Questions first: Introducing critical thinking using the Text Analysis Matrix (TAM)

J. Gregory Keller¹

Abstract: Critical thinking skills are crucial for both academic and everyday life. This paper presents the author's Text Analysis Matrix (TAM), a model for developing skills for the critical examination of texts. The TAM guidelines involve finding and clarifying the main claims of a text, discovering and assessing arguments, uncovering the implications for thinking and for action of the claims made in a text, and, finally, looking at the social and political impact of a text in the form of a critique. Results of the application of the TAM with an introductory Ethics course indicated more sophisticated arguments and more awareness of the broad implications of one's beliefs, as well as a greater awareness of social and political critique, at the end of the semester than at the beginning.

Keywords: Critical thinking, critique, critical reading, philosophy, teaching practice

The following ideas arose in response to an apparently simple question: How does one think philosophically? If, as I have been doing for a number of years, I set out to teach philosophy, especially to those with no prior acquaintance with the subject, it seems reasonable to ask what exactly I am trying to accomplish. When I first addressed the question, however, I found it remarkably intractable. What am I trying to teach? I often, and with some justification, have claimed that I cannot specifically put into words what I am trying to teach because it involves not only a body of knowledge and sets of skills but also a certain level of intuitive or artistic expertise that can be coached more easily than described. One can fall back on the following analogy: if someone wants to learn to play the piano or to play tennis, the most competent teachers will not make a list of items to memorize or even of skill sets only but will guide the student through a series of actions that, based upon the coach's refined mentoring skills, will provide on-going feedback until, seemingly miraculously, one day the diligent student will be performing actions that she could not have dreamed of mastering when she began.

I will admit to finding this analogy comforting when I could not at first define what I want students to learn. The more I thought about the situation, however, the less convinced I was that (1) the good coach cannot describe the results she seeks, even when such a description cannot itself produce those results, and (2) I was such a good coach that I could merely point to my consistent results without further contemplation of my aims. Furthermore, as a philosopher I can hardly claim that thinking about my pedagogic aims is either useless or too taxing. So I began to wonder and work, slowly at first, at clarifying what exactly I want to accomplish in teaching philosophy. In the end I produced a Text Analysis Matrix of sets of questions under four categories that provides me with a starting point for describing to myself and my students what we are undertaking together (see Table 1).

¹Department of Philosophy, Indiana University-Purdue University Indianapolis, 425 University Blvd., CA 331A Indianapolis, IN 46202 <u>jgkeller@iupui.edu</u>.

This undertaking, I came to realize, is not applicable only to philosophy. What I describe falls in the general category of critical, analytical, or one might say merely competent thinking. As discussed below, my recent research with an introductory Ethics class indicates that the TAM leads to more sophisticated arguments and more awareness of the broad implications of one's beliefs, as well as a greater awareness of social and political critique, among introductory level students. The mastering of text analysis lies at the heart of what I intend to teach in addressing with students the various texts of philosophy. Each semester I point out to students the important place in their philosophical education of the particular texts we read and of the interrelated sets of concepts we address. Yet since I hope that students will take classroom lessons both into the larger world of philosophic inquiry and into that other large world of everyday life, the critical thinking skills addressed by the TAM offer one kind of expertise that provides crucial competence in both these realms.

I. Literature Review.

One could describe the questions I raise and the approach I take as part of the long-standing tradition of critical thinking. A voluminous literature concerning this topic already exists. For example, Wolcott and Lynch (2001) provide "Steps to Better Thinking." Based upon a foundation of "Knowledge and Skills" the steps are as follows:

Step 1—identify the problem, relevant information, and uncertainties;

Step 2—explore interpretations and connections;

Step 3—prioritize alternatives and communicate conclusions; and

Step 4—integrate, monitor, and refine strategies for re-addressing the problem. (p. 2) Each of these steps then is divided into sub-steps to be used in the classroom.

In Learning to Think: Disciplinary Perspectives (2002), Janet Donald presents a variety of approaches to thinking based on the work of different academic disciplines. She provides a "working model of thinking processes in higher education" (pp. 26-27) in which she describes a perspective on different "methods of inquiry." The working model offers an over-arching set of procedures followed by most disciplines that includes: description, selection, representation, inference, synthesis, and verification. Under each topic on this inventory, then, she lists subtopics indicating their relation to the diverse inquiry methods she previously connected to academic areas. In a later summary of the "most important thinking processes used generally across disciplines," she lists separately "Identify the context" and "State assumptions," then reduces her previous set of common procedures to those of selection, representation, and synthesis (p. 284).

In Maclellan and Soden (2001), as summarized in Heron (2006) we see the following set of critical thinking skills:

- 1. unpacking concepts—ability to unpack or break down ideas, concepts or theories;
- 2. recognizing contradictions—differentiating between viewpoints and counterarguments;
- 3. development—explaining a phenomenon, joining ideas together to form lines of arguments;
- 4. providing evidence—supporting or justifying assertions;

12

²A version of these steps and much additional information can be found at http://www.WolcottLynch.com.

- 5. examining implications of evidence—generating hypotheses about consequences or examining the relationships between key factors;
- 6. alternative interpretation—questioning or challenging an interpretation of the evidence and offering an alternative. (pp. 212-213)

Heron goes on to say that "Adopting this type of framework risks simplifying a complex area. Moreover, it is important to recognise that critical thinking cannot easily be separated from other forms of thinking" (p. 213).

Pithers and Soden (2000) mention various educational "myths" that limit the learning of critical thinking, and say, "By rejecting the myths, it is possible to consider notions such as looking for novel approaches, the notion that the 'truth' may be fluid and context dependent and that the learner needs to develop more control and independence over their own learning" (p. 243).

Christine Loh (2003) suggests a method for improving dialogue that consists of the following practices:

- Listen to understand, find meaning and reach agreement
- Identify and re-evaluate assumptions
- Re-examine all positions raised
- Admit that others' thinking can improve one's own
- Search for strengths and value in other positions
- Discover new options, not closure. (p. 13)

We need further to note a philosophical argument by Michael Huemer (2005) that in general one is better served by believing experts or, when experts disagree substantially, remaining skeptical than by engaging in critical thinking about public issues. The reason for this stance has to do with the danger that one might substitute conclusions based upon one's own ill-informed critical thinking for the informed consensus arrived at by those who have better information and a history of critical analysis in a particular field of study. Of course, Huemer goes on to say, one should use critical thinking to assess who counts as an expert and in personal cases in which it is the case both that one has access to the relevant information and that no expert opinion applies.

In summary, many approaches are available that offer methods for thinking more critically. Each of the suggestions surveyed above points to the importance of a structured system for developing student analytical skills. Significant cautions about the use of critical thinking methods are also mentioned by Heron, Pithers and Soden, and Huemer. While each of the approaches described briefly above offers unique and helpful ideas and techniques, there are some significant differences between these ways of looking at the topic and the Text Analysis Matrix I have developed. The questions raised in the Text Analysis Matrix extend far beyond the critical thinking ideas mentioned here. Not only do the specific questions raised in the TAM offer a sharpened approach to texts and ideas, but the last two categories of the TAM go well beyond what is usually addressed in the literature on critical thinking. The study both of the implications of a claim, in thought and in action, and of possible social and political critique lends a larger and extremely valuable perspective to student work. It opens the way for the broadening of individual thinking and for the preparation of a concerned and capable citizenry. In the next section, I have identified in footnotes specific connections between the approaches to critical thinking discussed above and the use of the TAM.

Table 1. Text Analysis Matrix (TAM).

TOPIC	QUESTION 1	QUESTION 2	QUESTION 3	QUESTION 4
Claims	What's the main idea, thesis, or <i>conclusion</i> ? (Begin by listing important statements in the text, and then ask what idea is supported by most of the rest of the text.)	Is the main idea stated in one T/F sentence? (If not, state it in one T/F sentence. If this seems difficult, perhaps what has been found is a theme or issue instead.)	Is the main idea clear or can I make it clear? (Try to make it clear – define terms as specifically as possible and seek a coherent understanding of its meaning.)	(1) What <i>interpretations</i> of the claim (implications/critique) seem possible or reasonable to me? (2) What interpretations seem unlikely, impossible, or unreasonable? What are the differences between 1 and 2?
Arguments	What claims support the main claim? (This process can continue – the argument might contain claims that support its supporting statements.)	How do supporting claims (premises) work together to provide an 'argument' for the thesis (conclusion)?	Does the argument make the conclusion necessarily true, likely (or even highly likely), or does the argument really not support the conclusion at all?	Can the argument be made stronger or clearer? On the other hand, what objections or counterarguments might be raised?
Implications	What ideas or actions might follow from the main idea?	What argument might be given that these implications truly follow from the main claim?	What objections might be raised to the implications of the main idea? How might the claim be defended against these objections?	What implications might follow from the claim's being false? Assess these implications.
Critique	Whose perspective, voice, or feelings are upheld, strengthened, or made dominant by this claim? Who wins or loses if the claim is true? (Who or what is "governed" or "policed" by this claim?)	What "obvious" truths are taken for granted in this claim? What "common sense" but otherwise hidden assumptions are required to make this claim true and its argument work?	What ideas or sense of self is upheld, strengthened, or weakened by this claim and its argument or implications? What sense of community or society is strengthened or weakened?	What happens when we apply the claim and its "logic" (interpretations, arguments, counterarguments, and implications) to itself? (Look for what the claim says about philosophy, truth, society, persons, and so on.)

II. The Text Analysis Matrix (TAM).

My Text Analysis Matrix offers a methodical approach to assisting students in the development of an important set of thinking skills. Four categories of questions are addressed in the TAM. First, we ask about the claims found in a text. Second, we ask about evidence in the form of an argument or set of arguments. Third, the issue of implications comes to our attention. Finally, we look in the direction of critique, asking questions about the social and political situation being fostered or undermined by the claims, arguments, and, especially, implications of a reading. (For a summary of the questions that follow, please see Table 1, "Text Analysis Matrix").

A. Claims.

I begin, then, with an attempt to isolate and examine the claims found in a particular text and the claims one makes in addressing that text.³ The first question to be put to a text might well be simply, "What's the main idea?" Or, "What idea is supported by most of the rest of the text?" Teacher and learner can enter into an initial investigation of a philosophic work by wondering together about its main idea. I warn students that a given text might have multiple ideas that appear to be central or that appear to be supported by most of the rest of what is said. Further, we might legitimately disagree about the main idea, although presumably we can usually come to a consensus about what statements are central, even if we fail to agree about one single main idea. At the very least, we might agree that two or three statements have a legitimate claim to centrality in a given text and that certain other statements remain under dispute. The task of ascertaining what claims are central and what claims we wish to place on the list of possibilities for centrality can take considerable time and effort, but allows us a beginning point on the mutual journey into a critical assessment of a text.

Once we settle on a candidate or some candidates for main claim, we turn to questions of clarification, such as whether this claim, as we have understood it, is stated in a sentence that is either true or false. Frequently, students point to a question or a phrase as a main claim. When, however, we try to state the main claim as a sentence that is either true or false, we can immediately see that phrases and questions do not satisfy this criterion. It might be the case, of course, that a phrase that represents a major theme of the text can be transformed into a sentence that functions as the main claim. A question might also turn out to represent in a rhetorical way the main claim and might easily be changed into the correct form. The instructor nevertheless needs to remind students to be wary of taking a theme or a major question as the main claim, and students can quickly begin to see the difference, once they are asked whether they have found a statement or only a phrase or question. It is important, of course, not to denigrate the asking of questions or the forming or discovering of themes in a text. What we want to do instead is focus our critical energies on the statements in a text for which evidence will be given and that will present us with implications to consider. Questions and themes often organize our thinking in

2

³ Compare to Wolcott and Lynch (2001), Step 1 ("identify the problem"), Donald's (2002) "description" phase, Maclellan and Soden's (2001) "unpacking concepts," and Loh's (2003) "listen to understand" and "identify ... assumptions."

⁴ The clarification steps that follow are generally comparable to Wolcott and Lynch's (2001) identifying the problem, Donald's (2002) steps of description and selection, and Maclellan and Soden's (2001) "unpacking concepts."

helpful ways and turn us to important new ideas. A claim, however, opens our thinking specifically to arguments, implications, and the possibility of a critique and helps us place the ideas to be addressed in clarifying order.

The next step involves assessing the clarity of claims. In thinking critically, one must ask oneself if the main idea, as currently understood, is clear. At this point, the instructor can easily direct students to the "principle of charity" (See Davidson, 2001, and Quine, 1960). Student assessments of claims frequently begin with exaggerating a minor flaw in someone's claims or with interpreting claims or arguments in ways one can only assume the author would not have intended. Making claims clear then involves not only seeking to put claims in specific, plain terms but also seeking to place claims in their best light.

As a further step toward clarity, I often recommend to students that they seek to get a "picture" of the meaning of a claim or to find out if the claim "sounds right" or to grasp the main "feeling" of the claim – it is crucial that we recognize in working with ideas that different individuals represent ideas differently and that we seek to accommodate these differences. The use of the above mentioned different sensory approaches can help with at least some of those differences. Sometimes, of course, it will be difficult to clarify a claim. That might mean that the text itself leaves the claim essentially unclear or that we have failed fully to grasp the claim given in the text. Sometimes the lack of clarity can be attributed to the fact that the reader has misunderstood some larger portion of the text or its context in the life and culture of its author. Often lack of clarity in representing claims provides the instructor with an opportunity to work on students' critical thinking skills and on fallacious ideas they hold about the topic as a whole or even about the single sentence being discussed.

Following the question of clarity one must address the question of interpretation.⁸ At this stage, I ask students whether a given interpretation of a claim seems reasonable to them or not. Questions concerning the implications and critique of claims will be discussed later. The pedagogical issue at this point lies with the importance of helping students to see that one person's reasonable interpretation might be another's unreasonable one. That is, the instructor can raise here the issue of the variety of interpretations and the variety of reasons that might be given for those interpretations.⁹ At the same time, one can use this opportunity to point out that not all interpretations are equal. If I say, "My house is on fire," an interpretation that suggests that I am discussing how much I enjoy sailing the Mediterranean slips off the edge of the reasonable. On the other hand, varieties of interpretation can remind us of the multi-valence of language and of all there is to learn from those who see things differently.

_

⁵ The approaches to critical thinking discussed earlier suggest the importance of this step as well, for example clarification can play a role in Wolcott and Lynch's (2001) step one, "identify the problem," and in Donald's (2002) procedure of "representation."

⁶ Compare, for instance, Loh's (2003) idea that one must "listen to understand" and "Search for strengths and value in other positions."

⁷ Although none of the sources I mention above explicitly addresses the difficulty of one's first step, it clearly must be taken into account and any approach to critical thinking does so, if only implicitly.

⁸ See Wolcott and Lynch (2001), Step 2; also Donald (2002), "State assumptions"; and Loh (2003), "Identify and reevaluate assumptions."

⁹ See Maclellen and Soden's (2001) "alternative interpretation."

B. Arguments.

I next turn to the issue of the support offered for main claims. ¹⁰ Having identified a claim, we need to see whether the claim will stand up to scrutiny. One might, at this point, present arguments and counter-arguments of one's own, but the standard approach is to turn to the text for an understanding of the author's evidence for the claim. One must look first, then, for claims that seem intended to support the main claim (intended by the author, one might say – this issue of author intentions can, quite naturally, provide another fruitful line of questioning). There are numerous ways to go about this process, and the reader can adopt any of the standard procedures or can take a more novel approach. The main point here lies in looking for the evidence supporting a main claim in the form of other claims that appear as that evidence. The individual or class might, of course, disagree with the argument given and might even present a stronger, self-constructed argument. With beginning students, however, the instructor can focus on unearthing the author's (apparent) argument so that it can be assessed by the class. In everyday life the student will be faced with many claims as well as arguments allegedly supporting them. If she can develop some reasonable facility at noticing arguments, that alone will put her at an advantage in responding reasonably to the many claims of politicians, advertisers, religious advocates, and, for that matter, family and friends.

One must not only find an argument, however, but discover ways to assess it. For beginning students, my own hope lies in the broad sweep of more or less intuitive assessments of whether supporting claims work properly together and whether they make the conclusion necessarily or merely probably true (if they themselves are true). There are highly structured technical means for making these assessments, but in the midst of an introductory class I find an intuitive approach with some serious nods at structured technique to be all that's possible and more likely to remain with the student in everyday application. So I aim to enhance the students' intuitive skills at argument assessment rather than to produce proficient technicians of logic. This approach can be an aid for students in making sense of everyday claims and, in the best case, to be a method that can be generalized beyond the classroom and even disseminated to a student's circle of friends. Enhancing intuitive argument skills can be approached in a variety of ways. The main approach I take is to address a large number of arguments throughout the semester, thinking aloud with my students about whether a given argument works and why. Sometimes I simply describe the argument and its main strengths or weaknesses. Sometimes I present the argument and ask students questions to draw out of them an assessment of the argument. At other times I divide the class into smaller groups and ask the groups to work on various aspects of an argument that they then present to the class for our general assessment.

A further and important question concerns whether the given argument can legitimately be strengthened, enhancing the argument in the text by providing other arguments or by supplying missing or weak claims. The reader also needs to become aware of possible objections or counterarguments that have not been discussed by the text itself. In both cases, students need especially to address those points of view that they themselves find problematic. If a student, for instance, finds an argument for the existence of God appealing, it is important for that student to look seriously at objections or counterarguments. On the other hand, if a student finds an argument objectionable, say an argument concerning protecting the environment or feeding the hungry, that student needs to spend more time looking for ways to strengthen the argument. In

 10 This point potentially includes Donald's (2002) "inference, synthesis, and verification" and Maclellan and Soden's (2001) "development" step.

.

both cases, however, the aim is to increase an awareness of the need to compensate for one's initial leanings.

C. Implications.

I want now to turn to an especially important issue for the critical understanding of a text – discovering the implications of key claims. ¹¹ At this point one might either look for the implications of the main ideas as presented by the text itself or for implications seen by the reader that have not been explicitly mentioned in the text. Addressing such implications involves, first of all, recognizing what actions or ideas might follow from the main claim or claims of a text. To return to examples mentioned in the previous paragraph, we might ask: if "God exists" were true, what other claims about the universe and human life might also be true? If "protect the environment" is a legitimate normative claim, what actions might follow? For each claim we examine, we need to ask both what other claims or ideas seem linked to it and what actions or human practices does it imply. I sometimes ask students to consider what implications arise when a politician tells us that in order to save our freedom the government must take away our freedom (of course hardly any politician states such a claim this directly, but students usually understand the way hidden claims often lie behind political statements). To recognize implications often requires that we examine, as in this case, how words have been defined as well as what complex set of ideas and actions surrounds the given idea.

We must of course assess both arguments for and objections to associating certain implications with a given claim, recognizing that any statement about implications is itself a claim to be assessed alongside the original claim. Students might also find it useful to compare the possible implications of a claim with the possible implications of that claim's being false.

D. Critique.

The final aspect of thinking critically that I ask students to consider has to do with a critique of the claims, arguments, and implications already addressed. Critique in this sense turns the reader toward the social and political aspects of claims. It is easy for academicians to think of our work as somehow outside the realm of social and political life, as though we spend our time amidst pure ideas, untouched by the winds of prejudice and privilege that affect everyday life. Yet especially if we are trying to teach students to think in ways that might affect them and their world we must recognize the ways our classroom remains part of that world. Ideas are living things; they resonate with personal, social, and political meaning. To claim that God exists or even that the sky is blue or that a=a means something not just at a "purely philosophical" level, whatever that might be, but also in terms of how people think, live, relate to others, and decide about the way a community or state is going to function.

1

¹¹ At this point we move beyond the views of critical thinking mentioned in the Literature Review above. Although Maclellan and Soden (2001) mention "examining implications of evidence" they do not address under that topic the issues I focus on in this aspect of my critical thinking matrix. This is not to say that critical thinking approaches other than mine entirely fail to look at this issue only that it is not usually taken up as crucial to critical thinking. ¹² This aspect of my critical thinking matrix, one I find especially important to moving critical thinking from academic exercise to real-world endeavor, is not, to my knowledge, part of any other approach to critical thinking, though, of course, it is addressed by many thinkers in attempts to study and expose the play of politics and power in academe and in society.

So when one looks at claims, arguments, and implications, if the instructor wishes to be honest with her students and herself, she must also attend to the privileged perspectives, the apparently obvious truths, the sense of self and of community appealed to or assumed, and the internal logic contained within the texts addressed. There is a powerful tradition in academe of the neutrality of such endeavors, including the notion that if one approaches issues of identity, community, or state, except in a purely 'academic' fashion, the instructor or research is somehow sullying himself and his work. Yet the work of education itself lies squarely within processes of identity formation ("I am a philosopher"; "I am an educated person"; "I know x"; "I attended Harvard", "...State U", "... community college", or "I only finished high school", and so on), community solidarity (forms of knowledge, use of grammar, and peculiarities of accent as formalized or shunned in an educational setting mark the boundaries of a community as much as does geography or history), and national, racial or ethnic feelings and aims (we can think, e.g., of how history "changes" over time, not just because there's more of it but because perspective and power shifts, thus shifting who or what is heard, seen, or valorized).

I turn then, in attempting to think critically, to questions concerning what perspectives, voices, or feelings have the upper hand in the claims found in a text. One can ask whether there are winners and losers if the claim is true, and who or what is governed or policed by the claim and its implications. The student and instructor do this in order to understand both the possible bias of the text itself and any personal need to reject or modify a claim that might otherwise be accepted due to its social or political implications. The idea here may be illustrated in the case of "God exists" or even "a=a". If God does exist, then anyone who denies that it is so is wrong and, further, given how important the claim seems, might (it seems) deserve to be ignored at best or shunned, tortured, or killed at worst. Further, if God exists, then God's chosen spokespersons (or, usually, spokes*men*) must be given a key role in society. It is also worth noting that, if God exists and is male (whatever it might mean for God to have a gender or sexual role), then males are to taken more seriously than females because they are more like God. I could continue, but this might serve as a sufficient beginning in understanding that claims such as "God exists" play a role that is far from neutral. In the case of "a=a" one can see that such a claim focuses on the identity of objects, presumably over time, since to say that something is identical to itself at one time seems silly at best. When taken out of the realm of abstract logic, which must be done if one intends to "use" the claim, we need to ask: What does such identity mean? Does it imply that anyone who learns anything is automatically "not herself" now? The implications of identity statements range over a wide territory. Politicians will frequently seek to convince potential voters that they have not changed their minds or "flip-flopped" on an issue. This implies, of course, that they are "themselves" over time, I suppose. It also valorizes ignorance over learning and emphasizes the significance of lying to the public as a political necessity. I once heard a philosopher talk about a famous contemporary philosopher in terms of two time periods, the later being "after x went crazy". How did he go crazy? He changed his mind. Of course, in all fairness the change of mind resulted in a later position that the critic herself held in very low regard; the point, nevertheless, stands that one cannot very well learn anything without "changing one's mind" and that changing one's mind cannot therefore be held in low esteem if we hope for better ideas in philosophy, in politics, or in society in general.

Educators often seek to "govern" or "police" their students' thinking. This activity is undertaken, usually at least, with the best of motives. One hopes to govern grammar and style, claims and arguments; and class climate and participation. All of these acts work, at best, to further pedagogical aims. But educators are not the only ones governing what may be thought or

spoken or what feelings and voices may be heard. The texts chosen and the standard interpretations play a role in what one can think or utter. If instructors fail to turn toward this issue, they ignore the role of education in identity, community, and state and the role of each of these in education. What gets ignored plays a role in the level of ignorance instructors and students embrace. Critical thinking skills cannot end with one's being able to assess arguments; one must also be able to think about the issues that lie hidden within the accepted range of arguments and ideas.

So I claim that critical thinking needs, in the end, not only to assess claims, arguments, and implications of claims, it needs further to take at least a preliminary look at the "obvious" and at "common sense" in order to encourage and enhance a critical consciousness in instructors and in students. As a final step in this process, then, one needs to apply the "logic" of a claim to itself. A famous philosophic example can be found in the basic claim of logical positivism. In brief summary, the claim is that any statement is meaningless (is not truly a statement but is instead merely an expression of one's feelings) if it is not either a tautology (a logical truth such as "it is either raining right now here or it is not") or an empirically verifiable statement ("the speed of light in a vacuum is x'' - a verifiable statement need not be true it only needs to be able to be verified by experiment or observation). The immediate problem with this claim lies in the fact that when its logic is turned upon it, it fails its own test. That is, this claim is itself neither a tautology nor empirically verifiable.

"Only white males speak the truth" may pass the test of its own logic so long as it is stated by a white male, recognizing that such claims are seldom in our time period made as explicit as this. But suppose a significant part of this claim's target audience, if I may so speak, a woman for example, were to say this. Her words obviously cannot be trusted. So although she can acquiesce when a white male says these words, even her demure agreement is suspect, to the extent that the original statement is true. One could, of course, say that given the original claim it might be the case that those who are not white males can truthfully give signs of agreement that are not spoken. The point to be noticed here is the importance of looking and listening for ways that the logic of a claim says more than we first notice.

III. Application of the TAM.

I now offer some examples of ways the use of the TAM works for students. To do so I present here changes in student comments from the first day in a recent introductory Ethics course, before introduction of the TAM, to its end, after regular reference to it.¹³ In both cases, I asked students to address, in an in-class essay, the issue of lying, presenting them with the following set of alternatives: Lying is 1) always wrong, 2) often wrong, 3) sometimes wrong, or 4) never wrong. To judge the learning process of students, I compared answers given by students at the beginning and the end of the semester. There were 43 participants in the study. In the students' excerpts below, I use exact student wording except in a few cases of editing for spelling or for grammatical clarity. Pseudonyms are used in all cases.

A. Findings and Analysis.

The most striking difference overall in student essays about lying from the beginning to the end of the semester appears in relation to two aspects of the Text Analysis Matrix (see Table

¹³ The Ethics syllabus includes the TAM.

1): more sophisticated arguments and more awareness of the broad implications of one's beliefs about this practical issue. A number of students provided brief arguments in their first essays and mentioned some implications of their claims, but the development displayed in both areas is significant. Few students engaged in an obvious level of critique; I attribute the limited amount of stated critique to the specificity of the question I asked. On the surface, discussions of lying and truth-telling lend themselves less to questions of critique than some other areas of ethical interest because telling or withholding truth might appear to be a very personal decision and to relate primarily to direct personal relationships. Upon further reflection, however, I saw that questions of "who wins and loses," of the work of "common sense," and of one's "sense of community or society" (see Table 1, "Critique", Questions 1-3) definitely arose in student comments.

I found considerable critique demonstrated best in the final paper written by Steve, a nontraditional age male student. He addressed two major ethical theories in relation to lying and ended that discussion with the following:

What both of the positions lack is a grounding in real life. ... [It] seems to me that in this issue of moral principle, theory must intersect with real life or experience. Not to mention the fact that there is an emotional component to moral principle.

He went on to define "lying as ... 'knowingly telling an untruth with intent to harm." "In that case," he continued, "lying would always be wrong." Here we find the aspect of the TAM that I at first thought to be missing in these student essays; the question, "Who loses?" is addressed explicitly. Who loses? — The person lied to, and, most students agree in their final essays, the person doing the lying as well. What passes for common sense seemed to give students, as revealed by their first essays, the impression that lying was to be avoided due to its being "sinful" or to its being condemned by society but in their final essays they voiced a more "internal" critique of lying and of the alleged "common sense" that makes lying a purely subjective or cultural issue. Most of them, in their final essays, saw lying as a way of upholding the perspective of the stronger (or simply of the speaker) that cannot be morally or even logically maintained on that basis. The stronger (or the speaker) holds no special moral rights that allow her to get away with what is denied to others. The sense of community reflected in their concluding essays pushes the students beyond simple individualism to a consideration of a strong relationship between self and society and thus to issues of critique.

I turn now to a few additional excerpts from student papers that illustrate changing student responses from the beginning to the end of the semester. Matt, a nontraditional age male student, wrote at the beginning of the semester:

A Lie is merely a statement, it does not have a right or a wrong a correct or incorrect value to it until it is assessed by an individual or group using their perception. Values, such as Right and Wrong, are established by Society, Culture, Religion, and Individual weights of what is and is not seen as acceptable. If an individual lived in a society that had no set standards of acceptability, and that individual had no personal, cultural, or religious bias, then lying would just be a statement, and have no value of either right or wrong.

At the end, he said:

In order to determine the right or wrong ... of lying, one must first look upon the expectations of society and culture. ... [A]n individual within a culture must be able to communicate within that culture. It is expected that if one is speaking to his neighbor, her is speaking truth; if this was not the case ... society and culture would break down very

quickly. Under this assumption, this universally expected behavior, one can say that to tell the truth is what you should do, what is good to do, and what is right.

However, even taking into account the universal thought discussed above ... it is difficult to establish a complete answer. Some would argue that the result of the lie is what determines its value. ... [The] necessity to account for the individual makes it impossible to establish a complete and absolute answer.

We see, then, at the end of the semester a greater sophistication in the answer, even though his choice from the options provided is the same in both cases. More significantly, one can trace in the final essay themes related to the TAM. Although Matt provided a *claim* in each case, he backed up his final claim with stronger and more precise *arguments*. Of even greater importance, Matt's final essay took into account a level of analysis frequently not found in initial student essays by setting forth some of the *implications* of his claim. He did not venture noticeably into the area of *critique* in his essay, but in referring to the "necessity to account for the individual" he made a gesture in that direction.

Another student, Marti, a traditional age female student, changed her answer from saying at the beginning of the semester that lying is always wrong to concluding at the end that it is often wrong. In her initial essay, she said, "I can not think of any instance where I think it would be completely "right" or accepted by society to tell a lie" At the end of the semester, she offered as a reason for her change of mind the idea that "... in order to 'practice' becoming virtuous, we will make ethical mistakes." She went on to say, "As long as a person is working toward a virtuous life [basing her idea here on Aristotle] and using their mistakes to build their 'skill' of virtue, a lie can be forgiven and ... may not always be wrong." She concluded her essay by saying, "My theory may be criticized by those who have a different definition [of lying] than I." There is considerable sophistication in this concluding student essay. As in the previous student's essays, it is important to recognize that she offered not only a claim and arguments to back up that claim, but explicitly recognized the implications of her claim and noted that the obvious (to her) truth of her particular definition of lying need not carry over into everyone's assessment of the idea (see Table 1, "Critique", Question 2).

Alicia, a traditional age female student, said at the beginning of the semester, "Lying is always wrong because it's a sin." In her final essay, however, she claimed that her parents told her that "in order to be a good kid and get to go to heaven I had to tell the truth always no matter what." She said that she "often felt like that was stupid because if you could spare someone's feelings without them finding out, then why tell them the truth and hurt them?" She concluded that "After taking this class I believe my parents were right." She followed this statement with a long argument for the value of telling the truth. In this case the student originally had a sense of the negative implications for oneself of lying; presumably as a sin, lying is subject to severe penalties. In the end, however, she provided a lengthy discussion of exactly why lying is wrong and how to respond in the most desperate situations, citing a specific example that is parallel to a commonly cited ethical dilemma; if a girl hides in one's house for fear of her boyfriend should one lie to the boyfriend? The implications she mentioned in her final essay reflect an interest in the implications for others of one's actions and for a more sophisticated assessment of one's moral situation than those offered at the beginning.

B. Conclusion concerning Application of TAM.

Of the four aspects of the TAM (claims, arguments, implications, and critique), claims were most obviously presented both at the beginning and at the end in all student papers, arguments were found more frequently in final papers than in initial ones, implications appeared either in a more sophisticated form or solely in end-of-semester work, and critique appeared almost exclusively at the end, when most students saw beyond the personal issues of getting caught, having to pay, or either following or denying societal claims to the larger issues of one's intimate and undeniable engagement with one's community and world. The distinction between societal claims that one unthinkingly either takes up or denies and a clear sense of community that one embraces thoughtfully lies at the heart any of genuine critique as applied to texts, ideas, or one's own writing and thinking. Most students come into any class having been sufficiently imbued with the claims of their society and culture. A crucial part of critical thinking, as I view it, is to move students beyond the simple "common sense" they share with peers, family, and friends to new ways of critically assessing the ideas offered them.

IV. Summary.

In the end, then, I am far from thinking that I have now stated for once and all what it means to think critically or to approach texts philosophically, but the TAM can aid instructors as teachers/learners and students as learners/teachers to approach academic texts and the texts of everyday life with more clarity and insight as we work together to hone our natural, useful, and too often underdeveloped critical skills for the academic and life tasks that confront us.

Acknowledgements

Thanks to Deborah Biss Keller, IUPUI School of Education, for comments, questions, and clarifications. Special thanks are due as well to the IUPUI Center for Teaching and Learning, the Gateway Scholars program, and especially to Dakin Burdick formerly of the Center for Teaching and Learning for encouraging me to clarify many of the ideas contained in the TAM. Last, but far from least, thanks to numerous students over many years whose wisdom, questioning, and constant desire to read, write, and think more clearly has shaped and continues to shape my own thinking about these issues.

References

Davidson, Donald. (2001). Radical interpretation. In *Inquiries into truth and interpretation*, second edition. (Oxford: Clarendon Press). Originally published in *Dialectica: International Journal of Philosophy of Knowledge*, 27(1973), 314-328.

Donald, Janet. (2002). Learning to think: Disciplinary perspectives. San Francisco, CA: Jossey-Bass.

Heron, Gavin (2006). Critical thinking in social care and social work: Searching student assignments for the evidence. *Social Work Education*, 25(3), 209–224.

Huemer, Michael (2005). Is critical thinking epistemically responsible? *Metaphilosophy*, 36(4), 522-531.

Loh, Christine (2003). Promoting sustainability tools: Connecting thinking and dialogue skills. *Civic Exchange*, January 2003.

Lynch, Cindy L. and Wolcott, Susan K. (2001). Helping your students develop critical thinking skills. IDEA Paper #37. Manhattan, KS: The IDEA Center.

Maclellan, E. and Soden, R. (2001) Making explicit tutors' judgements about quality in students' academic writing in the Faculty of Education. Report of an Initiative for the Teaching and Learning Quality Improvement Committee, University of Strathclyde.

Pithers, R.T. and Soden, Rebecca (2000). Critical thinking in education: a review. *Educational Research*, 42(3), 237–249.

Quine, Willard Van Orman. (1960). Word and object. Cambridge, MA: MIT Press.