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Elizabeth A. Low

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The Development of Science from Superstition.

In all ages, among civilized no less than barbarous nations, the mysterious and the unknown have exerted an influence upon man.

To-day, in this age of scientific development, here and there, we find survivals of petty superstitions, which, among the ignorant, consist chiefly in having their fortunes told usually by some gypsy denizen of a gypsy camp, in planting their crops, and shingling their roofs, in what is known as the down sign, and in looking at the new moon over the right shoulder.

The popular fads of mind

reading, Hypnotism, Clairvoyance
and the like arrest the attention
of the educated, and fill the
pockets of unscrupulous charlatans.

Among the ancients, however,
superstitions could not thus be
summed up in a few words. With
them, it took a religious form.
The worship of the powers of
nature prevailed, and all natural
phenomena were regarded with
excessive reverence and awe as
the product of the gods. Every
nation had, indeed, its special
deities, and, as it was of the
greatest importance that these
be appeased, there was need
of those skilled in interpreting
the various changes of nature,

in order to know aright the mood and will of the gods. This duty naturally fell to the priest, who united with his priestly offices, those of the philosopher and the seer.

Among the Greeks, the principal mediator was the Oracle at Delphi, to whom the gods were reported to speak in the rustling leaves and babbling brook, while the priestess seated upon a tripod over a chasm, supposed in this unimaginative age to have emitted natural gas, uttered prophecies, conveniently ambiguous, so as to admit of several meanings.

The Romans, however, were

not content to hear the divine will
from human lips, and, accordingly,
their augurs and haruspices
studied the lightning, the flights
of birds, and the entrails of
animals, as containing the omens
of the will of the gods. Of
such moment were these omens,
that an army was frequently
kept waiting several days until
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the appearance of the sacrifice.

Among the Chaldeans, the
stars furnished the principal
source of prognostication. Shep-
herds, watching their flocks
by night, learned to tell the
hour by the flight of the
stars, for, while at first, the

spectacle of the heavens seemingly remained unchanged, the planets, the wanderers were soon separated from the fixed stars, and to their fancy appeared the analogy between destiny fixed and unchangeable, and the changeful lot of man on the earth. As time passed on, the astrologer became an important personage in other countries than Chaldea.

Observations of stars were made with greater care, and, at last, the whole theory of astrology was developed. Earth was at the centre of the universe, with the Sun, Moon, and Stars revolving around it. So powerful was the influence supposed to

be exerted upon it, and its inhabitants, that for a certain star to be in the ascendency at one's birth, predestined him for a certain fate. Rare conjunctions of stars portended good fortune; eclipses and more frequent phenomena, evil fortune. Aerolites were looked upon as images sent from the gods to be worshipped. An instance of this, we have Diana of the Ephesians, undoubtedly an aerolite; the holy stone at Kaaba in Mecca, which every year receives a black silk gown from the Sultan of Turkey, and numerous bits regarded by the Arabs as amulets. These are some of the more general superstitions. To us,

they seem absurd and ridiculous,
and yet, to astrology, freed from
its superstitions and prejudices,
modern astronomy owes in part,
the firm basis on which it rests
to day. Observe the difference
in the case of alchemy! The
alchemist busying himself with
searchings for the Philosopher's
Stone, and the power of obtaining
perpetual youth, doubtless made
many experiments and discoveries,
in his efforts to reach the sought
for end, and yet, on account of
the jealousies existing among
the members of the fraternity
itself and the superstitions of
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one, his occupation was carefully concealed with the result, that Chemistry rests on a less sound basis than either Physics or Astronomy.

As from imaginings, such as these there eventually were developed, the solid conclusions of modern science, the question might be asked, "Why did not the human mind, asserting its freedom, sooner deliver itself from the trammels and superstitions of the age?" The answer is that such a course was impassible. Men cannot take a broader view of things than the horizon of their knowledge will allow them, and it was not till a

truer, broader view of the universe was obtained that man, seeing his error, endeavored to correct it. Even then the development was slow, as firm bonds, scholastic and ecclesiastical, had to be broken, before science could obtain a proper development and recognition.

In proof of this, let us see what, in those ages, scientific investigation and enlightenment signified. In the first place, it meant the overthrow of the whole religious life; further, that the priests should be deprived of their power and that the strength of rulers be weakened. For, were they not

the descendants of the gods,
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With this in mind, is it
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covery? How then, was the
change effected? in other words
how did modern science ob-
tain the impetus and strength
necessary to free itself from
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it sprung?

The change began with Copernicus; but he, wise old man,
not willing to be called a
heretic, kept his discoveries
secret, until about to die, when

they were printed in full. The discoveries, against the religion, no less than the science of the age, proved, first, that the Sun is the centre of the universe, second that the spheres of fixed stars are so far away from the earth as to preclude any possibility of its inhabitants being affected thereby.

Others followed him; many new discoveries were made; facts were more carefully observed; records were kept with increasing accuracy; light was poured into the darkness, until at last, the binding power of ignorance and superstition was effectually broken.

1891 Commencement Oration of Elizabeth A. Low, Class of 1891

Transcribed by Krista Gray, September 2008

Edited by Meg MacAvoy, September 2008

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In all ages, among civilized no less than barbarous nations, the mysterious and the unknown have exerted an influence upon man.

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in order to know aright the mood and will of the gods. This duty naturally fell to the priest who united with his priestly offices, those of the philosopher and the savant.

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