

Chrtc 390 Module 1 Slides: An Introduction to Neuroscience and Christian Theology

Introduction to Neuroscience

Dr. Heather Looy's Slides adapted by P. Flaman

■ **Neuroscience, defined broadly:**

- *The study of the role of bodily states (and particularly brain states) in human psychological experience and behavior.*

■ **How do we think about the brain?**

- Student examples re brain states & experience
- Consider the brain as an organ
- Localization of function vs. distribution of function
- Modularity of the mind-specific genetically determined programs
- Shift toward a more dynamic view
- How we picture the brain is important in our culture due to the strong influence the neurosciences have on how we perceive ourselves, our human nature, our personhood

■ **Neuroscience in the media:**

- Why the interest? Trust in science? Disillusionment with philosophy and religion?

Introduction to Neuroscience

■ Impact of neuroscience

- we invest science with great authority
- neuroscientists are *asked* and *expected* to speculate on the implications of their research for our self-understanding

■ A Few quotes by scientists / neuroscientists

- **Francis Crick:** *We are nothing but a pack of neurons.*
- **James Watson:** *We used to think our fate was in our stars. Now we know, in large part, that our fate is in our genes.*

Introduction to Neuroscience

- **Michael Persinger:** *God experiences are becoming potentially more dangerous in a world living with the threat of nuclear nightmare. Who would you rather have with his finger on the button? A person who realizes that (God) experiences are neurological? Or someone who believes in an afterlife?*
- **V.S. Ramachandran:** *Have you ever wondered why some jokes are funny and others are not, why you make an explosive sound when you laugh, why you are inclined to believe or disbelieve in God? Surprisingly, we can now begin to provide scientific answers to at least some of these questions. Indeed, we can even address lofty philosophical questions about the nature of the self: Why do you endure as one person through space and time? What does it mean to make a choice or to will an action? And more generally, how does the activity of tiny wisps of protoplasm in the brain lead to conscious experience?*

Introduction to Neuroscience

- **Simon LeVay:** *People will ask of some trait, Is it psychological or is it biological? By that they generally mean Is it some nebulous state of mind resulting from upbringing and social interactions, or is it a matter of genes and brain chemistry? But this is a false distinction, since even the most nebulous and socially determined states of mind are a matter of genes and brain chemistry too.*
- **Richard Restak:** *To what extent am I anything other than my brain? My way of coping has been to fashion a simple mantra I repeat silently from time to time: My brain and I are one. My brain and I are one.*
- **Are these statements fair?** What can neuroscience tell us and what can't it tell us about ourselves? To answer these we need to look at what neuroscience really is.

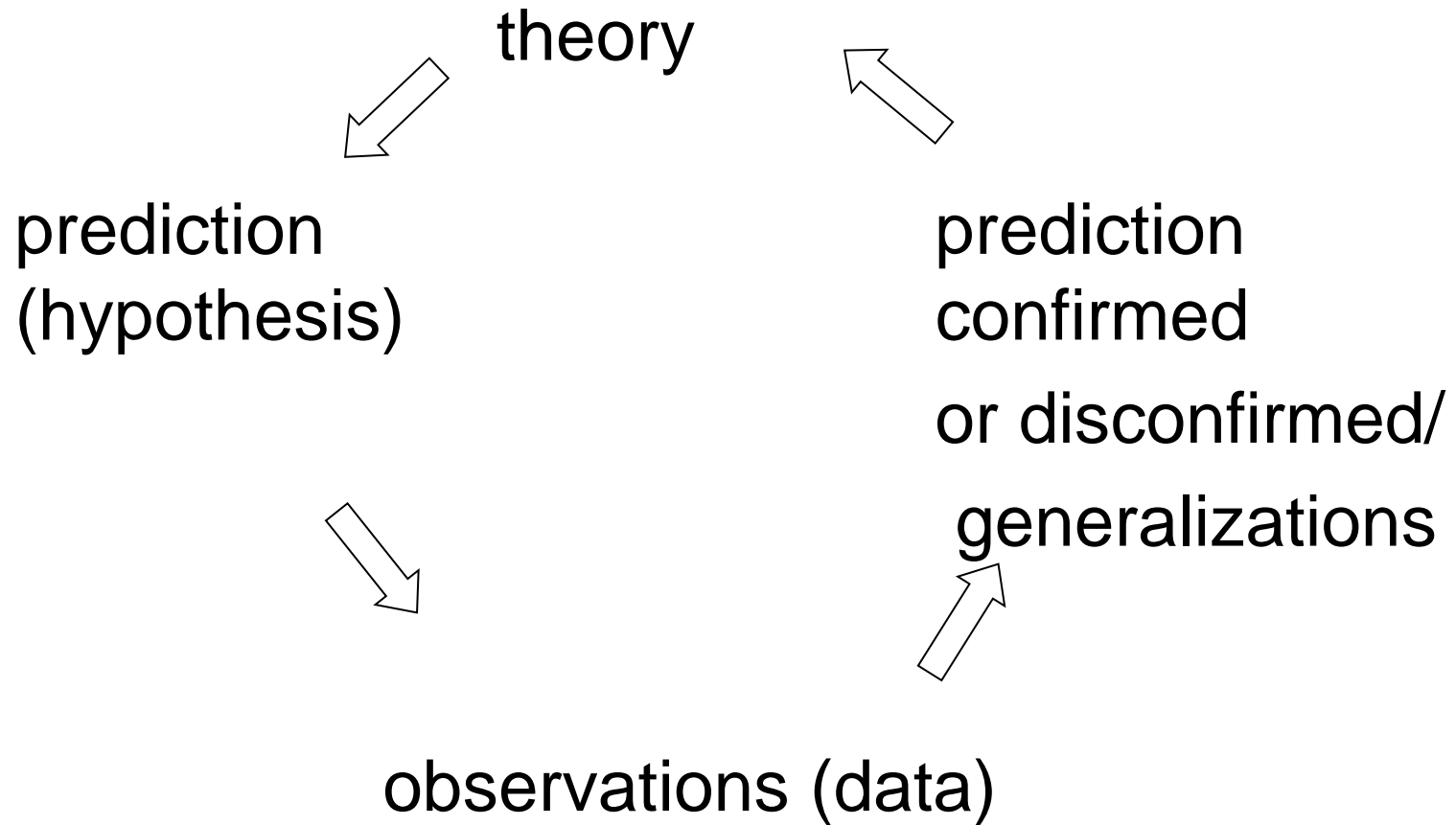
Introduction to Neuroscience

Assumptions of neuroscientific research

■ 1. scientific method--empiricism

- hypotheses and theories: proposed explanations for events
- scientific theories are tested through systematic observation under controlled conditions
- a theory is a “good” theory if it:
 - a) helps us predict what will happen in the future
 - b) helps us explain related observations and phenomena
 - c) is the simplest way to accomplish this
- A self-correcting process
- A public, communal process
- Consider the video clip (Nova: Secrets of the Mind): Ramachandran re Capgras’ Syndrome

Science is a Process



Scientific Method

- Assumptions (necessary)
 - Empirical (covered last week)—observing the real world
 - Rational: reasoning about one's observations; follow accepted rules of reasoning; work within accepted paradigms of explanation
 - Materialism
 - science studies material/physical world
 - methodological materialism/naturalism

Scientific Method

- Assumptions (common but not required)
 - Philosophical/ontological materialism
 - Non-teleological
- Science describes the natural world
- Meaning, purpose, what ought to be: beyond science
- Limits of Science

“Do you believe that absolutely everything can be expressed scientifically?”

Einstein: Yes, it would be possible, but it would make no sense. It would be a description without meaning—as if you described a Beethoven symphony as a variation in wave pressure.

Limits of Science

- Michael Shermer, “Science is not a database of unconnected factoids but a set of methods designed to describe and interpret phenomena, past or present, aimed at building a testable body of knowledge open to rejection or confirmation.”
- Good thinking is not purely objective and neutral
- Science is *not* ‘purely objective’
 - tests ideas against the real world
 - draws on authority, tradition, intuition as well as observation & reasoning
 - *always* occurs in community: language, cultural values, interpretive paradigms, faith communities
 - always done *for* community

Bias & Objectivity

- *“Pure objectivity”* is a myth; seeking it leads to *objectivism*
- *“Objectivism portrays truth as something we can achieve only by disconnecting ourselves, physically and emotionally, from the thing we want to know”*
Parker Palmer
- *Scientism*: believing that science is the *only* legitimate way of knowing & that it is truly objective
- Wisdom & understanding need more than “objectivity”
 - Truth is relational and embodied
 - Emmanuel: God with us, incarnate

Ways to View Science & Faith

Interacting: *Conflict*

- *Either* neuroscience *or* theology tells us the truth of who we are: one is wrong
- E.g., Richard Dawkins:
 - “science involves a process of constantly testing and revising theories in the light of new evidence, while faith makes a virtue out of believing unprovable and often improbable propositions”
 - “faith is believing something without good reasons for doing so”
- But science inherently involves faith: in an orderly world; in human ability to discover that order; in untestable assumptions underlying theory; in hypotheses and theories and paradigms; in the goals, applications & interpretations of data.
- Dr. Heather Looy thinks the conflict view is an oversimplified view of both faith and science.

Ways to View Science & Faith Interacting: *Independence*

- neuroscience tells us *how* we are physically constructed & function
- theology tells us *why*: purpose, meaning
- “nonoverlapping magisteria”: Stephen Gould
- But:
 - Science (including neuroscience) affects theological understanding
 - Theology can affect science including neuroscientific interpretation

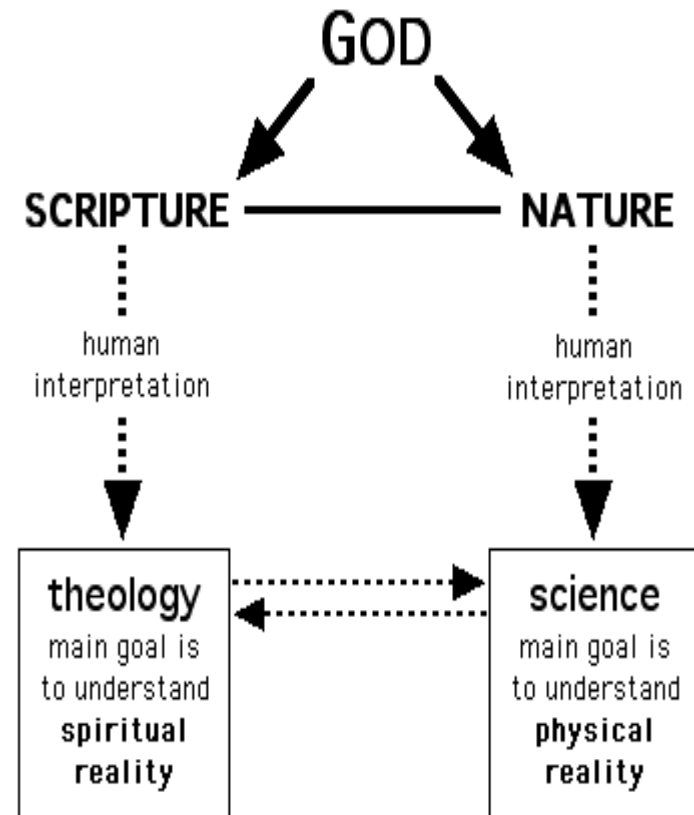


Ways to View Science & Faith Interacting: *Consonance*

- Science including Neuroscience & Theology (of the person) enrich & illuminate one another
- Both:
 - involve assumptions, interpretations, community, creativity
 - are “partners in the great human quest to understand reality” (John Polkinghorne)
- Challenge: *how* to bring them together?
 - They involve different languages, concepts, methods

Ways to View Science & Faith Interacting: *Critical Realism*

- similar to consonance
- science & theology provide truths about reality (physical world & transcendent: God)
- both are tentative, interpretive, communal, subject to change



Paul Flaman's Slides for Module 1: An Introduction to Christian Theology

- Theology
 - Greek *Theos* (God) and *Logos* (Word ... Science)
 - Augustine - faith seeking understanding
 - Seeks to integrate one's understanding of God, and everything else in relation to God, with experience, reason and other knowledge (cf. the various sciences, philosophy, other religions...)
- Christian
 - Cf. Natural, Jewish, Muslim ... theology;
 - Jesus (God incarnate, fullest revelation to us and ultimate norm re who God is and who we are);
 - Bible - Christians generally believe it is inspired by God in some sense. Today there are various interpretations and Christian perspectives.

Introduction to Theology by Flaman cont.

- Catholic
 - Greek *kata* (according to) & *holos* (the whole), i.e., accept all of God's revelation (not pick and choose), the whole truth; believes in unity of truth (cf. faith, reason, science and experience);
 - Considers the Bible together with Tradition and the Magisterium (teaching of Popes & bishops).
- Orthodox Church
 - Schism with Rome in the 11th Cent. A.D.
 - Accept the Ecumenical Councils before this schism as authoritative but not the ones after
- Protestantism (16 C. A.D.-Luther, Calvin ...)
 - Emphasis on the authority of the Bible
- Today
 - There are also various perspectives within each Christian denomination and the Ecumenical Movement (cf. Jn. 17:21)

Introduction to Theology by Flaman cont.

- God's Revelation, Christian Faith, Experience and Human Reason
 - How does a human person reveal herself/himself?
 - Consider one's actions and words, and human faith / trust.
Compare God's words & actions including miracles & grace, and faith / trust in God
- Re Christian views of divine revelation consider:
 - Heb 1:1-2; Jn 1:14: God spoke through biblical prophets & Jesus; as God incarnate Jesus is normative
 - Rm 1:19-20 & 2:13-16: It is possible to know certain truths about God and morality without God's revelation (cf. The Christian approach to non-Christians)
 - Mt 28:16-20: Jesus' teaching is normative for persons of all nations and human cultures
 - Mt 11:25-26: God reveals himself to the humble
 - 1 Jn 4:7-9 Since God is love, one must love to know God

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- Interpreting Scripture
 - What are some different views of the Bible today?
 - Consider, e.g., 2 Tm 3:16 and Lk 1:1-4
 - Catholic view (also held by many others): the Bible was written [a] by true human authors [b] who were inspired by God. Re interpretation and:
 - a) consider such things as the original languages of the text, the historical and cultural contexts, the various literary forms and idioms, etc. which the authors used, comparing other documents of the time, archeological findings, etc. Consider the important work of biblical scholars as well as their faith/presuppositions/agendas.
 - b) each text should be considered in the context of the whole Bible taking into account God's progressive revelation. Consider prayer and being open to the same Holy Spirit who inspired the authors. What did/does God want to communicate through these human authors?

Introduction to Theology by Flaman cont.

- Consider Yves Congar's view of 'traditions' (human--cf. Catholic, Orthodox, Protestant) and 'Tradition' (divine, inspired by the Holy Spirit)
 - Consider certain biblical texts (e.g., Mt 15:3-6; 2 Th 2:13-15; Jn 14:26 & 16:13) regarding this view and a legitimate development of understanding, articulation and teaching re faith and morals. Cf. the Fathers, doctors & saints of the Church.
- Consider Catholic teaching regarding the Holy Spirit & the human dimension re Scripture, Tradition, the role of the Magisterium & Ecumenism
- Regarding method in theology consider as well:
 - not only faith but also experience (individual & in community; prayer, the Holy Spirit & Jesus in the midst...) & reason (cf. science; philosophy; etc.). Cf. Polkinghorne, Ashley, Rahner, Von Balthasar, Lonergan, Lubich ...