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Gender, Epistemology, and Education: An Exploration of the Knowledge Construction of Female and Male Pupils

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This study explores gender differences in the knowledge constructed about World War II by 11- and 12-year-old Scottish pupils. Data collected over seven months included field notes, interviews, students' reading and writing, and audiotapes of discussions. Examination revealed the young women's work showcased individuals while the young men framed World War II information using a world view. The findings illustrate the epistemological differences that can exist between our male and female students as they construct their own understanding of topics.

DURING THE PROCESS of a seven-month naturalistic study we examined Scottish primary students' uses of reading, writing, and research processes as they were involved in studying World War II (WWII) (Many, Fyfe, Lewis, & Mitchell, 1996). As patterns were identified in the data, the first author noted distinct differences in the processes and content evident in the work of the male and female pupils. Working hypotheses emerged regarding whether differences in the students' work might reflect different epistemological stances toward what was deemed valuable knowledge.

These initial indications caused us to turn to the literature to examine issues related to epistemology. The study of epistemology addresses three primary concerns: (a) what counts as knowledge, (b) where knowledge is located, and (c) how one increases a knowledge base (Cunningham & Fitzgerald, 1996; Fitzgerald, 1993). Cunningham and Fitzgerald (1996) contend that because education deals with knowledge, epistemology can be thought of as education's most basic and central concern.

Recent educational research has recognized the importance the epistemology of teachers plays in the classroom (Fitzgerald, 1993; Lyons, 1994). Teachers hold both implicit and explicit assumptions about knowledge and about their own roles in students' knowledge construction. Further, teachers' views of the nature of knowledge in their subject areas shape the learning tasks they orchestrate in their classrooms (Anders & Evans, 1994). However, research is needed which systematically explores the epistemological perspectives not just of teachers, but also of students (Lyons, 1994).

Prior to conducting this study, we were familiar with research examining the ways in which men and women construct knowledge (Anyon, 1978; Belenky, Clinchy, Goldberger, & Tarule, 1986; Luttrell, 1989; Perry, 1981). This literature, in part, prompted us to consider whether the work of these young female and male students might reflect gendered ways of knowing. Examination of early work by Perry (1981) provides a description of the epistemological growth experienced by male students. Across their college career, male students in Perry's research shifted from dualism, to multiplicity, and finally to relativism and to commitments to ideas within a relativistic perspective. In contrast,

Belenky, Clinchy, Goldberger, and Tarule's (1986) research (which including college-age individuals) provided descriptions of women's varied epistemological perspectives toward knowledge and knowing. Their research indicated some women operate from a received knowledge perspective where authorities outside themselves were considered as conveying truth. Others are more subjective, paying attention to their inner feelings as a source of knowledge. Still others operate from a procedural knowledge perspective in which they learn by adopting a method of analyzing information or by connecting to another's perspective in order to understand another's view. Finally, some women integrate reason, intuition, and the expertise of others to construct their own knowledge.

Our investigation of the literature indicated little work had been done examining young students' epistemological perspectives on what counts as knowledge. Consequently, the purpose of this study was to describe the knowledge constructed about World War II by these male and female pupils. We were particularly interested in what the students felt 'counted as knowledge' as illustrated in what they chose to emphasize in their self-selected research projects and whether there were differences in the processes students used to construct their knowledge.

Method

Context of the Study

This study took place in Aberdeen, Scotland, with the cooperation of colleagues at Northern College and administrators, teachers, and students of Glashieburn School. From November to June, the first author became a participant-observer in a primary 7 class (11 and 12 year-olds) in order to explore the reading and writing processes of the students. Each twelve-week term, students focused on a specific project or topic of study, with the project during the primary phase of data collection focused on World War II. Sources of information for the World War II project study included approximately 30 books in a classroom library, newspapers, photographs, and other artifacts from the time period, video tapes (both fictional and informational), computer programs, play scripts,

art work, wall charts, and teacher-made or commercial information sheets or activity sheets. The students' engagements in reading and writing described here focused on their efforts to investigate a self-selected topic related to the overall class project on WWII.

Data Sources and Analysis

Data collection occurred across a seven-month period of time. Two months prior to the WWII project work, the first author conducted preliminary interviews with all students and observed in the classroom on the average of 2-3 times a week. Data was collected on a daily basis during the twelve weeks the students focused on WWII project work, and on an average of 2-3 times weekly during the following two months as some students extended their research into the following term and to allow for continued debriefing and member checks with all students.

Data was in the form of structured and unstructured field notes, debriefing interviews, audio, and videotapes of group discussions. The first author, using a notebook computer, gathered all field notes and interview information. Students' personal research booklets on World War II, copies of the source texts used (when available), and other pertinent artifacts produced with respect to the unit of study were photocopied. Analysis followed the naturalistic procedures set out by Lincoln and Guba (1985) beginning with the first day of data collection. Patterns and themes in the data identified in the on-going analyses focused inquiry on subsequent days. Using an emergent sampling design, we began data collection through a serial selection of participants. We initially touched base with all students, but as we began to glimpse patterns in students' approaches to project research and variations in strategies used for reading and writing from texts, we targeted specific students as "key informants" for in-depth analysis. The number of key informants emerged across the data collection and was based on the degree to which a given student's process or strategies were redundant in light of the participants we had previously interviewed.

Data collected from all sources previously mentioned were organized into files for the seventeen key informants (11 females and 6 males). Analysis proceeded inductively using a constant comparative

method (Glaser & Strauss, 1967). Throughout the data collection, peer debriefing occurred between the first author, the fourth author, and two other colleagues at Northern College in Aberdeen in order to discuss the first author's working hypotheses and ongoing analysis of the data.

Subsequently, the co-authors for this study collaborated in additional inductive analysis of the data focusing specifically on the content of the young women's and men's personal projects. The projects were in the form of 15-20 page booklets sharing the results of the students' investigations into their self-selected topics. To analyze this data, we first created data reduction charts that captured the content of the projects (Huberman & Miles, 1993). Next, categories were created and refined using a constant comparative approach (Glaser & Strauss, 1967) to describe themes evident in the males' and females' projects. Finally, attention moved from the personal projects to the field notes and interview information to triangulate patterns and to identify possible gendered ways of working during the research process as well as in the content of the reports. In the section below, we will first provide a brief overview of the broad differences in the males' and females' World War II personal projects and then we will focus in depth on the patterns which emerged in the content of the young men's and young women's work and in their processes of constructing that information.

Results

A gendered perspective on wartime topics was evident in our data from even a cursory glance at the topics chosen by the students in this class. As illustrated in Table 1, the males concentrated on objects, events, and historical figures, while the young women chose topics that allowed them to focus on children and on the lives of everyday women and men.

Close examination of the content of the students' personal projects revealed the young women's work showcased individuals, their experiences and feelings, and the environments in which the people lived. In contrast, the males' primary concentration was on understanding World War II from a perspective, which framed the events using a worldview. In the sections that follow, we will present specific themes of the students' work.

Table 1. Personal Research Topics Chosen by Male and Female Pupils

Females	Males
Children at War	Army
Wartime Children	Aircraft
Make Do and Mend	Weapons and Artillery
Anne Frank and the Jews	The Royal Air Force
The Holocaust	WWII Aircraft
Posters – Propaganda	Hitler and World Leaders
Aberdeen at War	
How Women Coped	
Wartime Children	
Growing Up at War	
The Royal Air Force	

The Young Men's Views of World War II

Examination of the male pupils' project work indicated three themes which were salient in the males' attention to the war: (a) a focus on the military, (b) an identification with power and authority, and (c) an exploration of world-wide involvement in the war.

A focus on the military. The primary emphasis throughout the young men's projects was a focus on the equipment used by the military. A young boy named "Ron" completed the most detailed project with this focus. In an early interview, Ron described his choice of "World War II Aircraft" for his personal research, "I like aircraft - I think it is the most exciting of the topics. I already know quite a lot. I am always digging into books and putting two and two together. I have some information already. I am writing up a chart with information about the different types and then I am going to write a chapter on each." Ron did compile chapters on each of the types of aircraft he identified on his planning web, "fighters, bombers, seaplanes and flying boats, reconnaissance, prototypes, and jets." In his coverage of information, Ron provided visual images through hand-drawn silhouettes or photocopies, charts of technical data, and descriptive passages. His descriptions often included his personal judgments. For instance, on a two-page spread of pictures

with hand-written captions “A typical dog fight”, “A spitfire pilot lining up a BF109 in his sights” and “The P-51 Mustang,” Ron wrote:

Dogfighting

When you were dogfighting you only had one chance to get your opponent and you had to take it. It was a lot of dodging, twisting and turning and firing. You had your enemies in your sights for less than four seconds, but with machine guns firing 160 rounds per second it wasn't a problem.

Escort Fighters

Any fighter could be an escort, but there had to be one flight of planes at the least. All escort fighters were built for long range but the Mustang was the probably the best because it had a large fuel tank and packed a mean punch because it was armed with six machine guns, rockets and bombs. (Ron's personal project, pp. 7-8)

In researching his topic, Ron gleaned information from across books, movies, posters, exhibits, and video games and he loved to share. His excitement about his topic is glimpsed in the excerpt from the field notes below, which were typed during a debriefing session in the third week of the students' project work:

Many: I asked him about his web - if he came up with it all at once or if he added to it over time.

Ron: Well 1 [fighters] and 2 [bombers] I thought of right off and then I came up with 3 [seaplanes and flying boats]. Cause I got a book at home I bought on holiday. I am going to do a lot from that on it. 4 [reconnaissance] there is just one problem, I have a book on German fighters and equipment but there is not enough on Allied fighters. 5 [prototypes] that is aircraft that were invented by British but never got into production. Dad got a book at home - I know mainly from books that a lot of them didn't get into production. (He already knew this information.)

Many: What is the difference between jets and fighters?

Ron: Jets are rockets and the fighters are piston engines. (His explanation covered about a paragraph and was filled with technical language - I can't keep up with him when he is excited about a topic and he lives and breathes this topic!) 6) There are a lot bombers that do reconnaissance.

Many: What is that?

Ron: They run forward take photos and retreat before they are shot down.

Many: How do you know about that?

Ron: My dad has a game at home and it's a lot like chess and it has a lot of reconnaissance planes in it and I said, 'What is that?' So I dug into it and found out everything I could about it.

Many: What do you mean you dug into it? What did you do?

Ron: I found a book and just read it. ... (Taken from field notes, Jan. 22, pp 2-3)

Ron's project and his developing knowledge base was more extensive than most of the other students in the class. However, his enthusiasm for his topic was fairly characteristic of all the males who had chosen similar topics. The young men's projects were replete with: photocopies; drawings; lists and descriptions of cockpits, fighters, spitfires, and bombers (including British, American, German, Japanese, and French planes); the battles that the planes were used in; technical information; signs and symbols used on aircraft; and the roles of ground crew and mechanics.

Coverage of the military effort in the young men's report also included attention to other equipment such as tanks, automobiles, ships, and artillery. Two of the projects included drawings of a pilot and of a flight lieutenant, officer pilot, and sergeant of the Royal Air Force and a photocopy of a German soldier. In addition, some students described or created lists of battles that were fought or important wartime events. Finally, as illustrated by Ron's comments above, the males in this class

drew heavily on books related to their topics as resources for increasing their knowledge base.

Identification with power and authority. A second theme in the young men's projects was an identification with power and authority as seen in a focus on world leaders. The young men included extensive information on both political and military leaders. The most comprehensive coverage was found in Ian's project, "Hitler and World Leaders," which provided detailed discussion of the careers of Hitler, Mussolini, Churchill, Roosevelt, Chiang Kai Shek, Hirohito, and Stalin. For each leader, Ian included a historical description of their rise to power and their success as a "warlord". For example, in writing about Churchill, Ian noted:

After three years of Winston Churchill becoming Prime Minister he told the commons that he could only offer blood, toll, tears, and sweat. In that he promised victory however hard it was. That was the first of a few speeches that inspired the country. ... The whole of Britain loved the voice of Churchill on the wireless sets. They loved his two-fingered V which was for victory. Winston had a no nonsense suit, the massive cigars and the bulldog look. Winston Churchill made himself the Minister of Defense and thereby became an effective warlord. Some of his judgments were seldom wrong and brought his government such architects of victory as Montgomery, Cunningham, and Alexander.

The emphasis on world leaders was also apparent in the work of Ian's classmate, Geoff. Geoff's project included passages on General Bernard Montgomery, Benito Mussolini, Chiang Kai Shek, and a comparison – contrast section on Hitler and Churchill. Like Ian, Geoff also described the leaders' roles during the war, their decision-making processes, and their victories or defeats. The emphasis on leaders' power and authority was further illustrated in such work as Robert's poster illustrating Hitler being strangled by Allies, Ron's discussion of Benito Mussolini as a political leader, and Dugald's description of Chief Air Marshal Sir Hugh Dowding's discussion of the difficulty of protecting

British shipping in home waters.

A world view of World War II. Overall, the male pupils' treatment of World War II was conducted from a world view. This was a natural inclusion in Ian's project on Hitler and the world leaders, but the emphasis was also evident in the other boys' projects that focused on the army, aircraft, and weapons and artillery. For instance, Geoff's project on the army included army commanders and leaders from multiple countries. His work showcased pictures and descriptions of German and Italian aircraft alongside examples from the Royal Air Force. In addition, he outlined each of the countries involved with Allies or with the Axis power, he included a death tally for nine countries, and he charted the amount of funds spent by not only Britain but also the United States, Germany, Russia, Italy, and Japan. Similarly, Ron's work on weapons and artillery included propaganda posters from other countries, drawings of the flags of various countries, and a survey of classmates on which country they felt did the most damage to Germany. Each young man's report included information that indicated they had expanded their lens from the home front to the war on an international scale.

The Young Women's Views of World War II

Although both the young men and the young women included attention to basic wartime events and historical figures, three themes emerged in the young women's content which were not present in the male's projects. The first was an emphasis on empathizing with the experiences of wartime individuals. The second was attention to the restrictions on freedom that were apparent during the war (as evident in the evacuation of millions of children from the larger cities to the country, in the stripping away of individuality which occurred across numerous contexts, and in the treatment experienced by the Jews). Finally, it was only in the young women's projects that we found attention to how women were treated during war and critiques of that treatment.

Empathy with the individual. One strong thread running through the young women's reports was a focus on how it would have felt to have actually lived through the war. One way this was apparent was in

the strong focus on what it would have been like to have been a child during World War II. The young women emphasized the experiences of children as the children donned gas masks and went to bomb shelters, as they were evacuated to the country, and as they lived through or died as a result of wartime experiences. For example in the section below, Victoria described the evacuation program, a topic common to many of the young women's reports:

In 1939 a World War started. The government could not decide what to do with there children because the parents and the government did not want them killed by the Germans. So they thought of sending them to the country. This was called evacuation. Over a million children were evacuated. They would go even a hundred miles away from home. The only children who were evacuated were the ones who lived in industrial cities. Children who were lucky enough to have relatives in the country went to stay with them, but most of them went by the government. The children who were not old enough for school went with their mums, but the children who were old enough for school went with the school. (Victoria's personal project, *Children at War*)

Victoria introduces her section on evacuation by giving an overview explaining the government's evacuation program; however, in a later paragraph she proceeds to relate the emotional impact the parting must have had on the families, "The parents and the children must have been very sad when they had to say goodbye to each other. Some children had never been so far from home with strangers." Victoria then went into depth explaining the evacuation process the young children experienced. She accounts how children lined up on the playgrounds, gas masks in hand, and boarded trains for unknown destinations. Her concern for the children's feelings was again evident as she criticized the process of country people meeting the evacuees in the town halls and then selecting the children they wanted. She wrote:

...Some people would go to the station to pick up the children they wanted. It was not a good way of finding

homes for the children. The bonny clothed or cute children were chosen first and the children who were left until last were very upset.

The ways in which young women positioned themselves to understand the experiences of individuals and particularly to understand the lives of the children took other forms besides empathizing with the individuals' emotions. These students also visualized experiences and imaginatively considered what they would have done in certain situations. Drawings of houses to which they might have been evacuated, surveys of their peer's preferences as to where they would have like to have gone if they had been evacuated, and illustrations of experiences evacuees' might have encountered, all gave an indication of the degree to which the young women imagined the realities of the war as it might have been for children like themselves. Another key informant, Christine, portrayed these images in a particularly effective manner, creating a section in her research booklet titled, "The War Through the Lens of a Camera." In this section Christine photocopied graphic images of children and war, as illustrated by the following captions found underneath the pictures:

"Many families built their own Anderson Shelters in readiness for bombing raids. Here a toy dog, in regulation gas mask, stands guard over the entrance."

"Anxious watchers at the station barrier wait for their parents' arrival on the first 'evacuation special' from London."

"Children being evacuated during the Blitz on to waiting trains. Metropolitan Police women help to keep their spirits up."

"During the Warsaw Uprising these young boys, like Jan, acted as secret messengers for the Resistance Movement."

"Londoners take shelter in the Underground during the Blitz."

“When you had your gas mask on you looked like a cross between a rubber pig and a man from outer space.”

The emphasis on understanding the war from the perspective of the individual was also seen in other focuses in the young women’s projects. For instance, it was the young women, who, when writing about Hitler, chose to include personal aspects such as the death of Hitler’s father when he was only 13 years old, his mother’s death when he was 18, the denial of his application to study at the Vienna’s Academy of Art, his work as a postcard painter, Hitler’s shooting of his dog prior to committing suicide, and the notion that when Hitler’s followers praised him it made him “think that what he did was good.”

Another type of entry that strongly indicated how much the young women identified with wartime individuals were the surveys they conducted with their classmates. Six of the eleven girls chose to do surveys requiring respondents to respond to wartime experience through highly personal and involved ways. For instance, survey questions about evacuation, such as Louise’s “What would you have taken with you?” and Rachael’s “Where would you like to be evacuated to?” reveal that the students were consciously relating to the problems of children like themselves during the war. Samantha’s survey asked, “What would you have missed most during the war?” While the majority of students stated that they would miss holidays, a typical response perhaps of children who were inexperienced with war, the next highest vote, over food and games was that the students would miss their parents.

A final example of how female students identified personally with what they learned about World War II was their frequent references to loss of life. Christine explained that she had included a death toll list in her project because “When people die in your family - that is pretty emotional isn’t it? And so that is one of the most important things to list.” Similarly, Claudia stated that she included the “sad memorial” of a tombstone of five children killed by the enemy because “I thought it was good to show that young children got killed as well as adults.” A clue as to how Elizabeth responded to what she had learned in her project is that along with the words “plane, London, and enemy” that were found on her word search, Elizabeth also included “suffering.” This affective word

gave a clear indication that she empathized with what the bombing of London and loss of life meant to the people of World War II. Finally, Morag's ending for her project seemed to capture how the young women felt, "some of the stories I've heard are horrible. I just hope there will never be a WWIIII."

Restrictions on Freedom

A second theme running through the girls' foci on individuals, their experiences, and their environment, was an emphasis on restrictions on freedom. These restrictions fell into several broad categories: restrictions that affected everyone; those related to the evacuation process; restrictions imposed on the Jewish people and people in concentration camps and prisons; and voluntary restrictions adopted by the Jewish people.

Restrictions which affected everyone and had to do with everyday life during the war included attention to aspects such as rationing, identity cards, black outs, and gas masks. Mhairi and Claudia both made the point that everyone had to register for ration books. Mhairi also mentioned the national registration identity card that "...had to be carried around wherever you went." Elizabeth noted that clothes were also rationed and that housewives had to spend long hours queuing for food. She included the fact that newspapers could only be six pages long due to lack of paper indicating a kind of rationing or restriction of news.

Five of the girls included the black out as part of their project. They emphasized that cars and trains were not allowed to put on their lights, houses had to have shutters or shades to prevent any light from escaping at night, and that people were prosecuted for breaking black out restrictions. As Jean said, "They was not aloud [sic] any light on at all." Four of the girls included sections on gas masks. Everyone was required by law to carry their gas mask everywhere they went. Claudia explained her choice of this emphasis by noting, "Because they always had to take their gas masks with them when they went outside in the war...My Grandad told me about it and he always had to carry his in a cardboard box before he could go outside" (Taken from field notes, January 13).

The second category in the girls' projects focusing on restrictions was the evacuation of individuals from cities, which affected primarily mothers and children. While the initial evacuation in 1939 was voluntary, the government ordered the evacuation of all children from the industrialized cities when the blitz began. In Mhairi's project on posters and propaganda, the explicit message concerning evacuation was that if you took your child back to the city, he/she would die. While the restrictions within the realm of everyday life were reported in a matter of fact way, this was not the case with the evacuation. In speaking of the children who were evacuated, Elizabeth said, "It must of been dreadful for some children even as young as five, being separated from their parents. Sometimes children did not get reunited with their families for up to five or six years later." Similarly, Linda asserted, "Imagine how it would feel, if you were taken away from your family, at a point as confusing as wartime, when you need support the most," and Victoria imagined, "The parents and the children must have been very sad when they had to say goodbye to each other. Some children had never been so far from home with strangers." The girls also spoke of the lack of choice as to where the children would be placed as well as restriction of parental visits due to the expense of the long trips. In Louise's project on growing up at war, she drew a series of cartoons about the way the war changed the lives of the children. Within the changes, she included the loss of parents and friends due to evacuation, the abuse of some children by the people they were placed with, as well as having to share parents, friends, and toys by the children already in the homes where the evacuees were placed. Implicit in the above changes was the resulting restriction of personal freedom, which often occurred at a high cost to the emotional well being of both parents and children.

A third category in our data can be described as restrictions on the Jewish people and on people in concentration camps and prisons. Four of the girls included sections on Anne Frank and her family. Their focus was primarily on the restricted life the Franks lived in the secret annex. The girls noted the Franks had to avoid all windows, could not flush the toilet during the day, and had to walk quietly during the day when people were downstairs in the building. Danielle stated, "In the annex eight people lived for over two years within five small rooms most of the time. They had to tip toe around. It soon settled down to a routine. They were

not allowed to go to the toilet so they had to go before the warehouse opens at six forty five."

Concerning restriction on Jewish people, Mary noted that they could not go out in the evening, use the parks, swimming pools or public transportation. They were also made to wear a badge, a yellow star with the word 'Jew' on it. Allison reported that concentration camps were prisons and that some became extermination camps where people were murdered or worked to death. She wrote, "Concentration camps were little cold places. Everybody was crammed together with not a lot to keep them warm." Similarly, Linda maintained, "Life was exceedingly tough for Jewish children as you can imagine. They were taken away from their homes, separated from their families and forced to live in appalling condition." Once again the affective element was apparent as they reported on these restrictions of freedom. In writing about the concentration camps, Mary included a particularly emotive account of the French spy, Odette Churchill, who spent eight weeks in Karlruhe prison and after that had to spend three months and eleven days "in complete and utter darkness." Mary ended this part of her project with a quote from Odette, "In solitary confinement 24 hours a day are endless. Sometimes I felt that there was no difference between 24 hours and 24 months. The only way to escape is with your mind. After all no one can control our minds if we don't want them to."

The fourth and final category of restrictions of freedom addressed in the girls' research projects concerned those restrictions that bound the Jewish people together. Allison wrote about the Jewish dietary restrictions, the restrictions on what they could do on the Sabbath, and the separation of men and women in the synagogue. These kind of restrictions, which affirmed group identity, stand in opposition to those in the other categories which focus on limitations of personal freedom.

Women's wartime experiences. The earlier themes of empathizing with the experiences of individuals, and of restrictions on freedom cannot be arbitrarily divided from the final theme evident in the young women's projects, a focus on women's wartime experiences. The three themes intertwine and mingle in both the content and the comments made by the students about their work. At the same time the awareness

of the roles women played during the war was a clear pattern in the young girls' work that was not present in the boys' reports.

As the young women constructed their understanding of the war, they captured an understanding also of the treatment of the women during the war and they envisioned the difficulty of the roles that the women had to assume during this time. Although a survey by one female key informant, Evelyn, revealed that a majority of both females and males in the classroom believed that women had a harder time during the war, it was only the girls' projects that documented the fact that women were expected to assume the jobs left vacated by the men while they simultaneously fulfilled their roles as mothers. Linda wrote:

The jobs for the young ladies or just ladies were W.V.S. (Women's Voluntary Services) ladies. Nursing jobs, factory jobs, Women's Land Army, almost everything the male race did the females had to take over. The farming, the factories, in America the women even had to take over the baseball! On top of that they had the cooking, the cleaning, the ironing, and worrying about their children.

Other young girls similarly addressed the roles women played both at home and abroad. The following descriptions of topics addressed in the girls' projects paint portraits of women's wartime experiences that the girls recognized as valuable information to be included in their work:

- women spies languishing in "utter darkness" in prisons on the continent;
- women factory workers maintaining aircraft engines;
- women building the electric circuitry for bombs;
- women as housewives balancing the family rations for food and clothing;
- women donating their pots and pans to be turned into Spitfires to bomb the German forces;
- women as builders of bomb shelters;
- women as concerned mothers grabbing their children's gas masks and rushing to the shelters whenever the warnings sounded;

- women sending their children off on evacuation trains with buckets and spades as if they were going on a holiday;
- women as growers of vegetables to keep their children healthy and allow the farmers to grow for soldiers;
- women pilots ferrying the airplanes from the factories to the pick-up points for battle; and women as instructors training men to fly;
- women relegated to a secondary or lesser status when the men returned home as heroes;
- women as victims of the Nazi concentration camps;
- women dreading the telegram about their husbands' or sons' deaths or missing in action status;
- women afraid to speak for fear that their comments could relay information about their loved ones to a German spy;
- women learning to make do and mend; to do without new clothes and fresh fruits for themselves and their families;
- women queuing up for long hours to get little food.

One particularly original contribution to the reports focusing on women's experiences was Elizabeth's inclusion in her Poems and Songs section entitled, "Women's Work Song." It is a cumulative verse which demonstrates that the tasks done by the women kept the machines running -- even though they do not know what machine the parts they are crafting will keep working. And through their work the machines do keep running, the engines keep roaring, and enough food is grown to keep the nation fit. Through the song Elizabeth underscores that the women's tasks permeate not only all aspects of the home front but the war front as well.

Finally, it was clear from the artifacts the young women chose to incorporate into their projects that they had a deep understanding of and appreciation for the myriad tasks placed upon the women and the emotions they dealt with during this trying time. They also critically reflected on the women's plight, noting that the women were not accorded the prestige that they deserved after the war, when the heroes--the men--returned home.

The case of Morag. Although these three patterns were evident across the female key informants, one young girl, "Morag," initially

seemed to represent an anomaly in our data because of her selection of what was in this class a more male-oriented topic. Her work will be described below.

While the other girls in the class had chosen topics focusing on children's experiences during the war, the fate of the Jews during the holocaust, propaganda, and Anne Frank, Morag decided on "The Royal Air Force." Morag knew her choice was different, in fact she wanted to choose the Royal Air Force (RAF) for that reason and because then she would not be competing with friends (taken from field notes Jan. 20, May 12). Many of Morag's male classmates did end up also focusing on the RAF, however, as Morag noted in our final interview, the boys' approaches to the topic differed considerably from her own. Morag remarked, "I think they have probably done more on weapons and planes and I have done more on heroes and people in the war. Cause I wanted to find out what people had done and what people had done a lot of things in the war and the boys probably know a lot about weapons but they are presenting the same things but just in different ways. I wanted mine to be different."

In-depth analysis revealed that while Morag's topic differed from the other girls, strong similarities did exist between Morag and the other young women in terms of the thematic foci and ways of approaching the research topic. Like other female students, both Morag's product (her personal project booklet) and her process consistently portrayed her sense of the importance of people and their lives. Throughout Morag's process of investigating the Royal Air Force, she continually noted information gained from conversations with her mum and from family friends, the Smiths. When reflecting on her own questions regarding information she had come across concerning the wartime period, it was to her living sources that Morag turned for clarification. Morag noted that through these conversations she had learned of mistakes in books and had found out information she had never seen referenced in books.

Not only were people seen as valuable sources for information, it was people and their lives that also held Morag's attention as she constructed her sense of the Royal Air Force. This fact was evident first in the strong visual statement made by the pictures Morag chose to

include. The boys focusing on this topic incorporated drawings and photocopies of guns, bomb shelters, flags, planes, and submarines, but only one picture of a person, a drawing of a pilot. In contrast, every picture in Morag's report depicted people. Portraits of women pilots, artists, heroes, and women members of the auxiliary air force forcefully spoke to Morag's belief that wars were about people and their lives. Morag's written text also delineated her personal and experiential focus. Her chapters aptly illustrate this concern including titles such as "Women Pilots", "Escape from Hell Camp" (about Warrant Officer Richard Pope), "No Flying Allowed" (about the women's auxiliary air force), "Noor Ingyat Khan" (a female POW), and "Who was known as the Legless Ace?" In addition, Morag ended her report with a collection of newspaper articles focusing on the experiences of individuals during the war, explaining that they were all stories about people and what happened to them (taken from field notes, April 21). And finally, as was mentioned earlier, it was Morag who wrote on the final page of her project, "Some of the stories I've heard are horrible, I just hope there will never be a WW3" and then she signed her name. As a postscript she added, "Thanks to: Mr. and Mrs. Smith." (Taken from field notes, May 5).

Discussion

In summary, we suggest that gendered ways of knowing may impact students as they construct their own perceptions of the world through the content they study in school. The work of the young women implied a different ethical imperative from the males' research. The young women's foci were on individuals, their experiences and feelings, and the environments in which they lived. This emphasis is consistent with Gilligan's contention (1982, 1993) that women develop an ethic of care and connectedness that compels them to be contextual, to be involved in relationships and to be influenced by feelings. Males, according to Gilligan (1982, 1993), focus on the principles, the letter of the law and the hierarchy of the situation. An emphasis consistent with the data from our study indicating the young men focused on power and authority.

The young women's content and processes were also reflective of varying stages of the work of Belenky et al. (1986). First, the female

pupils relied not only on texts but also on individuals as sources for information. This process is consistent with patterns portrayed by Belenky's et al. (1986) women in the stage of received knowing. Both relied on outside authorities for information. The female pupils in our study were open to learning by listening. Although the males also sought out individuals to interview, they did not choose to incorporate any of the information they learned into their final projects. In addition, elements found in the Belenky et al. (1986) stage of subjective knowing were also evident in the girls' foci on first hand experiences as sources of knowledge. While the nature of the historical topic precluded the girls from drawing on their own experiences, it was the personal narratives of others (both oral and written) that they validated in their reports. Finally, elements of our female pupils' approaches were also consistent with the attributes noted in women operating within the category of procedural knowing. Women at this stage who are connected knowers show an orientation toward relationships and develop procedures for gaining access to other people's knowledge. They also have a capacity for empathy. The girls in our study employed interviewing strategies in order to gain information about their topics. They foregrounded people's emotions and their inquiries led them to wish dramatically that no one need ever experience such horrible wartime events again. Such patterns are clearly indicative of the types of knowledge construction representative of connected knowers in the procedural knowing stage.

Our female pupils are much younger than the women in the study by Belenky et al. (1986) and they did not demonstrate consistent patterns of any one stage described in their study. However, traces of our students' processes indicate fine threads that may provide the pattern for expanding these young women's ways of viewing truth, facts, and experience throughout their lives. Their underlying emphases on experience and their ability to value individual's accounts may provide the fertile grounding for them to move into relying on their own subjective/constructive knowing as they grow and gain in experience.

In looking at the young men's perspectives, one might consider the degree to which the female-dominated context of school may have played a role in their emphases. Young's (1999) work with preadolescent males indicates that within the societal context, hegemonic discourses of

masculinity can support boys' heterosexist display of gender within local contexts. Given that the teacher's overall thematic study was viewed through the feminine lens of children's experiences during the war, it is possible that the males may have been trying to overstate their case or perhaps trying to be different as they felt they could not compete.

From a classroom perspective, these gendered patterns in our data raise issues regarding curriculum and assessment. In this Scottish classroom, both the males' and the females' topics and approaches were accepted and validated. The self-directed nature of the project work empowered them to decide what was significant content. Learning was not defined as a set body of teacher-determined information on which students were to be tested; instead, individual students shaped learning in idiosyncratic ways as they constructed their own reality of World War II. Understanding the experiences of individuals and acquiring a body of factual information on events, weapons and artillery, were both seen as appropriate ways of knowing about a topic. Teachers wishing to honor multiple ways of knowing, then, would need to follow an approach that included participatory experiences that honored individuals' explorations and moved away from teaching texts as information to be memorized (Alvermann, 2001). In addition, from a critical literacy perspective, teachers might also wish to explore with students' notions of masculinity and femininity (Swarts, 1992; Young, 2001). Young's (2001) work with adolescent males underscores that for gender equity to ever exist, teachers must be willing to challenge existing practices of gender.

The findings from this study created for all of us a richer understanding of the epistemological differences that can exist between our male and female students as they construct their own beliefs. Thus, this work confirms the importance of recognizing the unique perspectives students may bring to knowledge construction. Through greater understanding of the relationships that exist between gender and literacy and what counts as "knowledge," we can provide the impetus for challenging our selves, our schools, and our society to value multiple ways of knowing.

References

- Alvermann, D. E. (2001). *Effective literacy instruction for adolescents*. Executive summary and paper commissioned by the National Reading Conference. Chicago, IL: National Reading Conference.
- Anders, P. L., & Evans, K. S. (1994). Relationship between teachers' beliefs and their instructional practice in reading. In R. Garner & P. A. Alexander (Eds.), *Beliefs about text and instruction with text* (pp.137-153). Hillsdale, NJ: Lawrence Erlbaum Assoc.
- Anyon, J. (1978). Elementary social studies textbooks and legitimating knowledge. *Theory and research in social education*, 6 (3), 40-55.
- Belenky, M., Clinchy, B., Goldberger, N., & Tarule, J. (1986). *Women's ways of knowing*. New York: Basic Books.
- Cunningham, J. W., & Fitzgerald, J. (1996). Epistemology and reading. *Reading Research Quarterly*, 31, 36-60.
- Fitzgerald, J. (1993). Teachers' knowing about knowledge: Its significance for classroom writing instruction. *Language Arts*, 70, 282-289.
- Gilligan, C. (1982). *In a different voice*. Cambridge: Harvard University Press.
- Gilligan, C. (1993). Joining the resistance: Psychology, politics, girls, and women. In L. Weis & M. Fine (Eds.) *Beyond silenced voices* (pp. 143-168). Albany, NY: State University of New York Press.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. New York: Aldine.
- Huberman, A. M., & Miles, M. B. (1993). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 428-444). Newbury Park, CA: Sage.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Luttrell, W. (1989). Working-class women's ways of knowing: Effects of gender, race, and class. *Sociology of education*, 62, 33-46.
- Lyons, N. (1994). Dilemmas of knowing: Ethical and epistemological dimensions of teachers' work and development. In L. Stone (Ed.) *The education feminism reader*, (pp. 195-220). New York: Routledge.
- Many, J. E., Fyfe, R., Lewis, G., & Mitchell, E. (1996). Traversing the topical landscape: Exploring students' self-directed reading-writing-research processes. *Reading Research Quarterly*, 31, 12-35.

- Perry, W. G. (1981). Cognitive and ethical growth: The making of meaning. In A.W. Chickering & Assoc. (Eds.). *The modern American college* (pp. 76 - 116). San Francisco: Jossey-Bass Publishing.
- Swarts, V. R. (1992, October). Using feminist thinking in the classroom: Discovering new ways of knowing. Paper presented at the Annual Meeting of the Speech Communication Association, Chicago, IL.
- Young, J. P. (1999). Critical literacy: Young adolescent boys talk about masculinities within a homeschooling context. *48th yearbook of the National Reading Conference* (pp. 56-73). Chicago: National Reading Conference.
- Young, J. P. (2001). Displaying practices of masculinity: Critical literacy and social contexts. *Journal of Adolescent and Adult Literacy*, 45, 4-14.

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