ABSTRACT
        Past research on political socialization has failed
to provide clear implications for educational policy or practice.
However, reconceptualizing that research using a framework derived
from cognitive psychology can reveal relationships between political
socialization and education not previously seen. In this
reconceptualization, schema or conceptual networks are the primary
vehicles for remembering and retrieving information and using that
information to solve problems. Such an analysis of previous research
reveals four points. One, the typical school curriculum presents
information in a way which does not allow the student to relate it to
existing schemata and, when appropriate, to restructure them. Two,
there are some general cognitive characteristics which need to be
taken into account in curricular formulations. These include
adolescent difficulties in decentering, perceiving reciprocity, and
coordinating different parts of their personal schemata. Three, an
active student involvement with controversial issues combined
requires them to defend various positions stimulates students'
restructuring of schemata and positively contributes to civic
education. Four, the conceptualization of social or political schema,
when linked with recent work on reading, suggests the possibility of
dealing explicitly with students' concept maps as part of
instructional methods. Asking students to construct and discuss
concept maps or diagrams of political actors and actions may be a
useful tool for increasing the complexity of their schemata. If
current research on political socialization in young people focused
on schemata and conceptual networks, it would be more useful in
improving citizenship education than it has been. (PPB)

POLITICAL SOCIALIZATION

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Research on the acquisition of political attitudes and knowledge during childhood and adolescence was published regularly from the mid-sixties through the mid-seventies by political scier ists, psychologists and social studies educators. Then for about ten years little new work appeared, leading Cook (1985) to appropriately entitle an article, "The Bear Market in Political Socialization." Within the last two years there have been several conferences and symposia on this topic. At least two will result in substantial publications.[1] Since there is also renewed interest in citizenship education, it is an appropriate time to examine the implications of political socialization research for educational policy and practice.

The purpose of this chapter is to review research in political socialization as it provides a background for enhancing citizenship education. This chapter argues, however, that past research has failed to provide clear implications for educational policy or practice. In order to make this point, a number of major studies published from 1966 to the present will be examined. Some of these studies will be reconceptualized within a framework derived from cognitive psychology, a framework in which the idea of schema, representation, or conceptual network

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[1] Orit Ichilov has edited a book based on a conference held in Israel in 1987 entitled _Political Socialization and Citizenship Education_ which will be published in 1989 by Teachers College Press; Gary Allen has edited the papers from a symposium presented in 1987 at the Society for Research in Child Development which will appear as a special section in the periodical _Human Development_ in 1989.

is important. A schema or representation may be defined as a cognitive structure which organizes previously acquired and newly received information; which has an impact on remembering and retrieving information and using it for solving problems; which may be related to attitudes. Glaser (1988) has defined schemata as "modifiable information structures that represent generic concepts stored in memory." A schema is constructed by an individual and is therefore not a faithful reflection or copy of a reality existing in the world. Cognitive psychologists usually study schemata by relatively indirect methods (for example, by asking subjects to think aloud while they solve a problem or to state the links they see between concepts).

Political scientists have studied adults' political schemata (Conover & Feldman, 1984, Lau & Sears, 1986). However, these studies of political cognition have not concentrated on young people's schemata or on processes of schemata change. As a result, the existing research on political cognition has only limited applicability for those concerned with citizenship education. This chapter will conclude with a discussion of the ways in which research using the concept of young people's political schemata can be related to citizenship education.

Brief Descriptions of Studies Summarized

In order to refer to the specific findings of a given study within several different sections of the chapter, brief descriptions are given here of the major research projects.

In 1961 a team of investigators at the University of Chicago gave questionnaires to more than 12,000 second

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to eighth graders in four major regions of the United States. Two books resulted (Hess & Torney, 1967 and Easton & Dennis, 1969). The investigators were primarily interested in measuring attitudes related to issues such as support for the government, relationships to political authority, and likelihood of political participation. The influence of the school and of factors such as the child's intelligence on socialization were emphasized.

In the mid-1960's 120 students from the 5th, 7th, 9th, and 12th grades in Ann Arbor, Michigan responded to a variety of hypothetical dilemmas in which they were asked to imagine that a group of individuals is attempting to establish a government and laws on an island in the Pacific. These data are reported by Adelson & O'Neil (1966) and Adelson, Green & O'Neil (1969). In a later addition to the study, comparable groups in Britain and Germany were interviewed. These data are summarized in Gallatin (1976).

In 1965 a team of investigators at the University of Michigan gave questionnaires to a national probability sample of more than 20,000 students and interviewed almost ten percent of these students and one or both parents. The investigators were interested in attitude correspondence between parents and children on political issues as well as in attitudes such as political efficacy (Jennings & Niemi, 1974). A second wave of this panel study in which 80% of the students were reinterviewed was conducted in 1973 and is reported in Jennings and Niemi (1981). A subsequent panel wave has been collected and preliminary data have been published (Jennings, 1987).

In 1968 approximately one-hundred and twenty Australian children from five to sixteen years of age were interviewed on a variety of topics dealing with domestic politics and international relations. The report of this study is contained in Connell (1971).

In 1971 a team of investigators, part of the multinational consortium of institutions called the International Association for the Evaluation of Education Achievement (IEA), conducted a survey of civic education in eight countries of Western Europe and the United States. The IEA Civic Education Survey paralleled other studies in subject areas like mathematics and science. The survey format included multiple choice cognitive items and a variety of attitudinal measures in various formats. Stratified random samples of schools and students were drawn. In

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the United States 3200 14-year olds and 3000 seniors in high school were tested. Some national comparisons were made, showing the U.S. to be high on attitude scales relating to a positive image of the government and sense of political efficacy and on scales measuring interest in political participation. Regression analysis was used to assess the influence of home background and various school characteristics and practices (Torney, Oppenheim & Farnen, 1975; Torney-Purta, 1984).

In the 1970's Furth and his colleagues (1980) interviewed 195 children aged 5 - 11 from three primary schools in southern England. They were questioned about the community, societal roles, money, shops, the school, the bus service, and the local Council.

In the 1970's eight hundred British children, aged 7 to 11, were engaged in small group discussions of politics. These data are reported in Stevens (1982).

In 1974 a sample of 1000 Pennsylvania high school seniors was studied using both survey and interview methodology. Cognition, affect, and participation were measured with both multiple choice and open-ended questions. Findings are reported in Sigel & Hoskin (1981).

In 1974 a group of investigators in Southern California began a longitudinal interview study of almost 250 kindegarten students, who were interviewed ten times between their school entry and their high school graduation. The data from the first five years of the study are reported in Moore, Lare, & Wagner (1985).

In the late 1970's approximately 1000 Italian children, aged 3 to 14 were given a Piagetian style interview about economic issues. The data are reported in detail in Berti & Bombi (1988), a translation of a book originally published in Italian in 1981.

In 1976-77 approximately one thousand Chicano 17-19 year olds from nine public schools in Los Angeles, San Antonio, and Albuquerque were interviewed either with surveys or an in-depth protocol. Some were re-interviewed five years later (Jankowski, 1986).

In the early 1980's two studies were conducted of knowledge of and attitudes toward international issues and global problems with high school students. One study surveyed approximately 1000 high school students in eight U.S. states (Torney-Purta, 1984) and the

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other, conducted as part of the Stanford Study and the Schools surveyed about 1500 students in Northern California (Torney-Purta & Landsdale, 1986). Regression analysis was used determine the predictors of high scorers on the cognitive tests, and some classroom observations were conducted in the second study.

In 1986 Hahn (1988) administered a questionnaire with measures such as political interest and confidence, efficacy, support for women's rights and classroom climate to nearly 1500 students from 21 schools in the U.S., Britain, Denmark, the Netherlands, and the Federal Republic of Germany. Preliminary analysis has dealt with scale development and some between-country differences. U.S. students were especially high on political efficacy, political confidence, and political trust (paralleling findings in the IEA studies).

In 1986 a national sample of 8000 17-year olds was tested with a multiple choice tests of knowledge of history (including substantial number of questions on 20th century history) through the National Assessment of Educational Progress. Results are to be found in Ravitch & Finn (1987).

These studies vary in type of methodology, size and choice of sample, and theoretical framework in which they were conceptualized. The historical time in which they were conducted influences some results, as does the country or the region of the U.S. in which they took place. The next sections of this chapter will discuss the core idea which lies behind each of the several kinds of political socialization outcomes which have been measured, first examining work which purports to measure an affect or attitude; second, examining research on cognitive outcomes defined as knowledge elements; third, examining cognitive outcomes viewed as perceptions, images or beliefs; fourth, examining cognitive outcomes relating to some sort of developmental stage (usually Piagetian), and finally presenting a

reconceptualization of some of this research in terms of cognitive psychology using concepts such as schemata and cognitive restructuring.

At titudes and Affect as Outcomes of Socialization

Research from the early 60's through the present has used the construct "attitude" to describe important outcomes of the results of the political socialization process. In some cases attitude has been used loosely to cover anything which was not a cognitive item for which a correct answer could be designated or anything which was measured on a rating scale. A somewhat more stringent criteria is appropriate. An attitude item should assess feelings about an attitude object, and these feelings should be related to self-identity, interest, motivation or potential action.

Some "attitude outcomes" studied in the political socialization literature meet these criteria, for example, national pride and generalized support for the political system. Most studies have found children and even adolescents to be positive about their national symbols, highly supportive of the political system of their country, and expressing high levels of liking and trust for political leaders, especially the President (Hess & Torney, 1967; Moore et al., 1985). Young children appear to acquire this positive orientation even in the absence of very clear ideas about what their country or government is. American adolescents continue to take pride in America and its government, although Watergate was followed by some diminution of that

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feeling. The modal response reported for high school seniors by Sigel & Hoskin (1981) to the question, "are you proud to be an American," was "proud of it most of the time, but ashamed sometimes." Explicit comparisons were sometimes made to conditions in other countries, especially lack of freedom under communism. This illustrates the extent to which national feeling may be defined by reference to other disliked countries or countries perceived as enemies.

Young people in many countries other than the U.S. express similar national feelings (for example, very positive in Israel, although considerably less positive in Finland) (Torney, Oppenheim, & Farnen, 1975). The concept of loyalty to the national and local community in the sense of willingness to sacrifice one's own interests for the common good, is stressed as an attitude of "civic virtue" by Conover, Searing, & Zinni (1938). By the criteria proposed here national feeling and willingness to sacrifice for the common good are attitudes because of the affective nature of the response.

Jankowski's (1986) interview study of Chicano adolescents assessed cognitive dimensions of responses to political ideologies before asking about affective or attitudinal responses. Respondent; were asked first what they knew about capitalism/liberal democracy, Chicano nationalism (separatism), communism, and socialism; then they were asked how they felt about each of these ideologies. There were substantial differences between the youth in three cities. In San Antonio

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students were most able to describe capitalism/liberal democracy, Jankowski concluded because of a required course on the free enterprise system. These respondents had little awareness of Chicano nationalism. In Los Angeles and Albuquerque, many knew Chicano nationalism but, usually from contacts with speakers or literature outside the school or from discussions with their parents. Many students were positive about this ideology. In contrast, capitalism/liberal democracy tended to be associated with Anglos and viewed negatively. For example, the only groups in Los Angeles who viewed capitalism/liberal democracy positively were those of high SES and those of low SES who were recent migrants hopeful about their opportunities. Those from both middle and lower SES families tended to be alienated from liberal democratic and capitalistic ideologies. This study is of interest because the author first measured the schemata of capitalism/liberal democracy which the students could articulate, following that with the attitudinal question regarding feelings about the ideology.

Another outcome which is appropriately called an attitude because of its explicit affective component 's exemplified by the Global Concern Measure, originally developed by Barrows and his colleagues for the ETS study of attitudes toward the world and used by Torney-Purta (1985) with high school students. This scale includes items such as the following: "The fact that a flood can kill 25,000 people in India is very depressing to me." Some items also relate to expressed interest in learning about

other cultures. A regression analysis found girls to have higher scores on this concern scale than boys. Other factors related to a high score were reading the international news in the newspaper, watching TV news, and participation in extra-curricular activities with an international component. Those who were more fluent in foreign language and those who had taken more foreign language courses also expressed higher levels of concern, suggesting that the experience of learning another language may increase empathy and concern for those in other countries in general (Torney-Purta, 1985).

Feelings of support for specific candidates or for the Democratic or Republican party also lie within the core meaning of attitudes proposed here. These have been very important in many socialization studies (Jennings & Niemi, 1974, 1981). Because the purpose of this review is to inform citizenship education whose hallmark in the U.S. is non-partisanship, these attitudes are not discussed in this chapter.

Responses to specific public issues such as those used by Jennings & Niemi (1974) (e.g. integration of schools or allowing Communists to hold office) are more difficult to unequivocally classify as attitudes. Much of the variation in responses on these items depends on the kind of image or concept the respondent has of institutions such as schools, groups such as Black children, or political organizations such as the Communist Party. Without inquiry about the cognitive components of those images for an individual, the positive or negative character of

an affective response is difficult to interpret.

Feelings of tolerance for those those holding beliefs different from one's own have also been included in many studies of democratic citizenship as attitudinal outcomes (Sullivan, Piereson, & Marcus, 1982; Torney, Oppenheim, & Farnen, 1975). Classifying tolerance as an attitude by the criteria of affectivity is also problematic. In fact Mueller (1988) argues that "it may be far too generous to believe there is anything like a real, tangible 'attitude about' or 'commitment to' or 'hostility toward' civil liberties." (p. 22).

The scale Support for Women's Rights (from the IEA study) included statements such as "women should have the same rights as men in every way" and "women should stay out of politics." The indirect evidence indicates that there is an affective component to this scale in the sense of a personal feeling of identification; there was a very strong tendency for females to support women's rights more than males in all nine countries (Torney-Purta, 1984). Even in countries like Finland where women's rights are well established, sex difference on these items were larger than sex differences for any other items. Hahn's more recent data (1988) shows similar trends. This set of items appears to have some attitudinal or self-identification component, probably in addition to cognitive components.

There is one set of items which has been labeled as "attitudes" in many political socialization studies which does not meet the criteria in this definition of attitudes -- the

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political efficacy scale, including items such as the following: "there are some big powerful men in the government who are running the whole thing, and they do not care about us ordinary people." Disagreeing with items such as these has been interpreted as indicating an individual's personal investment in political activity. Responses to these items appear rather to be an index of the respondent's cognitive image of the government, not an index of personal sense of efficaciousness. This interpretation of the political efficacy items as measuring the individual's view of the government rather than an attitude of self-involvement is corroborated by the IEA studies in which the political efficacy scale consistently clustered together with the image of government and did not relate to items dealing with personal interest or participation in government (Torney, Oppenh u, & Farnen, 1975). This is not to argue that there is no such thing as an attitude of political self-efficacy, but only that the items used to measure it are several steps removed from any attitudinal or affective aspects.

What is the relevance for citizenship education of the various "attitude outcomes" discussed? Support for a political party or particular candidate certainly has a strong affective component, but changing these attitudes is not a legitimate educational ai i.

Pride in country and general support for government meet the criteria for attitudes; in the United States these affective states are important for the school to promote, but two pieces of

research data should be kept in mind. First, many of these feelings are quite well established early in the school years by powerful socialization from schools, families, and media (Hess & Torney, 1967; Moore et al, 1985). Second, there is evidence from the IEA study that an overemphasis on patriotic rituals after elementary school has a counterproductive effect: frequent participation in patriotic rituals was associated with lower scores on knowledge of civics and on lower support for democratic values (Torney, Oppenheim, & Farnen, 1975).

Attitudes such as concern for others (especially those in other countries or those suffering from injustice), support for the common good, and interest in learning about situations different from the one in which one lives are important and often understressed aspects of the schools curriculum. Research on altruism or perspective taking as a kind of social cognition is relevant here; the interest dimension is, however, an important and not always well understood part of the schools' work in citizenship education.

When considering scales such as support for women's rights, tolerance and civil liberties, or sense of political efficacy, the cognitive component may be as important as the affective one. What is the individual's image of the political system, either in reality or in the ideal situation? How are the roles that women play in society and politics viewed? How are the aims of interest groups perceived? Recognizing that these aspects of socialization include both affective and cognitive structures

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actually may make the school's job easier by suggesting ways of helping the individual build images or schemata of the system which link citizens in general or women citizens in particular to political institutions. This is more likely to be successful than taking the affective approach of preaching women's equality or citizen's duty in the classroom.

In summary, several types of measures frequently labeled "attitudes" in political socialization research have been reviewed. It is argued that one of the reasons political socialization research has been relatively unimportant in influencing citizenship education is that attitudes have been too broadly construed, and studied in such a way that little guidance can be given to educational practice. In the last section of the chapter ways of connecting attitudes to cognitive structures will be explored.

Discrete Knowledge Elements as Cognitive Outcomes
of Socialization

The previous section suggested that in many political socialization studies so-called attitudes actually include an essential component which is the cognitive images of institutions and individuals who relate to those institutions. One way of looking at these cognitive elements is as relatively discrete pieces of factual information, usually measured with either multiple choice or short answer questions. Ravitch & Finn (1987) argue that there is an inadequate knowledge of history among American seventeen year olds based on their average score on a

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multiple choice test of 54.6% correct. These authors concluded with a number of recommendations to deal with what they call "a generation at risk," especially requirements for history taught continuously through the school years and a greater stress on chronological history.

The IEA study included cognitive tests of substantial length and breadth of coverage. Fourteen-year-old students in the U.S. achieved a mean score of 24.7 out of 47 items placing them in fourth rank out of eight countries (Torney, Oppenheim, & Farnen, 1975). American students tended to know relatively more about national politics and institutions than about international politics, when compared with those in other countries (Torney, 1977). Among the predictors of a high score on the cognitive test in a regression analysis were high socio-economic status of home, gender (with boys scoring higher), enrollment in an academic track, teachers' willingness to introduce controversial issues in the classroom, encouragement of students' expressions of opinion in the classroom, and infrequent practice of patriotic rituals in the classroom.

A study of international knowledge in which a 28-item multiple choice test was used with nearly 1000 students also found mean scores near 50% correct (Torney, 1985). A regression analysis showed that higher scoring students were those with higher GPA's, those who read international news in the newspapers, those who watched TV news, those who had taken more social studies courses (especially courses in international

relations, world geography, or Western Europe), and those who had visited another country. The Stanford Study and the Schools project found similar predictors for a test of knowledge of international economics and security with the additional finding that students who felt free to disagree with their teachers in class also scored higher (Torney-Purta & Landsdale, 1986).

The Sigel & Hoskin (1981) study of high school seniors included a 15-item current events test and open-ended questions asking students to idervify political issues and list government actions relating to issues. Again in this study the percentage correct is a little more than 50%; items dealing with events recently in the news were more likely to be known than other information. The average student in the mid-seventies was at least aware of a number of domestic political issues; one hundred percent mentioned Watergate, with substantial numbers also mentioning inflation, and the energy crisis.

It is possible to obtain some hints about educational processes from multiple choice tests by examining similarities among the predictors of high performance in studies conducted with different samples and methods. Where differences by gender exist, boys tended to perform better. Most important, a classroom climate which includes the discussion of controversial issues and where students are encouraged to express their own opinions, even if those opinions disagree with the opinions of the teacher, perform at higher levels than students in classrooms where teachers stress memorization of unrelated facts.

Political socialization studies which have dealt with young children have tended to ask questions in an interview format, such as "who does most to run the country?" Because these questions are administered face to face and because of appropriate sensitivity to young children's desire to please adult interviewers by giving correct answers, there is some tendency to delete the more difficult questions from interviews for the early elementary grades.

Although most studies find that adolescents are more knowledgeable than younger children, the level of correct answers on multiple choice surveys of political knowledge (both domestic and international) tends to hover around the 50-60% correct mark. That has been interpreted as indicating a very poor grasp of political issues by youth. This percentage may partially be a function of the fact that those who construct these tests choose to include some very easy items, some rather difficult items, and a majority of items of moderate difficulty. In fact, manuals on test construction often urge that most items be constructed so that forty to sixty percent of respondents answer them correctly. Those constructing surveys are not prompted to eliminate difficult questions, as are those interviewing young children. This artifact of test construction is important, since none of the tests cited here was criterion referenced (that is, designed to measure knowledge which is known to have been covered in the curriculum). Even with this caveat, however, young children or adolescents are not well informed about those things which many

educators think they should know. They may not be as deficient as some of the studies using this method of testing have suggested, however.

The tests described above have dealt primarily with pieces of knowledge tested without reference to their connection to other pieces of knowledge. Cognitive psychologists would call these "accretions to the knowledge base." In answering these questions, some students refer to organized structures of knowledge in which specific pieces of material are embedded. For example, some respondents probably carry a type of time line in their head which allows them to retrieve dates quickly. However, it is probable that most students in deciding which multiple choice answer to choose search through a set of unrelated facts learned by a rote process. "Piecemeal memory storage" is only the most basic element of what cognitive psychologists believe to be important in knowledge acquisition. Information which is organized and connected to cognitive structures is much more important, and multiple choice tests tell us little about that.

Because most multiple choice tests measure discrete knowledge elements stored in a piece-meal fashion, the applications of their results are limited. Unless the tests are referenced to the criterion of what is taught in classes (very difficult to do in the United States which lacks any central curriculum) and related to the structures in which individuals store and retrieve information, they should be used with caution.

Many U.S. school districts place a great deal of weight on

measuring educational outputs with multiple choice tests, even connecting teacher pay raises or school funding to student performance. A curriculum which is highly successful in helping students build complex conceptual structures of civic processes but which does not stress learning discrete facts about government may appear to have failed if results are measured on a multiple choice test of such factual knowledge. Any curriculum development effort in citizenship education must develop and validate methods for evaluating student and school performance which are not limited to multiple choice tests and which include the assessment of organized knowledge structures.

Perceptions and Images as
Cognitive Outcomes of Socialization

A number of political socialization studies have used structured measures to obtain information about perceptions and images of institutions rather than focussing on discrete knowledge elements. Some of these have been conducted with survey instruments, others with interviews (see also the Jankowski material on perceptions of ideology covered in the previous section).

For example, Sigel & Hoskin (1981) assessed understanding of what democracy is by asking students how they would explain this form of government to a foreign student who came from a country where democracy was not the form of government. Their answers were scored on a five point scale for sophistication. Many of the students simply repeated slogans regarding individuals'

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freedom to do as they pleased without government interference, or (to a lesser degree) rule by the people rather than by an authoritarian leader. It was the rare student who could give two or more features of democracy and relate them to each other. However, students who had a more sophisticated image of democracy were also more likely to be able to apply democratic principles in everyday problem situations.

Sigel and Hoskin also asked students about their images of how the government provides certain services or guarantees certain rights for citizens. The ranking of these services from those performed best (providing a strong national defense, giving all young people a good education, encouraging the growth of business) to those performed least well (fighting inflation, weeding out corruption in government) is an interesting index of students' images of the government.

The IEA survey dealt with images of the political power structure. The President or Prime Minister and members of Congress or the Parliament were believed to be the most influential by fourteen year olds in all of the tested European countries, followed by union leaders and rich people. Newspaper editors and radio/television commentators were rated quite low in their influence on laws and policy -- ninth or tenth out of ten in all the countries. Variation between nations was greatest in ratings given the "average person." He or she was seen as moderately influential in New Zealand, Ireland, and the United States and lacking influence in the Federal Republic of Germany.

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A score assessing the understanding that there are differences in opinion among groups in society on political issues showed the older students and boys to be more aware of political conflict. Although these questions did not have answers which could be called correct or incorrect, they do provide a characterization of the young person' view of the political process.

These findings concerning images or perceptions of democracy and of political power structures suggest the extent to which students tend to center on one meaning of a concept to the exclusion of subtleties (e.g., the concepts of democracy as relating to the adolescents' concern for being able to do what they want without interference from authority) and the extent to which they overemphasize the roles which are most familiar to them (e.g., the average citizen and not the newspaper editor) when looking at the political power structure. This "centration" is an important cognitive characteristic of young people which influences the type of citizenship education curriculum which will be successful.

Using Developmental Stages or Processes to Explain Cognitive Cutcomes of Socialization

Nearly all of the research in this field conducted by psychologists (and some of the work of sociologists and political scientists) has used the concept of stage in describing cognitive outcomes of socialization. Some of these are "weakly defined developmental approaches," merely describing political ideas to

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which older and younger students subscribe and referring to them as stages without any evidence for the characteristics which most psychologists attach to stages -- qualitative change, coherence and longitudinal evidence of progressive change without regression. "Moderately well defined developmental approaches" incorporate evidence regarding the processes by which development takes place, either in addition to or instead of focusing on stages. These approaches represent considerable advances beyond the conceptualizations of cognitive outcomes dealt with in the previous two sections and can also be integrated with the cognitive approaches utilizing schemata discussed later.

First there are a number of examples of the "weakly defined developmental approach." The results of an IEA instrument used to assess perceptions of institutions were interpreted to suggest that there are five "stages" in political socialization in 10 to 20 year olds (Torney, Oppenheim, & Farnen, 1975):

> One: Vague inarticulate notions, with emergent notions of one or two institutions (e.g., the police).
>
> Two: The "sheltered" view, in which primarily the harmonizing values and processes become established (e.g., creating a better understanding so people can live and work together).
>
> Three: An intermediate stage of growing awareness of social conflict, of economic forces, of multiple institutional roles but essentially still with a sheltered orientation.
>
> Four: The sophisticated/realistic view, with less stress on fairmindedness and understanding, awareness of both the cohesive and divisive functions of many institutions,.. of social bias, low participation, oppressive potential.
>
> Five: Scepticism about institutions and lack of belief

in their efficacy, an emphasis on unfairness.

It was not suggested that stage five represented a higher level of political maturity, but only that where it appeared the students were nearly always in the oldest group. These were merely descriptive statements characterizing the responses given by older and younger students.

Moore and his colleagues (1986), in what is also a relatively weak developmental approach, described six stages within three levels for kindergarten through fourth grade students, and extrapolated through the school years. The young person was described as progressing from an undifferentiated view, to identifying a single critical feature or function, to including more critical features and cognizing ideology. However, students in Moore's longitudinal study often regressed in "stage level." The paralleling of these stages to Piaget's preoperational, concrete, and formal operations was inferred from general similarities to the work of others and not based on independent measures of level of cognitive functioning. Although rich longitudinal data were available, they were not analyzed in a way to identify developmental processes. This is therefore a "weakly defined developmental approach."

Furth and his colleagues (1980) delineated stages in their British sample's understanding of societal institutions and also dealt with developmental processes.

> Stage 1:   Personalistic: acceptance of observed experience (e.g. with shops and bus drivers) with minimal interpretation or attempts to link information with what is already known (5 - 6 years)

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Stage 2: First Order Social Functions: differentiation applied to observed experiences, expression of playful images which allow the child to try out alternative interpretations going beyond observations. Little attempt to integrate ideas. (7-9 years).

Stage 3: Part-systems in Conflict: compensatory thinking which searches for logical and factual coherence as a response ` internal conflict, but is often satisfied with compromise solutions (10-11 years).

Stage 4: Concrete Systematic: some reversibility of thinking and some integration connected with formal logical thinking. The differences between personal and social events are appreciated. (Pre-adolescence). (source Furth, 1980 and Berti & Bombi, 1988).

Furth's framework is a "moderately well defined developmental approach." Furth's stage descriptions are not especially well formulated. However, the study is successful in its developmental aim of showing that children's thinking about social processes is not only the result of knowing less about adult ideas and not merely a copying of adult models. It is the discussion of equilibration of mental structures in explaining the child's active construction of mental images of society and the attention to "developmental experiences" which make this a "moderately well defined developmental approach." The notion of developmental experience is especially important:

> The children on their own ask questions that reveal an internal conflict and come up with a relevant answer (at least to them); they express discontent about their own opinions and correct themselves;...they expressly volunteer their gap in understanding and subsequently get excited as they discover a new insight. In response to an internal disturbance they reach out to a new balance...The social setting of these occasions (interviews) is eminently suitable to developmental experience. The children are cooperating in a conversation with another person who...takes the children's viewpoints totally seriously in a noncorrective and supportive fashion. They are like two

peers working together on a common problem (Furth, 1980, pp. 91-92).

Furth continues:

An important step in the process of equilibration is the overcoming of positive pull due to personal observations that turn out to be functionally irrelevant. (p. 95)

The role of misconceptions based on overreliance upon personal observations or naive "hunches" has recently been investigated in the field of natural science in a way paralleling this discussion of developmental processes relating to social institutions. Vosniadou & Brewer (1987) questioned children about observational astronomy, classifying their answers as reflecting either a naive phenomenological view (the earth is larger than the sun, flat, and motionless and the sun's movement causes the night/day cycle) or as reflecting a Copernican view. New information could be incorporated into a naive schema or misconception without altering it. For example, a child who was told that there is day in Europe at the same time as night in America assimilated this information into the representation of a flat earth by viewing it as a layer cake, in which a flat America was under a flat Europe; the sun dropped through the European layer to shine on America, and at night went back again.

The child who is given new information may accumulate it, either by assimilating it to an existing conceptual framework as illustrated above or by storing it in a "piecemeal" fashion relatively unconnected to previously acquired concepts or knowledge. In either case, new information does not modify

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misconceptions. A new piece of knowledge presented to the child may also result in either weak or radical <u>restructuring,</u> that is accommodation of a schema or concept. In radical restructuring there is relatively complete reorganization -- e.g., in astronomy a view of the earth as spherical and in motion.

Experience and education contribute to these restructuring processes. According to Vosniadou & Brewer, children often restructure their views of the earth when they are shown physical models and when they are involved in Socratic dialogue. This focus on dialogue parallels the description by Furth (1980) of developmental experience and relates to research which highlights the importance of active classroom discussion of political and social issues. Vosniadou & Brewer's contribution to understanding educational influences does not re ; on stages but on their recognition of important processes by which young people's schemata or concepts change or are restructured.

Connell (1971) also has a "moderately well defined developmental approach." His interviews included questions about domestic and international politics and were relatively sophisticated in using followup questions and in analyzing the data around meaningful developmental concepts. Connell describes the differences between the child's physical and social world. The child does not have direct contact with a social institution or the opportunity to manipulate it in order to see its reactions, as he or she might with a ball of clay. Adults, either in personal relationships as parents or teachers or

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through their control of the media, determine what a child sees of politics. They do not determine, however, what the child constructs of politics, since children do not simply reproduce adult ideas.

Connell delineates four "stages" and two "stances." The basic stance of young children in this domain is that politics are not problematic. Their statements are relatively "ad hoc", often inconsistent. In the framework of this chapter, these statements are related to unstable, idiosyncratic, and partial schemata or images of what the political world is like. At about the age of 9 or 10 (an important age in many of these studies) the child begins to notice political alternatives, at first relatively isolated from each other, to realize that opposing policy positions exist, to connect these contrasting positions on politics.

What stages does Connell describe for age 7 - 16?

First is the stage of intuitive thinking in which the child confuses political and non-political, twisting, chopping and fricaseeing political materials with a sublime disregard for their original status as political fact.

Second is the stage of primitive realism in which there is an identification of a distinct political world and the appearance a "task pool", a collection of ideas about what political leaders do (e.g., tell people what to do). There is little organization of ideas.

Third is the stage in which the political order is constructed by dividing the task pool, expanding concrete detail, and perceiving multiple relationships among political actors.

Fourth, is the ideological stage (not reached universally in his sample, even by the age of sixteen) in which abstract thought about political arguments is possible and society and politics are seen as wholes (Connell, 1971, p 231).

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Many of Connell's examples illustrate how children construct their own political views.

Stevens (1982) in her study of British children of seven through eleven made explicit reference to Piaget's theory, a "moderately well structured developmental stage approach." She notes that children juxtapose events because they cannot imagine an ordered sequence, cannot make mental comparisons, conceive of rules as absolute, and think egocentrically. Many of the eleven-year-olds in her study were able to connect ideas and link structures with policies in areas such as conservation, women's rights, or economics. This, she notes, parallels Piaget's characterization of concrete operational children who are able to realize that an idea has more than one aspect, that different interpretations are possible and that changes are reversible (e.g. role-occupants can be replaced). She drew the following conclusion:

> The age of approximately nine years appears to be significant in the development of political concepts. A spurt in understanding, interest and the ability to articulate ideas appears to take place. Many of them appear to arrive on a cognitive plateau where less dramatic gains and consolidation are achieved during the next two years...Between nine and ten years of age would appear to be the optimum time for the start of political education. (Stevens, 1982, p. 170.)

Berti and Bombi (1988) made a careful attempt to deal with stages and to integrate developmental processes in their study of Italian young people. Although they give generalized descriptions of stages, they argue that the child does not have a

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single overall level of reasoning in the economic sphere. Rather, there are sub-domains of understanding. For example, young children may not operate at the same stage in understanding the production of goods and the exchange of goods.

(pp. 175-185):

> Preoperatory or pre-economic period (3 - 6 years): Child sees regularities within situations which are known first hand. A script exists for the distribution of good in shops, but things which are not sold in a shop (e.g. cows) cannot be bought. There are few ideas about production; things exist because they are needed.
>
> Intuitive level, still pre-economic (6-7 years): Child sees correspondences between prices of objects and amounts paid and between remuneration and work done. Production and selling are merged and industrial activity is not well understood.
>
> Concrete operatory period (7-10 years): Pre-economic ideas are replaced by more articulated understanding which includes the exchange of non-transportable goods outside shops. There is little understanding of the relation of price to costs of production. Two unrelated economic arenas exist -- bosses and workers (work and production) and consumers and shopkeepers (buying and selling). (p 182)
>
> Formal operatory period (11-14 years): There is a single framework which incorporates work/production and buying/selling. Only with formal operations and the ability to deal with abstract notions can the child organize the different factors which contribute to the formation of prices or coordinate notions of worker-boss-owner. Public institutions are understood. "At earlier levels the words council, government, or state were ..assimilated to a very general idea of someone who commands or provides for other people; now they are taken as denoting institutions which provide collective services...The owner of the means of production is distinguished from the boss; public institutions are distinguished from private owners." (p 184)

These authors also studied the effects of an economics curriculum which relied on active participation by students, concluding that children as young as eight benefited from this

in. struction. They also identified beliefs in children that seem quite resistant to instruction, similar to the misconceptions described earlier in astronomy. For example, among the barriers to full understanding of banks' profits are the persistence of interpersonal norms of equality and reciprocity between people, making it seem unfair for a bank to charge for loans.

Berti and Bombi have also studied the effect of pairing children at lower levels of understanding with those at higher levels to ascertain the role played by conflict of perspectives. They note that conflict did produce growth in understanding, but that there were still some general cognitive prerequisites without which children had difficulty in taking advantages of exposure to other points of view.

The research of Furth, Connell, Steven, and Berti & Bombi concerning stages of political or economic understanding gives fascinating glimpses of the political world as it appears to children and how they shape their own awareness of it. However, this research also has its limitations when applied to education. First, many developmental psychologists have recently questioned whether there are inferential abilities which characterize cognitive functioning across subject areas or domains. This means that labeling a child or an age as being "at stage X" is misleading. Some researchers are even questioning the existence of homogeneous and discrete stages within limited domains such as the child's understanding of number (Gelman & Baillargeon, 1983).

Although stages have been defined by researchers in

political and economic socialization, specific age limits should not be taken too seriously as they have often been developed from very limited samples. When such age limits are defined, the mistaken implication may be drawn that biological maturation is important to this process as a factor independent of interaction with the environment. Another mistaken implication is that every eleven year old should be expected to have a specific set of skills. This places too little emphasis on individual differences.

The developmental research cited in this section is of relevance to education, however. The most basic and well supported generalization is that children are constructing their own concepts of the political world from the information which is presented to them in school and from what they see on television or hear their parents discuss. In the early elementary years these ideas about the civic domain are vague, poorly connected, and centered on one aspect of a situation. Only in middle to late adolescence do well structured and integrated images appear (and only in some students).

Some have argued that cognitive development at a relatively high level should be seen as a prerequisite to the ability to benefit from civic education. For example, it has been suggested that until a young person is at the formal operational level, one should not burden the curriculum with discussions of citizenship and politics. The developmental research cited above suggests why that is not desirable. First, even if there are

developmental stages in understanding the physical world it is not clear how these relate to understanding the social world. Second, there is a great deal of spread in the cognitive stage levels of young persons at any given age or grade level. If one waited until the majority of members of a class were clearly at the formal operational level, no citizenship education would take place in some high schools. Third, several of these researchers note that children of about ten or eleven seem especially receptive to discussions of citizenship and politics. Such discussions may stimulate aspects of their more general cognitive development as well as their understanding specific to the domain of politics. Even those who delineate stages argue for the importance of educational input through the school years (Berti & Bombi, 1988; Gallatin, 1976).

The processes of assimilation and accomodation which developmentalists in general and Piaget in particular identified have become the basis of some new approaches to understanding cognitive development and education which do not rely on delineating stages. Some recent work on cognitive restructuring has had considerable impact on the reform of science education (Carey, 1986). Almost all of the developmentally-based approaches argue for the active participation and involvement of students in the educational process. Rather than remaining with Piagetian concepts of stages which are increasingly questioned, studies of political socialization should use information processing theories in cognitive psychology and focus on

processes such as cognitive restructuring.

Using Schemata as Cognitive Outcomes

in Socialization Research

Two kinds of schemata will be highlighted in this chapter, event schemata or representations (covered in this section) and schemata of social institutions derived from hypothetical problem-solving situations (covered in the next section).

Event representations, describing sequences of actions, are of particular importance in understanding political socialization. The notion of "script" is sometimes used to describe an expected sequence of events, for example, during a visit to a restaurant or a physician's office. It is possible to see political roles, as they are understood by young people as connected with the script for an event (e.g., the policeman's role is to arrest criminals or the citizen's role is to read the newspaper and then vote).

The previous section documented that young children have vague and poorly structured representations of politics. Some of these ideas are idiosyncratic to an individual, and others are relatively common to groups of children (misconceptions held by many children in a given age range, for example). Young children have vague ideas that political leaders exert power by telling people what to do. They may believe that this influence is exerted personally in a kind of infinite personal chain of command (e.g., the President tells someone who tells someone who tells someone else, and so on). For example, the view held by

many young children that citizens as individuals can have a direct and immediate influence on government policy (e.g. by calling up the President and telling him what they think) could be interpreted as the child possessing a script for the citizen's efforts at exerting political influence which is personal and does not involve cooperation with groups. Leiser (1983) noted that young Israeli children rely on scripts for activities like shopping when they are asked questions about economics; later these scripts are reorganized into what he called conceptions, which some children can see from the point of view of several actors in an economic interaction.

One function of experience, including classroom experience, is to modify or restructure political, social and economic scripts, usually in ways which makes them more like the event schemata of informed adults. However, new information will not always cause a restructuring of a political schema. Factual information may simply be assimilated into existing schemata without changing them.

The concept of schemata has considerable potential for linking research in political socialization to educational practice. In a review of research on social studies education Armento (1986) described classrooms as settings in which both students and teachers are active constructors of meaning who cognitively organize incoming stimuli on the basis of prior knowledge and existing values. She draws the following implication: ' ny instructional method that increases students'

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macroprocessing of the content of instruction is apt to improve achievement" (Armento, 1985, p. 946); she continues to note that helpful instructional techniques include those which increase students' image-making, their relation of prior knowledge to new information, or the hierarchical system of interrelationships which they see.

Several recent studies by cognitive psychologists and by researchers specializing in cognitive processing in reading in the social studies content area emphasize the importance of student-elaborated schemata in the process of learning.

In a study by Ohlhausen and Roller (1988) 5th, 7th, and 9th graders were asked to read and underline important information in one of three versions of a social studies passage about an unknown country. The Content and Text Structure Passage included an explicit hierarchical structure in which factual material about geography (location, landforms, and climate) was presented. The Structure Only Passage included the expository text structure and signal sentences for structure but substituted nonsense words for content information. The Content Only Passage included the same factual material but put the sentences in random order. No structuring sentences, such as "we will first describe the physical geography of Melanesia," were included. As expected, the best performance was by the group given both Content and Text Structure. However, for the two youngest groups the Structure Only Passage (with nonsense words) was easier than the Content Only Passage (with meaningful words but no guides as to how to

incorporate material into structures or schemata). Clues for invoking schemata in interpr.ting information about other countries are important.

In a second study, Berkowitz (1987) trained students in using the material in texts to generate "graphic maps of concepts" such as nation. Groups trained in this way were compared to groups which studied maps for the concept of nation produced by others and to groups which practiced question answering from the text or rereading procedures. On the average a student who generated his or her own graphic representation or schema, even if it was not complete or totally accurate, showed a clear and significant advantage in recall over a student who studied "correct" concept maps produced by others or who studied the passage in other ways. This illustrates again the power of an individual's self-generated schemata and the importance of helping students to relate what is in a text actively to their existing schemata.

The approach to understanding developmental change and educational influence illustrated by Armento, Furth, and Connell has not yet been linked effectively to constructs which represent the outcomes of the process. The concept of schema is potentially such a link.

Mapping Schemata Based On
Solutions to Hypothetical Problems

A major area of research on cognitive processing has been the construction of models of problem-solving. Subjects are

asked to think-aloud while solving problems in logic or physics, thus allowing the researcher to trace the problem-solver's approach to goals and subgoals and the use of rules and justifications for solutions; graphic models can then be built of these cognitive processes.

Voss and his colleagues have analyzed the cognitive processing associated with solving ambiguously structured social science problems by novices and experts. Solutions proposed to these kinds of problems cannot be characterized as correct or incorrect, and there is much less agreement about constraints on operations than there would be in geometry (Voss, Tyler, and Yengo, 1983) In analyzing the problem-solving strategies in these think-aloud protocols, the sequence of different elements of the argument (e.g. stating a subproblem, stating a solution, evaluating a solution, stating a fact) is important. Voss notes that experts (professors) spent more time defining a problem and were more attentive to constraints upon specific solutions than novices (undergraduates). He argues that the structuring phase, in which an individual sets out goals and reaches into the knowledge base for relevant information, is an important part of the representation of a social science problem.

Although this type of analysis is of potential interest to educators, the method is difficult to use with adolescents or pre-adolescents whose problems solutions are often stated in a relatively disorganized way. Further, Voss's method of analysis gives a relatively content-free picture of respondents' thinking,

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which is not very helpful to educators who are interested in the content as well as the process of problem solving.

To meet some of these difficulties I have recently modified a think-aloud problem solving technique to collect data on hypothetical international problems. The responses can be represented in graphic models of schemata for the social, political, and economic systems as seen by adolescents. The major elements of these schemata are actors in the political system, actions in which they can engage, and constraints upon their actions. I have tested the feasibility of this methodology by interviewing adolescents participating in an educational program whose aims are to increase the accuracy, complexity, and connections present in social, political, and economic schemata. The remainder of this section presents an example of the use of this think-aloud problem-solving technique to elicit material for making graphic models of individuals' schemata.

The data were gathered through interviews regarding hypothetical international problems conducted at the Maryland Summer Center for International Studies, a two-week program for gifted and talented Maryland students aged 13-17. Following two days of lectures and readings, students were divided into six teams (Brazil, Nigeria, Mexico, the USSR, France, and Japan). Each team met in its own room which included an IBM computer linked to a central unit. Students on each team sent messages regarding policy and diplomacy to other teams over this computer system. The topics of these on-line conferences were issues such

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as North-South relations, human rights, and nuclear arms control. The aims of the program included enhancing the participants' knowledge of other countries and international problems as well as helping them to understand the perspectives of different countries. Given special importance was the aim of enhancing thinking skills, especially as the students discussed with each other the content of messages they plan to send before the computer-network was engaged to transmit them.

In my research the following hypothetical question was posed to students on the first day of the session and again ten days later:

> Imagine you are the finance minister of a developing country. The interest payment on your debt to banks in the industrialized countries is due, but there is not enough money in your treasury to pay this debt. What would you do to solve this problem. Just think aloud and say whatever comes to your mind about how you would solve this problem.

Graphic models of responses were constructed for six students assigned to the Brazilian team in 1987. To illustrate change, the graphic models drawn to represent pre-session interview responses appear on the top of the page; post responses appear on the bottom. In Figure 1, which represents the response of one Maryland adolescent, the triangles represent actors mentioned who might be approached by the finance minister and involved to solve the problem. The most frequently mentioned actors were the banks who held the loans and the governments or economies of the countries where the loans were held.

On the average, more actors and more actions were mentioned post-simulation. In particular the students who were playing on

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this Brazilian team were more likely after the simulation to propose getting together with other Southern or debtor nations to put pressure as a group on the developed countries to lighten the debt load. They were also more likely after the simulation to refer to actions that might be taken within their own economy, particularly the institution of austerity measures.

On the graphic displays (illustrated in Figure 1) the ovals are used to represent particular actions which these actors might perform or be asked to perform (e.g. the banks might be asked to reschedule your debt). Arrows are used to represent the direction of the requests. Below that, in the diamonds, are represented evaluations or constraints on these actions. No sequence of discussion is indicated in these figures.

Although no two individuals had exactly the same schemata of actors and actions, there was a high degree of similarity between the pre and post-session interviews within a given individual. This suggests that there are substantial and relatively stable individual differences in these schemata. The schemata were more complex after the simulation experience for four of the six Brazilian team members (although one was only marginally different); in one case the level of complexity was almost exactly the same; in one case the schema was less complex.

The schema of the international economic system for the individual whose response is illustrated in Figure 1 is very rudimentary at the pre-session interview. The only actions mentioned have to do with investment in another country's

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economy.   After the simulation multi-national corporations, lending institutions in other countries, and other Southern nations were mentioned in addition to another country's economy. The constraints listed were relatively rudimentary.

This figure has been presented as an example of a modeling technique which represents the complexity of actors and potential interactions in the international economic system. A schema is more complex when it involves a large number of potential actors, who are each able to perform a varied set of actions. Another aspect of schema complexity is the inclusion of relevant constraints upon actions and the recognition of connections between the potential actions performed by different actors. Only two of the six Maryland students playing on the Brazilian team connected actions of one actor with those of other actors (or with the system as a whole).

The use of a think-aloud interview responding to a hypothetical problem to produce graphic models shows considerable promise as a way to represent individual differences in the schemata of actors and actions in the international system, continuity over time in those schemata, and changes in the complexity of those schemata.   One way of defining what it means for someone to have a complex concept of a political or economic system is to say that the individual has a schema or conceptual network for connecting a variety of relevant actors, their actions, and constraints in a particular domain.   Second, these displays show cognitive restructuring as a movement from

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unconnected and unconstrained actions to collected and constrained actions. Third, the approach can be related to existing recent research on cognitive approaches to education such as those described by Armento (1986).

As further evidence for the appropriateness of schemata in studying the outcomes of political socialization or civic education, the research conducted by Adelson and his colleagues more than twenty years ago will be reconceptualized in this framework. In their research, students were presented with the hypothetical situation of a group of individuals marooned on a Pacific island and required to solve a variety of problems.

The eleven year-olds in their sample pieced together answers from relatively disconnected pieces of information and opinion. Older students gave answers which were much more integrated. There were substantial contrasts between the responses of eleven or thirteen-year-olds and those of fifteen year olds. The responses of eighteen year olds were elaborations on the types of responses given by fifteen year olds.

Gallatin describes the following levels of political thinking in the Adelson data:

> Level 1: The confused, simplistic, punitive, or concretely pragmatic response.
>
> Level 2: Transition responses, answers that express the rudiments of a political concept but remain somewhat fragmentary or personalized.
>
> Level 3: Conceptual response, answers that are phrased in terms of a political principle or ideal (Gallatin, 1980, p 352).

Level 3 responses to hypothetical dilemmas (such as deciding the

benefits of education or public health measures such as smallpox immunization) showed the ability to "speak from a coheren. view of the political order" and to refer to a "sense of community and the social contract" (Adelson et al, 1966, p. 297; Gallatin, 1976).

In the framework proposed in this chapter, these findings could be conceptualized as indicating that the older students possessed more complex schemata for the political system and political community which involved more reciprocity and more explicit constraints on actions. Adelson also noted that older students were able to relate social institutions both to the community as a whole and to the individual; in the schemata framework that means an expansion of the potential political actors to include institutions and their representatives as well as persons. Older students, according to Gallatin and Adelson, were able to trace the long-range consequences of various actions both for the political community as a whole and for the individual. In this framework, that means that they were able to see future as well as present constraints. Further, for the older respondents these constraints originated not only in the individual but in the community at large; there were more connections seen and more recognitions of the reciprocity of actions between individuals and government, meaning fewer unilateral actions by government.

In summary, the schemata framework provides a way of graphically operationalizing the difference between a diffuse

approach which does not make connections and one which is phrased in terms of connected political principles, concepts, and images.

The research of Bombi and Berti (1988) discussed in a previous section would also lend itself to schema analysis. The child's ability to distinguish actors and the actions they perform in the economic system (owner from boss, seller from producer) could be graphed using this methodology. Further, they described the young child's unconnected views of aspects of economic activity which later became connected in a system.

There are difficulties with the use of hypothetical problems to elicit the responses which are used in schema-mapping. There may be particular characteristics of the problem situation posed which influence the response. Psychologists are understandably wary of building a theory or an educational approach on responses to a single hypothetical situation or dilemma. The finance minister dilemma used as an example in this chapter may only be appropriate for students who already have high international awareness.

The connection between these cognitive responses and important attitudinal outcomes of civic education is being explored. One possibility is to think of each actor and action in the schema map as having associated with it an attitudinal "charge", either positive or negative. If one asked adolescents to deal with hypothetical dilemmas about which they felt strongly, such as Apartheid or hostage taking, one could ask about positive or negative attitudes related to each proposed

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actor and action. A second way of relating schemata to attitudes is proposed by Weinreich-Haste (1986). Affect may be aroused in a crisis situation (e.g., experiencing fear of a nuclear war). The individual may then seek schemata to deal cognitively with that affect and to channel it into behavior or action. A third alternative is to inquire how the student sees himself or herself as a political actor, what actions are possible or probable, what constraints exists, and what feelings or motivations are associated with those actions.

Although responses such as think-aloud protocols are time-consuming to collect and score, they are also very informative concerning the way in which students are actually receiving the information presented to them in the classroom. This represents a new methodology for political socialization research which can be linked to citizenship education.

Conclusions

This chapter has traced political socialization research of several types -- that which has dealt with attitudes, with discrete knowledge elements, with perceptions or images, and with developmental stages. The reasons why this research has failed to have a significant impact upon civic education have been noted. The final section of the chapter presented a reconceptualization of this research area based on the concept of schemata within the specific domain of politics. It is argued that such a conceptualization has a number of advantages if one hopes to maximize the usefulness of research.

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First, if one conceptualizes political socialization and citizenship education as processes which result in increasingly complex schemata of the political or economic system, the difficulty of producing high levels of political knowledge among young people becomes more apparent. The school curriculum presents information in a way which does not allow the student to relate it to existing schemata and, when appropriate, to restructure them. Rather, knowledge is presented in a way which results in most students accumulating unrelated pieces of information encoded in memory in a piecemeal or disconnected fashion. This is a very inefficient methods of storing information. Further, teachers have little opportunity or training to prepare them to assess the schemata relating to politics with which students enter the classroom. Without this assessment instruction cannot be tailored to those conceptions or misconceptions.

Second, this review has indicated that there are some domain general cognitive characteristics which need to be taken into account in curricular formulations. Many early adolescents are still characterized by difficulties in decentering (that is, focussing on things outside their own experience), difficulties in perceiving reciprocity (that is, seeing the perspective of others and the need for give and take of opinions), and difficulties in coordinating different parts of their schemata (that is, seeing connections between the actions of political leaders and the actions of citizens, or between the production

and distribution systems).

Third, this conceptualization helps account for the results of studies which indicate that students' active involvement in grappling with controversial issues and constructing and defending their own positions have positive effects on civic knowledge. This type of classroom experience stimulates the students to restructure their schemata of the economic and political system, just as Socratic dialogue has been found to aid in the restructuring of childrens' astronomical views.

Finally, the conceptualization of social or political schema, when linked with recent work on reading suggests the possibility of dealing explicitly with students' concept maps as part of instructional methods. As: _ng students to construct and discuss concept maps or diagrams of political actors and actions may be a useful tool for increasing the complexity of their schemata. Such methods would also include cognitive strategy training to promote active processing of material (see Cornbleth, 1985 and Armento, 1986). A citizenship education program might be organized around concept maps of increasing complexity which also made students' attitudes about their own participation as political actors a subject of discussion.

New attention is being given to political socialization research. If this work can include a study of young people's schemata or conceptual networks, it is more likely to be useful in improving citizenship education than it has been in the past.

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Schemata of Actors, Actions, and Constraints in International Debt Crisis
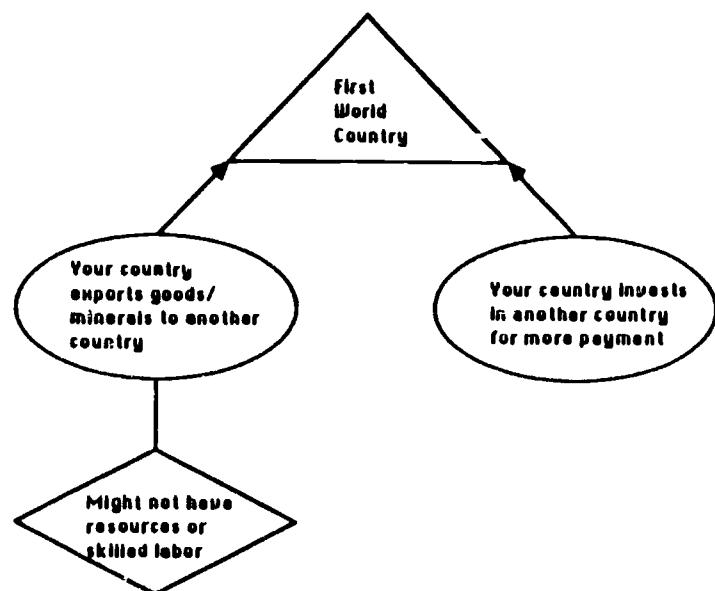## Pre-Session on Top / Post-Session on Bottom

PRE

First World Country

Your country exports goods/ minerals to another country

Your country invests in another country for more payment

Might not have resources or skilled labor

POST

Other country economies

First World Country's Banks/US & USSR

Multi- National Corporations

Other Southern Nations

Your country exports raw materials to other countries

Your country borrows from other countries

Your country has MNC invest in your country

our country binds together to establish an interest cartel

There might not be enough

Poor credit means they won't lend

Not all countries would agree

Figure 1

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