been influenced by the general pagan understanding of the
time that the east is the direction in which the good divine
powers are to be found, a view originally connected with
sun worship" (Davies 1986, 421). Along with these particu-
lar rationales, however, Christian scholars and theologians
have also offered numerous other historical, theological, or
biblical explanations for the custom of facing eastward
(Davies 1986; Hassett 1913; Lang 1989; Yarnold 1994). In
addition, a related custom has been the practice among
some Christians of burying the dead with the lay person's
feet placed to the east (Lang 1989). Interestingly, the early
Church's adult baptism (i.e., conversion) ceremonies—insti-
tuted after the Roman Empire legalized Christianity in the
4th century—incuded having the candidate face west to
renounce the devil, then turn away in the opposite direc-
tion "to face Christ, the source of light, in the east"
(Yarnold 1994).

Historically, this custom of facing eastward has
found expression in the geographic orientation of church-
es. From the 4th century to the 8th century, Christian basilicas
in the Western world were typically built with their
entrance on the east side, whereas later basilicas, influ-
enced by Orthodox and French church architecture (Foley
1991; Redmond 1967), came to be built with the opposite
orientation, with the apse (i.e., the area containing the
altar, opposite the entrance) on the east side. In both cases,
however, apparently the "presider stood on whichever side
of the altar allowed him to face east, the place of the rising
sun and a symbol of the resurrection" (Foley 1991, 70). The
latter custom of both presider and congregation facing
eastward continued in Roman Catholic churches until the
decades after World War II, when priests gradually
switched their orientation so that they now face the con-
gregation, even though this change means that the priests
may thus be facing westward (Cross and Livingstone 1983).
Protestant ministers have generally faced the congregation
since the Reformation, although their churches have not
been oriented in any particular direction (Cope 1986). In
fact, throughout Christian history, from the earliest days to
the present, "orientation has never been considered
absolutely essential and many churches have been built
regardless of it to accommodate them to the site available"
(Davies 1986, 421).

Islam

In contrast, Islam has been perhaps the most con-
cerned among the major Western religions with the direc-
tion-facing problem. Interestingly, among Muslims the
direction of prayer (qibla, in Arabic) was initially, as it is
among Jews, toward Jerusalem. However, within a year or
two of Muhammad's founding of Islam (7th cent.), the
Muslim qibla (also spelled kibla) was changed from
Jerusalem to Mecca, due perhaps in part, some have specu-
lated, to Muhammad's disappointment that few Jews were
converting to Islam (Wensinck 1986). Thus, Muslims were
instructed, "Turn then your face in the direction of the
Sacred Mosque: wherever you are, turn your faces in that
direction" (Koran 2:144); that is, in the direction of the
Ka'ba (sacred mosque), which is in Mecca. To this day
whenever a mosque is constructed, the building is oriented
to face in the direction of this qibla (Wensinck 1986). In
addition to its considerable importance in Muslim prayer,
"according to Islamic law, certain ritual acts such as reciting
the Qur'an, announcing the call to prayer, and slaugh-
tering animals for food, are to be performed facing the
Ka'ba. Also Muslim graves and tombs were laid out so that
the body would lie on its side and face the Ka'ba" (King
1999, 47). In addition, "it is forbidden to turn towards
Mecca when relieving nature" (Wensinck 1986, 82).

Historically, Muslims have used a number of dif-
ferent approaches in determining the direction of Mecca.
In the first two centuries of Islam, for example, the qibla
was sometimes determined by using the direction of the road
on which pilgrims left for Mecca (Goldstein 1996), or
it was simply to face south because "the Prophet
Muhammad had prayed due south when he was in Medina
(north of Mecca)" (King 1993, I 253). Later in the medieval
period, however, two main traditions, each existing along-
side the other, emerged: mathematical astronomy, which
used geographic coordinates and trigonometric formulas,
and legal scholarship, which used a number of different
rules of thumb not requiring computations. Interestingly,
as King (1993, X 8) notes, "It is quite apparent from the ori-
entations of mediaeval mosques that astronomers were seldom
consulted in their construction. Indeed...several differ-
ent and often widely-divergent kiblas were accepted in spec-
cific cities and regions."

The medieval legal scholars, drawing on a kind of
folk astronomy, began with the observations that the
Ka'ba, a rectangular-shaped building, is oriented so that,
roughly speaking, (1) the two shorter walls face the rising
point of the star, Canopus, (2) the two longer walls face the
summer sunrise or winter sunset, and (3) each of the walls
face head on into one of the four Arabian winds. These
observations were then combined with a view of the Ka'ba,
in Mecca, as the center of the world. Muslim legal scholars
then divided the world into either 4, 8, 11, 12, or 72 sectors
radiating out from the Ka'ba, so that each sector of the
world could be said to face a particular section of the
perimeter (or wall) of the Ka'ba. Muslims living in a partic-
ular sector could then determine the qibla based on the ris-
ing (or setting) of the sun or stars or the winds in their
location. Thus, the legal tradition's

Attempts to define the kibla for different locali-
ties in terms of astronomical risings and set-
tings [or even of wind directions] stem from the
fact that these localities were associated with
specific segments of the perimeter of the Ka'ba,
and the kiblas adopted were the same as the
astronomical directions which one would be fac-
ing when standing directly in front of the
appropriate part of the Ka'ba. (King 1993, XI 1-2)

So, for example, early Iraqi mosques faced the winter sun-