

Ways of Knowing, Learning and Making Moral Choices

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Abstract

This paper explores the epistemological dimensions in the thinking of adolescent girls. Using two different kinds of data – (1) typical constructions of moral conflicts reported by adolescent girls that reveal either a justice or care (response) focus; and (2) girls' responses to a story completion exercise – this paper identifies epistemological perspectives in girls' thinking that link ideas of self, knowing and morality. An hypothesized model of 'learner's interests and goals' and 'approaches to knowing' related to these conceptions of self and morality is presented and implications for teaching are discussed.

Introduction

When psychologists Blythe Clinchy and Claire Zimmerman (1975) first began to study how college-age women understood the nature of knowledge and came to construct their own truths instead of accepting without question the precepts of authority or their own gut reaction, they were guided by the work of William Perry (1970). College students, Perry argues, move during their undergraduate years from a dualistic understanding that knowledge can be cast as either right or wrong to a position of relativism, an understanding that all knowledge is constructed. In sketching these changes, Perry suggests that what is needed to achieve this epistemological revolution is a capacity for detachment, an ability to stand back from oneself in objectivity, to assess conflicting authorities and the relativism of one system of thought to another (*ibid.*, p. 35).

Most of the college women Clinchy and Zimmerman studied could match the positions and changes in thinking of Perry's Harvard men. But they did something else not predicted by Perry's model. While the women were able to act in detached objectivity, to see and respond to demands of external authorities, they also acted out of a need to understand the opinions, beliefs and perspectives of other people. In brief, in order to understand others they seemed to step into, not back from, situations, to see and respond to others in their own particular situations and contexts. Later, Clinchy joined with Belenky, Goldberger and Tarule (Belenky *et al.*, 1986) to elaborate and verify these findings for a more diverse group of women.

Using a sample of 135 women, including women in city colleges as well as rural mothers coping under difficult, sometimes oppressive, situations, Belenky *et al.* (1986) verified the earlier findings of women's multiple approaches to knowing,

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but expanded their theory to include five different epistemological perspectives. These categories range from 'silence' and 'received knowledge', places where women look to others as authorities, denying their own voices; through a 'subjectivist' belief which affirms their own personal ideas; to a belief in reasoned, objective, 'procedural knowing'; and, finally to a conception, similar to Perry's, that all knowledge is contextual and constructed and that women are 'constructionists', capable also of 'making theory'.

In this work Belenky and her colleagues found that the metaphor of 'voice' captured accurately and most powerfully the way women came to understand themselves as knowers, especially in 'gaining a voice' or finding one. Belenky and her colleagues found, too, a link between women's ways of knowing, their ideas about themselves and questions of value – about what is right and wrong, good and bad. Thus, in connecting these ideas of self, morality and epistemology, Belenky *et al.* expanded on what Carol Gilligan (1977; 1982) first suggested: that is, that there is an intricate connection between people's ideas of self and their ideas about morality.

This paper takes up issues of morality, self and approaches to knowing of adolescent high school girls. Using two different kinds of data – (1) an examination of typical constructions of moral conflicts reported by adolescent girls, and (2) an examination of epistemological perspectives found in girls' responses to a story completion task about different theories of how the universe was formed – this paper examines in a clearly speculative way how girls' ways of knowing are linked to the logic of their ideas of self and morality. The recent research on women's ways of knowing of Belenky *et al.* (1986) provides one context for this work, as does research on adolescent girls' ways of making moral choices (Gilligan and Lyons, in preparation). In the first part of this paper I present some examples of adolescent girls' use of two orientations to morality, called a morality of justice and a morality of care (Gilligan, 1977, 1982; Lyons, 1982, 1983) and show how these orientations may be seen as ways of knowing. Secondly, I present and discuss the story completion exercise and indicate girls' different epistemological perspectives. Thirdly, I address the potential educational implications of this work, that is, of different approaches to learning implied in different ways of knowing. I conclude with a discussion of how teachers in one high school, the Emma Willard School, have thought about and used this research in their own teaching.

The connection between ideas of self and morality

When Gilligan first challenged the field of moral psychology, she argued that moral psychology's traditional and singular focus on justice had obscured another dimension of people's moral concerns (Gilligan, 1977, 1982). In addition to rights and fairness, the concerns of justice identified in Kohlberg's (1969, 1984) model of moral development, Gilligan suggested that other issues shape people's ways of framing moral conflict and choice: that is, concerns about interdependence, about maintaining the connections and attachments between individuals or assuring that someone not be excluded or hurt. Gilligan called this orientation to morality an ethic of care or response. Gilligan had identified this orientation to morality in part by studying women, whom, she found, focused more frequently than men on these issues of response and care in their moral decision-making.

My own work, the first systematic testing of Gilligan's hypotheses, analysed people's use of the two moral orientations in describing their actual life conflicts and looked at the relationship between people's self-descriptions and the moral conflicts they described (Lyons, 1981, 1982, 1983). Results revealed a complex pattern. Men and women used both justice and response (care) considerations in

their reasoning about moral conflict; however, people were likely to focus predominantly on one orientation. Similarly, while men and women could focus on either orientation, women were more likely to use response considerations while men were more likely to focus on considerations of equality and fairness in relationships. In this analysis, I identified, too, the link between the ways individuals described themselves and their ways of thinking about moral choice.

The key issue in connecting self-description with moral orientation is the way individuals describe the relationships between people. Although most people, men and women, mention relationships in their self-descriptions, there are differences. People characterizing themselves as autonomous or 'separate' in their relations to others more frequently use considerations of justice and fairness in their moral decision-making; people describing themselves as interdependent or 'connected' in their relations to others more frequently use considerations of response or care. Thus, this work called attention to the significance of relationships, of the attachments between people, as the intricate link between a person's ideas of self and morality. The need then was to investigate and elaborate more specifically how relationships figured in people's changing understandings of self and their deliberations in moral choice.

The Emma Willard study of adolescent girls

Our research in moral psychology, especially the discovery of women's moral concerns, attracted the attention of administrators at the Emma Willard School, an all girls high school in Troy, New York. Founded in 1814, Emma Willard is a school with a traditional concern about excellence in the education of women. Looking to current formulations in psychology to help them think about the education of girls in the 1980s, Emma Willard administrators were dismayed to find that in 1981 there was not very much research to help them understand girls' development or their learning. Like psychologist Joseph Adelson (1980), who at that time was also seeking to summarize recent research on adolescent girls, they concluded with a stark assessment: that 'adolescent girls have just not been much studied' (Adelson, 1980). It was then that Emma Willard officials asked Gilligan to help them think through the issue of the education of girls. In particular they wanted to know how girls thought about and made choices – about their courses of study, their school counsellors, room-mates, their future and themselves. Thus, Gilligan and I, joined by other women researchers from Harvard, began a study of Emma Willard girls' ideas about choices, including as a central exploration their moral choices.

The idea that this would be an important study of adolescent girls and that theory from moral psychology could inform an understanding of adolescent girls' behaviour intrigued Emma Willard staff and they became eager students of this research. Discussions between faculty and researchers in formal workshops and in informal conversations took place over the four years of the project. These conversations, which focused on both issues of theory and practice, shaped new questions to be added to the study and raised issues about how staff interpreted the behaviour of their students as well as how they might modify their practices. Through open-ended interviews Emma Willard girls began to share their ideas about themselves, their life in school, their understandings of relationships, the moral conflicts they saw and dealt with in their lives, and how they envisaged their future. The project was designed to map aspects of girls' development and to examine and revise educational practices in one school setting.

Two Emma Willard high school students exemplify the predominant use of either justice or care reasoning found in the thinking of Emma Willard students who took part in this study (Gilligan and Lyons, 1985, in preparation). The two

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students presented here are meant to represent a larger sample of people, male and female, who have similarly been found to use justice or care as a predominant pattern in making moral choices (Lyons, 1982, 1983; Gilligan, *et al.*, 1982; Johnston, 1985; Gilligan and Lyons, 1985). Although it has also been found that there can be a third pattern in the use of justice and care reasoning, that is, an equal use of both justice and care considerations, here each is discussed separately for purposes of contrast. My intention is to identify and connect features of knowing to a person's characteristic use of justice or care reasoning in her moral decision-making.

A morality of justice and a morality of care: ways of knowing

Responding to an interview question asking them to tell about a moral conflict they faced, two adolescent girls, leaders in the organizations and affairs of their school, reveal situations that caused them conflict: situations they describe as moral conflicts. It happens that the conflicts they present pertain to their leadership duties. One girl, Jane, the editor of a school publication, begins by identifying a situation she faced when a member of her editorial staff failed to carry out her job. Describing the situation and her problem, Jane says:

I had a problem with a . . . girl whom I would tell her that I needed her to get something done and I would tell her two weeks ahead of time and then I would go remind her . . . and she would kind of act like I was nagging her about it. So I wouldn't say anything to her and then when I needed whatever she was supposed to have done, she hadn't done it. And this went on for about two months. It took me a long time . . . I felt like I really knew that I needed somebody else to be doing the job and, yet, I felt that whenever I would talk things over with her, she would say, 'Yah, I really want to do it and I want to be able to help.' It's like I kept feeling torn between should I get someone new and say you are fired, or should I just keep waiting. I guess I finally decided that I looked at things she was doing . . . I wasn't really sure, partly I wasn't sure if I should be dealing with her or I should ask my faculty adviser to go speak to her so I wouldn't have to get involved. I finally decided that it was probably better if I talked to her, because it was really a problem between me and her and the faculty adviser wasn't involved.

Another student, Tracy, a proctor in one of the school's dormitories, responsible for some ten students in her hall, reveals a situation of conflict that occurred for her:

This year as a proctor, I am supposed to mark people off and at the beginning of the year, I was very concerned with really doing, being a straight arrow and doing a good job. And somebody once asked me, one of the the three musketeers, one of my good friends, who I lived with, asked me if she could sleep through 'Morning Reports' assembly which is never supposed to be done, because I am supposed to mark her off if she is there. And that was hard, because I was caught between choosing between a friend and what was right.

Asked to specify the conflict, Tracy goes on:

It was the difference between choosing, doing what the rule said, what the rules dictated and choosing between maintaining my friendship with this girl, at least as I saw it, to maintain my relationship with this girl.

While both girls hold positions of leadership and could have invoked the authority of their position to resolve the conflicts they report, they did not. Tracy, for example, could have told her friend, 'No, you can't sleep in'. Similarly, Jane could have said, 'Have your assignment in by Friday or I will have to replace you'. And while the conflicts they report could have been cast quite similarly – 'I had a problem in doing my job' – they are cast with different emphases. Tracy exemplifies a justice focus and Jane a response one. Table 1 presents a comparison of the problems the girls saw, indicating in each student's own words how the problem was construed, the considerations each person brought to its resolution and to the evaluation of the resolution. While these differences may at first appear subtle, they are nonetheless identifiable.

The contrast between these students reveals different elements in priority. For the proctor the challenge of rule versus friendship is cast as an issue of hierarchy – the priority of her friendship versus her authority in maintaining the rules. For the editor the conflict is two-fold, both wanting to honour the girl's desire to keep the

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Table 1: Analysis of two kinds of moral conflict: considerations used in the construction of the problem, the resolution and the evaluation of the resolution

Conflict 1: Jane, The Editor	Conflict 2: Tracy, The Proctor
<ol style="list-style-type: none"> 1 I didn't really want to confront her and I knew I had to. 2 I didn't know if I was being unreasonable in things I was asking her to do – maybe I didn't make it clear to her the things I needed [her] to do. <p><i>Resolution</i></p> <ol style="list-style-type: none"> 1 Part of me wanted to yell at her – but when I would see her upset about things that were going on in her life or just other things that she was busy with, I couldn't just go and say, 'You know, why aren't you doing this . . . ' I just couldn't look at my situation, that this is the most important thing because I realized there were other things going on. 2 One of my decisions was taking on the work that she hadn't done and not really dealing with her . . . I guess I could have conceivably kept her on and her never really doing the work and . . . [But] I would end up feeling bad about it because I did. 3 I also talked to some other people about it on the staff [asking] 'What do you think?' . . . So I was passing it off like 'Do you know why she isn't doing this?' 4 And everyone else was sort of doing her job and it was getting to be too much work for other people. I guess I had to decide, me decide. 	<ol style="list-style-type: none"> 1 It was a difference between choosing what the rule said, what the rules dictated, and . . . maintaining my friendship with this girl. <p><i>Resolution</i></p> <ol style="list-style-type: none"> 1 I considered that she knew my job, she knew what kind of pressure I was under and if she was going to sit there and pressure me, what kind of a friend was she and if I said 'No' to her over morning reports and she decided this was the end of our friendship, maybe we didn't have that much of a friendship. 2 I was at a point where I needed to assert my authority as a leader and she needed some limits set for her.

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<i>Evaluation (Was it the right thing to do?)</i>	<i>Evaluation</i>
1 Yeah. I think looking back on it, I do. In some ways because I knew she really wanted to do it and in the beginning I felt bad. I could say 'Yeah, she really does want to do it.' But I feel now that it was the right thing because obviously she wasn't upset by what happened in the end. It was more upsetting when there were problems going on.	1 Sure, yeah, because it's important at the beginning of the year to draw, at least to start with a hard line because then it makes it a lot easier to ease up later. And I didn't want to start easy and then have to tighten up. 2 . . . At that point in time, I was at the point that I needed to assert my authority as a leader and she needed some limits set for her, too, because she was at the period where she was testing me out to see what I would do . . . because it was new in the year. She had known me as somebody who fooled around the year before, I mean by being late to study hall and not regarding the rules as a sacred cow and saying 'That is a stupid rule and I am going to violate it because I don't feel it has a lot of merit', so she was testing me out to see what kind of an authority figure . . . I was going to be and I needed to say to her, 'Hey, you are not going to be able to use our friendship as a tool to push me around with.'
	3 I realized that you can do what is right and at the same time not sacrifice relationships. As my friends have gotten older they have an ability to do that, too . . . I believe this is right and the world is going to die unless this happens and she believes something else very strongly and we are able to argue about that. In fact, we are able to fight a lot and still get along, and our friendship still works. And that can work. I have discovered that you can do the 'right' thing and not sacrifice a relationship.

job on the school journal, and, when she fails to do her assignments, of confronting her. Here it is not just that different kinds of conflict engage these young women, but each girl frames the conflict differently.

Examining more carefully the features of these situations we see certain patterns to each girl's thinking. For Jane, the editor, a hesitant questioning is her first response to the situation. Maybe she was being unreasonable, unclear. Maybe she hadn't 'made it clear the things needed to be done'. As she ponders what she actually considered in thinking through what to do, we see at work this same questioning, 'I wanted to yell at her . . . but I just couldn't look at my situation as the most important.' Seeing what else is going on in the girl's life, stepping into her situation and context, forces Jane to stop. Then by taking on the work of the other girl she comes to recognize, too, that she is hurting herself. There is no good solution in doing the work herself. Similarly, she recognizes that other people, in taking up the slack and doing added work, were finding it too much for them. Ultimately she decides she must decide for herself, confront the girl, and, when she does, is amazed to discover that the girl is not upset to give up her job.

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Categorizing aspects of Jane's thinking, several features can be identified. She:

- is tentative and questioning; she questions if she is right;
- is context oriented: looks to see the other in her situation and contexts;
- tests her reading of the conflict with those involved;
- seeks understanding of self and other;
- uses dialogue with others to assess the problem and find a solution;
- deliberates more about solving the problem than any other aspect of it.

One might say in the end that Jane learns something about the girl and herself – it was more upsetting living the situation than in confronting the person, a kind of psychological knowledge of the interactions between individuals.

Similarly, characterizing aspects of Tracy's thinking, several features are revealed. She:

- is assertive and self-referencing;
- is oriented to seeing the problem in terms of how it meets a standard she holds ('if she were going to pressure me, what kind of a friend was she . . . maybe we didn't have that much of a friendship');
- seeks understanding of self by others ('She knew what kind of pressure I was under.');
- casts the problem as if within a hierarchy ('choosing what the rule said or maintaining my friendship.');
- fits the problem to a general situation ('I needed to assert my authority as a leader and she needed some limits set for her, too, . . . she was at the period where she was testing me out to see what I would do.');
- deliberates more about how she evaluates her decision, that is, how she justifies her actions.

In the end Tracy learns something about friendship and herself, that you can keep to your standards, do the right thing and still have a relationship. It is a balancing the individual can achieve, a psychological knowledge of the self about relationships.

Table 2 summarizes the logic of two moral perspectives and Table 3 shows a related set of ideas. In particular I draw attention to the features of knowing and thinking evident in each orientation. While these summaries were prepared and developed from previous studies of people's use of justice and response or care reasoning as well as the Emma Willard study, it is useful here to see how a set of related ideas – of self, relationships and ways of thinking – are interconnected to ideas about morality (Lyons, 1982, 1983, 1985). It is important to re-state, too, that most people – including the students presented here – show evidence of both kinds of consideration in their thinking about moral conflict. Yet it is the patterning of these responses so that one mode predominates, shaping the way issues are constructed and resolved, that is of interest here.

What seems important here is that features of problem-posing can be seen as characteristically related to ideas of self and morality. Johnston's (1985) work showed that adolescents can generate solutions in either mode, but have a preference for one in their spontaneous solutions. Thus, while we know that people can use either justice or care reasoning in their moral decision-making, what is significant is the mode of choice an individual in fact uses. The logic of the two perspectives is a powerful lens useful for interpreting different understandings of the meanings individuals ascribe to their experience. It suggests that common vocabularies – like how people define morality and responsibility – may

Table 2: Overview of the resolution and evaluation

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Table 2: Overview of the central moral issues and logic of response and care in the construction, resolution and evaluation of moral conflicts

		<i>Morality of response</i>	<i>Morality of justice and rights</i>
A	What becomes a moral problem	In a morality of response or care that rests on an understanding of relationships that entails response to another in their terms and contexts, what becomes a moral problem has to do with relationships or the activities of responding to another. Conflicts of relationships have to do with potential or real fractures between people, that is, with breaking – not of trusts or obligation – but severing of ties between people or restoring or maintaining them. Conflicts of response or care have to do with how to respond to another within a particular situation; how to promote welfare/well-being of another; relieve hurt/burden/suffering	In a morality of justice as fairness that rests on an understanding of relationships as reciprocity between individuals, what becomes a moral problem has to do with either mediating issues of conflicting claims between people; or with how one is to decide conflicts; or how one can justify one's decisions and actions, considering fairness and equality as a goal between individuals
B	In the resolution of conflict	Resolutions are sought (1) in restoring relationships or the connections between people; (2) in carrying through on activities to ensure that good comes to others or hurt is stopped	Resolutions are sought (1) meeting one's obligations or commitments or performing one's duties; or, (2) in holding to or not violating one's standards, principles, especially fairness
C	In the evaluation of the resolution	Evaluation of moral choice is made considering (1) whether relationships were restored or maintained; and (2) considering how things worked out over time	Evaluation is made considering (1) how decisions were thought about and justified; and (2) whether principles or standards were upheld or fairness maintained

carry different meanings. Thus, this work alerts us to differences in logic and meaning that may make a difference in the everyday lives of students and their teachers.

Ways of knowing: another perspective

The task was straightforward: 'Complete the story.' It was presented to 73 Emma Willard students with these instructions:

The following situations are ones high school students sometimes face. For each situation, complete the story. Tell what the person is thinking and feeling and what they might do. Since these are stories there are no right or wrong ones.

One of the story situations given to the high school students included this short narrative:

The teacher has said that there were three theories of how the universe was formed. Sandy wondered: 'How could there be three theories?'

The high school students wriggled in their seats, pondered how they might complete the stories and then wrote their own. These are the stories four different students wrote:

Table 3: The logic of two moral perspectives: a set of related ideas

	<i>The perspective of response in relationships</i>	<i>The perspective of rights in relationships</i>
Perspective towards others	See others in their own terms and context; enter into their situation	See others as one would like to be seen (through self's lens); in equality and reciprocity. Step back from situation for objectivity
Conception of self-in-relation to others	Interdependent in relation to others	Autonomous/equal/independent in relation to others
Ideas and images of relationships	Attachment as given, interdependence of people; concern with responsiveness, isolation of people; relationships as webs	Attachment through roles; obligation, duty; concern with equality and fairness in relationships; relationships as hierarchies
Mode of thinking/knowing	Particularistic; contextual; question posing; suspended judgement; use of dialogue, discussion; goal is understanding; thinking and feeling held together	Objective; generalizing; abstract; rule-seeking; goal is to critique; analyse; to answer question; to prove; thinking and feeling seen as needing to be separated
Interpersonal ideas and processes	Interdependent; emphasis on discussion; listening; in order to understand others in own contexts	Objective; role-related; in order to maintain fairness and equality in dealing with others

1 Only three? Why not hundreds. After all the Indians thought that at night a big basket was put over the world. That's how we got stars, the holes in the basket. But why weren't there more? There had to be. So many people think differently. Okay. So only three were acknowledged. Let's see if the teacher can explain them and then I'll hit her with a few more. Why can't there be more than three?

2 'I'm sure you are all wondering what these three theories are,' said the teacher. 'For homework, I want you to read Chapter Five. Chapter Five tells you all three theories and explains them. If you still have questions tomorrow, I'll be happy to answer them.'

3 Sandy, of course, could only believe in one theory and felt upset that it could be wrong. She was scared at the idea of not being able to understand the universe. How was she supposed to understand herself?

4 The only one she knew of was about Adam and Eve. She decided to ask her teacher what the theories were. The teacher explained. She still believed the Bible. Sandy had learned about how the universe was formed in Sunday School and had been brought up with that idea. She didn't want to believe the chemistry and biology that helped form it. The universe is very peaceful and plain and the astrological facts made it complicated and boring. She didn't wish to think of it that way. She liked to be plain and peaceful.

In these responses it is possible to see another example of adolescent girls' approaches to knowing. In the narratives they write, the girls present the sense

they make of the moral theories of the universe, the experience of thinking which suggests different high school educators.

For what is striking are different ideas about the nature of knowledge. Students' ideas about whether knowledge is multiple: and, what someone can surely know. But changing ideas about the self. And believing in the construction of the self. It makes making moral choices so

Examination of the multiple theories. The per cent or nine students (22 per cent or 16 students) called 'questioners' from those who were about existing formulations were difficult to want to confront it or correlation with 'other', and need further

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The work presented formative stages. It researchers. Student classes next to one wrestle with – is he students may be a. Although teachers researchers have not that the educational

they make of the motives of human conduct, the values and goals which they see underlying human action; and in the particular story task, considering multiple theories of the universe, the perspective shifts from a conception of knowing to the experience of the self as a knower. It is possible to identify patterns in girls' thinking which suggest that a more rigorous examination of these findings across different high school populations is an important research agenda, especially for educators.

For what is striking about these story examples is not just that they contain different ideas about authority or imply different underlying stances towards the nature of knowledge, but that embedded within them is a view of the self. Students' ideas about knowledge seem connected to their ideas about the self: whether knowledge is thought of as fixed and given by authorities or whether it is multiple: and, whether one is questioning and comfortable in the face of the multiplicity of knowledge or threatened by it. There may be a right answer and someone can surely tell you. There may be many answers, each with its own truth. But changing ideas about the nature of the world, of knowledge, can appear as changing ideas about one's self as well, and these can clearly be experienced as threatening to an individual. Understanding the universe is linked to understanding the self. And believing something – like the role of chemistry or biology in the construction of the world – may be something one can refuse to do, as one student wrote. It may be 'more peaceful' that way. Student responses reveal the self is intricately implicated in ways of knowing, as it is in ways of valuing and making moral choices (Lyons, 1981, 1983).

Examination of the range of student approaches to knowing identified in the story of the multiple theories of the universe reveals that the 73 students who participated in this exercise were at different positions in their ideas regarding multiple theories. These ranged from those who expected 'one right answer' (12 per cent or nine students) or that some 'authority knows', e.g. the teacher, a book (22 per cent or 16 students); to those who expected 'diversity', multiple answers, in so far as they saw and expected that there might be multiple theories (eight per cent or six students). But the largest number of students seemed to be what can be called 'questioners' (44 per cent or 32 students). This category included a range, from those who were just beginning to perceive that questions might be asked about existing forms of knowledge, to those who saw that their current formulations were different from those of other students, to those who saw clearly the possibility of multiple theories. Some students saw multiplicity but did not want to confront it or acknowledge it in their thinking. In these data there was no correlation with grade level. Some ten student responses were identified as 'other', and need further elaboration.

A summary of the ideas of different epistemological perspectives or categories along with some characteristic features of the self is presented in Table 4.

Theoretical issues and educational implications of the story completion exercise

The work presented here, the story completion responses, is clearly only in its formative stages. It does, however, offer some initial insights to teachers and researchers. Students who answered these questions and wrote their stories sit in classes next to one another. Their diversity of views – a fact teachers always wrestle with – is here identified in its knowledge dimensions, suggesting that students may be at quite different but identifiable epistemological places. Although teachers have rarely had access to this kind of information, for researchers have not always addressed high school students, it seems important that the educational implications of these ideas be further developed not just as

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Table 4: Epistemological categories of high school students with related ideas about the self

<i>Epistemological perspective</i>		<i>Idea of self</i>	
1	There is one right answer	1	Self seems hidden/less accessible
2	Authority knows	2	Self seems hidden/less accessible
3	Questioning: multiplicity perceived	3	Self in transformation; may be frightened by what is glimpsed/perceived – what is or what can be known; knowledge may be rejected
4	Diversity expected	4	Self appears comfortable, even playful, in face of multiplicity.

guides to teachers' understanding but also as ideas teachers may find useful in setting goals for student learning.

For example, if most students in a grade, class or school were in a questioning mode, that would be most useful for teachers to know, if one goal were to aid students towards understanding the multiple and contextual nature of knowledge. Kitchener and King's work (Kitchener and Kitchener, 1981; Kitchener, 1983; King *et al.*, 1985) suggests that high school students share similar understandings about knowledge. But the research reported here indicates that a greater diversity may exist within a single class of students. Clearly it would be useful if teachers had a simple method, such as a set of story completion tasks, that they might use to identify the thinking of their students. Obviously there are diverse ways to interpret these data that we need to understand better. Psychologist Ellen Langer (1987) offers one perspective. Writing about how students learn, Langer emphasizes that her research indicates the power of student uncertainty as a special opportunity for learning. The danger of a teacher's helping behaviour, for example, in providing a 'right answer' may be an impediment to student development.

Similarly, if teachers knew the kind of vulnerability of self in relation to knowing that students can experience, they might be able to respond to students in more useful and helpful ways. The data examined here, the stories of adolescent girls, indicate the vulnerability of students who confront the idea of multiplicity. On the basis of similar findings Perry posits special positions, like 'retreat', that students find more comfortable in the face of multiplicity. Belenky *et al.*'s work suggests the special significance for adult women in development of finding a voice, of acknowledging oneself as a knower. Clearly the epistemological perspectives presented here need to be verified and elaborated for a range of students, male and female, before we can posit exact implications for teaching.

This work also suggests that there may be developmental aspects to, or changing understandings of, the nature of knowledge. For example, it seems possible that if a student once perceived that there might be multiplicity of views, she could not easily relinquish that understanding even if she wanted to. The question then is, is there a sequence to development in outline here? Do students move through these different perspectives sequentially as places in their development or do they constantly go through them, circling back as different areas or disciplines are encountered, a suggestion Perry makes. Belenky *et al.* do not confirm if their model is developmental. But the work of Kitchener and King (Kitchener and Kitchener, 1981; Kitchener, 1983; King *et al.*, 1985) and Brabeck

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(1984) reveal an age-related developmental trend in changing ways of knowing among high school students.

It would also be interesting to compare this new model of epistemological perspectives of high school students with Belenky *et al.*'s work. A rough approximation has been suggested by Clinchy and Goldberger (1987) that lines up the 'One Right Answer' and 'Authority Knows' positions presented here with the 'Received Knowers' of Belenky *et al.*'s model and the 'Questioning Perceived' and 'Multiplicity Expected' with Belenky's 'Subjectivists', indicating that there may be more varied epistemologies among high school students than their model or Perry's indicates.

This work raises the issue, too, of the interaction between student and teacher and reminds us that learning takes place in relationships. The views of students presented here incorporate clear ideas about authority. While we do not know exactly how they translate these ideas and fit them with their own teachers, if they see their teachers as authorities, these student responses give some insights that are worthy of further inquiry, something we need to understand better.

Implications from the Emma Willard experience: a model of learners' interests and goals

We know from the work at Emma Willard School that this research, in particular the identification of the two moral orientations in the thinking of Emma Willard girls and the phenomenon of a focus or predominance in girls' thinking, is illuminating and useful to teachers in a number of ways. First it can help to account for and explain girls' behaviour. Girls who value, for example, the maintenance of relationships or the welfare of their friends, act on that in their day-to-day life in the school.

The faculty adviser of Jane, the editor, for example, knew of her situation because she had asked the adviser for help. But the adviser had no idea how long the situation had gone on, nor, perhaps more importantly, that it had taken such a toll on Jane, in the work she took on and in the kind of thinking she carried out as she struggled to find a workable solution (Emma Willard teachers, in Gilligan and Lyons, in preparation).

Similarly, teachers seeing the two moral orientations as embodying two logics, now look at discipline issues differently. They recognize that girls may want to be involved in the school judiciary procedures for very different reasons – reasons that will shape their behaviour: some to help prevent student troubles; others to have a chance to be in charge of the procedures that will guarantee fairness in deliberations. These views may be compatible. But they are subtly different, suggesting different values that in turn lead to different ways of interacting.

Probably the area of most significance to teachers comes in the ways teachers now think about the education of girls. Not only did Emma Willard faculty review and 'balance' their curriculum to respond to the inclusion of women within it, that is, to guarantee that women were included (e.g. in the novels assigned in reading, in the examination in history of the social features of people's lives as well as the political features), but teachers became more attentive to their practices in support of student learning: in listening to questions students ask and in reflecting on their own responses; and in trying out diverse approaches, such as cooperative learning, in maths classes and on the playing fields. Table 5 presents an hypothesized model of characteristic features of two approaches to learning implied in the two moral and self orientations, the justice and care modes with their related self-conceptions – the self as autonomous or separate and the self as interdependent or connected. (This terminology of a 'connected' or 'separate' knower is the one used by Belenky *et al.*, adopted from my own work (Lyons, 1981,

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Table 5: Learners and learning contexts: the relationship of mode of self to learner's interests, goals and mode of thinking (adapted from Belenky *et al.* (1986), Bruner (1986), Gilligan (1982), Lyons (1982, 1985))

<i>Mode of self</i>	<i>Learner's interests and goals</i>	<i>Learner as thinker and knower</i>
Autonomous (separate in relation to others)	To question; to prove; to find answers to questions; to solve problems	Analytical; procedural; truth seeking; rule-seeking and using
	To convince by argument; logic	Test for truth: consistency; logic; reasoned hypothesis
	Know how to know truth	Transcend time and space and particulars; imagination: to see before proving; thought and feeling held apart
Interdependent (connected in relation to others)	To question; to find understanding of situations, people and their contexts; narrative-seeking; to convince by motives, particulars of lives	Tentative and questioning; judgement suspended; fact-gathering; synthesizer
		Test for truth: believability; concern for understanding of human motivation; intention
		Imagination used to enter into situations, contexts; locate in time and place
		Thought and feeling held together

1982, 1983) and that of Gilligan (1977, 1982, 1986). Here the emphasis is on different features of the learner's goals and interests, that reflect different approaches to learning.

While the two approaches to learning are thought of as clearly complementary although significantly different, understanding and articulating these differences is an important agenda for the future. Most schools tend to foster rule-oriented, rational, abstract thinking, whether in maths and science or history and social studies: less attention is given to features we identify here as associated with a response 'connected' learner. Emma Willard teachers, for example, found themselves thinking about student hesitancy and questioning in a different way once they had some familiarity with the two orientations. One new Emma Willard teacher of history, for example, shared an incident with colleagues which he at first found perplexing. He was nearing the end of a class in which he had been emphasizing how the American political system worked in one presidential election in which a deal was struck between Northern and Southern Democrats and Republicans. One girl raised her hand to ask what grounds the people involved had to trust one another. The teacher, feeling as if the question came from 'left field' since it had nothing to do with a systems approach he was emphasizing, was puzzled at his failure to be clear. But in sharing this situation with colleagues he was offered a different interpretation. That is, the girl was more interested as a learner in understanding the motives of those involved. She heard the event as a narrative, a story of an encounter in the relationships between individuals. The logic she sought was not the logic of a system. Rather she sought the logic of understanding, what Bruner calls 'believability' (Bruner, 1986). Unlike the teacher who sought to transcend time, she was rooted in it, in the particulars of the situation, and in the relationships between people. It is this approach to

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learning with its different concerns and interests that educators need to understand better and listen for. They also need to make opportunities for this voice to be expressed and heard. If this is a mode of learning more frequently found in the thinking of girls – although we know it is available to both sexes – we need to be attentive to that. Adolescent girls remind us of the centrality of Piaget's (1932/1965) insight, that 'apart from our relations to other people, there can be no moral necessity' and let us understand how morality, mind, self and relationships are intricately linked in everyday ways of knowing and learning.

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