

Methodology

A. Converging Evidence

- Different Species
- Males vs. Females
- Variations within Species
- Single Individual across Context
- True Experimental Methods
 - Vs. Quasi-Experimental Research
 - Manipulation
 - ↑ Internal Validity (↓ Secondary Variance/Variables)
 - ↓ External Validity
- JCPP

Methodology

B. Data

- Archeological Records
- Current Hunter-Gatherer Societies, e.g., !Kung
- Contemporary Observations
- Self-Report (Impression Management, Even if Anonymous)
- Life History & Public Records (Danish Folker Register)
- Human Products

A₁. Species Comparison

Hx: Sperm Competition

Large Sperm Volume serves to displace competitors sperm

Prediction: Sperm Volume Correlated with Promiscuity of Species

Methodology: Testicular Weight/Body-Size as **Index** of Volume

Data:

•Gorillas	0.02%	Spearman's rho Correlation
•Orangutans	0.05%	
•Humans	0.08%	Bonobo Chimps
•Chimpanzees	0.27%	

2. Gender Comparison

Problem of paternity exclusive to Men

Equal Degrees of Jealousy **Differentially** Apportioned

- Men demonstrate greater jealousy over **Sexual** Infidelity
Activates behaviors which insure **Paternity**
- Women demonstrate greater jealousy over **Emotional** Infidelity
Per the Female's need for **Resource Support** from the male

Origins of Spousal Abuse?

3. Individual Comparisons

Hypotheses within the Literature:

- Absence of Investing Male → Propensity to Abort
Greater in Younger Women who have more reproductive
Opportunity
- **Poor** engage in riskier strategies to acquire resources
- Women Without Brothers at greater risk of Male Abuse

4. Ipsitive Measures

Comparing Same Individual across Contexts:

Advantages:

- Internal Control for Other Factors – Held constant
- Reduced spontaneous variability

Disadvantages:

- Niche Resident
 - Must wait a long time
 - Not the same subject
- Context shift not in Isolation – Cannot isolate cause of change?
E.G.: Change in treatment by males with Increase in hunting success in Siriono men – More meat or More women

5. Experimental Methods

True Manipulation compared to Control Subjects:

Advantage: Internal Validity

Disadvantage: External Validity

Example:

Hypothesis that external threat increases in-group **Favoritism**
& out-group **Prejudice**

Manipulation: Telling group that they will be displaced by
another group

Data: How the test group divides up group payment for participation

B₁. Archeological Records

E.G.: Bone Fragments:

- Brain size
- Game animals at campsites
- Fossilized feces – diet
- Injuries, disease, & death

2. Hunter-Gatherer Societies

E.G.: Benefits from successful hunting

- Intuitively: More Meat – **Survival Strategy**
 - Wrong: Shared Collectively
- Indirect Benefits: **Reproductive Strategy**
 - Greater Care of Offspring by community (**Classical Fitness**)
 - Sexually Attractive to Women

3. (Systematic) Observations

E.G.: Visiting every household in Trinidad:

Men with fertile wives engage in more “**Mate Guarding**”

- Vs. Pregnant or Old wives
- More fights

Flinn, *Ethology & Sociobiology*, 1988

- Drawbacks:
 - Impression Management (Internal Validity)
 - Occult dynamics (External Validity)
 - Requires **Converging Operations/Evidence**
 - from other methodologies

4. Self-Report

Necessary for some psychological content

E.G.: Sexual Fantasies

- Males: Visually oriented, more partners, more switching
- Females: More context, emotional expression, romance

Problematic

- Impression Management
- Unaware of what Information is relevant

- Reliability across sources, and situations
- Requires **Converging Evidence** from other techniques

5. Life History and Public Records

Are current behavioral patterns (1) Longstanding & (2) Recurrent?

E.G.: Wealthier men marrying younger, more fertile women as a **Sex Difference in Reproductive Strategy** (pub record & sex):

- Relative to less-wealthy men
- Larger Age-Gap with age of Male
Consistent with need for fecundity
- Consistent Across Cultures

Kenrick & Keefe, *Behavioral & Brain Sciences*, 1992

6. Human Products

Differential Consumption of Products

E.G.: Pornography vs. Romance Novels in Men and Women

Converging Operations

Consistent conclusions

- From differing Data Sources
- Collected using different Methodologies
- Controls for:
 - Confounding
 - Methodological Biases/Deficiencies

What Are The Adaptive Problems?

Indeterminant:

- Do not know all the contingencies of past
- Each new adaptation creates new adaptive problems
 - E.g.: Coordination/Subordination with other adaptive **Strategies**

All adaptive problems concern:

- Reproductive Needs
- Reproductive Aids

Classes of Adaptive Problems

- Survival and Growth: being ready to reproduce
- Mating: Selection, Attraction, Retaining (👍), Performing
- Parenting: To the point of reproduction
- Aiding genetic relatives (non-descendant kin)

Sign-Posts for Identifying Adaptive Problems

(1) All humans live in groups;

- Making sure you are included
 - Isolation Peep
 - Amygdala lesions
- Proximity to **Conspecifics** leads to competition for Scarce Resources for Survival and Reproduction
- All groups have social hierarchies
 1. Problem of getting ahead – For scarce resources
 2. Problem of maintaining Status
 - Ulceration in Mice
 3. Problem of reaction by superiors as you rise
 - Head mounts
 - Illness, seizures

2. Contemporary Traditional Societies

Assumption: Closely resemble situation/problems under which humans evolved

- 99% of human history as hunter-gatherers
- Only 10,000 years of agriculture
Less for most of world

Common Problem: Impossible to hunt large game alone

Requires:

1. Division of labor
2. Coordination
3. Communication (Primates)

3. Paleoarchiology

- Teeth: Diet
- Fractures: Cause of Death
- Bones: Nature of Diseases and the Adaptive Problems they cause

4. Current Mechanisms

- Cross-Cultural Phobias
Indicate Common Adaptive Problems
- Universal Sexual Jealousy
Indicates common problem of Paternity

5. Task Analysis

First: Observation

1. Common structure

E.G.: Living in groups with status hierarchies

2. Common Phenomenon

E.G.: Favoring genetic relatives

Second: Investigate what Cognitive & Behavioral Tasks must be Solved to mediate these Structures/Phenomena

- Use only Information available in that environment
- E.G.: Who carries copies of your genes and to what Degree
 - Physical appearance
 - Not a conscious process