**LETTER FROM THE EDITORS**

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This edition of the APA Newsletter on Teaching Philosophy contains three articles and five reviews of recently published materials that are appropriate for classroom use. As it happens—we didn’t plan it this way—the three articles that are featured in this issue of the Newsletter all deal with the teaching of logic.

Our first article, by Fred Sommers, is entitled “On the Future of Logic Instruction.” Sommers suggests as an alternative to modern predicate logic a more “natural” logical language—“algebraic termist logic”—that, he claims, has the advantage of being more intuitively understandable to students, more efficient in dealing with relational arguments, and equally good or better than modern predicate logic in facilitating inference. The algebraic termist logic that Sommers suggests has these advantages because, he claims, it “stays closer” to natural language than does modern predicate logic, is less technical, and avoids the necessity of translating from and back into natural language. We leave it to our readers to make their own assessment, and look forward to hearing their views.

Our second article, “A Kinesesthetic Technique for Teaching Categorical Syllogisms,” by Erin Livingston and Wallace Murphee, also offers an alternative approach—“Murphee’s Method”—to the teaching of logic, in this case the teaching of categorical syllogisms. The method that the authors suggest may be seen as a supplement rather than as an alternative to the use of Venn diagrams. We look forward to hearing from readers who regularly teach categorical logic as to the usefulness of this approach.

Our third and final contribution, “Boolean Euler Diagrams,” by Daniel Flage, looks at the way that the use of Euler circles may have greater intuitive appeal for some students than the use of Venn diagrams and therefore more helpful to them in dealing with categorical syllogisms. Again, we would be interested in readers’ responses to this paper’s suggestion.

The mailing addresses of this issue’s contributors are listed at the end of our Newsletter.

As always, we list the books and other materials that we have received recently and that are relevant to the teaching of philosophy. We encourage our readers to suggest themselves as reviewers of books and other material that they think may be especially good for classroom use. (Those items that are not asterisked are still available for review.) If you know of material not listed within our pages that you think would be suitable for review, please write and tell us. Please remember, however, that our publication is devoted to pedagogy and not to theoretical discussions of philosophical issues. That should be borne in mind 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. The following guidelines for submissions should be followed:

- The author’s name, the title of the paper and full mailing address should appear on a separate sheet of paper. Nothing that identifies the author or his or her institution should appear within the body or within the 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 that are available from the APA and that are published in the present edition of the APA Newsletters on the front inside cover.
- All material submitted to the Newsletter should be available on disk-readable computer disk, but don’t send the disk with the submitted paper. The editors will request the disk when the paper is ready to be published. In writing your paper to disk, please do not use your wordprocessor’s footnote or endnote function; all notes should be added manually at the end of the paper.
- All articles submitted to the Newsletter are blind-reviewed by the members of the editorial committee. They are: Tziporah Kasachkoff, The Graduate Center, CUNY, co-editor (tkasachkof@gc.cuny.edu) Eugene Kelly, New York Institute of Technology, co-editor (ekelly@nyi.tnyu.edu)
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On the Future of Logic Instruction
Fred Sommers
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§1 Two logical languages

[All of auster science submits pliantly to the Pyrrhonian bed of predicate logic. Regulation to fit it...serves not only to facilitate logical inference, but to attest to conceptual clarity.]

Willard Van Orman Quine here states some of the "official" reasons that modern predicate logic replaced Aristotelian term logic as the standard logic taught in the universities. I shall however suggest that the reign of predicate logic is not as stable as is commonly assumed and that a terminist logic could once again become "the logic of the schools."

Modern predicate logic (MPL) differs from the traditional (superseded) logic of terms in two main respects. Where the logical language of term logic stays close to natural language, MPL is, as Quine acknowledges, "Pyrrhonian," making use of the artificial technical language of function and argument, quantifier and bound variable, whose syntax departs considerably from the syntax of the vernacular sentences that figure in our everyday reasoning. On the other hand traditional term logic paid for its adherence to natural syntax by being inherently weak. Predicate logic was developed as a calculus of comprehensive inference power, while the older logic of terms seemed confined to syllogistic arguments, being incapable of explaining inferences involving multiply general sentences. For example, predicate logic could, but traditional term logic could not, show that 'every horse is an animal', entails 'every owner of a horse is an owner of an animal'. Quine alludes to this decisive virtue of predicate logic where he speaks of how well MPL facilitates logical reckoning.

It is however not true that term logic is in principle incapable of coping with relational arguments. There is in fact a terminist logical language that is both natural and comprehensive, providing a logical calculus comparable in inference power to that provided by the canonical language of MPL.

§1.1 A more natural logical language

Since we think in our native language, a more natural logic will identify the features of our language that facilitate our intuitive and brisk logical judgments. It is a surprising though not very well known empirical fact that the familiar logical words we use in everyday deductive reasoning behave in a natural language like English in the way that 'or' and 'and' signs behave in algebra and arithmetic. Specifically, 'some' (at least), 'it' (weas' aren't, etc.) 'and' and 'then' are plus words; 'every' (all, any), 'not' (no, non-), and 'if' are minus words.

Exploiting the plus/minus character of the natural logical constants gives us a logical language whose formulas are translations (not "translations") of the sentences that figure in actual reasoning. For example, where MPL (using letters for the material expressions) translates 'not every Greek is a philosopher' as "¬Gx -> P(x)", a formula whose syntax markedly differs from the original since we read it as 'not: for everything x, it is a Greek then x is a philosopher', an Algebraic Term Logic (ATL) transcribes it as "¬(G + P)", which we read in the same way we read the original:

- (G + P)
¬G ¬P
not every Greek is a philosopher.

The canonical sentences of ATL are English sentences of form "(not) every X is/an Y." Logical equivalence is algebraic. Thus the equivalent categorical 'Some Greek isn't a philosopher' and 'not every Greek is a philosopher' are algebraically equal:

G + P = (¬G + P).

Both are equivalent to "(¬P) + (¬G)" (some non-philosopher is not a Greek) and to five other particular sentences whose transcriptions are algebraically equal to "+G + P." Indeed the following eight algebraically equivalent categorical are logically equivalent:

+G + P + (¬P) + G + (¬P) + (¬G + P) + (¬G + P) + (¬G + P) + (¬G + P) + (¬G + P)

Plus-minus transcription of the natural logical constants, thus provides a formal language whose sentences have the logical perplicity of elementary algebraic expressions and, with that, a term calculus whose inference power (as we shall presently see) matches that of the predicate calculus.

The Need to Regiment Sentences for Logical Reckoning

Quine justifies the procrustean character of canonical idioms by referring to the need for "regimenting" sentences in ways that facilitate logical reckoning. Some form of "regimentation" is indeed inescapable; a great deal of what we do in our everyday deductive thinking consists of regrouping sentences to perspicuously reveal their logical structure, making it easy for us to reckon with them. We hear someone say "Taxicab drivers are always cynics" and "regiments" it as "every Taxicab driver is a cynic: (T + C)". Coming across "only citizens are voters", we paraphrase ("regiment") it as "no non-citizen is a voter". It may then be
algebraically transcribed as \(-\langle C \cdot (C + V) \rangle\). A sentence of form \(p \land q\) is represented as \(p \cdot q\); it could be rephrased as \(\text{if not-then } p\) and transcribed as \(-p \land q\). For the student of AT, the process of regimenting a sentence for logical reconstruction and notation with transcription in mind; the student of AT-paraphrases "there are syntactic 'nouns' as 'some nouns are\', giving it the standard two term categorical form suitable for transcription as \(\langle N \cdot C \rangle\); MPL, students, on the other hand, regiment it as 'for some x, x is a nun and x is cynical'. In general, MPL renditions are translations into a canonical but artificial idiom. By contrast, AT, regimentations are simple English paraphrases of the vernacular (usually simpler than the sentences being regimented).

The Standard Categorical Form

\[
\begin{array}{ccc}
\lambda & \varepsilon & X \\
\eta & \delta & Y \\
\gamma & \zeta & Z
\end{array}
\]

yes/no: some x\(\varepsilon\) some x\(\varepsilon\) Y

Each sentence has a positive or negative "valence," depending on whether it makes a positive or negative claim of existence. Particular, or existentially positive, statements are positive in valence, claiming that things of a certain kind exist. Universal, or existentially negative, statements are negative in valence, claiming that things of a certain kind do not exist. A simple inspection reveals the valence. Any sentence whose two first signs are the same \(\langle + \rangle\) or \(\langle - \rangle\) is particular and positive in valence; any sentence whose first two signs differ \(\langle + \rangle\) or \(\langle - \rangle\) is universal and negative in valence. Sameness of valence is one of the two necessary and sufficient conditions of logical equivalence:

The Principle of Equivalence

Two statements are logically EQUIVALENT if and only if they are algebraically equal and existentially covalent. (The word 'equivalent' is itself an apt mnemonic for these two conditions.)

5.1.2. The inference power of Algebraic Term Logic

The canonical sentences of AT are English sentences of form "(and) some x\(\varepsilon\) X implies Y, whose terms may be negative (non-X), compound (X and/or Y), or relational (R to some/every Y). For example, AT transcribes \(A\langle \text{no one is hitting every target} \rangle\) as \(\langle A \cdot (A + H) \rangle\) and \(B\langle \text{every archer is falling to hit some target} \rangle\) as \(\langle A \cdot (A + H) \rangle + T\) and shows them to be logically equivalent:

\[
\begin{align*}
\text{No}(A) \text{ archer is hitting every target} & = \langle \text{Yes: every archer is falling to hit some target} \\
& = \langle A + H + T \rangle & = \langle A + (H + T) \rangle
\end{align*}
\]

We find that the older term logic's incapacity to reckon with multiple generally does not carry over to algebraic term logic (ATL). For example, though MPL was originally preferred for its ability to derive 'every R to an x is R to a Y' from 'every X is Y, we find that ATL easily does this.\(^1\)

Here are several more examples of "logibical" equivalence:

\[
\begin{align*}
\text{no non-citizens are voters} & = \text{every voter is a citizen;} \\
& \langle A \cdot (C + V) \rangle = V \cdot A
\end{align*}
\]

some boy dislikes every dog = not every boy likes some dog; \(\langle B \cdot (C \cdot D) \rangle = \langle C \cdot (B + D) \rangle
\]

not both p and q = if p then not q; \(\langle (p + q) \rangle = \langle -p \cdot q \rangle
\]

some A and B is C = some A is B and C.

\[\langle A + B \cdot (A + B) \rangle = \langle A \cdot (A + B) \rangle\]

\[\langle R \cdot A \rangle + B = \langle (B \cdot R) \cdot A \rangle\]

A transcription term logic can easily be taught to students of beginners' algebra, instilling an early salutary awareness that logical thinking is literally a form of familiar reckoning. By contrast, predicate logic is difficult and unfamiliar and not suitable for high school students.

5.2. Sylllogistic in ATL

A sylllogism is an argument that has as many (recurrent) terms as its has sentences. Standard syllologisms have three terms and three sentences. The following arguments illustrate the way ATL transcribes and recports syllologisms:

\[
\begin{align*}
\text{A1} & \\
\text{Every dolphin is a mammal.} & \langle D \cdot M \rangle \\
\text{Every mammal is warm-blooded} & \langle M \cdot W \rangle \\
\text{Every dolphin is warm-blooded} & \langle D \cdot W \rangle
\end{align*}
\]

\[
\begin{align*}
\text{A2} & \\
\text{Not a creature was stirring} & \langle -A \cdot S \rangle \\
\text{Some creature was a giant} & \langle C \cdot G \rangle \\
\text{Some giant wasn't stirring} & \langle G \cdot S \rangle
\end{align*}
\]

Syllogisms that have a valid "mood" are called "regular." Only two kinds of sylllogism are regular:

(i) Universal regular sylllogisms; these are sylllogisms all of whose sentences are universal.

(ii) P- regular sylllogisms; these are sylllogisms that have a particular conclusion and exactly one particular premise.

A sylllogism is not valid unless it is regular A1 is an example of a "U-regular" sylllogism; A2 is an example of a "P- regular sylllogism." Both are valid. Indeed any regular sylllogism whose conclusion is equal to the sum of its premises is valid. The Sylllogistic Principle states the conditions for a sylllogism to be valid.

THE SYLLLOGISTIC PRINCIPLE

A sylllogism is valid if and only its mood is regular and the sum of its premises is equal to its conclusion. All sylllogistic argument proceeds by adding premises and cancelling middle terms. Here is a valid P-regular sylllogism in five sentences (four premises and the conclusion) and five (recurring) terms:

\[
\begin{align*}
\text{Vernacular} & \\
\text{Regimented Form} & \\
\text{Transcription} & \\
\text{Tall-tailors are always cynical} & \langle \text{every T is a C} \rangle & \langle T \cdot C \rangle \\
\text{Anyone who is witty is amusing} & \langle \text{every W is a A} \rangle & \langle W \cdot A \rangle \\
\text{There are tall-tailors who are very witty} & \langle \text{some T are W} \rangle & \langle T \cdot W \rangle \\
\text{Only unhappy people are cynical} & \langle \text{no H is a C} \rangle & \langle H \cdot C \rangle \\
\text{Some amusing person aren't happy} & \langle \text{some A aren't H} \rangle & \langle A \cdot H \rangle
\end{align*}
\]

[Note that the sylllogistic principle applies even to "sylllogisms" that have only one premise. Thus 'some citizen is a farmer, hence not every farmer is a non-citizen' may be regarded as a 2-term P-regular
sylogism, \( (\text{a} \lor C \land \neg (\text{a} \lor \neg C)) \), whose conclusion is equal to its premise. "Every farmer is a citizen, hence every non-farmer is a non-citizen" is a valid (U-valid) "sylogism": \( \neg C \lor ((\text{a} \lor \neg C) \land (\text{a} \lor \neg C)) \).

7.2 Syllogisms with singular sentences

In predicate logic's syntax of function and argument, predicate letters and individual symbols (proper names and variables) come from different fonts of type and play different syntactic roles. In a terminal-logic terms, whether general or singular, play the same syntactic roles and may be interchanged. According to Leibniz, "Socrates is an Athenian" is elliptical for "some Socrates is an Athenian" and so is equivalent to "some Athenian is Socrates". However, because "Socrates" is a uniquely denoting term, "some Socrates is an Athenian" conveys "every Socrates is an Athenian". In general, if \( X \) is a singular term, \( X = Y \) is a particular statement, of form \( X = Y \), that entails its own universal generalization: \( \forall x x = Y \).

In this sense, a singular statement has "null quantity"; we may choose to regard it as universal. Since either quantity will do, ordinary language does not specify. However, for logical purposes, we must be explicit. Consider the inference:

1. Socrates is an Athenian.
2. Socrates is a genus.
3. Some Athenian is a genus.

Assigning opposing quantities to the premises shows this to be a valid syllogism:

\[ +S^+A \quad \text{(some) Socrates}^+ \text{is an Athenian} \]
\[ +S^+A \quad \text{(every) Socrates}^+ \text{is a genus} \]
\[ -A^+G \quad \text{some Athenian} \text{is a genus} \]

7.3 Facility in logical reckoning

In the light of ATL's facility with logical reckoning, the common claim, echoed by Quine, that modern predicate logic "facilitates logical inference" needs to be heavily qualified. For it wrongly suggests that term logic is not as facile. Consider how MPL achieves its facility. Instructions of MPL teach the art of translation into the canonical language. And they teach rules (of inference, of transformation) for reckoning with the formulas. It is true that any competent student of MPL is easily able to prove the equivalence of the two archer sentences, (A) and (B). But it takes mastery of the art of translation and even then it is only relatively "easy." Compare the ATL proof, lately given, of the equivalence of (A) and (B) with a standard MPL proof that requires one to apply (among others) the laws of "quantifier interchange" in showing that:

\[ (A^+)^+C(x)Ax \land (C^+)(y)(T_y \lor H_xy) \]
\[ \land (B^+)^+C(x)A^+x \land (C^+)(y)(T_y \lor H_xy) \]

are logically equivalent.

7.3.1 ATL easily reckons arguments with multiple general premises. As in ordinary syllogisms, reference to a conclusion formed by canceling and replacing the positive middle term. Here is an argument with two "relational" premises:

1. (Some driver is giving every child a toy; \( +S^+G (C^+T) \))
2. Every woman is kissing a child; \( +W (R^+K^+C) \)
3. Every woman is kissing someone a sailor gives a toy to; \( -W^+R (K^+S^+G^+T) \).

There is no short MPL proof that (C) "every 'some' is an animal" and (D) "some owner of a horse is not an owner of an animal" are jointly inconsistent. By contrast, ATL can show in a single step that (C) every horse is an animal and (D) some owner of a horse doesn't own an animal jointly entail a contradiction. Adding (C) to (D) cancels (D)’s positive middle term, \( H \), and results in the self-contradictory conclusion, (E) "some owner of an animal isn’t an owner of an animal:"

\[ \begin{align*}
(C) & \quad +H^+A \\
(D) & \quad +O^+H \land (+O^+A) \\
(E) & \quad +O^+A \land (+O^+A)
\end{align*} \]

In MPL, the student proceeds by translating the premises and then showing in about 15 carefully contrived steps that the two formulas, \( (\forall x)(H(x) \land A(x)) \) and \( (\forall x)(O(x) \land H(x)) \) imply a contradiction as \( (+A^+H \land (+T^+H)) \) does not provide this the official and unexceptionable answer is: Yes, predicate logic does have a clarity that term logic lacks. In the way it explicitly states the existential conditions that must obtain for a sentence to be true. Quite generally, the logical language of the predicate calculus is ontologically perspicuous in a way that the language of term logic is not. Each canonical sentence is quantifier variable notation uses its "ontic" heart on its syntactic sleeve. For it to be true that some Greek is not a philosopher it must be the case that there exists no one who is both a Greek and a non-philosopher and this is explicit in \( (\exists x)(G(x) \land \neg P(x)) \). For to be true that no archer is hitting every target, it must be the case there exists no one who is an archer and such that there exists no target the archer does not hit and, \( (A^A) \), the canonical translation of \( A \), says much as such.

Nevertheless, while being truth conditionally explicit is one way of being "conceptually clear" it is not the only way. An equally plausible clause of the clarity of the formulas of a canonical logical language is the perspicuity of those formulas for purposes of explaining the celerity of common deduction. We have noted, to notice how efficiently and (logically unutored) person is in in making deductive [arguments. The inference from the vernacular (A) to the vernacular (B), every archer is missing some target is instantaneous and unhesitatingly made by any ten-year old without benefit of the ontic explicitness provided by quantifier-variable formulations. How does the ten-year-old do it? Not by the artful methods of MPL. No college student of predicate logic who has just learned how to translate (A) and (B) and to formally derive \( (\forall x)(A(x) \lor H(x) \lor H(x)) \) from \( (\exists x)(A(x) \lor H(x) \lor H(x)) \) is ever moved to say, "aha, so that's how (at age ten) I so quickly and intuitively inferred (B) from (A)" by contrast, the ATL explanation of why we all are so quick to infer (B) from (A) — which points out that distributing the external signs of denial of \( (\neg A \land H \land H) \) systematically changes each internal logical sign to its opposite, yielding \( +A^+H \land +T \) — may well elicit an "aha" of platonist retrospection: "so that's what we do; that's how we
do it". The algebraic transcriptions of natural language sentences have a basic kind of clarity that the canonical MPL translations do not have. Similar considerations apply to the contrasting MPL and ATL accounts (long and relatively intuitively plausible, but still with a core of inconsistency. Instantaneously recognized, of (C) "every horse is an animal" and (D) "some owner of a horse is not an owner of an animal".

**§ 4 Suppositionless depths**

The grammar of ATL is the surface grammar of simple English sentences; that of MPL is the grammar of an artificial language. Nevertheless, because the quantifier-variable idiom has had no serious rival as the canonical logical language, there has been an understandable temptation to give it innate and "deep" status as a fact of a rational human nature; a temptation that Quine, despite his firm advocacy of MPL, resolutely (and, in my opinion, admirably) resists. Noam Chomsky, on the other hand, who has incorporated much of predicate logic in his later linguistic theory, has said that "one familiar quantifier-variable notation would in some sense be more natural for humans than a variable-free notation for logic." At one point he claimed that "[t]here is some empirical evidence that the (brain) uses quantifier-variable rather than quantifier-free notation." This fanciful bit of speculative neuroscience discounts the plain surface structure, which is variable-free, to postulate a dubious "deep structure" that has the syntactic structure of the quantifier-variable language of modern predicate logic.

**§ 5 The high cost of MPL's preeminence**

The final victory of predicate logic over the older logical terms came at a high cost to the general public. A hundred years ago Lewis Carroll was writing a book on logical form on term logic for a wide readership. Today after almost a century of MPL, predicate logic remains a technical subject about which no popular books are written. A hundred years ago teenagers were learning term logic in the secondary schools. They knew what a syllogism was and many knew how to tell the valid from the invalid ones. They knew what middle terms were. Today, in the information age, despite all the talk about cognitive development and "critical thinking," K-12 children are taught between two stools: the older logic of terms is no longer taught and modern predicate logic is too difficult to be taught.

Yet children are intuitively logical. Just as they speak more or less correctly from a young age; so they reason fairly well; for example most adolescents instantly recognize the equivalence of (A) and (B); they instantly judge that (C) "every horse is an animal" and (D) "some owner of a horse doesn't own an animal" are jointly inconsistent. But in the current state of logic teaching, such intuitions remain unattended and unexplained. First, apart from some bits of propositional logic, students are given no formal logical instruction until they reach college age when, if they choose logic as an elected subject, they may learn how to formally show the equivalence of (A) and (B) and (more laboriously) the inconsistency of (C) and (D). Second, even in college, the proofs they learn, being presented in the quantifier-variable idiom of modern logic, will shed little light on how their belligerent younger selves (who, pace Chomsky, do not intuitively think in terms of quantifiers and variables), are able to intuitively and instantly recognize that (A) and (B) are equivalent. It is simply not plausible to say that a teenager who instantaneously judges that sentences of form "every X is Y" and "some X is an animal" and (D) "some owner of a horse is not an owner of an animal".

...
over traditional term logic because of its ability to reckon with sentences containing relational phrases like ‘owner of a horse’. With the advent of an effective calculus of terms, the situation changes. It is not out of the question that fifteen years from now, some students will be choosing college with a fair knowledge of algebraic term logic. They would know to transcribe ‘every horse is an animal’ as ‘Hx∈A’, they might even know that if they contain (and) ‘Ifx∈A and Bx∈B’, then to a tautological premise (for example ‘¬(Ox∈H) ∨ (Ox∈H)’, every owner of a horse is an owner of an animal). They could cancel and replace the positive middle terms, H, by A, thereby immediately deriving ‘(Ox∈A) ∨ (Ox∈A)’, (every owner of a horse is an owner of an animal). It would not be easy to persuade such students that it is not necessary for them to learn how to translate ‘every horse is an animal’ into the language of quantifiers and variable variables and to apply rules of propositional and predicate logic to a proof that ‘(x∈A)y∈y∈(Ay∈y∈A)’ entails ‘(y∈x)(x∈y)(Ay∈y∈A)’. A way is simply not possible.

Although the prospects for reviving the teaching of term logic in the universities are admittedly not bright, the continued supremacy of predicate logic is by no means assured.

Endnotes
3. ‘pauitians’ is ‘also equivalent to ‘pa or ‘pt. Since ‘pa or ‘pt is equivalent to ‘p or ‘p’, the algebraic transcription of these formulas should be tautological commutative. ATL transcribes both ‘p or ‘pt and ‘p or ‘pt as ‘p or ‘p’ and ‘p or ‘p’ which are respectively equivalent to ‘p or ‘p’ and ‘p or ‘p’. This paper does not elaborate on the way the pluralistic transcriptions apply to propositional logic. On that logic, see An Invitation to Formal Reasoning, chapters 3 and 7.
4. See above, §3 and §7.
5. Because the relational arguments in predicate logic tend to be quite complex, most college logic texts omit them altogether, limiting themselves to arguments with monadic predicates. This practice, which does not exploit the advantage that ATL has over traditional syllogic logic, leaves the 21st century student of logic not much better off than the 19th century student of logic.
8. There are some rare exceptions. High school students fortunate enough to have contact with teachers of philosophy may be exposed to the rudiments of categorical logic. Also a small minority of secondary Catholic schools retain the tradition of teaching syllogistic logic.

A Kinesthetic Technique for Teaching Categorial Sylllogisms
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Introduction
While some students learn logic easily and naturally, apparently having an innate aptitude for mathematics, formalization and technical concepts, others struggle with the skills introduced in beginning logic and reasoning classes, never quite reaching mastery. These students are often quite sure that they just can’t get it.’ Alternative approaches to the introduction of logical concepts and for solving logic problems may reach students otherwise resistant to traditional techniques. Methods actively involving students in learning and using logical concepts, especially those including ‘manipulatives’ have been especially effective with such students.

This article presents a novel method for diagramming and verifying categorial syllogisms developed by Wallace Murphree and based on schematics first presented in Numerically Exercice Logic: A Reduction of the Classical Syllogisms (1991). This method is more ‘automatic’ than the traditional methods (Venn Diagrams) and therefore requires less sophistication on the part of the students to whom it is introduced. “Murphree’s Method” is thus better suited for use in classrooms with young students, students learning in a language other than their native tongue, and kinesthetic learners. We have used the method successfully in college logic courses, in summer programs for younger students, and for courses for non-native English speakers. We recommend it as a supplement to, rather than a replacement for, the more standard Venn Diagrams.

In this article, we introduce and demonstrate Murphree’s Method, using specially designed cards. The process of diagramming and verifying categorial syllogisms with the method is carefully illustrated. We also provide an explanation of the effectiveness of the method. “Murphree’s Method” is then compared with Venn diagrams and other techniques more commonly used in classrooms today. The article closes with a description of the results we achieved using the above methods with our own students. A copy of the assignment sheet used in our classrooms is included as an appendix.

The Method
A. Before Teaching Murphree’s Method
Before using “Murphree’s Method”, students should be introduced to the Aristotelian syllogism and various categorical statements. They will need to recognize the category to which the premises of syllogisms belong. However, they do not necessarily need to have mastered the relationships between the categorical statements as represented on the square of opposition.

Students should also have performed at least a few obversion, converse, and contrapositives. (It is not necessary for students to master converting statements, but it is enlightening for them to “discover” that all of the statements represented on a single card are equivalent.)
If students have experience trying to determine the validity of categorical syllogisms either on their own ('intuitively') or through checking each syllogism for the classical fallacies (success is not necessary), they will probably design an easier method for checking syllogisms, as the first is usually unreliable and the second is not only time consuming but also requires the memorization of a number of "rules". However, we recommend teaching Muphyse's Method before teaching Venn Diagrams, as it requires less mastery of the logical skills involved.

B. Drawing the Cards

Before learning Muphse's Method, students first make the cards to be used in the method. There are eight cards. Two are red X's. One of these X's has a green crossbar at the top; the other has a green crossbar at the bottom. Two of the cards are green X's with red crossbars. Two of the cards are Z's. For one of the cards, the horizontal lines are green while the diagonal line is red. On the other Z card, the horizontal lines are red while the diagonal line is green. The remaining two cards are mirror images of these Z cards. Students then place arrowheads on the lines of each card. Lines that are connected on both ends are bi-directional. Lines that are only connected on one end are unidirectional towards the free end. (An illustration of these cards, with the red represented in dark gray and the green represented in light gray follows.) Note that, since the up and down 'X' cards are the same when rotated 180°, there are only six different cards.

C. Labeling the Cards

Students should label the cards as follows: Place an "S" in the upper left-hand corner of each card. Place a "P" in the lower right-hand corner of each card. Place a "A" in the upper right-hand corner of each card. Label unidirectional green arrows "All (S)'s are (P)." Label bi-directional green arrows "Some (S)'s are (P)." Label bi-directional red arrows "No (S)'s are (P)." (Examples of labeled cards in gray scale appear below.)

As you can tell from the labels, 'A' propositions (SAP) are represented by unidirectional green arrows, 'E' propositions (SEP) are represented by bi-directional red arrows, 'I' propositions (SIP) are represented by bi-directional green arrows and 'O' propositions (SOP) are represented by unidirectional red arrows. The bi-directional arrows represent convertible propositions, while unidirectional arrows represent propositions that are not (fully) convertible. Green arrows represent positive propositions, while red arrows represent negative propositions.

The propositions are read off of the cards as follows: On the lower half of the card, the left side of the card represents the subject, while the right side of the card represents the predicate. The upper half of the card represents the complements of the subject and predicate. Thus, a unidirectional green arrow running from the lower right-hand corner of the card to the upper left would be read, "All P's are not S." (PAS) Similarly, a bi-directional red arrow running from the upper right-hand corner of the card to the lower left-hand corner of the card would read "No non P's are S." (P ES) All of the propositions thus represented on a single card are equivalent.

D. Lay out the Premises

Once students have labeled the cards, they need to make a mat on which to place the premises of the syllogism being tested. This mat is usually a standard-sized sheet of paper turned sideways (for 3 x 5 cards). In the lower left-hand corner, the student writes an "A." In the upper left-hand corner, the student writes a "P" for non-"A." The student then writes a "C" and "C" on the right side of the paper in a similar manner. Finally, a "B" and "B" are placed in the middle of the bottom and top edge respectively. (An example of this mat is shown below.)

A categorical syllogism can now be tested for validity using the labeled cards and the mat. The cards representing each of the premises are laid out in order on this mat. The positive terms are at the bottom of the cards. The negative terms are at the top of the cards. The arrow representing the statement type of the premise as presented points from the subject to the predicate of the premise (again, as presented). If there is a green path leading from one side of the mat to the other, there is a valid conclusion. The path may not move into the head of a green arrow, even if it is a bi-directional green arrow. Thus, there may be no more than one particular premise (red card), and if there is a particular premise, the path must start on that card. If there is a particular premise (red card), the conclusion is particular. (Some S's are P.) If there are no particular premises (all green cards), the conclusion is universal. (All S's are P.)

Consider the following example: An illustration of this example appears in gray scale below.)

Some A's are non-B. All non-C's are B. Therefore:
The first premise, "Some As are non-B", appears on the upward-down green x, so this card is placed on the second half of the mat. The second premise, "All non-C's are B", appears on the upward-down green x, so this card is placed on the second half of the mat. We then find that there is a green arrow from A to C. Since the first premise is particular, the conclusion must also be particular, yielding "Some As are C".

E. Solving Sorties

The method described above works for finding the conclusion or lack thereof for all standard syllogisms. Sorties may be solved step-by-step by replacing each pair of premises with its conclusion, if any, before moving on to the next premise. However, many sorties may be solved much more quickly by finding a path from the beginning to the end of a string of cards representing the premises laid end-to-end. Consider the following sorties. "Some A's are B; All non-B's are non-C; All non-D's are C; Therefore:" The cards representing this argument are shown below. Since there is a legal green path from A to D, there is a valid conclusion. Since the first premise is particular, the conclusion is also particular, "Some A's are D".

This method is sufficient for demonstrating valid conclusions, but it is not necessary. While it works for all sorties with only universal premises, and for any sorties with particular conclusions at either end of the premise chain, it does not necessarily work for sorties with particular premises elsewhere in the list. Consider the following sorties, "All B's are A; Some B's are C; All C's are D; Therefore:" Although there is no legal green path from A to D, this argument does have a valid conclusion, as we may determine by the following. Take the cards for the first two premises only, "All B's are A" and "Some B's are C".

From this, we can clearly arrive at the valid conclusion "Some C's are A", or "Some A's are C". If we now take this conclusion with the third premise, "All C's are D", we get the following: (Note the slight change to the playing mat, reflecting the use of letters in these premises.) This demonstrates the conclusion "Some A's are D." Thus, while Murphee's Method can quickly exhibit the conclusions for universal sorties, students must be careful when checking arguments having particular premises appearing within their list.

Why Murphee's Method Works

For some philosophers and students, Venn diagrams seem ideal, since they apparently "display" the validity of syllogisms in their shape and shading. For some students, however, Venn Diagrams seem less perspicuous. Unfortunately, these seem to be the very students who struggle with logic and are sure they can never understand the classical fallacies either. For these students, Murphee's Method seems much clearer. They can follow arrows and have come to naturally see green as go and red as stop, so the Murphee's Method cards display the flow of the syllogism rather clearly. (Perhaps, as one anonymous reviewer put it, Venn Diagrams show that a conclusion is 'contained' in its premises, while Murphee's Method shows that a conclusion 'follows from' its premises.) In any case, those who are comfortable with Venn diagrams and the classical syllogistic rules may ask for an explanation of Murphee's Method's effectiveness in deciding the validity of categorical syllogisms. We therefore provide one in this section. (We try to argue for the method's effectiveness as a pedagogical tool elsewhere in this article.)

The effectiveness of Murphee's Method is easiest to explain through predicate logic (perhaps this explains its appeal to a different kind of learner than either Venn Diagrams or the classical syllogistic rules). If we ignore existential presuppositions, we can convert the four basic categorical statements into quantified predicate logic (FOQPL), as follows:

\[
\begin{align*}
S\pi P & \iff \forall x (Sx & \land Px) \text{ or } \forall x \lnot (\neg P & \land \lnot Sx) \text{ [by composition]} \\
S\pi \lnot P & \iff \forall x (Sx & \land \lnot Px) \text{ or } \forall x (\lnot Sx & \land Px) \text{ [by proposition]} \\
S & \land \lnot P & \iff \exists x (Sx & \land \lnot Px) \text{ [by commutation]} \\
S & \land P & \iff \exists x (Sx & \land Px) \text{ [by commutation]}
\end{align*}
\]

The arrows are related to the FOQPL equivalences as follows: single-ended arrows show implication and may be transposed, while double-headed arrows show conjunction and may be converted. Since green is affirmative and red is negative, the green single ended arrow from S to P affirms the implication from S to P (S\pi P) \iff \forall x (Sx & \land Px), while a red arrow denies that implication (\lnot (S & P) or (S & \lnot P)). A green double ended arrow affirms the conjunction of S and P = (S & P) \iff \exists x (Sx & \land Px), while a red double ended arrow denies the conjunction of S and P = \lnot (S & P) or (S \land \lnot P). Therefore, with these correlations the cards for the propositions show all six equivalent statements. For example, the schematic for "All S's are P" shows:

\[
\forall x (Sx \land Px) \text{ by the bottom green arrow = All S's are P;} \\
\lnot (\neg P & \land \lnot Sx) \text{ by the top green arrow = All non-P's are non-S;} \\
\forall x (\lnot Sx & \land \lnot Px) \text{ and } \forall x (\neg P & \land Sx) \text{ by the double ended red arrow between S and non-P = No S's are non-P and No non-P's are S.}
\]

and
\(\neg x \land \neg y \land z\) and \(x \lor y \lor z\) by the lack of a direct connection between these terms which both lie at the point of green arrows. For any \(x, y, z\) is either non-S or P, and the converse.

(No standard expressions for these last two equivalences have emerged in the traditional treatment of the syllogism.)

The same holds for the other cards.

Thus, for the universal statements, the green arrows clearly indicate lines of implication. Conclusions for syllogisms with two universal premises follow from the transitive property of implication. These are the only conclusions permitted from these premises alone in predicate logic. On the existential presupposition, we can also get SAD, MAP, SIP; but we can also get this using Murphree's Method by first deducting SAD, MAP, SAP and then asserting the subaltern of SAP, SIP on the existential presupposition.

Syllogisms with two particular premises are prohibited by the rules of Murphree's Method and by the rules concerning the scope of existential quantifiers in predicate logic. This leaves just syllogisms with mixed premises. The rule against moving into the head of a green arrow guarantees that the legal path of a syllogism containing a particular premise must start on that premise. Thus, we need only worry about syllogisms that start with SIP or SOP followed by SAP or SEP.

Consider SIM, MAP. Murphree's Method yields the conclusion SIP for these two premises. This can also be proven using quantified predicate logic, as can SIM, MEP, SOP.

Syllogisms starting with SOP do not yield any conclusion using Murphree's Method, as the arrows to/from the middle term do not meet. In quantified predicate logic, a drawing of a conclusion from these premises would require denying the antecedent or asserting the consequent.

[Note: PAM, SOP, SOP and MOP are valid. The coin must travel along green (affirmative) arrows, it starts on the arrow representing "Some A are non-M" in the first case, and on the arrow representing "Some non-P are M" in the second. Thus, the proof for SIM, MEP, SOP applies if we simply reverse the cards, exchange non-M for M in the first case and non-P for P in the second case.]

Murphree's Method works, then, because the color and placement of the arrows on the cards display relations (implication, conjunction, disjunction, and negation) implicit in the classical statement of the premises, but explicit when these premises are expressed in FQQL. Sorties follow by a pair-wise induction on the premises.

Conclusions

We have used this method in logic classes in two distinctly different settings over the years. The first is college logic classes. The second is summer logic camps for younger (late elementary) students. Students' reaction to the method in these two settings has been remarkably similar.

Students already familiar with Venn diagrams often resist the introduction of a different way of accomplishing what appears to them to be the same end. Those not already familiar with Venn diagrams take to this method more readily. We therefore teach this method before teaching Venn diagrams in these classes.

Once students have worked through several examples, they become more comfortable with the method, drawing the correct conclusions in nearly all cases. They also find that it is much quicker than Venn Diagrams. In her classes, Livingston teaches the classical fallacies, Murphree's Method and Venn Diagrams. When the students are asked at the end of the semester which technique they prefer, the classes are consistently split between Murphree's Method and Venn Diagrams. (Only two students have ever claimed to prefer checking the syllogism for classical fallacies. They liked not having to do anything.) The following is a short list of comments by students on "Murphree's Method":

1. "This [Murphree's Method] is easy.
2. "It's faster than Venn Diagrams. You don't have to draw anything."
3. "You have to have cards. What if I wanted to do it in the case?"
4. "You can use Venn Diagrams if you have more than three things (terms)."

Murphree's Method does handle most sorties more readily than do hand-drawn Venn Diagrams. Our method also does not require as deep an understanding of the logical concepts modeled as do Venn Diagrams. (Students need merely follow the rules of the game.) Thus, Murphree's Method is better suited to the particularly young or mathophobic. However, Murphree's Method will not work well if you have the same term appearing more than once in the premises (for making explicit existential assumptions, for instance), whereas Venn Diagrams can handle such arguments. We therefore recommend Murphree's Method as a supplement to, rather than replacement for, Venn Diagrams, particularly for students already familiar with Venn Diagrams.

Appendix: Murphree's Method assignment sheet

I. Squares of Opposition

(1) Draw and label a Square of Opposition.

II. Identify each of the following.

(a) SIP
(b) SOP
(c) SIP
(d) SAP

III. Give an example of an ordinary sentence for each of the above forms.

IV. Give the equivalents and consequences (by distortion, etc.) for each of the above forms.

II. Rod - X, Green - Z

A. You will be making cards for a game out of 3x3 index cards. There will be the following choices for each of the cards:

i. Some cards will be red; others will be green.
ii. Some cards will have X's on them; others will have Z's.

III. On some cards, the letters will be forwards, on some, backwards.

(1) How many different cards will there be?

(2) Since X's are the same forwards and backwards, how many cards are actually different?

Using eight index cards make one each of the cards described above. Make the diagonal of the Z's a different color than the horizontal lines. Connect the bottom or top of
the X's with a different color than the diagonals. Place arrowheads at the unconnected ends of the lines on each card. Place arrowheads on each end of the middle line on each card. (If you are not sure how your cards should look, compare yours with the diagrams below.)

Unlabeled Cards: [dark gray is red, light gray is green]

Unlabeled Cards: [dark gray is red, light gray is green]

B. Playing the game:

i) Form groups of 3-5 students each.

ii) Shuffle the cards of all those in your group together. Deal four cards to each player. Place a penny (or other counter) on the playing surface (the floor or a table).

iii) Each turn, each player should:

(a) draw a card,
(b) place a card from his/her hand on the playing surface next to the counter, and
(c) move the counter along a green arrow, in the direction of the arrow.

(i) The counter cannot move into the head of a green arrow.
(ii) If the counter cannot move, the player gets a point, and that card is removed from the game (placed in the discard pile).

iv) The winner is the player with the fewest points once all cards are either on the board or in the discard pile.

v) Play the game again; starting with a different player.

(1) Does it matter who starts the game? Why or why not?
(2) Which cards are most likely to be playable? Why?
(3) Which cards are least likely to be playable? Why?

Categories with Cards

A. Label each of your playing cards as follows:

i) Label unidirectional green arrows "All ( )'s are ( )."

ii) Label unidirectional red arrows "Some ( )'s are not ( )."

iii) Label bi-directional green arrows "Some ( )'s are ( )'s.

iv) Label bi-directional red arrows "No ( )'s are ( )."

B. Make a play mat for your cards.

i) Turn a standard sheet of paper sideways.

ii) In the lower left-hand corner, write "A" (for now-A).

iii) In the upper left-hand corner, write "A" (for now-A).

iv) Similarly, write "C" and "C" on the right-hand side.

v) Write "B" and "B" in the middle.

C. You can now use the cards to work out categorical syllogisms:

i) Line up the cards for each premise in the syllogism on the mat. Remember that positive terms go at the bottom and non-terms go at the top.

ii) If there is a legal green path from the beginning to the end, this is your conclusion. (Remember that a path that moves into the head of an arrow is not legal.)

iii) There may be no more than one particular premise (red cards).

iv) If there is a particular premise (red card) the conclusion is particular. Otherwise, the conclusion is universal (green).

D. Here is an example:

Some A's are not-B. All non-C's are B. Therefore:

i) The first premise, "Some A's are non-B", appears on the forward red z, so this card is placed on the first half of the mat.

ii) The second premise, "All non-C's are B", appears on the upside-down green x, so this card is placed on the second half of the map.

iii) We then find that there is a green arrow from A to C. Since the first premise is particular, the conclusion must also be particular, yielding "Some A's are C."
IV. Practice

Use this method on the following syllogisms:

1. All As are B; All B's are C; Therefore:
2. No B's are A; All C's are B; Therefore:
3. No A's are B; All B's are C; Therefore:
4. All B's are A; Some B's are C; Therefore:
5. All A's are B; No C's are B; Therefore:
6. Some A's are B; Some B's are C; Therefore:
7. No A's are B; All C's are B; Therefore:
8. No A's are B; No B's are C; Therefore:
9. All B's are A; Some B's are C; Therefore:
10. Some A's are B; No C's are C; Therefore:
11. Some B's are A; All B's are C; Therefore:
12. Some A's are B; All B's are C; Therefore:
13. Some A's are B; No C's are B; Therefore:
14. Some A's are not B; Some B's are not C; Therefore:
15. All A's are B; All C's are B; Therefore:
16. All B's are A; Some B's are not C; Therefore:
17. Some A's are B; No B's are C; Therefore:
18. Some B's are A; No B's are C; Therefore:
19. Some B's are A; No C's are B; Therefore:
20. Some A's are not B; All C's are B; Therefore:

Bibliography


**Boolean Euler Diagrams**

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In the past several years, there has been a renewed interest in Euler diagrams. Part of the reason for this is the contention by some that Euler diagrams are more intuitive than Venn diagrams. Even if one grants this contention, there are several problems with Euler diagrams. As John Neville Keynes noted over a century ago, traditional Euler diagrams can be very cumbersome. As Hanmer and Shin acknowledge, their recent reconstruction, *dropping* Euler's mechanism for making existential claims, which implies that, for all its sophistication, their system is neither complete nor sound for either the Aristotelian or the Boolean interpretation of categorical logic. Finally, the proponents of Euler diagrams assume the propriety of the Aristotelian interpretation of categorical logic; an assumption which is at least dubious if not problematic.

In this paper I develop a system of Euler diagrams for the Boolean Interpretation of categorical logic. It retains the circles-within-circles and circles-outside-circles approach to relations among universal propositions, which is the respect in which Euler diagrams are more intuitive than Venn Diagrams. It introduces an X in diagramming particular propositions, which reflects an intuitive representation of 'some' (there is at least one'). If there is a counternfutive element, it is that logically equivalent forms of particular propositions are not visually identical.

I begin by introducing a Boolean Euler diagram for each of the four standard-form categorical propositions and discussing the necessary and sufficient conditions for the acceptability of any diagrammatic system for the evaluation of categorical syllogisms. Next, I introduce two Procedural Rules and a Rule of Interpretation for constructing Boolean Euler diagrams and discuss the reasons why the second procedural rule is needed. I conclude with an appendix that demonstrates that my system is complete and sound: that it demonstrates the validity of all and only the fifteen syllogistic forms recognized as valid by the Boolean interpretation of categorical logic.

Euler diagrams for universal propositions represent the relationship between two classes by the relationships between two circles. If we recognize that distribution is the fundamental relationship expressed by universal propositions, then there is one diagram for each universal proposition. In a universal affirmative (A) proposition, the circle representing the subject class is contained entirely within the circle representing the predicate class. In a universal negative (E) proposition, the circle representing the subject class is entirely outside of the circle representing the predicate class. The diagrams look like this:

- All S are P.
- No S are P.

In traditional Euler diagrams, a distinction is drawn between the representation of a particular proposition and that of a singular proposition. Since every singular proposition entails a corresponding particular, I collapse the distinction and represent both by the placement of an X with respect to a circle. In a particular affirmative (I) proposition, the X representing the subject term is placed within the circle representing the predicate term. In a particular negative (O) proposition, the X representing subject term is placed outside the circle representing the predicate term.

- Some S are P.
- Some S are not P.

Notice that the spatial relations of containment and exclusion effectively mirror the logical relationships expressed by the propositions.

There are two kinds of considerations that must be taken into account in proposing a diagrammatic method for evaluating categorical syllogisms. First, and primarily, are the logical considerations. On the Boolean interpretation of categorical logic, only fifteen of the two hundred fifty-six categorical forms are valid, namely, Barbara (AA1-1), Celarent (EA1-1), Darapti (AI1-1), Ferio (EO1-1), Camestros (AE2-1), Datisi (AI2-1), Disamis (AO2-1), Dimaris (AI1-3), Datisi (AI1-3), Bokardo (MO2-3), Ferisc (EO1-3), Camenes (AE2-4), Camestros (AI1-4) and Ferison (EO1-4). Any...
sound and complete diagrammatic must show that these, and only these forms, are valid.

Second, there are pragmatic considerations. There must be a uniform procedure for constructing Euler diagrams, and there must be a rule for interpreting the resulting diagram. Euler diagrams are like Venn diagrams insofar as the diagram will demonstrate the validity of the form of a categorical syllogism if and only if diagramming the premises results in diagramming the conclusion. Euler diagrams differ from Venn diagrams insofar as the mapping of logical space onto two-dimensional physical space is an integral part of the diagramming process. In a Venn diagram, the logical space germane to a syllogism is represented by three interlocking circles prior to diagramming the premises. In an Euler diagram, diagramming one premise delineates an area of logical space, and it is with respect to that area of logical space that one diagrams the second premise. For example, in constructing a diagram for Barbara (AAA-1), one might begin by diagramming the major premise, "All M are P."

and diagram the minor premise, "All S are M," with respect to those circles:

Since the diagram shows that the entire class of things that are S is contained in the class of things that are P, we have diagrammed the conclusion: the syllogism is valid. Similarly, in constructing the diagram for Celarent (EAE-1), one might begin with a diagram for the major premise, "No M are P."

and diagram the minor premise, "All S are M," with respect to these circles:

Since the diagram shows that the entire class of things that are S is excluded from the class of things that are P, we have diagrammed the conclusion: the syllogism is valid.

When the premises are universal and the argument is valid, all we need do is draw circles in accordance with the diagrams for the universal propositions, and we will diagram the conclusion. But there are cases in which the placing of the circles or Xs in diagramming the second premise is ambiguous: the circle or the X required by the second premise might occupy either of two or more positions relative to the areas of logical space defined by diagramming the first premise. To handle such cases, I introduce Procedural Rule #1.

Procedural Rule #1: If diagramming the second premise is ambiguous relative to the areas of logical space defined by diagramming the first premise, that is, if there are or more places into which one might place the required circle or X, then a circle or X should be introduced into each of those places.

As we shall see below, problems also arise when diagramming some particular propositions, namely, any particular proposition in which the middle term of the syllogism is in the subject-place. To handle such cases, I introduce Procedural Rule #2:

Procedural Rule #2: If the middle term of a syllogism is found in the subject place of a particular premise, convert or obvert and convert to place the middle term in the predicate place of the premise, and compare the diagrammed conclusion to all logically equivalent forms of the conclusion in judging the validity of the syllogism; if the conclusion is a particular proposition, the syllogistic form is valid if either the conclusion or any logically equivalent form of the conclusion is diagrammed.

In addition to the procedural rules, I introduce a Rule of Interpretation. As students constructing Venn diagrams soon realize, whenever either two Xs are introduced into the diagram or one of the seven interior areas defined by the three circles of the diagram is shaded twice, the argument is invalid. Such situations guarrantee that no conclusion follows with necessity from the premises. For two Boolean Euler's, I posit the following Rule of Interpretation:

Rule of Interpretation: whenever either (a) diagramming the second premise of a syllogism requires that circles be drawn in more than one area of the logical space determined by diagramming the first premise, or (b) diagramming the second premise requires that a second X be entered in the diagram, or (c) that a term must be diagrammed as a circle in one premise and an X in the other, the argument is invalid.

A final point should be noted before explaining why Procedural Rule #2 is needed. When constructing Venn diagrams, students are advised to diagram the universal premise before they diagram the particular premise, since, in some cases, this avoids the need to "move the X off the line" when diagramming the universal. In constructing an Euler diagram, it makes no difference which premise is diagrammed first. In practice, however, one might wish to stipulate that the major premise always should be diagrammed first, for if the syllogistic form is invalid, the order in which the premises are diagrammed often results in visually distinct diagrams. Notice, for example, the two diagrams for an EAE-3:

Major diagrammed first

Minor diagrammed first

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Throughout the remainder of this paper, I diagram the major premise first.

Why do we need Procedural Rule #2? To see why, consider the diagrams for Dantei (AI-1) and Datisi (AI-3), valid syllogistic forms that differ only insofar as the minor premise of each is the converse of the minor premise of the other. The diagram for Dantei works beautifully: by diagramming the premises, we diagram the conclusion.

On the other hand, the diagram for Datisi suggests that the argument is invalid. We diagram the major premise as follows:

Now we diagram the minor premise. How do we do it? In the major premise, M is represented by a circle. To diagram the minor premise, M must be represented as an F. Further, the placement of the circle representing S is ambiguous: M must be inside S, but that leaves open the question of the placement of the S-circle relative to the F-circle. Following Procedural Rule #1 — if we did not have Procedural Rule #2 — the diagram must look like this:

Given this diagram and our Rule of Interpretation, we must conclude that Datisi is invalid, which it is not. Procedural Rule #2 alleviates this problem by requiring that the middle term of a particular proposition be placed in the predicate place of the premise. In effect, Dantei (AI-3) is reduced to Dantis (AI-1), Feriko (EO-3) is reduced to Feriko (EO-1), Fesidir (EO-2) is reduced to Fesidir (EO-4) and Dimarit (IA-3) is reduced to Dimarik (IA-4).

But there are additional problems with Dimarit (IA-4), for by diagramming the premises one does not diagram the conclusion, "Some S are P," rather, one diagrams the conclusion, "Some P are S." Notice the argument form and its diagram:

Since "Some S are P" is not diagrammed when diagramming Dimarit, but since "Some S are P" is logically equivalent to "Some P are S," the soundness and completeness of my system of Boolean Euler diagrams requires that the argument will be deemed valid if either the conclusion or a statement logically equivalent to it is diagrammed in the process of diagramming the premises.

Both problems arise when diagramming Bokardo (IA-3). Were it not for Procedural Rule #2, the diagram for Bokardo would look like this:

As in the cases we have considered up to this point, the middle term must be moved to the predicate position of the major premise. So we obvert "Some M are not P" to "Some M are non-P" and convert that statement to "Some non-P are M." To keep the same number of terms in the argument, we must also obvert and convert the conclusion to "Some non-P are S." Modified in this way, the Euler diagram shows that Modified Bokardo is valid:

As I show in Appendix B, the consideration of logically equivalent forms of all the premises and conclusion needed to comply with Procedural Rule #2 allows us to demonstrate the validity of all and only the fifteen forms sanctioned by the Boolean interpretation. But this requires that we recognize that successive applications of conversion and obversion yield four equivalent forms of each of the standard form categorical propositions. These are as follows:

(1) All M are P abbreviates to (1) No S are non-P, which converts to
(2) No S are non-P, which converts to (2) No M are P, (1) abbreviates to
(3) All M are P, non-P. which converts to (3) Some S are non-P, (2) abbreviates to
(4) All P are non-M.

(1) Some S are P, converses to (1) Some S are P, (1) abbreviates to
(2) Some P are S, (2) abbreviates to (2) Some S are non-P, which converts to
(3) Some S are non-P, (2) abbreviates to (3) Some non-P are S, which converts to
(4) Some P are non-S.

By reducing the number of terms to three (some of which are non-S, non-M, or non-P) and comparing the diagrammed syllogism with the diagram for the relevant form of the conclusion, it is easy to determine whether the syllogistic form is valid.

Nonetheless, Procedural Rule #2 illustrates a fundamental truth about syllogistic logic, as well as a general shortcoming of the Euler approach to diagrammatics. The middle term of a syllogism mediates between the major and the minor. The concern throughout is with the relationship among classes. By placing the middle term in the predicate place of any particular premise, the middle term is treated as a term denoting a class (hence, as a circle), rather than a term denoting one or more individuals. It is only as a class-term that the middle term can mediate. But this shows that there is a fundamental shortcoming in the Euler approach. With respect to universals, the placement of circles correctly reflects considerations of distribution. But my Euler technique treats the relation of membership of individuals to a class in the same way as it treats the relation of classes to classes (distribution). The relationship is not the same, which is why
It was necessary to develop an elaborate procedural rule for Boolean Euler diagrams.10

Appendix

If my system of Boolean Euler diagrams is sound and complete, it must show that all and only the fifteen syllogistic forms sanctioned by the Boolean interpretation are valid. To demonstrate the adequacy of the system, we must examine the diagrams for each of the 258 forms. Since on the Boolean interpretation no more than one conclusion follows from a pair of premises, we need consider no more than sixty-four diagrams. If there are two particular premises, Procedural Rule #1 requires that placement of two Xs in the diagram, which the Rule of Interpretation deems a sufficient condition deeming the syllogism invalid. So, we need not examine cases in which there are two particular premises. We need consider only the remaining forty-eight cases.

I begin by constructing an Euler diagram for each of the four logically equivalent forms of the four categorical propositions. Then I construct diagrams for the syllogistic forms. I name the forms by giving the first two letters of the mood plus the figure. For example, AAA-1 represents all cases in which the premises are universal affirmative propositions in figure 1. In those cases in which a form is valid, I indicate which form is valid under the diagram. For example, under the diagram for AAA-1 I write, "Valid for AAA-1."

What follows are the diagrams for the various equivalent forms of A, E, I, and O propositions.
We need not construct Euler diagrams for syllogisms of the forms H₁-1₄ and IO₂-1₄, since none of these forms is valid and the invalidity is demonstrated by Euler diagrams: in each case two Xs will be introduced into the diagram, which is sufficient to show that the syllogistic form is invalid.

We need not construct Euler diagrams for syllogisms of the forms OL₄₁-1₄ and OO₂₁-1₄, since none of these forms is valid and the invalidity is demonstrated by Euler diagrams: in each case two Xs will be introduced into the diagram, which is sufficient to show that the syllogistic form is invalid. So by examining all combinations of the forms of the premises, we have seen that our Boolean Euler diagram technique demonstrates the validity of all and only the fifteen forms so-arranged as valid by the Boolean Interpretation.

Notes
3. In his Formal Logic, John: Nevins Keyes shows that constructing Euler diagrams to demonstrate the validity of affirming diagrams that show all the possible relations between P, M, and D—requires no fewer than three distinct diagrams (Ocker and Emsley in Formal Logic (London: Macmillan, 1966), pp. 341-344). He remarks, “It must be admitted that this is very complex, and that it would be a serious matter if in the first instance we had to work through all the different meanings in this manner.” (Formal Logic, p. 344). See also Ayla Voss, Symbolic Logic (London: Spectrum, 2014), reprint Broms, NY: Chelsea Publishing Company, 1971), pp. 162-163, 112, 122, 139. While more recent proponents of Euler diagrams have contended that the universal affirmative, “All S is P” can adequately be represented by placing the d circle inside the P circle, they still require three distinct circles representing the possible relations of S to P when diagramming particular premises. See Paul Ricoeur, “Euler Circles Revisited”. p. 9.
6. While it is beyond the scope of this paper to argue that the Boolean interpretation is correct, several points should be noted. (1) Proponents of the Aristotelian interpretation hold that universal propositions have existential import. While this might be considered with much of ordinary language, namely, all those cases in which we make universal claims about things we know on independent grounds to exist. It is not consistent with all ordinary uses of language. The statement "all unicorns are white" is not universally true analytically true—even through the best evidence indicates that unicorns do not exist. (2) Proponents of the Aristotelian interpretation propose a square of opposition that includes only the Aristotelian propositions that is, A, E, I, O, and their contraries. (3) Proponents of the Aristotelian interpretation cite as the forms of contradiction for the universal propositions that are not necessarily true, but they are not necessarily false. The square of opposition contains only the relations of contradiction. This implies that the Boolean interpretation is theoretically superior: it eliminates the necessity for the contraposition needed to make the Aristotelian square of opposition possible. (4) This is a corollary of (1) If the logic of the ontological argument is sound, the Aristotelian interpretation commits one to the metaphysical position that existence is necessary. This is generally a requirement of the logical form of a proposition in which the ontological commitment rest may be stated as P: "All things that are identical with God are things that are omnipotent, omniscient, and omnipresent. But P is a necessary truth. Therefore, on the Aristotelian interpretation, God exists. On the Boolean interpretation, P says only that for any x, if x is identical with God, then x is omnipotent, omniscient, and omnipresent. The Boolean interpretation does not, while the Aristotelian interpretation does, but the question of existence remains.
7. In the traditional Euler system, diagrams were introduced for all possible relationships between the subject and predicate classes represented by a universal proposition. For an A proposition, there were two diagrams, one in which the circle representing the subject class was completely contained by the circle representing the predicate class, and one in which the two classes were contrary and the circles were congruent. If distribution is the fundamental relation expressed by the proposition, we need not consider the second possibility. This allows us to effectively ignore singular propositions.
8. It is not a perfect mirror, however. As we show below, these Euler diagrams do not reflect the relations of conversion and obversion with respect to particular propositions. This problem...
Steven M. Cahn, Exploring Philosophy: An Introductory Anthology (Oxford University Press, 2000) 423 pp.£29.95 (paperback)

Reviewed by Celia Wolf-Denve
Stonehill College

This introductory anthology clearly grows out of many years of experience in the classroom teaching a wide variety of different types of students. But for all that, it has a certain freshness about it. Professor Cahn has tried very hard to select passages that students will find readable and engaging. All too often, we tend to assign selections to our students that are too long and complex for them to be able to read with understanding and then try, through lectures, to bridge the gap between the student's level of reading ability and the text. Unfortunately, this often causes students to rely too much on lectures and not make a serious attempt to wrestle with the texts. This textbook should encourage them to jump in and start thinking about philosophical issues without feeling intimidated. Placing a high value on clarity and argumentation, Cahn has chosen readings either from historical texts (by people like Plato, Descartes, Aquinas, Hume, Aristotle, Kant, and Mill) or by contemporary authors broadly within the analytic tradition.

The way the historical and contemporary sources are integrated is both interesting and unusual. Each unit begins with contemporary authors, presumably because they write in an idiom that the students will find more familiar. The majority of the pieces are by recent authors, chosen and edited to bring out the issues clearly. Where there are two contending positions, both are presented and argued for. Every unit but the one concludes with historical source material that treats some of the same issues that the more recent authors were discussing. Four Platonic dialogues and Descartes' first two Meditations are presented unabridged. There are essays by Professor Cahn in several of the sections, but when he advocates a position he is careful to point out that some philosophers disagree with him and include a selection that argues the other side. His essay on free will and determinism provides an excellent introduction to the issue and clarifies what the various positions are and what they imply.

There are no study questions provided for the selections, but each selection is preceded by a very readable and inviting introduction that tells about the author, sometimes providing interesting and little known facts about him or her. (Did you know, for example, that Richard Taylor was a renowned expert in apiculture, or the keeping of bees?). The introductions lay out the issues of that chapter, and often call the students' attention to things they should be on the watch for while reading. They aim to direct the students into the arguments without talking down to them, and they are accessible without sacrifice of rigor. Since each of the introductions is geared to the reading selection that follows, there is no one format that all of the introductions follow. In one case, Cahn's introduction breaks in the middle, and students are instructed to read the selection and then return to read the second part of that introduction. The Plato selections are accompanied by notes that explain terms, names, or allusions to places or historical events that students are likely to be unfamiliar with. Another useful feature of the book is the excellent "Suggestions for Further Reading" section at the end. Cahn's suggestions cover a wide range of different areas of philosophy and philosophical problems, and are admirably balanced and fair minded.

The organization is well thought out, and flexible, so that not all units are organized in the same way. The introductory unit discusses what philosophy is, and includes an essay by Monroe and Elizabeth Beardsley and the complete "The Defense of Socrates." The second unit, entitled "Reasoning," contains selections on logic and scientific method that are models of conciseness and clarity. The third unit, entitled "Knowledge and Self," contains discussions of philosophical problems: appearance and reality; the problem of induction; and free will and determinism, offering paired essays that balance each other. The pieces by Richard Taylor on mind and body and Thomas Nagel's essay on Death are interesting, but don't seem to mesh with each other in the way the other essays do, though the Nagel piece does fit well with the later discussion of euthanasia and with the Phaedo selection in the conclusion. The historical selections for this unit are Meno, the first two Meditations, and selections by Hume that deal in some way with scepticism and the role of the senses in knowledge.

Unit IV is about God. Unit V is on Morality. Unit VI is entitled "Society," and the conclusion discusses the meaning of life and the value of philosophy (featuring essays by Richard Taylor and Bertrand Russell as well as the selection of Socrates' death from the Phaedo). The sections on morality and society begin with some good, clear theoretical essays and conclude with the sort of historical material that most teachers are likely to want to draw on. For the Morality section the selections are from Aristotle, Kant and Mill, and for the Society section, they are the Crito and Mill's On Liberty. The practical issues touched on in the Morality section are euthanasia and abortion, while the Society section discusses privacy, capital punishment, affirmative action, and concludes with Sidney Hook's essay, "What is a Liberal Education?"

If we were using this text, I would want to supplement it at a few points. I would add a contemporary representative of virtue ethics to the Morality section, and also a stronger defender of the pro-life side of the abortion debate. (The moral
status of the unborn demands serious consideration, but does not receive it in the readings.) I would also supplement the section on God. The selections on why God allows evil are good and well balanced, and the way that Cahn puts together readings by Amos Elon and Richard Brandt works well. But the material on miracles and on faith and reason is skewed too much toward the atheist side. There is no serious defense of the possibility of miracles, and Richard Brandt's extreme fideism is a position that is too easy for Michael Scriven to knock down. Since Taylor's and Scriven's essays are so clear and accessible, they could provide a good jumping off point for discussion in which further subtleties could be introduced. But students who are religious believers would have profited from being able to draw on some contemporary essays defending their views in a sophisticated way — William Alston's cumulative case argument for Christian belief, for example.

On the whole, though, this anthology is put together with great care and wisdom, and succeeds admirably in doing what it sets out to do: namely to make philosophy accessible and inviting, without sacrificing clarity and rigor.

Reviewed by Mark Stone
Farran University

The study of David Hume plays a more important role today than ever before in our attempts to read and understand modern philosophy. Hume's thought is no longer viewed as primarily a form of deconstructive skepticism intended to undermine the rational credibility of the basic tenets of empiricism or to antagonize religious dogmatists. The emphasis on his skepticism has largely been tempered by a growing recognition that Hume's philosophical achievement includes substantial constructive and positive aspects. The most notable of these is the naturalism which infuses his explanations of human beliefs and actions. In contrast to the Cartesianists who strictly separate the animal from the human, Hume puts them on equal footing and argues that animals demonstrate in their behavior the same sort of reasoning that humans use. At the same time that he offers naturalistic explanations for our beliefs, Hume construes reason more broadly than a faculty limited to intuitive and demonstrative thought. Although neither intuitive nor demonstrative, our causal reasoning based on experience still forms a sort of "just" inference. A further positive aspect of Hume's work is the practical and beneficial role philosophy may play in our reflections on the body of natural beliefs that inform our common life. Philosophy's role is not to overcome them, which it cannot do, but to make us more circumspect about their fallibility. Teaching Hume in a way that recognizes some of these constructive insights means trying to fit together his skepticism, empiricism, and naturalism in a way that judiciously reflects the importance of each aspect of his thought. Harold W. Noonan's book Hume on Knowledge presents a clear and argumentative reading of Book I of A Treatise of Human Nature that successfully keeps all of these aspects in focus.

In Hume on Knowledge, one of the books in the Routledge Philosophy Guidebooks series, Noonan intelligently negotiates the tensions among the roles that reason, experience, and nature play in the opening book of Hume's first work. He recognizes the skeptical conclusions in this work that arise from reason's attempt to justify our beliefs. Reason undermines the credibility of our beliefs in necessary causal relationships, in the existence of objects independent of our minds, and in the continued and uninterrupted existence of the self. This skepticism is fed by Hume's empiricism, which requires that our ideas and knowledge be traced back to experience and never extend beyond what we have not observed. The general principle that the future will be like the past, on which causal inference depends, can itself never be justified on the basis of experience without a vicious circularity. Nevertheless, Noonan argues, as long as we base our beliefs about what is likely to follow some particular event on observed regularities in our past experience, our particular beliefs based this causal reasoning are justified (42). This type of reasoning that is neither demonstrative nor intuitive is the work of the imagination understood in a broad sense. Naturalism as Noonan understands it serves to mitigate Hume's skepticism and explain why we are determined to hold the very beliefs that reason calls into question. His resolution of the conflict between skepticism and naturalism essentially follows Hume's conclusion in the Abstract that "Philosophy would render us entirely Pyrrhonians were not nature too strong for it" (Treatise 657).

Though his book focuses on the first book of the Treatise, Noonan provides a succinct biographical sketch of Hume, a discussion of the historical background of his thought, and a brief account of how the Treatise and his other philosophical works. In addition to an obligatory exposition that shows Hume's place in the philosophical lineage of British empiricism that includes Locke and Berkeley, he also discusses some of the important connections between Hume and Newton, Malabrunche, Bayle, and Francis Hutcheson. The analysis and argument of the book focus on four themes: Hume's theory of mind, causation and causal inference, the problem of the external world, and personal identity. For each of these topics Noonan examines the essential terminology that Hume uses, the principles on which Hume's discussion depends, and the main lines of argument from the relevant parts of Book I of the Treatise. When it is appropriate Noonan examines Hume's account of these issues in relationship to his contemporaries. He also presents some of the main lines of interpretation from recent scholarship on these topics and evaluates their strengths and weaknesses. Each chapter closes with reflections on objections or limitations to Hume's thought from a modern perspective.

Both the title of the book, Hume on Knowledge, and its subject, Book I of the Treatise, may suggest a narrow perspective of Hume's philosophy dealing primarily with epistemological issues. But Noonan approaches this work from a much broader perspective that includes many of the constructive aspects of Hume's work that have been brought to light in recent years, for students who are struggling with this fundamental work and trying to understand the complexities of Hume's thought, Noonan provides an
intelligent introduction to the main arguments in Book 1 and
some of the main interpretations of this work. He presents a
reasonable account of Hume's skepticism that does not
underestimate its dangers for human reason, but at the same
time balances this skepticism with a reasonable empiricism
and a philosophical naturalism.

Simon Blackburn, Think: A Compelling
Introduction to Philosophy. (Oxford University
Press, 1999) 312 + vii pp. $22.00 (hardback).

Simon Blackburn, Being Good: A Short
Introduction to Ethics. (Oxford University Press,
2001) 162 + ix pp. $17.95 (hardback).

Reviewed by Alan W. Grose
Baruch College and the Graduate Center, CUNY

Teachers of introductory philosophy courses face the
perennial challenge of rendering the best of a vast history of
discourses accessible to concerns which students might
themselves have about the world and our place in it. For new
teachers, the task might be honing their skills at presenting
philosophy to novice thinkers, while for seasoned teachers it
might be restructuring or updating their course so as to be
new and fresh for teacher and student alike. Simon Blackburn
has recently offered us two splendid short introductory texts
which may be read either as companions to primary readings
in a course or on their own as examples of how one skilled
philosopher introduces the discipline to a wider audience.
Whichever the case, these books are sure to be stimulating to
students and teachers alike.

I. Beginning with Think, Blackburn starts his introduction of
philosophy with attention to problems of epistemology. He
introduces Descartes' skeptical doubts and some of their
intricacies. For example, he discusses what it might mean to
doubt one's senses, to imagine that one might be dreaming
or to worry that one might be deceived by an evil demon.
Though his preference is for a Humean approach to
philosophy (i.e., placing greater methodological stock in the
natural reliability of the senses than rationalist foundationalist
schemes such as Descartes'), Blackburn takes as his guiding
muse for the next several chapters Descartes' constellation
of skeptical doubts and dualistic responses. He weaves this
thread through chapters on Knowledge, Mind, Free Will, The
Self and God. His remaining chapters examine Reasoning,
The World, and What To Do.

Each of these chapters presents the modern philosophical
debates that surround its topic. The chapter on
"Mind," for instance, begins with some Cartesian worries,
continues with a presentation of ideas from Leibniz and
Locke, and includes consideration of Wittgenstein's private
language argument and of the questions of how to explain
various kinds of mental states. Similarly, in the chapter called
"Reasoning." Blackburn considers a number of types of
traditional first-order logical argument forms, but includes also
questions about the relation between logic and language as
well as some of the problems of drawing conclusions from
empirical evidence that is only probable.

The one limitation of Think is its focus on its generally
modern and loosely Cartesian set of issues. This may be a
problem for the logistics of a course that aims to take a broader
historical view. It might also be philosophically problematic
to some. For, if the aim of philosophy is, as Wittgenstein
suggested, "to show the fly the way out of the fly-bottle," then
Blackburn's effort is clearly a success. This method attempts
to refrain traditionally intractable philosophical questions
that show that they reflect misguided ambitions, thereby dissolving
the problems rather than solving them on their own terms. In
this vein, Blackburn has identified many of the traditional
confines of philosophical thought and guided his reader around
them. Yet one might wonder why the fly still buzzes around in its
virtually the same orbit, and I suspect that some teachers may find a
different set of topics a more compelling sample of the philosophical
discipline.

For an introductory course organized around "major
issues," however, Think might well be an ideal companion.
The Cartesian nest of problems is a permanent and prominent
feature of our intellectual world and an apt term for an
introduction to the world of ideas. I should note, however,
the scope of Blackburn's investigations is not the primary point
of his book: it is the skills he helps his readers to develop in
thinking about ideas and their place in the world. In this task,
he has accomplished a great deal.

II. Being Good is divided into three parts, organized to move the
reader out of the muck of popular confusion and frustration
towards clear reflection on central questions of ethics. Part I begins
the book with a careful examination of several ideas which
sometimes figure, in the minds of new students, as
barriers to meaningful ethical reasoning and theorizing. They
include The Death of God, Relativism, Egalitarianism,
Theory of Determinism and Futility, Unreasonable Demands and
False Consciousness. Anyone of these issues can send a class
discussion spiraling out of control, and Blackburn wisely
brings them to the fore quickly. He is well aware that these
ideas are active in our world, perhaps more so than ever. They
influence what he calls our "ethical environment," and the
Unreasonable Demands and False Consciousness.
Addressing them immediately allows Blackburn to situate
thinking about ethics as an activity of prime intellectual and
practical value.

In Part II, Blackburn proceeds to examine, under the
heading of "Some Ethical Jobs," questions about the very
meaning and value of life and ideas that leading theories claim are
central to ethics, such as Birth, Death, Pleasure, The
Greatest Happiness for the Greatest Number and Rights and
Natural Rights. In connection with the last, included as an
appendix is the UN Declaration of Human Rights, a useful
resource for many class discussions.

Part III concludes the book at the point at which many
philosophers begin their theorizing, namely with an
examination of the notion of Foundations. Considered against
the backdrop of Blackburn's opening discussion of threats to
ethics, this discussion may be viewed as an exploration of
those considerations we might invoke to feel secure in the
soundness of our reasoning concerning positive norms.
Blackburn distinguishes between the "ordinary, everyday
reason for acting" and a killer kind of consideration which
he calls a "reason, with a capital letter." With respect to the
possibility of Reasons (with a capital letter), Blackburn’s sympathies are unashamedly Humean. Though he acknowledges that many readers will find the ideas of Aristotle, Kant, Contractarians and Discourse theorists such as Scarcion, Habermas and Rawls powerful, he is ultimately skeptical about what such ideas can do for us. He holds that reason can be nothing more than a slave to the passions and that the most we can do theoretically is to note that we may attempt to forge with others a common point of view by appealing to general, rather than private, concerns. In this way, Blackburn believes that we sit out of our sympathy for other people’s reasons for acting (row with the little letter).

This reader finds Blackburn’s task unsatisfying, though provocatively so. It raises important questions about the role of reason in morality, and the tasks and ambitions of moral philosophy. We may use this short text to challenge our students to defend other theories against his readings or even to weigh the ambitions and merits of “Foundationalist” projects in general. However one stands on these issues, Blackburn’s presentation of moral philosophy is urbane and sensitive to the point of view of non-specialists in the business of moral reflection and might help us to think about how best to present moral philosophy to them.

III.

The two short texts reviewed here should not be construed as primary texts for an introductory course in philosophy. Nonetheless, Blackburn’s efforts are laudable for both his strong sense of our ideas as inhabiting the world in a way that ought to matter to us and his ability to move past common popular points of confusion to a clear consideration of time-honored questions.

At the close of Think, Blackburn acknowledges what may be a cause for pessimism in the business of thinking about the world and our place and activities in it. It lies in the frustration which we might feel when we come to understand how stubborn philosophical problems turn out to be. If Blackburn is right, as I believe he is, that frustration about the prospects for a theory finally getting it all right is paradoxically the natural result of thinking about the problems of philosophy with depth and with rigor, then we as educators have to these two short texts, precisely because of the pessimism which they are likely to instill in our students, cause for cheer.

Endnotes:
2. See p. 1081.

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Reviewed by Peter Rolland
Southwesterner College

As a philosophy professor at a large two-year community college in southern California, most of my teaching is in introductory philosophy courses with students who will never take another philosophy class. However, since some of my students go on to take some other philosophy courses and, once in a while some even go on to major in philosophy after leaving our college, my Introduction to Philosophy course must serve several different objectives. It must make philosophy interesting for students who are unenthused, and perhaps even hostile to it; it must awaken curiosity and inspire students to a life-long process of self-examination; and it must prepare students for further and more in-depth philosophical studies by giving them a firm grounding in the classic and essential themes of the philosophical tradition. For this challenging task, I have found the perfect textbook: Douglas J. Soccio’s Archetypes of Wisdom: An Introduction to Philosophy.

Archetypes of Wisdom functions beautifully at several levels. Designed primarily for the student entirely unfamiliar with philosophy, it nevertheless also challenges more able students. Soccio draws students of all levels into a thoughtful introduction to philosophy by making plain philosophy’s relevance to everyday life. He does what Confucius reminds us any great teacher must do: he “reanimates the past”. Soccio achieves this by artfully portraying the universality of the philosophical quest. The title of Archetypes of Wisdom is that “[the] best teaching begins where students are, not where they ‘should’ be” (Soccio, xvi). Yet Soccio never panders to his audience by over-simplifying his subject.

The text is arranged in historical sequence. After an engaging first chapter setting out the themes of philosophy as a discipline, chapter two shifts to the Asian tradition. In my experience, a rather thorough exploration of Taoism and Buddhism is a wonderful way to draw students into the process of philosophy. Then we turn to the western tradition. The chapters are arranged as follows:

Chapter 1: Philosophy and the Search for Wisdom
Chapter 2: The Asian Sage: Lao-Tzu and Buddha
Chapter 3: The Presocratic: Socrates
Chapter 4: The Sophist: Protagoras
Chapter 5: The Wise Man: Socrates
Chapter 6: The Philosopher-King: Plato
Chapter 7: The Naturalist: Aristotle
Chapter 8: The Stoic: Epicurus and Marcus Aurelius
Chapter 9: The Scholar: Thomas Aquinas
Chapter 10: The Rationalist: Rene Descartes
Chapter 11: The Skeptic: David Hume
Chapter 12: The Universalist: Immanuel Kant
Chapter 13: The Utilitarian: John Stuart Mill
Chapter 14: The Materialist: Karl Marx

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Chapter 15: The Existentialists: Soren Kierkegaard and Jean-Paul Sartre
Chapter 16: The Anti-Philosopher: Friedrich Nietzsche
Chapter 17: The Pragmatist: William James
Chapter 18: Philosophy as a Way of Life

Eighteen chapters with such diverse topics as listed above is a great deal to cover in one semester. Given a 13-15 week-semester, I don’t believe it is possible to cover more than 12 chapters. (On my own course we read chapters 1-10 and 13-15. Next semester I think I’ll reduce the reading even further by eliminating chapter three.) Happily, a variety of emphases is available with this one text with readings that can be chosen to reflect the interests and areas of expertise of the Instructor. All the chapters are equally good. The difficult part is deciding which ones not to assign.

One of the most appealing aspects of Archetypes of Wisdom is that it places the great ideas and themes of the philosophical tradition firmly within the context of living human beings. By telling the story of philosophy through the lives of philosophers, Socco successfully demonstrates that philosophy is not a disembodied set of abstractions but is instead a well-articulated series of questions and responses born out of the lived experience of people much like ourselves. Socco’s approach is made explicit in the title of the book and in the title of each of its chapters. By choosing a representative or archetype of each era or movement Socco personalizes the discourse. Nor does this structure sacrifice the complexities of a given movement. For example, though David Hume is the archetype empiricist under consideration in chapter eleven, that chapter also looks in detail at British empiricists John Locke and George Berkeley. Furthermore, the essential elements of the various versions of empiricism that are discussed in this chapter is brought into relief by frequent references to the previous chapter on rationalism and its archetype Rene Descartes. Moreover, by studying philosophy chronologically, we come to appreciate the notion that though it is a dialectical process, a long conversation where each new statement grows organically out of its historical context. It isn’t long before students realize that they comprise the latest wave of this timeless discourse, a realization that benefits the tradition and students alike.

Another appealing feature of Socco’s text is its use of well-chosen excerpts from primary sources. Ten years ago, like many beginning professors fresh out of graduate school, I was so comfortable dealing with primary source material that I assumed my students would be too. The first few semesters that I taught I asked my students to read, among other materials, entire Platonic dialogues, long selections from the Nicomachean Ethics, Descartes’ Meditations, Hume’s An Enquiry Concerning Human Understanding, and Hegel’s The Phenomenology of Spirit. I soon realized I was teaching only of very few students and that I was alienating most: my first years’ teaching experience was an exercise in frustration both for student and teacher alike. With time, I came to realize that much as I loved the readings that I assigned, they were not well suited to my goal of enticing students into the philosophic life—something that can be accomplished only through proper cultivation. Once this process is underway, however, a well-placed passage from the Apology or the Tao Te Ching or the Meditations can be priceless. Reading such passages is, however, premature unless the student is provided with the proper context. And this Socco does admirably. He inserts relevant excerpts from primary sources into his own lucid explications and the combination provides just the right alchemical reaction: inexperienced students are poised and spurred on while more advanced students find the deeper sustenance they desire.

Other desirable features, too numerous to mention, make Archetypes of Wisdom the best introductory textbook in philosophy that I have found. If you teach introdutory philosophy courses, I strongly recommend that you obtain a copy and see if this book matches your needs.

Books and other materials received

Items asterisked are currently being reviewed for a future issue of the Newsletter. (Readers are welcome to suggest themselves as reviewers of books not already under review. Please contact one of the editors.)

Belknap, Harvard University Press
McDowell, John. Meaning, Knowledge, and Reality
McDowell, John. Mind, Value, and Reality
Neelick, Robert. Insurances

Cambridge University Press
Dalibos, Daniel O. Holmegger’s Concept of Truth
*Hacking, Ian. An Introduction to Probability and Inductive Logic
*Huschnia, Brian. G. E. Moore’s Ethical Theory: Resistance and Reconciliation
*Murphy, Mark C. Natural Law and Practical Rationality
*Pettig, Graham. An Introduction to Non-Classical Logic

Chicago University Press
Cahn, Steven M. Classics of Political and Moral Philosophy
Davenport, John J. and Anthony Rudd, eds. Kierkegaard after MacIntyre: Essays on Freedom, Narrative, and Virtue
Irwin, William, Mark T. Conrad and Aeon J. Skoble. The Simpsons and Philosophy: The D’Oh of Homer
Perry, Burton P. The Voice of Reason: Fundamentals of Critical Thinking
Rescher, Nicholas. Paradoxes: Their Roots, Range and Resolution
Wright, Larry. Critical Thinking: An Introduction to Analytical Reading and Reasoning

Cornell University Press
Ambler, Wayne, trans., Xerophoen. The Education of Cyrus
Hassen, William. The Emergent Self

Greenwood Press
Navia, Luis E. Antiquities of Athens: Settling the World Right

Harvard University Press
Lovelace, Sabina. Ethical Formations

Lowbord, Sabina. Ethical Formations

— APA Newsletter, Spring 2002, Volume 81, Number 2 —
McDonald, John. Meaning, Knowledge & Reality
McDonald, John. Mind, Voice & Reality
McSherry, Coyne. Who Grows Academic Work? Planning for Control of Intellectual Property
Posner, Richard A. Public Intellectuals: A Study of Decline

Harcourt Brace
*Hermes, Paul. The Many Worlds of Logic (2nd edition)
*Solomon, Robert C. The Big Questions: A Short Introduction to Philosophy (6th edition)

Oxford University Press
Cahn, Steven M. and Markie, Peter, eds. Ethics: History Theory and Contemporary Issues
Mitchell, Donald W. Buddhism: Introducing the Buddhist Experience
Peterson, Michael, William Hasker, Bruce Reichenbach, and David Basinger. Philosophy of Religion: Selected Readings

Pennsylvania State University Press
Clay, Dinkin. Platonic Questions: Dialogues with the Silent Philosopher
Margolis, Joseph, and Jacques Catudal. The Quarrel between Invariance and Flux: A Guide for 1 May, Tod. Our Practices, Our Selves: Or, what it is to Be Human
Nagel-Deckerl and Cornelia Klingen. Continental Philosophy in Feminist Perspective
Wallich, John R. The Platonic Political Art: A Study of Critical Reason and Democracy

Prometheus Books
Bunge, Mario. Philosophy in Crisis: The Need for Reconstruction
Mahner, Martin. ed. Scientific Realism: Selected Essays of Mario Bunge

Routledge
Caputo, John D. On Religion
Derrida, Jacques. On Cosmopolitanism and Forgiveness
Dreyfus, Hubert L. On the Internet
Drummett, Michael. On Immigration and Refugees
Kearney, Richard. On Stories
*Peterson, Anne, ed. Popper, Karl. The World of Parmenides; Essays on the Presocratic Enlightenment
Ridley, B. K. On Science

Slutsker, Gunnar and Nils Gille, eds. A History of Western Thought from Ancient Greece to the Twentieth Century
Sterba, James P., ed. Social and Political Philosophy: Contemporary Perspectives
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