

NEUROETHICAL IMPLICATIONS IN COUNSELING PRACTICE

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GOALS

- (1) Recognize the term neuroethics and its components
- (2) Explore how neuroscience research informs the practice of clinical mental health counseling
- (3) Identify neuroethical dilemmas that may arise during clinical mental health counseling

THINGS TO CONSIDER

Neuroethics may be a new term that should become a common term.

Often, counselors utilize neuroscience research without regard to whether there is evidence to truly inform practice.

Without a clear understanding of how to critically analyze neuroscience research, practitioners may look past or fail to realize the quality of research.

As part of any decision-making, practitioners should weigh the research evidence and do a cost-benefit analysis prior to integrating new and or relatively under researched practices.



THE BASICS OF NEUROETHICS

Anything that manipulates the brain

Anything that is used to survey & assess the brain for the purpose of conceptualizing how the brain functions & how brain function leads to behavior

Conceptualizing brain function in terms of personality, criminality, or ability to be accountable for one's actions



NEUROETHICS DEFINED

Neuroethics is defined as:

- "the study of the ethical, legal, and social questions that arise when scientific findings about the brain are carried into medical practice, legal interpretations, and health and social policy." (Marcus, 2002)

William Safire describes neuroethics as:

- "the examination of what is right and wrong, good and bad about the treatment of, perfection of, and welcome invasion or worrisome manipulation of the human brain." (2002)

NEUROETHICS DESCRIBED

Neuroethics is more than just bioethics for the brain. It is the examination of how we want to deal with the social issues of disease, normality, mortality, lifestyle, and the philosophy of living *informed by our understanding of underlying brain mechanisms*" "It is—or should be—an effort to come up with a brain-based philosophy of life." (Gazzaniga, 2005)

NEUROETHICS INCLUDES

- **According to the Center for Neuroscience & Society at University of Pennsylvania**
<http://neuroethics.upenn.edu/>

Neuroethics encompasses a wide array of ethical issues emerging from different branches of clinical neuroscience (neurology, psychiatry, psychopharmacology) and basic neuroscience (cognitive neuroscience, affective neuroscience).

- These include ethical problems raised by advances in functional neuroimaging, brain implants and brain-machine interfaces and psychopharmacology as well as by our growing understanding of the neural bases of behavior, personality, consciousness, and states of spiritual transcendence.

NEUROETHICAL DEFINITION FOR COUNSELING

My extrapolated definition for counseling:

Neuroethics encompasses a wide array of ethical issues emerging from different branches of basic neuroscience and clinical neuroscience raised by our growing understanding of the neural bases of behavior, personality, and consciousness.

APPLICABLE ACA ETHICAL CODES

ACA Code of Ethics Preamble: Core professional values of the counseling profession:

1. Enhancing human development throughout the life span;
2. Honoring diversity and embracing a multicultural approach in support of the worth, dignity, potential, and uniqueness of people within their social and cultural contexts;
3. Promoting social justice;
4. Safeguarding the integrity of the counselor–client relationship;
5. Practicing in a competent and ethical manner.

APPLICABLE ACA ETHICAL CODES

The fundamental principles of professional ethical behavior are:

Autonomy, or fostering the right to control the direction of one's life;

***Nonmaleficence*, or avoiding actions that cause harm;**

***Beneficence*, or working for the good of the individual and society by promoting mental health and well-being;**

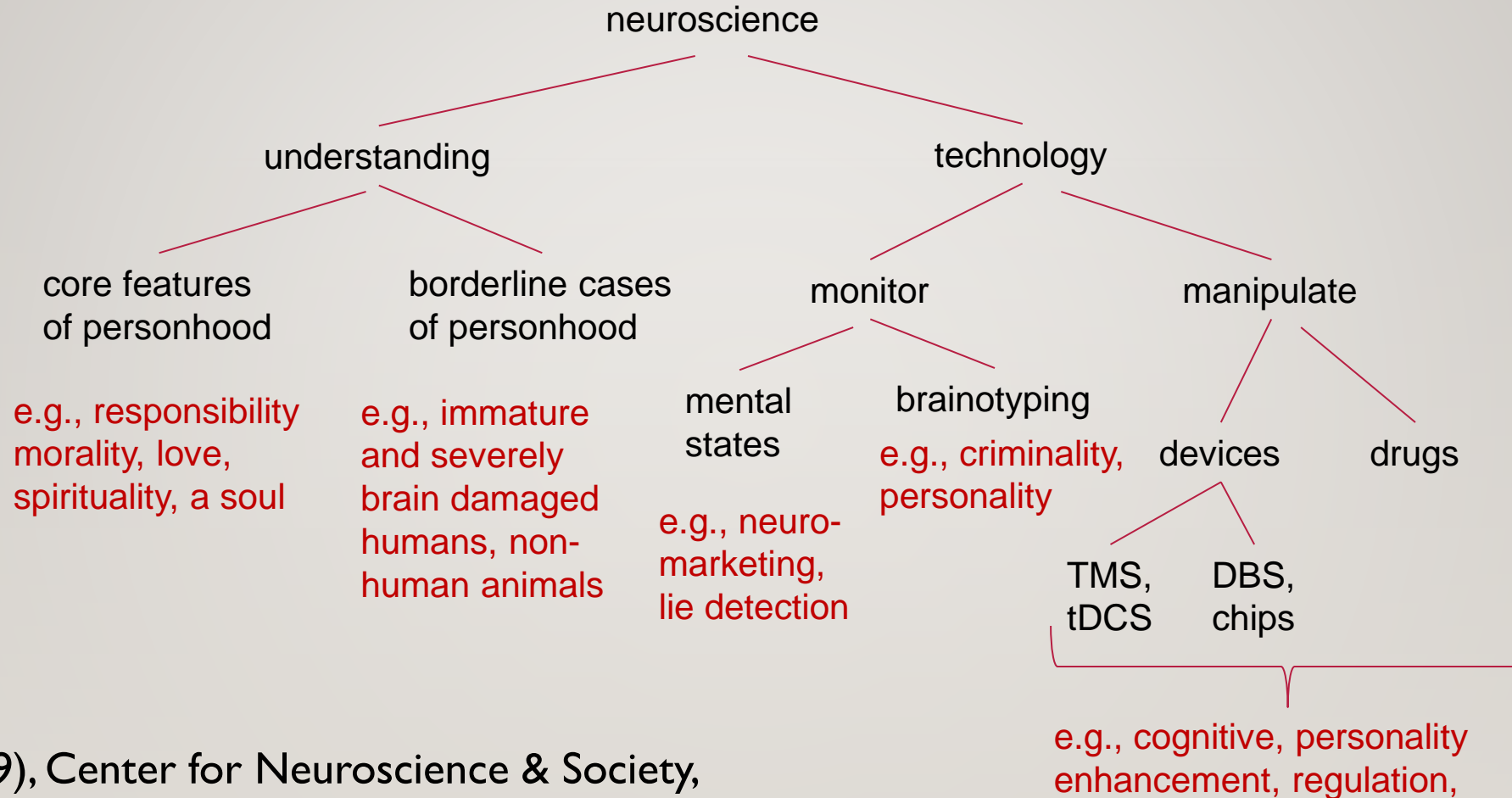
Justice, or treating individuals equitably and fostering fairness and equality;

Fidelity, or honoring commitments and keeping promises, including fulfilling one's responsibilities of trust in professional relationships; and

Veracity, or dealing truthfully with individuals with whom counselors come into professional contact.



NEUROETHICS TREE



Powers (2009), Center for Neuroscience & Society,
University of Pennsylvania

BRAIN STIMULATION AS A THERAPEUTIC MEASURE

TMS

Transcranial magnetic stimulation is a noninvasive procedure that uses magnetic fields to stimulate nerve cells in the brain to improve symptoms of depression.

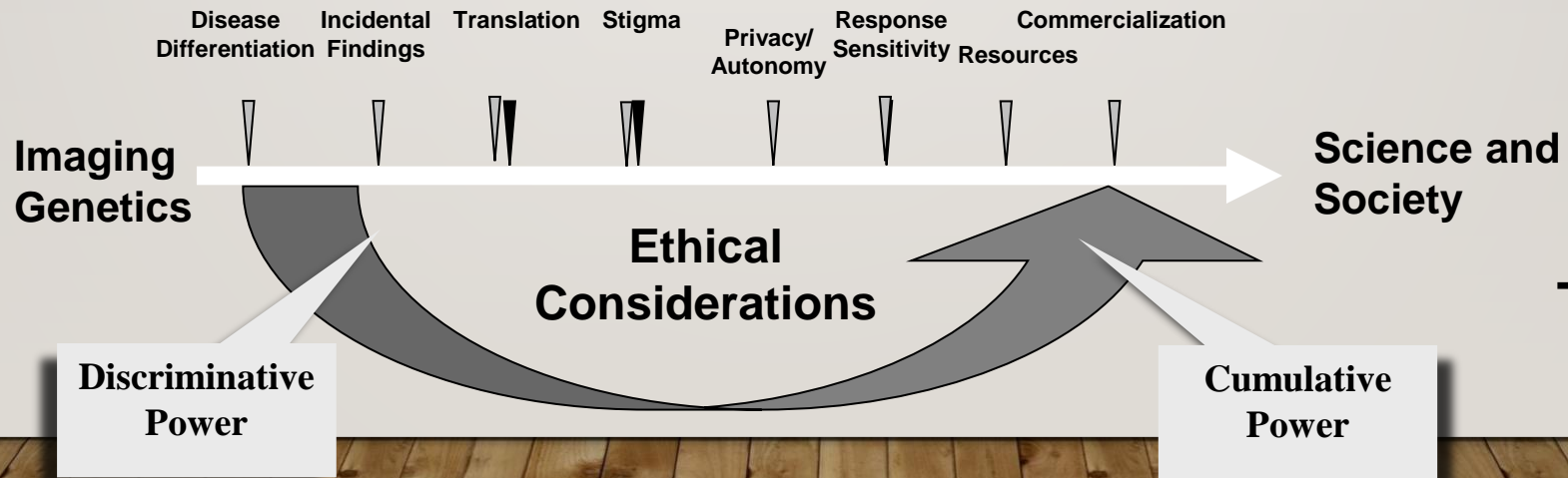
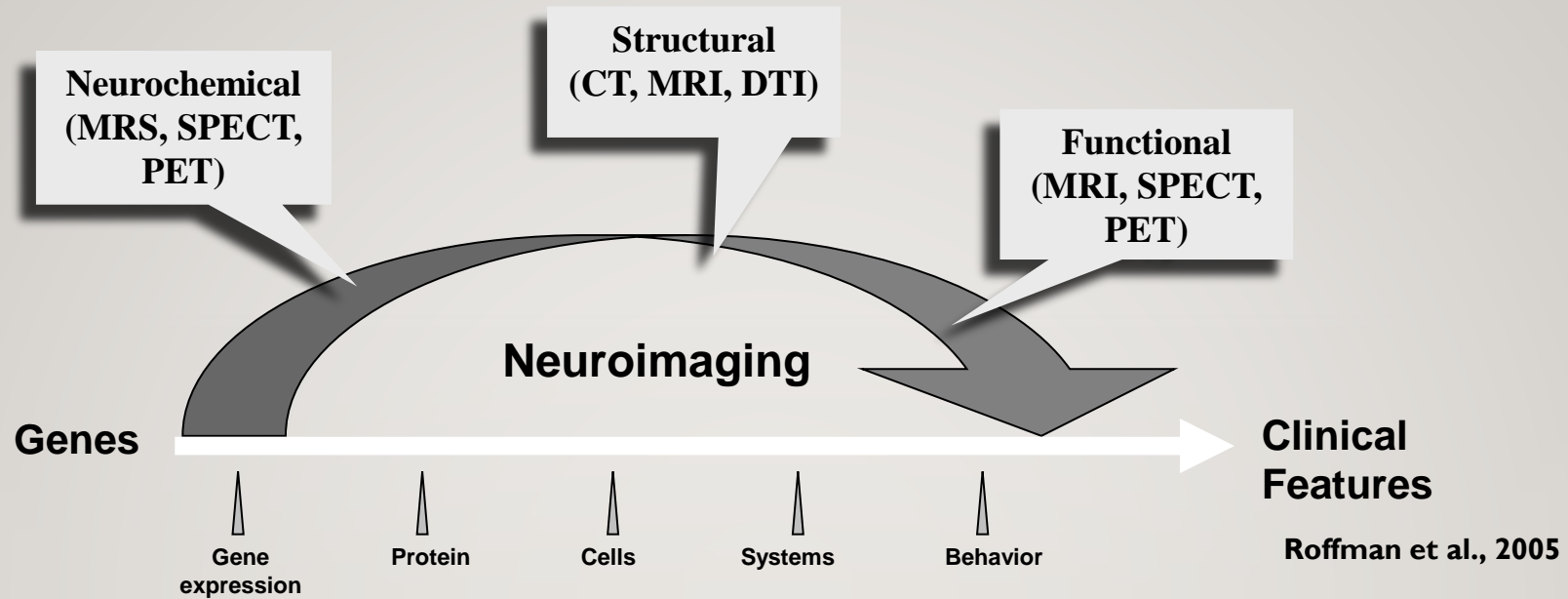
tDCS

Transcranial direct current stimulation is a non-invasive, painless brain stimulation treatment that uses direct electrical currents to stimulate specific parts of the brain. A constant, low intensity current is passed through two electrodes placed over the head which modulates neuronal activity.

DBS

Deep brain stimulation is a neurosurgical procedure involving the placement of a neurostimulator (sometimes referred to as a "brain pacemaker"), which sends electrical impulses, through implanted electrodes, to specific targets in the brain (brain nuclei). While its underlying principles and mechanisms are not fully understood, DBS directly changes brain activity in a controlled manner.





BRAIN DIAGNOSTIC IMAGING

FMRI

Functional MRI is a noninvasive diagnostic test that measures small changes in blood flow as a person performs tasks while in the MRI scanner

DTI structural scan

Diffusion Tensor Imaging is a technique that detects how water travels along the white matter tracts in the brain

SPECT functional scan

A single-photon emission computerized tomography to analyze the function of some of your internal organs. A SPECT scan is a type of nuclear imaging test, which means it uses a radioactive substance and a special camera to create 3-D pictures



BASIC AND CLINICAL NEUROSCIENCE

BAYLIS (20026)



Understanding

- Cognition
- Memory
- Perception
- Creativity
- Attention
- Empathy
- Motor control
- Self-control

Normalizing

- Cognition
- Memory
- Perception
- Creativity
- Attention
- Empathy
- Motor control
- Self-control

Enhancing

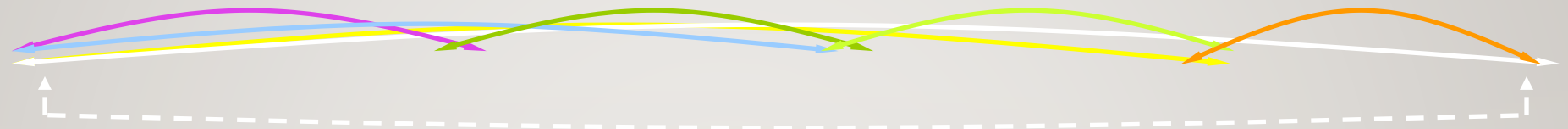
- Cognition
- Memory
- Perception
- Creativity
- Attention
- Empathy
- Motor control
- Self-control

Controlling

- Cognition
- Memory
- Perception
- Creativity
- Attention
- Empathy
- Motor control
- Self-control

SYSTEMS, GOALS, INTERESTS

BAYLIS (2006)



Understanding

- Health care
- Law
- Education
- Insurance
- Workplace
- Military
- Marketing

Normalizing

- Healthy
- Fit to stand trial
- Attentiveness
- Eligibility criteria
- Capabilities

Enhancing

- Better than well
- Excel in school and at work

Controlling

- Non-medical screening and surveillance
- Transhumanism
- Military Industrial Complex
- Neuromarketing

Professional Responsibility

C.2. Professional Competence

C.2.a. Boundaries of Competence

Counselors practice only within the boundaries of their competence, based on their education, training, supervised experience, state and national professional credentials, and appropriate professional experience. Whereas multicultural counseling competency is required across all counseling specialties, counselors gain knowledge, personal awareness, sensitivity, dispositions, and skills pertinent to being a culturally competent counselor in working with a diverse client population.

C.2.b. New Specialty Areas of Practice

Counselors practice in specialty areas new to them only after appropriate education, training, and supervised experience. While developing skills in new specialty areas, counselors take steps to ensure the competence of their work and protect others from possible harm.



COMPETENCY



The Counseling Relationship

A.7. Roles and Relationships at Individual, Group, Institutional, and Societal Levels

A.7.a. Advocacy

When appropriate, counselors advocate at individual, group, institutional, and societal levels to address potential barriers and obstacles that inhibit access and/or the growth and development of clients.

A.7.b. Confidentiality and Advocacy

Counselors obtain client consent prior to engaging in advocacy efforts on behalf of an identifiable client to improve the provision of services and to work toward removal of systemic barriers or obstacles that inhibit client access, growth, and development.



RESEARCH CRITICISM

Qualitative vs. Quantitative

Correlation vs. Causation

No evidence vs. Evidence-Informed vs. Evidence-Based vs. Randomized Clinical Trials

Developmentally Appropriate Treatment vs. Manualized Treatment

Sound Methodology with Unbiased Analyses



CAUTION AND NEUROSCIENCE RESEARCH

“Because of the disconnect between what we *actually* know and what we *would like* to know about the brain, basic neuroscientific studies don’t always translate into applied contexts as easily as some would hope.” (Etchells, 2014)

“There is a growing public perception of neuroimaging as “hard” science, complementary to the “soft” science of psychological evaluation.” “...technology should be applied cautiously – Neuroimaging is not evidence for causation” (Sahakian & Turner, 2007).

THINGS TO PONDER

- What is the risk/benefit, to individuals and society, of using available neurotechnology? How should we address error of measurement?
- Should we attempt to predict behavior? What impact will this have on our legal system?
- What about, long-term side-effects/consequences, especially in the developing brain?
- Will we run the risk of becoming a homogeneous society?

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RESOURCES

International Neuroethical Society

<http://www.neuroethicssociety.org>

Neuroethics (Journal)

<http://link.springer.com/journal/12152>

Neuroethics: Mapping the Field

<http://www.dana.org/news/neuroethics.aspx>

Neuroscience for Kids

<https://faculty.washington.edu/chudler/neuroe.html>



Center for Neuroscience & Society, University of Pennsylvania

Open Educational Resources

https://neuroethics.upenn.edu/portfolio_category/neuroethics-open-educational-resource/

RESOURCES

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