' fall in the West by the end of the fifth century far into the Middle Ages, if it has never disappeared completely. Nevertheless, with the gradual loss of stable and centralized governments and quickly changing rulerships in the Germanic kingdoms, we witness the rapid decline of the logistic network during the post-Roman world. One major consequence was the reorientation of cultural, military, political, and economic centers, simply because the early medieval rulers in England, Italy, on the Iberian peninsula, in Germany, or France could not main-

tain the old transportation arteries and had to rely on other features, some natural, such as rivers and valleys, ancient tracks, and mountain passes. Even though major transportation routes survived and were constantly worked on out of sheer necessity to maintain them, the overall network suffered significantly. This did not mean, however, that the Middle Ages did not have or did not care about good logistics. Without those no wars could have been fought, and no markets could have been supplied. All trade, communication, and travel for countless purposes depend on a reliable transportation network (see the contribution to this *Handbook* by Romedio Schmitz-Esser, "Travel and Exploration"). But it is important to keep in mind that medieval streets and roads in general were not simply identical with those from antiquity because the technical know-how, the political will to maintain such a transportation network, and the financial means to do so were simply lacking or got lost in the course of time. We also would have to consider that early-medieval armies operated differently than Roman armies, transported less military equipment, making them much more mobile, and so soon resorted to more direct routes when, for instance, crossing the Alps abandoning the old Roman roads that had been built better but usually went on detours for convenience's sake (Winckler 2012, 116–19).

However, many ancient roads continued, such as the *Via Aurelia*, the *Via Cassia*, the *Via Claudia* (Walde, ed., 1998), the *Via Appia*, the *Via Julia Augusta*, or the *Via Flaminia* (Bonomi 1991), continued to be traveled on. Until today remnants of those roads still can be seen, such as the *Via Appia* (Bogstad 2010) at Rome, the Roman road ascending Blackstone Edge, above Littleborough, near Manchester, or the famous short stretch next to the Roman-Germanic Museum in Cologne. Another example is the Roman military road parallel to the Hadrian's Wall in Northumberland, still clearly visible today. Similarly, the Romans had to build or expand the roads crossing the Alps since the second half of the first century C.E. because they had expanded their territory beyond that mountain barrier and needed to provide their troops north of it with the necessary resources (Winckler 2012, 62–72).

Modern words reflect the longevity of the Roman transportation system, for we still talk of "street" (Engl.) or "Straße" (Ger.) based on Latin *via strata* (paved path), or of "la route" (French), based on Latin *via rupta* (a passage forged through), and "la rue" (French) based on Latin *ruga* (crevice, crack, passage) (Heinz 2003, 12). Nevertheless, throughout the Middle Ages new roads came into existence, new cities emerged, and new bridges were built. But critical Alpine passes, such as the Great St. Bernard Pass, continued to be used as in Roman times because they were ideally located and most convenient for the bulk of traffic, and only had to be maintained continuously (Pauli 1980; Hunt 1998; Bergier and Coppola, ed., 2007). The same applies to other routes crossing the

Alps, as extensive archeological research has revealed (Planta 1985; Schneider 2002/2003). Interestingly, the St. Gotthard Pass was not developed until the early thirteenth century because of local difficulties, especially the turbulent Reuss river which swelled up too much during the snow melt and made all travel impossible (Woodburn Hyde 1935). The first bridge, the so-called "Devil's Bridge," crossed the *Schöllenen Gorge* not before 1230, and it had to be rebuilt many times, though it was always constructed of wood until the sixteenth century when the first stone bridge spanned over the Reuss (see also below).

Some of the key components of Roman roads consist of (1) a solid foundation, sometimes laid on pile-gratings in marshy areas; then (2) a self-contained bottom layer of broken stones, tile fragments, and gravel; (3) the use of clay, lime, or lime mortar to bind the stones into a cohesive and watertight mass; and (4) a solid and durable paved surface. Older research still assumed a uniform application of this layer throughout the empire (Speck 1950; Schreiber 1961, 120–22). This, however, has proven to be erroneous since especially in the Northern provinces many roads were covered only with a layer of crushed rock (*summa crusta*) (Heinz, 2003, 43; 47–48). The Romans placed greatest emphasis on roads because of their supremely military function, since the far-flung borders of their huge empire had to be defended from ever-growing numbers of hostile Germanic tribes coming from the North and East (Goffart 2006), not to forget the Parthians in the East and other peoples. But merchants also traveled on those roads, and those continued to be used far into the Middle Ages and beyond.

By the same token, we need to keep in mind that the Romans were not necessarily the first to build roads and streets, but often followed much older systems, as the case of the city of Trier illustrates, allegedly founded by Emperor Augustus in 16 B.C.E., although the ancient Celts had already lived there, utilizing the location as a convenient rest stop for merchants and warriors who traveled through that area. In other words, ancient trade routes crisscrossed Europe even before the Romans left their first impact.

We must also not forget that major roads existed in other parts of the world, before and after the Romans, if we think of the famous *Silk Roads*, the roads through the Egyptian empire, the merchants' trails through the Sahara, and the massive road system built by the Incas until ca. 1500 (Regal 1936; Schreiber 1961, 182–94). Moreover, every road leads to a specific point of interest, and the Asian road system more or less connected China with Europe, especially because of the great demand for silk and spices from the East. By late antiquity relatively intense trade involving lead, zinc, and glass connected both continents (Schwarz 2005), but the highpoint of East-West trade was not achieved until the thirteenth century when the Mongols established their vast empire under Genghis Khan and his successors (d. 1227; Hartog 1989; Krämer, ed., 2011). When the Mongols moved

their large armies, they obviously sent military engineers (or pioneers) as an advance unit to clear and level the roads, to build pontoon bridges, and we can assume that other cultures operated in a similar fashion, though perhaps less effectively than the Mongols (Krämer 2011, 103). Being less concerned with religious issues, and more in fostering trade, the Mongols invited Westerners with relatively open arms, reducing or eliminating the usual toll and setting up rest stops every twenty-five to thirty miles, as Marco Polo reported. In other words, the history of roads, transportation, and travel easily transcends the usual historical periods of antiquity, the Middle Ages, and the Renaissance. Likewise, this economic and logistical history quickly forces us to abandon the traditional Eurocentric perspective and to pursue a much more global orientation (Borgolte 2010; see also the contribution to this volume by Romedio Schmitz-Esser, "Travel and Exploration").

B Travel, Roads, and Transportation in the Early Middle Ages

Roads, streets, and paths were created by a variety of measures throughout the Middle Ages, and we commonly identify them as "Altstraßen" or 'original roads' (Wopfner 1931). The *holloways* result from people regularly walking or riding the same stretch, creating an ever deepening passage, making it hollow. Then there are man-made *earthworks*, *embankments*, *terraceways* (on the slope of a hill), *zigzags* (to climb a hill), *causeways* (similar to embankments, but mostly crossing a marshy or swampy area), and *cuttings* (not developed until the modern age; cf. Morriss 2005, 80–100). Archeological excavations have uncovered evidence that by the early Middle Ages fairly extensive bridge and road constructions were carried out that even made possible the crossing of wetlands and swamps, such as by Slavic people in the modern region of Mecklenburg (Schuldt 1975). We know of many people who traveled, and this especially since the eighth and ninth centuries, even if we disregard the entire age of migration in the third to fifth centuries. Whether we think of the major military operations undertaken by Charlemagne (d. 814) (Götz 1985, 529) and his successors, whether we consider the extensive travels by pilgrims along the old *Via Flaminia* (Einhard, *vita* 2; cf. Heinz 2003, 108) or the Benedictine monks who went on missions in seventh- (originating from Ireland under the leadership of Columban) or in eighth-century Germany (Anglo-Saxons, led by Saint Boniface) and thus had to cross many lands to reach out to the local people both in the North (Frisians) and the South (Bavarians), or whether we include the fairly large groups of administrators and

warriors who belonged to the courts of the early-medieval peripatetic kingdoms, travelers used a broad system of roadways in this era. Early medieval Europe also witnessed a variety of military attacks from the outside, such as that by the Huns (fifth century), the Saracens/Arabs in the eighth century, the Vikings between the eighth and the eleventh centuries, and the Magyars in the tenth century. Those massive military operations would not have been possible without extensive logistic opportunities having been available to them, irrespective of the presence of good roads or bridges. In addition, the Huns, like the Saracens and later like the Mongols, had the great advantage of being very swift on their horses, which allowed them to cover huge distances in a short span of time, free of the need to have good roads at hand. The Vikings mostly relied on their extraordinarily well-built ships with which they could easily travel along the shore line, into estuaries and deep inland on rivers, and even cross the Atlantic and the Mediterranean. None of these attacks, however, seem to have been supported by special road systems, especially since none of those peoples really settled after their conquests, except for the Vikings, who began to build their own fortified camps and harbors especially along the Western coast of England, in Normandy, and in Southern Italy by the ninth and tenth centuries (Haywood 1991; Ellmers 1998; Løset 2009; see also the contribution to this *Handbook* by Timothy Runyan).

Regarding real roads, however, as we knew them from the Romans, we have to wait until the ninth century to witness a renewed effort to maintain, rebuild, or create roads and streets, and even canals in a systematic fashion. Charlemagne would not have been able to carry out his life-long military explorations and conquests without the possibility to transport large amounts of equipment over long distances. He is also said to have tried to create a waterway connection between the rivers Main and Danube to make possible his attack on the Avars, begun in 792 and continued until 793 or 794, the so-called *Fossatum magnum* (Spindler 1998). Scholars still debate whether that canal was actually ever completed, but recent dentrochronological and archeological research has now provided the evidence to confirm this report (Ettel and Daim, ed., 2014), which underscores the extent to which the early medieval engineers were capable of organizing long-term and large-scale projects. Moreover, Charlemagne could realize his excursions into Arab-controlled Northern Iberian Peninsula only because some kind of a good road system actually existed. We know especially about his retreat through the pass in the Pyrenees, the Valle Roncesvalles, as described, though poetically embellished, by the anonymous poet of the *Chanson de Roland* (ca. 1100) and later, in close imitation, the *Rolandslied* by the Priest Konrad (ca. 1170). This developed further in the course of time, especially because economic factors played a significant role insofar as merchants needed to transport their wares and sell their goods at many different markets scattered all over

Europe and beyond. While many ancient cities dwindled considerably or disappeared from the geophysical map altogether in the post-Roman period, new settlements were created and set up in heretofore neglected areas. Their survival, however, was only achieved because old or new roads made all kinds of exchanges possible, bringing in business to the early-medieval markets.

C Roads Supported by Monasteries and Cities

Since the twelfth century many new monasteries were founded, especially by the Cistercians, but also by the much older Benedictines, which required a close connection with their mother houses for organizational, spiritual, and economic purposes. They were commonly placed strategically next to major road arteries (Kaminsky 1972, 16–21; 149–50; et passim; Wehlt 1970, 17–18). The monastery of Corvey, for instance, was situated at the water crossing of the *Hellweg*, one of the most important East-West axes traversing the Holy Roman Empire (Stephan-Maaser 2000). Other roads arriving from Mainz and Frankfurt, Kassel, and Cologne passed by Corvey and continued to the North and North-East. Only by the middle of the twelfth century did this major road lose some of its importance due to changing economic and political conditions in the Empire, especially because then the maritime trade and the massive immigration of farmers from the West in Eastern European countries reoriented the economic foci. This did not diminish at all the need for roads, but the new ones took different directions, leading into new Eastern territories.

At the same time, the city communities began to take better care of their intra-urban streets and bridges, as we can tell from the city plans of Pisa (1155), Reggio (1204), Treviso, (1231), to establish market squares, such as those in Florence, Bologna, and Vercelli. The cities of Paris and Hanover began to put in pavements in 1183 and 1200 respectively. They were followed in this by Duisburg (1250), Venice (1264), Lincoln (1286), and London (1253).

In order to pay for the enormous costs, taxes were raised and tolls (pontages) were taken, as stipulated in the *Mainzer Landfrieden* from 1235, in which Emperor Frederick II ordered for the first time that tolls were to be raised by local authorities that had to use those monies for the maintenance of roads. Nördlingen set up a toll system in 1358, Mergentheim in 1340. The famous bridge at Totnes in Devon, a town situated on one of the most important an ancient trackways in Southwest England and at the head of the estuary of the River Dart in Devon (Stansbury 1998), raised a significant amount of toll throughout the centuries; only the king or his officers were exempt. In northern German cities, we often hear of wealthy individuals who made large donations to the city for the building of

streets and roads, such as in Lübeck (1289) and Hamburg (1398). In France, regional treatises arranged the establishment of tolls and taxes to create a road system, such as in Bourges (1095), Narbonne (1157), and Vexin (twelfth century). The *Coutumes de Beauvaisis* from 1283 granted the public authorities the power to raise taxes and to take tolls specified for the building of a road system. In Scandinavia, private individuals of greater financial means mostly took care of the transportation system, while in England the logistics were lacking considerably even far into the high Middle Ages, unless merchants or monks undertook a major effort, such as in Canterbury (1389).

One reason why roads apparently had deteriorated by the sixteenth century might be closely linked with the dissolution of a vast number of monasteries in the wake of the Protestant Reformation begun by Martin Luther in 1517. These institutions had traditionally cared for roads reaching and departing from their location, trying to attract pilgrims and supporting the exchange with other monasteries. Wien their disappearance, a major source of road maintenance was lost (e.g., the monastery at Corvey in Northern Germany; cf. Stephan 2000, 35–39). But by then we also have to consider the crucially intensified traffic with much larger loads, heavier carts, and iron material used for the wheels, which had a catastrophic effect on roads everywhere, as the general complaints about travel conditions teach us, such as those by William Harrison, third and last archpriest of England (1586). Those problems had already existed in antiquity, but the Romans had simply built superior roads that could handle those weights effectively.

On the Iberian Peninsula, the various royal houses supervised the establishment and maintenance of their road systems since the end of the thirteenth century. In Italy, the individual urban communities took the initiative to work on the streets and roads since the second half of the thirteenth century. Rural communities were regularly charged with working on the country roads. We know of city offices explicitly charged with supervising the streets and roads, such as in Siena (1290/1299), Milan (1346), and Madrid (cf. Montero Vallejo 1988; Segura 1993). However, the major imperial roads leading through Italy were still the responsibility of the German king (Schrod 1931).

D Medieval Travelers and Roads

In general, however, we have rather limited knowledge about streets and roads in Europe, and must mostly rely on itineraries by kings, on travelogues by pilgrims, nobles, and merchants, indirectly drawing information about the possibilities of traveling and of the intensity of travel at specific times (see also the contribution

to this *Handbook* on "Travel and Exploration" by Romedio Schmitz-Esser). Generally, it would be erroneous to assume that medieval people were mostly village-bound and had hardly any means or the freedom of departing from the places where they lived; on the contrary, as we know now, they traveled for a myriad of different goals, depending on their individual purposes and needs (Ohler 1986). Monks regularly sent manuscripts to other monasteries, abbots and bishops attended synods and councils, crusaders amassed at certain points and then traveled in groups and armies to the battle location, and to the next harbor to cross the Mediterranean (Labarge 1982, 137–54). Throughout the entire Middle Ages, we encounter knights on their way to tournaments, to court festivals, weddings, and ceremonial events, such as knighting squires (Mainz, May 1184, called by Emperor Frederick I, for instance; Fleckenstein 2002, 202–03). Although they were regularly using horses, they had to be accompanied by squires, carts for their lances, armor, weapons, and a tent or tents, clothing, foodstuff, and other essentials. Thus, they were dependent on more or less good roads for themselves and their rather large retinue (Fleckenstein, ed., 1985; Barber and Barker 1989). The institution of the tournament was not developed until the early twelfth century, but then it quickly attracted huge interest in the European aristocracy. Although France was always the center of tournaments, we find similar events in all other countries, especially Flanders, despite many attempts by the king or the pope to ban those events, which at times resulted in the death of a participant and numerous injuries (Keen 1984, 83–101; Krüger 1985). By the twelfth century, we witness increasingly young scholars crisscrossing Europe, following major scholars and teachers to individual universities (Courtenay and Miethke, ed., 2000; Irrgang 2002).

Courtly poets, minstrels, goliards, and jugglers traversed the lands, looking for new audiences for their livelihood. And the massive building projects of the Romanesque and later the Gothic cathedrals and churches would not have been possible without large groups of expert stone masons, architects, carvers, painters, artists, and other workers required (Harvey 1984; Coldstream 1991). Late medieval roads were increasingly crowded by poor people, haberdashers, those suffering from leprosy (if not quarantined in lepers' colonies) and other sicknesses, beggars, Gypsies (today properly identified as Sinti and Roma), lansquenets and other soldiers, cripples, unemployed teachers and scholars, artists, prostitutes, and many others (Landolt 2011).

The craft system in late medieval cities was based on young men beginning the learning process as apprentices with a master, and subsequently wandering around from town to town, working with a variety of masters to learn as many different techniques as possible, until they were allowed to pass their exam, doing their masterpiece (Schulz 2002). However, this did not automatically grant

them the privilege of opening their own workshops. Instead they had to wait, often for many years, until a position opened through the death of an old master or the expansion of the city population, which caused much social unrest especially in early modern cities (Metzger 2002; von Heusinger 2009; Schulz 2010). In other words, the social mobility in the Middle Ages was considerably higher than we commonly assume today, even though it would be somewhat true that the peasant class could hardly move away from the village until the fourteenth and fifteenth centuries (Schubert 1995; Dobozy 2005). Nevertheless, even they resorted to the great opportunities in Eastern Europe by the twelfth and thirteenth centuries and left home to create new existences in those distant lands. Altogether, a large number of people traveled for many different reasons over surprisingly long distances throughout the entire Middle Ages.

Even though we do not hear much about specific road building projects or of the conditions of roads in high medieval sources (that is, chronicles or romances, pilgrimage accounts and travelogues; late medieval sources generally reveal more data on this aspect), it would be inconceivable to assume that merchants with their valuable goods, for instance, would not have been able to rely on fairly decent modes of transportation (Brennig 1993; Spufford 2002). The most famous example might well be Marco Polo, who traveled all the way from Venice to China and spent ca. twenty years there at the court of the Mongolian Khan, after which time he returned and finally wrote about it in his *Il Milione* (ca. 1298). One telling example of how little he reflected on the actual road conditions would be: "When the traveller leaves this castle, he rides through a fine plain and a fine valley and along fine hillsides, where there is rich herbage, fine pasturage, fruit in plenty, and no lack of anything. ... Sometimes the traveller encounters stretches of desert fifty or sixty miles in extent, in which there is no water to be found ... . After these six days he reaches a city called Shibarghan, plentifully stocked with everything needful" (Polo 1958, 74).

The fact that most medieval kings pursued a peripatetic life style in order to be physically present at least once in most parts of their kingdoms required that they could travel without too many difficulties, being accompanied by their entire court, which implied considerable logistic tasks to be handled on a daily basis (Peyer 1964). King John moved over thirteen times a month throughout his reign, while King Edward I moved at least nine times per month (Hindle 1998, 17). Much depended, of course, on the size of the kingdom. The German-Roman kings, for instance, had to cover a much larger territory than his French, English, or Spanish counterparts, so their itineraries were considerably longer and more complex, which also meant that a real capital city never quite developed in the area of the Holy Roman Empire, except for Prague by the fourteenth and Vienna by the fifteenth century (Ditchburn et al, ed., 2007, 51; Scales 2012, 80–83). By the late

Middle Ages, the courts of justice were also traveling from location to location, and both the royal and the legal courts had to be accompanied by their scribes and the relevant archives, not to mention the treasury, clothing, food supplies, arms, tents, and at times even the most valuable royal insignia (Duggan 1993). In a similar way, the ecclesiastic courts were on the road, both the episcopal synods (*Sendgerichte*) and the papal inquisitors.

It was not enough for the king to travel all the time: but he also had to send ambassadors, emissaries, couriers; he had to receive foreign visitors, his own princes, dukes, and barons, and in general run a whole country, which meant that traveling was a very common aspect of a noble or courtly lifestyle (Labarge 1982, 33–51; 115–36; Brummett 2009). For instance, the marriage of two young people from different countries commonly involved heavy diplomatic exchanges and negotiations, and many letters, gifts, and contracts had to be exchanged before a mutual agreement was reached. Subsequently, the bride usually traveled to the court of her future husband, bringing with her a whole household, staff, wardrobe, and library, as in the case of the Byzantine princess Theophanu Skleraina and Emperor Otto II in 972 (Davids 1995), Anne of Bohemia and King Richard II of England in 1382 (Suchý 2009) or of Leonhard of Görtz and Paula de Gonzaga in 1478 (Antenhofer 2007).

In England, the members of Parliament also traveled on a regular basis, assembling at Oxford, Winchester, or Westminster, which tells us that there must have been sufficient roads and accommodations alongside for travelers of all social classes. Similarly, justice courts moved around to be available to every person in England, and by the same token, countless individuals undertook considerable travels to the respective courts to have their cases heard, such as Bishop Wilfrid of York who went three times to Rome to plead for the primacy of his see over that of Canterbury (Brundage 2008). By the thirteenth century, we witness an ever growing institution of the legal court system, with professional lawyers and judges, and then the courts, secular and ecclesiastical, were mostly located in specific cities (Naegle 2002). In the Holy Roman Empire, the king's central power was fading throughout the Middle Ages, which also meant that the territorial princes increasingly gained independence, which found its expression also in the establishment of regional courts following a variety of legal systems, until in 1495 Emperor Maximilian I introduced Roman law at the Imperial Court of Justice (*Reichskammergericht*), which maintained its status of the final legal authority. All these developments required intensive travel by lawyers, judges, plaintiffs, defenders, witnesses, and simple observers (Janin 2004).

Pilgrimage can be identified as the most central religious motive to go traveling, irrespective of the difficulties of the various roads, the costs, the dangers from robbers and other criminals, inclement weather, and the barriers of the various

mountain ranges (that is, the Pyrenees, Alps, Appenine Mountains). While Jerusalem and Rome have always been regarded as the supremely important pilgrimage sites, by the eleventh century Santiago de Compostela began to attract an ever swelling number of pilgrims because the remains of the Apostle St. Jacob had allegedly been transferred there, making the cathedral to a deeply veneered shrine of his relics since their 'rediscovery' in 814. Apart from four major routes traversing Northern Europe leading to Northwestern Spain in Galicia, many smaller roads were filled with pilgrims aiming for Santiago de Compostela, such as the notorious English mystic Margery Kempe (ca. 1373–ca. 1440) (Bogstad 2010). As in the time of Charlemagne, the pass of Roncesvalles in the Pyrenees was the main artery for the flood of pilgrims, who then took the road to Burgos, Leon, and Villafranca to Santiago. Others chose the route east of the Pyrenees from Girona to Montserrat, then on to Lerída, Zaragoza, Burgos, and Astorga. The pilgrimage to Santiago was also known as "The Way of St. James," but until today, the most popular route proved to be the "The Camino Frances," which begins in Saint-Jean-Pied-Port on the French side of the Pyrenees and finishes about 780 km (ca. 500 miles) later in Santiago (Stokstad 1978; Dunn and Davidson, ed., 1996; Brabbs 2008; Wolfzettel 2012). The four major pilgrimage routes through France were the "via lemovizensis" (via Vezelay), the "via touronensis" (via Tours), the "via bodnesis" (via Le Puy), and the "via toulosana" (via Toulouse) (Plötz, ed., 1990; Plötz 2002; Denecke 2013, 180).

Compared to antiquity and the early modern age (seventeenth and eighteenth centuries), the Middle Ages seem to have known considerably less wheeled traffic, if we disregard the transportation of goods by merchants, farmers, and others. In England, there was no official traveling coach for the monarch until the time of Elizabeth I (1558–1603). Nevertheless, wealthy and powerful individuals owned splendid carriages, as shown in the fourteenth-century Luttrell Psalter on fols. 181v–182r, drawn by five horses and being a stately vehicle for at least four noble ladies who used it more for a kind of procession than for actual transportation needs (Kreuger 1920; Backhouse 2000, 54–55). Queens and other noble ladies could commonly resort to a kind of chariot, although it would have been an items of considerable luxury, and even though it did not have any springs, making the journey rather hard and uncomfortable (Labarge 1982, 37). Sir Geoffrey Luttrell, on the other hand, is presented only in full armor, seated on his war horse, on fol. 202v. In Geoffrey Chaucer's *Canterbury Tales* (ca. 1400), the entire company of pilgrims rides on horseback. As to the Knight, we learn that he had been to Alexandria in Egypt, Prussia, Lithuania, Russia, Grenada (Spain), Ayash (Syria), Antalya (Turkey), Tlemecen (Algeria), and Balat (Turkey), all locations of major battles between Christians and Muslims or representatives of other religions. His son, the Squire, has not yet seen so much of the world, but he as well has had

considerable knightly experiences in Flanders, Artois, and the Picardie (Chaucer 2008, 51–86).

Chaucer might have exaggerated here a little, but it was certainly not uncommon for late medieval knights to roam the entire European world in search for military challenges. Chaucer's near-contemporary, the South-Tyrolean poet Oswald von Wolkenstein (1376/77–1445) claimed similarly of having visited many different countries during his years as squire and then as a knight, such as Prussia, Lithuania, Tartary (probably Russia), Turkey, France, Italy, and Spain (Kl. 18, 17–18). In other poems, he mentions Hungary (Kl. 23, 82; Kl. 30, 25 ['Kl.' refers to the number of each song in the critical edition]), Portugal (Kl. 23, 101), and Northern Africa (Kl. 23, 101). Then Oswald also refers to extensive travels through the various German-speaking lands, having visited Salzburg, Munich, Augsburg, Ulm, Heidelberg, Cologne, and Aachen (Kl. 41), while he subsequently bitterly complained about his sorrowful existence back home in his castle Seis am Schlern in the Tyrolean Alps, contrasting his boring and frustrating life with the splendor of his international travels to Turkey, Russia, Prussia, Denmark, Sweden, Flanders, France, England, Scotland, Spain, Portugal, and France (Kl. 44, 1–17).

The most attractive travel goal, however, remained Jerusalem, apart from Rome and Santiago de Compostela. One of the most famous authors of an extensive travelogue was Arnold von Harff who departed Cologne in November 1496 and did not return home until October 1498. He traversed all of Germany, crossed the Alps, made stops in Meran, Verona, and Rome, from whence he toured Rimini and Venice. There he took a ship all the way to Alexandria via Crete and Rhodes. Once in Egypt, von Harff went to Cairo, and from there traveled to Mount Sinai, then to Jerusalem. The return route took him north via Damascus, Beirut, Conya, and Constantinople. After having journeyed across the Balkan, he aimed for Santiago de Compostela, visiting Verona, Milan, Nîmes, and Burgos. Traveling from Santiago, he stopped at Burgos, Bordeaux, Rennes, Paris, and Brussels. Von Harff also claimed to have visited Mecca, Aden, and India between September 1497 and September 1498, but this was only a fictional account (Classen 2010). Nevertheless, his travelogue proves to be fascinating because of its astonishing details, global perspective, and open-mindedness, especially when he visited completely non-Christian territory or cities, such as Cairo. Otherwise, however, von Harff was not unique at all, as documented by a plethora of contemporary travelogues and pilgrimage accounts.

It was, indeed, highly fashionable for anyone in Christian Europe who had the financial means to go on a pilgrimage to Jerusalem at least once in his/her lifetime (Halm 2001), very similar to the Muslim *hadj* (Wolfe 1997). One of the most impressive accounts about such a travel was published by the Canon of the Mainz Cathedral, Bernhard von Breidenbach in February 1486, who had em-

barked on his journey together with his two friends, Count Johann Solms-Lich and his knight Philipp von Bicken, and with the famous Utrecht artist Erhard Reuwich in 1483. This work proved to be a bestseller, so a German translation appeared already in June of the same year, which was followed by ten new editions until 1522 in five different languages (Latin, German, Dutch, Spanish, and French). The program of illustrations was probably one of the major selling points, which allows us today to gain some insights in the road conditions. On fol. 138r, for instance, we see a group of Muslim horsemen, most of them playing a music instrument. The road is fairly smooth, but there are many rocks and plants over which the horses have to step. We do not observe any particular road work or pavement. Looking at the woodcut showing the entire Holy Land, we discover a feature typical of the art of woodcuts (see also Hartmann Schedel's *World Chronicle* from 1493): a heavy emphasis on the cities with their major buildings, especially the churches and the city wall, rather than on mountain ranges, wide open plains, the Mediterranean, rivers, and hills, but not on roads. Many other contemporary travelers went on pilgrimages and followed the same paths, and visited the same sites, but hardly any of them was more detailed in his comments about the roads, since the religious experience dominated all accounts. The one important exception proves to be Felix Fabri who went to the Holy Land twice, first in 1480 and then in 1483, and in his account, *Evagatorium*, he provided amazingly detailed comments about the road conditions in the Alps.

This observation finds its confirmation by way of many contemporary maps, such as the one of the Holy Land by an anonymous artists, in Ptolomy's *Cosmographia* (Ulm 1482), plate 24. Erhard Reuwich, obviously following the artistic standards of his time, paid attention to essential urban and natural elements, but ignored roads and streets altogether, such as in his woodcut of Rhodes (fol. 23v–24r). In Sebaldus Rieter's pen-and-ink drawing of Jerusalem (2nd half of the fifteenth century, Munich, Staatsbibliothek, Cod. iconogr. 172), there are at least some streets included connecting the major buildings, but even here we have to realize that artists did not consider roads or streets worthy subjects to be treated in their works (Timm 2006).

This situation proves to be rather ironic, considering the intensity of traffic already since the early Middle Ages. Insofar as many goods had to be transported over vast distances, both the roads and the vehicles must have met higher standards than we can perhaps imagine today. Geoffrey Hindley's comments speaks volumes in this regard: "The constant movement of the royal courts demanded transport and if the king himself and his immediate entourage could look to a comparatively rapid and easy journey on well-fed and well-groomed horses, their effects had to be transported in the lumbering vehicles taken from the farmyard" (Hindley 1971, 53).

E Medieval Horses

Not surprisingly, the horse played as big a role in the daily lives of medieval people as the car does for us today, and we could not even claim that the cost for and the trouble with horses were considerably higher compared with modern vehicles (for a most detailed study, see now the contribution to "Horses" by Cynthia Jenéy in this *Handbook*). In this regard, the horse truly determined much of travel in the Middle Ages; not surprisingly, until today we talk about 'horse power' to identify a car's power (Hyland 1999). As much as we now have available a large number of different cars and trucks for all kinds of purposes, so in the Middle Ages the variety of horses was great, depending on the specific use they were put to, whether we think of the great war-horse (charger or destrier), the secondary war horse, the rouncey, then the palfrey of the ladies, cart-horse (pack-horse), the sumpter horse, and the hubby (used for skirmishes by light cavalry), to mention just the most important types (Hewitt 1983; Gladitz 1997; Clark, ed., 2004). The German equivalents were *ros/ors* (for the war-horse) and *pfert* (palfrey), in equivalence to the Latin *dextrarius* (destrier) and *palefridus*. Often the best horses were considered to be those that were imported from Spain, and then those of the Arabian kind (Bumke 1986, vol. 1, 236–40; Ackermann-Arlt 1990; for horses in medieval Spain, see Rivas 2005). Massive caravans, pulled by horses and mules, dominated the medieval highways, and they even managed, obviously quite successfully, to cross the Alpine passes to Italy or to Germany vice versa. The problems were manifold, whether we think of the countless tolls to be paid, the dangers from bandits and robbers, warfare, inclement weather, and then, of course, the bad road conditions. None of those, however, ever prevented intensive trade between all parts of medieval Europe and the neighboring countries, and this already since the sixth and seventh centuries between the Austrasians (Rhineland), the Frisians, the Danes, and the Anglo-Saxons. Trade existed in the area of the Baltic Sea, and it extended all over the Mediterranean and beyond (Ditchburn et al, ed., 2007, 61–63).

In fact, considering how little individual travelers complained about the challenges of crossing those high mountain passes, they were not as difficult or dangerous as we might assume they probably would have been for medieval people. Archibishop Rigaud, for instance, was held up for three days in early February of 1254 at Salins in the Jura mountain (on the road from Paris to Lausanne) due to deep snow, but then he pushed on and reached his goal thereafter. We have, for example, a detailed report about the specifics of crossing those passes by the Spanish traveler Pero Tafur from the 1430s, but others were also not shy about commenting on the mountains and the roads crossing them (Labarge 1982, 29). Nevertheless, most pilgrimage authors only list the individual towns

North and South of the Alps, and might add the distance, but do not say anything about the road conditions, such as Konrad Grünemberg (1486; Denke, ed., 2011, 282).

F Road Building, Maintenance, and Improvement

Only occasionally do we hear of efforts by the authorities to improve roads. King Edward I charged Roger Mortimer in 1278 to enlarge and widen the roads into sections of northern Wales as part of his military campaign against the Welsh. In 1353 King Edward III ordered that the road between Temple Bar and Westminster be repaved. The City of London levied tolls on all trade entering the city, and used that money to improve the roads in the immediate surroundings. But medieval Europe did not know any comprehensive plan to create and maintain a systematic road network, as the Romans had done. When new towns sprang up in England, like Oxford, Coventry, or Plymouth, which were not located on one of the ancient Roman roads, new ones had to be built. In contrast to the Roman world when roads were simply physical entities, in the Middle Ages roads were regarded as "a right of way, an 'easement', with both legal and customary status" (Hindle 1998, 6).

If under bad weather conditions the road became impassable, the traveler was generally entitled to deviate and even trample over crop, as stipulated by the Statute of Winchester in 1285. When a road led over a hill, normally a variety of tracks developed, each traveler trying to find the most convenient way, especially for the wagons and carts. If roads followed the ancient Roman lines, such as Watling Street (between Canterbury and St. Albans; see Roucoux 1984), Ermine Street (from London to Lincoln; see Ellis and Hughes 1998), Fosse Way (from Exeter to Lincoln; Oswald 1928), and Icknield Way (Southern England from the Dorset coast to the Norfolk coast, probably pre-Roman; Thomas 1980), those medieval arteries survived until today. If, however, they lacked in a solid foundation, and then might have fallen out of use, they quickly disappeared from view and can hardly be tracked today, though arial photography has certainly revealed them once again.

These four roads were greatly admired and reflected on by chroniclers such as Geoffrey of Monmouth. Although he referred only to a legendary king, Belinus, his comments about the need of royal investment in the road system deserve to be cited: "He ordered them to make a road of cement and stone which would traverse the length of the island from the Cornish sea to the shore at Caithness and lead directly to the cities on the way. He commanded that another road be built across the width of the island from the city of St David's on the coast of Demetia to Southampton, to lead to the cities there as well as two more roads diagonally

across the island, leading to the remaining cities" (III, 39, p. 52; Given-Wilson 2004, 129–30). The *Leges Edwardi Confessoris* (early twelfth century) granted travelers royal protection on those roads, and by ca. 1250–1259 Matthew Paris included them in his map of England contained in his *Historia Anglorum* (British Library MS Royal 14.C.VII). He mostly designed illustrated itineraries for specific routes, such as from Dover to the North or from London to Apulia, but these were for the learned, hence just for readers, while most travelers had to rely on oral accounts helping them to find their way (Labarge 1982, 11). When Marino Sanudo wrote his *Secrets for Crusaders* and presented a copy to Pope John XXII in 1321, it was accompanied by map illustrations by Pietro Vesconte from Genoa, who provided astonishing details about Palestine: resorting to a grid of squares over the whole surface which made the detection of specific locations possible with much more accuracy than ever before (Labarge 1982, 11–13).

Depending on the specific use of a road, it was either called a 'portway' (leading to a port or a market town), 'herepath (road mostly used by the army), 'church path' (for access to the parish church), 'corpse road' (to transport dead bodies to a remote cemetery), 'pilgrim route' or 'pilgrim way,' 'abbot's way' (connecting abbeys with each other), 'drove road' for herding animals. The same phenomenon, with local variations, can be found on the Continent, a good example being Ochsenfurt in Northern Franconia/Bavaria in the vicinity of Würzburg. As the name tells us, throughout the Middle Ages and beyond, large herds of oxen were driven through the ford of the river Main. The same etymology applies to Oxford.

From early on, great emphasis was placed on the Alpine passes, since they were the crucial arteries connecting southern with northern Europe. As a result of the fall of the Roman Empire the economic, political, military, and hence logistical importance of the Alpine regions underwent profound transformations, which were both periphery and critical juncture for the major European powers already in the post-Roman world (Winkler 2012). Early medieval pilgrims, soldiers, and merchants continued to ply the old Roman roads, which were in steady use throughout the centuries. Since the high Middle Ages both the major roads and the mountain passes received increasing attention by the urban and territorial authorities, such as in Milan, Italy. In the early thirteenth century, the opening of the Alpine pass of St. Gotthard made possible a much more intensive traffic by merchants and traders between Italy and Northern Europe. The Milanese society of merchants, the *Universitas mercatorum*, undertook many efforts to secure the maintenance of that pass for its own profits. Contracts were regularly signed to guarantee the security of the Alpine routes, such as a contract from 1270 with the bishop of Sion/Sitten to guarantee the safety of travelers across the Sempione/Simplon pass. Bellinzona and Biasca, above all, made great efforts to control the

route through its valley because of the major economic impact. They were even entitled to raise a road toll to support the maintenance efforts (Conta 1996; Chiesi 1996). Some of the most important items that were transported across the Alps were wool, metal, and salt, apart from a wide variety of ordinary commodities, including wine, tools, cloth, spices, and the like. The transport on waterways, such as the Lago di Como, was not necessarily or always the preferred mode because of difficult climatic conditions, so the Strada Regina on the land route often enjoyed priority, even though constant maintenance was necessary (Scheffel 1914; Frigerio 1996; Hille 2000).

G Bridges and City Streets

Most medieval cities were interested in attracting merchants to their markets, so they all made some efforts to build and maintain roads leading to their city gates, even though, throughout the Middle Ages, the king was regarded as the central authority over all roads, supposed to guarantee peace and protection on the roads. Many cities were developed according to some kind of master plan, though we cannot compare this with those in place since the seventeenth century. The streets and houses were grouped around major centers, such as the church or cathedral and the market square with its city hall (Bruges, Tours, Rennes, Metz, Bordeaux, Freiburg i. Br., etc.; cf. Leguay 1984, 17–49), although rectangular design was rare. Crafts and guilds tended to be grouped together, forming smaller neighborhoods in the city, so they took care of their own streets and sewer system, if any was in place. Many times gallows were erected at road junctures outside of cities and well visible to all travelers, as we learn, for instance, from Wernher der Gartenære in his didactic verse narrative *Helmbrecht* from ca. 1260–1270 (v. 1305), and court cases were often heard at a crossroads, where the punishment was also enacted (v. 1705; cf. Reinhold 2010). Building bridges always proved to be a significant financial investment and demanded great engineering skills. Charlemagne was not only famous for his establishment of the cathedral of Aachen, but also for the bridge over the Rhine near Mainz. Archbishop Willigis of Mainz (975–1011) ordered the building of the oldest stone bridges in Germany at Bingen, crossing the Nahe, and at Aschaffenburg, crossing the Main (Wenniger 2012, 391–92; Tuczay 2012).

Originally, the erection and maintenance of bridges were royal privileges, but in the course of time the cities took over the responsibilities and hence the control and income resulting from bridges. At times, bridges provided asylum, and they were also regarded as ideal locations for negotiations, offering a kind of neutral space between two opposing sides (Schneider 1977; Maschke 1978). Spanning a

river or a gorge was generally viewed, disregarding the extensive technical challenges, as a pious act, as the crossing of such a body of water by human means constituted almost a religious ceremony, often closely associated with the spiritual transition into another dimension. Consequently, religious, mystical, and secular authors often operated with the metaphor of the bridge for a variety of purposes (Dinzelbacher 1973; 1990). While rivers were mostly crossed by means of ferry boats or rafts during the early Middle Ages, as the names of numerous cities such as Bedford, Hereford (both England), Frankfurt a. M., Ochsenfurt, or Erfurt (all Germany) indicate, since the time of Charlemagne new bridges, mostly out of wood, were erected. The twelfth century witnessed the beginning of ever wider and lengthier bridges out of stone, such as in Regensburg (1135–1147; Feistner, ed., 2005) or Würzburg (since 1133) (both Germany), or Beaugency (France) (Bachmann 2014, 282–87) (Fig. 1).

Fig. 1: Medieval stone bridge at Beaugency crossing the Loire, ca. fourteenth century (© Albrecht Classen).

Between the twelfth and the fifteenth century, medieval Europe witnessed the construction of at least fifty major bridges out of stone, such as the one at the Thames in London (1176–ca. 1209), at Capua (1234–1239), Torgau (1490s, spanning the river Elbe), or at the Vitava in Prague (1357–early fifteenth century; see below).

Most of them followed the model provided by Roman bridges, but in the course of time other types came into being, such as bridges with relatively flat

arches or with segmental arches, such as the Ponte Vecchio in Florence (1335–1345). But the vast majority of medieval bridges all had very heavy and low columns which often made the passage by ships underneath rather hazardous, such as in Bruges (Fig. 2).

Fig. 2: Stone bridge crossing a channel around the city center of Bruges (© Albrecht Classen).

Some bridges were used by craftsmen and merchants to pursue their jobs, others served for taking tolls; a good number of bridges, however, were financed by religious donations and hence were toll-free (Troyano 2003; Hänseroth 2008). In 1423, for instance, Richard Whittington, mayor of London, left £100 for the repair and improvement of bad roads, while William Chichele, brother of the archbishop, determined £10 for the maintenance of London Bridge (Labarge 1982, 22). Some of the most important bridges were those at Castle Combe, Wilshire, built ca. 1180, and at Sutton, built ca. 1500. Some towns had fortified bridges, such as Warkworth in Northumberland, and Monmouth in Wales. Apart from the famous London bridges (Watson et al., ed., 2001), the fen causeways to Ely are some of the largest examples in England (Hindle 1998, 41–45; for bridges, see also the contribution on "Architecture" in this *Handbook* by Charlotte A. Stanford).

All major rivers (for instance, the Rhine, Danube, Elbe, Po, Rioja, Rhone, Loire, Thames, etc.) invited the building of cities at their shores because the waterway was the easiest and the most economic means of transporting goods and people. Consequently, bridges were also built to facilitate travel across the rivers. Julius Caesar built a bridge out of timber trestle over the Rhine as early as in 55 B.C.E. The bridge at Mainz was built in 90 C.E., and the Constantine bridge at Cologne in the fourth century. The Romans also built a stone bridge over the Moselle at Trèves (Trier). During the Middle Ages no bridge was built at the middle or lower part of the Rhine, where ferries normally took over the task of transporting people and goods, but we know of many bridges, such as at Säckingen in the very southwest of Germany. Other important bridges were the stone bridge over the river Main at Würzburg and the stone bridge over the river Danube at Regensburg (see above).

All major cities, such as Paris and Rome, witnessed the erection of bridges in the course of time, and the actual number of bridges all over Europe is too large to list here (Boyer 1976, 171–95). Bridges often tell us why a certain road took a specific direction because rivers had to be crossed at concrete locations, and the roads were not supposed to follow long detours (Cooper 2006). In fact, most bridges were the decisive points determining the direction roads took; otherwise major detours would have been necessary (Labarge, 1982, 22). Although bridges have been mostly the object of attention of local historians, we can now underscore their central importance for the larger transportation system over hundreds and thousands of miles (Jervoise 1930; 1931; 1932; 1936). Goods could be transported either on land with packhorses, which was the most expensive mode, on carts and wagons, which considerably reduced the price, on barges using rivers, while sea transport was the cheapest (Cook 1998, 12–13; Röder et al., ed., 2014). Both the construction and maintenance of roads and bridges were highly expensive and difficult to carry out by medieval authorities.

We know that freely roaming masons were in charge, but not much information about them has survived, although they required detailed technical know-how when constructing a bridge. Most bridges had no stone parapets, but only wooden railings, while the major emphasis rested on the starlings and cotwaters to break the force of the water. While the high Middle Ages mostly saw bridges using ribbed arches, by the fifteenth century segmental arches were introduced. Major bridges were normally strong enough to allow toll houses or workshops to be built on them (for instance, Florence, Erfurt, London, Paris, and Venice), which facilitated the collection of taxes and tolls (for good illustrations and references, see Grewe 1999). In England and in other parts of Europe, the *trinoda necessitas*, introduced by the Normans after their conquest in 1066, required freemen to offer their service in the building and maintaining of bridges and roads

at least until the time of the *Magna Carta* (1215), after which only those tradition-ally charged with that task were obligated to do so. Especially King John (r. 1199–1216) pursued a vigorous policy of having the owners of estates see to it that their part of the roads was maintained and that they build bridges if ordered so by the king. This was, however, such a huge burden that a special clause was included in the *Magna Carta* to change that. This stipulation was also introduced to Ireland in 1216 by John's son, Henry III. The *Statute of Winchester* from 1285, however, required from each lord of the manor upkeep of the king's highway, and hence probably also of the bridges (Cook 1998, 47). A truly intriguing example of an extensive stone bridge probably dating back to Roman times but today preserved in its medieval shape (prior to 1196) is the Old Bridge (*Ponte Vecchio*) spanning the river Trebbia outside of the north Italian town of Bobbio. It consists of eleven uneven arches and displays a rather irregular shape, which became the source of many local legends.

H Roads and Bridges Reflected in Textual Sources

At the same time many towns and cities received royal privileges to erect their own bridges and to charge toll (pontage), such as the Dublin Bridge charter of 1214 or the Bennetsbridge in 1285. In order to finance the bridge at Agen in France, the king assembled a general court in 1189 to approve a hearth tax of six deniers arnaudins. The bridge ultimately cost 30,000 sous arnandins, but it hadwashed away already in 1320 (O'Keefe and Simington 1991, 26–28). Other famous bridges were the Pont-Saint-Bénezet at Avignon (1177–1188), the Bridge at Saint-Savin sur Gartempe at Vienne (twelfth/thirteenth centuries), and the Nyons Bridge (1361) at Nyons, Drôme, to name a few. All of them continue to attract modern interest. Major bridges in Germany were the one crossing the Danube in Regensburg (ca. 1135–1147), the bridge spanning the Main in Frank-furt a. M. (1276), the one over the Neckar in Heidelberg (1284), or the one over the Lahn in Limburg (1248). The bridge over the Regnitz in Bamberg (1387) proves to be spectacular until today, for the city hall, today in its Baroque appearance, was erected on top of it to mark the border between the bishop's domain and the city. The oldest wooden covered bridge still in existence was created in Lucerne, Switzerland, in 1333 (it burned down completely in 1993). We should also not forget the famous Charles Bridge in Prague over the Vitava River, started by Emperor Charles IV in 1357 to connect the Old Town with the area around the castle, the Hradschin (Fig. 3).

Fig. 3: Stone Bridge, later called Charles Bridge, Prague, crossing the Vitava, begun in 1357 (© Albrecht Classen).

The earliest medieval road map dates from ca. 1355–1366, the Gough Map (Oxford Bodleian Library, MS. Gough Gen.Top 1), which is the oldest road map of England, covering ca. 4.700 km, though it was based on a prototype from the time of King Edward I (r. 1272–1307) (Szabó 1996; von den Brincken 2009, 243–50). Much of its material is derived from portolan charts, paying most attention to coastal areas and the towns there. As precise as this map might be, it also misses a major road, the *Watling Street* (see above). Both islands and lakes, and as well as rivers are, particularly the latter due to their importance for transportation and trade, over-sized. Although we have many maps from the entire Middle Ages, *mappaemundi* (world maps), portolan maps, regional maps, city maps, and the like, the emphasis rarely rests on roads and streets. For instance, the *Ebstorfer Weltkarte*, or the *Hereford mappamundi* provide information about the entire world in macro- and microcosmic dimensions. In that context, roads and streets did not matter. As Harvey emphasizes, "we have to see as a map any representation of landscape viewed as though from above the ground, form some point unattainable in reality. It means too that these picture-maps of the Middle Ages were the ancestors of both the large-scale maps and the bird's-eye views of later ages" (Harvey 1991, 87).

Medieval secular literature commonly describes some protagonist roaming the world, traveling on horseback, on foot, by boat, and the like, and many times we are provided with rather detailed road descriptions (Chrétien de Troyes' and

then Hartmann von Aue's *Erec*, respectively). These, however, focus on the larger geographical and physical setting and rarely give us more than a glimpse into the specific conditions of the roads or bridges. In the *Nibelungenlied* (ca. 1200), for instance, the entire court of the Burgundian kings travels from Worms to what we call Hungary today, covering a huge stretch of land, but the poet does not comment on the road itself. In the *lais* by Marie de France (ca. 1190) the main characters regularly move from one country to another, which is also the case with Tristan in the many medieval versions of this text, but we do not learn anything in particular about the roads or bridges. Boccaccio follows the moves of his countless figures in the *Decameron* (ca. 1350), and sometimes the events are located in the city, sometimes in the countryside, but sometimes they take place at many different sites, such as on the sea, on islands, and elsewhere, covering the entire Mediterranean territory. In Juan Ruiz's *El libro de buen amor* (ca. 1340) the Archpriest encounters the dangerous mountain girls (serranas), who help him survive his failed attempt to walk up to the pass, but there are no specifics about the passages or paths. Sir Gawain in the Middle English *Sir Gawain and the Green Knight* (late fourteenth century) traverses large parts of Wales in his search for the Green Chapel, but he seems to cross more wild and uninhabited areas than civilized and cultured territories. He never travels on any significant roads. In one of the first prose novels, the anonymous *Fortunatus* (printed in 1509 in Augsburg), the protagonist traverses all of Europe and also part of Egypt, the Holy Land, and the Near East, and the text often reads like a travelogue, taking us from one location to the next in a rather monotonous manner. But apart from informing us about the distances between cities or towns, the author could care less about the roads themselves. On the other hand, the religious biographies, the *Vitae sanctorum*, contain many scenarios of traveling religionists, from the early medieval missionaries to the late medieval preachers of the mendicant orders. In any case, to repeat our previous observation, which now serves well to sum up our discussion, medieval people were often on the road and traveled far and wide for many different reasons and purposes. Roads existed at many places, but we have much less information about them in concrete terms than about the Roman roads. It is easier to identify the central nodules of a large-scale transportation and road system in the Middle Ages by focusing on monasteries, villages, cities, and bridges than on the actual roads, but archeological evidence and aerial photography have considerably assisted us in tracing the surprisingly dense system of medieval roads (Szabó, ed., 2009). Although maps existed, of course, those were mostly products for the learned and kept in libraries, while the actual travelers had to rely on oral accounts, personal experiences, and geographical observations (von den Brincken 2009, 242–43). Nevertheless, the many records about medieval travelers, from the simple goliards to merchants, ecclesiastics, knights,

kings and queens, confirm that traveling must have been more easily possible than we can imagine today, even though the roads in general were certainly in much worse conditions than those built by the Romans, and even though hardly anyone possessed reliable maps, detailed or not. Both the literary evidence and historical travelogues confirm this observation from many different perspectives (Labarge 1982, 141; Blaschitz 2009; Holzner-Tobisch et al., ed., 2012).

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Daniel F. Pigg
The Rural World and the Peasants

A Introduction

When the words "rural world" surface in medieval studies, they seem almost ubiquitous with the medieval world. Until the rise of cities in the high and late Middle Ages, the rural world seems to be almost the only world. In literary texts, the rural world is the area through which knights pass on their quests and engage in hunting; it is the area devoted to agricultural activity, including the growing of crops and the raising of livestock for consumption. That world was the subject of art in such productions as the *Luttrell Psalter* and was imaged in the margins of many Books of Hours. At the same time, as Albrecht Classen observed in an introductory essay to one of the most comprehensive studies of the rural world, "the vast majority of premodern societies lived in the countryside. Everyone depended on the rural world for foodstuffs, and no individual can exist without the natural environment. Plants, birds, animals, and fish are all integral elements in the larger context of humanity, hence the greater need to approach the Middle Ages and the early modern age from this perspective as well" (Classen, ed., 2012, 7).

Without question, since much of the literature of the Middle Ages actually occurs in the rural world, it would seem prudent that such a space be examined for itself. In many cases, however, the rural has been regarded as merely serving as a kind of backdrop against which the characters in narrative engage in actions. From the historical angle, much work has been done by scholars such as Georges Duby (1968), Jacques Le Goff (1980), Werner Rösener (1992), and Barbara Hanawalt (1986), with particular attention to the material and economic aspects that not only constitute the peasant life, but also the means of production of which they are a part in the larger medieval economy. At the same time, the rural was a place of mythical elements, and the dark and lonely locations far away from urban and courtly civilization" (Classen, ed., 2012, 24). In the early Middle Ages, the peasant, as Le Goff notes, became "a synonym for ignorance and illiteracy" (Le Goff 1980, 96). In the literary imagination, the peasant (*rusticus*) degenerated into subhuman categories when seen beside the clergy (Le Goff 1980, 96–97). Thus it is hardly surprising that in literature of the late Middle Ages readers experience a kind of ambivalence to the peasant. Not only does Langland's (ca. 1332–ca. 1386) *Piers Plowman* see a slightly elite peasant, Piers the Plowman who owns his own plow, but he works with individual peasants who are significantly degenerate individuals on his half acre. Paul Freedman extended Le Goff's study

of medieval tripartite society (Le Goff 1980), but he suggests that we must differentiate between the peasant and the poor. The representation of the peasant was generally favorable, given their Christian status. The poor on the other hand were seen as evil and were demonized (Freedman 1999, 15; 19). The rural world was subject to famine and plague, changes in economic market factors, the tyranny and extravagance of monarchs, the care and the avoidance of the Church and a host of other factors that make the rural world a significant space for study. As its principal dweller, the peasant tends that world.

B The Land Itself and Its Classifications

No study of the rural world should begin without attention to land, its divisions, and the population that lived on it. From the time that the Roman world began to lose control in England and Europe in the fifth century, the majority of the land was agricultural. The Middle Ages actually continued many of the practices from the Roman period with respect to land usage. In rural areas, the distinction between *champion* and *woodland* is typically made (Homans 1936, 338–51). *Champions* refers to "great open stretches of arable fields broken only, here and there, by stands of trees" (Homans 1936, 339). *Woodland* refers not to forest land but to an area where "fields were small and were surrounded by ditches, and walls made of earth thrown up in digging the ditches" (Homans 1936, 339). Barbara Hanawalt notes that the description of the woodland most clearly mirrors the modern notion of agricultural domains in its divisions (Hanawalt 1986, 20). A traditional way to describe the divisions of land is cities, towns, villages, and the countryside outside of those domains. Cities and towns typically held their own charters and governed themselves. The only ties of the cities and towns to the rural would, of course, would be related to the export of goods to national and international markets.

Much land was obviously tied up in feudal obligations. Leonard Cantor isolates several distinct areas: forests, chases, parks, and warrens. Forests were held by the king and were the location of game such as deer particularly for royal hunting. Typically no farming occurred in this area, except for some few grants directly from the king. Chases were private forests with exclusive claims as hunting areas for nobility. Parks were typically smaller areas of perhaps 100 to 200 acres, and they were typically tied to the feudal manor, again specifically for hunting. Warrens, typically held by and from the king, were still small parcels of land for the raising and hunting of rabbits (Cantor 1982, 56–85).

Readers may easily imagine that a good deal of the medieval literature that features hunting would have occurred in these areas of regal grant. The village

itself is perhaps more significant for a study of the rural world in the Middle Ages, particularly from the perspective of the peasant. In his study of the village which he labels as "the farming unit," Homans notes houses in rows and a parish church. Further, "The village was a unit in that the fields which spread out in a ring around the houses and closes were village fields, cultivated according to the rotation of crops which were customary and binding on every villager" (Homans 1936, 343). The production of goods, of course including food, to support the manor was certainly important to the design. While we think of peasants occupying these villages, it is also true that not all peasants achieved the same status. If the invention of the plow was important to the world order, certainly labelling someone a "plowman" in distinction to a "laborer" was significant (Hilton 1975, 20–25). Poll tax rolls show that these "wealthier" peasants would actually have those who were poorer to live them with, although it seems typically one to two in that case (Hilton 1975, 34–36). Having a team of horses or oxen would, of course, also have been assumed, and as Hanawalt notes through her study of court roles, there were specific laws governing the borrowing of animals and plows by others (Hanawalt 1986, 51–52).

From the literary angle, characters such as Chaucer's Plowman of the *General Prologue* to his *Canterbury Tales* (ca. 1400) and Langland's (ca. 1332–ca. 1386) titular character of Piers seem to be of the wealthier group. That Piers employed others to work on this half acre is thus not a significant surprise as it accords with historical records normatively found in the period. What seems clear from literature and historical records as determined through materials such as court rolls and coroners' reports is that the peasants were a vital and at times volatile force in medieval culture.

C Population

Population changes and shifts typically reflect the vagaries of life, except for experiences such as plague. Historians, not just literature such as the *Decameron* (ca. 1353), note a significant change with the Black Death of 1347–1351 and its subsequent visitations throughout the fourteenth and fifteenth centuries in less devastating forms. Rosemary Horrox's *The Black Death* notes that typically 1/3 to 1/2 of the population of Western Europe died during that period (Horrox, trans. and ed., 1994, i). Such is the standard statement, but that certainly means that local variations would have meant some villages were complete eliminated while others fared better. A devastation too apocalyptic to imagine except through the scattered historical records and literary pieces, the Black Death brought a significant change to the world. It apparently even took Laura about whom Petrarch

(1304–1374) wrote his sonnets down to those people for whom history does not register by name in mortality lists. The experience reshaped the world, including the labor market.

That the English Parliament of 1351 established the *Statutes of Labourers* to hold down the wages of a shrinking labor market demonstrates both a real and imagined anxiety about the extent to which the means of production in a society would be impacted (Horrox, trans. and ed., 1994, 286–88). Judith Bennett has shown that problems with available land, wages, and rents were already high before this experience occurred in England and that the Black Death actually increased the problem and that such changes were responsible for changing the socio-economic and agricultural structures in the late Middle Ages (Bennett 1987, 18–22). As the larger economy was expanding to allow wealthier peasants a greater stake in their own fortunes, only paying rents to their landowners, the market was obviously already moving away from a formal feudal and manorial structure. With the loss of laborers during the Black Death, the rural landscape began to move away from crop-centered agriculture to more open grazing land for animals (Bennett 1987, 20–24). Vast tracks of land were abandoned. Overall population through the end of the Middle Ages reveals a growth between the eleventh to the thirteenth centuries, with declines during the fourteenth century during years of plague and famine, but a slight growth during post-Plague years that actually only sustained the significant loss during the plague years (Poos 1985, 516–17).

An examination of the rural world and the peasant during the Middle Ages in terms of land and population shows what Hanawalt observes: "a new social structure was developing in the countryside that eventually eroded the good features of the old communities" (Hanawalt 1986, 7). For Hanawalt that meant greater social stratification and a deeper inculcation of a rigid social structure. At the same time, the potential for a reinvention of the world on a micro-level was possible. Evidence shows both landowners worried about their loses and those who occupied the land seeing the potential for shaping more of their own future. The market economics of capitalism may indeed owe their origins to medieval villages.

D The Rural World and the Peasant in Literature

It would be impossible to pretend to present the scope of representation of the rural world and the peasant in medieval literature in a short essay, but there are several patterns that can be suggestive by looking at some representative pieces. Perhaps the single most ambitious examination of the rural world was undertaken in a massive volume edited by Albrecht Classen entitled *Rural Space in the*

Middle Ages and Early Modern Age (Classen, ed., 2012). An introduction and 27 essays cover literary texts as diverse as selected poems by Walter von der Vogelweide (ca. 1170–ca.1230), the *Mabinoigi* (ca. 1350), *Guillaume de Palerne* (ca. 1200), and various Arthurian romances from England, France, and Germany, just to name a few specifics. This collection of essays along with Justice's *Writing and Rebellion: English in* 1381 (Justice 1994), Freedman's *Images of the Medieval Peasant* (Freedman 1999), and Newman's *Growing Up in the Middle Ages* (Newman 2007) provide excellent background for the study of the rural world and peasants.

In medieval literature, three key themes can be found regarding the rural world, both with and without peasants present. At times, the rural world can be represented as a harsh place for living—first, a place beyond the reach of recognizable law or custom. The rural world can be represented, second, as a kind of liminal space through which individuals pass and in which they encounter peasants of exemplary quality from whom they learn virtues that can be translated back into a courtly or noble world. The rural world can, third, be presented as a microcosm of the entire world in which a peasant is entrusted with the possibility of either overhauling or revitalizing the social order in the midst of the decade of the feudal world. These themes span the literatures of all European cultures, but they are not limited to these areas. Readers will be able to find additional literary texts that affirm similar thematic points.

Representing the rural world as an inhospitable place for living on account of those who live there can be seen in a text such as the Old English *Beowulf* (ca. 8th–10th century) and "The Wife's Lament" (ca. 10th century). Readers might immediately think of the sea with its harsh waves, the swimming match between Beowulf and Breca, the dwelling place of Grendel and his mother, and the location of the dragon's lair. Clearly, the poet juxtaposes a superhuman Beowulf against these various landscapes to suggest his success against them. Each of these locations has its own rules, and these are hardly the internalized codes of Germanic law and behavior. The underwater cave of Grendel and his mother, not far from Hrothgar's compound, including the treasure hall of Heorot, is its own kind of anti-hall. The dragon in the second part of the poem, living outside the court culture of Geatland, destroys the rural world and even burns down Beowulf's own mead hall. That the poem locates these events away from the center of society—the court—is significant. These rural areas test the strength and wisdom of the hero, and he is able to overcome them. Perhaps pushing the point of rural space a bit further—even as an exile—is the anonymous "Wife's Lament." Speculations about the reason for the wife/speaker's exile to a cave with barren surroundings can easily be made, but the rural world here is seen as a hostile space that provoking longings and despair. While both text certainly understand

the rural space as literal, they can also be read as fictive spaces of exile from the preferred court life of early Germanic society. While it is certainly not absolute in its expression, this version of the rural world as hostile seems more dominant during the early Middle Ages.

Representing the rural world and the peasant as exemplary suggests that medieval writers, particularly of the high and late Middle Ages held the location and its primary inhabitants with respect. As Classen notes in his study on Hartman von Aue's *Der arme Heinrich*, a peasant daughter and her significant placement in the story "if she met the specific demands and submissively adapted to the expectations of noble society, marrying the man who could thus profit her, while she was tremendously elevated in social rank" (Classen 2012, 279). Classen also mentions Griselda in Boccaccio and Chaucer's works (Classen 2012, 279). This motif deserves greater treatment here. In Chaucer's *Clerk's Tale*, adapted from Boccaccio (1313–1375), Griselda, the daughter of a poor farmer, shows her dexterity not only as a judicial force standing in for her husband Walter in court; but she is also significantly stronger that women of a higher social status. That she warns Walter he must not treat his new wife-to-be as he has treated Griselda because the harshness of life experienced by those at labor and living in poverty can withstand the vagaries of tyrannical rule. Griselda is one sense seems too exemplary; certainly one can imagine that someone put through the mental torture that she must endure as she witnesses her children being taken away from her would be highly grief-stricken if not combative. In the *Envoy* to Chaucer's *Clerk's Tale*, readers are reminded that they are to follow Griselda only in her humility. At the same time, given that she represents the rural world, it is also significant that she is the character in the tale who represents true virtue. Two women have been chosen to represent this aspect not because male from the rural and peasant worlds do not possess virtue, but that the virtues of the specific women are transformational to their social orders. Historians would likely note that in this way the mixing of noble and peasant worlds was probably more a matter of wish fulfillment than concrete reality, but it suggests that writers felt it important to show the virtues learned in the peasant world. The Matter of England romances, particularly *Havelok the Dane* (ca. 13th century), often show that the virtues of the rural world, learned from peasant families, could enrich the understanding of the nobility as it prepared them to rule.

Representation of the rural world and the peasant could not only be exemplary, but that same world would serve as a microcosm for social change throughout the order. That literature could assume a life beyond the written text in this way, Steven Justice has noted that John Ball refers to the central character of William Langland's (ca. 1332–ca. 1386) *Piers Plowman* in a significant sermon on 1381 in which he envisions Piers as one to restructure society as he attempted to

do on his half acre before leading the pilgrims on their search for St. Truth (Justice 2004, 118). In the poem, in all versions, Piers is represented as owning a plow and being in the service of a landowner for some forty years. He understands truth to be an emblem of the social order itself—even the feudal order—which he attempts to restore (Alford, ed., 1988, 32–34). At the beginning of the endeavor, he is able to get everyone to engage in labor, even his social betters. Fine ladies knit liturgical garments; knights may hunt as well as provide protection from those who would seek to endanger the activity.

The laborers—some of whom will ultimately look more like the dangerous poor that both Le Goff (1980) and Freedman (1999) commented on—will begin well, but will break their contract of work with Piers. Deeply rooted in the specifics of post-Plague England, *Piers Plowman* represents the poet's attempt at finding a way forward in a society where change at all level has resulted in religious, social, and economic paralysis at its best and corruption at its worst. Piers, an elite peasant, becomes the icon of a change. Historians have shown that the feudal and manorial system was beginning to change in the fourteenth and fifteenth centuries. Piers seems to represent a skillful leadership that can enable those at the level of peasant and poor to engage in their own entrepreneurial activity that will enrich the entire society. Langland's view (ca. 1332–ca. 1386) is an optimist one at one level. That it is has less to do with Pier's rural vision than with the lack of human will to understand the current situation. That Piers moves more to a visionary status in the second portion of the poem is indicative of the fact that Langland (ca. 1332–ca. 1386) still sees the seeds of social change in the very hopper of his medieval plowman and his team. The rural world and the peasant can make a difference.

Scholarly studies of the rural world and the peasant, combining the methods of archeology, anthropology, archival research, economic analysis, art history, and literary studies, show that peasants were far from passive people engaged in labor within a system that seemed to provide few rewards. Hanawalt's study (Hanawalt 1986) was groundbreaking with its attention to correct views of peasant families and their behavior. Literary studies have raised the possibility of the changing ideologies at work throughout the Middle Ages in the presentation of the rural world and the peasant. What seem clear is that anyone who writes off the rural world and the medieval peasant is missing some of the most vital imaginative and energetic social spaces in the period following the fall of Rome and the rise of European states. While readers may think transformation begins at kingly courts, literature and history show that changes had already begun among the peasants of the medieval world.

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Christina Clever
Saints and Relics

Medieval Christendom worshipped saints who either died for their faith (martyr-dom), lived an exceedingly pious life, or accomplished an extraordinary deed for the church. For this purpose a formalized process of canonization was established in the high Middle Ages. Saints were attributed a special closeness to God as a transcendental reward for their deeds and virtues. Accordingly, people believed saints could act as intercessors (*intercessores*) on behalf of the living and the dead before God to alleviate their sins. In this regard, their function is comparable to that of Jesus Christ and the Virgin Mary.

A Diversity of Saints

The origin of the veneration of saints can be traced back to the early Christian cult of martyrs. Consequently, there was only one kind of saint in early Christendom, the martyr. Initially, the Greek term *martys* referred to a witness in general. There-fore, all apostles, even those who did not die for their faith, are venerated as martyrs. All of them are word witnesses who had to overcome different kinds of resistance, but not all are blood witnesses, who gave their lives. Since the middle of the second century, the meaning of the term 'martyrdom' gradually narrowed from incorporating suffering for one's faith in general to sacrificing one's life. Subsequently, the focus shifted toward the blood witness.

The veneration of saints was very popular throughout the Middle Ages. Not only did new narratives emerge all the time, but the already existing ones were continuously passed down and the circumstances of suffering were more drasti-cally depicted. Lately, this special emphasis on suffering and physical agony raised the question of their psycho-social function. Robert Mills, for instance, urges his readers to "consider how the masochistic scenario embraced by medie-val martyrs might have provided a framework for structuring people's worldly experiences and desires," and posits that "within the sphere of medieval devo-tion, religious sublimation and carnal desire can become powerfully intertwined" (Mills 2005, 176). Parallels can certainly be seen in the development of the image of Christ and the *Imitatio Christi* as well. After all, Christ, being the first who gave his life for his faith, had to be the basis for any veneration of martyrs.

With the end of the great persecution of Christians in the fourth century, the significance of "unbloody martyrs" increased. This meant saints who would have

given their life for their faith any time, but for different reasons did not have to. Opportunities to die for one's faith simply decreased; most of all, they were limited to missionary work (e.g., Saint Boniface) or to contact with heathen conquerors (e.g., Ursula and her 10.000 virgins). For the sanctification of those who did not suffer martyrdom, a spiritual death was often the decisive element, comparable to St. Paul's repeated demand to 'mortify' one's own body (Rom. 8:13; Cor. 1.9:27). Important sources which convey this new image of sainthood are, for instance, the account of the monastic father Antonius by the Alexandrian bishop Athanasios from the middle of the fourth century (Deferrari, ed., 1952, 133–224) or Sulpicius Severus's letter about St. Martin which is approximately 50 years younger and of especial importance for the Western Church (Peebles, ed., 1949, 101–40). Both reveal a completely different picture than that of the suffering martyr. Rather, the sanctity becomes apparent through particularly distinct virtues: first of all prayer and meditation, poverty and unworldliness, for instance as a hermit in the desert (Russell, ed., 1981; Ward, ed., 1975), hard work and asceticism (Wimbush, ed., 1990), and ultimately love of one's neighbors and enemies. All these virtues bear the ideological imprint of the simultaneously emerging monasticism (Vivian, ed., 1996). This shift was accompanied by a proliferation of terminology with which saints were now described: besides confessors (*confessores*) we find, for instance, hermits (*eremitae*), ascetics (*ascetae*), and virgins (*virgines*). Furthermore, certain social groups supplied specific images of saints with specific virtues like bishops, monks or nuns, kings or soldiers. Nevertheless, these do not always constitute divisible categories.

The tradition of the Orthodox Church considers saints to be manifestations of the Holy Spirit; they serve Him as visible likenesses (Hackel, ed., 1981; Efthymiadis, ed., 2011). This is the reason why in the East icons played an important role relatively early, while the West still argued about whether such images were allowed. Saints are also present in the Ethiopian and Syrian Church (Wallis Budge, ed., 1928; Brock and Harvey, ed., 1987).

B How to Become a Saint?

Until well into the Early Middle Ages the veneration of saints was basically a matter of tradition. Cults emerged without a formalized process. Nevertheless, they were normally depending on the confirmation of a local bishop to be kept practised in the long run. The causes for veneration, also in later times, were often reports of miracles which happened at the site of the saint's grave. The removal (*elevatio*) and translation (*translatio*) of the saint's remains was decisive in order to establish a cult already in earlier times. In some regions, this encountered

fierce resistance due to disagreements whether this act was allowed or not. In Rome, for instance, the first grave opening and translation was not performed until after 754; for a long time it was strictly forbidden.

During the period of papal reform in the 11th century, a formal process for canonization was established, with its initiative being reserved for the Holy See (von der Nahmer 1994, 11–25; Klaniczay, ed., 2004). The oldest known example for a formal canonization is the one of Bishop Ulrich of Augsburg by John XV in 993 (Berschin and Häse, ed., 1993; Bischof 1993). Since then, the papacy demanded a strictly formal process, in which clear rules for the possibility of becoming a saint became apparent. Criteria examined were whether the Christian in question had led an extraordinarily virtuous life, had worked miracles during his/her lifetime or after his/her death, or had suffered martyrdom (Barone 1982). The bull for the canonization of Homobonus of Cremona from 1199 reads: "Two things are necessary, for someone to be deemed holy, a virtuous way of life and real signs" meaning pious deeds during his lifetime and miracles after death (Hageneder and Haidacher, ed., 1964, I, 762). Martyrdom, however, was no *conditio sine qua non*, but was interpreted as one of the aforementioned "real signs."

The files which were collected in the course of a canonization process are an important source for today's medieval history of religion, piety, and monastic orders, but also of everyday life, because some are extraordinarily comprehensive (Klaniczay 2004; Goodich 2007). Actually, the obstacles for canonization during the Middle Ages were comparatively high (Kleinberg 1989; Goodich 2004; Ziegler 1999; Wetzstein 2004). Only recently, Ronald C. Finucane showed the complex interaction of factors behind a successful canonization campaign using the example of the last five canonizations before the Reformation (Bonaventure, Leopold of Austria, Francis of Paola, Antoninus of Florence, and Benno of Meissen) (Finucane 2011).

The papal claim for the exclusive right to canonize was, however, not completely established in the twelfth century; bishops frequently performed canonizations as well (Kuttner 1938; Silano 2001). Furthermore, existing cults were still practised—partially even beyond the twelfth century—even though a formal confirmation from Rome was missing. Still in 1171, Alexander III addressed the Swedish king, reminding him that it is not permitted to venerate a person as a saint without approval by the Holy See (Kemp 1945).

The distinction between saints (*sancti*) and blessed (*beati*), which emerged in the course of the fourteenth century, was an attempt to alleviate the problem of existing veneration against the papal claim for the monopoly of canonization. Before then, *sanctus* and *beatus* had been used almost interchangeably in medieval sources—and even afterwards, their usage was not completely unambiguous (Vauchez 1997). However, a clear distinction between the two processes was not

established before the sixteenth century. Henceforth though, only those who successfully went through a process of canonization were regarded saints, while all those were considered blessed, who were believed to have already been granted access to heaven due either to their pious way of life or their good deeds. A formal process for beatification was not established until 1631; before that, the final decision was commonly left to the bishops. Between the years 1215 and 1334 alone roughly 500 people achieved this status, while only 79 persons altogether were canonized. However, even this attempt to bind canonization to the papal curia, was not entirely successful and would not be until Urban VIII achieved it to some degree at least in 1634.

The Orthodox Church did not participate in the process of formalization. There, saints were and still are venerated as such, foremost on the basis of universal acceptance, in other words on the basis of tradition (Patterson Ševčenko 2012). Local processes which resemble those of Western canonization occur occasionally only. Subsequently, the Eastern Church never shared the distinction between saints and blessed.

C Hagiography

The special veneration of saints in medieval Christendom resulted in a variety of different kinds of texts, images and material evidence, which testify to the lives of these saints. The basis for all these evidence of veneration is mostly texts, which chronicle the life and deeds of the saint. Those texts are subsumed under the term 'hagiography'. There has been a long discussion about possible genre differentiations (for the Latin tradition, see: Delehaye 1955; Boyer 1981; von der Nahmer 1994, 130–45). Essentially, three large kinds of texts remain, which then again show overlaps among each other. In this general form they can be found in the Western-Latin as well as in the Byzantine tradition.

I Acts of Martyrs

The beginnings of Christian hagiography are to be found in the genre of the acts of the martyrs (Musurillo, ed., 1972). They describe the confession, interrogation, and gruesome death, and normally also the accompanying miracles of the Early Christian martyrs. Since these texts are often written in a remarkably sober tone, the assumption that they draw from judicial records or notes becomes quite reasonable. Other stories of martyrdoms, like the *Passio Perpetuae et Felicitatis*, are quite extensive and give detailed biographical information. The Early Middle

Ages in particular see the emergence of a large number of collections of martyr-dom accounts (martyrologies) which put an emphasis on the suffering and sacrifice for the Christian belief, but ignore most of the saint's life (Dubois 1978). An especially widespread example for this is the martyrology of the Frankish monk Usuard, written around the year 850 (Nelson 1993).

II Saints' Lives

The genre of the *Lives of the Saints* is next to the acts of the martyrs the second large genre of hagiography (Feistner 1995; von der Nahmer 1994). In contrast to the aforementioned the emphasis is laid on the life, rather than the gruesome death, of the saint. The Saint's Life chronicles the extraordinary virtuousness and exemplary way of living, and sometimes also his or her special deeds of faith or miracles, if those were done during the saint's lifetime (Speyer 1997). Neverthe-less, they are not biographies, but rather follow a clear intention in their way of depiction, which often reveals itself in certain topoi. Regularly, the main concern is to show the evolution of holiness, which is basically already inherent from birth, as well as the steadfastness of the way and the obstacles which the saint had to overcome in order to follow his or her call. Not until the 12th and 13th centuries does the character of the *Saint's Life* change into a more individual text. Most *Lives* emerge directly after the saint's death and are repeatedly recorded by persons from their imminent environment like pupils, confessors, or monastic brothers or sisters. Ultimately, some cults did not have an impact outside of their regional context of origin.

III Miracle Stories and Reports

The post mortal deeds of a saint in contrast to an exclusive depiction of his or her lifetime are what miracle stories and reports are often concerned with. They represent the third large genre of hagiography. A lot of these reports emerged in connection with processes of canonization in order to testify to a saint's thauma-turgy. As a result, these stories often follow a strict pattern with a view to the type of miracle as well as the course of events. Many miracles occur during important moments of contact with the saint's remains, for example while their *elevatio* or *translatio* took place (Heinzelmann 1979).

IV Passionals and Legendaries

All three aforementioned genres of hagiographies can be found early on in collections, which occasionally also constitute hybrid forms. Amongst the oldest and for centuries most influential hagiographical collections are the *Vitae Patrum* from the turn of the fifth century and the *Passiones Apostolorum* from the sixth century. Other important early collections are the *Dialogi de Vita et Miraculis patrum Italicorum* by Pope Gregory the Great (540–604) and the *Libri Octo Miraculorum* by Gregory of Tours (538–594). Already the titles indicate quite obviously that we cannot always draw a clear distinction between saints' lives and miracle stories—furthermore, individual lives of martyrs have naturally been incorporated as well (Godding 1998).

In the eighth century, collecting hagiographical texts becomes institutionalised and results in the *passional*, a composite manuscript for liturgical usage, which was read aloud during meals or used for the liturgy of the hours. They can be arranged in alphabetical, chronological or hierarchal order; however, most of the times they are oriented for liturgical use according to the ecclesiastical year. Parallel to the liturgically inspired passionals, the so-called *legendaries* (Blurton, ed., 2011; Williams-Krapp 1981; Herbers 2002, 264–67) emerged, which were, amongst other things, used for the preparation of sermons, but were also, in the late Middle Ages, read increasingly by laymen.

Important legendaries of the 12th century are the *Dialogus miraculorum* by the German Cistercian Caesarius of Heisterbach (around 1180–1240; Smirnova 2010) and the *Abbreviatio in gestis et miraculis sanctorum* by the Dominican Jean de Mailly (around 1190–around 1260; Geith 1987).

However, the certainly most important collection of medieval saints' lives for the European region is the *Legenda aurea* by the Dominican monk Jacobus de Voragine (around 1230–1298) (Ryan, ed., 1993; Fleith 1991, 2001; Le Goff 2014). This is shown by the unusually widespread circulation of manuscripts, the numerous revisions, in which local saints were often incorporated, and the multiple translations into the vernacular. For academia this extraordinary circulation constitutes severe difficulties: Admittedly, it is quite obvious that the *Legenda aurea* was used frequently as a source for other hagiographical texts and especially for artistic depictions of saints. On the other hand, the challenge that remains constantly is to unearth the exact version which was used. After all, there is no single stable text of the *Legenda aurea*. It has been repeatedly altered according to regional and local requirements: Saints were incorporated or dropped, and the sequence of the ecclesiastical year was changed. Many manuscripts contain about 150 lives; all things considered, numbers may vary substantially.

In the late Middle Ages, writing about saints differentiated further due to the new needs of lay piety (Boesch Gajano 1985; Herbers 2002). Although the *Legenda aurea* made the transition into incunabula very early, it still lost significance quite rapidly in the sixteenth century. As its most important competitor, the *Sanctuarium* by Bonino Mombrizio (1424–1482) emerged at her side (Eis 1933). Furthermore, the collection by the Capuchin monk Martin of Cochem became important for the circulation of many later saints' lives from the late Middle Ages, because roughly a fifth of the lives he collected derived from the period between the fourteenth and seventeenth centuries.

V The *Acta Sanctorum*

The probably most ambitious hagiographical project to date goes back to the seventeenth century. Heribert Rosweyde (1569–1629) and Jean Bolland (1595–1665), two Belgian Jesuits, initiated the *Acta Sanctorum* in the spirit of the new demands of text critical biblical studies that were popular not only in the protestant camp, which rejected the veneration of saints anyway, but spread among catholic scholars as well. The plan was to compile a multi-volume, source-critically verified collection of Saints' Lives arranged according to the ecclesiastical year. The first two of the all in all 68 volumes were subsequently published in 1643 already; the *Société des Bollandists*, frequently called just *Bollandists*, are still continuing the work up to the present day.

The *Acta* collect all stories, reports of deeds, testimony to translations of relics etc. Therefore, despite its age, these volumes are often the most comprehensive tool that we have. For some years now, they are being made available on CD and —admittedly only accessible with subscription—as an online database (http://acta.chadwyck.co.uk). Additionally to the *Acta Sanctorum*, the Société publishes also one of the relevant journals regarding hagiographical research, the *Analecta Bollandiana*, and a regular series for monographs and essay collections, the *Subsidia Hagiographica*, finally an inventory, the *Bibliotheca hagiographicae*. The latter might seem difficult to handle at first, but is extremely helpful for a quick orientation, especially with regard to lesser known saints who are otherwise hard to find. Each volume consists of an alphabetical register of the saints with an overview of the Early Christian reports, translations of relics and miracle stories, including the manuscript tradition of each text.

D Veneration of Saints

To worship humans is strictly prohibited in Christendom. Subsequently, already the Second Council of Nicaea (787) made the significant distinction that God alone is worshiped *(adoratio)*, whereas saints experience veneration (*veneratio*). However, this certainly does not mean that in actual everyday piety there never was nor is direct praying to saints. After all, it was this practise that ignited the vehement criticism during the Protestant Reformation in the sixteenth century.

The veneration of saints in the Middle Ages was not only of relevance for the individual, but could also fulfil social functions (Derwich and Dmitriev, ed., 1999), for instance the identificatory purpose of a city's patron or the consolidation of a brotherhood under the protection of a particular saint. Early on churches and monasteries, too, were placed under the patronage (*patrocinium*) of a saint (Angenendt 2002).

I The Saint's Grave

As early as the second century, graves of individual martyrs took a special role in early Christendom. During Constantine's reign, whole basilicas were erected over individual graves to commemorate the witnesses of faith. The best known example is todays St Peter's Basilica, which was built on the gravesite of St Peter.

A decisive step was the translation of St. Ambrose's relics to the cathedral in Milan, where they were buried anew. This new practise established itself quickly, so that new churches did not have to be built over the graves of saints anymore, but that relics were translated into already existing or elsewhere newly erected churches (Fig. 1). Additionally, the integration of saints into the liturgy was even more immediate this way (Rose 2005). The transfer of the saints' remains had influence on Christian funeral rites as well. According to classical custom, burial sites were located outside of settlements, but when the saints' remains were translated into the cities' churches, the wish arose in others to be buried close to them. The consequence was that from the eighth century onwards, burials were held in the vicinity or even inside of churches. Many believers had the wish to be as close as possible to the saint's grave, because they thought that a special *virtus* would radiate from his remains.
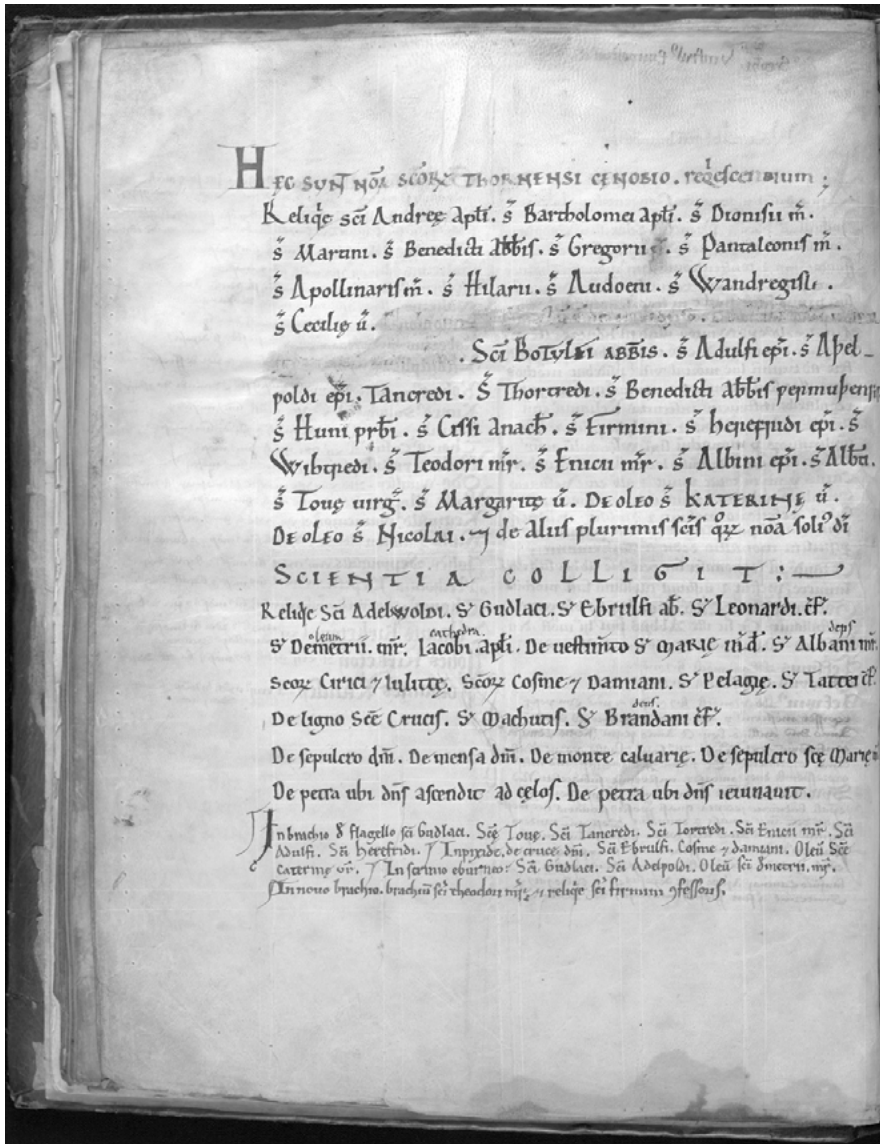
Fig. 1: London, British Library, Add. 40000, f. 11v: List of relics from the Benedictine abbey of Thorney, Cambridgeshire, England (twelfth century).

II Relics

This *virtus* is at the very bottom of the belief in the virtue of relics. It coalesces with the belief in the *real presence* of saints in their reliquaries and graves (Dinzelbacher 1990). Sanctifying as well as healing effects were being ascribed to relics and their *virtus*. Accordingly, they became the most important medium of contact between believers and saints besides prayers. In Psalm 16 (Vulgata 15,10) God promises that he will not let his "holy one see decay." St Peter sees these words fulfilled in the example of Christ being free of decay after lying in his grave for three days (Acts 2, 24–28). Lactantius elaborates on this even further by postulating that Christ's body did not decay, because it was predetermined to resurrect on the third day. The Middle Ages transferred this concept onto saints. A whole range of reports have survived which tell of grave openings that revealed bodies with no sign of decay. One of the best known examples is probably the report of the opening of Charlemagne's grave by Otto III, who found the body to be "without decay in its limbs" (*Chronicon novaliciense* III, 32 [MGH SS 7, 182]). Remarkable is the assumption that even those who suffered a gruesome martyrdom returned to full physical integrity. Gregory the Great reports that the head of the decapitated bishop Floridus of Perugia was reattached to its body after 40 days without any sign of external force (Gregory, *Dialogi*, 3.13.3).

In early Christendom and occasionally until the 10th century, the separation of the body was held to be sinful and only administered in exceptional cases. The dominant notion was that the intact body (*corpus incorruptum*) was indispensable for the physical resurrection during Judgment Day. Organic material, such as hair or fingernails that could regrow, on the other hand, was dispensable. The further development of the veneration of relics was significantly fostered by the role that Charlemagne ascribed to it: Oaths, for instance, were in principle sworn on relics; and every newly consecrated altar had to incorporate relics (Geary 1990).

From the High Middle Ages onwards, the perception established itself that the saint is present as a whole in every part of his or her body. Victricius of Rouen uses the same explanation in one of the first works about relics, *De laude sanctorum* (PL 20, 443–58). Accordingly, every part of the body incorporates the *virtus* of the saint, even very small particles. This concept did not remain limited to the body of the saint, but was extended to objects with which the saint had close contact, and on which, therefore, the *virtus* had been transferred. These objects are being called contact relics and were often the tools of the saint's torment, his/her clothes, his/her staff or something similar. Contact relics are also called secondary relics in contrast to primary relics which correspond to the saint's body or individual parts of it.

Relics of Christ and Mary are of course in existence as well. However, in contrast to the saints there are significantly less primary relics of both, because their ascension to heaven was not only imagined as a spiritual but also a physical transfer. Thus, hair, teeth and fingernails as well as the milk and tears of Mary just as the foreskin and especially the blood of Christ were predominately venerated as primary relics in the Middle Ages. The *vita* of the Austrian beguine Agnes Blannbekin († 1315), for instance, explained her exceptional holiness by the appearance of Christ's foreskin on her tongue during confirmation (Dinzelbacher, ed., 1994)

Of course, secondary relics like particles of the cross or nails existed simultaneously. The Longinus-Lance ("Holy Lance"), which was in the possession of the Roman-German Emperor since Henry I, the Crown of Thorns (Sainte-Chapelle, Paris), the Robe of Christ (Cathedral of Trier) and the Veil of Veronica (St Peter's Basilica, Rome) were venerated as especially renowned contact relics. Furthermore, primary relics themselves, for instance the blood of Christ, could turn objects into secondary relics through contact; Caroline Walker Bynum (2004) illustrated this by using the example of the bleeding host.

Relics were kept in special vessels: *reliquaries* (Fig. 2; for an international research survey, see Cordez 2007). The oldest relic cases have survived from the sixth century, also capsules, which could be worn around the neck, and buckle reliquaries, which were worn on the belt. Charlemagne wore a large rock crystal around his neck on a chain which had enclosed in it a hair of the Virgin Mary (Robinson 2010, 113, Fig. 42). Relics were not only worn during one's lifetime, but occasionally also placed in graves.

From the eighth century onwards, reliquaries become more elaborate and valuable. Simultaneously, a new characteristic type emerges: the speaking reliquary or image reliquary (Falk 1993). From now on, reliquaries take the form of body parts. This often leads to the misconception that these cases represent the body part that they contain, in other words that an arm reliquary would contain the bone of an arm. This, however, is often not true. Rather, the intention is for them to epitomize the whole body of the saint (as a *pars pro toto*). Subsequently, there are sculptural depictions of the whole body. The oldest example of this kind of reliquary is said to contain relics of St Fides of Conques and originates from the ninth century.

Guibert of Nogent (d. 1125) is often cited as one of the main critics of the high medieval practise of relics (McAlhany and Rubenstein, ed., 2011; Fuchs 2008; for a broader review of critics, see Sumption 1975). He mainly opposed image reliquaries. Others, for instance Bernard of Clairvaux (d. 1153), criticised that the veneration of the holy was forgotten over the admiration of the valuable reliquaries: "The eyes are fed with gold-bedecked reliquaries, and the money-boxes
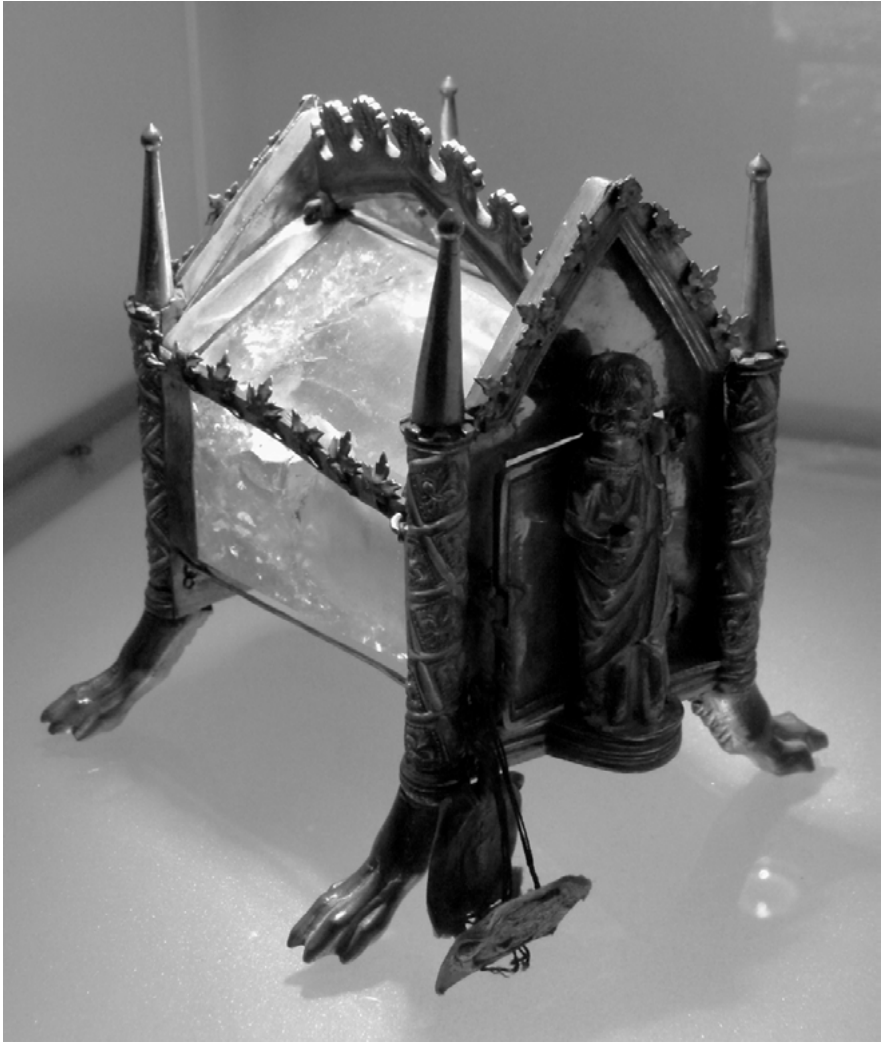
Fig. 2: Reliquary of the Basilica of Our Ladies, Maastricht, Netherlands. Crafted from gilded silver and copper with crystal in France or the Rhine-Meuse region in the early thirteenth century.

spring open ... People run to kiss it; they are invited to give; and they look more at the beauty than venerate the sacred" (Freemann 2011, 119).

The passing on of relics extended over the whole of Europe from the ninth century onwards and was probably an important impulse for trans-regional connections for long periods (Geary 1986). Since commercial trading with relics was prohibited, those transfers often happened in the form of presents and counter-

presents. Influential personages and wealthy institutes frequently were not satisfied with owning just one relic, but rather gathered large collections (Klein 2010). An especially famous example of such a collection was compiled by Charles IV and can still be visited today at Castle Karlštejn (Studnicková 2009). One decisive moment with regard to increasing the numbers of relics in the West were the crusades, especially the siege of Constantinople in 1204. During these times, the Near East, but most notably the wealthy Byzantine collections of relics were plundered and many relics brought to Western Europe (Barber 2005; Klein 2004; Touissant 2011).

III Saints in Art

The depiction of saints occupies an important place in medieval Christian art. This applies as much to the Western-Latin as to the Eastern Church, where icons were seen as spiritual mediators between observer and saint from quite early on (Wortley 2003). A decisive turning point for the West as much as for the East was the Byzantine iconoclasm, which was fought fiercely especially in the years around 800 (Brubaker 2012; for a broad-ranged intellectual history of iconoclasms, see Besançon 2000).

Early Christendom depicted saints mainly in scenes which were known from the Testaments or the Apocrypha so that the observer was in the position to identify the depicted from the context. This became difficult as soon as whole groups of figures would accompany Christ or a deceased. The increasing popularity of saints and the spreading of the veneration of relics led to a rise in individual depictions.

Occasionally, a first iconographic identification can be found, foremost of the apostles and evangelists, as early as the fifth century. In the course of the Middle Ages more or less fixed attributes for many saints emerged which allowed an approximate identification (Fig. 3). Martyrs were frequently given their tools of torment; beyond that, palm twigs and crowns were often the symbols of martyrdom. Clothes or tonsure could point to the social class of the saint. Individual attributes, however, indicated particular features or single episodes from the Life of the saint. Jerome, for instance, is often depicted with a cardinal hat and a lion, from whose paw he pulled a thorn and who was subsequently tamed. The iconography of saints can best be accessed through the *Lexikon zur christlichen Ikonographie* (8 vols., 1968–1976; vols. 4–8 treat the iconography of saints) or Schiller's *Ikonographie der christlichen Kunst* (5 vols., 1966–1991). The best aid in English is probably the translation of *The Bible and the Saints* by Gaston Duchet-Suchaux and Michel Pastoureau (1994).

Fig. 3: London, British Library, Add. 39636, f. 11r: St. Lawrence with a grill, the typical iconographic attribute memorizing his martyrdom. Cutting from an Italian Graduale (2nd half of the fifteenth century).

There are a number of motives in which saints are depicted especially often. Frequently, those are subjects of rogation, the act of writing, or divine inspiration. This form of depiction is particularly dominant in the Early Middle Ages. Not until the Carolingian period did the portrayal of events from the *Saints' Lives* in whole picture cycles increase. One of the most important works of goldsmith's art, for instance, is the golden altar of Sant' Ambrogio in Milan: the front shows twelve scenes from the Life of Christ and correlating on the back are twelve scenes from the life of St Ambrose, which thereby are typologically juxtaposed to Christ's life. Another example of this kind of artistic interpretation of a Saint's Life would be the iconographic program of the bronze door at the south portal of the cathedral in Gniezno from the last quarter of the 12th century. It tells the life of St. Adalbert

in 18 image fields. Here, too, the typological references to the life of Christ show the perfect *Christiformitas* of the saint.

Picture cycles that depict scenes from a Saint's Life become more frequent, especially on reliquary shrines of that same saint, from the 11th century onwards. The portrayal of saints finds its way into other media as well, namely illuminated manuscripts (Abou-El-Haj 1994, 137–46 provides a handlist of illustrated saints' lives). Many collections of Saints' Lives from the high or late Middle Ages were subsequently illustrated with corresponding cycles or single pictures. This is also true for psalters and calendars which, due to the numerous saints' days of the ecclesiastical year, bear an immanent relation to the subject and were, consequently, illuminated with matching miniatures with increasing frequency (Pfaff 1998; Kerschner, ed., 1993). The altar, however, remains the most important place for the depiction of saints. With the invention of printing then, the printed image of saints becomes a popular motive, especially as cheap single-leaf prints for devotional uses.

E Modern Resources and Research Aids

Farmer's *Oxford Dictionary of Saints* is a good choice for an initial orientation regarding individual saints. More comprehensive information can be found in the *Bibliotheca Sanctorum* (13 vols., Rome 1961–1970), published by the Pontifical Lateran University. Important introductory handbooks regarding hagiography and its study are listed in the bibliography (Aigrain 2000; Boesch Gajano 1976; Gregoire 1987; von der Nahmer 1994; Vauchez 1981). Special attention should be paid to the 4 volume work *Hagiographies: Histoire internationale de la littérature hagiographique*, which has been published by Guy Philippart since 1994. There, internationally renowned scholars give overviews, differentiated by countries and period. For introductory purposes, the *Introductory Guide to Research in Medieval Hagiography* by Thomas Head should be mentioned. It is only available at: http://www.the-orb.net/encyclop/religion/hagiography/guide1.htm. The introduction to his anthology *Medieval Hagiography* can also be used as a road map to translations of a large number of Saints' Lives; moreover, it contains a helpful guide to further reading (Head, ed., 2000, xxvi–xxxii).

A recently published *Companion* (Efthymiadis, ed., 2011) provides a good access point to research on the rich Byzantine hagiography. Additionally, the Dumbarton Oaks Research Library runs a bibliographical online-database: http://www.doaks.org/research/byzantine/resources/hagiography-database.

In 1994, the journal *Hagiographica* was founded as a forum for the study of Christian veneration of saints. Besides the *Revue histoire ecclesiastique* it is one of

the most important bibliographical resources to keep up to date with recent publications in the field.

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Richard G. Newhauser

The Senses, the Medieval Sensorium, and Sensing (in) the Middle Ages

A Introduction: Studying the Senses

The study of the senses as a factor in medieval cultural life has burgeoned over the last decade. This new scholarship has focused on a wide array of elements in the understanding of the medieval sensorium, that is to say, the "sensory model" of conscious and unconscious associations that functions in society to create meaning in individuals' complex web of continual and interconnected sensory perceptions (Classen 1997, 402; Corbin 2005; Howes 2008). This new work is itself an expression of a wider realization that is central to the "sensory turn" in the humanities, namely that no cultural history can call itself complete which does not take into account the sensorium of the period it is analyzing. In fact, sensology has a claim to be particularly indispensable for understanding the Middle Ages because both a theoretical and a practical involvement with the senses played a persistently central role in the development of ideology and cultural practice in this period (Newhauser 2009; Howes 2012). Since the 1980s, the study of the sensorium in the humanities has been enriched by cross-fertilization with scholarship in the social sciences, in particular the influential work of two anthropologists: Constance Classen and David Howes. The expansion of the pioneering work by them and others attracted increasing attention in various disciplines within the humanities in the study of many historical periods before it was taken up in medieval studies. For a number of reasons having to do in part with the alterity of sensory information transmitted by medieval texts and partially with the denigration of sensory perception in many theological works in the Middle Ages, scholars of the medieval period were somewhat slower to take up sensory studies (Newhauser 2009). But the study of the senses has quickly become one of the most important ongoing projects of medieval studies in the twenty-first century. As a recent survey has demonstrated (Palazzo 2012), the past decade of intensive research has already borne significant fruit in understanding the cultural valences of sensory perception and sensory expression in the Middle Ages in their historical development.

A number of features characteristic of the medieval sensorium emerges from a reading of this new scholarship. First, one can note the extensive amount of agency with which the senses were endowed in the course of the Middle Ages, which may even be said to exceed the interactive nature the senses are perceived

to have today. Sensory organs were not just passive receptors of information, but actively participated in the formation of knowledge. This particular feature of the medieval sensorium is sometimes documented by referring to the extramission theory of vision. According to this understanding of vision, sight occurred when a visual ray left the eye of the observer and landed on an object, so that sight was thought to work in ways parallel to the sense of touch (Newhauser 2001). But in fact the theory of extramission was challenged and largely replaced by the intromission theory championed by the Perspectivists in the thirteenth and fourteenth centuries: John Pecham (ca. 1230–1292), Roger Bacon (ca. 1214/1220–1292), Peter of Limoges (first half of the thirteenth century–1306), Witelo (ca. 1230–after 1280), among others. According to this scientific understanding of vision, the process of sight begins when a ray of light enters the eye, which describes the function of the eye in a more passive procedure. Still, one can maintain that the senses were endowed with much more agency than they are today by noting that throughout the Middle Ages speech was very often numbered among the senses of the mouth. Taking in tastes formed a continuum with the active production of the sounds of speech, demonstrating both the agency of the mouth as a sense organ and the much wider range of reference in understanding taste in the Middle Ages than what is expected from that sense today, though speech can still play a role as a "sixth sense" (Howes 2009, 4–5).

The agency demonstrated by the medieval senses also had important ethical implications for the evaluation of the validity and reliability of sensory information generated in the process of understanding the world, and the ethical understanding of the senses is a characteristic element of the medieval sensorium (Woolgar 2006). The moral valences of the senses were expounded in hortatory treatises and sermons, but they were also informed by natural philosophy in such presentations of sensorial potential as the "bestiary of the five senses," in which each sense was linked to an animal because of the animal's often legendary properties. These series were frequently illuminated (Nordenfalk 1976; 1985). The representatives taken from the bestiary tradition in such lists could change, but a typical series that mentioned each animal because it was thought to excel all others in the powers of a particular sense included the lynx for its sharp sight, the mole for hearing, the vulture for smell, the spider for touch, and the monkey for taste. The lynx was not an animal always understood in medieval Europe; Richard de Fournival's (1201–1260) mid-thirteenth-century *Bestiaire d'amour* substitutes the *lens* here, a small worm thought, like the lynx, to have the power to see through walls (Richard de Fournival 2009, 192). Both examples of sharp-sighted animals seem to represent the reception of a misreading of the *Consolation of Philosophy* by Boethius (ca. 480–524/525) who had written of Lynceus, one of the Argonauts endowed with the gift of especially acute vision (book 3, prose 8;

Boethius 1957, 48). In antiquity, human beings had served as the representative of taste, but in the Middle Ages humanity was supplanted by the monkey in this role (Pastoureau 2002, 142). A lesson of humility was not difficult to draw from this substitution because of the limitations of humans in sensing their world; Thomas of Cantimpré (1201–1272) did precisely that in *On the Nature of Things*, his thirteenth-century encyclopedia of the natural world:

> Homo in quinque sensibus superatur a multis: aquile et linces clarius cernunt, vultures sagacius odorantur, simia subtilius gustat, aranea citius tangit, liquidius audiunt talpe vel aper silvaticus (4.1.190–92; Thomas of Cantimpré 1973, 106).

> [In the five senses a human being is surpassed by many animals: eagles and lynxes see more clearly, vultures smell more acutely, a monkey has a more exacting sense of taste, a spider feels with more alacrity, moles or the wild boar hear more distinctly.]

The ethical context of the medieval senses is one part of a potential paradox in the Christian sensorium (Spiegel 2008). As has been observed by others, in the Aristotelian tradition of medieval thought epistemology is based on sensory perception, in that the senses act as the first steps that will result in cognition. As Thomas Aquinas (1225–1274) put it, the Peripatetic dictum that "there is nothing in the intellect that was not previously in the senses" refers to human epistemology, not to the divine intellect (*Quaestiones disputatae de veritate*, quaest. 2, art. 3, arg. 19 and ad 19; see Cranefield 1970). On the other hand, the Christian moral tradition reacts with suspicion toward the senses as the potential portals of sin. It has been argued that this paradox amounts to an impasse that cannot be perfected, that if the means of perception are also the agents undermining cognition, the connection of perception and the will can have no coherence (Küpper 2008). But if the senses potentially destabilize cognition, one can observe that the connection of perception and the will still achieves coherence in the Middle Ages in a process of reforming the interpretation of sensory data, that is to say, through educating the senses.

In fact, in all periods of the Middle Ages, sensation was not just guarded, but guided. Guarding the senses is a fairly static phenomenon (Adnès 1967); education is progressive. Advancing from sensation to cognition involves an interpretive process that always implicates the edification of the senses (Newhauser 2010; 2014). The senses were educated in numerous ways: later medieval penitential practice encouraged the examination of the conscience using the taxonomy of the five external senses (Casagrande 2002). Medieval books containing advice about the education of children also demonstrate the importance of sensory training, which began already with baby and toddler care. In his influential *De regimine principum*, for example, Giles of Rome (ca. 1243–1316) suggests accustoming

young children to the cold (Orme 2001, 63). And for the education of older children he suggests that three senses are of paramount importance: sight, hearing, and speech. What was required for children was not an ascetic renunciation of sensory input, but the exercise of what was called a proper measure in sensation (2.2.10; Giles of Rome 1607, 314–17). Thus, children should be restrained from speaking of lascivious matters and chastised for lying; they should learn to refrain from listening to what is unseemly. All of this advice, reflecting to an appreciable degree borrowings from Aristotle's (384–322 B.C.E.) *Politics* as well as from the *Nicomachean Ethics*, belongs to the articulation of a precise catalogue of moral entities, transmitted by the clerical estate, that was one of the elements in the *instrumentarium* of the "civilizing process" in the Middle Ages (Elias 1997; Rosenwein 1998, 241). But there is more to it than what can be comprehended as *custodia sensuum*. Because children are inexperienced and know only a few things, their speech may be inappropriate without them recognizing it. Because, according to Aristotle, what we see first makes the strongest impression on us, children must be instructed in how to see: they must come to look at matters with maturity and not with wandering eyes in order to learn what might infect them morally, and Giles' singular example of the moral danger of vision is the sight of naked women. Nor is this a matter of the deleterious effect of the sight of things themselves that children must come to interpret as morally disruptive, but as Aristotle recommended (*Politics* 7.17), the pedagogical need for instruction extends to representations in paintings and sculptures as well (*in picturis et in imaginibus*). By the fourteenth century, developments in the science of optics were adapted for use in the process of edifying the senses (Biernoff 2002; Akbari 2004). Peter of Limoges drew on, and contributed to, the work of other Perspectivists to recommend the interpretation of optical illusions as material to be used in sermons, which made his *Moral Treatise on the Eye* (composed 1274/1275–1289) into an amalgamation of science and theology on the topic of how to see correctly (Peter of Limoges 2012, 18–44).

Gregory the Great (ca. 540–604), pope from 590 until his death and one of the most astute observers of the psychological realities underlying human behavior, gives a detailed view of the ethical context of the medieval sensorium. In the *Morals on Job*, he describes how the senses could function in a progression from temptation through sensible impression to delight in perception to concupiscence and, finally, to willfulness in sinning:

> Cum sit inuisibilis anima, nequaquam corporearum rerum delectatione tangitur, nisi quod inhaerens corpori quasi quaedam egrediendi foramina eiusdem corporis sensus habet. Visus quippe, auditus, gustus, odoratus et tactus, quasi quaedam uiae mentis sunt, quibus foras ueniat, et ea quae extra eius sunt substantiam concupiscat. Per hos etenim corporis sensus quasi per fenestras quasdam exteriora quaeque anima respicit, respiciens concupiscit. ...

Quisquis uero per has corporis fenestras incaute exterius respicit, plerumque in delectatione peccati etiam nolens cadit; atque obligatus desideriis, incipit uelle quod noluit. Praeceps quippe anima dum ante non prouidet, ne incaute uideat quod concupiscat, caeca post incipit desiderare quod uidit (*Mor Iob* 21.2.4; Gregory the Great 1979–1985, 1065).

[Since the soul is invisible, it is not at all affected by pleasure in corporeal things, except that, being closely attached to a body, it has the senses of that body as types of openings for going out [into external matters]. Indeed, sight, hearing, taste, smell, and touch are types of pathways for the mind, by which it comes into the external world and desires things that are beyond its substance. For by these senses of the body, as if by windows, the soul gazes at each and every external object, and by gazing at them, desires them. ... But whoever heedlessly gazes out through these windows of the body very often also falls into the pleasure of sin, whether he wants to or not, and being bound up by his desires, he begins to want what he did not want earlier. For the rash soul, while it does not at first act with foresight—in order not to heedlessly see what it might lust for—afterwards begins to blindly desire what it has seen.]

The windows to the external world depicted by the senses offer the mind information that also results in desire. While desire can lead to knowledge when directed to fitting objects and engaged in with temperance, it is the heedless and rash soul that cannot act with prudence and is blinded into acts of sin. Both knowledge and sin, in other words, have the same potential origin in sensation.

B The Medieval Sensorium: Classifying the Senses

The senses were configured in a number of ways in the Middle Ages. Broadly understood, however, there were three major taxonomies of the senses that medieval thinkers used to classify and organize sensory perception: the external or physical senses, the spiritual senses, and the inner senses. Each of these organizations of material or spiritual perception or cognitive processes in one way or another has its roots in classical antiquity, but each was essentially shaped and re-analyzed in the course of the Middle Ages.

The conception that humans have only five senses is purely arbitrary, but traditional in the West (Classen 1993; Vannini, Waskul, and Gottschalk 2012). The paradigm of the five external senses was inherited from antiquity, specifically from the classification of the senses by Aristotle or Democritus (ca. 460–ca. 370 B.C.E.) (Classen 1993; Jütte 2005, 61–71), with Cicero (106–43 B.C.E.) as an important intermediary (Dronke 2002), but this list was hardly as rigid as it is sometimes made out to be, and in all events it allowed for more multisensoriality

than a static hierarchy might be taken to permit (Dugan and Farina 2012). The influential monastic writer and papal advisor, Bernard of Clairvaux (1090–1153), gives a clear and schematic view of the five external senses, and one of their most frequently seen hierarchies. In his *Sententiae*, a collection of Bernard's thoughts that may represent notes for later sermons, he states:

> Quinque enim sunt sensus animales vel corporales, quibus anima corpus suum sensificat, ut ab inferiori incipiam: tactus, gustus, odoratus, auditus, visus (3.73; Bernard of Clairvaux 1972, 108).

> [There are five senses of the flesh, or the corporeal senses, by which the soul endows its body with sensation, namely, beginning from the inferior ones: touch, taste, smell, hearing, sight.]

This hierarchy, in which sight and hearing are considered "superior" senses and taste and touch "inferior," was repeated widely in the Middle Ages (Vinge 1975). It is reproduced in the examination of the senses in the influential book *On the Properties of Things*, composed in Latin early in the thirteenth century by Bartholomew the Englishman (before 1203–1272) and translated into Middle English late in the fourteenth century by John Trevisa (ca. 1342–1402) (3.17–22; Bartholomew the Englishman 1975–1988, 1: 108–23; Woolgar 2006, 14–15). The *Speculum vitae*, an English verse translation (completed in Yorkshire in the third quarter of the fourteenth century) of the *Somme le roi* (composed for the king of France in 1279) inscribes this ordering of the senses in its lesson on the good management of the body:

> Bot a man bihoues lede warly
> Þe fyue wyttes of his body
> Thurgh þe lyne of Equyte,
> So þat na witte passe his degre,
> And rewell þam so in þair offyce
> So þat þai turne fra alle vyce:
> Als þe eghen to se, þe eres to here,
> Þe nese to smelle sauours sere,
> Þe mouth to tast and to speke wele,
> Þe handes and al þe body to fele. (*Speculum* 55–56; Hanna 2008, 1, 6)

> [But it behooves a man to carefully manage / The five senses of his body / With the principle of fairness, / So that no sense surpasses its rank, / And to govern them in their duty in such a way / That they turn [away] from all vice: / As the eyes to see, the ears to hear, / The nose to smell various odors, / The mouth to taste and to speak well, / The hands and the entire body to feel.]

As a learned inheritance of antiquity, the five-sense taxonomy took some time to spread through medieval Europe (Howes and Classen 2013), and even when it was well established it could be supplemented. In Wit's description of the castle of the body in *Piers Plowman*, published by William Langland (ca. 1325–ca. 1390) in three versions composed between ca. 1370 and ca. 1386, the five senses are presented as the sons of Inwit (conscience):

> Sire Se-wel, and Sey-wel, and Sire Here-wel the hende,
> Sire Werch-wel-with-thyn-hand, wight man of strengthe,
> And Sire Godefray Go-wel—grete lordes alle (B.9.20–22; Langland 1997, 131).
>
> [Sir See-Well; and Speak-Well; and Sir Hear-Well, the courteous; / Sir-Take-Action-Well-With-Your-Hand, a man of great strength; / And Sir Godfrey Walk-Well—all of them powerful lords.]

Sight, speech, hearing, and touch appear in their idealized forms as morally contoured senses, not simply as tools for external sensation, and they are joined here by motion, one of the common sensibles in Aristotelian psychology. That walking well is numbered among the five senses is a fitting enhancement of a narrative centered on the allegorical action of pilgrimage.

The hierarchical ordering explained by Bernard of Clairvaux is an inheritance of classical philosophy's view of the value of sight and hearing occurring at a distance from the object of perception. As Carolyn Korsmeyer has observed, "In virtually all analyses of the senses in Western philosophy the distance between object and perceiver has been seen as a cognitive, moral, and aesthetic advantage" (Korsmeyer 1999, 12). But with a changed context, the "proximity" senses of touch and taste could be valued more than the "distant" senses. In the medical field, taste was appreciated for its pedagogical value as the single sense that can teach each person perfectly about the various natures of things because we take a substance completely into ourselves when we taste it with the tongue (Burnett 1991; 2002; Wallis 2014). As a diagnostic tool, tasting the bodily fluids of their patients served physicians as a more reliable guide to health than using most of their other senses, and a patient's experience of the feeling of pain was also considered especially useful in diagnosing illnesses (Cohen 2010). Even on ethical grounds, the proximity senses could be appreciated more highly than sight or hearing. In the "Treatise on Temperance," part of the influential *Summa on the Virtues* composed in Lyon before 1249 by the Dominican William Peraldus (ca. 1200–ca. 1271), proximity senses are valued because they do necessary service in preserving life: taste is a required element in eating, touch an essential part of reproduction. The other senses add to the quality of life, but are of less importance in its rudimentary maintenance. Basing his work on Aristotle's *libri naturales*, Peraldus observes that sight, smell, and hearing are activated at a

distance from the object of perception, but taste and touch require proximity to that object:

> Vnde delectationes que sunt secundum gustum et tactum maiores sunt quam sunt secundum alios tres sensus. Et pronitas ad operationes et delectationes secundum illos duos sensus maior est quam secundum alios tres. Et uicia que sunt secundum operationes et delectationes illorum duorum sensuum magis sunt periculose. Ideo uirtutes que sunt contra illa uicia magis sunt necessarie et magis note ... . (*Summa*, 3.3.8; William Peraldus, fol. 251vb).

> [Whence the pleasures that occur through taste and touch are greater than those that occur through the other three senses. And the inclination to the actions and pleasures stimulated through these two senses is greater than that stimulated through the other three. And the vices that occur through the actions and pleasures of those two senses are more dangerous. Hence, the virtues that are contrary to these vices are more necessary and more noteworthy....]

This variation in what is sometimes portrayed as the typical hierarchy of the senses in the Middle Ages is a function of the context in which the senses are discussed. For pastoral theology, the immediacy of sensation and its possible allure had far more potential for the process of edifying the senses than a statement on vision as the superior sense. Contextual analysis is a crucial step in understanding statements of order among the senses.

Because the senses played an active role in the process of perception, they were a vital element in the formation of the individual's moral identity. In an effort to deepen the Christian ethics of the senses, moral theologians often contrasted the pleasures of the spiritual senses with those of the external senses. Plato (428/427–348/347 B.C.E.) and other classical authors wrote of apprehending intelligibles using language that has counterparts among Christian authors who described spiritual perception (Gavrilyuk and Coakley 2012, 7), but the expression "spiritual senses" (*sensus spirituales*) is first attested in translations of Origen's (185/186–253/254) works by Rufinus of Aquileia (340/345–410). While Patristic authors generally treated the concept without systematizing it, in Western medieval theology the concept of the spiritual senses was used more analytically (Gavrilyuk and Coakley 2012, 2–5). Here, the spiritual senses were at times articulated as a system parallel to the external senses that was used to give expression to the non-physical human encounter with the divine (Rahner 1932; 1933), as if they were the sense impressions of the "eyes of the heart," or the "ears of the mind," or the "eyes of faith," and the like. But the spiritual senses could also have wider implications and be less closely named after the physical senses. In direct connection with Bernard of Clairvaux's enunciation of the five external senses, one also finds an equally schematic numbering of a parallel list of spiritual senses in his particular system:

Similiter quinque sunt sensus spirituales, quibus caritas animam vivificat: id est amor carnalis parentum scilicet, amor socialis, amor naturalis, amor spiritualis, amor Dei. Per quinque sensus corporis, mediante vita, corpus animae coniungitur; per quinque sensus spirituales, mediante caritate, anima Deo consociatur. Tactui comparatur amor parentum, quia affectus iste promptus omnibus et quodammodo grossus et palpabilis sic se omnibus naturali quodam occursu praebet et ingerit, ut effugere eum non possis, etiam si velis (*Sent* 3.73; Bernard of Clairvaux 1972, 108).

[Similarly, there are five spiritual senses by which *caritas* vivifies the soul, i.e., namely the corporeal love of parents, a social love, natural love, spiritual love, and the love of God. Through the five senses of the body, during one's lifetime, the body is joined to the soul; through the five spiritual senses, with the intervention of *caritas*, the soul is joined with God. The love of parents is comparable to touch, since this feeling, exposed to all and in a certain sense coarse and palpable, shows and offers itself to all in the course of nature so that you could not flee from it even if you wanted to.]

Bernard of Clairvaux demonstrates the importance of touch among the spiritual senses (Coolman 2004, 151–52; Mark M. Smith 2007, 97–99; C. Classen 2012, 29–31). More generally, he envisioned a unified sensorium in which *caritas* is achieved by a process that mediates between the corporeal and the spiritual senses. In Sermon 10 among the *Sermones de diversis*, he calls *caritas* the life of the sense(s) (*Serm div* 10.1; Bernard of Clairvaux 1970, 121). This sermon also elucidates at greater length the relationship of the spiritual to the physical senses that is treated inchoately in the *Sententiae*: The soul gives sense to the body, distributed in five bodily members; likewise, the soul gives a corresponding spiritual value to the senses distributed in five kinds of love: sight is related to the holy love (*amor sanctus*) of God; hearing to *dilectio* at a remove from the flesh; smell to the general love (*amor generalis*) of all human beings; taste to a pleasant or social love (*amor iucundus, amor socialis*) of one's companions; and touch to the pious love (*amor pius*) of parents for their young (both humans and animals) (cf. Fulton 2006, 191). And elsewhere, Bernard uses rhetorical synesthesia (Rudy 2002, 13–14; 54–55) to describe the unity of how the spiritual senses work: In his explication of the Song of Songs he writes that: "Habet oleum effusum sponsa, ad cuius illae [adolescentulae] excitantur odorem, gustare et sentire quam suavis est Dominus" (The bride has poured out an oil to whose odor the maidens are drawn to taste and feel how sweet is the Lord) (*Sermones super Cantica canticorum* 19.3.7; Bernard of Clairvaux 1957, 112).

In the development of an emphatically somatic language to describe mystical experience among writers in the centuries following Bernard, one can also see further reflection on the unity of the spiritual and physical senses. Hadewijch of Antwerp (mid-thirteenth century), a Dutch or Flemish beguine, avoids a clear distinction between inner and outer perception, insisting on a unified sensorium of experiencing God in which there is a continuum between external acts of sensation

by the physical senses and interior perceptions (Bynum 1987, 153–61; Rudy 2002, 67–100). For the English mystic Richard Rolle (1290/1300–1349), the gift of God's presence felt within is meant to flow outward and transform ordinary physical sensation as it united the spiritual and physical senses, and in a way that emphasized the sense of hearing in Rolle's foregrounding of the soul's participation in heavenly song (Watson 1991, 113–91; McGinn 2012, 207–08). Significantly, the unity of the senses also implicates the vitality and importance of the process of their edification. Though the fruition of the concord of external and spiritual senses was not envisioned to be achieved until the resurrection of the body at the end of time, the process was considered to be "under way now in the interim period, the time of *transitus*, during which the senses have begun to be reformed by the action of grace on the whole human faculty of sensation" (McGinn 2012, 209).

Later medieval writers sometimes use the phrase "inner (or internal) senses" to refer to the spiritual senses, as a way of contrasting them with the external, or physical senses. More specifically, however, the phrase "inner senses" designates the stages that were considered to be involved in the process leading from physical sensation by the external senses through perception to cognition. The list of these inner senses was fluid, containing anywhere from four to seven senses or faculties, but the system of five external senses served as the basic paradigm for a parallel series of five inner senses developed in Aristotle's *De anima* (*On the Soul*) and some of his works on natural philosophy (Modrak 1987; Gregoric 2007; Karnes 2011, 31; 33). These psychological faculties were further theorized by Aristotle's interpreters, above all Avicenna (ca. 980–1037) and Averroes (1126–1198), and developed in the recovery of these works along with Aristotle's texts in the West. The psychological faculties were understood to work in stages of increasing abstraction, but the process begins with sensation by the external senses and then their combination and judgment in the collection point of the αἴσθησις κοινή, the "common sense" (Heller-Roazen 2007, 31–41; 2008). The work of both Islamic scholars influenced Scholastic theologians, importantly among them Albert the Great (ca. 1200–1280). In Albert's account, the steps in the cognitive process are, first, sensation by the external senses, and then collection in the common sense, followed by imagination, estimation, fantasy, and memory. The common sense receives forms only from the act of sensation by the external senses, but after it passes these on, imagination "accepts the form of an object even when the object is not present" and stores these forms for future reference. Estimation does not receive sensible forms, but intentions (e.g., whether a perceived object is sociable or friendly, etc.) and uses this information to motivate a person toward particular action. Fantasy serves complex functions by combining intentions from the estimative faculty and forms from imagination and memory, with the result being what we would understand as "fantasies" (e.g., a man

with two heads) or artistic works. Memory "apprehends an object through a form that it has stored rather than a form that it receives *de novo* from the senses at the time of apprehension" (Steneck 1974, 201–02; see Carruthers 2008).

One of the most important early vehicles of transmission of Aristotle's view of these cognitive faculties is Boethius's *Consolation of Philosophy*. The view of the psychological processes at work in human cognition laid out by Boethius was still influential in the late Middle Ages. In the fifth book of Geoffrey Chaucer's (ca. 1340–1400) Boethian translation, for example, Lady Philosophie explains faculty psychology to Boece, distinguishing the faculties, or inner senses, as received through Aristotle's *De anima* (*On the Soul*). Thus, in explicating how human perception differs from divine knowledge, she notes that a round shape is comprehended differently by different senses, and analogously a human being is comprehended differently by the senses, or by imagination, or by reason, or by intelligence. These faculties culminate in the highest faculty, that of intelligence, which comprehends the pure form of a human being that remains eternally in divine thought. But the process begins with the physical senses, that is to say, in the external comprehension of the shape of the body of a human being as this has material existence (*Boece*, V.pr4.155; Chaucer 1987, 463). The senses function here as information gathering tools, perhaps limited in scope to the comprehension of material substance, but nevertheless necessary as the starting point for the further forms of understanding that eventually subsume them.

The edification of the senses adds an important component to the understanding of the activity of the inner senses. Beginning in the thirteenth century, the linkage between aesthetic and didactic effects in literature and the arts became part of a new reflection on the cognitive processes and the senses that was stimulated by the expanding corpus of Aristotelian texts and commentaries (Black 1989; 2000; Gillespie 2005). It had been a commonplace since Horace's (65–8 B.C.E.) *Ars poetica* to say that the goal of literature was both to entertain and to teach, but to this was added a consideration of the pathways of pleasure that made it possible and advisable to use the former goal to simultaneously achieve the latter one. Vincent Gillespie has observed that Roger Bacon, one of the earliest academics to lecture on Aristotle's works on natural philosophy, encouraged writers to engage with the *affectus*, not just the rational abilities, of human beings to achieve ethical ends. This required an understanding of how the pleasures of poetry appealed to the senses and through them to the imaginative faculties that led to ethical understanding. In Bacon's *Optics*, one finds an exhortation for the training of these cognitive processes as analogous to processes of spiritual growth. Bacon recommends that engaging the imagination is more effective as a way to stimulate the affective connections leading to higher levels of comprehension (Gillespie 2014).

C Sensing (in) the Middle Ages

Underlying research into the senses, in historically distant periods as well as in the contemporary moment, is the recognition that sensory experience is socially and culturally constructed, that an investigation of the "sensate" is an examination of social and cultural processes (Mark M. Smith 2007; Vannini, Waskul, and Gottschalk 2012, 5–8). Concepts of time, place, and identity are constructed within the totality of these processes, forming important parts of the "sensory model" that maps a community's understanding of the senses.

Sonic culture is an integral constituent of the sense of time, not only in the important activity of measuring the distance between now and time past (Sterne 2012, 1)—the span of centuries separating plainchant and punk rock, for example—but also in the measurement of time as it passes. The sounds constructing time are contextualized: In the monastery or anywhere within hearing of a church tower, the medieval day was apportioned into eight liturgical hours: matins, lauds, prime (around 6:00 a.m.), terce, sext, nones, vespers, and compline, each separated by three hours and each generally introduced by the ringing of bells. But beyond liturgical time, from the thirteenth century the development of the mechanical *horologium* (clock) led to the building of municipal and ecclesiastical clock towers which eventually rang out the passing time on a twenty-four-hour schedule. In the industrialized cities of Ypres, Bruges, and Ghent, bells were used to mark the start and end of the work day, analogous to factory sirens in the modern period (Reyerson 2014). In 1355, the inhabitants of Aire-sur-la-Lys (Pas-de-Calais, France) were authorized to build a belfry in order to help regulate the labor of the textile workers there. The Zytglogge (clock tower) in Bern was fitted with a bell in the early fifteenth century. As Jacques Le Goff has noted, these communal clocks in urban centers were a function of "merchant time," the instruments "of economic, social, and political domination wielded by the merchants who ran the commune" (Le Goff 1980, 35). The sound of a bell, in both liturgical and urban time, came to signify not just the mechanical measurement of time, but the temporal transition from one state of being to the next (*ora/labora*, work/rest, wage earning/consumption, etc.). This aspect of the medieval soundscape also reveals much of the subjectivity of the authors who inscribed bells in their works (Fritz 2011). Geoffrey Chaucer employed the bell of a *horologium* to mark the passage between dreaming and a waking state in *The Book of the Duchess*:

> Ryght thus me mette, as I yow telle,
> That in the castell ther was a belle,
> As hyt hadde smyten houres twelve.
> Therewyth I awook myselve
> And fond me lyinge in my bed ... (1322–25; Chaucer 1987, 346).

[Just as I tell you, I dreamt / That in the castle there was a bell / And it was striking the hour of twelve / And with that I awakened / And found myself lying in my bed... .]

And William Langland used the sound of bells on Easter day at the end of Vision six in *Piers Plowman* not only to awaken the dreamer briefly from his dream, but also to mark the transition to the next narrative sequence introducing grace and the founding of the Church, a movement from humanity's fallen state to the promise of redemption (B.18.428; Langland 1997, 325).

Of course, many more of the senses are involved in the construction of time than hearing: Taste marked the passing of the liturgical year in celebratory feasts or by what was not eaten during Lent; vision and touch tracked the cycle of seasons, the movement of the sun to the south in winter and the return of its warmth in the spring; smell was essential in timing agricultural processes (e.g., the ripeness of fruit) or the baking of bread. And all of the senses worked together in intersensorial (or multisensorial) processes of mutual interaction to construct the various contexts of time.

The importance of intersensoriality as a factor in a culture's sensorium can hardly be overstressed (Mark M. Smith 2007, 125–29). It plays a key role in the construction of place, and a number of contributions to sensory studies have called for increased attention to this factor as a way of overcoming a dependence on the visual alone. As Stephen Feld has noted, "The overwhelmingly multisensory character of perceptual experience should lead to some expectation for a multisensory conceptualization of place. But by and large, ethnographic and cultural geographic work on senses of place has been dominated by the visualism deeply rooted in the European concept of landscape" (Feld 2005, 182). As Yi-fu Tuan has observed, medieval cathedrals were constructed as environments that stimulate "the simultaneous use of three or four sense receptors." Sight, sound, touch, and smell reinforce each other "so that together they clarify the structure and substance of the entire building, revealing its essential character" (Tuan 1990, 11; see also Tuan 1993, 135–42). The multisensuality of the liturgy added to the multisensuality of the cathedral's space (Palazzo 2010). Likewise, the well-being ideally offered by the warmth of the hearth, the human warmth of the family gathered around it, and other domestically-contained sensory comforts could make returning home after a day's work or long travels one of what Constance Classen has called the "rites of pleasure" afforded to both the lower orders and the upper echelons in the Middle Ages (C. Classen 2012, 7–22). Whereas the interactions of the senses in the cathedral took place in a controlled environment under the watchfulness of clerical organization in order to optimize spiritual goals, the senses working together could become unregulated in other places, so that these multisensual possibilities became sites of anxiety. The *Liber*

de humanis moribus by Anselm of Canterbury (1033–1109) depends on the multi-sensoriality of place to define the potential danger of two important locations visited by the monks for whom Anselm wrote: the refectory and the marketplace. Where Anselm comes to examine sinful *curiositas* here, he develops a schematic approach that classifies "curious" activity in forty-four types of behavior, differentiated according to how many basic elements they combine, the elements being the most discrete methods for indulging one's *curiositas*: in thoughts, words, deeds, or the various external senses. Thus, there are five simple types of sinful curiosity (in thought, word, deed, sight, or hearing), six double types (word and deed, word and sight, word and hearing, deed and sight, deed and hearing, or sight and hearing), and so on. The last six chapters of this analysis are devoted to twenty-eight types of the sin of curiosity that are exclusively concerned with matters of sensory perception.

The minuteness and practicality of this analysis for the monastic life is seen especially well here, for all of these types of *curiositas* are located in the marketplace or the dining hall. The sin of curiosity is seen, in this way, when one is too eager to see what dishes are being served, or tastes the food on the table only to know whether it tastes good or not, or smells the spices for sale in the market simply to know what each one smells like (Anselm of Canterbury 1969, 47–50). They reveal the fundamental monastic orientation of the author of the *Liber de humanis moribus*, for as examples of a faulty will and the results of one of the three major categories of sin, they assume an ascetic life as their "curiosity-free" diametric opposite. Places potentially beyond the control of monastic authority also became potentially threatening because they allowed multisensory indulgence (Newhauser 2010).

The confrontation between competing spaces is also made sensible in the opposition between their conflicting sensory regimes. One can think here of the response of the perfumed elite in Rome to the "stench" of the Germanic armies invading from beyond the Alps in the fourth century, an introduction of one odor, and its rejection, into the space of another (Classen, Howes, and Synnott 1994, 51). Aroma is one of the keys to understanding social differences (Dugan 2008), but it also helps uncover the distinction between rural and urban space in the Middle Ages (as also today). To highlight this distinction, Jacques de Vitry (1160/1170–1240) uses one of the major techniques to appeal to the affective understanding that was foregrounded by the mendicants starting in the thirteenth century, namely narrative *exempla*. He relates a story about a peasant who came to the city and was so overcome by the odor in the vicinity of the spicers' quarter (*apothecaria*) where fragrant spices were being ground up that he collapsed and could not recover until he was carried back to the country, half dead, and was able to smell the stench of fumes and dung at home again (Jacques de Vitry 1890, 80, no. 191).

The olfactory order presented here serves also to emphasize class distinctions: peasants did not possess the refined abilities to be able to breathe, let alone appreciate, the scents of fine spices (Reyerson 2014). Soundscapes, too, create localized meaning (Vannini, Waskul, and Gottschalk 2012, 8), at times using the same contrastive pairs as was formative for the olfactory sense. The political complaint poem "London Lickpenny," from late medieval England, narrates a Kentish peasant's confrontation with the noise of Westminster and London where he has gone to seek legal redress. Because he has no money to pay off the various judicial clerks, his journey is fruitless. Outside the Royal Courts of Justice, Flemings accost him to buy hats or reading glasses; in London, he is confronted by a bewildering array of hawkers wanting him to buy their goods: "Hot shepes fete!" (hot sheep feet); "Ribes of befe, and many a pie!" (beef ribs and a variety of pies); "Ser, a pint of wyn would yow assay?" (Sir, would you like to try a pint of wine); and many more (Dean, ed., 1996, 222–25). He is overwhelmed by the sensory overload of the city and returns to being a plowman (Carlin 2014; for the soundscape of Paris in the later Middle Ages, see Dillon 2012). The confusion of voices and the smells and sights of urban space underscore the gap between the city and the countryside and the alienation of the peasantry in the urban economy. But foregrounding the cacophony of voices also makes sensible a moral confusion at the heart of the poem, that is also a critique of English society, in which the failures of the law and the aggressiveness of commercialism form a continuum.

Speaking of the senses as socially and culturally constructed also implicates the way social identity is defined within "sensory communities" (Vannini, Waskul, and Gottschalk 2012, 7–8). These social groupings establish sensory regimes and enforce standards that are reflected in concepts of the hierarchy of the senses and other aspects of the sensorium, but since social identity also has a political character, sensory communities are subject to resistance by conflicting or insurgent or "reinterpretive" understandings of the senses. The political potential of the haptic sense can be observed in regulations on who can touch whom; physical violence is also the "ultimate method of enforcement of the status hierarchy" (Synnott 1993, 169). But touch is also bi-directional—when someone leans against a wall, her back both touches the wall and is touched by the wall—so that the social order of touch also regulates what a sensory community considers fitting to be touched by, expressed in particular by the clothing it finds appropriate for itself. In the Middle Ages (as also now), "class distinctions were impressed on the skin through the use of symbolically potent textiles" (C. Classen 2012, 9). Aristocrats wore silk and refined furs; the lower orders could not afford these materials. The significance of power, wealth, and beauty in such clothing contrasted with warnings about how it indicated the sinfulness of pride, creating complex patterns of ethical implications (Nicole D. Smith 2012). But after the mid-fourteenth

century the spread of what had been first a court fashion of close-fitting clothes to the lower orders is typical of a disruptive pattern of resistance in which the lower orders imitated aristocratic fashion. Likewise, urban designs of houses influenced the building of rural homes; an increased use of pewter for tableware can be attributed to its similarity in appearance to the silver used by aristocrats (Dyer 2005, 137–47).

Taste provides a complement to the sensory ordering of touch because of its supremely social nature in its literal, gustatory meaning (e.g., indicating food that tastes good); in its widest, aesthetic implications (e.g., indicating someone of discriminating taste) (Bourdieu 1984); and in the range of its ethical significance (Vecchio 2010). The development of the penchant for sweetened food, and the importance of sugar in creating this sweetness, again shows how conflict between the social orders played itself out as the competitive appropriation of one sensory community's prerogative by another social group. The early and high Middle Ages were comparatively "salty" when measured against the sweetness that became pervasive in the later medieval period (Schulz 2011, 541). The increased use of sugar in the European diet is often linked to discoveries in the New World (Mintz 1985), but in fact from the twelfth century sugar was a significant commodity throughout Europe, where it was brought as an export, along with a variety of spices, from the Middle East, Cyprus, Sicily, and southern Spain (Ouerfelli 2008). Through their connection with Muslim civilization, imported spices and sugar served as part of the links to the Mediterranean world and beyond, and using spices in a great number of dishes became a demonstration of the upper orders' ability to enjoy the opulence of the fabled East (Freedman 2008, 39; 143). Combining many spices and sources of sweetness in a great many dishes at feasts, customary among the English upper classes in the late Middle Ages, was also designed partially to appeal to many of the senses all at once (Woolgar 2007, 175–77). But after the middle of the fourteenth century, the lower orders possessed enough spending power to be able to emulate aristocratic styles of eating, as can be seen in the occasional grand meals using venison, wine, and spices that were organized by some peasants for weddings and funerals, or by urban artisans in fraternities (Dyer 2005, 126–72). Sweetness began to grow to be a ubiquitous gustatory pleasure, adding to the already complex and at times ambiguous associations of "sweetness" (Carruthers 2006) to designate everything from the taste of divinity (Fulton 2006) to the corrosive effect of moral decline among the clergy (Newhauser 2013).

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