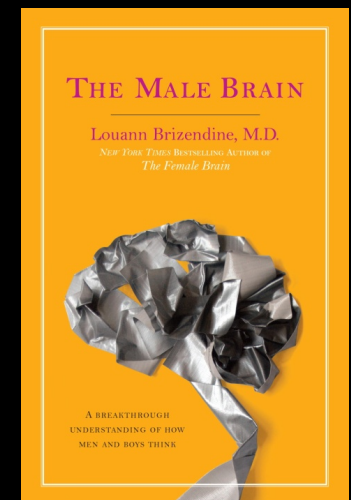
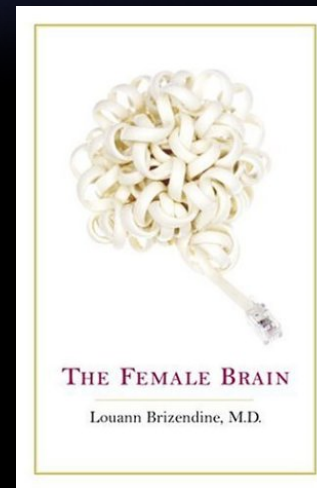
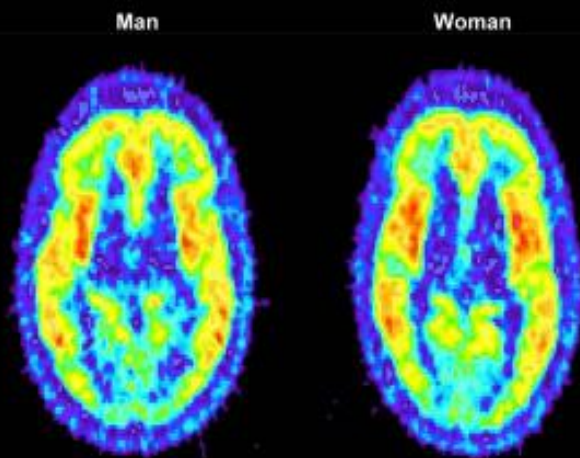
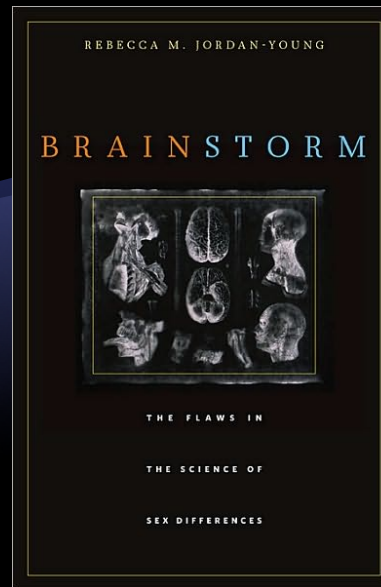
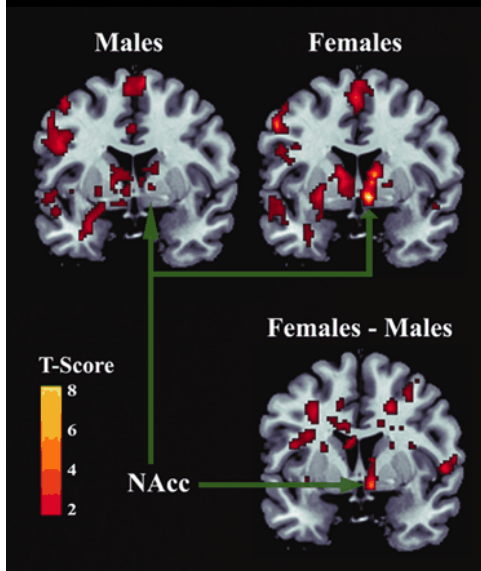




# THE REPRODUCTIVE BRAIN:

## NEUROSEXISM AND THE ETHICS OF SEXUALITY

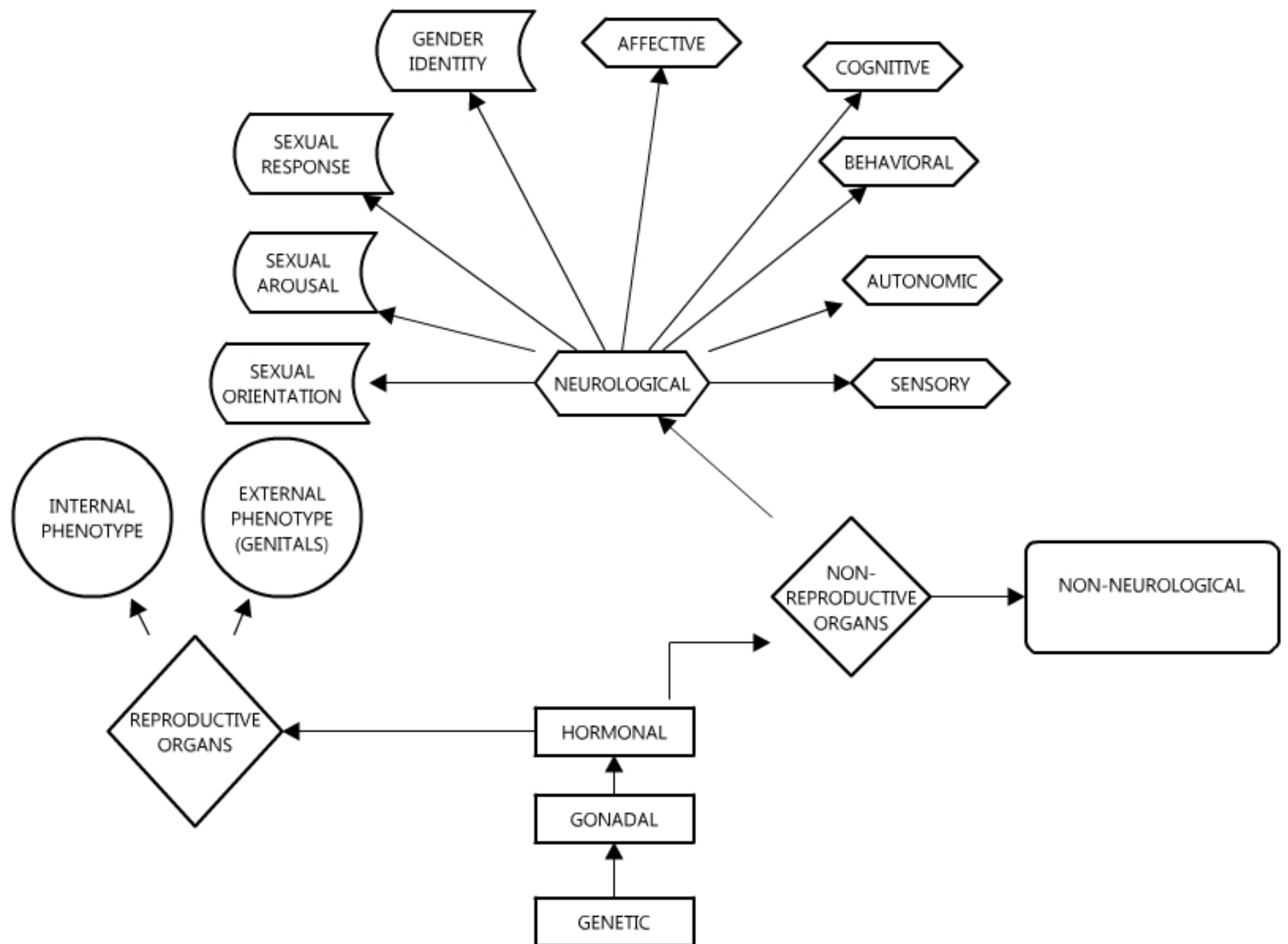
WILLIAM M. STRUTHERS  
WHEATON COLLEGE  
DEPT OF PSYCHOLOGY  
WHEATON, IL





# The Sexual Brain

- ◆ Levels of sexuality
- ◆ Sex
  - ◆ Reproductive status
- ◆ Gender
  - ◆ Socially constructed/delineated differences between masculine and feminine

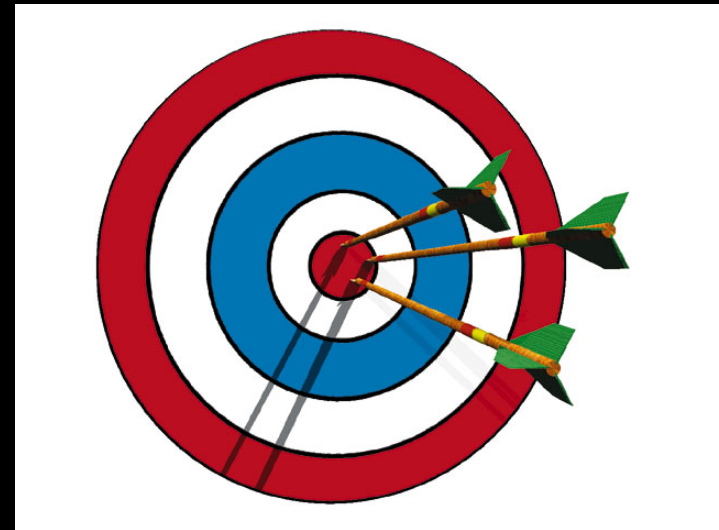


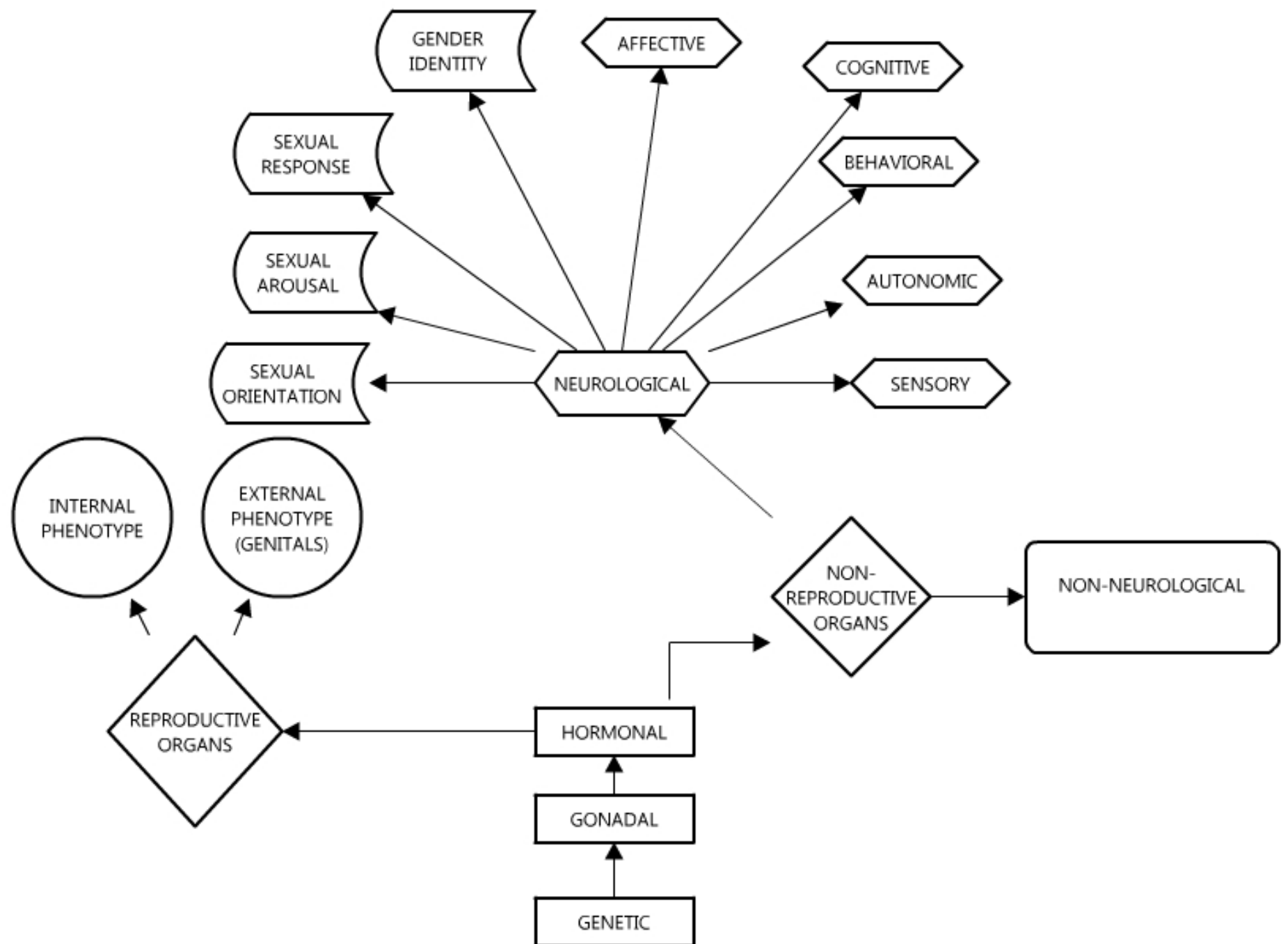




# THE SEXUAL BRAIN

- ◆ 'Flight of the Arrow' Analogy
- ◆ Developmental Effects of Hormones
  - ◆ Morphology
  - ◆ Circuitry
  - ◆ Activity
- ◆ Experiential Effects
  - ◆ Morphology
  - ◆ Circuitry
  - ◆ Activity







- ◆ Developmental emphasis is on ‘Bottom-Up’
  - ◆ Flow of influence comes from lower, deeper levels to change higher levels
  - ◆ Lower levels provide the scaffolding and support for higher levels
- ◆ Psychological emphasis is on ‘Top-Down’
  - ◆ Flow of influence comes from higher levels to change lower levels
  - ◆ Higher levels induce changes in lower systems
- ◆ Bi-Directionality of the system



# Sexual Mosaic Brain

- Neurological sex does not present as nominal\* as external phenotypic sex
- Brain regions develop on different trajectories
- Trajectory is influenced by prior development, developmental sensitivity, hormonal status, and environmental factors
- **Plasticity**
  - Interacts with the environment and genes
  - Epigenetics
- Neurological processes underlie the experience expression of sexuality







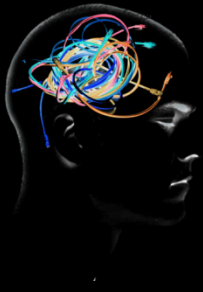
# Relational Sexuality

- Embodied Nature
- Differentiation
- Neurological/Psychological Sexuality
  - Sexual Orientation
  - Gender Identity
  - Sexual Arousal/Response
  - Cognitive
  - Behavioral
  - Affective



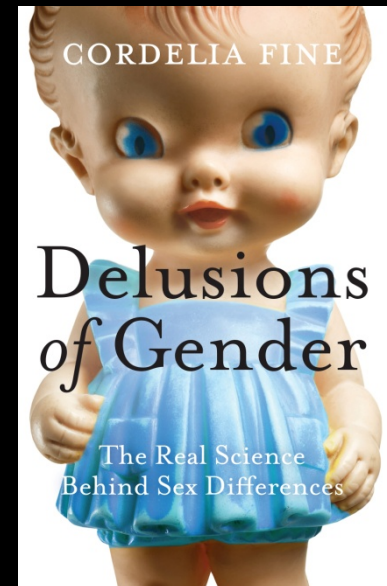
# Cultural Sexuality

- Reproductive
  - Novelty
  - Evolutionary Biology and Psychology
    - Male/Female Differences in Mating Strategy
    - Neurosexism\*



# NEUROSEXISM

- ◆ Fine, 2008. Will working mothers' brains explode? The popular new genre of neurosexism. *Neuroethics*, 1:69-72.
- ◆ “...rush to cloak old-fashioned sexism in the respectable and authoritative language of neuroscience.”





- ◆ A Billion Wicked Thoughts, by Ogi Agas and Sai Gaddam, 2011.
- ◆ Computational neuroscience
- ◆ Internet searches
- ◆ Miss Marple
- ◆ Elmer Fudd





# IMPLICATIONS OF SEX DIFFERENCES

- ◆ Neuroethics
- ◆ Moral judgments
- ◆ Empathy
  - ◆ Compassion and Detachment as mutually important
- ◆ Rationality
- ◆ Plasticity
- ◆ Agency
- ◆ Responsibility





# Neurosexism and Sexual Morality

- ◆ Spectrum of differences
- ◆ Climate of suspicion
- ◆ NeuroGendering Project/Conference (Uppasala University, Sweden, 3/2010)
- ◆ Feminist/Queer critique of neuroscience



# Posture with Difference Data

- ◆ **Caution** - towards over-interpreting sex/gender differences
- ◆ **Openness** – towards the quality of the data and the methodology used
- ◆ **Intentionality** – to neither deny differences, nor to exaggerate them
- ◆ **Compassion** – in the respect and dignity shown to all human beings (regardless of gender or neurological status)