NEWSLETTER ON TEACHING PHILOSOPHY

FROM THE EDITORS, TZIPORAH KASACHKOFF & EUGENE KELLY

ARTICLES

STEVEN M. CAHN
“The Ethics of Teaching: A Puzzle”

CARRIE FIGDOR
“Essay Exams as a Process, Not Just a Product”

LAWRENCE M. HINMAN
“Teaching with a Screen”

JOSEF VELAZQUEZ
“A Logical Order?”

MARK ZELCER
“A Flow-chart Approach to the Ontological Argument”

BOOK REVIEWS

Daniel O. Dahlstrom: Heidegger’s Concept of Truth and Jacques Derrida, trans. Mark Dooley and Michael Hughes: Cosmopolitanism and Forgiveness
REVIEWED BY JOHN MARMSZ

Greg Restall: An Introduction to Substructural Logics
REVIEWED BY SAMIR CHOPRA

John D. Caputo: On Religion
REVIEWED BY JASON A. BEYER

BOOKS AND OTHER MATERIALS RECEIVE

ADDRESSES OF CONTRIBUTORS
Welcome to the Spring 2003 edition of the APA Newsletter on Teaching Philosophy. We are pleased to present in this issue five papers on diverse topics that will be of interest to teachers of philosophy, and several reviews of books that can be used in the philosophy classroom.

Our first paper—to which we solicit reader response—will, we hope, initiate a new column in future issues of our Newsletter. In this paper, entitled “The Ethics of Teaching: A Puzzle,” Steven Cahn presents, by analogy, a situation that many of us encounter in our classrooms, and asks how best to handle its consequences. Cahn raises this question as an ethical problem. We urge our Newsletter readers to respond to this paper and to suggest “ethical puzzles” that they themselves have encountered in their classrooms. We shall publish the responses that we receive. Given sufficient reader interest, we shall, as a continuous feature of our Newsletter, present both puzzles of the classroom suggested by our readers and the comments we receive in response to them.

Our second paper, by Carrie Figdor, is entitled “Essay Exams as a Process, Not Just a Product.” Carrie shows how essays exams can be used as teaching and not merely as evaluative devices, and details various strategies that instructors might employ to do this. Given the concrete detail and the examples used, this paper offers many practical suggestions for philosophy instructors.

Our third article, by Larry Hinman, describes various computer software programs that can be used to teach philosophy ‘with a screen’ (with a computer). Larry discusses the advantages and disadvantages of these programs and reflects on the wisdom of using computers to teach logic and ethics. As we are all aware, computer technology in the classroom is increasingly being encouraged by college administrators. Larry has many years of experience teaching – and reflecting about – philosophy ‘with a screen’ and we welcome his contribution.

The fourth article in the current Newsletter is authored by Josef Velazquez. In “A Logical Order?” Josef suggests that introductory logic students might benefit from our deferring the introduction of and display of “defining” truth tables until after students have worked with some practical problems in natural deduction. Josef explains why he believes it to be pedagogically sound to have students translate ordinary English sentences into logical symbols ‘intuitively’ before introducing them to truth tables, to the way that truth tables define logical symbols, and to the way that truth tables can prove argument forms valid. Readers are encouraged to comment on the method that Josef suggests (as we encourage them to respond to any of the material that we publish).

Our fifth and final article, entitled “A Flow-chart Approach to the Ontological Argument,” is authored by Mark Zelzer. Mark suggests a way of presenting Anselm’s Ontological Argument which, he claims, will reveal to students both its structure and its weaknesses. If you try this out in the classroom, please let us know how this fares with your students.

The addresses of contributors to our Newsletter are listed at the end of the issue.

We always encourage our readers to suggest themselves as reviewers of books and other material that they think may be especially good for classroom use. The names of books and other materials that we have received for review are listed in section IV of the Newsletter. But reviewers are welcome to suggest reviewing material that they themselves have used in the classroom and found useful, even if it does not appear in our ‘Books Received’ list. Please remember, however, that our publication is devoted to pedagogy and not to theoretical discussions of philosophical issues. This should be borne in mind not only when writing articles for our publication but also when reviewing material for our publication.

As always, we encourage our readers to write for our publication. We welcome papers that respond, comment on or take issue with any of the material that appears within our pages. However, it is not possible, given the number of pages that we publish in each issue, to consider papers in excess of 15 pages.

The following guidelines for submissions should be followed:

- The author’s name, full mailing address and paper title and should appear on a separate sheet of paper. Nothing that identifies the author or his/her institution should appear within the body or within the footnotes/endnotes of the paper. The title of the paper should appear on the top of the paper itself.
- Four complete copies of the paper should be sent.
- Authors should adhere to the production guidelines which are available from the APA and are published in the present edition of the APA Newsletters.
- All material submitted to the Newsletter should be available on Windows readable computer disk, but do not send the disk with the submitted paper. The
The Ethics of Teaching: A Puzzle

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I

Suppose a youngster named Patricia is told by her parents that her uncle left the country decades ago and now lives in an inaccessible region of the world. He is a man of high moral principle, who cares for her deeply and has high hopes for her. He is also a man of considerable resources who in mysterious ways keeps track of her activities.

As Patricia grows up, her belief in her uncle plays an important part in her life. When her hopes are stymied or her inaccessible region of the world. He is a man of high moral principle, who cares for her deeply and has high hopes for her. He is also a man of considerable resources who in mysterious ways keeps track of her activities.

If you believe Patricia has been misled and, in fact, her supposed uncle never existed, should you try to convince Patricia of her error?

II

Suppose your student Peter believes in God, and this belief enables him to deal with life’s problems and achieve worthwhile goals.

If you believe Peter has been misled and, in fact, God does not exist, should you try to convince Peter of his error?

III

Do cases I and II differ in any significant ways? Should teachers treat them differently? Why?
everything to do with scheduling and graduation requirements. There is therefore (at least initially) little motivation other than the maintenance of a grade average for a student to perform well in a philosophy class. (Even this motivation can be considerably diluted by school policies that allow students to drop classes without academic penalty up to the day of the final exam.) Fortunately, while concern with grades may be all the motivation a philosophy teacher has to work with, this concern is often sufficient, at least at the introductory level, to induce students to work at mastering the material. It is not unusual for grade-motivated students to do what is required to get a good grade even if they are only mildly interested, while others who may find the material very engaging may not be able muster the time or energy to do the work necessary to succeed in the course. This is not to deny the importance of stimulating interest in philosophy, but only to emphasize that students need not be enthralled with the subject to do well in it.

It is clear, then, that often philosophy teachers must simultaneously teach philosophy and its associated skills to students who have, at most, a passing instrumental interest in the subject. My suggestions about rethinking essay examinations are made with this situation in mind.

Much has been written on how to teach critical thinking skills in both critical-thinking and non-critical-thinking classes, with many of the strategies advocated being adopted from the writing-across-the-curriculum (WAC) movement. Although some of the WAC literature has an annoying postmodernist slant (for example, professors are often subjected to belflitterment-by-stereotype while students are extolled as knowledge makers), it is valuable in its emphasis on process over product and in its concrete proposals for incorporating this viewpoint into pedagogical practice.

Among these proposals is the suggestion that explicit and incremental steps for producing an adequate, college level, valuable product (such as a term paper or some such graded assignment) be built right into the syllabus. Thus, term papers or other written assignments are “staged” or “sequenced” through a series of due dates over a period of weeks so that students are required to submit items that, incrementally and progressively, lead to the production of the final paper. For example, a sequence of such steps might include, first, a two- or three-sentence statement of the position the student will take on the topic; second, a 250-word abstract of the central arguments that the student will develop; third, a first draft of the paper that is then returned to the student with suggestions for improvement; fourth, a final draft of the paper; and fifth, an optional rewrite of the final draft after it has been evaluated and graded. Ideally, each stage serves to reinforce both the content of some part of the course and a particular cognitive skill (such as the skill involved in articulating a particular position or in demonstrating how that position is or is not supported by particular reasons). In this way, the learning of skills and content come to complement one another.

The incremental process of writing described above captures the essential idea behind the view that essay exams may be used as tools for learning rather than merely as tools of evaluation. That is, essay exams can be part of a learning process and not just a product of learning.

How Essay Exams Can Function As Part Of The Learning Process

Just as one can teach the successful writing of term papers in stages, so one can have students learn to write a good essay exam in stages, though how much staging should be built into the exam process will depend on the skills possessed by the class. If basic writing skills and minimal familiarity with making arguments can be assumed, a fairly simple sequence consists in having students (a) write practice essays; (b) model good essays; (c) model grading criteria; and (d) prepare notecards. I shall discuss each of these below with examples drawn from how I employ them in the classroom.

Differences in skill levels among students in a single class will show up at each stage and can be addressed at each stage via more or less detailed verbal or written comments on how each student’s work can be improved for the next stage. If the first step reveals that many students lack basic writing or reading skills, then staging assignments is, if anything, more rather than less important. I will return to this issue below.

(a) Practice Essays. About three or four class periods before the exam date, I provide a list of questions from which I will choose those questions that will appear on the exam. I ask students to prepare some rough notes which they might use to answer one of these questions. They all prepare notes for the same question for the practice essays. (They can prepare notecards for the other questions later. See (d) below on notecards.) In the following class session, I set aside twenty minutes and have the students write an essay answering that question, using the notes that they have written at home. This gives the students a clear understanding of how much they can write during that time and of the pressure they will face during the exam itself. I inform the students that I plan to distribute two of the best essays written during this period to all members of the class.

I collect but do not grade this essay. It counts as an “informal” writing assignment – that is, it gets a checkmark and counts as part of each student’s cumulative in-class “participation” grade. But, I do look through the essays briefly, without making comments, to find two essays that come closest to what I want. (See (c) below for what I look for in these essays.) I try to choose essays that differ from one another in how they answer the question, either in content or in organization. I photocopy these essays, names excluded, for the class. (The rationale behind “informal” or “low-stakes” writing — another bit of WAC terminology — is that while writing assignments that do not get grades often do not get done, assignments can still count — and get done — without being graded.)

(b) Modeling Good Essays. An obvious problem with essay exams is that different teachers in different disciplines have different expectations of what constitutes a good essay. What counts as a good essay in one class may not in another. It is therefore important to make clear to students what your own criteria are. A “norming” session in class solves this problem neatly.

Before the class session when the exam is scheduled, I hand out photocopies of the selected practice essays. We read through each of the essays to discover what makes them good and how they might have been improved (keeping in mind that they were written in twenty minutes). As a variation, one can have the students make these discoveries in small discussion groups, after which everyone comes together for a whole-class discussion. I leave it to the students to compare the selected essays we go over in class with their own.

(c) Modeling Grading Criteria. When we review the practice essays, I also distribute a “grading sheet” listing the criteria that I will use when I grade the actual essay exam. I list my criteria under the main headings of “Organization,” “Content” and “Style.” I demonstrate what each of these categories refers to with respect to the selected practice essays we have just discussed. I also explain why I think these criteria
are important in assessing their work and why other considerations are not as crucial to me. For example, I make clear that while their essays must be readable, I do not expect perfect grammar since writing under time pressure usually induces mistakes. The practice essays and norming sessions are intended to give students an opportunity to make and learn from their most important errors — such as poorly organized answers or answers that do not address the question — without paying a penalty. They are not intended to teach grammar.

Not incidentally, establishing grading criteria also speeds the grading process itself. I write few if any comments on the exams themselves since, in my experience, students almost never read them. I have found that why a particular grade was earned (not “given”) is not normally an issue for students unless they are unhappy with their grade. Whatever comments I do wish to make, I put on the student’s grading sheet (the same grading sheet introduced in the norming session described above), which is returned to each student along with his/her graded test. Mostly, my comments are brief notes that can be used as reference points in case a student wants to retake some part of the exam (see below for retakes of exams). I have found that by making the criteria for the assessment of student essays clear ahead of time, student complaints about grades that are not requests for an exam retake are minimized.

(d) Preparing Notecards. I recommend that students prepare a single 3 x 5 card of notes that they can bring with them to the exam. Having to fit their notes onto a 3 x 5 card can help students consider ahead of time what is important and how to organize that material. Some students write — or word-process — in unbelievably tiny font sizes and so are able to fit a good portion of their essay onto the card. Preparing notecards is wildly popular with students as it appears to give them license to prepare a “cheat sheet.” But from a teacher’s point of view this is an enormously effective way to encourage student preparation for the exam. When it comes to preparing “crib sheets,” one person’s cheating is another person’s review. Very few students do not prepare these cards and hence very few do not do some preparation for their essay exams.

The minimal staging that I have just described for an essay examination can be varied and expanded in numerous ways. For example, to model good essays, the instructor can distribute photocopied examination essays from another class — essays which received grades varying from ‘A’ to ‘D’ — and have students, divided into small groups, try to figure out what grades the essays received and why. Practice essays can then be written after these essays are discussed by the class as a whole. Also, after discussing grading criteria, the instructor can ask students to rewrite their practice essays at home in accordance with the criteria discussed. Doing this would require beginning the staging process at least one class earlier. Alternatively, students can be given a few minutes in class to assess their practice essays according to the criteria discussed and be asked to write down what they would need to do to make their essay better conform to the criteria. Time can also be set aside for a peer review session in which students assess one another’s essays according to the criteria.

As I noted above, the process that I describe here of preparing students for essay examinations assumes that one’s students possess a level of reading comprehension and writing proficiency that allows their practice essays to be minimally coherent. If there are no—or too few—practice essays that demonstrate a minimal level of reading comprehension and writing skill, then the staging process would have to be further broken down and begun sooner. In fact, the lower the level of students’ skill in writing and comprehension, the more necessary staging becomes if the essay examination is to be a useful type of evaluation at all. One suggestion for dealing with students of generally low-level skills is to provide examination questions along with each reading assignment from the very beginning, and then have the students rewrite the examination questions in their own words. (This is one way to discover poorly worded questions.) Students can also be asked to identify those portions of the readings, which are most relevant to answering each question and why.7

If the questions are well chosen, this can help students to focus on what is important in their readings. Classes in which students have only minimal levels of reading and writing skills are, of course, philosophy classes only in the sense that the subject being used to teach writing and reading happens to be philosophy. There is no genuine choice in these cases between teaching basic skills or covering the material, since where there are no skills, there is no learning, and where there is no learning, there is no coverage.

Staging need not stop once the exam that it has led up to is given. If optional examination retakes are allowed, students can earn extra points by explaining the mistakes that they made in selected essays.8 I allow essay retakes in which students are required to explain what was wrong with their initial answer as well as provide the corrected one. It is not important for the rewritten assignment to deal with all of the errors on the previous exam or paper. Retakes can squeeze more learning out of an examination (or out of any written assignment) by giving students a second chance to do well.

In general, with staging, I get better essays and students get better grades. No doubt, this is in part because even minimal staging prevents students from waiting until the night before the exam to review the material. Staging exams also makes it clear to students what the instructor wants, and by what standards the work will be assessed. Finally, when I fail to receive good essays from my students, I am in a better position to diagnose the difficulties that students have, and can try to add stages into the preparation for the next exam (or the next version of the course) to work on those skills that are inadequate. Therefore, the basic sequence of essay examination preparation that I detailed above accomplishes two things: it eliminates or at least alleviates certain important sources of poor performance on essay exams and it helps reveal some specific cognitive weaknesses that would otherwise go unnoticed. The following example will illustrate this point.

On one essay examination I asked students to explain both how Descartes and Hume each accounts for our idea of God, and how Descartes’ epistemology would be affected were he to admit that Hume was right (and vice versa). Most students did not draw the general implications for Descartes’ epistemology were Descartes to have acknowledged that the idea of God is our own construction, as Hume maintained, and not innate. They did not see that a human-constructed idea of God need not have a referent, and that for Descartes this would have the unfortunate consequence of leaving his skepticism unresolved since a human-constructed idea of God would not entail a benevolent guarantor of the existence of anything that corresponded to his clear and distinct ideas.

I had initially thought that the process of sequential preparation of essay writing would challenge students to write more exploratory essays than they otherwise would have. But my hopes were unrealistic. I have come to realize that, at least at the introductory level, most essay exam takers are sufficers, not maximizers. But I think the answers I received also reveal the difficulty that many students have in focusing on the
important facts from which the correct implications might be drawn. Although I had stressed in class that—and why—Descartes needs to prove that God exists, no connection was made between this fact and the possibility that Hume’s explanation of our idea of God is correct. I now realize that I should build into the assignments leading up to the exam more opportunities for making these kinds of connections and for drawing out their implications. My point here is that staging exams can help separate problems stemming from weaknesses in critical thinking skills from problems that stem from unfamiliarity either with the material or with the instructor’s style. The latter types of problems can be fairly easily identified and addressed via the sort of staging suggested above; the former weaknesses are best addressed in exercises throughout the semester.

Finally, I should mention that staging is just one way of increasing the effectiveness of exams as learning tools. Another way is to simplify the examination itself by, for example, not asking a question trailed by hints or subquestions that can overwhelm students or lead them to answer each question in order rather than to write an essay on one clearly stated question.

I also tend to have students answer the same questions, avoiding assessment problems that arise from inevitable differences in the difficulty of questions. Finally, I grade the exams “blindly”: students put only numbers on their blue books, 3 x 5 cards and examination sheets. This goes a very long way toward minimizing the “halo” effect: when I call out the numbers and match names with grades, I am often surprised at the results.

Endnotes
1. A clear-eyed, yet hopeful, assessment of the difficulties many students have is provided in Jane Freimiller, “The One-Page Philosopher: Short Writing Assignments for Introductory Classes,” Teaching Philosophy Vol. 20 No. 3 (September 1997), 269-76.
2. “Writing-to-learn” is part of the pedagogical vocabulary developed within the Writing Across the Curriculum movement, which emphasizes the use of writing as a tool for teaching, not just evaluation. An early example of efforts to incorporate WAC techniques in the teaching of philosophy is Jeffrey Berger’s “Writing to Learn in Philosophy,” Teaching Philosophy vol. 7 no. 3 (July 1984), 217-22. The approach to essay exams that I suggest in this paper stems from that pedagogical movement, and in particular owes a big debt to John C. Bean’s Engaging Ideas: The Professor’s Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom (San Francisco: Jossey-Bass Inc., 1996). Bean’s book is an indispensable source of practical advice on using writing to improve student learning in any discipline.
3. Some of the difficulties that students can have in learning what it means to take a position and provide evidence for it are documented in B. Walvoord, and J. Breihan, “Arguing and Debating: Breihan’s History Course,” in B. Walvoord and M. P. McCarthy, eds., Thinking and Writing in College: A Naturalistic Study of Students in Four Disciplines (Urbana: NCTC, 1998), pp. 97-143. Sensitivity to such issues of cognitive development is often missing in philosophical contexts. For example, Perry and Bratman, in their widely-used introductory text, include advice on how to read philosophical texts “aggressively,” which in their terms means to “adopt the stance of the intelligent and perceptive opponent, thus coming to understand the case the philosopher is trying to make.” (See J. Perry and M. Bratman, Introduction to Philosophy: Classical and Contemporaneous Readings, 3rd ed. (New York: Oxford University Press, 1999), 2-6.) This advice could only be of use to a student who already understands what it is to make a case for something, not to mention what it is to adopt a critical attitude toward it.
4. An excellent article that examines the lack of basic epistemological education and – even more importantly—the resistance to critical thinking that often accompany the lack of critical thinking skills is Shelagh Crooks, “Developing the Critical Attitude,” Teaching Philosophy Vol. 18 No. 4 (December 1995), pp. 313-25. This article is a must-read for anyone in any discipline concerned with critical-thinking issues.
5. A heuristic for improving student comprehension of philosophy texts—based on having students focus on statements in their readings that are puzzling or incompatible with their beliefs—is suggested by Jonathan Adler in “Reading and Interpretation: A Heuristic for Improving Students’ Comprehension of Philosophy Texts,” in T. Kasachkoff, ed., In The Socratic Tradition: Essays on Teaching Philosophy (Lanham, MD: Rowman & Littlefield Publishers, Inc., 1998), 37-46. Bean (op. cit.) also suggests many reading strategies, such as developing reading guides that focus attention on critical aspects of the text. Adler, Bean, and Perry and Bratman (op. cit.) all agree that a critical factor in increasing comprehension is simply getting students to read more slowly. The introductory class that I have in mind in this essay has sufficient reading skill to be able to learn to read original works with the aid of such heuristics; I do not assume that they can already do this.
6. For a collection of important articles on WAC, see A. Young, & T. Fulwiler, eds., Writing Across the Disciplines (Upper Montclair: Boynton/Cook, 1986).
7. For a suggestion that daily essay quizzes can help increase learning, see P.A. Connor-Greene, and J.W. Murdoch, “Does Writing Matter? Assessing the Impact of Daily Essay Quizzes in Enhancing Student Learning,” Language and Learning Across the Disciplines, Vol. 4 No. 1 (May 2000), pp.16-21. In the study reported here, psychology students who had daily graded essays performed better than those who did not when given an essay quiz on a professional research article on an unfamiliar topic. The problem with such exercises, of course, is how to manage the grading load.
8. For suggestions on how multiple-choice exams can be used to bolster learning, see C. Bolt-Lee and S.D. Foster, “Examination Retakes in Accounting: Increasing Learning by Writing After the Exam,” Language and Learning Across the Disciplines Vol. 4 No. 2 (August 2000), pp. 40-46. The method described here of allowing students to “retake” missed questions by explaining why their original answer was incorrect could be adapted to essay exams or even to short-answer tests.
9. John C. Bean has many useful suggestions for improving essay questions to make them more effective. See Engaging Ideas: The Professor’s Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom, op. cit., 191-2.

Teaching with a Screen
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Introduction
Four years ago I began teaching with a screen, that is, teaching classes with a computer and projector and screen in the front of the room. Initially, conditions were primitive. The computer for the classroom was kept in a locked storage room down the hall. Before each class, it was necessary to get it out of the room, roll it down to the classroom, hook it up, and then pray that the Internet correction worked. There were no speakers, and our academic computing services looked puzzled when asked about sound capabilities. (Napster changed all that.) Now, at least in the newer classrooms, all is changed. The computers are built into the front podium desk, room-darkening shades are on all the windows, the sound system is excellent, the projectors are brighter. All that is necessary is a little key to open the cabinet in the desk.

In the following remarks, I would like to reflect on some of the ways in which the presence of a screen in the classroom has had an effect on my teaching. In the course of these reflections, I shall talk about some of the technology, especially
the software, and indicate some of its strengths and weaknesses.

In my experience, the impact of the screen in the classroom varies with the type of course being taught. I have found teaching with a screen most helpful and least intrusive in logic courses but more problematic in ethics courses where the screen is a positive factor in some respects but an impediment in other respects. Let us look at these issues in more detail.

**Teaching Logic**

For the past twenty-five years, I have taught introductory logic every year. Teaching a basic course in logic involves helping students to develop certain skills. But in order to develop these skills, students need to acquire a certain amount of knowledge of logical conventions and symbols and what they stand for and an understanding of how to manipulate these symbols. Teaching logic thus involves (a) conveying the requisite information (such as the conventions for Venn diagrams) to the students, (b) helping students to understand the relevant information through explanations and examples, and (c) helping students to develop proficiency in the application of the concepts they have studied. Classroom time is devoted primarily to the first two tasks but since the amount of information conveyed in an introductory course in logic is in fact relatively small, much of class time is devoted to understanding the key concepts that are presented. Proficiency in using these concepts is principally accomplished through homework exercises which are later reviewed in class, a review usually directed toward uncovering student misunderstandings of the concept.

I have found teaching with a screen to be a tremendous help in the logic classroom. My use of the screen in this (and in other courses) has gradually evolved to have several components. First, I integrated my logic (as well as some other) courses with a course web site that I developed. I started running my own web server in 1994, primarily because the support of our university’s academic computing center was so bad it came closer to resistance than support. Being forced to develop a course web site on my own, however, turned out to be fortuitous since it made web publishing and the development of further course web sites far easier than it would otherwise have been.

**On-line Syllabus and Schedule and ‘Handouts’**

I posted the full syllabus for the class on the web site, including the schedule of all classes and class assignments. This turned out to be particularly useful as last-minute changes to the schedule or to assignments could easily be posted on the web making the information easily available even to students who missed class.

This on-line syllabus quickly evolved into a substitute for class handouts generally. Many of the materials that I previously would have duplicated on paper and distributed in class—for example, sample quizzes and exams, review questions, and case studies—I now put on the web for easy student access and use. It is also easy to include links to other on-line logic resources that are beneficial to students. For example, I can now easily send students to Ron Blatt’s elegant Java application for teaching moods and figures using Venn diagrams (an application to which Blatt is happy to have links).²

**Answer Keys**

In addition, I can post answer keys for homework assignments on the web. Although students are advised not to consult the answer keys while they are doing their homework, they are encouraged to refer to the answer key when checking their work to see where they might have made mistakes. Not only is this advantageous to students who miss class, it makes reviewing homework answers in the classroom easier as well. For instead of my students having to grapple with my semi-legible writings on the board, they can now view neatly typed or computer-drawn answers to homework assignments. When it is time to go over homework assignments in class, all I have to do is click on the appropriate link on the web-based class schedule and the answer key for that set of exercises pops up on the screen.

Putting answer keys on my web site proved to be a problem in a way that I had not initially anticipated: because my web sites are open sites that are accessible to everyone, students in courses other than my own had access to the answer keys that I posted on my site even when their instructors (who were using the same logic book as I) opposed their students’ having access to the answer keys. ‘Dedicated’ course software packages (which I do not use) solve this problem by restricting access to the whole site to authenticated users only. My own solution is to have access to answer keys password-protected so that only my students can access these files.

This issue raised for me a number of new questions about academic integrity. Is it cheating for students in a course to surf the web and find other course sites that can help them, perhaps in ways that their instructor would not like but which the instructor did not explicitly forbid? Jim Moor has argued that new computer technologies can create “policy vacuums” — areas in which we have yet to develop explicit rules to guide conduct.³ The example I cited above is an example of such an area. Often instructors do not have an explicit policy forbidding students from accessing other course sites or restricting the ways in which they can use those sites, and usually this is because the instructors have not even thought of the possibility.

When issues such as this arise, all three groups involved have responsibilities. First, webmasters must be responsible in choosing what is to be put on the web and what kind of access will be permitted. Second, instructors need to be aware of new technologies and the ways in which they may be used by their students and to publish clear policies about these matters for their students. Third, students who have some reason to doubt whether it is appropriate to use a particular electronic source must act responsibly by asking their instructors whether use of that web-based resource is permitted. In some classes (such as mine), students are encouraged to use answer keys responsibly to help them to better understand the material; they are not to be used as a substitute for doing the work. In other classes, especially where homework is graded, instructors may prefer students not to have access to answer keys at all. Responsible students should always ask instructors to clarify what their particular policy is.

**PowerPoint Presentations**

A third on-line component which I include in the class schedule are PowerPoint presentations of the material.⁴ Over the years I have developed a set of PowerPoint presentations that cover all the topics to be covered in class. These are tightly integrated into the on-line schedule. For each class meeting, there may be one or more PowerPoint presentations, depending on the number of specific topics covered that day. For example, on a day where we will be dealing with fallacies, I will have prepared a PowerPoint presentation that deals with fallacies of relevance, another with fallacies of weak induction, and so on. As a result, all the lecture material for the course is on the web in a format that allows students to find specific topics easily and quickly. It is possible to save PowerPoint
presentations on the web in such a way that users of the web site can play these presentations full-screen, moving through each slide a click at a time or using a navigator to go to a particular slide. Instructors should be aware of the fact that it is also possible to put PowerPoint presentations on the web so that students can simply right-click on the link and download the presentations to their own computer. This option enables students who have only dial-up access to the web at home the convenience of downloading the web site while connected to the university network and viewing the downloaded file offline at a later time.

PowerPoint presentations of basic logical concepts work well in the classroom: they are useful for popping up definitions of fallacies, examples of particular fallacies, and the like. Typically, when we are analyzing arguments in ordinary language, it is easy just to ‘pop up’ the passage on a screen so that everyone can see it in the front of the room in legible form. Key words or phrases can be highlighted, and it is often useful to have two versions of the same slide—one without any markups or comments, and the other showing the various points in the passage that one wants to emphasize. (See below for a discussion of the way in which SmartBoard technology can further improve the use of PowerPoint’s in such situations.) And PowerPoint presentations can be helpful in more formal areas as well: Venn diagrams can be presented, one premise at a time, in a neat and colorful fashion. (At this stage of the technology, a certain amount of animation can be added to the individual slides, but this is still fairly limited.) Furthermore, PowerPoint presentations are extremely easy to create. Nonetheless, although the ease of using PowerPoint in the presentation of logical concepts makes PowerPoint highly efficient in terms of time spent in developing a presentation, PowerPoint has the disadvantage of being inflexible in two ways.

First, as noted above, it has very limited animation capabilities. Basically, PowerPoint is designed to be an electronic overhead program, flashing up one page of text or drawings after another. Although, often, this is precisely what we want to do, sometimes in teaching logic we want to do more than this, and then PowerPoint falls short. For example, if we want to capture the flow of a particular argument or demonstrate the logical impact that one premise has on another (when, which I taught with a blackboard or whiteboard, I tried to do by means of drawing arrows) then it is precisely this dynamic sense that is difficult to capture in a static program such as PowerPoint.

Second, PowerPoint is not interactive. That is, it is not possible to click a button and interact with the program, except in the limited sense that one chooses when to move from one slide to the next. For classroom presentations, this is usually not a major issue as the students are interacting not with the program but with the instructor and each other, but for online use by students when they are not in the classroom, interactivity is often highly desirable.

Other Presentation Packages
In light of the above deficiencies of PowerPoint, let me indicate some alternative possibilities for electronic presentations. There are at least two good ways to create animations for the web.

First, the most powerful way—in the sense of allowing tremendous flexibility in drawing and animation, far more than one can get in PowerPoint—is through the use of a dedicated animation program, that is, a program whose sole purpose is to produce animations. The best of animation program now available is one from Macromedia called ‘Flash’ (though recently Adobe has released a competing product, ‘LiveMotion,’ that can create movies in the popular Flash format). Flash is highly powerful, has a full programming language that allows one to control virtually all aspects of the ways in which animations are created and played and allows one to create very sophisticated on-line animations that stream over the web quite efficiently. Whereas PowerPoint uses the metaphor of a slide or page as its basic unit, Flash uses a timeline and divides a movie into individual scenes.

Flash creates its drawings in what are called ‘vector graphics.’ Vector graphics create pictures through mathematical equations that describe how lines should be drawn (and, generally, how the picture should be constructed). As a result, the clarity of a drawing or picture created with vector graphics is independent of size. Thus, vector graphics provides the tremendous advantage of allowing you to zoom in on a particular part of a very detailed drawing, such as a complicated argument diagram or timeline, without losing clarity. You could, for example, easily zoom in on a region of a picture or drawing with a magnification of fifty and the zoomed-in region would remain as clear and crisp as it was originally. (The crystal clarity of zoomed-in areas of vector graphics stands in stark contrast to ‘bitmaps’ which are electronic drawings and pictures made up of a series of dots with each dot (or ‘pixel’) having a specific numeric value that indicates a particular color. Bitmaps do not resize very well and quickly become grainy if enlarged.)

Flash is also a great program for creating web-based interactions that involve responses from the user. One can, for example, create a quiz in Flash that records student responses to a database or file that is then sent to the instructor while at the same time giving immediate feedback to the student. This makes it easy to combine quizzing students with teaching them.

The other way in which you can create dynamic information is by using a program called ‘Dynamic HTML’6). The advantage of DHTML is that it does not require any special software, whereas Flash requires the Flash player to be installed on the viewer’s computer. The disadvantage of DHTML is that it does not behave the same way with all browsers. Because of this, an operation of that works perfectly in Internet Explorer 5.5 may not work at all in Netscape Navigator 6. DHTML does, however, easily handle such things as on-line quizzes and interactions. For example, one can set up an interaction in which students can drag and drop premise or conclusion indicator words onto a particular icon as a way for students to practice identifying premise and conclusion indicators. In my experience, the best program for creating DHTML and on-line interactions such as the one described above is Macromedia’s Dreamweaver MX. (The earlier version of this program was called ‘Dreamweaver Ultradev’7). It even has a free extension (a supplemental program or plug-in) called “CourseBuilder” that makes the process of creating on-line quizzes and exams much easier.

The Interactive Whiteboard
Typically, when we teach with a screen, there is both a screen and a whiteboard in the front of the room. The whiteboard is clearly the direct instrument of the professor, whereas the screen is not (though of course, what is displayed on the screen will have been programmed or designed by the instructor beforehand). Recently, the whiteboard and the screen have been combined into one. The most successful version of this combination is called ‘SmartBoard’8 which allows the teacher to project PowerPoint slides onto the board and then draw on the board to bring out particular points. SmartBoard allows the instructor to save the slide with the writing on it to a file by
simply tapping the screen. The result is that instructors can interact dynamically with the screen and then easily save and archive the results of these interactions so that they can be made available to students.

**Some Additional Considerations in Using a Screen to Teach Logic**

**Many Boards vs. One Screen.** When you teach with a whiteboard, it is often possible (if you have enough whiteboards in the classroom) to fill up several boards before having to erase anything. During a logic class, I have often filled one or two boards with reference material helpful to that day’s material while using one or two more boards to work out problems. One of the limitations of teaching with a screen is that you can only have one screen visible to students at any given time. This poses a difficulty when you are working on material that cannot fit on a single screen.

**The Darkened Classroom.** One of the more interesting aspects of teaching with a screen is that it alters the space of the classroom. The room is usually darkened, especially when the projector is old-fashioned. In addition, there is often noise generated by both the computer and the projector (although this will diminish as equipment improves). Most interestingly, the lived space of the classroom is altered: prior to the use of a screen, the classroom space was typically divided into two areas: the instructor’s turf and the students’ turf. With the addition of a screen, students and teacher are often put to one side while the screen is on the other. (I shall comment on the strangeness of both students and professor staring at the inanimate screen in my discussion of teaching ethics, below.)

**Student Access to Computers.** It is important to consider the issue of equal access to computers. Clearly, if not all students have access to computers or do not know how to use the computers that they have access to, then a course that depends on computer use will disadvantage some students relative to others in the class. One has to be careful not to create unfair requirements that put some students on unequal footing with others. Until two years ago, I dealt with this problem by ensuring that students who did not have access to computers or have the requisite skills to use a computer received a ‘hard copy’ of the same materials I made available in electronic form to my computer-savvy students. But in the last two years two factors have prompted me to change this policy. First, at our university we now have sufficient computer-lab access that students can get on a workstation at any time of the day and work at a computer for as long as they want. Second, increasingly, I have come to believe that students who do not use a computer are precisely those students who need to be encouraged to become computer-literate and so should not be exempt from the computer-related aspects of the course. Typically, at the beginning of the term, I conduct one class period in a computer lab where all the students have workstations. This is a perfect time to set up a buddy system in which the more computer-savvy students can help those who are less comfortable with the technology. (Indeed, for this generation of students, the buddy system has often been the principal way in which computer skills have been developed.) This does not, however, always solve the problem, especially for students who work and are only on campus while they are taking classes. On our campus, which has many resident students, this is much less severe a problem than it is at other institutions, particularly urban schools with a very high percentage of commuter students. In such circumstances, it is important to remain sensitive to the needs of students who still do not have ready access to computers and the Internet. For both ethical and pedagogical reasons, we should avoid reinforcing the “digital divide” in our classrooms and disadvantaging students who are already at a competitive disadvantage with their more affluent counterparts.

**Teaching Ethics**

I am somewhat more ambivalent about teaching with a screen in my ethics classes than I am about teaching logic with a screen. This is all the more surprising to me because I spend a significant portion of my day working on my ethics Websites, *Ethics Updates* and *Ethics Videos*. Since I have been a strong and active proponent of putting ethics-related materials on the web, I was clearly well disposed toward teaching ethics with a screen, and expected my teaching the subject with a screen to be a smashing success. But my experience was otherwise.

To be sure, the experience certainly was not terrible. Student evaluations were fine, and in many ways the course offered students a rich experience: on-line videos, including interviews with authors of some of the articles in our anthology; videos of many of the class lectures; on-line PowerPoint presentations on, for example, current newspaper articles relevant to the topics being considered in class; case studies; discussion forums; and student journals in which they write about their reactions to the readings and the course ideas. But I found myself discontented with the classroom experience. My reasons follow.

**Teaching Ethics and Teaching Logic with a Screen: Important Differences**

After some reflection, it seems to me that my discontent with teaching ethics with a screen centers on the use of PowerPoint presentations in the classroom. The presentations locked me into a strict—perhaps constricting—agenda. While this did not pose any special problem for the teaching of logic, it did so for the teaching of ethics. This led me to asking why having a fixed teaching agenda is less important in ethics than in logic. Is it simply that the material in ethics is far more interesting and thus digressions into related material are more attractive? Although the answer to this question is ‘yes,’ this answer does not capture the full or even primary issue. It is rather that the process of teaching ethics involves an important element that is quite minimal in the teaching of logic. Recall the three elements in teaching logic that were discussed above: (a) conveying information, (b) fostering understanding, and (c) developing proficiency in applications. All of these elements are certainly present in teaching ethics, but in addition, one needs to conduct students to self-reflection.

In teaching ethics, it is, of course, necessary and important for students to understand the concepts and arguments being considered in the course. But in the study of ethics, understanding involves self-understanding. That is, the grasp and evaluation of moral concepts and theories necessitates our understanding the content of our own beliefs and practices. Fostering self-understanding can be done very effectively in the classroom. But the need to do so points to the root problem with presentation software, whether PowerPoint or some other version: it locks the class into a fixed path that can often prevent instructors from exploring issues that relate to the interplay between the self-understanding of one’s students and their understanding of the moral concepts.

If this sounds like Socrates, that is because it is. In his early dialogues, Socrates clearly saw the intimate link between understanding and self-understanding. For him, philosophy is fundamentally a dialogue or conversation, and the basic movement of philosophical discourse is not the lecture from one to the other but the back-and-forth movement between discusssants of an issue. It is precisely this “to and fro"
movement that is disrupted by presentation software. Consider an example:

When considering issues of animal rights and welfare, students often find themselves forced to look at some of their most basic suppositions about personhood and respect. For many Christian students, there is a deep ontological divide between human beings, who have immortal souls and who have been distinguished by the fact that the Son of God became a human being, and all other living beings, who possess neither of these characteristics. We often discuss traditions that contrast with this understanding of the Christian view, such as, for example, Hinduism, according to which both animals and humans have immortal souls, in which the same soul may be incarnated at one time as an animal and at another time as a human being, and in which some Gods (such as Ganesh) take animal form. This is precisely a moment when students are likely to reach deep into their own experience and respond with a “yes, but…” objection that can lead to the heart of their beliefs. When they are in the passive mindset encouraged by presentations, they are much less likely not merely to voice but even to have such a response.

Of course, the issue of self-understanding is not limited to ethics. There are many areas of study, such as literature, where self-reflection is crucial, and teaching in these areas is subject to the same considerations outlined here for teaching ethics.

Expectations Created by the Screen

There is a natural reply to some of the issues raised here: simply turn off the projector and enter into a dialogue with the students. This is exactly the right thing to do, and one of the secrets of teaching well with a screen is knowing when to shut it off. However, when a class begins with a PowerPoint presentation, students often settle into a passive mindset. The presentation seems to conduce to their viewing themselves as passive absorbers of information: they may ask questions for clarification (and even this seems intrusive to some students) but generally they take their job as one of sitting, listening, and taking notes. I have found that it is often difficult to shift students from this passive modality to a more active one without providing some strong stimulus.

The Ideal Screen

Some of the problems I have noted here will, no doubt, be improved so as to allow greater responsiveness to students’ questions would involve creating an on-line bank of mini-

responses to specific questions that could be called up easily. Currently, presentations tend to be bulky and capable of being used only in their entirety. It would be helpful to be able easily to pull up a set of only three or four slides that address a specific question. (This is not a difficult programming task—though to the best of my knowledge no such program now exists—and it would be more and more useful as we come more and more to depend on presentation software in the classroom.

Conclusion: Teaching Well with a Screen

Teaching with a screen is here to stay. Increasingly we will find ourselves using computer-equipped classrooms that actually work well and easily, and as these classrooms become more common it is reasonable to expect that their use will expand. This expanded use will, in some cases, no doubt prove helpful in improving the quality of classroom education. Yet there is a danger that teaching with the aid of computers will encourage students to be passive and to see their role in life primarily as absorbers of knowledge rather than as active thinkers. Particularly in courses where self-knowledge is an important component, it is important to preserve the classroom space for dialogue and interaction, for the back-and-forth movement of conversation that has been at the heart of philosophy since Plato’s dialogues.

The Medium and the Message

In teaching with a screen it is important to consider the question of the extent to which the use of computers transforms not only how we teach but also what we teach. Years ago Marshall McLuhan told us that “the medium is the message.” Teaching with a screen brings home how true this is in the classroom. No doubt, in our teaching with a screen we gravitate toward what we can put on a screen, especially what we can put on a screen in a compelling manner that commands students’ attention. Students (and teachers, for that matter) are talented in many different ways, and we must be careful not to overlook or devalue talents that do not manifest themselves in computer-mediated communication.

Endnotes

1. The Ron Blatt Java application is available free on-line at:
3. PowerPoint is available as part of Microsoft Office MX. Contact your campus bookstore for an academic price. On the web:
4. Flash is available at an academic discount from Macromedia: http://www.macromedia.com/resources/education/store/.
5. More information about Adobe LiveMotion can be found at: http://www.adobe.com/products/livemotion/main.html
6. Dynamic HTML is a general standard (like HTML) that is supported by various programs.
7. Dreamweaver is available at an academic discount from Macromedia: http://www.macromedia.com/resources/education/store/.
10. http://ethics.sandiego.edu/video/. This and the website noted in the immediately preceding endnote now receive about two million visits a year.
A Logical Order?

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I want to suggest a change in how the topics are ordered at the beginning of courses in symbolic logic. The change I want to suggest is actually just a small thing — just a minor shuffle — and yet I do think it makes a difference.

Before I actually talk about this change in concrete terms, though, let me say a little something about the general idea behind it. This general idea is nothing special or profound, but just the idea that there is sometimes a difference between the logically most correct and the pedagogically most effective method. I would imagine that we have all, at one time or another, decided to start our students off on the simplest path, only later to bring them onto the truest one. And it is something like this that I will be suggesting here.1

The Traditional Order and the Suggested Alternative

In the textbooks I am familiar with, the various functions (and, or, if-then, not) are first defined in terms of truth tables. After this, truth tables are used to construct proofs. And then, finally, natural deduction is introduced as a shorter method for constructing proofs.

And the first thing to say about this order is that it is the logically most correct one. It is an order that makes sure everything is properly defined first and then works logically up from there.

But, despite its logical correctness, I am not sure that this method is pedagogically the most effective one. As an alternative, I will propose beginning with some translations and some simple natural deductions before getting involved with truth tables. I know that this might sound a little crazy at first, but I can assure the reader that it is possible. And I will, in a little while, try to explain in some detail just how this alternative works.

Problems with the Traditional Order

Before I do that, though, I would like to explain the problems that I see with the traditional order. Let me emphasize, again, that I do not think these problems are logical problems, but pedagogical ones.

First of all, then, I think that truth tables might be a little too formal and rigorous to really be a good place to begin. I don’t want to say that truth tables are difficult (they’re not), but they do represent a very formal and rigorous approach. And I am not sure our students are ready to appreciate so much formal rigor right at the start.

Our students are not mathematics students after all, and they probably will not have a mathematics student’s taste for the rigorous definition of basic elements. Hence I am afraid that truth tables will not impress them as a simple and elegant way to achieve rigor, but as some weird mathematical thing they can’t quite see the point of. To put it simply, the most formally rigorous spot might not be the best spot for ordinary students to begin.

And so the alternative proposal delays the introduction of truth tables a bit. My hope in this is that, if the students are already into the swing of things by the time we introduce truth tables, the formal rigor of truth tables might make more sense to them. I will argue this point further in the concluding section of this paper, but, for now, let me move on to the second problem that I see in the traditional order.

For I think this order also makes it hard for the students to see the purpose or “payoff” of truth tables. We will tell them, of course, that truth tables represent a precise definition of the logical functions (and, or, if-then, not). But precise definition is not, in itself, a selling point with most students. They will want to know what purpose this precision serves.

And it is here that the problem sets in. For when we take these truth tables and actually start to use them to solve problems they quickly turn — for any problem with more than three variables — into a nightmare of tedium. We might have a series of very precise definitions, but all they seem to produce is a method which is too cumbersome to actually use. And this must look to our students a little bit like the man who builds this wonderful sailboat in his garage, only to find out that he’s made it too big to actually fit out the door.

Of course, at this point the traditional order introduces natural deduction as a way of shortening the work, but that leaves our students wondering why, if natural deduction is the easy way to go, we didn’t just start there?

And this brings me to my third main reason against the traditional order, which is that it delays the introduction of natural deduction. And since natural deduction is actually the “real thing” — i.e., the main thing the course is focused on — this delay is, to my mind, a mistake. I don’t know why exactly this is true, but my experience has been that too many introductory topics — too many preparations for the real thing — never work well.

I am reminded here of a story from Jon Krakauer’s book on climbing Mount Everest. Mr. Krakauer says that, by the time he got to the top, he was so fatigued by the climb and so light headed from the lack of oxygen that he didn’t really care too much about where he was, and so he just looked around for a minute, said to himself, “oh that’s nice,” and began climbing down. And I am afraid that if we spend too long reaching the real heart of the course, that we will be producing an effect similar to this.

To sum all these reasons up, I think that the traditional order runs the risk of seeming, to our students, like a weird precision which leads to a painful tedium, all the while postponing the method that actually does work in an efficient way. And so, despite its logical correctness, I think that this is probably not a good way to start.

An Analogy

An analogy to what I am talking about here is the way the topics are traditionally arranged in an introductory calculus course. These courses begin (or at least at the time I was involved with them they used to begin) with the delta-epsilon definition of a limit. And only after the students have tortured themselves with this for a while does the course move on to derivatives.

The problem with this arrangement is not only that the delta-epsilon definition is so head-crackingly difficult that it produces more discouragement than enlightenment, but also that the definition is unmotivated. For a student who has not yet been introduced to derivatives, all these deltas and epsilons will look like they are serving no earthly purpose at all. And it doesn’t make sense to tell someone to wrestle with alligators unless we can first show him or her what the gain or advantage will be.

I have, therefore, always thought that these topics needed to be reshuffled. We should teach derivatives first, appealing to a common sense notion of a limit (“as this gets smaller and smaller”). And only once we have done this should we go back and make this notion of a limit more precise by...
introducing the formal, delta-epsilon definition. For at this point the student will have at least some chance of understanding why this formal definition is important.

The Suggested Change
And my suggestion for symbolic logic courses is similar to this. Here too I want to begin by doing actual practical problems (natural deduction) before introducing formal definitions and theoretical rigor (truth tables). More concretely, my suggestion would work as follows:

I think that we should begin by translating ordinary English sentences into the logical symbols, but without yet actually defining these symbols in truth tables. The translation of English into symbols (and symbols into English) is, I think, a simple way of explaining to an ordinary student what these symbols mean. Of course, this is not the logically correct way to define the symbols. But I think it will do for a start. And when we come to truth tables later on we will be able to then provide the correct and rigorous definitions.2

Next, I think we should establish a few basic argument forms by appeal to common sense. Modus ponens, modus tollens, hypothetical syllogism, disjunctive syllogism, and double negation are the forms I start with. There is still no need for truth tables, because the students’ intuitions (bolstered by a few common sense examples) will be good enough to see that modus ponens, for example, is valid while affirming the consequent is not.

Then I think we should start doing natural deductions with these basic forms. These natural deductions will, of course, be very simple, but that is an advantage. Many of our students will be a bit math-phobic and so starting with very simple problems where they can easily get the right answer will be a good way to settle them down.

I then repeat this process a couple more times, i.e., I go on to introduce two more batches of rules, establishing them by common sense and then using them right away in natural deductions. In the first batch I have conjunction, simplification and addition; in the second batch I have constructive dilemma, absorption and tautology.

And the point of all this is to get the students comfortable with natural deduction and to give them an idea of what it is good for. Already with the first batch of rules, the students will be performing the whole process of translating an argument from English into symbols and then proving the validity of that argument. And the next two batches will let them see how this logical system can grow from its small beginnings into an instrument of some power.

And once the students are already involved like this with symbolic logic, then I think we are finally ready for truth tables. For we can now present truth tables in a way that will make sense for our students when applied in a post facto way, i.e., when they are applied to make logically secure a process (natural deduction) the students are already involved in. The problem is that rigor before the fact, though logically more correct, will feel to our students like a vague and painful groping in the dark, while rigor after the fact will appear like a salutary grounding of a process whose worth has already been proven. And, when it comes right down to it, this doesn’t seem to me like such a bad presentation of what the role of rigor is.

I think it is important to remember here that symbolic logic was created by men who already knew what modus ponens was and who understood how arguments linked together in longer deductive chains. And it was from this pre-understanding that they went on to create symbolic logic as a rigorous and formal system. They, in other words, already knew what they were formalizing before they formalized it.3

But our students are not in this situation. They come to us not knowing what modus ponens is and having only a hazy idea of how arguments work. And so to just start off with truth tables is problematic because, unlike the creators of symbolic logic, our students have no real idea what these truth tables are supposed to be formalizing. And I think this leaves our students in a position where they are unable to really appreciate the truth tables and what they achieve.

My proposal tries to do at least a little something to rectify this problem. For my proposal begins by giving the students some idea of modus ponens, of how arguments link together, etc. This puts the students a little bit closer to the situation the creators of symbolic logic were in, i.e., it gives the students at least a little pre-understanding of the process of argument. And so it makes the students a little more ready to understand and appreciate how truth tables take this process of argument and make it rigorous and precise.

Again, I think that the analogy with calculus is instructive here. For the original inventors of calculus actually did not use the modern and precise definition of a limit. They talked, instead, in terms of the much less rigorous concept of infinitesimals. And the whole delta epsilon limit business was introduced only by later generations as a way of making this fairly vague talk of infinitesimals more precise.

But our calculus instruction skips this natural and historical progression. For we expect our students to grasp the point of the delta epsilon definitions before they have gone through the vaguer but simpler stage of infinitesimals. And this is, once again, the logically correct and pure method. But, given the fact that it was not something Newton or Leibniz was able to do, it hardly seems like a reasonable thing to demand of our students.

I am not, of course, trying to insinuate that truth tables are anywhere near as difficult as the definition of a limit. But I think there is still a similarity in this sense: that rigor is easier to appreciate if the process involved is first known, albeit in some sort of vague or common sense way. And this is what my suggestion is trying to do, i.e., it is trying to introduce the process of natural deduction first in a sort of non-rigorous way, to set the stage and provide the reason for its being later made rigorous by the introduction of truth table definitions.

After we have introduced truth tables we will now be working with a complete set of tools and we can just proceed by, each day, using truth tables to derive some new rules, and then using natural deduction to apply those rules.

Some Concluding Considerations
Perhaps we could sum this whole thing up by saying that precision and logical rigor will make more sense to our students when applied in a post facto way, i.e., when they are applied to make logically secure a process (natural deduction) the students are already involved in. The point is that rigor before the fact, though logically more correct, will feel to our students like a vague and painful groping in the dark, while rigor after the fact will appear like a salutary grounding of a process whose worth has already been proven. And, when it comes right down to it, this doesn’t seem to me like such a bad presentation of what the role of rigor is.

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Endnotes
1. I would like to thank the anonymous reviewers of the first draft of this article for a series of suggestions and criticisms which have allowed me to make this draft clearer and (I hope) better.
2. The most common objection of the anonymous reviewers of the first draft occurred at this point. They argued that, before the introduction of truth tables, the logical symbols could have no meaning at all. For it is the truth tables which first give these symbols their meaning. I would like to concede that, from a strictly logical point of view, this objection is correct. But I think that from a pedagogical point of view the suggestion I am making here can, nonetheless, be saved. Symbolic logic is not (or is not just) an uninterpreted mathematical system. Rather, it is a mathematical system which is standardly interpreted to apply to ordinary language argumentation. And because of this the logical symbols have two sorts of meanings. The first and primary meaning is the meaning that they have within the mathematical system. This is the meaning that is defined by the truth tables. But they also have a secondary meaning in terms of their interpretation, i.e., in terms of their application to ordinary language argumentation. In this secondary sense we might say, for example, that the symbol > means if-then. What I am proposing here is simply that we begin with this secondary sort of meaning and only later work our way up to the primary one. I do concede that, from a strictly logical point of view, this approach is backwards. But I have found that it is nonetheless pedagogically effective.
3. I am indebted on this point to Gilbert Ryle and his discussion of knowing how and knowing that in The Concept of Mind. (see esp. chapter II, section 3)

A Flow-chart Approach to the Ontological Argument

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The ontological argument generally proves difficult to teach (or explain), especially to students who are taking a course which serves to fill their only humanities or philosophy requirement. It is often quite difficult for students to pull the argument out of Anselm’s words, but even once it is presented in the form of an argument, I find that students are no less perplexed. It is usually the first genuine multi-stepped philosophical (metaphysical) argument an undergraduate encounters, and often the most sophisticated.

I offer here an approach to the argument which I found clarifies it for many students who were not grasping the subtleties of Anselm’s formulation. This version also has, as a by-product, the added advantage of making some of the standard objections, which tend to get introduced in a first-level course, stand out more clearly.

Since the ontological argument is not really a single argument, but rather a family of arguments, I will outline the version I have in mind. It is Anselm’s first version in somewhat simplified form, but it appears to be the most common version taken from Anselm.

The argument:  

Premise 1: We can conceive of a being, than which none greater can be conceived.  
Premise 2: Whatever is conceived exists in the imagination of the concever.  
Premise 3: That which exists in reality as well as the imagination of the concever, is greater than that same thing that only exists in the imagination of a concever.  
Conclusion 1: A being, greater than which none can be conceived, exists in reality and in the imagination.

Premise 4: God is a being, greater than which none can be conceived.  
Conclusion 2: God exists in reality.

Premise 4 and Conclusion 2 seem sufficiently straightforward enough so as not to present any pedagogical challenges, and I shall ignore them for the present discussion.

After explaining the premises and conclusion of the argument as well as can be, you can offer a more visual version of the argument.

Start by examining the concept of what it means to be the greatest possible being. To be the greatest possible being for Anselm means to be a being with all the perfections. Thus to be the greatest being (God) would be to be omniscient, omnipotent, omnibenevolent, etc. You may, if you have any, use your favorite ‘perfections’. We are thus only cashing out the concept of ‘greatness’ embedded in Premises 1 and 3. Remember, the argument simply states that if we really are imagining a being with all these perfections, then we are imagining an existing being.

Then draw the following flow-chart:

Imagine a being, greater than which none can be conceived

Omnipotent? — No?  \(\downarrow\)
Yes?  \(\downarrow\)

Omniscient? — No?  \(\downarrow\)
Yes?  \(\downarrow\)

Omnibenevolent? — No?  \(\downarrow\)
Yes?  \(\downarrow\)

Exists? — No?  \(\downarrow\)
Yes?  \(\downarrow\)

Argument Terminates

Greatest being exists.

Essentially this starts with Premise 1 and cashes it out piece by piece. Each “Yes?” that we pass means that the greatest being that we are imagining has the property above it. If the being we are imagining is omnipotent then it meets one necessary condition for being the greatest being referred to.

Each arrow going from “No?” back to the beginning is there because the being we were imagining did not meet the criteria for a greatest being. If our greatest being is not omnipotent then we go back to the beginning where we imagine a greatest being that is omnipotent and start again. The next time around we have a Greatest Being who is omnipotent and we then check for omniscience, and repeat the process for all the necessary conditions for being the Greatest Being. We do the same for omnibenevolence, and if you like, for omnipresence as well. This is all well and good just working with the context of Premise 1. You should point out that this is only another way of seeing Premise 1 — imagining a greatest being.

In comes Premise 3 telling us that if something exists in the imagination and in reality then it is better than a counterpart that only exists in an imagination. Hence the final “exists?” node. If it does not exist, Premise 3 tells us, it is missing a perfection, and you must go back and imagine a being that does have it. You should point out that Premise 3 is the same as the final node.

Now it is easy to see both the argument and the first objection. The objection states that this argument begs the

— 232 —
question. You can introduce this using some sentence that is clearly a question-begging argument. For example: “Euthanasia should be permissible because people should have the right to decide when to end their own lives.” Usually with a little coaxing any group of students can see that the problem here is that we have just stated the same thing twice. We have embedded the conclusion - that euthanasia should be allowed — in the premise — that people should have the right to decide when to end their own lives. It becomes clear, when we just look at the list of perfections on the flowchart, that existence is in there. The existence of the greatest being is in Premise 3 and 1 (with help from Modus Ponens), before we even come to the conclusion. That is, talking about the greatest being involves “existence” (P3) as well as all properties of greatness (P1). Hence we have begged the question.

Next you may want to illustrate Gaunilo’s objection — that you can run this argument on the greatest anything and you will get the same result. His example makes use of a greatest island whose existence is a joke. We use the example of the greatest rocket ship, but the greatest anything will do. You can show that if you talk about the greatest rocket ship it too must have the property of existing; otherwise it is not the greatest rocket ship which we were imagining in the first place.

We show with an almost identical chart what Gaunilo’s claim amounts to. Then, call the ontological argument chart “A”. Call the argument for the existence of the greatest rocket ship “B”. What we have to then offer is the following argument: A and B have identical argument structures. B is a ridiculous argument. Therefore A, which employs the same structure, is too.4

Imagine a rocket ship greater than which none can be conceived

Indestructible? — No?

Yes?

All fast? — No?

Yes?

All comfortable? — No?

Yes?

Exists? — No?

Yes?

Argument Terminates

Greatest rocket ship exists.

The above two criticisms are clarified by the diagram. The standard Kantian criticism is not directly exposed by the diagram, and should be discussed afterward. What Kant tells us, without going into detail, is that the final node on our chart is illegitimate, as existence is not a predicate that can be treated on par with the others.5

Endnotes
1. I would like to thank the anonymous reviewers for some helpful comments.
2. As far as we need to be concerned here, all the relevant literature surrounding the Ontological Argument can be found in Plantinga’s collection, The Ontological Argument: From St. Anselm to Contemporary Philosophers (Doublenay and Co., 1965).
3. In my classes we discuss the paradoxes of God’s attributes only after discussing the proofs for God’s existence. The paradoxes include God’s ability to create immovable objects given His being Omnipotent, God’s Omniscience clashing with things He cannot possibly know (such as subjective facts), and the existence of evil given God’s wanting to prevent evil (that is, His Omnibenevolence), His power to prevent evil (that is, His Omnipotence), and His full knowledge of the evil that takes place (that is, His Omniscience). If, prior to your discussion of the Ontological Argument, you assume that these paradoxes show that it is logically impossible for God to have these properties, then you will need another account of the “perfections” that Anselm could have had in mind.
4. As is well known, Anselm does reply to this argument. The reply is that without the “exist” property we are not logically barred from conceiving the greatest rocket-ship. In the case of God we are logically barred from conceiving Him. Keep in mind that the chart merely elucidates what Gaunilo was doing. It does not presuppose his correctness.
5. You may want to see Norman Malcom’s response to Kant in this context. It has certain affinities to Anselm’s reply to Gaunilo.

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**Book Reviews**


Reviewed by John Marmysz
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Aristotle’s law of contradiction holds that a statement cannot both be true and false at the same time. His law of the excluded middle holds that a statement is either true or false, and that there is no third possibility. Each semester that I teach a course in critical thinking, there is at least one student who objects to these supposedly foundational laws of sound thinking. Such objections normally rest on the claim that truth is a much more complicated affair than Aristotle, and most logicians, give it credit for being. For any given statement, so the objection goes, you will always be able to find at least two people holding contradictory opinions concerning that statement. If one person believes a statement to be true while another believes the same statement to be false, who is to say which opinion is right and which opinion is wrong? Why can’t both be correct? Why can’t a statement be partially true and partially false at the same time? When such objections are raised, my usual response is to point out the difference between a statement being true in actual fact, and the mere belief that a statement is true. People are sometimes mistaken in their beliefs, and in the case of two people who hold contradictory opinions concerning a particular statement I explain that while they both may believe their opinions to be correct, by the basic rules that govern coherent, logical thinking, only one of them can be correct in fact. So long as we presume that there is an objective reality “out there” and that the purpose of our language is to allow us to articulate the nature of that reality, we need to be able to distinguish between statements that truly correspond to reality in actual fact and those that are the result of faulty beliefs. Without presupposing the law of contradiction and the law of the excluded middle (as well as the law of identity), there would be nothing standing in the
way of any statement being both true and false at the same time in actual fact, and if any statement could both be true and false at the same time in actual fact, then there would be no way of speaking coherently about objective reality. At best, we would only be able to speak about our own subjective beliefs. At worst, all of our communication would be reduced to mere babbling and palaver.

This usual response to skeptical students mollifies most of them most of the time. They nod in agreement and concur that one of the consequences we would face in rejecting the basic laws of thought would be the destruction of coherent speech about the objective world. Insofar as all moral, scientific, and spiritual inquiry rests upon such coherent speech, if we were to reject the basic laws of thought, we would also have to accept the destruction of objective morality, science and religion. Such consequences are not tolerable, we all agree, and so we continue on with our lessons. However, I've begun to feel less and less comfortable with this defense of the basic laws of thought, and since reading Heidegger's Concept of Truth, by Daniel O. Dahlstrom, I understand why.

Dahlstrom's book examines and explains the details of Heidegger's critique of the conventional view of truth as conceptualized by modern logicians. Modern logicians claim that "truth" is a property only of statements. According to this view, the term "true" applies to those statements that properly mirror the world and reflect its essence back to our minds. When we utter a statement that corresponds with reality, the statement "brings to presence" a state of affairs, and it is this power to make that state of affairs present to the mind that distinguishes the statement as the proper locus of truth. Since it is only a statement that has this capacity, according to modern logicians there is no such thing as a "truth" that exists independently of a statement. Thus, those who speak about the "truth" of the universe, or the "truth" of human existence, are speaking in a loose, illogical, or at best, a metaphorical manner. Heidegger refers to this conventional, modern viewpoint as "the logical prejudice." The logical prejudice has permeated western philosophical thinking since its beginnings, according to Heidegger, finding root in a misreading of Aristotle.

Heidegger tells us that the logical prejudice has resulted from our inattention to the underlying conditions that allow statements to function in the way that they do function. While statements allow us to talk about truth, they are not, as is conventionally thought, the most primary source of the truth itself. In order for a statement to make the truth present to us, humans must first "be-here"(Da-sein) in order to be presented with that truth. The statement, thus, is really only a device that "uncover" something deeper, making it accessible to human beings. According to Heidegger, and contrary to modern logicians, it is this very act of uncovering that constitutes a more basic, existential source from which logical, statement-centered truth is but a secondary derivation. It is this primordial, existential sort of truth that Heidegger is concerned with reminding us about. In recovering an awareness of this primary source of truth, Heidegger wants to demonstrate that logic, statements, and language do not exhaust the ways that truth is revealed to us.

Ultimately, the most basic foundation of truth consists in a process of the revelation and concealment of Being Itself, according to Heidegger. Human beings live their lives projecting into the future. In the process, they create a sort of "clearing" in time that allows them to gather a world around them. This human world is not primarily a world of beings and objects, but of the ongoing relationships holding those beings and objects together in a cohesive whole. Though it is these relationships that are most important, the particular beings that serve as anchor points always threaten to distract our attention. Yet we cannot do without beings, since they make the relationships that constitute our world possible. Our lives are, consequently, always pulled between a fixation on particular beings and the attempt to transcend that fixation in order to experience that which unites and holds all beings together: namely Being itself. As the particular beings, entities and things in our world partially reveal Being on the one hand, they also, on the other hand, partially conceal it. Being itself never comes into full presence, but is only sensed here and there. "Authentic" human living consists in understanding this process, and the closest that we can get to absolute truth is to understand the revealing and concealing process for what it is. The only unequivocal truth is Being itself, but that is beyond our capacity to fully fathom because it is never wholly present to our minds. For modern logicians, the aggravating consequence of Heidegger's philosophy is that no particular thing in the world, including a statement, is ever completely true or completely false. Rather, recalling the student criticism that I mentioned earlier, statements, insofar as they act simultaneously to reveal and to conceal Being, are always only partially true and partially false. At best, statements offer a limited mode of access into Being itself, which is the only unmitigated truth. Since the state of affairs brought to presence by a statement lies somewhere in between complete truth and falsehood, the laws of contradiction and of the excluded middle do not hold universally.

Dahlstrom explains all of this in Heidegger's Concept of Truth in a far more exhaustive manner than I have summarized here. His treatment of the logical implications of Heidegger's philosophy is very detailed and systematic, yet it is also extremely complicated. At times, in fact, I found myself losing the main thread of Dahlstrom's argument, for it becomes swallowed up in his technically elaborate explanations and interpretations. Accordingly, the appropriate audience for this book undoubtedly is one already acquainted and comfortable with Heidegger's way of thinking and with Heideggerian terminology. Though some of the general insights articulated in Dahlstrom's work would resonate with the sentiments of skeptical students like those in my critical thinking classes, the book's difficult details make it inappropriate for any but the most advanced students engaged in a study of philosophical logic.

Towards the end of Heidegger's Concept of Truth, Dahlstrom offers his own objection to Heidegger's critique of modern logic. Interestingly, it is the same sort of criticism that I have found myself uttering again and again to the students in my critical thinking classes. Turning Heidegger's own terminology against him, Dahlstrom tells us that with the suspension of basic principles like the law of contradiction, speech would be transformed from an authentic form of communication into mere "palaver." Not even Heidegger can ignore the basic laws of communication in his own writing. Dahlstrom tells us. "Heidegger effectively communicates precisely by not setting this principle [the law of contradiction] aside in practice, even if he claims its expendability in principle"(p. 449). Though Heidegger may be correct in pointing out the existential foundation of logical truth, so long as we use language to explore that truth, Dahlstrom concludes, we must accept the basic laws of thought as binding. The consequence of doing otherwise is to reduce all speech to a kind of incoherent babbling.

I mentioned earlier that I have become increasingly less comfortable with this defense of the basic laws of thought. For one thing, it draws its strength largely from a sort of appeal to fear, which is, of course, one of the fallacies that we study.
in critical thinking classes. If we accept the kind of attack that Heidegger makes on the basic laws of thought, so the argument seems to go, then our traditional use of language will be upset, and we do not want that to happen, now do we? Therefore, let’s reject the critique so that we won’t have to deal with the fearful consequences. Such a line of reasoning is quite unsatisfying, because our unwillingness to accept the consequences that follow from a critique such as Heidegger’s is irrelevant to the strength of the critique itself.

But there is another reason why I have become uncomfortable with this line of consequentialist reasoning. The fact of the matter is that at some level it just seems untrue that all coherent and meaningful speech is necessarily governed by the laws of contradiction and the excluded middle. There are some ideas whose very sense and meaning rests precisely upon the recognition of a kind of contradiction internal to the structure of the ideas themselves. We call such concepts “paradoxical.” When paradoxical concepts are articulated in statements, it is not always mere palaver that results. Perhaps some of the world’s most profound literature owes its value to just those sorts of incongruities, contradictions and inconsistencies that, when articulated in statements, spur our minds into action and motivate us to think deeply about some of the world’s most profound literature owes its value upon the recognition of a kind of contradiction internal to the structure of the ideas themselves. We call such concepts “paradoxical.” When paradoxical concepts are articulated in statements, it is not always mere palaver that results. Perhaps some of the world’s most profound literature owes its value to just those sorts of incongruities, contradictions and inconsistencies that, when articulated in statements, spur our minds into action and motivate us to think deeply about important, yet unresolved, paradoxes. Two such concepts are the subject of Jacques Derrida’s book On Cosmopolitanism and Forgiveness. In this book, Derrida demonstrates that the concepts of cosmopolitanism and forgiveness both derive their sense from a logic of inconsistency. In both cases, in order to authentically understand these terms, we must be willing to accept a sort of “double imperative” (p. ix). First of all, with “cosmopolitanism,” Derrida shows that there is a tension between the notions of unconditional and conditional hospitality. In the cosmopolitan city, for instance, newcomers must be welcomed unconditionally at the same time that they are subject to the conditions of laws, customs and rules. The very concept of cosmopolitanism, Derrida argues, rests upon the willingness to negotiate between these two seemingly contradictory principles.

Likewise, the concept “forgiveness” rests upon a “double imperative.” In order to authentically grant forgiveness, a transgression must first be regarded as unforgivable. If this was not the case, Derrida claims, then the forgiveness granted would not be true forgiveness, since to truly forgive is to forgive the unforgivable. “That is to say that forgiveness must announce itself as impossibility itself. It can only be possible in doing the impossible” (p. 33). His point is that it is no great feat to forgive small infractions that are of little consequence in the first place. Profound and true forgiveness results from actually granting forgiveness to those who have done something that, in the abstract, we would have thought unforgivable. Forgiveness is something extraordinary, and there is nothing more extraordinary than carrying out the impossible.

Derrida’s examples offer clear and convincing illustrations of how some statements, even when they do violate the law of contradiction, may make perfect sense. We all know that it is not sheer “palaver” to state that we should strive to “forgive the unforgivable,” and Derrida reminds us of this. His book On Cosmopolitanism and Forgiveness is clear, short, easy to understand and quite appropriate for both beginning students and instructors interested in the study of the structure of language. In addition, it offers a very nice set of examples that help to counter some of the claims made by defenders of the “logical prejudice.”
logics. It is fair to say that in general, it is the reinterpretation of the structural rules that classical logic employs that serves as the starting point for understanding structural logics and their associated notions of consequence.

Restall’s first chapter is essential to understanding the entire substructural project. His brief introductions to relevant logics, linear logics and the Lambek calculus are excellent preludes to what follows. (Examples from this introduction can be successfully used to explain what substructural logics are all about.) After the first chapter, Restall is off at top speed. Rather than describing each logic separately, Restall describes the universal components of substructural logics. The first part of the book deals with syntactic entities, namely, proof theory (for conjunctions, disjunctions, conditionals, and the binary connectives), modalities (as unary connectives) and Hilbert and Gentzen systems (as alternatives to natural deduction systems in proof theory). At the end of the chapter on proof theory, one has gained a good idea of the substructural project through Restall’s examination of the different logics that are formed by the different combinations of structural rules for different propositional connectives.

The second part of Restall’s book deals with semantics by means of a discussion of propositional structures in the most abstract and generalized sense. As can be imagined, providing semantics for substructural logics requires some ingenuity since the primary tinkering with the logic that has taken place has been at the syntactic level, with the semantics only following in its wake.

The third part of the book moves on to a discussion of decidability (the determination of whether an inference in the logic is valid or not). Not all substructural logics are decidable. (Anderson and Belnap’s system \( R \), for example, is not.)

The book’s coda wraps up with a discussion of the philosophical issues that have been raised in the book. In addition to the obvious and pervasive issue of logical consequence, these include the role of logics in general, the discussion of which appears at the end of the book and brings the reader neatly back to the examples used in the Introduction. For just as those examples illustrate, here the point of the discussion is that logic can be understood in more general terms than just plain sentential deduction. Rather, it can be understood to play a role in reasoning about linguistic entities (as in the Lambek calculus), in resource-sensitive computation (as in linear logic), or even in understanding paraconsistent logics (since explosive inference caused by the presence of contradictions is contained by the dropping of problematic structural rules—that is, by modifying proof theory appropriately).

As an example of the illumination that the book will provide students who have studied some logic, consider the chapter on Modalities (Chapter 3). On reading this chapter, even students who hadn’t grasped that modalities can be understood in many ways (say, as an obligation, or as an action in dynamic logic) will realize that modalities can be understood, quite generally, as simple modifiers of sentences (that is, of the content of sentences) and, thus understood, will necessitate a recasting of semantics for their use.

The book’s intended target is advanced undergraduate and postgraduate students and researchers in logic (either in philosophy, mathematics, computer science or theoretical linguistics). I can see this book being used most fruitfully in philosophy departments in two ways: Either as an independent reading project for a highly motivated undergraduate or graduate student or as a text for a small class in advanced topics in logic. (Given the specialized nature of the book, perhaps this is the only kind of class that can profitably and successfully use this book). The comprehensive coverage of the book easily allows it to serve as a stand-alone textbook and I, for one, would be very interested in seeing classes offered on Substructural Logics that use this text. There is a plethora of examples in the book, and the motivated student could do worse than to sit down with a pencil in hand and work diligently through these. Restall provides exercises at the end of each chapter divided into “Practice,” “Problems” and “Projects,” the first being routine completions of material in the book, the second being regular exercises, and the third being slightly more involved undertakings that take the student beyond the confines of regular problem solving. Each chapter also includes a little historical note about the problem under discussion, and for the keen student, Restall provides an extensive, 15-page bibliography. Students with some training in logic will find the book valuable in understanding the broader philosophical project of logic and a graduate student planning to do a Ph.D. in substructural logics could profitably start his or her research project with a reading of this book.

Given current academic climates, I do not know how many Mathematics or Computer Science departments are likely to offer a class in a subject this specialized and in some ways, abstruse. But any Philosophy department that wishes to offer a specialized class in logic will find this a fascinating subject.


Reviewed by Jason A. Beyer
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John Caputo’s On Religion is one of the latest additions to Routledge’s ‘Thinking in Action’ series, the goal of which is to bring philosophy and philosophical issues to the general public. Despite such occasional post-modern monstrosities as “the impossible” and “the possible as the ‘im-possible,’” Caputo’s book largely succeeds in doing exactly what a book in this series should be doing. The worry with a book of this sort is that any philosophy text intended for consumption by the general public will too easily be taken by the audience to reflect some kind of philosophical orthodoxy. While I admit to some concern that the anti-realist stance that pervades Caputo’s works might be taken as such an orthodoxy, the overall theme of this book is both welcome and potentially revelatory. On Religion is oriented around the distinction between religion as dogma and the religious as love of God (p. 3). Being religious, for Caputo, involves exhibiting love; irreligion involves not doctrinal dissent but lovelessness.

Caputo sees God’s question to Adam in the garden, “Where are you?” (Gen. 3:9), as signaling that we are beings who do not know who we are (p. 18). Our lives, our future, and even our very being are to some degree mysterious. The religious life, as Caputo views it, involves exposing ourselves to this kind of uncertainty (p. 14). Furthermore, there is no way for us to conclusively discover the way to completely resolve these mysteries and uncertainties (pp. 20-1). We are, so to speak, trapped within our own experiences and interpretations. Caputo draws from this the quite reasonable conclusion that we cannot, in religious matters, affirm any kind of infallibility or exclusivism. This would lead us to fundamentalism, which Caputo sees as being a confusion of oneself and one’s own desires with the word of God, something which must ultimately be seen as a form of idolatry.
presented with advanced technology and ancient mysticism
as Moff Jerjerrod and Han Solo) disregard the Force, we are
and science and religion. It is this last that interests Caputo
matter and mind (replacing it with a strongly monistic view),
overcomes the traditional dichotomies of good and evil
Skywalker, as well as the story of his fall and redemption. The
western side, we have the "virgin birth" story of Anakin
religious approaches and mythologies. (pp. 78-90) On the
epic tale that combines elements of both western and eastern
dichotomous thinking endemic to the Enlightenment in favor
Caputo analyzes the Star Wars series as symptomatic of a
readers. Chapter 3 stands out in this regard, for in this chapter
religion both comprehensible and compelling for all levels of
the book. Its appeal to the general public is evidenced by his
many references to examples with which his readership is
probably already familiar. For example, in his attempt to make
fundamentalism understandable, Caputo makes extensive use
of the popular film "The Apostle" to illustrate both the negative
tendencies of fundamentalism as well as its initial good
intentions.

Caputo does an excellent job of outlining the move from
the pre-secular world to the secular world of the
Enlightenment, and then again from the secular to the post-
secular world, where religion, subjectivity, and mystery are
once again admitted into the realm of intellectual respectability. He does in a handful of pages what many have
failed to do in entire books: make a post-modernist view of
religion both comprehensible and compelling for all levels of
readers. Chapter 3 stands out in this regard, for in this chapter
Caputo analyzes the Star Wars series as symptomatic of a
growing religious consciousness that overcomes the
dichotomous thinking endemic to the Enlightenment in favor
of a more post-modern approach. We see in these movies an
epic tale that combines elements of both western and eastern
religious approaches and mythologies. (pp. 78-90) On the
western side, we have the "virgin birth" story of Anakin Skywalker, as well as the story of his fall and redemption. The
Jedi philosophy and organization appear strongly influenced by eastern religious approaches. For Caputo, the Star Wars saga
overcomes the traditional dichotomies of good and evil
(replacing it with the dark and light sides of a single Force),
matter and mind (replacing it with a strongly monistic view),
and science and religion. It is this last that interests Caputo
the most. We see in Star Wars the perfect melding of science
and religion: despite the way in which a few characters (such
as Moff Jerjerrod and Han Solo) disregard the Force, we are
presented with advanced technology and ancient mysticism
co-existing as components of a single world, with no hint of
conflict or disharmony between these elements. Star Wars is
presented to us as a model resolution to the science/religion
conflict that Caputo intends “religion without religion” to
overcome.

In my own courses in philosophy, including philosophy
of religion, I find it important to emphasize the extent of human
fallibility. This emphasis is captured by Caputo’s book, which
presents us with an understanding (though not the only possible one) of religion fit for beings such as ourselves. On
Religion is a service to anyone who takes the effort to read it
with some degree of openness. While On Religion is designed
more for popular consumption than for classroom use—
although there is an index, there are no official references and
only a scant bibliography—in this reviewer’s opinion this book
would make an excellent addition to any introductory course
either in religious studies or in philosophy of religion. It teaches
the reader perhaps his most significant lesson in these areas:
humility. This can be seen in the very claims that Caputo
presents as axioms of religion without religion (pp. 132-33): “I
do not know who I am or whether I believe in God” and “I do not
know whether what I believe in is God or not.” Such
admissions are the first steps toward honesty and humility in
one’s approach to religion.
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Litch, Mary M. *Philosophy Through Film*, 2002.


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**SUNY PRESS**

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**UNIVERSITY PRESS OF AMERICA**

Finch, Jonathan. *Some Thoughts on Thinking: Philosophy at Five Miles Per Hour*, 2002

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