

Location → L1 L2 L3 L4 L5 L6 L7 L8

Twin Pair

↓

TP1

{ DZT

TP2

{ MZT AAbbccDDee // FghiJ

TP3

{ MZT

genetic factors
(pairs of alleles)

TP4

{ DZT

sequence of
environmental
factors

TP5

{ DZT

TP6

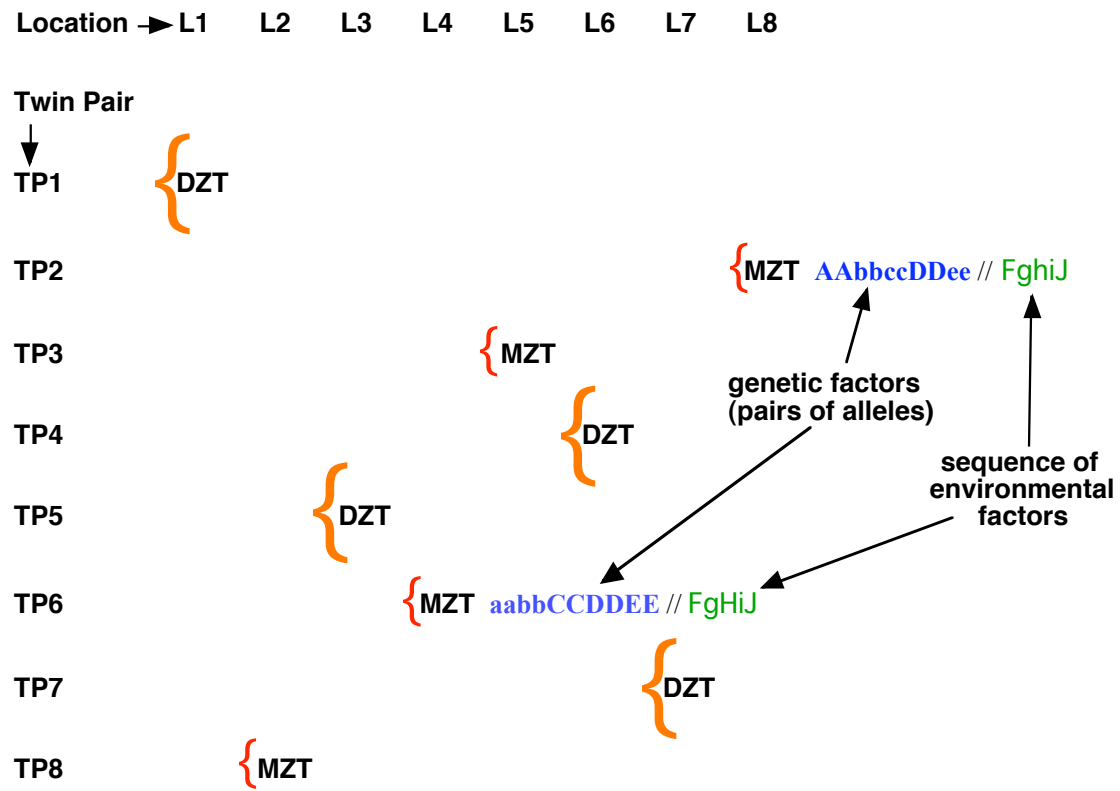
{ MZT aabbCCDDEE // FgHiJ

TP7

{ DZT

TP8

{ MZT



what can we do with high heritability given the possibility of underlying heterogeneity?

- * Identify the specific, measurable genetic and environmental factors without reference to the trait's heritability (or the other fractions of the total variance).
- * High heritability guide molecular research to identify the specific genetic factors involved.
- * Restrict attention to within a set of relatives.
- * Put aside the search for measurable factors. Instead, focus on heritability as a fraction of the variation among measurements.
- * Reduce the possibility of underlying heterogeneity by restricting the range of varieties (twin pairs) or locations (families).

Possible Angles of STS Investigation

Conceptual reconstruction and extensions

- * Debate conceptual oversights or missteps
 - incl. relevance of ag. methods to analysis of human variation
- * Realizable intervention built into inferences about causality Circumscribed re-run sense of causality
 - incl. Wider relevance in social science and epidemiology
- * Policy interventions alter the structure of the relations that produced the observations
- * Inattention to heterogeneity and typological worldview
- * Nothing essential of each group that leads to differences in averages
- * Philosophical discussion obscured the relevance of heterogeneity

Possible Angles of STS Investigation

History of translation from ag & lab breeding to human genetic analysis

- * How restrictive conditions discounted or forgotten around heritability estimation
- * Trace Wright's notation from its origin through its adoption in human genetics

Possible Angles of STS Investigation

Racialized imaginaries in the analysis of differences among groups

- * Persistent interest in explaining differences among averages for groups defined on racial grounds
- * What can be done unless individuals are treated on the basis of their group membership
- * Heterogeneity not acknowledged = typological or essentialist assumptions?
- * Racially essentialist imagination facilitated transfer of conventional statistical tools from ag to human research?
- * Transfer of tools from selective breeding = hopes and fears?

Possible Angles of STS Investigation

Engagement of STS scholars with scientists

- * STS scholars: reflexive about what they aim to do with our own knowledge claims
 - incl. interpretations pointing to shortcomings in the science
- * Influence working scientists or education of future scientists?
- * When to “go native”? When to become active citizens or consultants in policy debates?
- * PT: indirect influence = interest STS scholars in delving deeper into some of the above areas of STS
- * PT: more direct engagement with scientists = use my interests and skills to draw attention to 4 areas of inquiry not obscuring the possible heterogeneity of factors