

DETERMINANTS OF LATERALITY IN MAN

Ian Christopher McManus
Christ's College
Cambridge

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For Diana

"Ease and leisure were given thee for
thy retired thoughts out of the sweat
of other men"

Milton

Summary

The thesis is divided into two fairly distinct parts. In the first part I describe a genetic model of cerebral dominance. This discussion commences with an account of the structure and description of handedness. This is followed by three chapters in which I suggest that left-handedness is not caused by birth-stress, and neither is there an unusually high incidence of sinistrality in epileptics or twins; there then follows a discussion of the whole concept of pathological left handedness, for which I suggest there is not adequate empirical evidence. Having thereby circumvented several major obstacles to the fitting of genetic models, I then describe a simple genetic model which will account for family and twin data on handedness. This is followed by the application of the model to cerebral speechdominance and aphasia. Finally the model is fitted to data on the inheritance of hand-clasping and arm-folding. This is followed by a brief consideration of the possible advantages of left-handedness. In the last chapter of the first part are considered several miscellaneous aspects of left-handedness and the inheritance of asymmetries.

The second part of the thesis considers aspects of the symbolism of laterality. The first chapter considers a conventional symbolism which derives at least from the

doctrine of Pythagorean opposites, and which influenced Greek sculpture and thought. The next chapter describes the "epidemiology" of a more unusual asymmetry, that of the portrayal of the left cheek in Western portraiture, and it is concluded that this is not a simple symbolism in the usual sense, but that it does have iconographical importance. The final chapter in this section describes two experiments on the particular meaning of the left and right cheek.

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Summary

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