

Linkage Encyclopedia Article

Linkage

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.



Contents

[Linkage Encyclopedia Article.....1](#)

[Contents.....2](#)

[Linkage.....3](#)

Linkage

Linkage is a term used to describe the phenomenon of two or more non-allelomorphic genes repeatedly occurring in the same gamete (a haploid reproductive cell). These genes and their appropriate alleles are passed from generation to generation as a joined unit. They do not obey the law of independent assortment.

Linkage occurs on the same chromosome, and in fact, one chromosome is one linkage group. When cross over occurs during meiosis (cell division that produces four haploid gametes), the linkage breaks down. Crossing over is the exchange of genes by chromosomes during meiosis that alters the genetic pattern contained within the chromosome. The further apart the alleles are on the chromosome the more likely a cross over event will occur between them and linkage will not be evident.

Linkage and its occasional breakdown during cross over provided was studied in order to produce the earliest form of genetic (or linkage) maps. Linkage maps were based on the percentages of cross overs between linked non-allelomorphic genes and showed the relative locations of genes within the chromosomes of an organism.