

The observations of embryology/
developmental biology render plausible an
alternative picture to genes controlling
development:

i) The organism is a composite of
coherent processes.

Changes, e.g. produced by mutations, can yield
significant (or trivial) but still integrated
change in the organism.

ii) Development is a complex
process of structures arising out
of structure, and so

a change in genes does not necessarily
imply a change in some characters.

a change in genes can sometimes result in
a discrete change in some characters.

iii) Although development is
complex, this doesn't imply the
need for a controlling center. Local
rules of interaction can yield larger scale co-
ordination.

Development of social characters will be
similarly complex and difficult to tie down to
genes, but even more so because

- a) post-embryonic development involves more
extensive interaction with the environment and
- b) social characters involve interaction among
individuals.