

Neurobiology of Racial & Ethnic Discrimination



PRESENTED BY

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Credits



- Bruce Wexler, MD (2006). Brain & Culture: Neurobiology, Ideology & Social Change.
- Nancy Hill (June 2011), Harvard University

What is Race



- Is it biological?

- Yes

- No

Evidence for Race Effects



- Genetic predisposition for:
 - High blood pressure
 - Sickle cell anemia
 - Skin cancer

Origins of Racial Differences

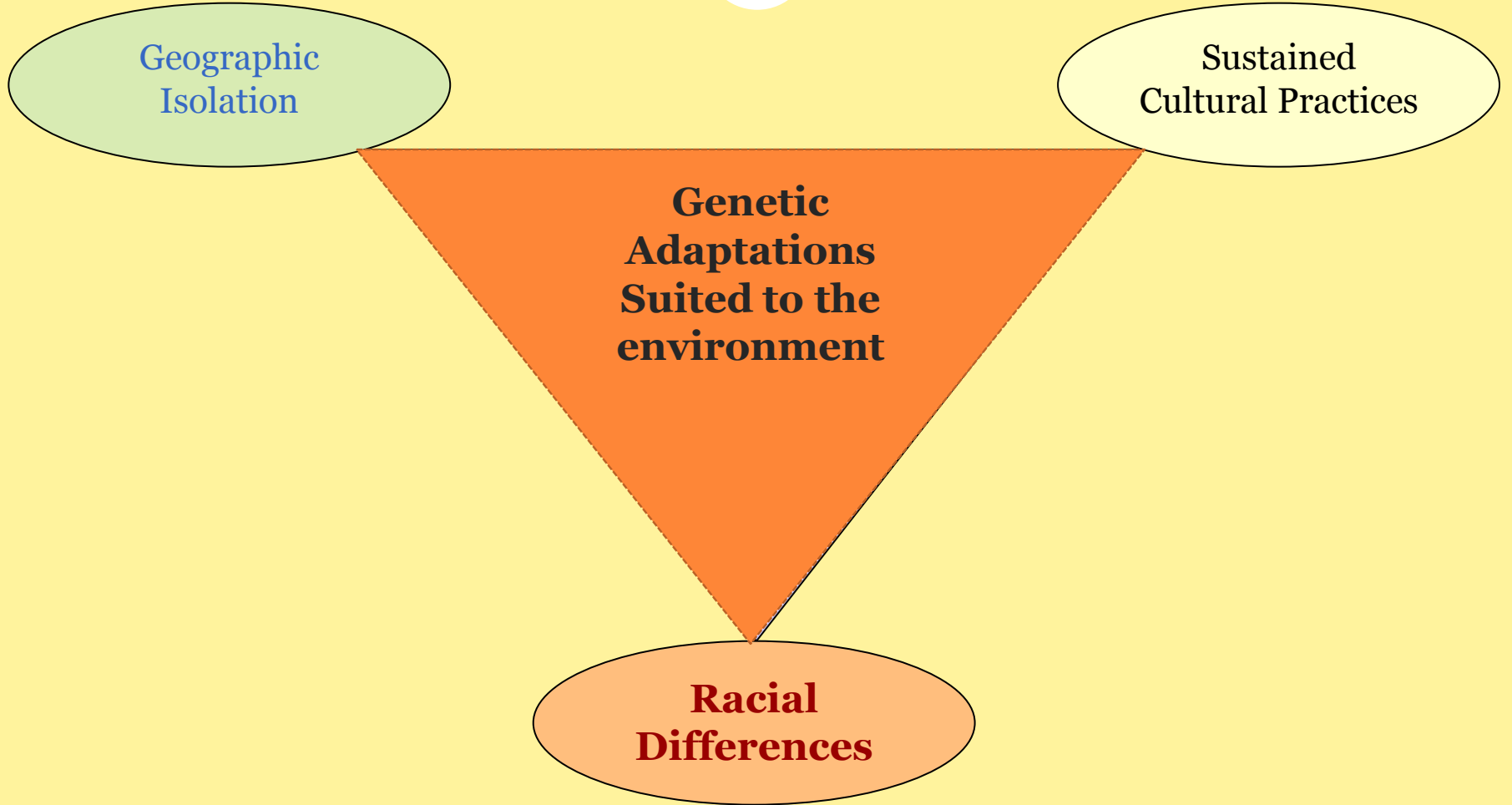


Geographic
Isolation

Sustained
Cultural Practices

**Genetic
Adaptations
Suited to the
environment**

**Racial
Differences**







What Is Race?



- A socially constructed reaction to phenotypic characteristics
- Genotype
- Phenotype

What is Ethnicity?



- Meaning of the word:
 - Ethnikos- Greek for “nationality”
 - Ethnos- Latin for “tribe”

- What are some of the current definitions of ethnicity?

What is Ethnicity?



- Common ancestry/history
- Shared language, beliefs and moral codes, social rules, and behaviors of a given community

Culture



- Culture is a *dynamic process* that includes”
 - Family roles
 - Values
 - Communication patterns
 - Affective styles & spirituality
 - Political affiliations , etc
- In order to understand other people’s cultures we must be able to take their perspective.



Culture shapes
the way
we see the world



Environment, Neurobiology Neurophysiology & Culture



Do people
discriminate
against babies?



MICKI WYER



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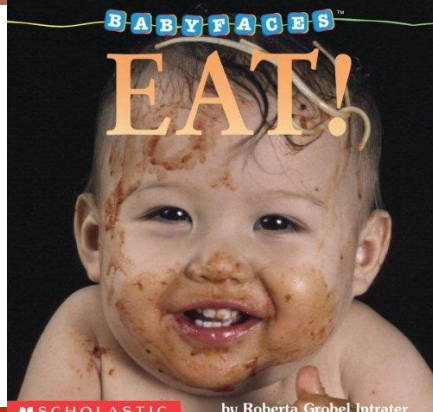
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Emotional Processing & Discrimination



- We see and learn through the lenses of our emotions
- What we learn from phobias

Emotional Processing & Discrimination



- Social Bonding Neurotransmitters
 - Oxytocin
 - Vassopressin
 - Dopamine
 - Serotonin

Social Bonding Systems



- **Effects of Oxytocin & Vassopressin**
 - ✦ Associated with the internal reward system
 - ✦ Levels are directly influenced by parental care
- Decrease fear and anxiety in stressful situations
- Increase aggressiveness toward perceived threats
- Facilitate sense of loyalty to social groups & cultures

Social Bonding Systems



- Decrease in levels of Oxytocin/Vassopressin:
 - Causes bonding systems to develop abnormally
 - Compromises capacity of the internal reward system
 - Compromises commitment to societal and cultural values

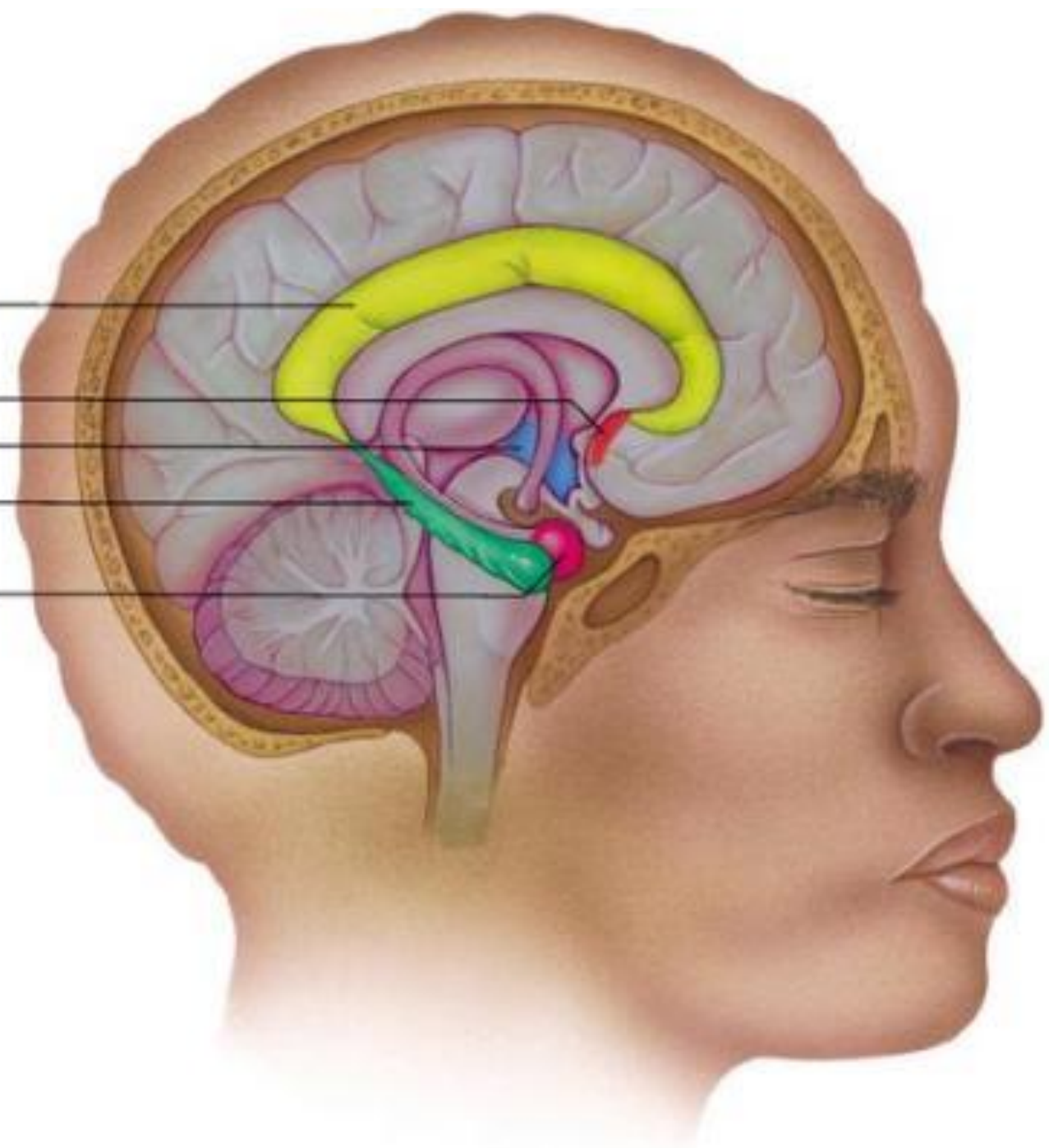
Cingulate cortex

Septal area

Hypothalamus

Hippocampus

Amygdala



Brain & Environment



- From birth to puberty
 - By puberty we form internal constructs of reality, based on the environment we lived in
 - After puberty
 - Contradictions between the internal constructs and the actual environment will produce conflict

Brain & Environment



- Conflict means that one of the two (internal structures or the actual environment) will have to change.
- **Examples:**
 - Bereavement
 - Immigration
- Learning Mechanisms used during childhood are different from those used in adulthood (due to plasticity)

Brain & Environment



“Experience-dependent, learned structures filter, select, and otherwise alter our perception and evaluation of sensory inputs”

(Wexler 2006, 154-55)

Brain & Environment



“..since internal structures shape perceptual experience to be consistent with the structures themselves, they limit further alteration of brain structure by environmental input”

(Wexler 2006, 155)

How Internal Structures Shape Experience



- It is very important for people to have their views confirmed, or at least remain intact.
- To some degree, a person's actions can be predicted
- Social Power enables people to have their views adopted by subordinates at the expense of their own
 - This is due to the necessity to conform with the group

The Familiarity Effect



“On the level of subjective experience, people like things more simply because they have seen them more and they more closely match established internal representations. Because of this, individuals generally try to surround themselves with familiar objects and people, and resist intrusions of foreign elements into their environments.”

(Wexler 2006, p. 4)

What is familiar is Preferred



“... established perceptual, attitudinal, and cognitive structures resist change. ... People selectively affiliate themselves with like-minded individuals, and forget and discredit views and information inconsistent with their existing beliefs.” Wexler 2006, p. 4)

Effect of Familiarity



- **Familiarity** means correspondence between internal representations and external reality
- Familiarity increases one's motivation to selectively pay attention to stimuli that match/are related to the internal structures (e.g., your new car)
- Familiar = more pleasant & enjoyable
- **Unfamiliar social stimuli** do not have a close correspondence with external reality and are thus perceived as “unpleasant.”

Effect of Familiarity



- Stimuli seen more times (regardless of duration) are favored to & perceived as more positively than less familiar ones. Effect applies even to Alzheimer's pts
 - Example: Student-in-bag experiment (hostile, curious, friendly)
- Because these familiarity effects take place automatically and without conscious awareness, they are very difficult to prevent or control.

Effect of Familiarity



“.. as an individual becomes familiar with an object, its neural representation becomes more developed and more easily activated by subsequent exposures to that object or objects that share features of that object ...”

(Wexler 2006, 159)

Roots of Discrimination



- Bias, prejudice & discrimination are rooted in dissonance between internal representations and external reality.

Roots of Discrimination



- Distorted and negative presuppositions about people of a different race/culture can be noticeably strong despite little or no actual experience.

Roots of Discrimination



- “The prejudicial beliefs derive directly from sociocultural input, including the internal structures of important adults to whom the individual is exposed during childhood” (Wexler 2006, 152)

Roots of Discrimination



- **Priming & Subliminal messaging:**
- can cause unfamiliar people/things to be perceived as emotionally negative or positive

Roots of Discrimination: Lines of Defense



- Avoiding experiences that do not match internal structures
 - Example: people seek other people who share same beliefs, what they know, likes, dislikes, etc.
- Ignoring, discrediting, or forgetting the offending stimulus
 - Example: attitudes to new research about smoking
- After making decisions, people try to reduce the conflict by forgetting, reinterpreting previously dissonant info & ignoring new conflicting info.

Roots of Discrimination: Lines of Defense



- **Rationalization:** weighing the benefits & risks and sacrificing one of the worlds (internal/external)
 - making a living
 - Protecting human development and well-being
 - based on group pressure & social consequences
 - People change attitudes/views to conform with group, even when they know the group has made the wrong decision
 - ✦ Explains “intentionally achieving lower”

European Colonialism: Seeds of White Supremacy



- Rise of Modern Europe
- Encountering other cultures
- The drive to obtain wealth easily combined with these negative attitudes.
- European leaders (led by scientists & social thinkers) began to justify their motivations through demeaning the foreign cultures.

European Colonialism: Seeds of White Supremacy



- Scientists used Darwin's Theory to determine that
 - Europeans were on top of the evolutionary ladder
 - The closer a person was to European features, the higher on the evolutionary scale.
 - That “the newly discovered people were considered evolutionary precursors of Euro-Americans ... that the newly discovered people **were not human beings** at all, but a distinct species filling the evolutionary space between men and monkeys”

(Wexler 2006 203)

Example: Wexler 2006, page 204

European Colonialism vs Other Cultures



- Pursuit of wealth and colonial expansion combined with negative attitudes led to:
 - Discrediting the foreign natives and everything associated with them in order to easily enslave them and take their wealth and their land:
 - Discrediting their cultures, religions, races, and way of living
 - Exterminating the natives & their cultures
 - Forcing European values on those who remain

Watson's View



- Using European religious values to justify colonial ambitions and slavery (e.g., true motive for **Crusades** was wealth and elimination of non-European belief systems)
- **Watson's view:**
 - “He thought that the prospects for the African continent were gloomy, because the intelligence of blacks was lower than that of the rest of the world's population. ...He hoped that every one was equal, but that ‘people who have to deal with black employees find this not true.’ ” (Lone Frank 2011, 12)

Immigration



“The country of my childhood lives within me with a primacy that is a form of love... it has fed me language, perceptions, sounds, the human kind. It has given me the colors and the furrows of reality, my first loves. The absoluteness of those loves can never be recaptured. No geometry of the landscape, no haze in the air, will live in us as intensely as the land that we saw as the first, and to which we gave ourselves wholly, without reservations”

(Eva Hoffman 1959, Cited in Wexler 2006, 175)

Immigration: What Immigrants Experience



- Loss of family, relatives, familiar places, tastes, smells, foods, etc.
- Loss of human connections and being well-known
- Facing a complete misfit between internal representations and new external reality
- Become surrounded by unfamiliar people, places, etc.
- See themselves as insignificant to others
- Having to deal with erasing many of the long-established internal representations
- Language barriers that cause them to be isolated

Immigration: What Immigrants Experience



“Immigrants experience substantial problems moving from one culture to another. Their homesickness and culture shock can be so strong as to make the familiarity of even former unhappiness seem preferable to their current distress. Their process of adjustment is fundamentally similar to recovery from bereavement.”

(Wexler 2006, 183)

Immigration: What Immigrants Experience



- Having to constantly work on resisting the effect of the old patterns in obstructing the processing of new realities
- Newness can be deeply painful
- experience is very similar to bereavement

How Immigrants Cope



- Keeping alive the dream of returning to motherland
- Attempt to recreate/restore the old environment in the new land:
- Choosing to live in a climate & landscape similar to those left behind
- Associating with fellow countrymen (enclaves)
- Speaking only the native language
- Eating native foods, having same furniture, etc
- Can sometimes be pathological

Impact of Perceived Discrimination on Mental & Physical Health



- High emotional stress
- Increased blood pressure
- Increased risk for heart disease
- Increases mortality risk

Cognitive Change?!!



- **Change must be gradual:**

“Distress and dysfunction should be evident when changes in the external world exceed the potential of perceptual processes and self-alteration to readily reconcile the two.” (Wexler 2006, 170)

Cognitive Change?!!



- **Change is painful**, even when the people consciously determines that it is good for them
- **Adaptations** are harder to make as the person grows older

“can have a negative physical and emotional consequences, are not always successful, and as a result are avoided when possible”

(Wexler 2006, 171)

What Can We Do



- We use our metacognitive skills:
 - Analyze your own thoughts
 - Try to understand your own thinking process & behavior
 - Be open to new learning
 - Exposure is the key to desensitization
 - Education leads to cognitive flexibility
 - Lack of knowledge leads to cognitive rigidity/resistance to change
 - Laws
- **Teach metacognitive skills at an early age**
- Your brain will continue to develop as long as you continue to challenge yourself!

Conclusion



- Discrimination is not a state of being: it is an artificial way to rationalize dissonance
- The society will make us grow prejudiced or otherwise
- Familiarity and exposure to people from different culture is the most important tool
- Teaching tolerance should begin in the first year of life.
- We can change our ideas, because we own them!