*History of Western Philosophy: Modern Period*: 200315 v. 1

PHIL 320: 49506R

Fall 2020

MW 8:30 – 9:50 a.m. WPH 102

Professor John Dreher

MHP 211 (also more informally in the MHP courtyard or the courtyard by the Student

 Center)

x05173

dreher@usc.edu

Hours: Mon 7:45 – 8:15; 10 – 10:45 a.m.

 Wed 7:45 – 8:15; 10 – 10:45 a.m.

 By appointment

NB: Scheduled office hours are meant to handle brief inquiries. For longer discussions, please make a mutually convenient appointment time.

**FINAL EXAM (TAKE-HOME) DUE: Wed Dec the 9th at 10:00 a.m.(HARD DEADLINE)**

**SYLLABUS[[1]](#footnote-1)**

**MATERIALS**: (Required)

 Ariew and Watkins, eds. *Modern Philosophy: An Anthology of Primary*

 *Sources*, 2nd edition, Hackett Publishing Company, Indianapolis,

 2009; ISBN 978-0-87220-978-7

 Atherton, Margaret, ed. *Women Philosophers of the Early Modern Period*, Hackett Publishing Company, Indianapolis,

 1994; ISBN 0-87220-259-3

 (Recommended)

 Boyle, R., Stewart, ed, *Selected Philosophical Papers of Robert Boyle,*

Hackett, 0-87220-122-8.

**DESCRIPTION**: This course involves an intensive examination of the writings of British and European philosophers of the 17th and 18th centuries. Specifically, we shall examine Descartes’ attempt to relieve systemic skepticism, his conception of knowledge, his theory about the origin of error and his account of the relation of the rational subject, the knower, to the object of knowledge, the known. Descartes’ arguments against skepticism were not well received even by admirers like Arnauld. They thought that if we doubt the capacity of human reason to know, we must doubt any attempt to relieve that doubt by the use of reason. Moreover, Descartes argued that a knowing subject is actually an immaterial or spiritual substance, which raises an obvious worry about how an immaterial object (the soul) can interact causally with material objects (bodies). In fact, Leibniz and others denied the possibility of the casual interaction of mental (spiritual) and material substances, despite the fact that the exercise of the will typically leads to bodily movement, and changes in the

body often lead to changes in sensation. Leibniz seeks to avoid the problems associated with causal interactionism by proposing a spectacular theory that denies the existence of material substances, affirms the existence of mental or spiritual substances and claims that the physical universe is actually composed of ‘composites,’ the subject matter of natural science that are grounded in simple spiritual substances, which Leibniz calls ‘monads.’ We shall interpret monads liberally, thinking of them as units of information. Philosophers from the start found Leibniz’s theory bizarre, but if interpreted *liberally*, Leibniz’s theory gives us a plausible as well as original way of conceiving the natural world.

 Rationalists Descartes and Leibniz were challenged by the empiricist John Locke. Contrary to Descartes and Leibniz, Locke claims that all knowledge of nature originates from and is validated by experience. In this way, Locke seeks to accommodate the new science of Galileo, Boyle and Newton. Locke develops an ambitious view about language in which he attempts to account for general terms on the theory that general terms designate general ideas. Locke’s theory was challenged by other empiricists, especially Berkeley and Hume, because Locke seems to affirm the existence of ideas that cannot really be ideas of particular things and hence cannot be plausibly supposed to derive from experience. For example, the general idea of a triangle would be an idea of a triangle that did not have particular characteristics, like having an interior right angle or an interior angle greater than 90 degrees or having no interior angle greater than or equal to 90 degrees. Yet every triangle must have one of those three characteristics. As odd as it may seem, one of the most difficult problems in philosophy is to explain the nature and origin of general terms and general ideas.

 Another idea that poses great difficulty is the idea of causation. Rationalists like Descartes thought that both the existence and identity of events and objects effects depend upon their causes. This theory, which is often called ‘the imprint theory of causation,’ accords with common sense. For example, the imprint made upon a piece of paper by a seal is determined by the engraving on the seal. Rationalists thought that common sense examples of causation encourage the thought that all causation could be analyzed on the imprint model. Yet Newtonian science, which affirms gravitational attraction, does not seem to accord with the imprint model. Hume famously denies the imprint model by insisting that the effect cannot be ‘discovered’ in the cause. But what could substitute for the imprint theory? Hume argues that perfect correlations that tell us what would happen under various conditions can accommodate modern science. Even so, Hume maintains, there is no argument, neither demonstrative nor ‘from experience’ that shows that even perfect correlations that have held in the past will continue in the future.

 Kant complained that modern philosophy finds itself entangled in the excesses of Leibnizian metaphysics or else hobbled by the skeptical conclusions of Hume’s empiricism. Kant set out to set philosophy free from both. According to Kant, our confidence in natural science is justified by the fact that the reality science seeks to describe and explain is “informed” (viz. given form) by the very categories that we bring to an understanding of it. Thus, if we can successfully analyze the structure of our own understanding, we shall discover the structure of the reality we seek to understand. To be sure, the structures we are considering are very general; they include the mathematical structure of ‘arithmetic,’ what later became known as real analysis, as well as Euclidean geometry, and certain metaphysical structures, like causation, that necessarily characterize the reality we seek to understand.

 In addition, we shall be interested in a conceptual revolution that occurred over the course of the seventeenth and eighteenth centuries. During the early seventeenth century the medieval thesis that faith and reason are essentially complementary remained intact. By the end of the eighteenth century, however, natural science was thought to threaten religious belief, and by the middle of the nineteenth century many philosophers argued that religion and reason are actually incompatible. Religion, they claimed, requires a ‘leap of faith,’ presumably a leap over the chasm of doubt opened by reason. Many people have thought that substantive scientific doctrine, e.g., Newton’s theory of gravitation or Darwin’s theory of evolution undermined religion. Our course will consider the matter at a deeper level, looking to see how the scientific revolution occasioned crucial changes in concepts like *substance, causation, existence and identity* and how those changes threatened the medieval synthesis of faith and reason.

**LEARNING OBJECTIVES:**

1, To introduce students to major works by key figures in the development of Western philosophy from the 16th to the18th centuries.

2. To trace the ways in which major philosophers during this period are in dialogue with one another, and in particular to examine the role of women writers in the dialogue.

3. To study the complex interaction of philosophy, mathematics, natural science and religion throughout the period, when boundaries between these areas of human concern were much more fluid than they are today.

4. To gain a facility in interpreting difficult texts from a period far removed from our own.

5. To develop skills in writing critical and analytical essays.

**STUDENTS WITH DISABILITIES:**

Any student who has registered with the office of Disability Services and Programs (DSP) and who has been certified by DSP as needing specific accommodations will gladly be afforded those accommodations. Please meet with the instructor as early as possible in the semester to discuss the best ways of providing these accommodations. I will be very glad to work with you to tailor course requirements to your specific needs subject to considerations of general fairness for all students in the class.

**STATEMENT ON ACADEMIC CONDUCT AND SUPPORT SYSTEMS:**

**ACADEMIC CONDUCT:**

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](https://policy.usc.edu/scampus-part-b/). Other forms of academic dishonesty are equally unacceptable.  See additional information in *SCampus*and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct.

**SUPPORT SYSTEMS:**

*Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call*

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. [engemannshc.usc.edu/counseling](https://engemannshc.usc.edu/counseling)

*National Suicide Prevention Lifeline – 1 (800) 273-8255*

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. [www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org/)

*Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call*

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. [engemannshc.usc.edu/rsvp](https://engemannshc.usc.edu/rsvp/)

*Sexual Assault Resource Center*

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: [sarc.usc.edu](http://sarc.usc.edu/)

*Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086*

Works with faculty, staff, visitors, applicants, and students around issues of protected class. [equity.usc.edu](http://equity.usc.edu/)

*Bias Assessment Response and Support*

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. [studentaffairs.usc.edu/bias-assessment-response-support](https://studentaffairs.usc.edu/bias-assessment-response-support/)

*The Office of Disability Services and Programs*

Provides certification for students with disabilities and helps arrange relevant accommodations. [dsp.usc.edu](http://dsp.usc.edu/)

*Student Support and Advocacy – (213) 821-4710*

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. [studentaffairs.usc.edu/ssa](https://studentaffairs.usc.edu/ssa/)

*Diversity at USC*

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. [diversity.usc.edu](https://diversity.usc.edu/)

*USC Emergency Information*

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. [emergency.usc.edu](http://emergency.usc.edu)

*USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.*

Provides overall safety to USC community. [dps.usc.edu](http://dps.usc.edu/)

**REQUIREMENTS**:

**CLASS ATTENDANCE**

Class notes for the entire semester are found below. **It will be very helpful to read the class notes before class and before reading the primary text.** Please be sure to have access to the notes during class. **Mastering the class notes is NOT a substitute for class attendance, which is mandatory;** this means that the class meetings may be missed only due to illness, family emergency, unavoidable absences due to USC approved activities, significant religious holidays or matters of equivalent urgency and importance. Because the class is large, I cannot possibly repeat lectures during offices hours. If you must miss class, I suggest that you partner with classmates to keep up with required material. You are welcome to record all class sessions and to take photos of the blackboard or white board. NB: **At this writing we all hope that classes will be held as usual. In case that classes are given only on-line, my plan is to conduct class remotely at the scheduled times and to go over the lecture notes in a discussion format and to respond to questions and comments on-line.**

Class attendance is also important because class notes include the basics, but they do not include information that arises spontaneously during class. Moreover, the reading assignments are fairly heavy. The passages that are especially important will be emphasized during lecture. Those are the passages that we must be sure to master.

**WRITING REQUIREMENTS**

There will be two short papers, each a minimum of five pages in length, an in-class midterm examination and the final take-home paper (in place of an in-class final examination.) A suitable length for the final take-home paper is seven pages.

 Your paper should be submitted on Blackboard and directly to me as an email attachment to me at **dreher@usc.edu**. Please enter the subject line of an electronic submission in the following format: **LAST NAME, FIRST NAME, PHIL 320 F 20 Paper #1, Paper #2, Paper #3, Final Paper. For example, George Washington would submit the second paper as: WASHINGTON GEORGE PHIL 320 F 20 Paper #2.**

 Papers that are late will be penalized as follows: Up to 48 hours: 1/3 of a letter grade; for more than 48 hours: 2/3 of a letter grade. **In accordance with University policy,** **no paper will be accepted after 10:00 a.m. on Wed Dec the 9th, the date of the scheduled final examination.** The grade of “IN” will be given only for documented illness or family emergency. Failure to submit any paper will result in a reduction of the COURSE grade of one full letter grade. For example, suppose that a student turned in the first three papers and took the midterm, but did not turn in the final paper. If the average of the first three papers were 92.3 (A -), the final grade in the course would be (B -).

Below find prompts for the four papers You may substitute a paper topic of your choice for the recommended topics ***with permission in advance*.** Below are a few *alternatives* that may be of interest:

**PAPER #1: DUE WED Sep 23 at 10:00 a.m.;** **the paper may be turned in without excuse until WED Sep 23 at 11:59 p. m. with a one percentage point deduction on the paper grade.**

**Paper #1 Prompt**: What standard must a claim meet before Descartes’ is willing to affirm it? Does Descartes believe that his own standard for accepting propositions is satisfied by its own requirement for affirmation? Why does Descartes claim that his standard of affirmation is warranted only if God exists? Do either of Descartes’ arguments for the existence of God meet Descartes’ own standards for affirming his claim that God exists?

**Paper #1 ALT Prompt**: According to Descartes, how is the human mind or soul related to the body? How are human beings different from other animals? Why is it that Descartes is troubled by the possibility of human error, even supposing that God exists and validates our standards for affirming various claims? How does Descartes account for errors in our beliefs about the “external” world (the world of which we are conscious, but which is not a part of our consciousness)? State and evaluate the criticism of Descartes’ account of our cognitive relation to the “external world” that is developed by Princess Elizabeth of Bohemia

**Midterm Exam Oct 14 at 10 a.m.: The in-class ( if conditions require on-line) exam will be held during class. The exam will deal with Leibniz (including the relation of Leibniz to Descartes).**

**Study questions to emphasize concerning Leibniz include:**

**What is Leibniz’s argument against the existence of material substance? Explain Leibniz’s account of the relation between monad as and composites (that is, physical objects). What are the roles of appetition and apperception in Leibniz’s philosophy? What is Leibniz’s doctrine of the pre-established harmony? What difficult does the conception of time pose for Leibniz? How does he deal with it?**

**What is Leibniz’s doctrine of the Indiscernibility of Identicals; of the Identity of Indiscernibles? What role does Leibniz’s conception of identity play in his account of space? Contrast Leibniz’s relativistic notion of space with Newton’s absolutist conception of space. Is it logically possible for an absolutist conception of space (in the Newtonian sense) to be compatible with a non-Euclidean geometry?**

**PAPER #2 DUE WED Nov 4 at 10 a.m.: The paper may be turned in without excuse until WED Nov 4 at 11:59 p. m. with a one percentage point deduction on the paper grade.**

**Paper #2 Prompt: How does Locke account for general terms? for abstract ideas? What difficulties does Locke’s account face? How does Berkeley criticize Locke’s account? Why is it that Berkeley is called a ‘nominalist’? What difficulties are faced by nominalist accounts of abstract ideas? How does Berkeley deal with them? How does Hume account for them?**

**Paper #2 ALT Prompt: What difficulties do the conceptions of time and space pose for empiricists? In particular, can the notion of instantaneous velocity be accommodated by an empiricist account of ideas? What difference does the answer make for our understanding of motion?**

**TAKE-HOME FINAL: DUE WED DEC 9 at 10 a.m.: HARD DEADLINE (no extensions without a proper excuse)**

**Final Take-home Prompt: Identify and explain what led to changes in conceptions of causation from the ancient theory of Aristotle to the mechanist conception of the early modern era, to the Newtonian conception, onto the Humean “regularity” theory and finally to the Kantian conception. Most contemporary philosophers now favor a regularity theory of causation, which obviously resembles Hume’s theory rather than Kant’s. What are the advantages (and disadvantages) of regularity theories?**

**GRADING**

**Final grades will be calculated as follows:**

Paper #1 – 20 %

Midterm – 20 %

Paper #2 – 30%

Final Take-Home Paper - 30%

**Grading scale:**

94: A

90: A –

87: B +

84: B

80**:** B **–**

And so forth.

**Criteria of Adequacy: The following are criteria that are observed in grading:**

* clear distinctions and logical arguments
* apt and accurate references to original texts
* use and faithful footnoting of pertinent secondary source material
* apt comparisons among various philosophers of the period

**What Do Grades Mean?**

**In general, a grade of ’85,’ which is a ‘B’ on the grading scale above, indicates a solid knowledge of the material covered on the class notes and familiarity with the most important passages drawn from primary texts. Higher grades of ‘B+,’ ‘A-,’ and ‘A’ indicate knowledge that goes beyond the basics. In order of importance, those indicators are:**

**1. demonstrated capacity to analyze the logical structures of arguments, viz., to identify**

 **their premises and conclusions and to determine their strengths and weaknesses;**

**2. demonstrated knowledge of primary texts by apt and accurate reference to them;**

**3. apt comparisons of primary texts to those of other philosophers;**

**Format**: This class is taught in lecture/seminar format, which means that basic information contained in the class notes will be introduced, which will be followed by discussion of the basic ideas.

**SCHEDULE OF LECTURES, ASSIGNMENTS AND EXAMINATIONS**:

**WEEK #1**

**1. Mon Aug 24: Ancient and Early Modern Theories of Motion:** Aristotelian hylomorphism, including “substantial forms,” and Aristotle’s “causal” theory of explanation; Aristotle’s theories of celestial and of terrestrial motion, including his definition of force; main idea underlying Ptolemaic astronomy (cycles and epicycles); the Copernican challenge to the Ptolemaic system; reactions by Kepler on celestial motion and Galileo on terrestrial motion, including his hypothesis of the inertial force of celestial bodies and his Law of Feely Falling Bodies.

**2. Wed Aug 26: The Promise of Early Modern Science and the Threat of Skepticism:** Ancient atomic theories of Leucippus, Democritus and Lucretius; the early modern theories of the “Chymists,” Boyle’s version of mechanism and his account of the “communication” of motion analysis; analysis of the origin and forms of qualities; Boyle’s understanding of the scientific method; the skeptical doubts of Montaigne

Readings: Boyle, “Notes on a Good and an Excellent Hypothesis,” handout.

 “On the Excellence of the Mechanical Philosophy,”

 MP, pp. 308 – 16.

Montaigne: Apology for Raymond Sebond, MP pp. 4 – 16.

**Week #2**

**3. Mon Aug 31: Descartes’ Method**: To accept only what is clearly and distinctly perceived where clear and distinct perception is defined as the perception of clear and distinct ideas by the “natural light,” that his method might be copper and glass rather than diamonds and gold; the three stages of doubt. The Evil Demon Hypothesis, *Cogito ergo sum*; the metaphysical presupposition that whatever demonstrates the existence of a thing also determines its essence; that ”I am a thinking thing; a thing that thinks;” about the epistemological and metaphysical priority of the mental over the material; the wax example; the hats and cloaks example.

Readings: Descartes, *Discourse on Method*: MP pp. 25 -34.

  *Meditations*: Dedicatory letter, Preface, Synopsis of the

 *Meditations*, I,II MP pp. 35 – 47

**4. Wed Sep 2: Descartes’ First Argument for the Existence of God:** Argument for the existence God from the fact of our idea of him, “*ex nihilo, nihilo**fit*,” the Correspondence Rule (formal and objective causes); The Truth Rule: Can the principle that whatever is clearly and distinctly perceived is true withstand its own scrutiny?

Readings: Descartes, *Meditations* III, MP pp. 47 -54.

 “The Truth Rule,” hand-out

**Week #3**

**5. Mon Sep 7**: **LABOR DAY University Holiday**

**6. Wed Sep 9: Descartes’ Second Argument for the Existence of God:** Anselm’s first version of the proof, Descartes’s elaboration of Anselm; the distinction between the everlasting and the eternal; responses to Descartes’ use of the Truth Rule in *Meditations III and Meditations V:* Hobbes, Arnauld and Locke;

Readings: Descartes, Meditations, V, MP pp. 58 – 61

 Hobbes and Descartes: *Objections and Replies*: MP pp. 78 – 82;

 Arnauld and Descartes, *Objections and Replies*, MP pp. 83 – 92;

 Locke, *Essay Concerning Human Understanding,* MP pp. 406 – 11

**Week #4**

**7. Mon Sep 14 The Nature of God, and the Compatibility of God’s Existence with Human Error**: Descartes’ analysis of error; revisiting systematic doubt, the role of memory in Cartesian skepticism, distinction between reasons for doubt and reasons to withhold judgment, Cartesian dualism, relation of mind to body; setting aside doubts about reason; ‘knowledge” of the material world; can there be knowledge of probabilities?

Readings: Descartes, *Meditations* IV, VI, MP pp. 54 – 58; 61 - 68.

**8. Wed Sep 16 Descartes Critics: Hobbes, Spinoza, Leibniz, Princess Elizabeth of Bohemia and Margaret Cavendish on** material falsehood, the Circle, the Cartesian method and Cartesian dualism; Spinoza’s ontology and parallelism

Readings: Hobbes and Descartes: *Objections and Replies*: MP pp. 76 -9;

 Spinoza: “Letter to Oldenburg” (1661), MP pp. 137 - 8.

 “Letter to Oldenburg” (1665), MP pp. 142 - 3.

 Leibniz: “Letter to Molanus,” MP pp. 104 – 5.

Elizabeth of Bohemia, “Correspondence with Descartes,” WPEMP.

 Margaret Cavendish, “Philosophical Letters, Selections” WPEMP,

 pp. 22 – 45.

**Week #5**

**9. Mon Sep 21 Leibniz: “Monadology”:** The impossibility of material substance, simple spiritual substances, composites and physical objects; the Identity of Indiscernibles, the Indiscernibility of Identicals, the Principle of Sufficient Reason and the Principle of Non-contradiction;

Readings: Leibniz, *Monadology*, 1 – 37; MP, pp. 275 – 78.

**Wed September 23, Paper #1:** **Your paper** **must** **be submitted electronically to me in WORD with extensions .doc. or docx by noon on Blackboard and as an e-mail attachment me at:** **dreher@usc.edu****. The paper may be turned in without excuse until WED Sep 25 at 11:59 p. m. with a one percentage point deduction on the paper grade.**

**Paper #1 Prompt**: **What standard must a claim meet before Descartes’ is willing to affirm it? Does Descartes believe that his own standard for accepting propositions is satisfied by its own requirement for affirmation? Why does Descartes claim that his standard of affirmation is warranted only if God exists? Do either of Descartes’ arguments for the existence of God meet Descartes’ own standards for affirming his claim that God exists?**

**Paper #1 ALT Prompt: According to Descartes, how is the human mind or soul related to the body? How are human beings different from other animals? Why is it that Descartes is troubled by the possibility of human error, even supposing that God exists and validates our standards for affirming various claims? How does Descartes account for errors in our beliefs about the “external” world (the world of which we are conscious, but which is not a part of our consciousness)? State and evaluate the criticism of Descartes’ account of our cognitive relation to the “external world” that is developed by Princess Elizabeth of Bohemia.**

**10 Wed Sep 23 Leibniz on Nature and Substance:** Newton’s argument for absolute space; Leibniz’s argument against absolute space; the distinction between Leibniz’s relational theory of space and Einstein’s non-Euclidean Theory of Relativity. Leibniz on composability and the pre-established harmony between composites and simples,

Readings: Leibniz, *Primary Truths,* MP, 265 – 68.

 Newton, from *Letters to Clarke*, MP, pp. 294 – 303

**Week #6**

**11. Mon Sep 28** **Leibniz on Nature and Substance; the problem of relations for Leibniz’s philosophy:** Newton’s argument for absolute space; Leibniz’s argument against absolute space; the distinction between Leibniz’s Euclidean, relational theory of space and Einstein’s non-Euclidean Theory of Relativity. Leibniz on “compossibility” and the pre-established harmony between composites and simples,

Readings: Leibniz, *Primary Truths,* MP, 265 – 68.

 Newton, from *Letters to Clarke*, MP, pp. 294 – 303

**12. Wed Sep 30** **Leibniz on the Pre-established Harmony:** “reduction” of relational to monadic predicates in Leibniz’s philosophy; the pre-established harmony between final and efficient causes; between the principles of nature and of grace; reconciliation of Aristotelian and Mechanistic conceptions of causal explanation; Leibniz on the problem of Cartesian dualism; the sense in which time is illusory.

Readings: Leibniz *Monadology,* 38 – 90, MP pp. 278 – 83.

**Week #7**

**13. Mon Oct 5 Leibniz’s Critics**: Worries about Leibniz’s conception of motion; explanation of the false appearance of the possibility of interaction of mind and body, difficulties with the notion of the capacity of motion to originate within unextended substances; issues concerning the definition of compossibility in nonrelational contexts, more on differences between Leibnizians and Newtonians on the nature of space and time.

Readings: Anne Viscountess Conway, selections from *The Principles of the Most*

 *Ancient and Modern Philosophy*, WPEWP, pp. 46 – 76

 Damaris Cudworth, Lady Masham, selections from her

 “Correspondence with Leibniz,” WPEWP, pp. 80 – 95

 Bertrand Russell, from the *The Philosophy of Leibniz*, handout.

**14. Wed Oct 7 Locke on the Origin of Ideas and Self-Evident Truths:** Locke’s doctrine of empiricism, the distinction between simple and complex ideas, of ideas in general and their origin, ideas of sensation, ideas of reflection; Locke on simple ideas of one sense, of more than one sense, of primary and secondary qualities

Readings: Locke, E*ssay Concerning Human Understanding*, MP pp. 317 – 40.

**Week #8**

**15. Mon Oct 12 Locke on Complex Ideas, Identity and Diversity;**

Of duration, mixed modes, power and complex ideas of substances;identity of things, personal identity, the self. **Review for Midterm Examination**

Readings: Locke, *Essay Concerning Human Understanding*, MP, 347 – 77

**16. Wed Oct 14 Midterm Examination**

**Wed October 16 IN-CLASS MIDTERM: Open Book; open notes. You may not contact anyone during the examination. (This exercise will cover the philosophies of Descartes’ philosophy of mind, Spinoza’s parallelism, and Leibniz’s philosophy.) The examination and its questions will be in red; please respond in black. The examination will deal primarily with *Leibniz’s philosophy*. The in-class midterm examination will be distributed electronically before the beginning of class as a document of WORD. (Hard copies will be distributed at the beginning of class; you may write your responses on the hard copy if you chose.) Please download the document as a WORD file and respond to each question. Please return your completed examination to me on Blackboard and as an e-mail attachment to me at dreher@usc.edu. (NB: In case that classes are meeting remotely, the exam will be taken at a remote location of your choice.)**

**Study questions to emphasize concerning Leibniz include:**

**What is Leibniz’s argument against the existence of material substance? Explain Leibniz’s account of the relation between monad as and composites (that is, physical objects). What are the roles of appetition and apperception in Leibniz’s philosophy? What is Leibniz’s doctrine of the pre-established harmony? What difficult does the conception of time pose for Leibniz? How does he deal with it?**

**What is Leibniz’s doctrine of the Indiscernibility of Identicals; of the Identity of Indiscernibles? What role does Leibniz’s conception of identity play in his account of space? Contrast Leibniz’s relativistic notion of space with Newton’s absolutist conception of space. Is it logically possible for an absolutist conception of space (in the Newtonian sense) to be compatible with a non-Euclidean geometry?**

**Week #9**

**17. Mon Oct 18 Locke’s Semantics**: General terms and abstract ideas

the distinction between; real essence/nominal essence; Berkeley’s objection; Of Knowledge and Opinion: Knowledge in general, scientific knowledge and the experimental method; Locke on the nature of demonstration and scientific investigation;

Readings: Locke, *Essay Concerning Human Understanding*, MP, pp. 377 - 405

 Berkeley, *Principles of Philosophy*, introduction, 1 – 25,MP pp. 438 – 54.

 Mary Shepard, “Selections from Essays on the Perception of an

 External Universe,” WPEMP, pp. 147 – 159.

**18 Wed Oct 21** **Locke, Newton, Berkeley and Leibniz on Knowledge:**  Locke on knowledge of the existence of God, of degrees of assent; Berkeley’s argument against material substance and his account of the “notions” of the self and of God contrasted with opinions of Newton and Leibniz; Locke on knowledge of the existence of God, of Degrees of Assent; contrasted with opinions of Newton and Leibniz

Readings: Locke, *Essay Concerning Human Understanding*, MP, 405 - 21

 Newton, *Principia,* *Optics*, MP 284 – 294

 Leibniz, *Preface to the New Essays*, MP. 422 – 33.

**Week #10**

**19. Mon Oct 26 Hume on Idea Formation, Skepticism Concerning the Projectability of Causal Knowledge and the Powers of Reason**: The origin and

association of ideas, , abstract ideas, space and time, natural and philosophical relations, the nature of reasoning and of the reason of animals; Hume’s skeptical doubtsconcerning the understanding; argument against induction,

Readings: Hume: *Treatise of Human Nature,* handout (space and time)

 *An Enquiry Concerning Human* *Understanding,*

MP, pp. 517 – 564

**20. Wed Oct 28** **Hume on the Powers of Reason**: Hume’s conception of belief, probability of chances, probability ofcauses, arguments by analogy; prejudice and ‘unphilosophical probability,’ Hume’s anticipation of the modern regularity theory of causation and the development of statistical analysis.

Readings: Handout

**Week #11**

**21. Mon Nov 2 Hume on the Self and God; Against Metaphysics**: Hume on ‘liberty,’ compatibilism and hard determinism, the possibility of founding a religion on miracles; The distinction between natural and revealed religion;The argument from design; the cosmological argument and the ontological argument; significance of Hume’s views about necessity in nature Against the concept of substance, against Locke’s theory of the self, against the immateriality of the soul, bundle theory of the self, skepticism concerning the self

Readings: Hume: *An Enquiry Concerning Human Understanding*, MP pp. 556 -600.

 *Dialogues on Natural Religion*, MP 601 – 40

 *Treatise of Human Nature*, MP, pp. 517 – 32.

**22. Wed Nov 4 Kant on Skepticism and the Excesses of Rationalism**; **the Transcendental Aesthetic:** Kant on the *a priori/a posteriori* distinction; analytic/syntheticdistinction, the possibility of synthetic *a priori* knowledge. Kant’s philosophy of space and of time; the challenge of Einstein’sGeneral Theory of Relativity. Arthur Eddington’s 1919 experiment. Can Kantianphilosophy accommodate conflicts between ‘perceiving’ and ‘conceiving’?between theory and (Kantian) intuition?

Readings: Kant, *Critique of Pure Reason,* MP pp. 717 – 37

**Paper #2: Your paper must be submitted electronically to me in WORD with extensions .doc. or docx by noon on Blackboard and as an e-mail attachment me at:** **dreher@usc.edu****. The paper may be turned in without excuse until WED Nov 6 at 11:59 p. m. with a one percentage point deduction on the paper grade.**

**Paper #2 Prompt: How does Locke account for general terms? for abstract ideas? What difficulties does Locke’s account face? How does Berkeley criticize Locke’s account? Why is it that Berkeley is called a ‘nominalist’? What difficulties are faced by nominalist accounts of abstract ideas? How does Berkeley deal with them?**

**Paper #2 ALT Prompt: What is Leibniz’s conception of space; in particular, what is his argument against the possibility of empty space? Do arguments against the possibility of a vacuum refute the Leibnizian understanding of space? Compare Leibniz’s conception of space with the Newtonian conception. In particular discuss the role of Leibniz’s principle of the Identity of Indiscernibles in Leibniz’s argument against the Newtonian conception of absolute space?**

**Week #12**

**23. Mon Nov 9 Kant on the Transcendental Analytic:** Aristotelian logic and the Table of Judgments; Kant on the pure concepts of the understanding emphasis on categories of quantity and of relations, the synthetic unity of apperception, the transcendental unity of apperception; transcendental deduction of the categories

Readings: Kant, *Critique of Pure Re*ason, pp. MP, pp. 737 -56

**24. Wed Nov 11**  **The Schematism of the Pure Categories of the Understanding;** emphasis on issues concerning cause and effect and the individuation of events by locationwithinthe casual nexus. The axioms of intuition, anticipations of perception, analogies of experience, postulates of empirical thought, refutation of idealism, Did Kant solve Hume’s problem?

Readings, Kant MP pp. 567 – 84.

**Week #13**

**25. Mon Nov 16**  **Kant on the Paralogisms of Pure Reason:** Pure reason as the seat of transcendental illusion, the paralogisms of pure reason, the ideas of substances, thinking thing things and selves; the referent of “I,” comparison with Descartes, Hume and Leibniz.

Readings, Kant, *Critique of Pure Reason*, MP pp. 785 – 88.

**26. Wed Nov 18** **Kant of the Error of Taking Transcendental Conditions of Experience to Be the Objects of Experience; Antinomies of Pure Reason:** Emphasis on space and time and on ‘free will;’skepticism concerning God, criticisms of traditional ‘proofs’ of theexistence of God; ’the possibility of ‘religion within the bounds of reason alone,’ Criticism of Kant’s distinction between phenomena and noumena by Hegel.

Readings: Kant, *Critique of Pure Reason*, MP pp 788 - 831 .

**Week #14**

**27. Mon Nov 23 Kant on the Antinomies of Pure Reason:** Kant’s view that the traditional disagreements between rationalists and empiricists are irresoluble. Unanswerable questions arise about the infinity of space and time, free will and determinism.

**28. Wed Nov 25** **THANKSGIVING WEDNESDAY** **University Holiday**

**Week #15**

**29. Mon Nov 30 Kant on the Noumenal Realm** Comparison of Kant and Plato on the relation between ethics and metaphysics; the two Kantian “Realms”; Kant’s conception of pure practical reason; rationality and moral worth; the possibility of religion within the bounds of reason alone; the Hegelian response concerning God, criticisms of traditional ‘proofs’ of theexistence of God; ’the possibility of ‘religion within the bounds of reason alone,’

Readings: Kant, *Critique of Pure Reason*, ’MP pp. 831 - 35.

**30. Wed Dec 2 COURSE EVALUATION (8:30 – 8:45) Contemporary Challenges to the World View of the Enlightenment:** Newtonian principles of scientific investigation, revisiting the theory of substantial forms and Boyle’s vision of the mechanical hypothesis. The strict determinism of d’Holbach and Laplace contrasted with Hume and Kant; General Relativity andthe rejection of the Newtonianconception of absolute space and time; rejection of Euclideangeometry,randomness in nature (beta decay), Indeterminism (Heisenberg),gaps in detectible causal relations (non- locality).

 Brief discussion of final take-home prompt.

**Final Take-home Prompt: Identify and explain changes in conceptions of causation from the ancient theory of Aristotle to the mechanist conception of the early modern era, to the Newtonian conception, to the Humean “regularity” theory and finally to the Kantian conception that marked end of the Enlightenment. Most contemporary philosophers now favor a regularity theory of causation, which obviously resembles Hume’s theory rather than Kant’s. What are the advantages (and disadvantages) of regularity theories?**

**31. TAKE-HOME FINAL DUE Wed Dec 9: Your paper must be submitted electronically to me in WORD with extensions .doc. or docx by 10 a.m. today, December the 9th, to Blackboard and as an e-mail attachment to me at:** **dreher@usc.edu****. (HARD DEADLINE)**

**STUDY QUESTIONS**

The questions below are designed to help you focus on the most important parts of the readings and lectures. ***There may be additions to the list of the study questions during the semester and the questions themselves may be modified.***

DESCARTES

D1. What are the three stages of doubt identified by Descartes in Meditation I? How are they related to each other? What is the purpose of the doubt? Does the fact that a proposition is doubted show that Descartes has a reason for doubting it?

D2. What is the difference between a “first personal” or “meditational,” and a “third personal” interpretation of the *Meditations*? To whom does Descartes address the *Meditations*? How do you think we should account for the fact that Descartes did not think that his resolution of “Cartesian doubt” is circular but that his critics did?

D3. Apparently, Descartes believes that he is a thinking thing because he has *concluded* that he exists because he thinks. Discuss the significance of this fact for understanding Descartes’s conception of the relation of mind and body.

D4. Reconstruct Descartes’ proof of the existence of God found in Mediation III. Be sure to discuss his famous principle about the formal reality and the objective reality of ideas and well as the truth principle and the medieval principle: *ex nihilo nihilo fit*.

D5. According to Descartes, error arises when our will extends beyond the scope of our understanding. Why does Descartes insist that error cannot originate in the understanding?

D6. Reconstruct Descartes’ argument for the existence of God found in Meditation V. Be sure to include a discussion of the significance of the fact that God is eternal in elaborating the proof. Do you think that Descartes argument for the existence of God in Meditation V presupposes that existence is a predicate? Do you think that Descartes proof of the existence of God in Meditation V is based upon Aristotle’s idea that in the case of immaterial objects final and efficient causes are identical?

D7. According to Descartes, the doubts that he entertained in Meditation I are not fully warranted once we have come to see that God exists and that he is not a deceiver. Specifically, how does the existence of God relieve Cartesian doubt?

LEIBNIZ

L1. What is Leibniz’s argument for his claim that ‘the world’ consists of simple, spiritual substances? How does Leibniz reconcile the existence of matter with his view that the world consists of simple spiritual substances? According to Leibniz, what is physics about, and what do physical laws describe?

L2. What according to Leibniz is a perception? What sorts of entities have perceptions? How does Leibniz distinguish perceptions from apperceptions? What sorts of entities have apperceptions? What is the role of appetition in Leibniz’s account of choice?

L3. Leibniz argues that there is an internal principle that accounts for ‘change’ in monads. What can possibly be meant by ‘change’ in this context?

L4. Russell claims that Leibniz ‘forgot relations.’ What is the meaning of this criticism? How does Russell attempt to justify it? Did Leibniz really forget about relations, or did he just understand them in a way that Russell rejected?

L5. Leibniz claims that each monad mirrors the universe. How is this claim related to the theory that for Leibniz all relational properties are conceived as intrinsic properties? What does Leibniz mean by the ‘pre-established harmony?’ Specifically, what does the pre-established harmony harmonize? What in Leibnizian metaphysics is a human being?

L6. What is Leibniz’s principle of the identity of indiscernibles? What is his principle of the indiscernibility of identicals? What is Leibniz’s principle of sufficient reason? Of non-contradiction?

L7. Leibniz argues against the Newtonian conception of absolute space. What is his basic argument?

L8. What, according to Leibniz, is a possible world? Why does Leibniz believe that this must be the best of all possible worlds?

L9. What according to Leibniz is the pre-established harmony? What is it meant to explain? Be sure to deal with both the pre-established harmony between physical composites and simples as well as the pre-established harmony between the efficient and final causes.

L10. According to Leibniz, some influences upon us incline us without necessitating? What philosophical problem is addressed by this distinction? How, according to Leibniz, is it possible for us to choose freely if all our actions are pre-ordained and foreseen by God?

LOCKE

LO1. Locke argues that it is not possible for ideas to be impressed upon the mind without perceiving them. What is the importance of this point in his argument against the rationalists? Why is it important in Locke’s defense of his view that there cannot be innate ideas?

LO2. What according to Locke is the origin of all our ideas? Does Locke believe that there are self-evident truths? Necessary truths?

LO3. What, according to Locke, are simple ideas? What are the origins of simple ideas?

LO4. For Locke is it possible to have a positive idea of something that involves privation? Something that includes negation. What is the significance of this issue for Locke’s complaint about rationalists like Descartes and Arnauld for understanding of ideas like the idea of God?

LO5. How does Locke distinguish between primary and secondary qualities? How does Locke argue that qualities like ‘cold’ are secondary?

LO6. What is Molyneux’s problem, and how does it relate to Locke’s claims about perceptual judgments concerning convex surfaces of spheres? What difficulty does Locke encounter in dealing with Molyneux’s problem?

LO7. How does Locke account for the idea of space, of time?

LO8.What, according to Locke, is a power? (Be sure to distinguish active from passive powers in your response.)

LO9. Why is it important for Locke to account for ideas like space, time and power? Is his account consistent with his concept empiricism?

LO10. How does Locke distinguish between the concept of a body, of a human being, of a soul or finite spirit, of the self?

LO11.What is Locke’s explanation of the origin of the idea of God? How might Descartes respond to it? For Locke is it possible for us to have a positive idea of God?

BERKELEY

B1. State Berkeley’s argument against Locke’s account of abstract ideas.

B2. Why does Berkeley think that mental substances exist but that material substances cannot exist?

HUME

H1. What is Hume’s argument against the existence of substance? How does his argument affect our conception of ourselves, of God? What are Hume’s criticism(s) of the conceptions of substance found in the works of Descartes? of Leibniz? of Spinoza?

H2. What is Hume’s distinction between matters of fact and relations of ideas? Are causal statements matters of fact or relations of ideas? Why? What is Hume’s understanding of causation and how does it differ from the view of causation found in philosophers like Descartes? What difficulties does Hume’s account of causation raise for his theory of personal identity?

H3. What are the following distinctions in Hume’s philosophy? Between ideas and impressions; between simple and complex ideas, between ideas of sensation and ideas of reflection?

H5. What is Hume’s argument against the claim that there are non-question begging ‘proofs’ to show that past regularities are projectable?

H4. What according to Hume is a belief? What are the conditions under which beliefs are formed? How does Hume distinguish belief from knowledge? What according to Hume are special cases of belief that are called ‘knowledge’?

H5. What according to Hume is experimental reasoning? How do inferences justified by experimental reasoning differ from demonstrations? Are animals capable of drawing inferences?

H6. What is Hume’s criticism of Locke’s account of our perception of external objects? (Be sure to include a discussion of Hume’s view about the distinction between primary and secondary qualities.)

H7. What epistemological work does ‘common sense’ do in Hume’s philosophy? Does it show that Hume’s philosophy is subjectivist?

H8. How does Hume attempt to counter arguments for the existence of God in the ***Dialogues Concerning Natural Religion*?** Specifically, how does Hume deal with the argument from design, the cosmological argument and the ontological argument?

KANT

K1. What, according to Kant, are synthetic ***a priori*** judgments? How are synthetic ***a priori***judgments related to the pure forms of intuition and the pure concepts of the understanding? How does Kant attempt to justify his claim that every event has a cause?

K2. How does Kant deal with the notion of substance? Is substance a concept in Kant’s sense of ‘concept’? Is substance an object of possible experience? Why does this matter to Kant? What are the consequences of Kant’s views about substance for his conception of the self? for his conception of God? According to Kant, what is wrong with the conception of the self that we find in Descartes and Leibniz?

K3. Kant claims that he ‘has found it necessary to deny knowledge, in order to make room for faith.’ (***Critique of Pure Reason***, Preface to the Second Edition, p. 513) What is it that Kant believes that we cannot know? What are the objects of faith? How, according to Kant, is it possible for us to ***think*** of God?

K4. Kant believes in the determinism of nature and in the free (autonomous) will. How does he attempt to reconcile these two apparently conflicting claims? What are the consequences of his dualism with respect to the self for his views about morality and religion?

K5. According to Kant, does this difficulty undermine our notion of freedom?

K6. What is the essence of Kant’s objection to the ontological argument, to the cosmological argument, to the teleological argument?

K7. What difficulty does Einstein’s theory of relativity pose for Kant’s claims about synthetic *a priori* truth? What would Kant need to do in order to overcome the difficulty?

COMPREHENSIVE

C1. Discuss the role that changing conceptions of substance and causation play in undermining rationalist views of God and the self and explain how they facilitate the skeptical views of Hume and the critical views of Kant. In particular, how does the ‘imprint theory’ differ from Hume’s regularity theory, from Kant’s ‘critical’ theory?

C2. What distinguishes the Enlightenment as a worldview from the worldview of the Rationalists? Specifically, how do the two worldviews differ with respect to their theories of knowledge and belief? What are the consequences for our understanding of God and of ourselves?

C3) Contrast Empiricism with Rationalism during the early modern period. Be sure to consider both the issues of belief and of conception formation. How does Kant try to reconcile the differences between the two views in his “critical philosophy?”

**LECTURE NOTES**

**Week 1 Mechanism**

Atomism and Mechanism

1. According to Aristotle (384 – 324 BCE) in (*Metaphysics* Zeta; 1028b2) the fundamental question of philosophy, ‘the question what is being’, amounts to the question: What is substance? Aristotle thought that ordinary, concrete things are the paradigms of substance (or what he called ‘primary substance’). One of the projects of philosophy is to find a general principle or formula by which to answer the question what makes a given concrete thing *what it is* and therefore *what differentiates it from other things.*  (Henceforth I call this: Aristotle’s big question). Aristotle was not the first to ask the big question, but he was the first to fully appreciate its centrality to philosophy and to discuss it in a general way. As Aristotle acknowledges in Zeta, it is a question that was asked ‘long ago.’ For many centuries, Aristotle’s answer to the question dominated metaphysical thinking in the Western world.

2. Among the earliest philosophers to ask Aristotle’s big question were Leucippus (c. 5th century BCE) and Democritus (c. 460 – 370 BCE). Leucippus came upon with what proved to be the most important insight into Aristotle’s big question. Leucippus conceived of concrete things as complexes composed of atoms. Democritus, who followed Leucippus, worked out the details of Leucippus’ insight. The result is the earliest known articulation of the view that came to be known as ‘atomism.’ It may seem that atomism is obviously correct, as it is evocative modern physical theory. As well shall see, however, even though it is probably right to think of contemporary physics and chemistry as atomist theories in the broadest sense, it would be wrong to think of them as atomist theories in the sense of Leucippus and Democritus.

3. Leucippus and Democritus’ main idea is that there are two elements of reality: atoms and the ‘void,’ which is the emptiness in which atoms are located and through which they move. The differences in physical objects, including qualitative differences as well as constitutive differences, are to be attributed solely to modifications (changes) in the shapes, geometrical configurations and positions of the atoms. One objection to early atomism is that it did not provide an account of the origin of motion; another is that it did not enable us to explain why it is that atoms seem naturally disposed to move in different directions (some types upward; others downward). Another problem concerns the origin of the atoms: If they *come into* existence, then the question of the origin of atoms would seem to be endlessly pushed back. (How did the causes of the atoms come into existence?) The obvious alternative, which early atomists accepted, is that atoms are eternal, which is to say that they do not have an origin.

4. Plato (420 BCE – 350 BCE) argued against the atomist theory of the constitution of substance. Plato argued that qualitatively identical objects have something in common, a quality, which is distinguishable from each thing exemplifying or instantiating that quality. This theory is especially plausible when we think of mathematical objects. For example, all 3-4-5 right triangles are alike in they share the obvious mathematical property. Plato reasonably thought that the shared property must be abstract; he called it a ‘form.’ Plato postulated the independent existence of forms because he thought that two objects that are alike in shape must each have a unique relation to the same form. Most importantly, Plato thought that objects with non-intersecting durations can share the same form. Plato concluded that the forms, unlike ordinary objects, are neither created nor destroyed.

5. Aristotle agreed with Plato that qualitatively identical objects have something in common, but Aristotle balked at the idea that what they have in common exists independently of the objects that instantiate them. Moreover, Aristotle was dissatisfied with the idea that atoms can simply travel through the void. In the first place, Aristotle observed that different kinds of substance have different ‘natural’ motions. Those that are solid or liquid tend to move downward; fire and air tend to move upward. Celestial objects, Aristotle thought, tend to have circular motions. (Later in 1585, Kepler discovered that the planets have elliptical orbits although they are nearly circular, which explains why it was easy to mistake their geometrical properties.) Most importantly Aristotle thought that atomism fails to explain the motion of objects in the absence of continuous force. (Of course, Galileo and later Newton (First Law) would deny that any explanation is needed, because they maintained that objects in motion tend to stay in motion -- maintain their speed and direction -- until a force is exerted upon them.) These two doctrines: that motion requires the application of continuous force and that certain forms of motion are associated with various kinds of objects dominated Western thinking until the beginning of the 17th century C.E.

6. As we have observed, for Aristotle the basic form of substance, what exists, is the concrete thing. According to Aristotle, all concrete things or primary substances can be classified according to genus and species. Thus ‘men’ or human beings are rational animals. We are animals (genus) and are differentiated from other animals by our rationality (species), which distinguishes us from other animals by our capacity for reasoned belief and choice. Species and genera are secondary, meaning that they could not exist, *contra* Plato, without concrete individuals to exemplify them. But species and genera can be thought of as individual things (as for example when they are referred to by substantives in nominal position in ordinary subject/predicate sentences). Thus they retain a kind of existence, but because they cannot exist without entities to exemplify them, their existence is secondary and dependent upon the existence of primary substance.

7. Basically, the species and genera of primary substances determine or fix their kind. So, for example, ‘man’ is a rational animal. The essence of a thing is whatever makes it the thing that it is. The essence of a thing involves both the form that it has (which is determined by its ‘formal’ and ‘final’ causes) and the matter that constitutes it (which is determined by its ‘material’ cause and its etiology or ‘efficient’ cause). These ideas are most conveniently introduced by example. Thus, a particular human being has a formal structure (rationality) and develops naturally to reach a certain end, a fully rational adult, by its final cause. The matter that makes the human body is its material cause, and the biological processes that take the human being from embryo to adult are its efficient causes. What a thing is, therefore, depends upon its causes: formal, final, efficient and material.

8. Strictly speaking, matter without form cannot exist, because it would be nothing in particular; therefore, matter without form can exist only ‘potentially.’ Conversely form without matter can exist only ‘potentially,’ because without matter, form could not be exemplified in a concrete thing.

9. Aristotle’s theory of primary substance, that is, of form existing in matter, was thought for centuries to be an adequate answer to the question: What makes a thing what it is? Moreover, what a thing is was thought to determine the natural course of its motion; solids and liquids downward; air and fire upward; celestial bodies circular. At the beginning of the seventeenth century both ideas were challenged. First, as noted, Galileo suggested that objects in motion tend to stay in motion unless there are forces that alter their courses. Objects change velocity through their relations with other objects (which involve collision or gravitation or some other mysterious force – like magnetism). Similarly, Robert Boyle, who is known to us for his famous law relating the temperature, pressure and volume of gases,[[2]](#footnote-2) revived ancient atomism. His theory became known as the corpuscular theory of matter. Boyle argued that what a thing is, viz its identity, determined ultimately by the configurations of atoms that make it up. As we shall see in lecture 2, Boyle’s ideas differed significantly from the earlier ideas articulated by Leucippus and Democritus.

Boyle

1. In the ‘Origin of Forms and Qualities’ Boyle summarizes the essentials of his ‘Corpuscular Philosophy.”[[3]](#footnote-3)

1-1. That the matter of all concrete things is the same, substance extended and impenetrable.

1-2. Because all things share matter, they are can distinguished from each other only by the differences in the ‘accidents’ that ‘diversify them.’

1-3. Motion does not belong to the essence of matter, by which Boyle means that the nature of a thing does not depend upon whether or not it is moving; moreover, motion is not produced by other accidents of the moving object. Note that this contradicts the Aristotelian view that there are characteristics motions of objects that vary according to their constitutions: to wit: solids and liquids -- downward; air and fire -- upward; celestial -- circular. Boyle argues that motion is not producible from other accidents, because other accidents derive from motion; motion is ‘the first and chief mood or affection of matter.’ (Digression: Spinoza expressed roughly the same thought by the claim that ‘motion and rest’ in the following ’law’: ‘Bodies are distinguished from one another by reason of motion and rest, speed and slowness, and not by reason of substance.’[[4]](#footnote-4) )

1-4. The motion of matter ‘naturally’ divides it into various parts, which are shown to be minute by various experiences and included ‘eminently’ by chemical operations. (Think here of Boyle’s law of gases: The *pressure* of a contained gas a function of the force that its minute *particles exert per unit of area* of the container. The temperature and pressure of the gas are related to each other because an increase in the temperature of the gas is really an increase in the kinetic energy of its molecules; the minute parts that make up the gas.)

1-5. According to Boyle ‘it must necessarily follow’ that each of the minute parts or *minima naturalia*, has a determinate ‘bigness or size,’ and its own’ shape.’ *Bulk, figure and motion-or-rest* are the three ‘most catholic’ (most nearly universal or perhaps universal) affections of the ‘insensible’ parts of matter (viz, the parts of matter that cannot be sensed.’) What Boyle is here suggesting is that the qualities of matter will be determined by certain basic ‘affections’ or ‘accidents,’ including bulk, figure and motion/rest.

1-6. The textures of minute objects are determined by the locations (position or posture) of their constitutive particles – much in the way in which a regiment is determined by the ordering and size of its soldiers.

1-7. Qualities like heat, color, sound and odor are not among the original or real qualities of objects, but are ‘effects or consequences of the primary affections of matter,’ whose operations depend upon the bodies they affect. (This is Boyle’s version of the distinction between primary and secondary qualities. Some ‘qualities’ like bulk and figure are deemed to lie within objects, but their colors, sounds and odors are effects of those primary qualities upon us. What does this mean about the truth of sentences like ‘Apples are red?’ Notice even if we agree that the way apples look depends upon who looks at them, the sentence ‘Apples are red’ is still completely true. We do not differ about whether apples are really red; only about the analysis of the fact that they are red.)

1-8. Natural kinds of objects, like metals and stones, are determined by the ‘accession or recession’ of corpuscles. In other words, natural kinds are determined by the regular motions of the minute particles of certain size and shape that make up those objects. (Note how primitive this model is by contemporary standards. Sub-atomic particles are not merely minute particles of certain mass and shape. Remember that both electro-magnetic and nuclear forces are essential to the explanation of the behaviors of atoms. But also keep in mind that Boyle was the first to postulate the mechanical model of explanation in modern times. Think of how far Boyle advanced the discussion over Leucippus and Democritus.)

1-9. “Essential” properties are not substantial forms but are determined by the constant and fixed arrangements of minute particles. Thus, some arrangements characterize an object for its entire duration; where as other configurations change according to the laws motion and rest and do not affect the nature of the object. This accounts not only for the existence of natural kinds of objects like metals and stones, but also for the fact that objects can change color or odor or taste without affecting their ‘natures.’ This is essentially the famous distinction between primary and secondary qualities. Primary qualities are invariant under conditions of change; whereas secondary qualities are not – or so advocates like Boyle and Locke argue.

2. According to Boyle, it is inconceivable that a substantial form should ‘educe’ from particles or their motions. A form could ‘educe’ only from another form, and therefore the theory of substantial forms is not, as we would say, well-founded. (Yet, it might be objected, aren’t bulk and figure also ‘forms’ or like ‘forms’? And is it really true according to contemporary science that they are invariant under conditions of change?)

**Week 2 Descartes and the Method of Doubt**

1. By the beginning of the 17th century, the new science was firmly entrenched as a new research paradigm, and the ancient philosophy of Aristotle became discredited. As we have seen, there were two principal issues: The first concerned the explanation of motion. Aristotle thought that objects have a tendency toward motion according to their kind; Boyle and like-minded philosophers/scientists believed that concrete things tend to stay at rest or move until a force acts upon them. Secondly, followers of Boyle and his corpuscular model of explanation believed that the qualities of objects ultimately depend upon the bulk, figure and motion of their constitutive parts. This suggested that the key to scientific explanation would lie in refined observations of objects and their motion or of changes in their qualities.

 Commitment to empirical verification was also reinforced by the great discoveries of Copernicus, Kepler and Galileo; to wit that the planets orbit the sun; that their orbits are elliptical and not circular, and finally that there are far more heavenly bodies associated with the planets that had been hitherto thought. In particular, Galileo discovered four of the moons of Jupiter, which contradicted received wisdom concerning the solar system.

2. The scientific revolution overlapped the Protestant Reformation. The Protestant Reformation challenged the teaching of the Catholic Church on the basis of Biblical arguments. But the Protestants found natural allies among scientists. That is because at the Council of Trent c. 1585, the Catholic Church endorsed the scientific teachings of Aristotle. The decision put the Church on the losing side of the new debate about nature and how best to understand it. As a result, many thinkers and philosophers wondered what could possibly be a rational basis for religious belief.

3. One answer was proposed by Michel de Montaigne. Montaigne concedes that all knowledge begins with the senses. However, Montaigne observes that we actually do not know whether or not our senses are complete, in the sense of revealing everything that is true. In fact, Montaigne reminds us that ‘it is impossible for a blind man to understand by nature what he cannot see.’ (MP p. 6) Furthermore, Montaigne emphasizes the fact that the senses often deceive us. A man suspended in a cage of iron experiences fear aroused by his senses, even though reason convinces him that the cage will provide sufficient protection. (This is an example used later by Hume to the same end.) Montaigne varies examples, but they share a common theme, which is that the senses are subjective, and we have no standard by which to judge them. But if the senses are inadequate to gain knowledge of what is passing, how could they be adequate to what is eternal? Religion, Montaigne concludes, is a matter of faith. It is not challenged by the new empiricism because the testimony of the senses is largely irrelevant to it.

4. Descartes too believes that the senses are inadequate to knowledge. But Descartes believes that religious belief can be rational. In His Meditations Descartes offers a daring and very dramatic argument, in which he claims that knowledge of the existence of God is possible and is as certain, in fact more certain, that scientific knowledge. Beyond that, Descartes argues that our confidence in science presupposes that nature is ordered so that we can understand it through the use of our perceptual and conceptual powers. Those powers can be trusted, Descartes argues, only because God has ordered nature to accommodate us. Descartes begins his study of philosophy by discussing his method in his *Discourse on Method*, 1637. Descartes tells us in the *Discourse* that he has resolved to accept only what he can “clearly and distinctly perceive.” That of course raises an immediate problem because Descartes perceives that sense perceptions are not clear and distinct.

5. As we read Meditations One, we find that we are really being asked to put ourselves in the position of the narrator. We are asked to distinguish between those things of which we merely believe and those that are beyond doubt.

 Descartes asks us to begin with judgments of perception. The reason for this, we have said, is that his goal is to show that scientific belief actually presupposes beliefs that ultimately are justified on religious grounds. Probably the most important presupposition of modern science is that scientific theories are developed from observation and experiment and ultimately tested by observation and experiment, which involve ordinary judgments of perception. So, if ordinary judgments of perception are certain, science would appear to be independent of metaphysical or religious presuppositions, but if judgments of perception are open to uncertainly, then we’ll need to see how they can be grounded if we are to justify scientific belief.

2. Beginning with judgments of perceptions, Descartes, like Montaigne, notes that we find our sense experience subject to illusion. Seeing does not seem to be sufficient to establish veridical judgments of perception. But Descartes recognizes that people will object, claiming that we are often able to detect error and correct it by means of further sensory experience, for example, we may approach a distant object, or touch an object to validate our visual impression of its texture. It is important that these correctives involve the use of reason, even though Descartes does not emphasize that fact in the early part of Meditations One. It is perhaps reasonable to suppose that Descartes thought that he was on firm ground from a religious point of view in wondering whether or not sense perception is veridical. After all, according to scripture there are several examples of the resurrected Jesus appearing to witnesses who do not recognize him even though they see him. In any event, Descartes moves on to the second stage of doubt, which involves the Dreaming Argument.

3. Descartes begins the Dreaming Argument by noting that it appears to be impossible to distinguish dreaming from waking states while dreaming. He even claims that ‘there are no conclusive indications by which waking life can be distinguished from sleep … that I am quite astonished, and my bewilderment is such that it is almost able to convince me that I am sleeping.’ (MP p. 20)

 But Descartes immediately qualifies his skeptical conclusion and acknowledges that even if the objects of daily life were imaginary, we would still be bound ‘to confess that there are still more simple and universal concepts which are true and existent.’ (MP p. 21) Among those concepts corporeal in nature include extension, which in turn includes ‘extended things, their quantity, or size and number, and also the place where they are, the time that measures their duration, and so forth.’ For this reason it appears that mathematics is more certain than physics and astronomy; perhaps we are certain of mathematical truths. Even if we are merely dreaming, we cannot reasonably suspect them “of any falsity or uncertainty.” (MP p. 21)

4. But even truths of arithmetic and geometry appear to be open to doubt, because it is possible that God has brought it about that I am sometimes mistaken when I perform simple mathematical operations, and so I might wonder whether or not I am always mistaken; that is to say, systematically deceived even when I am engaged in ordinary mathematical calculations. Someone may object that God cannot be imagined in this way, because it would seem that he is surely *malicious* if he were to allow my systematic deception (that is, that I be ‘always mistaken’ because of defective cognitive powers). (MP p. 21) Descartes also argues that it would ‘also seem to be inconsistent for him (God) to permit me to be sometimes mistaken,’ but of course we often are mistaken. (This may not accord with the religious thinking Descartes sought to validate, cf. Romans 8:28.)

5. All this leads to the supposition of the “evil demon,” an original evil force bent on deceiving us at every turn, making falsehood appear to be validated by our inherently defective and corrupted powers of cognition. The proper standard of cognition, according to Descartes, is to accept nothing that is vulnerable to the power and art of the evil demon. But is there any proposition like that? Descartes argues that there is; it is the famous ‘*Cogito*,’ which literally means “I think” in Latin.

6. Descartes affirms the *Cogito*: ‘I am, I exist, is necessarily true every time that I pronounce or conceive it in my mind.’ But Descartes wonders: ‘Who am I?’ The Aristotelian answer cannot be correct (that we are rational animals), for how are we to attach certainty to any analysis of 'rationality' or 'man'? Descartes concludes that thought is an attribute that belongs to me (because I demonstrate my existence from the fact that I think.) Here then is a suppressed argument:

* If my existence follows from the fact that I think, then thought is an attribute that is inseparable from my nature.
* My existence does follow from the fact that I think (which we know from the *Cogito*).
* Therefore, thought is an attribute of me that is inseparable from my nature; that is, I am a thing that thinks.

In fact, Descartes believes that the idea of the self (and buy the way, the idea of God) are among our innate ideas (ideas derived not from experience but rather in-born.) Think of this putative counter-example to the claim that the idea of the self is innate. At some point an infant learns to recognize herself in a mirror, and if we ask: Who’s in the mirror, the answer we receive is ‘me.’ Now, perhaps Cartesians will argue that this proves that the idea of self is innate; otherwise, how else could the infant possibly have identified *herself* as the object whose body is reflected in the mirror. On the other hand, an opponent might argue that the child comes to see that her own movements are perfectly matched by changes in the mirror, and thus that she must have come to the conclusion that it is the movement of *her* arm that is reflected in the mirror. But the Cartesian might remonstrate that this argument presupposes what it is meant to prove; that is, that the infant already knows that the arm that is moved is *her* arm. But how could she know that unless *she* already had a concept of *herself*.

7. Thinking covers a wide range of activities, including imagining, and this fact shows that whatever knowledge or reasonable belief I have about the world presupposes that I exist. For example, if I merely imagine a golden horse, it is at least I who imagine, which proves again in its turn that I exist. Even so, it may seem that our knowledge of corporeal things is both conceptually and epistemically *basic*. Descartes considers two examples to disabuse us of this crude from of materialism. First, consider a piece of wax, we can see that its identification through its states is not *sensed* but rather inferred; that is, we infer that the solid wax, and then the melted wax, and finally the gaseous wax are all states of the same thing. Hence, nothing but the understanding can conceive the wax itself. Second, if we are *still* tempted to the idea that we always get ideas by sensing, think of the *men* outside who walk past with their hats and cloaks. All we sense (viz. perceive) are expanses of colors that are moving, but we *reason* that they are actually hats and cloaks and, further, that they cover men.

**Week 3 The Truth Rule**

Argument from Meditations III and the Truth Rule

Meditation III: Part One

Descartes reasons in this way at the beginning of the third meditation.

1. I am assured of the truth of a proposition by the fact that I clearly and distinctly perceive it, but this would not be possible if I were ever to conceive clearly and distinctly of something that is false. But did I not clearly and distinctly perceive the propositions of mathematics, at least sufficiently to know that they are true? They only reason that I ever doubted them was because of the Evil Demon possibility.

2. I clearly and distinctly perceived my own existence by the “light of nature.” But I cannot doubt what the light of nature shows me, because there is no other faculty by which I could doubt it. It is “obvious” by the “light of nature” that there must be at least as much reality in the total efficient cause as in the effect. (This is because the effect derives both its identity and existence from its cause; whence else, Descartes asks, could the effect derive its identity and existence?) It follows that the more perfect cannot be dependent upon the less perfect. Therefore, there must be at least as much formal reality in the cause of idea as there is objective reality in the effect, viz the idea caused.

3. All my ideas could have come from within me, with a single exception, and that is the idea of God. Only God Himself has sufficient formal reality to produce an idea that has God as its objective reality. Hence, it must be that God exists.

4. Both admirers and detractors immediately objected to Descartes’ argument for the existence of God. It seemed to depend upon questionable metaphysical principles, but, more than that, it seemed to presuppose what it is meant to prove. Indeed, if we can trust our own reason only if we know it is validated by God, then ‘proving’ that God exists will be of use to us only if we already know that we can trust our reason. Among other things, we need to know that what we clearly and distinctly perceive is true, without relying upon the prior supposition that God exists. The apparent (and perhaps real) circularity in Descartes’ reasoning is referred to as ’The Cartesian Circle,’ or sometimes just ‘The Circle.’

Meditation III: Part Two: The Truth Rule

Resolving the Circle

T: (Abbreviation of the Truth Rule): If I clearly and distinctly perceive that P, then P is true.

D: (Definition of Clearly and Distinctly Perceiving): I clearly and distinctly perceive P if and only if I believe that P, and P is ‘unshakable’ for me. (from Loeb)

U: (Definition of Unshakable for X): P is unshakable for X if and only if X has arguments that make it impossible for any argument to dislodge X’s belief that P, that is, make it impossible for any argument to count as a reason against P for X. (from Loeb[[5]](#footnote-5))

A1: A is the assumption that **from** (i) If X clearly and distinctly perceives IF P, THEN Q, and (ii) X clearly and distinctly perceives P **we may validly infer** (iii) X clearly and distinctly perceives Q.

A2: If I clearly and distinctly perceive that P true, then P is ‘necessarily true each time I conceive it or put it before my mind.’

A3. If an argument counts for me as an argument against P, then it counts for me as an argument in favor of NOT-P.

Preliminary Proof of P5 (below): There isn’t any argument that would count against the Truth Rule, T, for me.

P1. Suppose that argument A counts as a reason for me against the Truth Rule.

P2. Then A counts as a reason for me against the claim that IF I clearly and distinctly perceive T, THEN T is true. (P1,T)

P3. Thus, A counts as a reason for the conjunction: (i) I believe that T, (ii) T is unshakable for me and, yet, (iii) T is not true. (P2,A3)

P4. But no argument can count as a reason for me in favor of (i), (ii) and (iii) because any argument that counts for me in favor of (ii) is an argument that makes it impossible for any argument to count for me as a reason against T and hence against (iii). In other words, if A counts as a reason for me for the unshakability of T, it also rules out for me any argument against the truth of T. (P3,U)

**P5**. Hence, it is impossible that A counts for me as a reason against the Truth Rule. (P4,T)

Claim C7 (below): I clearly and distinctly perceive that T is true.

Claim C8 (below): T is necessarily true each time I conceive it or put it before my mind.

C1. There isn’t any argument that would count against T for me. (P5)

C2. Therefore, T is unshakable for me. (1 and U)

C3. I believe T. (autobiographical report)

C4. Therefore, I clearly and distinctly perceive T. (C2,C3,D)

C5. Therefore, I clearly and distinctly perceive that whatever I clearly and distinctly perceive is true. (instantiation of T in C4)

C6. Therefore I clearly and distinctly perceive that if I clearly and distinctly perceive T, then T is true. (instantiation of T in C5)

**C7**. Hence I clearly and distinctly perceive that T is true. (C4,C5,A1)

**C8**. Hence T is necessarily true each time I conceive it or put it before my mind. (C7,A2)

Does the Truth Rule Validate Descartes’ Basic Argument for the Existence of God?

 It would appear that C8 certifies T by *Cartesian standards* for use in dispelling doubt, because the ‘cogito’ is likewise certified by virtue of the fact that it is ‘necessarily true each time I conceive it or put it before my mind.’ T can be therefore used to prove that God exists and is not a deceiver, which proposition guarantees that everything that is clearly and distinctly perceived by me to be true really is true. Thus, the problem of the Circle is arguably solved, from Descartes’ point of view. However, this reading holds up only to the extent that A2 holds up, and that raises two issues. First is A2 a reasonable reworking of the ‘cogito’ argument? Secondly, even if A2 is a plausible reading of the ‘cogito’, it will attribute a plausible view of ‘unshakability’ to Descartes only to the extent that the ‘cogito’ itself as plausible.

A More Precise Rendering of Descartes Argument for the Existence of God

Ultimately, Descartes point is the only God could give us an idea of God. Descartes’ prose and the lecture extracted from it is at attempt to justify that claim within the context of the metaphysics of Descartes’s time. Now the challenge is to make the argument more precise than Descartes explicitly does in *Meditations*, without, of course, attributing any beliefs to Descartes that he is unlike to have held.

A Reconstruction of Descartes’s Argument for the

Existence of God (from Meditations V and Meditations III

1. I have a clear and distinct idea of God, autobiographical report

 viz, an idea of an eternal, simple, self-caused object.

2. I have an idea of a being who is God if and only if interpretation of (1)

 it is simple, eternal and self-caused. In other words,

 my idea of x is an idea of God and if only if my idea

 of x is an idea of a being who is simple, eternal and

 self-caused.

3. ***Ex nihilo, nihilo fit****.* **clear and distinct**

 **metaphysical principle**

4. The cause of a thing explains its existence and identity. definitional

5. The identity of an idea is determined by what it is an idea of. definitional

6. Whatever causes an idea explains what it is an idea of. 4, 5

7. Whatever explains the identity of an idea must ‘have as much 3, 6

 reality as the object of the idea.’

8. **The only object with ‘as much reality’ as an eternal object is clear and distinct**

 **an eternal object.**  **metaphysical principle**

9. **The cause of the idea of God is eternal.** 2,7, 8

10. Necessarily, nothing eternal was created. definitional

11. Nothing external to an eternal object can cause it (that 10, definitional

 is, can create it).

12. Everything has a cause. 4

13. Every cause is internal or external. definitional 14. The cause of an eternal object is internal, which is to say 11, 12, 13, definitional

 that every eternal object is ‘self-caused.’

15. **The cause of the idea of God is self-caused**. 9,14

16. Necessarily, anything eternal cannot be destroyed definitional

17. Whatever cannot be destroyed does not have parts; i.e., **clear and distinct**

 **i.e., is simple metaphysical principle**

18. **The cause of the idea of God is simple** 9, 16, 17

19. **The cause of the idea of God is eternal, simple and self-caused.** 9,15,18

20. The idea of God as a simple, eternal, self-caused being 1

 is clear and distinct.

21. **Every clear and distinct idea is true.** **The Truth Principle**

22. A being is God if and only if that being is simple, eternal 20,21

 and self-caused.

23. **The cause of the idea of God is God**  19,22

23. Anything that causes something to exist also exists 3

 (albeit at least at its ‘level’ of reality).

24. **The cause of the idea of God exists.** 1, 23

25. **God exists.** 22,24

**Week 4 Descartes on Knowledge, Mind and Error**

Responses to Descartes’ Argument for the Existence of God in Meditations III:

 Hobbes, Arnold and Locke

Hobbes

Hobbes argues that our ideas of God’s attributes or properties are all derived from finite examples. We conceive God from them by introducing the notion of ‘boundlessness.’ But what we mean by this is merely something that is not restricted in the way in which we are. So, we can have no image of God and hence no genuine or positive idea of God. Descartes responds that ‘idea’ is the word we use to designate the form of a perception. So, we form an idea of the ‘divine act of understanding’ by indefinitely extending our conception of ‘an act of understanding.’ But the idea of God that we used to prove God’s own existence contains such immense power that it would be contradictory for us to suppose that something other than God could exist without having been created by him. For Descartes the idea of God is innate, which means that we have the power to elicit it; it does not mean that we are always thinking of it.

Arnauld

1. Arnauld reminds Descartes that the idea of cold is plausibly an idea of privation. By this Descartes and Arnauld mean that whatever is cold is lacking something. Of course, that thing is heat. (Why would it be implausible to say that heat is a privation and what is lacking is cold? Leibniz answers this question by saying that there are degrees of heat. (New Essays on the Understanding) But according to Arnauld, Descartes claims that although cold is a privation, the idea of it is something positive, which is ‘materially’ false. Arnauld counters that if cold is merely a privation, there cannot be a positive idea of it, and, hence, could not be a materially false positive idea of it. Arnauld goes on to argue that ideas are positive not because they are a mode of thinking; otherwise every idea would be positive given that every idea is a mode of thinking.) On the contrary, an idea is positive by virtue of the objective existence it contains and its presence in and to the mind. (MP, p. 83) Where then does Descartes go wrong? Arnauld says that if the idea of cold that is displayed to the mind is a privation, then it is true. But if it is a positive being that is displayed to the mind, then it is not the idea of cold, but of something else. According to Arnauld, if we insist that the idea of cold is a positive idea of a privation, then it is not the idea that is materially false but rather the judgment that the idea is an idea of something positive that is false.

2. Why is all this of interest. It is because if someone has an idea of God that transfers ungodly attributes to God, we should not say that his idea is false but rather that his *judgment* that his idea, which includes privation, actually is an idea of God:

…Therefore, though it is possible that this idea is not the idea of cold, it nevertheless cannot be a false one, but you may say, it is false precisely in virtue of its not being the idea of cold. Actually, it is your judgment that is false, were you to judge it to be the idea of cold. But the idea, in and of itself, is most true.

In a like manner, the idea of God surely ought not be called false, not even materially, even though someone could transfer it so something that is not God, as idolaters have done. (MP, p. 83)

3. But now the question arises, could my idea of an infinite being derived from ‘something other than an infinite being, and especially whether I am derived from myself.’ (MP. p 83) Theologians claim that it doesn’t make sense to say that one’s self-conception is derived from oneself because ‘being derived from oneself’ cannot be taken in a positive sense. It just means ‘not derived from another.’ According to Arnauld, Descartes claims ‘being derived from itself, can be taken in a positive sense, even when it applies to God. (M, p. 84) If so, God ‘stands in the same relationship to himself as efficient cause to efficient effect, which Descartes in fact asserts. (MP, p. 84) But according to Arnauld, Descartes way of conceiving this is incoherent.

3a.Suppose that I am the efficient cause of myself, or that God is the efficient cause of Himself.

 (supposition for reduction ad absurdum)

3b. Every efficient cause occurs prior to its effect. (by definition)

3c. Therefore I exist before I exist, or God exists before God exists. (from 3a,3b)

3d. But nothing can exist before itself. (obvious metaphysical principle)

3e. Therefore, I am not the cause of myself, and God is not the cause of himself. (3a,3b – 3d)

4. Now, Descartes argues against Arnauld that whether cold is something positive or a privation, our idea of it is the same. And it is reasonable to say that the idea of cold gives rise to error if cold is a privation because ‘I cannot observe any more reality being shown to me by one idea (of heat or of cold) that the other. (That is, each seems to me to represent something objectively real.) (MP, p. 87) But material falsity, Descartes goes on to say, exists only in the idea; formal falsity (about what is objectively real rather than the (misleading) content of our idea) exists in the judgment.

5. What is the coldness of which we have an idea? Descartes says that when ideas are confused and obscure (like the ideas of heat and cold) we can mistake what exists merely in the understanding for something that it represents correctly. But now we come to the main point. Couldn’t we say that about our idea of God as well? Couldn’t it be that our inadequate idea of God is a confused representation of something that purportedly exists outside the understanding? But Descartes says that cannot be if the idea of God is clear and distinct, because then it represents accurately. **(Why? The Truth Rule!!!)** Moreover, this enables us to see why it is that we should call the ideas of idolaters and those formed at the ‘whim of the mind’ to be materially false, that is, occasions for errors in making judgments about God. And Descartes concludes, he is right to call obscure ideas materially false because obscure and confused ideas are not caused by something positive but rather by the obscurity of the ‘sensation’ itself. (MP p. 88)

Locke

Our ideas of substance are complex. Spirits are examples of complex ideas of substance. Spirits, according to Locke, are capable of change in position because they are associated with bodies. However, the ideas of substance underlying finite spirits and bodies are unknown to us. We do have coherent ideas of the solid cohesion of parts in bodies and of those that impart motion. We also have coherent ideas of powers of the spirit, including thinking and the power of beginning or stopping thoughts or motions.

 Our idea of God is an idea of our own creation. “When we frame an idea … most suitable … to the supreme being, we enlarge every one of those (simple ideas of reflection) with our idea of infinity and some putting them together make our complex idea of God. (**MP**, p. 366f) How would Descartes respond to this; in particular, what would Descartes’ think of Locke’s use of ‘infinity’?

Truth and Error in Descartes, from Descartes’ Point of View

1. The idea of God arises from the contemplation of the fact that I am an incomplete and dependent being, which presupposes that I have an idea of what it would be like to be complete and independent being, which in turn implies that I have an idea of God.

* It cannot be that God is a deceiver, because deception is a mark of weakness and hence not the mark of a complete and independent being.
* Since God gave and continually renews my capacity to reason, and God is not a deceiver, it is therefore impossible to believe that I could ever fall into error if I use my faculty of reasoning correctly.
* But this raises the question of the origin of error. According to Descartes, insofar as we ‘participate in nothingness or not-being’ (that is, insofar as we are imperfect and unlike God) it is not surprising that I might fall into error. This means that I need not assume that I have a ‘special faculty’ for error but rather that error is the mark and/or product of a deficiency in me.

2. The lack in me that allows for error derives from a privation or lack of some knowledge that I could possess, but God could have created me so that I would never be mistaken, if I were to use my faculties correctly. Yet, this should not lead us to the conclusion that God created what is worse in preference to what is better.

* First we must recognize that our own powers of intelligence are inadequate to understanding the operations of God’s mind
* Second, we must not consider a single “creation” separately, apart from all others, in judging it. For the will of God is for the best on the whole.

3. Self-examination yields the result that our errors are due to two joint causes: the understanding and the will.

* By understanding we merely conceive that which the will affirms or denies.
* Among our attributes, only our will is perfect, viz. in its freedom. And it is this that indicates that we are made in the image of God.
* From this we may conclude that the will is ‘much more ample and far-reaching than the understanding.’ We err when we extend the will to matters that we do not understand. The will is therefore easily turned aside ‘from the true and the good and chooses the false and the evil. And thus it happens that I make mistakes and that I sin.’
* When we say that we do not understand, we mean that we do not comprehend with perfect clarity.
* From this it follows that we err even when we affirm what is true by accident.
* Error is not attributable to God, because it is due to a privation, and it not referred to God as its cause.
* Thus, the rule to affirm only what is clearly and distinctly perceived is justified. We cannot err if we affirm only what is clearly and distinctly perceived.

Descartes: Knowledge of Nature

1. We now turn to the issue of our possible knowledge of the “external” world. When we turn our attention to the continuum (mapped onto Cartesian co-ordinates), we find that we are aware of an “infinity” of things that cannot be attributed to the imagination, but rather have true and immutable natures – that is, ideas of them and about them that force themselves upon us and are therefore unlike the ideas of the imagination. I clearly and distinctly perceive the properties of these objects, and hence my ideas of them must be true.

 Descartes idea at this point is that the innate ideas of mathematics essentially apply to extension, that is, to regions of space. Thus a clear and distinct idea of a mathematical object, say a right triangle, must hold of regions of space. For Descartes, regions of space are define by matter. Thus, the application of the principles of geometry to physical space.

 This idea is daring; maybe too daring. Descartes reasoned that space could not be empty of matter if extension (which is an innate idea) applies to every region of space. For that reason, Descartes said that space must be filled with something, “the plenum.” This suited his mechanistic views of astronomy. Why? Because Descartes (who did not know about Newton’s theory of gravitation) thought that motion is generated by “communication,” that is by matter acting upon matter. Descartes reasoned that the motions of heavenly bodies must be perpetuated by vortices (something a huge storm), which causes the planets to rotate around the sun. It is interesting that the shape of a vortex is conical. Hence the motions of the vortices could be calculated by referring to their conic sections.

 Many people have ridiculed Descartes’ physical theory, and it certainly is not correct. On the other hand, it doesn’t deserve ridicule; it is a coherent theory, but it does not comport with Newton’s or Einstein’s accounts of planetary motion and gravitational force gravitational force.

2. I also clearly and distinctly perceive the idea of God, although this may at first not appear to be true because having become accustomed to separate essence from existence, I am persuaded that I may know the essence of God even though God does not exist. Yet upon reflection it is clear that I cannot separate the existence of God from his essence any more than the essence of a rectilinear triangle from the fact that the sum of its angles equals two right angles or of the idea of a mountain from a valley.

3. But mightn’t someone argue that even though I cannot separate the idea of a mountain from a valley, it does not follow that any mountain exists? This objection, turns out to be specious. It is true that from the fact that I cannot conceive a mountain without a valley it follows only that if a mountain does exist, the valley must also exist. But I cannot conceive of God except as existing, and hence from the fact that I conceive of God it follows that he exists. Well, that’s assuming that we actually do conceive of God, which one of the points at issue according to Descartes ‘critics! But Descartes’ argues that he does conceive of God because:

* I cannot conceive of anything but God whose nature involves existence,
* I cannot conceive of two or more “Gods.”
* If God exists at all, he exists eternally.
* Our conception of God is determinate and cannot be altered.

Obviously it would be something of a challenge to analyze this grand argument and set it forth in an orderly fashion. One important fact is that Descartes does not believe that this argument for the existence of God could be sustained without first knowing that God is not a deceiver, which of course presupposes that God exists. But given that we are not systematically deceived and that what we clearly and distinctly perceive is true, Descartes believes that we could successfully argue that God exists if only because he is eternal.

This last point deserves more credit than it is given. I think that it would be correct to represent Descartes version of the ontological argument in this way. I (that is I, Descartes) have a clear and distinct idea of God as an eternal, necessary being because my idea of God is *innate*. Because my idea of God is clear and distinct, it is an idea that accurately represents. Hence God exists.

Notice that this argument could not be applied to something that exists adventitiously. If, I, Descartes had a clear and distinct idea of an existing dollar bill in my wallet, then my idea would accurately represent and there would be a dollar bill in my wallet. But I do not have a clear and distinct idea of an existing dollar bill in my wallet. Notice, that weak as this argument is, there is one that is even weaker: I, Descartes have a clear and distinct idea of a dollar bill in my wallet, therefore my idea accurately represents and there is a dollar bill in my wallet. But I, Descartes do not have a clear and distinct idea of a dollar bill.

We do not have a clear and distinct idea of a dollar bill because in order to have a clear and distinct idea we would need to distinguish it successfully from all other ideas and successfully distinguish all its components parts from each other. . But the content of the idea of a dollar bill depends upon its causes (and causes of its causes), and we cannot have an idea of all them. (This argument, which I believe is implicit in Descartes, is explicit in Spinoza.)

4. Until we satisfy ourselves of the Truth Principle, we cannot be satisfied by any proof that uses it. But as we have seen, we can satisfy ourselves that the Truth Principle is as certain as the cogito. But why then do we need to wait for Mediation V for the proof of the existence of God from the clear and distinct perception of God’s eternality? A pretty question! This is where Descartes ideas about memory emerge. Even if we are certain of something x now, we cannot project present certainty about x into future truth about x unless we know that the evil demon is not at the ready to deceive us. To know this, we need to satisfy ourselves now that God now exists; having done that, we would now know that the evil demon does not exist and will not ever exist. In other words, we couldn’t just infer the existence of God from the clear and distinct perception of his eternality (which implies projection into the future) and hence future existence without knowing that the evil demon does not exist, and to know that, we must first know that God exists! But we can know that, if we can be as certain of the Truth Rule as we are that the evil demon cannot deceive us now about our own existence, and hence about our essence and the contents of our mental life.

5. But what are we to conclude of the material world. As we have seen, ontological arguments about God do not carry over to the material world. (Arguments about the applicability of mathematics to extension and physical space are exception, because the ideas of extension and mathematics are innate.) If we can know that God exists and will always exist, what can we say about our knowledge of the changeable world? Descartes begins by emphasizing the difference between the imagination and conception. The imagination is a faculty by which we produce images, at least in simple case, of things that we conceive. These images are likely produced by bodies. Because there is no other likely explanation of images, we conclude that it is ***probable*** (p. 48, line 20 from the top) that bodies exist.

6. But are we able to gain greater confidence in the existence of external things by examining sensation?

* We know that what can be clearly and distinctly conceived to be separate are in fact distinct. Thus my soul and my body are distinct, and from this it follows that it is possible for one to exist without the other.
* We perceive certain faculties, like the ability to change location. It is very clear that these faculties must inhere in a corporeal or extended substance. Furthermore, we have a faculty by which we receive and recognize ideas of sensible objects. But these faculties are not in me insofar as I am a thinking thing. Thus they must exist in a substance other than me.
* Since God is not a deceiver, it follows that these images (ideas of sensible objects) must be produced by sensible objects. Thus corporeal objects must exist, and what I clearly and distinctly perceive of them (viz the truths of mathematics) must also be true of them.
* But we have reason to hope that we can learn truths about corporeal objects that are doubtful. After all, God gives us a critical faculty by which to examine our beliefs and to correct errors. Thus, what we learn from nature (for example, how to relieve the pain of hunger or thirst) is based upon correlations that we have reason to think are true.
* One difficulty that immediately arises is that sometimes nature appears to teach me something that is false, for example, that food will relieve the distress of hunger. But what if it is poisoned, and we eat the food any way, unaware of its lethal additive? How is it that God allows us to fall into error in this way even when we appear to ourselves to take proper precautions suggested by critical scrutiny?
* To begin, the mind or soul does not receive impressions from all parts of the body, but only from the brain or perhaps one of its smallest parts. The changes in the brain appear to be caused by changes in the body, but different changes in the body can produce the same change in the brain, which accounts for the fact that we can be deceived. This knowledge enables us to identify errors. In principle we could gain certainty about the causes that act upon our bodies, but the complexity of investigation means that we may find ourselves open to error in particular cases.

**Week 5 Descartes’ Critics and Introduction Leibniz**

Descartes’ Critics

Princess Elizabeth of Bohemia

* Princess Elizabeth: How can the soul move the body since it appears that motion is communicated through bodies? Descartes: Descartes’s reply is vague. He complains that we have not yet stated the principles by which the soul and body interact, and he adds that we have a tendency to treat qualities like gravity as substances. This leads to the mistake of thinking that forces inherently pertain to the body.
* Princess Elizabeth: But the fact that gravity propels objects does not appear to substantiate the view that objects can be propelled by something that is immaterial. Descartes: What moves objects is the soul united with the body (or a mereological union of the soul and the body).

Margaret Cavendish

* For Margaret Cavendish nature is infinite and (eternal (everlasting?) and corporeal. Bodies are divisible, but the resulting parts are also corporeal. (As we shall soon see, Leibniz would agree with Cavendish so far, but he claims nevertheless that the ultimate constituents of reality are not corporeal but are spiritual.)
* Cavendish proposes an explanation for beliefs in the supernatural. It is that people do not want to see themselves as ordinary objects of nature but rather yearn to be “Godlike.”
* Thought sand sensation are therefore to be explained via the motions of matter.
* The operations of nature follow from internal principles

Hobbes

* As we have already seen, Hobbes’ philosophy is very different from Descartes’.

Hobbes. Hobbes flatly denies the conceivability of God. Hobbes’s reaction to Descartes on God follow from deep differences concerning language and conceivability.

* Hobbes argues that just as a term like ‘fire’ may be used to name the unperceived cause of a sensation; so “God” might just be a name used to refer to the unperceived idea of the cause of a feeling or of a notion. But Hobbes implies that this is not enough to give us a genuine idea of God. Descartes counters by claiming that Hobbes’s conception of an ‘idea’ is much too narrow, as it seems to focus on ‘images of natural things.’ (MP, p. 79)
* Hobbes claims that feelings like fear involve objects, and that there cannot be a feeling without an idea of the object. Moreover, Hobbes asserts that animals can fear and, hence must have ideas of the objects of fear; that is, of the things they fear. But Descartes rejects all this, claiming that feeling, like seeing, are acts that take place independently of language, and hence need not involve affirmation and therefore need not involve an image of a thing feared (or wills). (MP p. 80)
* Hobbes insists that an idea like the ‘soul’ is inferred because animal motions must have a source. The idea of God is likewise inferred. So, Hobbes’s argument about the existence of God in Meditation III depends upon the assumption that there is a positive idea of God, that is, an idea of God that is defined as the cause of this or that. But Descartes responds that it is obvious that there is a positive idea of God, and that the only reason for thinking that there isn’t a positive idea of God is that there isn’t an ***image*** of God ‘depicted by the corporeal imagination.’ (MP, p. 80)
* Hobbes denies that there is a positive idea of substance, and so he denies the key premise that the cause of an idea of substance must have as much formal reality as there is objective reality in the idea itself. Moreover, Hobbes complains that Descartes has not adequately explained the idea of ‘degrees of reality.’ But Descartes remonstrates, complaining that the conception he offers of the degrees of reality corresponds to the distinction between substance and mode. (MP, p. 81) Hobbes argues that our ideas of God’s attributes or properties are all derived from finite examples. We conceive God from them by introducing the notion of ‘boundlessness.’ But what we mean by this is merely something that is not restricted in the way in which we are. So, we can have no image of God and hence no genuine or positive idea of God. Descartes responds that ‘idea’ is the word we use to designate the form of a perception. So, we form an idea of the ‘divine act of understanding’ by indefinitely extending our conception of ‘an act of understanding.’ But the idea of God that we used to prove God’s own existence contains such immense power that it would be contradictory for us to suppose that something other than God could exist without having been created by him. For Descartes the idea of God is innate, which means that we have the power to elicit it; it does not mean that we are always thinking of it.

Spinoza

1. According to Spinoza (MP p. 97) the Circularity Objection to Descartes is this:

* We can be certain of nothing before we have a clear and distinct idea of God.
* But we cannot have a clear and distinct idea of God as long as we do not know whether or not the author of our nature is deceiving us.
* Therefore, we cannot be certain of anything as long as we do not know whether or not the author of our nature is deceiving us. (MP p. 96f)

2. Spinoza accepts (1i) but denies (1ii); Spinoza claims that we can have a clear and distinct idea of a triangle, for example, ‘whether or not the author of our nature is deceiving us.’ Just as we can know the *Cogito*, so Spinoza thinks we can have clear and distinct ideas of others things.

 Descartes might have declined this helpful suggestion because Descartes wondered whether or not we could be systematically deceived, and hence be mistaken in what we clearly and distinctly perceive, or mistaken in our conviction what whatever is clearly and distinctly perceived is true. Spinoza might have responded that Descartes himself puts these doubts aside when he accepts the cogito. At that point he admits that certain thoughts, clearly and distinctly perceived at least to the degree of the Cogito, are beyond doubt. And, if that is the standard of reason, then reason will commend the inference to the fact that I am a thinking thing from the fact that my existence is clearly and distinctly perceived by me whenever I contemplate the fact of by doubting my existence.

3. Elsewhere, in Spinoza’s *ETHICS*, Spinoza complains that Descartes misconstrues the notion of substance, and that his misconception misleads him both about the nature of God and about the relation of the soul and the body.

* For Spinoza, substance is a thing that can be ‘conceived in and through itself.’ By this Spinoza means that the conception of substance is not dependent upon any other thing, and in particular not dependent upon ‘negation.’ In other words, to have a proper conception of substance, one need not differentiate substance from things of its kind. Thus, we can have an accurate conception of this piece of paper if we can distinguish (know that it is not the same) as the next page of the handout. But substance is conceived in and through itself, meaning that there isn’t anything else of the same type (another substance) from which it must be distinguished. It follows that for Spinoza there can be one and only one substance, and that substance is God.
* Moreover, Spinoza says that Descartes is wrong to think that there are many finite substances, some mental and material. In the first place, two finite ‘substances’ could not really be substances, because to know what each is we would need to know that it is not the other. Moreover, it is wrong to think that there could be two types of substances, mental and material, because knowledge of what each is would involve knowing that it is not the other. Thus, it cannot be that there is a problem of the causal interaction of mental and material substances, because there aren’t two types of substances. According to Spinoza, reality can be conceived either as mental or as material, and the two conceptions “parallel” each other, so that for each mental event there is a physical event and conversely. Reality, which is substance for Spinoza, is revealed equally by the mental and the material aspects of reality.

5. Leibniz

1. Leibniz is not at all satisfied with Descartes’ ‘proofs’ of the existence of God. In the first place, Leibniz thinks that Descartes’ God is like Spinoza’s, a mere abstraction. Descartes does not show that his God is one that ‘we would hope for,’ one who is ‘just and wise, doing everything possible for the good of his creatures.’ (MP p. 104)

2. But there is a deeper problem, which is that Descartes’ God seems to be defined as the repository of all perfections. Leibniz points out that some people deny that this premise will be sufficient to prove the existence of God because they deny that existence is a perfection, that is, a properly of a thing. (On this theory, the idea of a real dollar bill is the same as the idea of an imaginary or non-existence dollar bill. In denying the existence of the imaginary dollar bill we are not attributing a property to existing dollar bill that the imaginary one does not have. Arguably, if that were the case we could not intelligibly (but mistakenly) affirm the existence of an imaginary dollar bill. NB: This version of the argument is due essentially to Kant, who relies upon it, or something very much like it, in his *Critique of Pure Reason*.)

3. Other people who deny that the conception of God as a repository of all perfections will reject the conclusion that God exists because they cannot see how a ‘simple idea … can imply existence outside us.’ (MP p. 102) According to Leibniz, those people are wrong, and it is important to see where they go wrong. Leibniz’s point is that we do not know *a priori* that it is possible for a being to exist with all perfections, because they might contradict each other. (Presumably Descartes would argue that any perfection that could not co-exist with another would be imperfect, lacking something that a perfection ought to have.) But never mind, Leibniz insists that there is always a ‘presumption on the side of possibility,’ that is, a thing is possible until it is shown that it involves a contradiction. But, God’s existence follows from his possibility, presumably because no contraction can be shown from his nature, because the idea of God is simple. Indeed, Descartes seems to rely upon this very intuition when he argues that we have a clear and distinct idea of God. If the idea of God were complex, it could be confused, and hence possible that it is not clearly and distinctly conceived, implying that it could contain a hidden contradiction.

4. Leibniz agrees with Spinoza’s objection to Descartes’ conception of the soul. But Leibniz begins his criticism by complaining that Descartes’ idea of the immortal soul is really worthless, because Descartes does not guarantee that the soul will in the after-life have any recollection of the life that was led. This, as Leibniz remarks, would undermine the idea that the soul is the ultimate object of moral evaluation. (MP p. 103) For Leibniz, the soul is a simple spiritual substance that has attributes that distinguish it from all others, in particular, that is conscious of itself. (More on this when we study Leibniz in detail.)

**Introduction to Leibniz**

1. Leibniz defines a monad to be a simple substance, mean a sub stance without parts. (Monadology #1: MP 275

2. Simple substances of monads must exist because composites exist, and a composite is a collection or aggregate of simples. (Monadology #2, MP p. 275)

3. Composites are divisible, but simples are not divisible. Hence monads are not material, at least if the essence of matter is extension. Extension is divisible without limit, but no monad is divisible. Therefore monads re not extended; hence they are not material. But whatever is no material in nature is spiritual. Therefore, monads are simple spiritual substances. (This is the traditional way of reading Leibniz, although our translation suppresses this argument and simply assets that where there are not parts, there can be neither extension, nor shape nor divisibility.)

4. The idea of a simple, spiritual substance, which will ultimately be the ‘atoms of nature’ and hence the physical world is disarming. But, first, it is important to distinguish physical from material things. That physical things are material, essentially composed of matter, is a metaphysical thesis. But how can physical things be composed of immaterial (viz. spiritual) things? We shall adopt the following hypothesis of interpretation, and base our reading of Leibniz on it. As a rationalist, Leibniz believes that the physical world is intelligible to the human mind. In suggesting that monads are spiritual, Leibniz is suggesting only that they are intelligible. Their essence is to be understood. They are, in effect, packets of information. As we study Leibniz, we’ll try to develop this hypothesis and evaluate it.

6. Change in the physical world for Leibniz is a rearrangement of parts (cf. Boyle). But a simple substance has no parts to rearrange. Hence it cannot be brought into existence or be destroyed. (Inferred from Monadology #3, #4, MP. p. 275)

7. Because monads do not have parts; they cannot undergo the type of change that characterizes the physical world, and further cannot exchange information with other monads, because that would imply exchange of parts. Leibniz expresses this colorfully: “Monads have no windows.” (Monadology, #7, MP p. 275)

8. However, monads must have qualities; otherwise they would be nothing at all. And no two Monads can have the same qualities because if two purportedly different monads, x,y, have all the same qualities, then x = y; that is, x and y are really one. (Monadology, #8 - # 10, MP, p. 276)

**Wek 6 Leibniz on Nature, Substance**

**and the Pre-established Harmony**

Leibniz on Nature and Substance

Lecture #9 Leibniz on the Pre-established Harmony

1. According to Leibniz, animals have at least some memory, and so there is a non-trivial sense in which they have souls. But memory and reason are distinct; reason involves ‘necessary and eternal truths.’ (MP p. 278 *Monadology* #29)

2. Knowledge of necessary and eternal truths enables us to ‘think of that which is called ‘I’.’

3. There are two kinds of reasoning: one is by non-contradiction, by which we rightly judge that all contradictions are false; the second is by sufficient reason, by which we rightly judge that there is a sufficient reason why each fact is as is it and not otherwise. (MP, p. 278; Monad. #31, 32)

4. Thus there are two kinds of truths: those of reason and those of fact. Truths of reason are necessary, meaning that their ‘opposites’ are impossible; truths of fact are contingent, meaning that their ‘opposites’ are possible. (MP p. 278; Monad, #33)

5. To explain the multiplicity of contingents, we will not make progress be referring to further contingents, which would also require explanation. Rather, we need a sufficient reason for the entire chain of contingents, and this sufficient reason is what we call ‘God.’ (MP p. 278; Monad, #37)

6. Because God is a simple consequence of its possible existence and because God is sufficient for everything else, there can be nothing outside of God that is independent of God. (MP p. 278; Monad, #38 - 41)

7. The influence of one monad over another ‘can only be ideal,’ which means that actions and passions are ‘mutual;’ in other words, do not entail incompatible predications.

8. There are infinitely many possible universes. A universe is an infinitude of monads. We may liken an infinite set of monads, a possible world, to a maximally consistent set of propositions or statements, which would be the correct descriptions of an infinite set of monads. (A maximally consistent set of propositions is a set that would become inconsistent if any single proposition were added to it. We can construct a maximally consistent set by including every statement or its negation.)

 Because there must be a sufficient reason for every fact, there must be a sufficient reason for the existence of this possible world rather than any alternative. That reason is that God, who, acting from his nature, must have chosen the best.

9. A living being is a body with a dominant entelechy, and each part of a living body is also a body with a dominant entelechy. Thus each living body has a dominant entelechy, which in the case of animals is its soul. But the parts of animals are yet other living beings, with their entelechies.

 The soul follows its own laws and the body its own laws, and agree by virtue of the ‘pre-established harmony.’ (MP p. 282; Monad. #78) Another way of saying this is that souls act according to the laws of final causes whereas bodies act according to the laws of efficient causes, and the two harmonize with each other.

10. We have already seen that there must be a pre-established harmony among monads in the actual world; otherwise the actual world would not be possible. If Mary loves Joseph then it must be that Joseph is loved by Mary. But the pre-established harmony is a much wider notion. In particular, it guarantees that ***the order of efficient causes is in harmony with the order of final causes***.

 At the level of ordinary physical objects (composites), it must be that the monads that constitute physical objects have formal (and hence final) causes that are consistent with the behavior of composites. Perhaps an example of this that is drawn from contemporary science is that the properties of a composite like gold depend upon the formal and final causes of the monads that make up the gold. There is a sufficient reason for these pre-established harmonies (among monads and between monads and composites), to wit the ***intelligibility*** of reality, which is an expression of God’s ***rational*** nature. In addition to a pre-established harmony among constitutive monads and non-living things, there is a pre-established harmony between the bodies and souls of living things.

11. Leibniz writes that souls act according to final causes and are ordered by them. Here we again see the enormous influence of Aristotle. Remember that final causes are explanatory: They enable us to identify the ‘end’ of an object and hence to determine whether or not it is a good example of its kind. Consider for example, a statue made of bronze (material cause), given form by a sculptor (efficient cause), that is itself a certain shape (formal cause), which is a representation of Athena (final cause). Getting the shape right means producing a statue whose end (final cause) is the representation of Athena. The statue, if it is a good one, will have the shape that it has just because it is a statue of Athena.

 Rational souls act according to final causes because they choose for reasons, that is, they choose to achieve a certain end. Souls that are non-rational can be thought of as acting for reasons, even though those reasons do not guide action through deliberative choice. A thirsty dog runs to a source of water, but not as a result of deliberation. Even so, the dog’s action has an explanation that refers to a final cause.

12. Now, according to Leibniz, bodies and souls act as though the other does not exist, although it is impossible for bodies to act without souls. In fact, the internal structure of each monad is governed by appetition, that is, is guided by the natural tendency to its own end. In the case of monad that is not a soul, the formal cause and final cause will be the same. So, the natural tendency of the monad will just be implicit in what it is. In the case of souls and rational souls, the order of efficient causes, by which we could predict bodily movements, and the order of final causes, the ends of action, must be consistent. And this too is a pre-established harmony. It exists for a sufficient reason, which is that it is a condition of the *rationality of choice*, which is a reflection of God’s ***rational*** nature.

13. These distinctions, between souls and rational souls (or minds, which are sometimes called ‘spirits’) and the distinction between final and efficient causes are extremely important for Leibniz’s religious philosophy. For Leibniz minds are capable of *knowing the system of the universe*, and in this way each is like ‘like a little divinity.” (MP p. 282, #83) It may be better here to take a more daring view of what Leibniz is saying, by allowing that minds actually can mirror a fragment of God’s thoughts. In any case, Leibniz explicitly says that minds are capable of entering in ‘a kind of society with God,’ in which God is likened to a prince or to a father. (MP p. 282, #84)

14. The collection of all minds that enter into this sort of relation with God is the ‘city of God,’ and in fact the city of God reveals yet another pre-established harmony, which is between the physical kingdom of nature and the moral kingdom of grace. By this Leibniz means that rewards and punishments are apportioned by God according to actual physical acts performed. There is of course a sufficient reason for this harmony, which is God’s ***just*** (viz ***good***) nature.

Leibniz on the Pre-Established Harmony

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**Week 7 Background and Locke Part One**

Some Important Distinctions:

1. Concept Empiricism: The doctrine that all ideas derive, directly or indirectly, from experience.

2. Innate Ideas: Ideas that are not acquired as a result of experience, but are present from birth.

3. Statements: A statement is a claim made by asserting a sentence of language.

4. Propositions: A proposition is whatever is expressed by a statement. For example, the statement of Latin: ***Silent leges inter arma***, expresses the same proposition as the statement of English: **Laws are silent in war**. (Cicero) Statements are relativized to languages; propositions supposedly transcend, language, or at least particular languages.

5. Empirical Truths: Statements (viz. propositions) that are true because they correctly assert facts about the natural world, broadly construed. (Examples, laws of nature, true

judgments of perception)

6. Conceptual Truths: Statements (viz. propositions) that are true because of the way in which concepts are related to each other (Examples, Everything is identical to itself; every

triangle has three interior angles)

7. Analytic Statements: Statements (viz. propositions) that are true by virtue of logical form or by virtue of logical form and their descriptive terms (Examples: Everything identical to itself; every triangle has three interior angles; every analytic statement is true.)

8. Contradictions (or inconsistent statements): Statements that are false by virtue of their logical form or by logical form and their descriptive terms.

9. Questions: Are all conceptual truths analytic? Are all analytic propositions conceptual truths?

If P is analytic, then which proposition is a contradiction?

10. A posteriori propositions: Propositions that are confirmed by sensory experience or are derived by correct inferences from propositions that are confirmed by sensory

experience.

11. A priori propositions: Propositions that are known without any reliance on sensory experience (except knowledge of the words used to express those propositions).

12. Synthetic Propositions: Propositions that “tend to be” confirmed or disconfirmed, directly or indirectly, by sensory experience, including observation and experiment.

13. Questions: Are all posteriori truths synthetic? Do you think that there are synthetic a priori

propositions? (They would be propositions about the world that can be known without examination of the world.)

14. Self-evident truths: Truths that can be known without proof or demonstration.

15. Maximally consistent set of propositions: A set of propositions is maximally consistent if the

 addition of any proposition to it would make it inconsistent.

16. Necessary truths: Propositions that are true in every possible world, that is, that are included within every maximally consistent set of true propositions.

17. Possible truths: Propositions that are true in at least one possible world, that is, are included in at least one maximally consistent set of true propositions.

18. Questions: If P is a necessary proposition, then which proposition is not possible? If P is possible then which proposition is not necessary? Are all self-evident truths necessary? Are all necessary truths self-evident? What would Descartes say?

Locke’s Version of Concept Empiricism

1. Locke’s goal is to consider the ‘discerning faculties’ of ‘man’ with respect to their objects. This means that Locke will not be concerned with the problems that beset the rationalists, and in particular will not be concerned with the question whether or not ideas depend upon the motions of matter. (MP p. 316) What does this imply about Princess Elizabeth’s criticism of Descartes?

2. According to Locke it is possible to explain how people come to have knowledge without having recourse to any innate ‘impressions.’ Here, of course, Locke is rejecting the Cartesian approach.

3. Suppose that it was demonstrated that there is universal consent to certain principles or acceptance of certain ideas. Even so, Locke would claim that universal consent in itself proves nothing.

4. Locke asserts that ideas cannot be imprinted upon the mind without the mind perceiving them. In fact, even if the axioms of mathematics are discovered by the mere use of reason it would not show those principles to be innate. In fact, reason is not a faculty of discovery, but rather a manner of the manipulation, by transformation rules, of knowledge that we already have.

5. Furthermore, it appears that our knowledge of ordinary truths does not depend upon the use of reason because our knowledge of ordinary truths begins even before we have mastered the language necessary to express them. Furthermore, if a given proposition were innate, the ideas that make it up would need to be innate, but it is obvious that our ideas (for example) of colors and sounds are not innate.

6. All the materials of our thinking are or are derived from sensation or reflection. Sensation refers to objects outside of us or our feelings. Reflection refers to the operations of our minds: like doubting and believing. These are imprinted upon the mind which is, as it were, a blank tablet or a ***tabula rasa***. For Locke it is extremely difficult for anything to think and not be conscious of it. In fact, Locke even conjectures that if we take away consciousness, especially of pleasure and pain, it will be difficult to know where to locate our personal identity. (MP p. 325)

7. Cartesians and other rationalists trap themselves when they insist that it is the soul that thinks. A soul, they insist, can think without our knowing it, but they do not allow that a person always thinks, even without knowing it.

8. For Locke, all ideas come from experience. These include both the ideas of things and propositions or thoughts about those things. Some propositions may well be self-evident, but that does not mean that they are innate. As for ideas, all originate either in sensation or in reflection about the operations of our own mind. That all ideas derive from experience is often called ***concept empiricism***.

Locke on Simple Ideas

1. Some ideas are simple; some are complex. Some simple ideas united in the same subject, for example (i) softness and warmth or (ii) motion and color. Yet they are perceived as though they were discovered by separate senses.

2. There are several sources of ideas through sensation: by one sense only, by more than one sense, by reflection only, and some by all the ways of sensation and reflection.

3. By One Sense Only: Simple ideas that come to us from one sense only include **colors, tastes, sounds, and smells**. The idea of solidity, which is resistance to penetration, comes to us from the sense of touch.

1. Solidity fills space but is distinct from the space that it fills.
2. Solidity must be distinguishes from hardness. Hardness is resistance to change in figure and is a function of the firm cohesion of its parts.
3. The mutual impulse, resistance and protrusion of bodies depend upon their solidity. Thus the idea of solidity enables us to distinguished ‘pure space’ from what occupies it. Locke claims that the idea of pure space is as clear as the idea of the extension of a body.

4. Ideas by More Than One Sense: Prime examples are of ideas derived from sight and touch, including space or **extension, figure, rest and motion**.

5. Simple ideas of Reflection: Ideas of reflection are ideas derived from reflection on the operations of our minds. The two principal, most comprehensive, simple ideas of reflection are: (i) the **power of volition or willing,** which is called the will; and (ii) the power of perception or **thinking, which is called the understanding**.

6. Simple Ideas of Both Sensation and Reflection: These ideas include **pleasure and pain, power, existence and unity**. A further idea derived from both sensation and reflection is succession. (NB: This idea will be of obvious importance in a definition of the natural numbers that will satisfy empiricist intuitions. Another essential single idea will be **unity** (from which the idea of a unit is derived). As an exercise try to construct a definition of the whole numbers (0, 1, 2, 3, ….) that depends upon only the ideas of unity and succession. Can you expand your definition to accommodate the rational numbers (any number that can be expressed as a fraction?)

1. Power is derived from the fact that we can at will move several parts of our bodies. We also infer that bodies have power to move each other.
2. The idea of succession is derived from ‘what passes in our minds.’ Hence it has a temporal origin.

7. Distinction Between Positive Ideas and Privations: Locke argues that we can have positive ideas that are produced by mere privations. Thus, black is a privation (absence of color) but our idea of it is positive. (What are the implications of this observation for Arnauld’s criticism of Descartes’ claim that positive ideas can be materially false? for the Cartesian conception of God?)

So, a shadow, which is a privation (viz., an absence of light) can give us as clear idea of a man as the perception of the man himself.

1. Examples like these cause Locke to wonder whether or not there is a valid notion of privation. He writes: ‘In truth it will be hard to determine whether these are really any *ideas* from a privative cause, until it is determined whether *rest is any more a privation than motion.*
2. As an exercise, try to determine which of the premises of Descartes argument for the existence of God in Med III is/are challenged by Locke at this point.

8. Distinction Between Primary and Secondary Qualities: The power to produce ideas is a quality of an object. The immediate object of ‘a perception, thought, or understanding’ is an idea. (MP, p. 333)

1. Primary qualities are inseparable from bodies. So through all division into parts, parts retain primary qualities. They are solidity, extension, figure and mobility.
2. Secondary qualities are powers to produce various ‘sensation in us’ by the primary qualities, of their insensible parts.
3. Other powers, which are just as real as secondary qualities, are also powers of the insensible parts of objects include, for example, the power of a fire to heat an object. These powers produce ideas or changes in objects by ‘impulse.’ (p. 333) As an exercise, contrast Locke’s understanding of the relation of the fire to a hot frying pan with Descartes’ understanding of the same phenomenon. Do Boyle and Locke differ in their conceptions of primary qualities?

9. **Ideas of primary qualities are resemblances. Ideas of secondary qualities are not resemblances**. This means that ideas of color do not resemble their causes in the objects that produce those colors, but our ideas of the primary qualities do resemble their causes.

10. Someone might be tempted, despite the above, to insist that the warmth that is produced in us by the first must resemble warmth in the fire. But Locke argues that this argument is surely wrong (because of a counter-example involving pain). As an exercise, reconstruct Locke’s argument against the theory that we can infer that there is warmth in the fire because the fire procures warmth in us. (See p. 334, col. 2, lines 3 – 14) Referring back to the exercise in (8c), do you think that Descartes could successfully defend his imprint theory against Locke’s counter-example?)

11. Locke argues that heat and cold cannot really be in physical objects. That is because the very same water may be sensed at once as hot by one hand and cold by another. Contemporary science would define temperature as the mean kinetic energy of a substance. (As an exercise: Would Locke’s understanding of the qualities heat and cold be supported or undermined by the contemporary definition of temperature?)

12. Generally when philosophers are attempting to undermine an opposing theory, they try to construct and error theory, or an account of how it is possible that their distinguished opponent could have fallen into error. Locke claims that people fall into the error of thinking that secondary qualities are semblances because ‘the ideas we have of distinct colors, sounds, etc. containing nothing at all in them of bulk, figure, or motion, we are not apt to think them the effects of these primary qualities, which do not appear to our sense to operate in their production.’ (MP. p. 136)

13. Perception is the first simple idea of reflection. According to Locke, wherever there is sense or perception, there some idea is actually produced and present in the understanding. (Which of the theories that we have studied are being attacked by Locke at this point?)

14. Although children may have ideas of hunger and warmth in the womb, this should not lead us to think that there are innate ideas. That is because hunger and warmth are, as Descartes might have said, adventitious, coming from experience. Innate ideas, Locke reminds us, supposedly originate as characters impressed upon the mind from the moment it is constituted.

15. Locke considers a puzzle proposed by contemporary Molyneux. Suppose that someone totally blind from birth learns to distinguish cubes from spheres by touch. Suppose that the person suddenly gain sight and saw a cube and a sphere. Is it reasonable to think that the formerly blind man person could successfully distinguish the cube from the sphere without touching either? Locke concedes that the blind man could not say ‘with certainty’ which object was the cube and which was the sphere. But this suggests that he might have an idea about which was which. Do you think that the formerly blind many would have any reason to judge one to be the sphere and the other the cube? What does this example show about the relation of sensation to judgment?

16. According to Locke the mind also has the capacity of retention. We may keep the object ‘in view’ before our minds, which is called contemplation. Or else we may ‘revive’ the perception that we once had, which is called ‘memory.’ Contrast here two cases. Suppose that someone is recalling a day in the country, sliding on the snow down a mountain. Just what is recalled? It is surely the idea of cold, but is the recollection of cold itself an experience of cold? Now, contrast this with the case of someone who has been insulted and belittled, and who became very angry as a result. Later the person recalls the insult, and becomes angry all over again. Is that person recalling anger, or experiencing anger? (This example is due to Hume.) What does this suggest about the relation between the ‘idea’ first experienced and the memory of it? Modern psychology claims that recollection depends upon coding, that is, on attaching names and descriptions to experiences. Does the apparent asymmetry between recalling the idea of cold and recalling the insult undermine or support Locke; undermine or support modern psychological theories of recollection.

17. Other acts of reflection include comparing, compounding, naming and abstraction. Locke claims that the purpose of names is to take particular ideas and to make them general. This is called abstraction. In effect, the paradigm particular idea makes it a ‘representative of all of that kind.’ But how can we know if a particular idea represents something general of its kind without first knowing what its kind is, and doesn’t this presuppose having a general idea in the first place? Can Locke respond to this objection?

**Week 8 Locke on Complex Ideas and Knowledge**

1. Complex ideas are formed from simple ideas from: (i) combination, (ii) by comparison or (iii) by abstraction (‘separating them from all other ideas that accompany them in real existence.’)

 (**MP** p. 340)

2. **Complex ideas are modes, substances or relations**. Modes may be simple or mixed. Simple modes are composed of different combinations of the same simple idea. Mixed modes include those compounded of ideas of different kinds. (Examples include **beauty (color and figure)**; theft (**concealed change of possession without consent**.)

3. There are several simple modes of space: distance is the space separating points; distance considered in length, breadth and ‘thickness’ is capacity. Immensity is an idea achieved by doubling or repeating ideas of distance.

4. Body is to be distinguished from extension because a body is something that is solid. Extension is merely the space that exists between the extremities of a solid object. (**MP** p. 342)

5. According to Locke, Aristotle’s substance/accident ontology has little use in philosophy. He writes: ‘substance, without knowing what it is, is that which supports accidents – so that we have no idea of what it (substance) is, but only a confused obscure one of what it does. (**MP** p. 344) Locke also questions the distinction that Descartes draws between God, finite spirits and bodies. (See **MP** p. 344)

6. God can be conceived to annihilate bodies while the entire universe is at rest. **The annihilation of a solid body would result in space without a body**. (**MP** p. 345)

7. **Temporal ideas** derive from **reflection** on the train of our own thoughts. The ‘distance’ between the ideas is duration. Time itself is duration set out by measures.

8. **The idea of power** is either active or passive, indicating what can make change or what is receptive to change. Will and understanding are two powers of the mind. Inthinking of the scope of the will, we distinguish liberty from necessity. **We are free if we are not hindered, and we will as we choose or prefer. Freedom is being able to act or not act according to our will**. (**MP** p. 353)

9. Our ideas of substance are complex. Spirits are examples of complex ideas of substance. Spirits, according to Locke, are capable of change in position because they are associated with bodies. However, the ideas of substance underlying finite spirits and bodies are unknown to us. We do have coherent ideas of the solid cohesion of parts in bodies and of those that impart motion. We also have coherent ideas of powers of the spirit, including thinking and the power of beginning or stopping thoughts or motions.

10. Our idea of God is an idea of our own creation. “When we frame an idea … most suitable … to the supreme being, we enlarge every one of those (simple ideas of reflection) with our idea of infinity and some putting them together make our complex idea of God. (**MP**, p. 366f) How would Descartes respond to this; in particular, what would Descartes’ think of Locke’s use of ‘infinity’?

11. Our idea of identity is really derived from our experience of identifying objects over time rather than from determining the conditions under which we have two objects rather than one.

12. This raises the question of personal identity, and it is important to sort out different aspects of the question. According to Locke, if one of the atoms of a body is taken away, it is no longer the same body. Thus, the constituent parts of a body determine the body itself. Second, the identity of the same man or human being consists in the participation of the same continued life by ‘constantly fleeting particles of matter in succession vitally connected to the same organized body.’ (**MP**, p. 369) Third, consciousness is what makes personal identity, or the same self. But the question whether the same spiritual substance is what thinks in the same person is a different question entirely, and question that presumably cannot be answered.

13. Scientific knowledge, indeed all knowledge, presupposes the use of terms that signify a variety of things. Those terms are called ‘general terms.’ Locke thinks that general terms are created essentially by acts of abstraction. His account of just how this is done is one of the most controversial doctrines in his philosophy. As we shall see in due course, Hume offers powerful objections to it.

14. According to Locke, ‘words become general by being made signs of general ideas.’ (**MP**, P. 377) Ideas become general by acts of abstraction, which separate the ideas from time and place and, beyond that, whatever ‘may determine them to this or that particular existence.’ (**MP**, p. 377)

15. At first names are given to individuals, and then, noticing what those things have in common an idea as framed of ‘which those many particulars … partake.’ For example, the name ‘man’ might originate in this way. Thus there is a general name for a general idea. Proceeding from the general name for the general idea of man, we proceed to ‘advance to more general names and abstractions,’ like the name ‘animal.’ (**MP**, p. 378)

16. General natures are abstract ideas. It is from abstract ideas that we first form general ideas and general names for them. (**MP**, p. 378) Thus, when we have collected a group of individuals and call them ‘human beings,’ we must be sure not to include any in the group who are not human beings. This means that we must know what human beings have in common so that we can know whom to exclude. (**MP**, p. 378) Locke thinks that this account explains why it is the definitions take the form of differentiating species from genus. (**MP**, p. 378)

17. The general and universal pertain to the understanding. Empirical science exemplifies knowledge, and that knowledge obviously depends upon claims that are general or universal. Abstract ideas are the essences of genera and species; they are founded on similarities. Locke distinguishes what he calls the real and nominal essences of substances. (Real and nominal essence are the same in ‘simple ideas and modes.’) The nominal essence of a substance, say gold, is defined by the characteristics the gold things have in common by virtue of which the general idea and hence the general term for gold were derived. These characteristics include properties like malleability, fusibility, the color gold, solubility in *aqua regia* but not in water. Locke conceded that that he did not know the real essence of gold, but would surely have agreed with us that the real essence of gold is a function of its atomic constitution, which is marked in the Periodic Table, where gold is identified as the element with atomic number 79. (**MP**, 381)

18. Essence does not pertain to individuals, but rather to the species (denominated by abstract terms) to which they belong. It is perhaps natural to think that each particular thing has a real essence that is independent of the kind of thing that it is, but this is a big mistake. That which is essential belongs to a particular thing as a ‘condition’ by which it is a thing of this or that sort, but take away the conception of the sort designed by the abstract idea and there is nothing essential to the thing. (**MP**, p. 383) What does this imply about Aristotle’s notion of substantial form?

19. Knowledge is the perception, or agreement, of two ideas. Locke identifies four kinds of agreement: identity or diversity; relation; coexistence or necessary connection and finally real existence.

1. Some agreements or disagreements are perceived at first sight. For example, we know right from the start to distinguish “white and round” from “red and square.”
2. Secondly we compare ideas by identifying the relations among them. Geometrical knowledge is largely of this sort. For example: That ‘two triangles upon equal bases between two parallels are equal’ is an example of knowledge or relations among ideas.
3. Coexistence refers to the ideas that are jointly exemplified in a subject. For example, malleability, fusibility, fixedness are all jointly exemplified by objects (of pure, viz. unalloyed) gold.
4. Real existence: An existence assertion, like God is or God exists, is of this type.

20. Degrees of Knowledge:

1. This first degree or type of knowledge is intuitive. This is knowledge that is immediate, without the intervention of other ideas. Examples, white is not black, 3 is more than 2. (**MP**, p. 389)
2. Demonstrative knowledge is dependent upon reasoning. It arises when the mind cannot ‘bring its ideas together, as by the immediate comparison.’ (**MP**, p. 389) Reasoning involves proofs. Before a demonstration is given, the proposition is dubitable, and even after it has been proved it is not as clear as intuitive knowledge. Finally, each step of the proof must be connected two prior steps by intuitive knowledge (cf: Descartes on the same subject)
3. Finally there is sensitive knowledge, which is knowledge of particular existences by perception.

Although this is called ‘knowledge’ it does not reach that ‘degree of perfection’ of the prior two forms.

20. Locke thinks that he has justified the claims to knowledge in mathematics and to a reasonable use of the word in the case of empirical science generally, although he denies that we can have genuine knowledge of nature unless we actually know the real essences of things. The situation with God is ambiguous. Locke claims ‘the existence of a God [that] reason clearly makes known to us, ...’ (**MP**, p. 411) But Locke’s assertion about what reason has shown is very cautious. Locke claims that we cannot understand the operations of our own minds, much less the operations of the eternal mind. (**MP**, p. 411) Thus we are not entirely clear about the God whom reason makes known. Moreover, if we were to ask about the God of Locke’s faith, the Christian God, Locke would agree that reason does not make the existence of that God clear to us. So, although Locke shows some sympathy for the type of argument we find in Meditation III, he certainly does not think that the idea of God is innate or that we are in a position to demonstrate the existence of the God in which he and many of his contemporary believe. It is clear (to me at least) that Locke is trying to show that belief in God is consistent with an empiricist view of idea formation and knowledge and even that there are some considerations that commend theism to us. However, he falls short of claiming that reason actually vindicates his own faith.

**Week #9 Berkeley and Hume on Skepticism**

Berkeley on Abstract Ideas

1. Berkeley begins his Introduction to a *Treatise Concerning the Principles of Human Knowledge* (1710) by bemoaning the skepticism into which we naturally fall when reflecting upon the nature of things. (MP, p. 439, #1) Berkeley attributes this skepticism largely to the abuse of language. (MP, p. 439, #5. The root of the abuse of language lies primarily in ‘the opinion that the mind has the power of framing abstract ideas or notions of things.’ (MP, p. 439, #6) In this passage, Berkeley is of course referring to Locke.

2. Berkeley argues *against the thesis* that we can have an abstract idea, like color, that isn’t any particular color and *against the idea* that we can have an abstract idea of motion that is not the idea of any particular motion. He offers a similar argument concerning the idea of man or human being. (MP, p. 440f, #7 - #10)

3. Locke acknowledges that natural science necessarily involves general terms. But Locke thinks that ‘words become general by beings made the signs of general ideas.’ (Locke Essay, III. 3. 6 as quoted by Berkeley MP, p. 441, #11) Berkeley counters this theory, arguing that ‘words become general by being made the sign, not of an abstract general idea, but of several particular ideas, and one of which it indifferently suggests to the mind.’ (MP, p. 442, #11) For example, the idea of a particular line segment can become general by ‘being made to represent or stand for all other particular ideas of the same sort.’ (MP, p. 442, #13)

4. As Berkeley acknowledges, his own theory raises an important difficulty. How, without an abstract idea, say of triangle, can we know that when we draw conclusions on the basis of a particular triangle that the conclusion can apply to all triangles? Berkeley’s answer is that we may consider any particular triangle ‘merely as a triangle, without attending to the particular qualities of the angles or relations to the sides.’ (MP, p. 444, #16)

5. Now, this response is not without its difficulties, for how in advance of forming the general idea of a triangle can we know which particular qualities characterize only some triangles rather than all triangles, indifferently? It may seem that for any property identifiable property P, we can solve the problem simply by *finding some triangles without P*. But suppose that we cannot find triangles without that particular property P. Does that mean that no triangle can have that particular property, or only that we have not succeeded in finding triangle without it? Berkeley, it seems to me, does not squarely face this difficulty, but the answer surely lies in the social nature of theorizing. When we offer a proof about triangles, the mathematical community will try to find flaws in it, especially when the proof has relied upon a property of a particular triangle that is not shared by all triangles. If enough people try to find a counter–example long enough without success, we come to accept the proof. However, we always remain open to the idea that unbeknownst to us, we relied in the proof upon a property peculiar to the particular triangle that stands proxy for the rest.

6. Berkeley, like many philosophers before him, offers an error theory to explain how and where a great philosopher like Locke could have gone wrong in coming to the conclusion that a general term is the name of an abstract idea. According to Berkeley, the big mistake lies in the assumption that a term can be general only if it names something. A general term must be kept ‘constantly to the same definition,’ but that is not to say that ‘it must stand everywhere for the same idea.’ (MP, 444, #18)

7. At the beginning of Part I of his *Treatise*, Berkeley offers his own theory of the origin of ideas, which is ‘that they are either ideas actually imprinted on the sense or else such as perceived by attending to the passions and operations of the mind or, lastly, ideas formed by help of memory and imagination, either compounding, dividing or barely representing those originally perceived in the aforesaid ways.’ (MP, p. 447, #I.1) This theory leads Berkeley to the conclusion that we can have reason to think that only ideas or the entities that have ideas (minds, spirits or selves) exist. The absolute existence of a thing which neither thinks nor is thought seems impossible to Berkeley, (MP, p. 447) Berkeley reasons that material substance, therefore, must be a self-contradictory notion. The essence of unthinking things is to be perceived, or as Berkeley writes, ‘their esse is percipi.’ But some people will say that the essence of material things involves extension or figure or motion, and these all exist independently of thought. But all of these are abstract ideas, and the particular ideas which indifferently represent things moving or with figure or extended are indeed ideas of particular things that have been acquired through sense experience. We can only make sense of material substance if we rely upon the notion of the very abstract ideas that must be rejected.

8. This leaves us with something of a problem, for the idea of the soul or the spirit, the thing that perceives, is not something that is itself perceived, at least in the way of other objects. Can the spirit or soul be an idea? Berkeley, as we shall see backs away from that conclusion. According to Berkeley, we have a ‘notions’ of our respective selves, we who perceive the physical world via the ideas delivered by the various senses or by reflection upon the operations of our minds.

Hume on Idea Formation and

Skepticism Concerning the Projectability of Causal Knowledge

Idea Formation

1. Like Locke, Hume was a concept empiricist, meaning that all our ideas come from experience. According to Hume, the objects of our sensation, including feeling, are impressions. However, our mental life includes not only impressions but also ideas. Ideas are (nearly always) fainter than impressions. Ideas are copied either directly or indirectly from impressions. Ideas are simple if they cannot be decomposed into other ideas; otherwise they are complex. Ideas are also recalled to mind by memory or produced by the imagination.

2. Simple ideas are (nearly always) derived from impressions. An exception is the idea of a shade of a color that is somehow conjured by reflecting nearly identical shades of the same color. Complex ideas are derived from series of impressions or from an impression that is multifarious. The idea of London is complex in this way. Note that an idea of London may not contain representations of every detail of the impressions from which it is derived, and those impressions may not successfully represent all of London.

**Week 10 Hume on Causation and Skepticism**

3. Now, according to rationalists, causes and effects are related so that the ‘effect may always be discovered in the cause.’ We have examined this theory in detail, a theory naturally called ‘the imprint theory of causation.’ Hume claims that this theory of causation is completely wrong. He says that no matter how hard you try, you will never discover the effect by examining the cause. Rather causes and effects are qualities or magnitudes (or, ambiguously, ideas of them – more on this later) that are constantly conjoined. They are causally related when the casual event precedes the effect event, and the constant conjunction of them supports a subjunctive or counter-factual belief. (As we have seen, a pertinent subjunctive belief is of the form, if c were to happen, then e would follow. A counter-factual belief is of the form if c had occurred, e would have followed.) So, at sea level, water freezes at 0C. (Centigrade). We can say: If the temperature falls to 0C at sea level, water will freeze. Or, if the temperature at sea level had fallen to 0C, then water would have frozen.

4. Hume’s thought experiment may appear to be question-begging. For example, when the engraving on a seal leaves an imprint on a piece of paper it is perfectly natural to say that the effect could be discovered in the cause. And yet Hume would say that there is a process involved in producing the imprint that involves minute particles and their ‘secret powers.’ There is some empirical evidence that bears favorably on Hume’s point of view. For example, children need to learn that they will fall down if unsupported, even though that truth may seem indubitable to us.

5. In any case, the heart of Hume’s analysis of causal relations is the constant conjunction of qualities. Hume claims that for a perceived constant conjunction to amount to a causal relation it must be that the constant conjunction is projectable; that is, that the conjunction supports subjunctive and counterfactuals. But according to Hume there can be no argument that supports projectability. A demonstrative argument must fail because the effect cannot be discovered in the cause. Arguments from experience must fail because they are circular; that is, the mere fact that constant conjunctions have been projectable does not show that they will be projectable, unless we have an argument to support subjective and counterfactuals. But that is just what the proposed argument from experience is intended to prove!

6. The fact that Hume is skeptical about arguments that could prove that constant conjunctions are projectable does not imply that he thinks that we have reason to doubt that past constant conjunctions will continue to be projectable. In fact, Hume claims that experience disposes us to expect constant conjunctions to be projectable, and in general it is reasonable to accept common sense beliefs that have been inculcated by experience.

7. If Hume is skeptical about arguments to prove causation it is worth asking whether he is skeptical about anything else. Indeed he is. In particular, he takes issue with Locke’s view that our ideas of the qualities of bodies actually resemble bodies. Hume apparently agrees that we know that there are bodies (although some commentators doubt even this much), but Hume claims that we do not have proofs about what those bodies actually are like. The reason for this view is that we cannot actually compare our ideas of bodies (viz of their qualities) with the qualities themselves, because any purported comparison would involve comparing our ideas. However, in the end Hume endorses common sense belief, roughly on the theory that the fact that we cannot actually justify common sense does not count as a reason against it.

8. The view of Hume taken in (6) and (7) above is very charitable, but not all philosophers have taken a charitable view of Hume. Kant in particular thinks that Hume’s skeptical arguments cast doubt upon our claims to scientific knowledge. After all, if it is just common sense (or repeated experience) that commends natural science, we hardly have reason to claim that it gives us knowledge. Kant claims that scientific truth is necessary, and Kant believes that the main project of his time was to show how scientific knowledge (or any knowledge) is possible and then to determine whether or not various claims to knowledge (say about God or the soul) can possibly be true. Because Hume raised these questions, Kant said that Hume had ‘awakened [him] from his dogmatic slumbers.’

Hume on Abstract Ideas and Projectability

1. Hume believes, like other children of the Enlightenment, that the only way we actually do have of investigating the real world is in fact closely connected with ‘truth and reality,’ by the experimental method of reasoning, which was introduced by Boyle to the world in his Notes on a Good and Excellent Hypothesis. But what reason is there for confidence in this method in light of Hume’s skeptical conclusion about induction: Can we possibility justify Hume’s confidence that we can successfully investigate the real world of fact? One possible strategy for establishing criteria for justified belief is to link the concept of justification with *stability*. This view attributes a remarkably contemporary outlook to Hume.[[6]](#footnote-6) The idea roughly is that justified beliefs are located within stable beliefs systems of reflective believers, that is, systems that have been firmly entrenched by experience tested by critical reflection and that are able to withstand ‘recalcitrant experience.’[[7]](#footnote-7) There is much to be said for this view, and much has been recently said for it by Louis Loeb.[[8]](#footnote-8) One of the main troubles with this view, as Loeb concedes, is that it appears that there are ways of creating stable systems of belief that are completely unjustified. Here we need only think of perverse schemes of education devised by tyrants or religious beliefs that are inculcated on the basis of supposed authoritative texts by religious regimes that do not tolerate critical scrutiny.

2 Loeb draws an important distinction between two versions of the stability-based theory that could be attributed to Hume. *The strong version of the theory would count beliefs as justified only if they would survive full reflection, reflection that presumably takes into account all known pertinent information. The weaker version, which Loeb attributes to Hume, allows belief to be justified only if it takes into account pertinent information at the believer’s disposal.*[[9]](#footnote-9) The difference is huge, and Loeb is quick to acknowledge that the standard that he attributes to Hume may not do enough in the way of ruling out unjustified belief. If we take a pragmatic approach to criticism, as is in fact favored here, we shall find that reflective persons, those who are epistemologically qualified to form beliefs, will always welcome new evidence and be prepared to countenance competing theories that new evidence inevitably inspires.[[10]](#footnote-10)

4. For Hume truth is an abstract idea Therefore, in order to interpret the claim that scientific theories are true ‘of reality,’ we shall need to rely upon Hume’s definition of abstract ideas. Hume’s theory of association is that a particular idea becomes abstract when it is associated with a general term that carries the mind to like ideas. Thus, as we attach the general term ‘true’ to a particular idea to which we have assented (deemed true); the particular idea becomes general in conveying the mind to similar ideas, that is, ideas to which we have assented (viz.,deemed to be true). In claiming that an idea is true we are in fact claiming that it can be straightforwardly associated (in fact by the casual principle of custom) with certain other ideas. If we want to show that an idea is false, we need to show that if fails to be projectable, that is, that it fails to carry the mind to ideas that we deem to be true. The essential mark of truth therefore is not stability but rather ‘projectability.’ This in fact is the standard that all good hypotheses are thought to satisfy an is clearly articulated by Boyle’s MS NOTES on a Good and an Excellent Hypothesis: ‘That is a good hypothesis, be at lest Consistent with the rest of the Phaenomena it particularly relates to, & do not Contradict any other known Phaenomena of Nature, or manifest Physical Truth,’ and ‘That it enable a skillful Naturalist to Foretell Future Phaenomena, by their Congruity or Incongruity to it: and especially the Events of such Expts as are aptly devisd to Examine it, as things tht ought or ought not to be Consequent to it.’

 This does not mean that systems of projectable ideas will be unstable, but it does mean that it is possible that there are stable ideas that cannot be projected. The standard of projectability imposes two requirements in belief formation and criticism that are characteristically Humean. The first of these is that successful belief systems and the processes by which they are generated will be *comprehensive*. The greater the extent of the association of the test belief with other beliefs deemed to be true over a wide domain, the greater the greater the solidity and force of the tested belief and the more closely (viz. likely)[[11]](#footnote-11) it is to be associated with truth and reality. The second standard is that successful theories will rule out competitors by offering *error theories*. *The successful theory will show that the unsuccessful theory has been generated by a method that mimics science (broadly construed) but is actually an impostor*, that is, does not rely upon standards that are themselves associated with reasoning that has led to the truth.

**Week #11: Hume on the Powers of Reason**

**and Application to Arguments for the Existence of God**

Hume on the Powers of Reason

Hume does not take up the nature and powers of reason in the *Enquiry Concerning Human Understanding*. This difficult and recondite project, however, is treated at length in the *Treatise of Human Nature*. (See notes below.)

**1. Belief**

Hume’s account of belief is fundamental to his entire philosophy. Hume denies that there is any difference whatever in the *contents* of ideas believed and those disbelieved. The difference between the believed and disbelieved lies solely in the manner of their conception. Beliefs are ideas that have been enlivened. Reasoning enlivens ideas that it validates, thereby turning them into beliefs. Causal reasoning, which generates ‘proofs,’ accounts for our strong beliefs about the future, but it is nonetheless subject to Hume’s famous skepticism about inductive reasoning. Other beliefs about the future are based upon probabilistic reasoning. This reasoning, which Hume takes up in his discussions of the probability of causes, the probability of chances, and analogy, introduces us to a broad array of issues concerning the philosophy of science as well as philosophy of religion in addressing issues like the credibility of testimony. There is even reasoning, which Hume calls ‘unphilosophical reasoning,’ that gives rise to prejudice, magic and pseudo-sciences like alchemy, that is, to beliefs that cannot be not held on a reasonable basis. Yet, for Hume, beliefs arise not only in reasoning but also from the senses and *via* memory, which is to say that both sensation and memory have the capacity to enliven ideas and turn them into beliefs. These are all issues that take us to the heart of Hume’s philosophical method.

**2. Probability of Chances**

 Probability, or what we might well call probabilistic reasoning, may be ‘divided into two kinds,’ that ‘of chance’ and that ‘which arises from causes.’ (*Treatise*, p.124f) According to Hume, chance is ‘nothing real’ and merely ‘the negation of cause.’ (*Treatise*, p. 125) By this Hume means that something that is deemed to be a matter of chance is something that is ‘considered’ to be uncaused. On the other hand, for Hume ‘a cause is always necessary,’ and so nothing that occurs can actually be uncaused. Hume reconciles these claims by supposing that matters of chance arise when we are *ignorant of the causes* on which their outcomes depend. When an outcome is a matter of chance, ‘the mind is completely indifferent to its outcome,’ which is to say that the ‘imagination is perfectly indifferent’ to the outcomes, that is, the mind is not carried upon the appearance of the input event to one rather than another possible outcome.[[12]](#footnote-12)

 From this it follows that ‘no one chance can possibly be superior to another.’ Indeed, if one chance could be superior to another, then there would be something to account for the superiority, that is, a cause, but then, contrary to our hypothesis, the outcome would not be a matter of mere chance.[[13]](#footnote-13) Notwithstanding the fact that all chances are equal, we sometimes speak as though they were not. Suppose that one side of a die is marked with an ‘*x*,’ and two sides are marked with a ‘*y*.’ Supposing that the outcome of a toss is matter of chance, we reason that on any given toss, a ‘*x*’ is twice as likely as a ‘*y*’ to arise. This calculation does not contradict the maxim that all chances are equal. The calculation obviously rests upon the supposition that each side is an equally likely outcome of any given toss. According to Hume, the measure of probability actually is the ratio of favorable outcomes to possible outcomes.

 In fact, although the outcome of a matter of chance is always deemed to be uncaused, the calculation of chances actually has ‘reference to causes.’ This is due to the fact that every calculation presupposes that the forces of the causes that actually do determine the outcome of a toss are divided ‘equally among them.’ Although the outcomes of tosses of a die are *deemed* to be uncaused, they are actually determined by the vector products of the forces operating upon the die. What blocks inferences favoring one outcome over the other is that as far as we can tell, the vector products favoring each side are equal in any given toss.[[14]](#footnote-14)

**3.** **Probability of Causes:**

Hume’s discussion of the probability of chances accords with contemporary thinking. What is not so familiar is what follows his discussion of the probability of chances, that is, his analysis of the probability of causes, which, according to Hume, is *reducible* to the probability of chances. In fact, from Hume’s discussion of the probability of chances it is natural to conclude that unequal probabilities of outcomes are due to concealed causes. In the discussion above, we agreed that the outcome of a toss is in fact determined by the vector product of the forces upon the die, forces that will be unequal in the cause of a loaded die, which, of course, would account for asymmetrical outcomes. However, once we know how the forces differ, their influence is once again taken into account by counting outcomes. Thus, two sides are marked ‘y’ and one is marked ‘x’ but the die is loaded so that ‘y’ is twice as likely to come up as any other side, the chance of throwing and ‘x’ equals the that of throwing a ‘y.’ But how do we know that ‘y’ is twice as likely to come up as any other side? Ultimately[[15]](#footnote-15) by experimenting, that is to say, by counting outcomes.

Unfortunately, there is another possible explanation of asymmetrical outcomes, and it is just at this point that the ‘vulgar’ conception of probabilistic reasoning takes a wrong turn. Instead of seeing that the calculation of outcomes by counting chances reveals our ignorance of operating causes, the vulgar mistakenly conclude that probable inference arises to deal with *causes that do not operate in their usual way*. (*Treatise*, p. 132)

**4. Reasoning by Analogy**

In order to deal with the changing conditions under which experiments are performed, Hume considers a further type of probabilistic reasoning, which he calls ‘analogical reasoning’. Although Hume’s discussion of analogy may appear to be a mere afterthought in the discussion of the probability of causes, it is actually essential to his understanding of scientific method. The fact that the significance of this section has been missed accounts for much of the difficulty encountered in dealing with Hume’s ‘skeptical conclusions.’

When we seek to apply a causal regularity to a new situation, we shall need to satisfy ourselves that the causal facts are the same in each case. For example, suppose that we set out to test the empirical generalization the *s = 1/2at2*, where *s* is the distance a body falls and *a* is the (local) acceleration of gravity and *t* is the time elapsed in the descent. Of course, this generalization will be best tested by *dense* objects, which reduce in the importance of local atmospheric conditions (to wit, ‘air resistance’). If one experiment is done with a cannon ball and the other with a Styrofoam Christmas ornament, the causal facts in each experiment will differ materially. Thus, a suitable object will be part of the initial conditions that are pertinent to a successful experiment. However, we must take account of the possibility that every experiment may have certain pertinent initial conditions that are unique to it (or at least to a subset of like experiments). As Hume says more simply, experiments will not perfectly resemble each other. Hume’s view is that the issue of the applicability of a causal generalization to a resembling case will depend upon the degree of *resemblance*.[[16]](#footnote-16) Not all dissimilarities will count equally. In order to justify the application of a causal generalization to a new situation, we need to satisfy ourselves that all *pertinent* causal factors are present and that there are not dissimilarities that will interfere with the experiment. In other words, the dissimilarities must be irrelevant to the operation of the putative cause. But *how are we to assess the significance of resemblances*? Unfortunately, Hume does not have a protocol to help us in these crucial situations.

Here we encounter the crucial problem of assessing the *relevance of putative evidence*, and the question arises as to whether or not the essentially Bayesian model of probability advanced in Hume’s earlier discussion of the probability of chances and the probability of causes actually applies here. There has been considerable discussion of this important matter. We take our conception of probability essentially from Pascal in accepting the familiar laws of probability in calculating chances. For example, we assume that probability measures range from 0 to 1 and that if Pr(h,e) = x, then Pr(-h,e) = (1- x). Bayesian probability, not fully developed in Hume’s time, takes a special view of *belief revision*, captured by Bayes’ theorem. As we have seen, in his discussion of the probability of chances and of causes, Hume adopts the Pascalian model, and it is therefore entirely reasonable to interpret him as a Bayesian when it comes to the probability of chances and of causes. However, the matter is much more complicated when it comes to assessing the *relevance of evidence*.

**5. Prejudice and Unphilosophical Probability**

We now turn to the beliefs that Hume seeks to discredit, those that are derived from ‘unphilosophical probability.’ As we have seen, Hume’s view is essentially that belief in the existence of any object derives from the association of the idea of the object with a present impression, which enlivens the idea. According to Hume, the enlivening force is ‘most conspicuous’ in the memory, and it is for this reason that we place the greatest confidence in it. A second source of belief in which we repose great confidence is cause and effect. Our confidence in beliefs derived from cause and effect is especially high when the association between the ideas has been ‘experienced to be perfectly constant,’ and when the effect observed exactly resembles those observed in past associations with the present cause. (*Treatise*, p. 153) We place lesser degrees of confidence in beliefs derived from the probability of chances and those derived from the probability of causes. The former beliefs arise from situations in which operative causes are unidentifiable; the latter occur where there is ‘contrariety’ or elsewhere resemblances among experiments are imperfect. Even so, beliefs arise in this way, and we may have some degree of confidence in them. Beliefs based upon probability may be firmly held, although in varying degrees. They too are ‘receiv’d by philosophers,’ (viz, natural scientists) and for that reason we are justified in believing them. (*Treatise*, p. 143) This raises a critical and immensely difficult problem in interpreting Hume. The question has two aspects. This first is obvious: Just what *justifies* the confidence we place in beliefs derived from memory, cause and effect and probability? The mere fact that they are held confidently cannot be the decisive point, for many unjustified beliefs are also held with confidence. The second issue is even more difficult: Just what can Hume *mean* by *justified belief*, if he cannot mean a belief held with a high degree of confidence?[[17]](#footnote-17) These are the essential questions of this section, and the way I propose to deal with them is to begin by considering beliefs that Hume does not consider to be justified. These beliefs he calls ‘unphilosophical beliefs.’

Hume identifies four species of ‘unphilosophical probability:’ Three of them deal with false associations, and these species of unphilosophical probability lead to or at least make way for prejudice and superstition. Those three are: (1) *a diminution of the resemblance between the enlivened idea and the impression that gave rise to it*, (2) *decay of the impression that gave rise to the idea* (3) *decay in the idea believed due to long supporting arguments.* The fourth deals with *unjustified ‘general rules’ or the misapplications of ‘general rules*,’ for which reason I call beliefs based upon them ‘pseudo-science.’

**6. A Model by which to Read Hume’s Probabilistic Arguments about Religion**

**6a. Prior Probabilities**

By ‘prior probability;’ decision theorists refer to the probability that an individual attaches to an outcome at the beginning of a decision procedure. This initial probability might be one that is completely irrational, that is, not founded on a rational analysis of past experience. However, as evidence is gathered concerning the event to be assessed, the probability of the event will be recalculated based upon the prior and the new evidence. What is surprising is that even if an initial prior probability is completely unfounded, the systematic recalculation of the initial probability on new evidence will correct the original misapprehension fairly quickly. It is easiest to see how this works by example.

At a party suppose that someone, A, offers to take bets on the outcome of a coin toss. Another, B, shrewdly offers the opinion that the coin is unfair, and attaches a high probability to the proposition that the coin will either comes up heads nearly all the time or tails all the time. Suppose further, to make the example simple, that our shrewd observer, B, recently saw A in a party shop out of town, where all the fake coins sold are said by ‘reliable sources’ fixed to turn up ‘heads’ 9 out of every ten times. So, let us assume that B attaches a prior probability of 9/10 to the proposition that the coin will turn up heads. That means of course that he expects that out of every ten tosses the coin will turn up ‘heads’ 9 times. The prediction is the prior probability, which is based upon observation of the out of town shopper.

Suppose that after the first ten tosses the coin has turned up heads 6 times and tails 4 times. How might the prior (viz. prior probability) be modified on this new evidence? It is not easy to say, because it is difficult to see how to weigh actual counterveiling evidence against the prior. Suppose that the B thinks his belief is based upon the prior has an epistemological weight equivalent to 10 tosses. In other words, B is confident enough about his prior to consider the evidence for it as strong as it would have had he witnessed ten tosses and 9 turned upon heads. On this theory, after the ten actual tosses, B might claim that there have in effect been a total of 20 tosses, where 15 came up heads and 4 came up tails. This would mean that his original prior would be revised from .9 to 15/20 = .75.

This result might well come as something of a surprise, but it would not completely demolish the hypothesis that the coin is a fake, and faked in favor of ‘heads.’ Suppose now that B asks to have the coin tossed again, for another ten times. This time suppose that the outcome is 6 tails and 4 heads. Following the earlier procedure, the calculation is now revised to: 20/30 heads or 63.33%, still in favor of ’heads.’  If the coin is actually fair, as it now appears to be, after a thousand tosses it is very likely though not absolutely certain(the statistical details are not important) that the prior will have been revised to 510/1010. Of course, any sensible person would have long since concluded that the initial prior was just mistaken and that the original epistemological weight assigned to the prior of ten tosses should also be revised downward, but not all the way to zero. After all, there is still the ‘evidence’ from the party shop, and it is still possible that the unfairness in the coin is minimal, purposefully designed to come out only when high rollers bet on, say, a million tosses.

**6b. Epistemological Weight Assigned to Priors**

What the previous example shows is that there are two issues in assessing priors. The first concerns what a person initially thinks that the evidence (whatever that is deemed to be) will support; in our case .9 probability favoring heads. The second is an assessment of how *credible* the evidence is; it is what I have called epistemological weight. A rational person will not attach any epistemological weight to what is in fact a mere guess. In the case at hand, involving the out of town party shop, people may reasonably take different points of view about the epistemological weight to be attached to the ‘heads’ hypothesis. The epistemological weight is what determine how much evidence contrary to the hypothesis must arise before the prior is deemed to be unreasonable. This is different from a recalculation of the probable outcome incorporating new evidence into the calculation on the basis of the original prior. This suggests that the assignment of the original prior could itself be a matter of rational deliberation. In particular, in the preceding case, the epistemological weight attached to the prior was equal to 10 tosses. The basis of the assignment was the observation at the out of town store. But, a rational assessor will try to compare the assignment of that epistemological weight to similar cases where a prior was assigned on comparable evidence. In fact, suppose that the subject determines that observations of this sort (those likened to observation at an out of town party shop) have misled in many previous cases; say in 70% of the cases. This means that relatively little epistemological weight should be attached to the out of town observation. The assignment of 10 tosses obviously attaches great weight to the out of town observation. It is a matter of great complexity and controversy as to exactly how much weight to assign epistemological weight to a prior. However, assigning a prior probability on the basis of evidence can itself be treated as a matter of comparing previous outcomes on the available evidence. That would, of course, involve assigning a prior to the epistemological weight of the prior. Essentially the assignment of a prior is a matter of considering how the basis of assigning the prior has worked in previous, similar cases.

Application to Arguments for the Existence of God

1. In various of his works Hume takes a strong anti-clerical stand against the religious institutions of his time. This is particularly true of his lengthy discussion of early modern English history. We also find more broadly negative comments about religions elsewhere. In is Dialogues *Concerning Natural Religion* Hume opposes the three traditional arguments for the existence of God. In the *Enquiry Concerning Human Understanding,* Hume offers his most powerful argument against religions that are based upon miracles. There Hume argues that no religion can be reasonably founded on a miracle. Below is a brief account of Hume’s arguments against the traditional proofs, after which I’ll propose a reading of the famous argument found in the ICHU.

2. In DCNR Hume takes up the teleological, cosmological and ontological arguments for the existence of God. He spends most of his book on the teleological argument, which is sometimes called the *argument from design*. The argument from design essentially states that the hand of God is evident in nature, because the works of nature seem so obviously to serve human purposes. There are various versions of the argument because there are many human purposes to be accommodated and many ways in which those purposes may be accommodated. Hume’s strategy is always the same. He argues that the purposes served by nature can be accounted for by purely naturalistic explanations.

3. Hume argues against the version of the cosmological argument that is inspired by Aristotle. According to this argument, there must be a first cause of natural phenomena; otherwise the sequence would extend backward forever and hence not offer a satisfactory explanation of any event. That first cause is God. But if someone says that first cause must be natural and therefore cannot be God, then, Hume claims, the entire infinite causal sequence will require an explanation, which must be God. Either way, God is necessary to a rational understanding of the universe and, thus, it is reasonable to believe that God exists. To this argument Hume responds that it ‘is absurd to inquire for a general cause or first Author for ‘an eternal sequence of objects,’ which obviously implies that the eternal sequence exists from eternity. Furthermore as long each event is explained by prior events, nothing is left unexplained. There is no need to consider the whole sequence a unity, because many unities, like kingdoms, are conceived as a single thing by a mere act of the mind and not be an intrinsic property. (Hume, *Dialogues Concerning Nature Religion*, New York/London, MacMillan (MacMillan/Library of the Liberal Arts), 1947, p. 190/IX)

4. Hume opposes the version of the ontological argument that is based upon the idea that the existence of a necessary being follows from its nature. Since God is perfect (or eternal or something like that) it is supposed that it must follow that God exists. But Hume famously argues as follows:

a. Nothing is demonstrable unless it implies a contradiction.

b. Nothing that is distinctly conceivable implies a contradiction.

c. But whatever we can conceive as existing, we can conceive as not existing.

d. Hence, there can be no being whose non-existence implies a contradiction.

e. Therefore, there is no being whose existence can be demonstrated. (DCNR, p189f/IX)

Some will of course deny (c). But Hume argues that existence and non-existence are matters of fact, and therefore non-discoverable by the mere operation of thought. What is demonstrable is the attribution of incompatible properties of an object, but to assert that an object exists is not to assert that it has a property. (As we shall see, this reading is inspired by Kant, and a close reading of DCNR supports it. The only way we could deduce that a thing exists for Hume would be to deduce that its non-existence implies a contradiction, but this could be done, on Hume’s view, only if the object had incompatible properties, which would make the thing itself inconceivable.)

5. Hume’s most devastating argument against religions that are founded on testimony of miracles is set forth in the *Enquiry Concerning Human Understanding*. There Hume argues there that whatever credence we attach to the *testimony* of a moral must be weighed for reliability. Hume claims, in argument after argument, that very little weight can be given to any testimony for a miracle, because experience makes it more reasonable to believe that the testimony is faulty than the incredible claim it makes that is contrary to all human experience. So, for example, the testimony that Lazarus was raised from the dead is contrary to all human experience. But there is a motive for the testimony that undermines its credibility, for example, that whoever testifies to a miracle gains attention, and the possibility of various sorts of rewards.

In the language or probability theory, Hume thinks that we should attach a very strong prior probability to the claim that testimony for miracles is not true. Miracles are essentially unrepeatable. Indeed if we supposed that we could recreate the conditions of a miracle and thereby determined that it really occurred, we would actually have shown that the event was not a miracle because we would have brought it about by natural means. The description below is what I believe could serve as a reconstruction of Hume’s understanding of a procedure for determining the correct epistemological weight to assign to a prior probability.

6. In a footnote in ICHU (Hume, Hendel, ed, *An Inquiry Concerning Human Understanding*, Library of the Liberal Arts, Indianapolis, 196, p. 121/XD, fn 6) Hume considers the case of an ‘Indian prince’ in which a person exposed only to tropical climates, who has never seen snow or ice, might think that freezing water is a miracle. After all, the experience would not contradict anything previously experienced. But Hume claims that this objection really does not count against his argument against miracles, because if that person were transported to a region with snow and ice, like the Himalayas or the Alps, it would become obvious immediately that a miracle had not occurred.

This, however, brings up an interesting question. According to the Einstein-Podalsky-Rosen Hypothesis, it is possible that certain events that are causally connected do not have detectable casual relations; that is, are ‘disconnected.’ If so, how would we know that an event identified as a miracle had not actually been caused by undetectable causal relations? But if that is a possibility, the distinction between miracles and natural events appears to collapse as there are possible cases in which the distinction could not be detected *in principle*.

**Week 12 Hume on Free Will and the Self**

**and Kant on Skepticism and Hume’s Error**

Hume on Free Will and the Self

1. Much of Hume’s teaching about the nature of the self is connected with his understanding of free will, or as he would say, of liberty. Hume famously proclaims, despite his skepticism, that a cause is always necessary. By that he means that a cause is always necessary to the proper explanation of an event. Humean actions are events, and thus it must be that a cause is always necessary to a proper explanation of them. This means that all actions that can be explained are caused. In fact, Hume believes that all actions can be explained *in principle*. Even so, it may be that some actions appear to us to be uncaused. But Hume claims that this is an illusion. An apparently uncaused action is an action without a detectable or knowable cause. This typically occurs when the anterior causal events are too complicated for us to sort out. (Hume, Selby-Bigge, *Treatise of Human Nature*, 2nd edition, Oxford, At The Clarendon Press, 1978, p. 130/I:XIII)

2. According to Hume, actions proceed from causes. Hume claims that mental and physical events can be associated casually. He is not endorsing the Cartesian view of casual interactionism, because he does not believe that effects can be discovered in causes (that is to say, Hume rejects the imprint theory of causation). Hume illustrate his point in a famous passage in which he claims that a man awaiting death by an executioner foresees his death as much from the intention of the executioner as from ‘the operation of the axe or the wheel.’ (*Treatise*, p. 406/II:III:II:17)

3. Even though all our actions are caused, including those that appear to originate in our ‘will’, Hume claims that there is still sense to be made of free action. According to Hume, we say that acts are free insofar as they derive from proximate causes within ourselves, as opposed to exogenous sources. (These, recall, are what Aristotle calls, mixed actions.) For Hume actions that are done in character are the paradigms of free action. The important point for us is that Hume denies the existence of the self that acts freely, in the image of God (exactly what Descartes and Leibniz affirm).

4. But what then is the self, on Hume’s account. Hume famously offers two accounts. The first is a so-called a ‘bundle theory.’ According to Hume, the self at any time, st is constituted by its perceptions. The self is therefore constituted by the union of all the st, viz. temporal states, over the course of a life. But the problem with this scheme is that it is unclear how the various temporal states are united into a single thing. Hume toys with the idea that they are united by memory or by casual relations, but neither of these work. (*Treatise*, pp. 451-63/I:IVVI) Memory does not give a complete picture and causation includes too much, as our own inner states are causally related to the inner states of others. In the end, Hume concedes that he cannot extract a coherent conception of the self that is consistent with his concept empiricism. (*Treatise*, pp 635/Appendix)

5. In fact Hume is driven to the conclusion that concept empiricism cannot make sense of substance. In order to see how this happens, it will be useful to recur to Locke’s theory of abstraction, and then, for the first time, to consider Berkeley’s criticism of Locke. Berkeley begins his Introduction to a *Treatise Concerning the Principles of Human Knowledge* (1710) by bemoaning the skepticism into which we naturally fall when reflecting upon the nature of things. (MP, p. 439, #1) Berkeley attributes this skepticism largely to the abuse of language. (MP, p. 439, #5.) The root of the abuse of language lies primarily in ‘the opinion that the mind has the power of framing abstract ideas or notions of things.’ (MP, p. 439, #6) In this passage, Berkeley is of course referring to Locke.

6. Berkeley argues *against the thesis* that we can have an abstract idea, like color, that isn’t any particular color and *against the idea* that we can have an abstract idea of motion that is not the idea of any particular motion. He offers a similar argument concerning the idea of man or human being. (MP, p. 440f, #7 - #10)

7. Locke acknowledges that natural science necessarily involves general terms. But Locke thinks that ‘words become general by beings made the signs of general ideas.’ (Locke Essay, III. 3. 6 as quoted by Berkeley MP, p. 441, #11) Berkeley counters this theory, arguing that ‘words become general by being made the sign, not of an abstract general idea, but of several particular ideas, and one of which it indifferently suggests to the mind.’ (MP, p. 442, #11) For example, the idea of a particular line segment can become general by ‘being made to represent or stand for all other particular ideas of the same sort.’ (MP, p. 442, #13)

8. As Berkeley acknowledges, his own theory raises an important difficulty. How, without an abstract idea, say of triangle, can we know that when we draw conclusions on the basis of a particular triangle that the conclusion can apply to all triangles? Berkeley’s answer is that we may consider any particular triangle ‘merely as a triangle, without attending to the particular qualities of the angles or relations to the sides.’ (MP, p. 444, #16)

9. Now, this response is not without its difficulties, for how in advance of forming the general idea of a triangle can we know which particular qualities characterize only some triangles rather than all triangles, indifferently? It may seem that for any property identifiable property P, we can solve the problem simply by *finding some triangles without P*. But suppose that we cannot find triangles without that particular property P. Does that mean that no triangle can have that particular property, or only that we have not succeeded in finding triangle without it? Berkeley, it seems to me, does not squarely face this difficulty, but the answer surely lies in the social nature of theorizing. When we offer a proof about triangles, the mathematical community will try to find flaws in it, especially when the proof has relied upon a property of a particular triangle that is not shared by all triangles. If enough people try to find a counter–example long enough without success, we come to accept the proof. However, we always remain open to the idea that unbeknownst to us, we relied in the proof upon a property peculiar to the particular triangle that stands proxy for the rest.

10. Berkeley, like many philosophers before him, offers an error theory to explain how and where a great philosopher like Locke could have gone wrong in coming to the conclusion that a general term is the name of an abstract idea. According to Berkeley, the big mistake lies in the assumption that a term can be general only if it names something. A general term must be kept ‘constantly to the same definition,’ but that is not to say that ‘it must stand everywhere for the same idea.’ (MP, 444, #18)

11. At the beginning of Part I of his *Treatise*, Berkeley offers his own theory of the origin of ideas, which is ‘that they are either ideas actually imprinted on the sense or else such as perceived by attending to the passions and operations of the mind or, lastly, ideas formed by help of memory and imagination, either compounding, dividing or barely representing those originally perceived in the aforesaid ways.’ (MP, p. 447, #I.1) This theory leads Berkeley to the conclusion that we can have reason to think that only ideas or the entities that have ideas (minds, spirits or selves) exist. The absolute existence of a thing which neither thinks nor is thought seems impossible to Berkeley, (MP, p. 447) Berkeley reasons that material substance, therefore, must be a self-contradictory notion. The essence of unthinking things is to be perceived, or as Berkeley writes, ‘their *esse* is *percipi*.’ But some people will say that the essence of material things involves extension or figure or motion, and these all exist independently of thought. But all of these are abstract ideas, and the particular ideas which indifferently represent things moving or with figure or extended are indeed ideas of particular things that have been acquired through sense experience. We can only make sense of material substance if we rely upon the notion of the very abstract ideas that must be rejected.

12. This leaves us with something of a problem, for the idea of the soul or the spirit, the thing that perceives, is not something that is itself perceived, at least in the way of other objects. Can the spirit or soul be an idea? Now, Hume agrees with Berkeley’s argument against material substance. But he thinks that Berkeley is wrong to assert the existence of spirits or souls. We are no more secure in mental substances than material substances, at least according to Hume. Hume claims that substance, in the Aristotelian sense, is the ‘I know not what (viz. the *je ne sais quoi*) that turns into a thing when modified by a quality. But a ‘*je new sais quoi’* is not an idea at all. Hume concludes that material substance and mental substance are empty concepts. He drives this point home by what we might call a take-away argument. Hume invites us to imagine ourselves without perceptions: take away visual perceptions, auditory perceptions and so forth until there are none left. The result, Hume claims, is that there is no longer an idea of the self.

13. But if there isn’t a self, how can it be free? It can’t be, I believe, but Hume does not claim that there is a coherent notion of a free originator of action, like God. What he claims is that certain of our actions, events in which we play a casual role, are free. Which are they? The one’s in which the proximate cause of our actions lie within ourselves, particularly in those enduring qualities that determine our character. We do say that certain agents are free, but by that we mean that the causes of their actions are located sufficiently in themselves to be called free actions. The concept of a free agent is therefore derivative, and context-dependent. What counts as free agency in, say, a legal context regarding a normal adult might be different from what counts a free in the case of a child or a mentally challenged adult; moreover, what counts as free agency in a legal context may not count as free agency in a broader, more lenient psychological or psychoanalytic context.

Kant: Skepticism and the Excess of Rationalism; Forms of Intuition, and

Synthetic *A Priori* Truth about Space and Time

1. Kant claims that his goal in the *Critique of Pure Reason* is to avoid both Humean skepticism and the metaphysical excesses of rationalism. His project begins by drawing a pair of distinctions that reveal confusion in Hume’s thinking.

2. In *An Enquiry Concerning Human Understanding* Hume claims that certain ‘perceptions’ (viz. propositions) are true because of ‘relations of ideas.’[[18]](#footnote-18) He gives two examples. The first is the Pythagorean Theorem; the second is the arithmetical truth that the half of thirty is equal to the product of 3 and 5. Other ‘perceptions’ (viz. propositions) are ‘matters of fact’ and are true if and only if they accord with reality. An example is that snow is white. Matters of fact have ‘contraries’ (viz. negations) that are ‘ever so conformable to reality.’ This does not mean that they are true, only that they *could be true*; reality could conform to them. Note that a proposition like (½ \* 30) = (5 \*3) does not have a negation that is ever so conformable to reality. The negation of that proposition is obviously and necessarily false. It is in fact an actual contradiction, because it is demonstrably equivalent to NOT (15 = 15). In fact, Hume’s argument against the projectability of causal belief is essentially an argument that causal beliefs are matters of fact that make claims about the future.

 Recall that Hume argues that there isn’t a way to know *a priori* that the future will resemble the past, and there aren’t any experiences of the future to confirm that the past will resemble the future. *It won’t do any good to say that what was past resembled what was then future, because we cannot show from it that past resemblances of the past to the future will continue to hold in the future.*

3. According to Kant, Hume conflated the following two distinctions: one concerning knowledge and the other concerning truth. Kant claims that some propositions are true because of their form, like: (x)(x = x), or else because of their form and the meanings of their descriptive terms, like: Every bachelor is unmarried. Kant called propositions of this sort ‘analytic.’ (The negations of these propositions are contradictions, like: NOT(x)(x = x), and NOT every bachelor is *unmarried.) These classes of propositions are distinguished according to the grounds* *of their truth or falsity*, grounds that pertain to the relations of the pertinent concepts to each other. But some propositions are true because of the *facts of the case*, because they are accurate reports of *the way “things” actually are*. These Kant called synthetic. The analytic/synthetic distinction is drawn with *respect to the sources of truth*.

 Now let’s turn out attention to distinguishing classes of propositions according to the ways in which they can be *known* or *believed* on a rational basis. Kant said that some propositions can be discovered without relying upon sense experience and therefore without relying upon observation and experiment. These he called ‘*a priori*.’ But other propositions can be known or rationally believed only on the basis of sense experience. These he called ‘*a posteriori*.’ The *a priori/a posteriori* distinction is drawn with respect to *sources of knowledge and rational belief*.

 I believe that Kant thought that Hume’s distinction between relations of ideas and matters of fact is actually a distinction between *a priori* propositions and synthetic propositions. Hume’s distinction, like all properly drawn distinctions, is meant to be totally exhaustive and mutually exclusive. As we shall see in detail, Hume’s doctrine therefore conflates two distinctions. Kant claims that a possibility that Hume necessarily ignored is that there could be propositions that are *a priori* and synthetic. That is because Hume identified *a priori* propositions with relations of ideas, which do not have negations that are ever so conformable to reality. Indeed, Kant thought *that there could be truths about the world without examining the world*; in other words, that same synthetic truths can be known *a priori*.

4. According to Kant, there are two sources of synthetic *a priori* knowledge. The first has to do with the structure of the world as we *perceive* it or as Kant said, of ‘intuition.’ The second has to do with the structure of the world as we *conceive* it. Kant argues that the world as we perceive it (intuit it) is necessarily *spatial* and *temporal*. Moreover, Kant thinks that necessary truths about space and time are synthetic and *a priori.*

 In analyzing synthetic *a priori* truths about space and time Kant was inspired by Newtonian physics. In particular, Kant thought that time is essentially the form of all ‘inner and outer’ experience, by which he referred to things *perceived* as well as ideas *introspected*. According to Kant, arithmetic reveals the *structure of temporal relations*. By this Kant means that no time is before itself (just as no number is less than itself) and that if one time x is before another y, then y is not before x. Same for numbers ordered by ‘<’. Finally, if x is before y, and y is before z, then x is before z. Similarly, if x is less than y and y is less than z, then x is less than z. *The truths of arithmetic are not analytic*, Kant theorizes, because they are truths about the structure of time. But Kant claimed, they are *a priori*, because they can be known without experiment or observation.

 Similarly, Kant claimed, the truths of Euclidean geometry describe *our perception or intuition* of all spatial relations. Hence, they are synthetic (about reality) but are also known *a priori,* independently of observation and experiment. That the truths of geometry describe our perception or intuition of space is extremely important. Remember Euclid’s Fifth Postulate: That for any point outside a straight line on the same plane, there is exactly one straight line through that point that is parallel to the line. Philosophers and mathematicians had questioned this postulate during the early nineteenth century, in particular Gauss, Riemann and Lobachevski.

 Recall too that in 1919 Arthur Eddington validated Einstein’s claim that physical space actually is not Euclidean, just because the Fifth Postulate of Euclid does not hold in actual physical space. Even so, perhaps you will agree that Euclid’s postulate does characterize our *perception* of space. We might say that the Fifth postulate is true of space as we *perceive* it but not as we *conceive* it, taking into account theoretical physics. This, of course, is quite a problem for Kantians because there is just one space whether it is perceived or conceived, and we cannot consistently have opposite opinions about its structure that are *a priori* and necessarily true.

 Descartes thought that physical space is necessarily Euclidean, because Descartes believed that Euclidean geometry necessarily characterizes extension and that extension is the essence of matter, which necessarily occupies space. For Descartes, therefore, Euclidean geometry is necessary, a priori (a truth about an innate idea) and (as Kant would have said) synthetic. But, physical space is not Euclidean and hence Newton’s physics is flawed. No one can now believe the Cartesian account of knowledge and necessary truth (not because Descartes was wrong about ideas like God, although he might well have been wrong about those ideas as well) but rather because Descartes was wrong in thinking that there are innate ideas that characterize physical space.

 The fact that Newton was also wrong about physical space means that Kant’s own philosophy is similarly flawed. It can be the business of philosophy to show how science is possible (just as Kant insists), but if the science is wrong, then the philosophy that shows that it is possible will be either wrong or irrelevant. That, however, does not prove that a Kantian scheme is worthless or irrelevant to physics today; it shows only that Kantians need to revise their account of how science is possible in light of the science that we *now think is true*.

**Week 13 Kant’s System**

Kant on the Transcendental Aesthetic and Overview of Kant’s System

1. Kant distinguishes two forms of ‘perceiving’ or intuition: Space and time. To be sure these are *pure* forms, meaning that they do not have empirical content. Forms of perceiving that do have empirical content would *presumably* be like forms defined by the color wheel, where yellow is the complement of purple, orange of blue, and red of green. Space and time are pure because they do not have empirical content, which could in principle be detected by the senses. On the contrary they are *ordering principles of things that can in principle be detected by the senses.* The pure forms of time and space are characterized respectively by relations that are isomorphic to relations among numbers defined by arithmetic and to relations of elements of (absolute) space that are defined in Euclidean geometry.

2. Kant believed that arithmetic and geometry must describe the actual world because they are forms by which our intuitions automatically structure the world. In this respect the relation between the forms of intuition and the physical world is like the relation between data structures and the elements that they structure in a computer program. Of course our relations to nature, the physical world, are not limited to perceivings; on the contrary, we also bring our powers of *understanding* to the analysis of what we perceive. That process is *conceiving* and its products are conceptions. Kant also thought that there are pure forms of conceiving and, indeed, pure concepts of the understanding - more on that shortly. It is through conception and reasoning that we come to construct theories that systematize and rationalize our perceptions, the object of our perceiving.

3. That our understanding of ‘reality’ is structured by the forms of perceiving (Intuiting) and conceiving leads Kant to draw an important distinction: between the phenomenal world and the noumenal world. The phenomenal word, aptly named for the phenomena that our peceivings detect and that our conceivings systematize and rationalize, is really nature. But how do we know that our structuring of nature actually matches the structure of *reality*, as for example in the way that God might detect its structure? The answer is that we have no way of knowing how reality is when it is conceived as unstructured by us. Kant calls reality as it ‘*really*’ is; the noumenal realm. God is a part of the noumenal realm, if indeed God exists. Although the noumenal realm is beyond the scope of our understanding, Kant believes that we do have intimations of it in the process of moral deliberation. According to Kant, our autonomous will, the experience that we have when we choose completely free of desire and inclination, is the noumenal analogue of causation in the phenomenal world. – more on that later in a subsequent lecture.

4. One difficultly that Kantians face was raised by the discovery that the physical world is actually non- Euclidean. This is a consequence of Einstein’s theory of relativity. According to Einstein’s theory, Euclid’s Fifth Postulate is false. (The Fifth Postulate says that there is exactly one straight line, L1, through a point on the plane outside a straight line, L2, which is parallel to L1. The parallel lines extend infinitely without ever intersecting. -- NB: ‘Straight line’ means shortest line between two points on a place. ‘Infinite’ means has neither a beginning nor an end.)

 Now Kant said that the axioms and theorems of Euclidean geometry are synthetic and *a priori*. But according to Einstein, the Fifth postulate isn’t even true, much less *a priori*. Some people have thought this result is so embarrassing that Kant’s theory is completely ruined -- and there is no question that it is a big problem. But there may be something to be said for Kant after all. Even though we believe that space is non-Euclidean, *that does not mean that we can perceive (viz. picture or otherwise perceive it) as non-Euclidean*. Our belief that space is non-Euclidean is based upon a complicated physical *theory*. In other words, our *conception* of space is at odds with our *perception* of space. This is a possibility that Kant himself did not pursue (or perhaps recognize), but it suggests that we ought not to conclude that a proposition about nature is synthetic and *a priori* until we are sure that perception and conception are in accord. If we were to hold ourselves to that higher standard, the difficulty about non-Euclidean geometry would be mitigation or even defeated.

Overview

5. In any case, Kant thinks that the phenomenal realm is ‘structured’ by the forms of our concepts. As with intuition, the concepts we are interested in are not empirical, but ‘pure.’ Pure concepts of the understanding ‘structure’ reality when applied, or as Kant says, are ‘schematized.’ When applied to the phenomenal realm pure concepts actually define the structure of the empirical world, the phenomenal world that we perceive and conceive. The pure categories of the understanding are the forms of understanding. It is not surprising that the pure forms of the understanding are revealed to us in the forms of judgment that we make. For example, hypothetical judgments correspond to the category of Causality and Dependence. (See MP, p. 739 -40) When we apply judgments of this form to the phenomenal world, we in fact end up making casual statements. Hypothetical judgments are ‘if … then ….’ judgments. When we organize phenomenal reality into elements related by judgments of the form ‘if … then… ‘, we classify the relations of phenomena into sequences in which each element ‘depends’ upon another. This, in fact, is a causal ordering. Kant thinks that from this he can show that every event must have a cause. How can that be? Kant’s view is that to *be* an event, something that has happened, is to have a place in the casual nexus. That is because events are *individuated* by their location in the casual nexus. Kant believes that in this way he has actually solved Hume’s problem. After all, for Kant the *identity* of each event is completely determined by its location in the causal nexus. If it appears that there ever was or could be a future that does not track its past, it is only because we have misconceived what has actually happened, which is to say that we have either misdescribed the event or else have been incorrect in our identification of the casual law.

6. Kant was a hard determinist, which is to say that he believed that every event that occurs is necessitated by anterior events that stand in the casual relation to it. But then how, then, can our will be free? Kant says that we choose freely when our choices are not determined by our desires. As a matter of fact, whenever we choose, there will be some description of the choice that refers to the desire that led to the choice. But there may also be a description of the event under which it may be regarded as the product of ‘pure practical reason,’ which is free of desire. Practical reason refers to the process by which we give reasons for the choices that we make. According to Kant, when we make ethical decisions our reasoning is ‘practical,’ or as we might say: it is ‘normative’ or ‘action-guiding’ in form. *Practical reason* has a form, according to Kant. The form of our practical reasoning might contain reference to desire, as it would for a utilitarian. But genuine *moral* reason for Kant is *pure*, that is, it is free of reference to desire. How then would it guide our choices and actions? Kant says that it structures the processes by which we choose. The principle that does the structuring Kant is the famous ‘Categorical Imperative.’ It instructs us to choose to act only from maxims that can be consistently will to be universal laws of nature.’ That would leave out maxims like ‘Maximin” (viz. most for me; least for you), because if I will that you follow Maximin, then I must, to be consistent, will that you follow Maximin, which would mean that you would attempt to defeat my application of Maximin to you. It is logic alone that guides genuine morality, according to Kant. And it is logic alone that frees us from desire and thereby allows us to make choices that are genuinely free.

7. Kant’s ideas about morality are tightly connected to his ideas about religion. Free choice gives us an intimation of the noumenal world. But the noumenal world will make sense only if the moral choices that we make are rewarded and the immoral choices are punished or at the least, not rewarded. A system of rewards and punishments suggests the presence of a judge, and, of course, that judge would be God. These reflections are *not* examples of knowledge, because they refer to the *noumenal* world. We cannot examine and systematize data of the noumenal world. But the intimation that we do have of the noumenal realm suggests that faith in God and in a system of rewards and sanctions makes sense. This does not mean that religious faith is rational belief; it only means that it cannot be dismissed as contrary to reason. Indeed, Kant said that in his critical philosophy he defines the limits of reason to make room for faith!

8. It is now obvious that Kant thinks that all attempts to prove the existence of God must fail, because God is an integral part of the noumenal world, and only the phenomenal world yields to the methods of science. Kant also believes that the soul, as defined by Descartes and Leibniz, cannot exist. The self, as we ordinarily conceive it, is a “posit.” We suppose that the ‘I’ of everyday judgment has an actual referent, but the reference of the ‘I’ is just the empirical self, the self that is studied in psychology; not the self that is morally responsible and the object of salvation or damnation. Thereby, the soul in the Cartesian or Leibnizian sense is relegated to the noumenal world and hence is an object of faith but not of rational belief or knowledge.

The Unity of Apperception

1. As we have seen, Kant associates various forms of judgment with categories, or concepts that we must have in order to understand each particular form of judgment. Kant identifies 12 types of judgments (MP p. 739) and associates them with 12 categories. For example, as we have seen, we are able to make universal judgments only if we have a concept of unities that are individuated from each other. Kant tells us that he is not going to give us a ‘definition of the categories.’ (MP p. 741) Even so, he helps us understand the categories by mentioning ‘derivative categories’ that are also *a priori*: For examples, force, action, community, resistance, arising. But these are not empirical concepts, that is, concepts that are synthetic collections presented by a single consciousness in the ‘manifold’ of experience. (MP p. 741) How are they related to the categories of the understanding? It is speculative, but perhaps we can think of the issue in this way. We associate certain qualities with each other to get the concepts of individuals, say, an individual human being. Those individuals can be associated into groups according to various distinctive qualities, say women, and thereby be represented as a *plurality* (viz as some humans), and finally various pluralities can be represented as a *totality*, that is, a ‘closed’ plurality, say of men and women – on the assumption that all human beings are one or the other. The concepts of unity, plurality and totality are necessary to making judgments like: All humans are … (say) animals; or some humans are … (say, women) , or Man (viz. humans) is (are) … (say) rational.

2. Among the categories of judgment Kant identifies three ‘modalities’: problematic, assertoric and apodictic judgments. Now, Kant claims that these categories contribute nothing to judgment itself, but rather relate the judgment to the ‘laws of thought.’ It is the relation of the judgment to the laws of thought that determines whether the judgment is merely possible (problematic), or true (assertoric) or necessary (apodictic). In a way, Kant here agrees with Locke. Locke claims that demonstration depends upon the agreement or disagreement of ideas as exemplified in the process of illation. Whether or not the illation is intuited (and therefore a valid step in the demonstration), depends upon whether the connection between the idea is necessary or merely probable (in which case the putative demonstration is merely probable.) For more on this see Ott, *Locke’s Philosophy of Language*, pp. 49 – 52.

3. The most important of the pure concepts is causation. We associate causality and dependence with hypothetical judgments (viz. If …, then …). What this means is that when we make hypothetical judgments about the manifold (that is, about our experiences, whether real or imaginary), we rely upon the category of causation. This fact enables us to make certain *a priori* judgments, for example, that every event has a cause. The reason for this is that to conceive an event, a happening, we must attribute some property to it, and that property locates the event within the casual nexus. Events are in fact not only explained by their location within the casual nexus but also individuated by it. So, every event has cause; some events are mental; mental and physical events constitute a ‘closed’ plurality, which the ‘empirical manifold.’ Thus, the empirical manifold is the collection of mental and physical events. This example is an attempt to illustrate how the various pure concepts might work together in producing ‘derivative’ *a priori* concepts, but Kant does not actually give this example (or any example), because he thinks that ‘they might give rise to doubts and charges that we may relegate to another activity without in any way detracting from our essential aim.’ (MP, p. 741) So the above may or may not be how Kant would wasn’t to deal with the example chosen.

4. Now, the question that immediately arises is how we know that the pure categories can actually be applied to the world in which we live. How do we know that they actually *describe* anything? Showing that they are applicable to ‘reality’ (and are not only figments of the imagination) is the project that Kant calls ‘deduction’ or in ordinary English ‘justification.’ What this actually requires is a unification of intuition and understanding; in other words, a demonstration that the *rules of thinking can be applied to the objects that we sense or perceive.*

5. The first step is to distinguish synthesis from analysis. Synthesis is the process of unifying the manifold of various intuitions and/or concepts in the understanding. This process may be conscious and deliberate, or it may be ‘automatic.’ The point is that any act of putting sensory or conceptual experiential inputs together is an act of the mind. Kant claims that synthesis (both temporally and conceptually) precedes analysis. In this sense, analysis is the decomposition of elements that have already been united by acts of synthesis. (MP p. 746)

6. The synthetic unity of apperception is the unity that arises in experience from the fact that the objects of our consciousness are apperceptions of the ‘I think.’ (MP. p. 746) In other words, the sensory and conceptual manifold can be construed as a representation of reality only if it is united in a *single* consciousness. But once experience is associated with a single consciousness, it is possible for us to represent the ‘identity of consciousness in those representations,’ which means that the thought that all the representations are united in me is tantamount ‘to the thought that I unite them.’ This conception of the ‘unity of consciousness’ is ‘objectively valid. (MP p. 749). However, it must be distinguished from the ‘empirical unity of apperception.’ This may differ from person to person, which is to say that we may assemble the elements of intuition and understanding in different ways. Even so, the *form* of intuition (space and time) and the pure concepts of the understanding are objectively valid, that is, any differences in our understanding of the manifold of experience are not to be attributed to different *a priori* intuitions or concepts but rather to differences in sensory or conceptual input or else to differences in the way in which pure concepts or forms are applied to the manifold. (MP. p. 749f)

7. Now, the ‘I think’ that is presupposed by the synthetic unity of apperception is neither consciousness of how I appear to myself nor as a I really am in myself. It is only the consciousness that I am. In other words, in conceiving of myself as a this-or-that I am already subsuming the concept of myself under the categories and locating myself in space and/or time, just as I would with any other object.

8. The pure categories of thought are essential to judgment. (This is what Kant means by a ‘metaphysical’ deduction of the categories, and it is covered above.) But there is also a ‘transcendental’ deduction of the categories. A transcendental deduction of the categories will explain how it is that we cognize *a priori* constraints on how objects must appear to us. The key idea is that space and time are not merely forms of intuition but rather are themselves intuitions containing ‘the manifold,’ and thus determine the unity of the manifold (meaning that everything is located in space and or time, and hence is characterized by the forms of intuition and the categories of the understanding (viz. Euclidean geometry and basic physics that reveal the structure of space and time)). Therefore, all possible perception and nature itself can be represented either by the senses or in thought, but only in space and/or time, which governed by the forms of intuitions and relations that are determined by the categories of the understanding, including such ‘derivatives’ as force. (MP. 754f).

The Axioms of Intuition and Anticipations of Perception

1. We have seen that there are pure forms of intuition (space and time) and pure concepts of the understanding, for examples unity, plurality, totality, of causality/dependence (as well as eight others that we have yet to examine.) They are conditions of the possibility of experience) which is to say that all experience is either intuited (perceived in space and/or time) or understood (conceived as a unity, totality, plurality, cause or effect, etc). However, it is one thing to account for experience and the necessary structure of it; it is another thing to show that it is objective; that is, that those experiences are the ones actually characterize the structure of veridical perception and true science. In Kant’s own words: ‘Every object is subject of the conditions necessary for synthetic unity of the manifold of intuition in a possible experience.’ As Kant sees it, the conditions for the possibility of experience are the same as the conditions for the possibility of objects of experience. (MP, p.761) But what then will distinguish a phantom (dream) from something real? For Kant it is that the real is a part of the synthetic unity of apperception that is characterized coherently by the ‘rules for the *objective* [emphasis mine] use’ or the categories. Those rules are the axioms of intuition, the anticipations of perception, the analogies of experience and the postulates of empirical thought. (p. 762) When we mistake a dream for reality, or ask a meaningless question (for example, whether an ordinary object could exist ‘outside’ space), we fail to follow the rules for the ‘objective’ use of the categories.

2a. The axioms of intuition are general principles describing a representation or appearances as a synthetic unity of apperception; in other words, as ordinary things conceived as objects in time, or in space and time. The axioms of intuition are related to the pure forms of intuition in that the pure forms of intuition determine the structure of the representations (viz. by geometry, which describes spatial relations, and arithmetic, which reveals the structure of temporal relations). Whatever is represented in space and/or time has extensive magnitude*. Hence the principle underlying the axioms of intuition is that all intuitions are extensive magnitudes.* Whenever we represent (either in the imagination or via veridical perception) as an object of experience we conceive it is a single thing or group of things existing over time. In the case that an object can be represented by the ‘outer senses,’ principally touch and sight, it is conceived as spatial. *All these representations are extensive and all have magnitudes; which is to say that they exist for longer or shorter periods or take up more or less space.*

2b. This in fact helps us see how strange mathematics is. The judgement 7 + 5 = 12 is synthetic and priori, but not because 7, 5, and 12 are themselves parts of the synthetic unity of apperception. Rather, *things* (like pieces of plywood) that are parts of the synthetic unity of apperception *have extensive magnitudes*, for example, 5, 7 and 12. The principles of mathematics tell us that whenever two magnitudes are 7 and 5 their union will be 12, although we need to be careful to remember that the extensive magnitudes need to be *distinct*. For example if we dissolve 5 ounces of alcohol in 7 ounces of water, we do not get 12 ounces of liquid.

3a. The anticipations of perception involve pure categories that we have not mentioned to this point. These are the categories of reality, limitation and negation. Of course these categories also are presupposed by the forms of certain judgments: affirmative, negative and infinite. We already have an idea of them. Generally, something that is real is limited in a certain way. *For example*, it has a border and what is *outside* the border is *not* the same as the thing it borders. But we also have ideas of things that do not have borders (or limits), and they, are infinite. (How might a Kantian use these concepts to characterize Descartes view of God? Of Spinoza’s view of God?)

3b. What unites the *anticipations of perceptions* is described by the general principle that whatever is real in an object of ‘sensation’ (read more broadly as experience) has *intensive* magnitude, which is to say, *degree*. This again shows how mathematics works to characterize all experience. ‘There are infinitely many different degrees with which space and time may be filled.’ (MP p. 765) Kant here is saying that anything that is represented spatially (has extensive magnitude that is spatial) or temporally (has extensive magnitude that is temporal) also have intensive magnitude and hence can be *divided without limit*, so that one will never come to something spatial or temporal that is not further divisible, or which is to say the same thing, does not have intensive magnitude or ‘degrees.’ Kant reasons that this shows that neither space nor time could be empty, because *emptiness* does not admit of intensive magnitudes, that is, of degrees. (MP p. 766) It may be tempting to object here that Kant is claiming something that is obviously false. For example, a piece of gold cannot be divided infinitely; it will cease to be gold when its protons are dispersed. But Kant is not saying that the *nature of a thing* will be preserved through infinite division. He is claiming that however far division is carried on, there will be further possible division, but he is not saying precisely *what* is left to be divided, only that whatever is left is ‘real,’ which is to say that it is temporal or both temporal and spatial.

Analogies of Experience

1. Recall that Kant identifies rules for the ‘objective use’ of the categories, which is to say the rules for applying the categories to the subject matter of ordinary perceptual experience and physical science. Those principles are divided into four groups: axioms of intuition, anticipations of perception, analogies of experience and the postulates of empirical thought. The analogies of experience give use the rules for applying relational concepts: like ‘substance,’ viz. thing and ‘accident’ viz. property, like cause and effect, and like interaction between agent and patient. Underlying these concepts is the fact that experience is presented to us as a representation of a necessarily connected set of perceptions.

2. Now, time is a pure form of intuition, which means that whatever we experience, whether objectively real or merely a fantasy, is temporally ordered. The application of time to the actual phenomenal reality studied by empirical science presupposes that the intuition of time is exemplified by nature. However, there is a major problem with this insight, which is that *time is not an object of perception but rather a condition under which objects are perceived*. Experience therefore presupposes that events can be represented objectively in time. This means, for example, that the clicking of an atomic clock, the rotation of Earth around the sun, the rotation of Saturn on its own axis, the ticking of a cuckoo clock in your living room, etc all must be coordinated. But coordinated with what? The answer is with something that sets the standard for physical regularity or constancy – something like the speed of light or the tempo of a Cesium atom.

3. Given that we have found an objective representation of time in the empirical manifold (nature), we can see how various fundamental relations are temporally ordered. The first of these is the relation of **substance and accident** or, better, a thing or body and its qualities. This relation is captured in English by predication, for example, in the judgment that this piece of paper is white. Obvious the successful predication presupposes a permanence or duration. According to Kant (MP, p. 769), ‘in all changes of appearance substance is permanent.’ In other words, if we observe a change in the color of this piece of paper, our judgment will presuppose that this piece of paper was at one time one color and at a succeeding time another color. The possibility of successful predication of a quality to a thing presupposes that there are permanent objects (that is to say, objects with duration) to exemplify qualities. Someone might object and say that each instantaneous event is itself an object with qualities that mysteriously come into existence and cease to exist at the same time. This is what Kant is denying; Kant is claiming that a mysterious conception like that is a pseudo-conception, something that cannot be conceived at all.

4. The second of the analogies of experience concerns causes and effect. According to this principle, all alteration occurs according to causal laws. But just what is alteration? It is either a change in a quality or else a change in location. In either case, the very act of specifying the change will involve reference to a quality or else to a location. This reference to a quality or location functions in two ways: first to identify the event and second to identify its place within the casual nexus. However, the identification of the event itself already places it within the casual nexus. How might this work? First, suppose that a planet moves along its orbit. Its change in position is represented and calculated by the laws of motion. So, we need know only certain facts about it, like its position, velocity and acceleration, to calculate its new position. But the position, velocity and acceleration of an object determine not only where it is in space but also where it is in the causal nexus. Or suppose that the planet changes color. A change in color is a change in the disposition to reflect light of certain magnitudes. But that disposition depends upon the electro-magnetic properties at the surface of objects. So, the very characterization of the change as a change in color already has implications for possible causal explanations of the event. Of course these illustrations are simplifications, but Kant’s point is that ultimately the identification of a change involves locating the pertinent event within the casual nexus, which in turn implies that every event (change) has a cause.

5. Finally, the third analogy of experience involves what Kant’s calls ‘community’ of action. According to Kant events are simultaneous; occur at the same time, only if ‘empirical intuitions succeed each other reciprocally.’ Take, for example, the increase in the pressure of a contained gas and the increase in temperature of the contained gas. These events are simultaneous under the assumption that each is caused by a decrease in the volume of the gas (by depressing a piston in a closed container.) We know that the events are simultaneous because there isn’t a criterion for claiming that one is prior to the other. It is interesting that Kant acknowledges that if events are separated by space and ‘are completely isolated,’ then their simultaneity would not be an object of possible perception. If you were to argue that either one must have occurred before the other or they are simultaneous, Kant would deny that there could be an objective criterion for determining which of the alternatives is correct.

**Week 14 Thanksgiving Week**

Kant on the Antinomies and the Noumenal Realm

Kant on the Error of Taking Conditions of Experience to be Objects of Experience

1. According to Kant, one way in which philosophers have fallen into error is to take the conditions of experience to be objects of experience. He takes up these errors in section of CPR called ‘Transcendental Dialectic.’ (MP. p783) He discusses some of the errors under the heading ‘Paralogisms of Pure Reason’: (2) below, and others under the heading ‘Antinomies of Pure Reason,’ (3a), (3b) and (3d) below. We shall be taking up four issues (2) the self, (3a) space and time, (3b) simple substance, (3c) freedom.

2. According to Kant, reason is not a unity of experience but rather a unity of the understanding. Unities of the understanding make possible the unity of experience. Recall that Descartes reasoned from the fact that his existence is shown by his thinking, that he must be a thinking thing. This is exactly the kind of inference that worries Kant. According to Kant, the object of self-consciousness ‘is not the consciousness of the determining self, but only of the determinable self.’ The ‘determinable self’ is the inner intuition in which experience is unified ‘in accordance with the condition of the unity of apperception.’ (MP, p. 786) The self is that which unifies experience (draws from the empirical manifold), and considers it as a unity. But that does not mean that the self is a unity of apperception. When we follow Descartes and think of ourselves as a thinking thing, we are *really turning a condition of our cognition as an object of cognition.*

3a. The antinomies of pure reason arise when we consider transcendental objects to be objects of experience. A transcendental object is an object that is essential to our account of how a certain kind of experience is ***possible***, for example, coming to have scientific knowledge. Antinomies are based upon a thesis and an antithesis, and Kant’s point is that there are apparently successful arguments against each, even though it appears that one of them must be true. They each appear to be true because they take a transcendental object to be an empirical object, that is, a synthetic unity of apperception. We are going to consider three of the antinomies. The first of these deals with space and time. Space and time are pure objects of the intuition. Suppose that we also consider them objects of experience. According to Kant, we are faced with an irresoluble dilemma. If space is an object, then it must be contained to be conceived as a totality. But if it is contained and conceived as a totality, how can it be infinite? The argument concerning time is the same in structure. To consider time an object, a synthetic unity of apperception, is to consider it to be a totality. But then it must be bounded, but if it is bounded, it is not infinite and therefore not time. On the other hand, if time is not bounded, then it cannot be conceived as a totality.

3b. The second of the antimonies concerns substance. Consider the proposition that every composite substance must consist of simple parts, and nothing exists but the simples that constitute composites. But then composites are merely external states of simples, and hence not genuine substances or things – just as rainbows and smiles are external states of things but not things themselves. On the other hand, consider the proposition that there exists nothing in the world that is simple. But there are things that are composite and hence divisible. But things cannot be divided without limit and nevertheless be composed of parts. Hence composites cannot exist, or else simples must exist. (MP, p. 794

3c. Finally, consider the proposition that there must be a something (free will) other than causality that is responsible for the possibility of human action, for something that is caused involves me only as a passive object, not as an agent. On the other hand, there is the antithesis which is the proposition that everything is caused. To assume that there is free will in the requisite sense is to assume that something can happen that is within the empirical manifold but which is not identified by its place with the casual nexus, But the empirical manifold is defined by the causal nexus. So, the thesis cannot be true. On the other hand, if everything is caused, then there cannot be free will because there would be an action (event) that would lie outside of the casual nexus and hence would be inconceivable.

**Week 15**

Kant on the Noumenal Realm

1. Kant distinguishes two forms of ‘perceiving’ or intuition: Space and time. To be sure these are *pure* forms, meaning that they do not have empirical content. Forms of perceiving that do have empirical content would *presumably* be like forms defined by the color wheel, where yellow is the complement of purple, orange of blue, and red of green. Space and time are pure because they do not have empirical content, which could in principle be detected by the senses. On the contrary they are ordering principles of ***things*** that can in principle be detected by the senses. The pure forms of time and space are characterized respective by relations that are isomorphic to relations among numbers defined by arithmetic and to relations of elements of (absolute) space that are defined in Euclidean geometry.

2. Kant believed that arithmetic and geometry must describe the actual world because they are forms by which our intuitions automatically structure the world. In this respect the relation between the forms of intuition and the physical world are like the relation between data structures and the elements they (the data structures) structure in a computer program. Of course, our relations to nature, viz. the physical world, are not limited to perceivings; on the contrary, we also bring our powers of understanding to the analysis of what we perceive. That process is our conceiving and its products are our conceptions. Kant also thought that they are pure forms of conceiving and, indeed, pure concepts of the understanding -- more on that shortly. It is through conception and reasoning that we come to construct theories that systematize and rationalize our perceptions, the objects of our perceiving.

3. That our understanding of ‘reality’ is structured by the forms of perceiving (intuiting) and conceiving leads Kant to draw an important distinction: between the phenomenal world and the noumenal world. The phenomenal word, aptly named for the phenomena that our peceivings detect and that our conceivings systematize and rationalize, is really nature. But how do we know that our structuring of nature actually matches the structure of reality, as for example in the way that God might detect its structure? The answer is that we have no way of knowing how reality is if it is not conceived through the filters of our cognitive apparatus, the pure forms of intuition and the pure categories of the understanding. Kant calls reality as it ‘*actually*’ is; the noumenal realm. God is a part of the noumenal realm, if indeed God exists. Although the noumenal realm is beyond the scope of our ***understanding***, Kant believes that we do have intimations of it in the process of moral deliberation. According to Kant, our autonomous will, the experience that we have when we choose completely free of desire and inclination, is the noumenal analogue of causation in the phenomenal world. – more on that later.

4. In any case, Kant thinks that the phenomenal realm is ‘structured’ by the forms of our concepts. As with intuition, the concepts we are interested in are not empirical, but ‘pure.’ Pure concepts of the understanding ‘structure’ reality when applied, or as Kant says, when ‘schematized.’ Pure concepts when applied to the phenomenal realm actually define the structure of the empirical world, the phenomenal world that we perceive and conceive. The pure categories of the understanding are the forms of understanding. It is not surprising that the pure forms of the understanding are revealed to us in the forms of judgment that we make. For example, hypothetical judgments correspond to the category of Causality and Dependence. (See MP, p. 739 -40) When we apply judgments of this form to the phenomenal world, we in fact end up making casual statements. Hypothetical judgments are ‘if … then ….’ judgments. When we organize phenomenal reality into elements related by judgments of the form ‘if … then… ‘, we classify the relations of phenomena into sequences in which each element ‘depends’ upon another. This, in fact, is a causal ordering. Kant thinks that from this he can show that every event must have a cause. How can that be? Kant’s view is that to *be* an event, something that has happened, is to have a place in the casual nexus. That is because events are *individuated* by their location in the casual nexus. Kant believes that in this way he has actually solved Hume’s problem. After all, each event is completely determined by its location in the causal nexus. If it appears that there ever was or could be a future that does not track its past, it is only because we have misconceived what has actually happened, which is to say that we have either misdescribed the event or else have been incorrect in our identification of a casual law.

5. Kant was a determinist, which is to say that he believed that every event that occurs is necessitated by anterior events that stand in the casual relation to it. But how, then, can our will be free? Kant says that we choose freely when our choices are not determined by our desires. As a matter of fact, whenever we choose, there will be some description of the event under which it has been produced by a desire. But there may also be a description of the event under which it may be regarded as the product of ‘pure practical reason,’ which is free of desire. Practical reason refers to the process by which we give reasons for the choices that we make. According to Kant, when we make ethical decisions our reasoning is ‘practical,’ or as we might say: ‘normative’ or ‘action-guiding.’ Practical reason has a form, according to Kant. The form of our practical reasoning might contain reference to desire, as it would for a utilitarian. But genuine moral reason for Kant is pure, that is, it is free of reference to desire. How then would it guide our choices and actions? Kant says that it structures the process by which we choose. The principle that does the structuring Kant is the famous ‘Categorical Imperative.’ It instructs us to choose to act only from maxims that can be consistently will to be universal laws of nature.’ That would leave out maxims like ‘Maximin’ (viz. most for me; least for you), because if I will Maximin I must, to be consistent, will that you follow Maximin, which would mean that you would attempt to defeat my application of Maximin on you. It is logic alone that guides genuine morality, according to Kant. And it is logic alone that liberates us from desire and thereby allows us to make choices that are genuinely free.

6. Kant’s ideas about morality are tightly connected to his ideas about religion. Free choice gives us an intimation of the noumenal world. But the noumenal world will make sense only if the moral choices that we make are rewarded and the immoral choices are not rewarded or even punished. A system of rewards and punishments suggests the presence of a judge, and, of course, that judge would be God. These reflections are not examples of knowledge, because they refer to the noumenal world. We cannot examine and systematize data of the noumenal world. But the intimation that we do have of the noumenal realm suggests that faith in God and faith in a system of rewards and sanctions make sense. This does not mean that religious faith is rational belief; it only means that it cannot be dismissed as contrary to reason. Indeed, Kant said that in ***his critical philosophy he defines the limits of reason to make room for faith!***

7. It is now obvious that Kant thinks that all attempts to prove the existence of God must fail, because God is an integral part of the noumenal world, and only the phenomenal world yields to the methods of science. Kant also believes that the soul, as defined by Descartes and Leibniz, cannot exist in the phenomenal realm. The self, as we ordinarily conceive it, is a posit. We suppose that the ‘I’ of everyday judgment has an actual referent, but the reference of the ‘I’ is just the empirical self, the self that is studied in psychology. The soul in the Cartesian or Leibnizian sense is also relegated to the noumenal world and hence an object of faith but not rational belief or knowledge.

Contemporary Challenges to the Enlightenment Vision of Natural Science

 One difficultly that Kantians face was raised by the discovery that the physical world is actually non- Euclidean. This is a consequence of Einstein’s theory of relativity. According to Einstein’s theory, Euclid’s Fifth Postulate is false. The Fifth Postulate says that there is exactly one straight line that is parallel to an given in on a plane. NB: The parallel lines extend infinitely without ever intersecting. ‘Straight line’ means shortest line between two points on a place. ‘Infinite’ means has neither a beginning nor an end.

 Now Kant said that the axioms and theorems of Euclidean geometry are synthetic and But according to Einstein, the Fifth postulate isn’t even true, much less *a priori*. Some people have thought this result is so embarrassing that Kant’s theory is completely ruined, and there is no question that it is a big problem. But there may be something to be said for Kant after all. Even though we believe that space is non-Euclidean, that does not mean that we can perceive (picture or otherwise perceive) it as non-Euclidean. Our belief that is non-Euclidean is based upon a complicated theory. In other words, our *conception* of space is at odds with our *perception* of space. This is a possibility that Kant himself did not pursue (or perhaps recognize), but it suggests that we ought not conclude that a proposition about nature is synthetic and *a priori* until we are sure that perception and conception are in accord. If we had held ourselves to that higher standard, the difficulty about non-Euclidean geometry would not have arisen.

 The rise of non-Euclidean geometry not only threatened Kant’s vision but more importantly appears to undermine Newtons’ understanding of the physical universe. That, of course, is because for Newton the structure of physical space is Euclidean. He also thought that space is absolute, meaning, as we have learned, objects have a location that is determined not by their respective positions that are relative to other objects, but rather by their locations in “absolute” space. As we have learned, this idea was challenged long before Einstein, by Newton’s rival Leibniz. Even so, the Einstein’s theory appears to have reinforced the Leibnizian conception of space. According to that theory, motion is always relative to certain framework (an “inertial frame”). The idea of special inertial frame, absolute space, seems to be very implausible. Things that are moving within the universe move relative to each other, but what sense does it make to ask whether the entire universe itself is moving with respect to some “absolute’ frame,” which itself is not contrasted with any other frame of reference>

 Indeed, the 20th century brought another threat to the Newtonian vision, which is the so-called “indeterminacy” principle discovered and promoted by Heisenberg. According to that theory, very small particles (like electrons) do not have determinate positions and momentums. In other words, it is not possible to determine the velocity, mass and position of an electron at any given time. This fact suggests that it is realty might not make sense to say that every particle has both a position and momentum at a given time.

 These discoveries, although they seem to be esoteric, have tended to undermine the Enlightenment vision that the physical universe can be characterized on a strictly determinist model, where each event can in principle be predicted given pertinent initial conditions, like mass, position and momentum. this tendency appears to statistical models of causation, that were initially, if crudely, promoted by Hume. and that were developed by mathematicians and physicists at the beginning of the 20th century. What seemed to be an unproblematic metaphysics that comported easily with determinist physical science came apart, and inspired subjectivism in other fields, like moral philosophy. It is ironic that the determinist model, particularly in it s Kantian form, seems to have be riven by the very science that inspired it, and Hume’s skeptical epistemology, which inspired ridicule, was vindicated by epistemological developments in the very science that Kant hoped to “validate.”

1. ***This version of the syllabus is subject to change before the beginning of classes and supersedes all prior versions. Also, the schedule of lectures, although firm, may be varied somewhat to accommodate special interests as they arise.*** [↑](#footnote-ref-1)
2. ‘At a fixed temperature the volume of a gas is inversely proportional to the pressure exerted by the gas’ -- from: Boyle, The *Sceptical Chemyst*, 1680 [↑](#footnote-ref-2)
3. Boyle, M. Steward, ed, *Selected Papers of Robert Boyle*, 50ff.Indianapolis, Hackett Publishing company, 1991, p. [↑](#footnote-ref-3)
4. Spinoza, Curley, trans, *Ethics* Part Two, (in: Curley trans and editor, *Collected Works of Spinoza*, vol. 1, Princeton University Press, Princeton, 1985), L1. [↑](#footnote-ref-4)
5. This treatment of clear and distinct perception is inspired by Loeb. See: Loeb, L, ‘The Cartesian Circle,’ 1992 (in: Cottingham, John, The Cambridge Companion to Descartes, Cambridge, Cambridge University Press, 1992). This type of treatment was suggested earlier in Bernard Williams, *Descartes: The Project of Pure Inquiry*, New York, Penguin, 1978. Sill earlier, Norman Malcolm also develops the idea of incorrigibility in his *Dreaming*, London, Routledge, Kegan and Paul, 1959. [↑](#footnote-ref-5)
6. Of course this brings to mind Quine’s famous image from ‘Two Dogmas of Empiricism’ in which he discusses criteria for belief revision. Well-confirmed theories, which turn out to be scientific theories, resist a redistribution of truth values across their statements because of our natural tendencies to ‘disturb the system as little as possible.’ Quine, [1961, p 43ff.] [↑](#footnote-ref-6)
7. Here again Loeb’s interpretation rings true to the contemporary ear, although this time it is natural to turn to Rawls for inspiration. Stability will be a mark of justification only in the epistemologically conscientious believer. Stability that is a sign of justification, perhaps Rawls-like equilibrium, cannot be just a property of a collection of beliefs. On the contrary, it must be stability that has been reached in conformance with certain standards of rationality. Of course, in this too the present theory agrees with Loeb; however, the standards of rationality cannot be taken for granted.

 In referring to Rawls I am thinking of the obvious passages from *A Theory of Justice*, especially *Rawls,* [1971, pp. 48 - 51]. See also Rawls [1951, pp. 212 – 24, especially p. 216].  [↑](#footnote-ref-7)
8. Loeb [2002, pp. 60 – 101, but especially pp. 89 - 94] [↑](#footnote-ref-8)
9. Loeb [2002, pp. 89] [↑](#footnote-ref-9)
10. Loeb [2009, pp. 91 -4] [↑](#footnote-ref-10)
11. The introduction of a probabilistic notion at this point is really essential to the argument. The sense in which ‘likely’ is taken up in Lectures for Week #11 [↑](#footnote-ref-11)
12. This sounds strange, because it is initially difficult to see how the imagination is involved in the comparison of likelihoods of the outcomes. However, it is important to remember here that for Hume reason is a species of the imagination. Reason is the formalization of the process of inference, by which one idea is presented after another via the natural relations that associate ideas with each other. These, of course, are resemblance, contiguity and cause and effect. Obviously, cause and effect will not operate in a matter of chance, since by definition chance excludes causality. Resemblance and contiguity may serve to enliven ideas and thus may make the imagination more likely to conceive one outcome rather than another. This is a probabilistic inference to be avoided. As we have seen, only causal inferences can legitimately assure us of matters of existence. Thus resemblance and contiguity may mislead us into thinking that an outcome that is a matter of chance is actually a rational belief. This is how superstition and pseudo-science gain a footing. [↑](#footnote-ref-12)
13. It is worth noting that here we have a straightforward argument that has nothing to do with the etiology of ideas. Although Hume thinks that arguments of this sort are obvious and trivial in that they are not ampliative, they are nonetheless essential to the development of his philosophy. [↑](#footnote-ref-13)
14. Hume establishes this conclusion by just the argument that we should have expected, that is, by deeming the vector products to be equal. (*Treatise*, p. 218ff) [↑](#footnote-ref-14)
15. I say ‘ultimately’ because a die might be loaded with prior information about how to make it twice as likely that ‘x’ will come up as another side. This knowledge, however, will ultimately depend upon experiment, that is, upon counting chances. [↑](#footnote-ref-15)
16. This is different from the previous case concerning the loaded die, because the initial conditions of the experiments with the die were supposed to be the same in every pertinent respect. [↑](#footnote-ref-16)
17. The complaint that Hume does not give us a clear standard for distinguishing belief from justification and hence claims about belief and claims about justification is hardly new. See Loeb [2002, pp. 102 – 5]. [↑](#footnote-ref-17)
18. We need to be careful to distinguish perceptions that are true or false by virtue of relations of ideas from relations themselves. Relations include resemblance (which is the basis for abstraction), identity (involving identification over time) , space and time (involving comparisons like above, below; before and after, quantify or number (involving motion); quality (involving degrees, like temperature and weight), contrariety (the opposites of existence and non-existence) cause and effect. These relations Hume calls “philosophical.” (*Treatise,* S-B and N, I;I:v, p. 14f.) [↑](#footnote-ref-18)