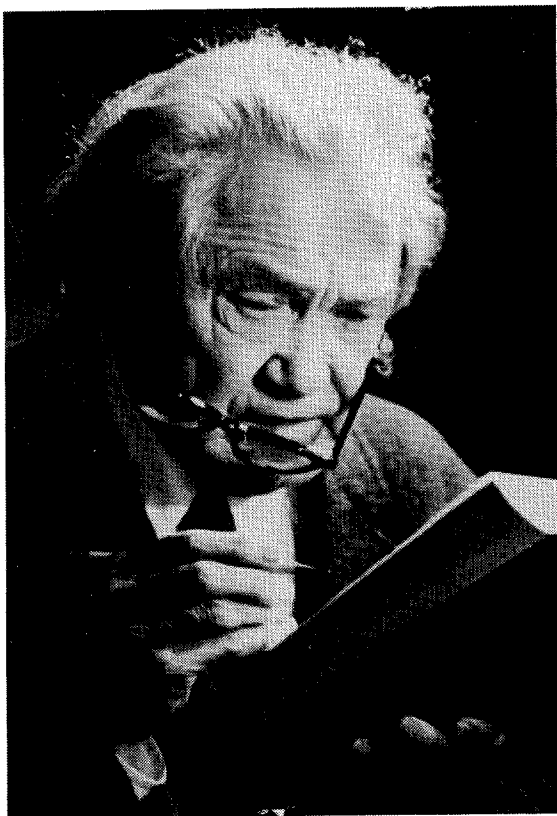


The Sixth International Conference on

Critical Thinking and Educational Reform



Sonoma State University



Henry Steel Commanger

Dean of American Historians, addressing the First International Conference
on Critical Thinking and Educational Reform

The Eighth Annual & Sixth International Conference on

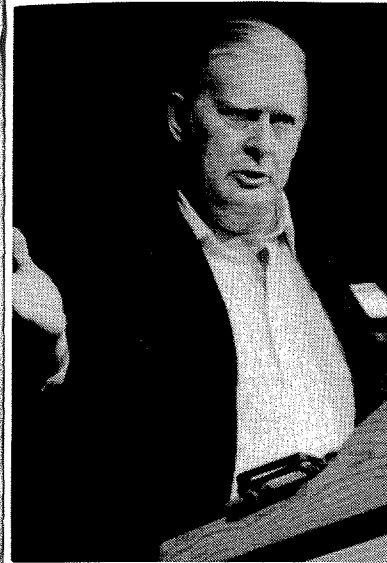
**Critical Thinking
and
Educational Reform**

August 7-10, 1988

Program
and
Abstracts

Under the Auspices
of the
Center for Critical Thinking and Moral Critique
and
Sonoma State University

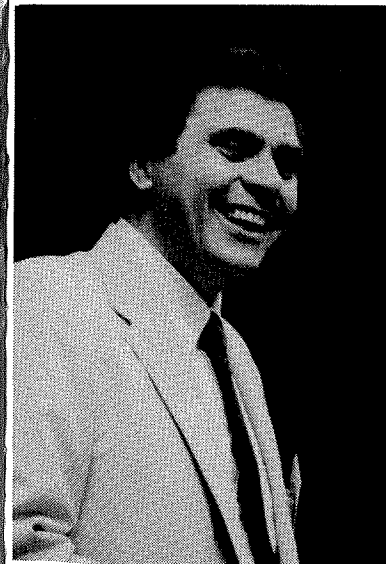
From Previous Conferences:



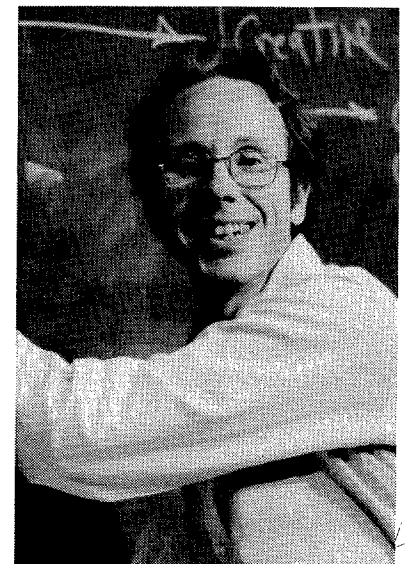
Michael Scriven



Carol Tavris



Neil Postman



David Perkins

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INTRODUCTION

Critical Thinking in North America: A New Theory of Knowledge, Learning, and Literacy

The pace of change in the world is accelerating, yet educational institutions have not kept pace. Indeed, schools have historically been the most static of social institutions, uncritically passing down from generation to generation out-moded didactic, lecture-and-drill-based models of instruction. Predictable results follow. Students, on the whole, do not learn how to work by, or think for, themselves. They do not learn how to gather, analyze, synthesize, and assess information. They do not learn how to analyze the diverse logic of the questions and problems they face and hence how to adjust their thinking to those problems. They do not learn how to enter sympathetically into the thinking of others, nor how to deal rationally with conflicting points of view. They do not learn to become critical readers, writers, speakers, and listeners. They do not learn how to use their native languages clearly, precisely, or persuasively. They do not, therefore, become "literate," in the proper sense of the word. Neither do they gain much in the way of genuine knowledge since, for the most part, they could not explain the basis for what they believe. They would be hard pressed to explain, for example, which of their beliefs were based on rational assent and which on simple conformity to what they have been told. They have little sense as to how they might critically analyze their own experience or identify national or group bias in their own thinking. They are much more apt to learn on the basis of irrational than rational modes of thought. They lack the traits of mind of a genuinely educated person: intellectual humility, courage, integrity, perseverance, and faith in reason.

Happily, there is a movement in education today striving to address these problems in a global way, with strategies and materials for the modification of instruction at all levels of education. At its foundation is an emerging new theory of knowledge, learning, and literacy, one which recognizes the centrality of independent critical thinking to all substantial learning, one which recognizes that higher order multilogical thinking is as important to childhood as to adult learning, to foundational learning in monological as in multilogical disciplines. This educational reform movement is not proposing an educational miracle cure, for its leading proponents recognize that many social and historical forces must come together before the ideals of the critical thinking movement will become a full academic reality. Schools do not exist in a social vacuum. To the extent that the broader society is uncritical so, on the whole, will society's schools. Nevertheless, the social conditions necessary for fundamental changes in schooling are increasingly apparent. The pressure for fundamental change is growing. Whether and to what extent these needed basic changes will be delayed or side-tracked, thus requiring new periodic resurgences of this movement, with new, more elaborate articulations of its ideals, goals, and methods — only time will tell.

The Heart and Core of Educational Reform

We have every reason to believe that critical thinking ought to be the heart and core of educational reform. If a person is adept at thinking critically, she is adept at gathering, analyzing, synthesizing and assessing information, as well as identifying misinformation, disinformation, prejudice and one-sidedness. A student with such skills will have the tools of life-long learning. Such skills are developed in a strong sense only when students are given extensive and continuing opportunities to construct and assess lines of reasoning from multiple conflicting points of view. Because of the human mind's spontaneous tendency to egocentric and sociocentric reasoning, it is essential that students reason dialectically or dialogically, that is, empathize with and reason within points of view they oppose as well as within those they support. If children do not grow up with a rich and varied backlog of such experiences, they will not develop genuine fair-mindedness. The time to begin this process is no later than the pre-school stage. This is where the foundation for fairness to others must be laid. It should be an essential part of the core of all schooling thereafter.

Such a goal is both cognitive and affective, for emotions and beliefs are always inseparably wedded together. When we describe ourselves as driven by irrational emotions, we are driven also by the irrational beliefs which structure and support them. When we conquer an irrational emotion through the use of our reason, we do it through the utilization of rational passions. It is only the development of rational passions that prevents our intelligence from becoming the tool of our egocentric emotions and the self-serving points of view embedded in them. A passionate drive for clarity, accuracy, and fair-mindedness, a fervor for getting to the bottom of things, to the deepest root issues, for listening sympathetically to opposing points of view, a compelling drive to seek out evidence, an intense aversion to contradiction, sloppy thinking, inconsistent application of standards, a devotion to truth as against self-interest — these are essential components of the rational person. It enables her to assent rationally to a belief even when it is ridiculed by others, to question what is passionately believed and socially sanctioned, to conquer the fear of abandoning a long and deeply-held belief. There is nothing passive, bland, or complacent about such a person. All human action requires the marshalling of human energy. All human action presupposes a driving force. We must care about something to do something about it. Emotions, feelings, passions of some kind or other are part of the root of all human behavior. What we should want to free ourselves from is not emotion, feeling, or passion per se, but irrational emotions, irrational feelings and irrational passions. A highly developed intellect can be used for good or ill at the service of rational or irrational passions.

The educational reform needed, then, is not a return to the past but the forging of a new beginning, one in which, for the first time, schools become focused on critical thinking and dialogical learning. The role of and education for both the teacher and the student needs to be reanalyzed and reconceptualized. Teachers need coursework in critical thinking as well as in its application to curriculum. They need instructors in those courses who model critical thinking. They need intensive field experience involving the observation of master teachers and supervised practice. They need to be valued as critical thinkers and given increasing professional autonomy. They need to be involved in the development of standards of practice in critical thinking. They need time to meet regularly with colleagues to observe and learn from each other's successes and failures. They need access to critical thinking materials. Such needs will not be met without funds: funds to thoroughly train staff (with long-term follow-up), funds for teacher release time, funds for staff to attend conferences, for instructional materials, for after-school committee work, etc. Quality in education will not come out of pure commitment and dedication.

On the college level, we need strategies for getting beyond narrow disciplinary and technical loyalties and commitments so typically strong in departmentally organized curricula. By spending the bulk of one's time writing and thinking within the confines of one field of knowledge, or worse, within one narrow specialty of that field, one loses sight of the place of

that part within the whole. The student then is serially tested within "parts," with little incentive to try to synthesize the parts into a whole. Such a task is not merely an "additive" one, but requires that students assess the parts for conflicts and contradictions, and use each to correct the others. Few college students make any real progress in this difficult and unrewarded task.

The problem of educational reform is, therefore, a long-term problem, requiring long-term as well as short-term strategies, and requiring a reallocation of social resources. We could make no wiser decision than to make a commitment to become a nation of educated and fair-minded people. Then we would have, not only a large pool of talent to solve our technical and scientific problems, but also a citizenry with the critical faculties and ethical dispositions to work cooperatively toward solutions to the vexing problems which increasingly threaten the very survival of humankind in the world.

HISTORY OF THE CONFERENCE

The 1988 Conference on Critical Thinking and Educational Reform reflects the development implicit in the seven annual conferences which preceded it. From the beginning, the First National Conference on Critical Thinking, Moral Education and Rationality (1981), the concept of critical thinking we have fostered was linked to broadly-based ethical concerns and not simply on more narrowly defined academic and technical needs. We began by bringing together some of the finest philosophical minds to reflect upon this crucial area of concern. Nicholas Rescher, Michael Scriven, Joseph Ullian, Julius Moravcsik, Ruth Marcus, Ralph Johnson, J. Anthony Blair, and Mary Anne Warren were among those who set us on our way. Beginning with thinkers capable of the most profound and self-critical thought was an excellent foundation to build upon. But we quickly saw that if progress were to be made, we had to expand our efforts to involve decision-makers at all levels of education. We were well aware that reports on educational reform would not reform education. Very often these reports themselves were in need of critique.

The conferences that followed the first have been expanded progressively, therefore, to include more emphasis on the crucial early years and on the forces and factors affecting the realities of teaching. We have sought to augment and unfold sound theory with models of sound practice. Hence our growing emphasis on workshops and video-tapes modelling instruction.

There have been two central problems that we have faced in bringing together K-12 and college instructors. Many college instructors and theoreticians have had little experience trying to translate the results of their research into classroom strategies at the K-12 level. And many K-12 teachers, in turn, have little sympathy for any theory that cannot immediately be so translated. Indeed, there is still alive in educational circles today the syndrome that H.L. Mencken so vividly caricatured:

The aim seems to be to reduce the whole teaching process to a sort of automatic reaction, to discover some master formula that will not only take the place of competence and resourcefulness in the teacher but that will also create an artificial receptivity in the child. Teaching becomes a thing in itself, separable from and superior to the thing taught. Its mastery is a special business, a sort of transcendental high jumping. A teacher well grounded in it can teach anything to any child, just as a sound dentist can pull any tooth out of any jaw. (Baltimore Sun, 1923)

In 1986, 280,000 California eighth-grade students took a history-social science test in which 40% of the questions addressed critical thinking skills. The California State Department of Education has developed a continuum of critical thinking skills for the 3rd, 6th, 8th, 10th, and 12th grades. A number of other states, including New York, Connecticut, Pennsylvania, South Carolina, Utah, Wisconsin, and Alaska are mandating critical thinking instruction in one form or another. The College Board has already pointed out that the ability to reason and think critically is a fundamental and necessary component of all other basic academic competencies. And, just recently, the American Federation of Teachers has published a national position paper on critical thinking.

The Center for Critical Thinking and Moral Critique has been working closely with the California State Department of Education, the College Board, numerous school districts, the Association for Supervision and Curriculum Development, the National Education Association, and the American Federation of Teachers to facilitate implementation of the highest standards of critical thinking instruction from kindergarten through the university.

It is important to recognize that we are still very much in the beginning stages of educational reform based on critical thinking instruction. There is every reason to think that the need for an annual conference in critical thinking will continue indefinitely. The deeply entrenched compartmentalization of knowledge, the increasing sophistication of propaganda and mass manipulation techniques, the continuing dominance of rote memorization and recall of facts as modes of learning, the growth of television and the electronic media, the increasing conflict of opposing ideologies in the global village, the acceleration of misunderstanding and stereotype in international politics, the growing desire for a simplistic explanation of life wherein opposing groups are identified as essentially "good" or "evil," the growing threat of nuclear holocaust — all argue for the pressing need of far-minded critical thinking skills.

ORGANIZATION OF THE CONFERENCE

We assume that all of the participants in the conference bring to it a shared general interest in critical thinking, understood as a family of interdependent intellectual skills and abilities in need of support by a complex of rational passions. We assume as well, then, that all participants share a commitment to the principle that such abilities and affective qualities can only be developed over an extended period of time and as the result of careful cultivation. We expect, therefore, that all participants will have some interest in the unique and necessary contributions of others working in diverse subject areas and at diverse educational levels.

Those who teach the early grades need to understand and appreciate the superstructure that is to be built upon the foundations they help to lay. Those who teach the middle grades need to understand and appreciate what has come before and what is to follow. And those who teach the later grades need to provide the capstones that will solidify the skills, insights, and passions that can secure life-long learning grounded in deeply internalized critical thinking skills. We assume, then, that all participants will make some effort to communicate with and build connections to others, to reach out beyond the parochialism of subject matter and grade level.

At the same time, we realize that special interest groups exist within the critical thinking movement and need to develop along a manifold of directions. We will be accommodating this need in two ways: 1) by classifying all presentations with a label that indicates possible special interest concerns (e.g. G, E, JH, HS, K-12, CC, U, etc...), and 2) by setting up an early meeting time on Tuesday morning (7:45-8:45) for groups to organize themselves into networks. (See page 125 for more information on these special interest meetings.)

Virtually all sessions have been scheduled for 1 $\frac{1}{2}$ hours to maximize opportunities for questions and discussion.

The evening social hours are intended to be an integral part of the conference. We are encouraging all of the presenters to make themselves available for the social hours so that the kinds of extended exchanges which are often not feasible in question and answer sessions might be facilitated.

The video programming is intended to augment the presentations by providing some models of instruction and what may come of it (e.g., tapes of students modelling critical thinking skills). Additionally, there will be some video programs shown which can be ordered as discussion starters for inservice training (i.e. tapes such as "Critical Thinking and History," "Critical Thinking and Science," and "Dialogical Practice, Program I").

CONFERENCE THEME: INFUSING CRITICAL THINKING INTO SUBJECT MATTER INSTRUCTION, KINDERGARTEN THROUGH GRADUATE SCHOOL

The conference theme has been selected to give participants a central concept by means of which they can understand the basic relationships between all of the various presentations. The field of critical thinking research and instruction approaches is rich and diverse, but there are common core concepts and insights which can be used to organize that diversity and render it coherent.

There is no question, for example, that there is a body of intellectual skills presupposed in critical thinking, skills which have broad application across the full range of human thought and action. Whenever humans act or think, they conceptualize or give meanings to their action and thought. These meanings or conceptualizations may be more or less clear (hence the importance of skills of clarification). These meanings organize and give expression to "information," which may be more or less accurate, well-justified, and complete (hence the importance of skills for the gathering, processing and assessing of information). They are based upon beliefs, some of which we take for granted (hence the importance of skills for locating and assessing assumptions). They build toward or entail consequences and implications (hence the importance of skills for pinning down and assessing consequences and implications). Finally, human action and thought is based upon and creates meanings within some perspective, point of view, or world view (hence the importance of skills which locate the perspective or point of view within which a given action or line of thought is developed).

But critical thinking is not just about intellectual skills, for intellectual skills can be used in a variety of ways, some of which are inconsistent with the foundational values of critical thinking: open- or fair-mindedness and a concern to apply the same rigorous standards of evidence and proof to our own thinking — especially that which serves our vested interest — as we do to others. It is easy, of course, to be "critical" when we are hostile to persons or belief systems, very difficult when we are strongly predisposed to favor persons or belief systems. Our egocentric or sociocentric biases may act as blinders to narrow our critical thinking to what are fundamentally self-serving uses of it. This problem was identified in ancient Greece by Socrates and Plato as the problem of *sophistry*. We know it in the modern world as the problem of demagoguery, propaganda, closed-mindedness and self-deception. This, of course, is not simply a matter of stupidity or of conscious evil.

What it does mean is that critical thinking skills can be used to defeat the ends of critical thinking. Or, less extreme, a person may not yet have learned how to organize and use his or her critical thinking skills with the same degree of consistency within domains where there is emotional blockage. All of the above points highlight the need to emphasize the affective dimension of critical thinking, the dimension of values, commitments, and traits of mind. This does not mean, by the way, that we need to condition or indoctrinate students in an affective way, for the critical spirit can be nurtured only while actually practicing critical thinking in some (cognitive) way. One cannot develop one's fair-mindedness, for example, without actually thinking fair-mindedly. One cannot develop one's intellectual independence, without actually thinking independently. This is true of all the essential critical thinking traits, values, or dispositions. The crucial need is to develop instruction in such a way that, for example, fairminded and independent thinking are required by the very nature of what is done. Examples of assignments and practices that foster the critical spirit and demonstrate how to infuse critical thinking into subject matter instruction, can be found in the Handbooks on Critical Thinking, K-3, and 4-6, which have been published by the Center.

Infusing Critical Thinking Into Subject Matter Instruction, K-12

The Center staff advocates a lesson plan remodelling approach to infusion of critical thinking into subject matter instruction. This approach is built into critical thinking handbooks for teachers. The basic idea behind lesson plan remodelling for critical thinking is simple. When remodelling lessons, the teacher critiques a lesson plan using certain strategies and principles and formulates a new lesson plan based on that critical process.

Lesson plan remodelling can become a powerful tool in critical thinking staff development. It is action-oriented and puts emphasis on close examination and critical assessment of what is being introduced into the classroom on a day-to-day basis. It makes the infusion of critical thinking more manageable by paring it down to the critique of particular lesson plans and to the progressive infusion of particular critical thinking principles. Lesson plan remodelling also is developmental in that, over time, teachers can remodel more and more lesson-plans, and what has been remodelled can be re-remodelled. It can provide a means of cooperative learning for teachers.

Results of this process can be collected and shared so teachers can learn from and be encouraged by what other teachers do. Dissemination of plausible remodels also provides recognition for motivated teachers. Furthermore, lesson plan remodelling forges a unity between staff development, curriculum development, and student development. Lesson plan remodelling helps avoid recipe solutions to critical thinking instruction, and integrates cognitive and affective goals into the curriculum.

Lesson plan remodelling is a long-term solution that transforms teaching incrementally as teachers develop and mature in their critical thinking insights and skills.

If teachers can develop the art of critiquing lesson plans they use and learn how to use that critique as the basis for remodelling the lesson plans, they will progressively (a) refine and develop their own critical thinking skills and insights, (b) reshape the actual or living curriculum, and (c) develop their teaching skills.

Infusing Critical Thinking Into Subject Matter Instruction at Colleges and Universities

Instruction at the college and university level is not typically built upon "lesson plans" so much as on course syllabi. All departments and professors play a role in planning how to structure their curriculum and teaching.

The Center staff makes the following recommendations:

1. **That a general statement of educational goals as they relate to critical thinking and basic intellectual skills be formulated and included in the catalog as well as a faculty handbook.** This statement might, for example, read as follows:

Becoming an Educated Independent Thinker

All students are expected to take responsibility for their own learning. This means that students are expected to learn the art of independent study and develop sound intellectual and occupational habits and skills. All work turned in should reflect care, thoroughness, and precision, should reveal command of the processes of critical reading, writing, speaking, and listening, and should demonstrate independent critical thinking. Students should not approach their classes as so many unconnected fields, each with a mass of information to be blindly memorized, but rather as organized systems for thinking clearly, accurately, and precisely about interconnected domains of human life and experience. In science classes, students should learn to think scientifically, in math classes to think mathematically, in history classes to think historically, and so on, in such a way that if later called upon to respond to an issue in one

of these domains, students will know how to begin to interpret and analyze it, to seek and organize information appropriate to it, to reason well concerning it, and to devise a clear and reasonable way to go about finding an appropriate answer or solution with respect to it. To develop into disciplined and independent critical thinkers and learners, all students should be actively involved in their own learning, looking to find in each of their classes the most basic ideas, principles, and meanings that underlie the field and to use these as a basis for analyzing, synthesizing, and assessing all of the remaining information or content covered. Students should recognize that fundamental concepts and processes must be mastered before one can successfully understand a given domain of knowledge and that it is better to learn what is basic to a field deeply and well then to rush on to half-learn and so mis-learn what is less basic. Classes will be structured so as to emphasize in-depth learning of fundamentals as a foundation for more advanced learning. Fundamental concepts and principles will continually be used as organizers for more advanced understandings.

2. **That for each area of study a statement of the ideal student be formulated.** This statement should help the students grasp in general terms what is expected of him or her as well as what some of the more basic "payoffs" are of studying in that area. As part of this statement, the general critical thinking skills list should be reformulated with the subject area in mind. The history department, for example, might formulate their goals vis-a-vis critical thinking in something like the following way:

Learning to Think Historically

All of the history courses have the goal of helping students to learn how to think historically in a critical and insightful manner. This includes learning how to identify historical viewpoints, to gather and organize historical information, to distinguish basic historical facts from historical interpretations, and to recognize historical relationships and patterns as well as the relevance of historical insight to the understanding of current events and problems.

3. **That elements of these subject area statements also be incorporated into the college catalog as well as into a student orientation brochure** to help students see the common objectives and skills that underlie all fields of study.

4. **That course descriptions and syllabi make clear how particular courses tie into these general objectives** rather than simply specify the particular specialized content of the course. This will help the student make connections between courses within a subject area as well as between subject areas. Rather than seeing only the specializations available, the student will grasp common elements, common goals, and common means to achieve them. For example, here is how an individual instructor, teaching American History, might follow up on the departmental goal statement for his particular course:

American History

The fundamental aim of the study of American history will be to aid students in thinking critically, insightfully, and knowledgeably about the American historical past, focusing on the basic issues upon which historians organize and base their research and the development of their divergent viewpoints. Students will learn how to write an historical essay in which they defend an historical interpretation based on organized, analytic historical reasoning, reflecting their careful reading of professional historians.

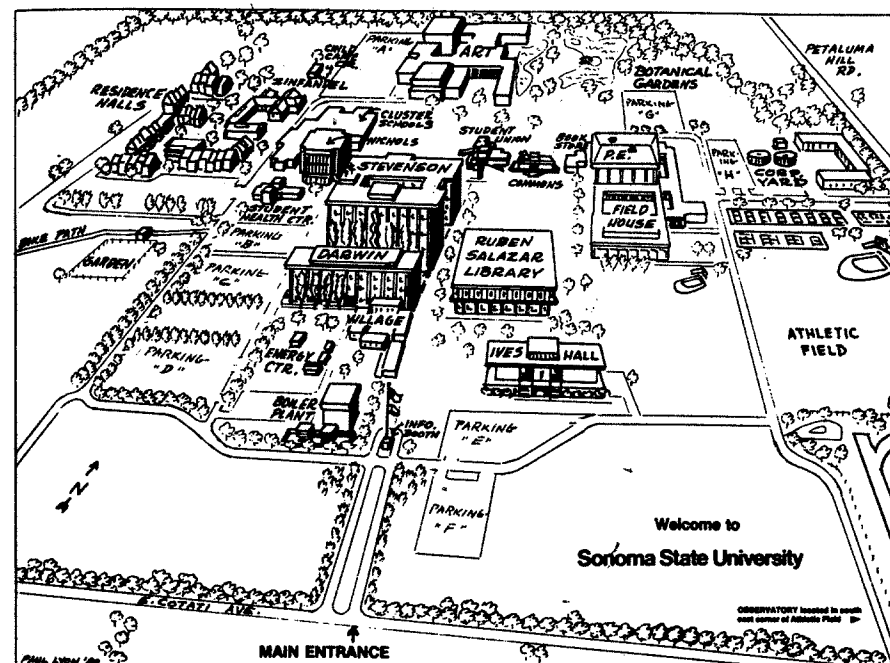
5. **That the students be informed early in the course as to how the course is being designed not only to foster subject matter mastery but also critical competencies and intellectual traits.**

6. That a general critical thinking course be developed that can serve as a "core" course for all students and focus on interdisciplinary issues and general critical thinking skills. The faculty should have input into what is covered in the course and should follow up and build upon it in each specialized subject domain.

7. That a campus-wide critical thinking committee be formed to help facilitate on-going faculty development in the area of critical thinking, including locating resource materials, disseminating classroom teaching techniques, organizing follow-up seminars from time to time, and arranging for conference participation that facilitates development in this area.

8. That a faculty critical thinking handbook be developed with submissions from many of the faculty leaders in the area of critical thinking skills. Faculty should be identified who have developed teaching and grading strategies that can be the basis for a shift of emphasis in instruction from a lecture-based, memory-based mode of instruction to one which more actively engages students in their learning and "forces" them to think their way through course material.

Map/Abbreviations



STEV = Stevenson Hall	G = General
DAR = Darwin Hall	E = Elementary
CS = Cluster Schools	JH = Junior High
NICH = Nichols Hall	HS = High School
SU: MP = Student Union Multi-Purpose Room	K-12 = Kindergarten-Grade 12
IVES: Warren = Ives Hall, Warren Auditorium	CC = Community College
	U = University

SUNDAY, AUGUST 7

8:00-9:00 am REGISTRATION
Student Union

9:00-10:15 am Richard W. Paul, Director, Center for Critical Thinking and Moral Critique
Infusing Critical Thinking into Subject Matter Instruction: The Problem of Restructuring Instruction
Quad Area G

10:30-12:00 noon Richard W. Paul
Designing an Elementary or Middle School Inservice Program for Infusing Critical Thinking into Subject Matter Instruction
Ives: Warren E, JH

Stephen Norris, Douglas Martin, Robert Ennis, Robert Swartz
Infusing Critical Thinking into Math and Science
SU: MP G

Alma M. Swartz
Facilitating Critical and Creative Thinking Dispositions in Children
DAR 108 E, G

Ralph Johnson, Perry Weddle, Ed Damer, Gerald Nosich
Informal Logic: Recent Developments in the Field
STEV 1002 CC, U

Nicholas Michelli, Wendy Oxman, Mark Weinstein
The Pre-Service Preparation of Teachers for Critical Thinking: The Montclair State College Model
CS 68 K-12, U

John Chaffee
Practical Strategies for Teaching Critical Thinking in the Disciplines
ART 108 CC, U, HS

Linda M. Phillips
Improving Inference Ability in Reading Comprehension
STEV 2049 G

Matthew Lipman
Critical Thinking and Reliance upon Criteria
STEV 3008 G

Joe Edwards
The Challenges of Keeping a Strong Staff Development/Critical Thinking Program On-Going with Enthusiasm and Energy
DAR 112 K-12

(Sunday, August 7
10:30-12:00 cont'd)

Vincent Ryan Ruggiero
Teaching Thinking Across the Curriculum: A Holistic Approach
STEV 3049 G

Howard Kahane
Critical Thinking Courses as Preparation for Adult Life in a Democratic Society
STEV 3072 G, CC, U

Kate Sandberg
Collaborative Learning: Making a Difference in Student Thinking
STEV 3046 G, CC, U

Ian Wright
Deciding
STEV 3040 E

Connie Missimer
Why Two Heads are Better Than One: Philosophical and Pedagogical Implications of a Social View of Critical Thinking
CS 20 G

John W. Thomas
Resource Guides for Self-Directed Learning: A Strategy for Promoting Critical Thinking by Focusing on Improvements in Students' Study Skills
NICH 173 K-12

Pertti Yli-Luoma
Development of Critical Thinking Skills in Physics Studies Among Pre-University Students in Nine Countries
NICH 166 U

12:00-1:30 pm LUNCH

1:30-3:00 pm Will D. Robinson, Marek Zelazkiewicz, John Hanson, Pertti Yli-Luoma, Kurt Bergling
Critical Thinking in Europe: Recent Developments
IVES: Warren G

Donald Lazere
Literature and Critical Thinking
IVES 119 HS, U, G

Charlie Blatz, Ken Bumgarner, Matthew Lipman, John Barell, Mark Weinstein, Nicholas Michelli
Critical Thinking Staff Development
SU: MP K-12

(Sunday, August 7
1:30-3:00 cont'd)

Edys S. Quellmalz
Making a Difference in Arkansas: An In-Depth Study of a Higher Order Thinking (H.O.T) Project
DAR 108 E

Gus Bagakis, Bernice Goldmark, Paul Baker, Dean Dorn, Eugene Labovitz
Infusing Critical Thinking into Social Studies
STEV 1002 G

Wendy Oxman
Project THISTLE: Thinking Skills in Teaching and Learning
CS 68 K-12, G

Sandra Black
Teaching Analytical and Critical Thinking: An Inservice Training Program
ART 108 K-12

Stephen P. Norris
The Disposition to Think Critically in Science
STEV 2049 G

Richard W. Paul
Designing a High School or College Inservice Program for Infusing Critical Thinking into Subject Matter Instruction
STEV 3008 HS, CC, U

T. Edward Damer
Mini-Critical Thinking Course: What the Fallacies Can Teach Us About Arguments
DAR 112 G

Gerald Nosich
Teaching Critical Thinking Across the Curriculum: A Unified Approach
STEV 3049 G, CC, U

Robert H. Ennis
Writing Critical Thinking Tests: Part I
STEV 3072 G

Thomas Jackson
Philosophy for Children: A Hands-On Demonstration, K-2 Level
STEV 3046 K-2

Kenneth Chuska, John Meehan
Activating Knowledge and Thinking In and Through Reading and Writing Activities
STEV 3040 K-12

(Sunday, August 7
1:30-3:00, cont'd.)

Connie Missimer
Workshop on Critical Thinking About the Nature of Evidence
CS 20 G

Jere Jones, Fred Korn
Teaching Critical Thinking in the General Curriculum: Overcoming Student Differences in Background, Preparation and Ability
NICH 173 CC, U

Bradley Bowen
Good Grief, More on Strong Sense Critical Thinking!
NICH 166 G

3:15-4:45 pm John Meehan, Ken Bumgarner, John Barell, Wendy Oxman, Peter Kneedler
Critical Thinking: What States are Doing
SU: MP G

Matthew Lipman
Critical Thinking and Philosophy for Children
DAR 108 G

Douglas Martin
Encouraging Critical Thinking in Science Laboratories
STEV 1002 7-12

Mark Weinstein
Integrating Thinking Skills into the Schools
ART 108 K-12

Jan Talbot
Think and Think Again!
CS 68 K-12

Gus Bagakis, Bernice Goldmark
Critical Thinking for Social Change
STEV 2049 K-12, G, U

Charlie Blatz
Enhancing the Use of Critical Thinking, K-12: Understanding and Designing a Schoolwide Staff Development Program
STEV 3008 K-12

Donald Lazere
Leftist Criticism of Mass Media
DAR 112 U, G

Vincent Ryan Ruggiero
"Ha! Ha! I'm Thinking"
STEV 3049 G

(Sunday, August 7
3:15 - 4:45 cont'd)

Robert H. Ennis
Writing Critical Thinking Tests: Part II
STEV 3072 G

Ralph Johnson
Is Conventional Logic Sexist? Is a Feminist Logic Needed?
STEV 3046 G

Paul Baker, Dean Dorn
Critical Thinking in the Social Studies and Social Sciences: Active Learning Strategies that Foster Literacy
STEV 3040 Grades 8-U, G

Dennis Rohatyn
The Future of Critical Thinking
CS 20 G

John K. Wilson
Developing Critical Thinking Skills with Developmental Students
NICH 173 CC

Corrinne Bedecarré
Do It-Yourself-Courses: Help Might Be Closer than You Think
NICH 166 CC, U

Hollibert E. Phillips
On Appealing to the Evidence
IVES 44 U

8:00-11:00 pm Beer and Wine Social
Dining Commons

Videotape Program
Dining Commons Alcove

MONDAY, AUGUST 8

8:45-10:15 am Nigel Dower, Rachel Lauer, James Gray
Critical Thinking and Global Problems
IVES: Warren G

David Martin, Nicholas Michelli, David Imig
Preparing Teachers for Critical Thinking: A National Perspective
SU: MP K-12, U

Clinton Vickers
Using the Mind Well: An Essential School
DAR 108 HS, G

(Monday, August 8
8:45-10:15 cont'd)

George Hanford
A Critical Connection
STEV 1002 G

Will Robinson
The Development of "Teaching Thinking" Programmes in the British Isles: A Variety of Process-Based Courses
CS 68 G

Charlie Blatz
Enhancing the Use of Critical Thinking, K-12: Matters of Perspective
ART 108 K-12

John Chaffee
Mini-Critical Thinking Course: Critical and Creative Problem-Solving
STEV 2049 G

Gerald Nosich
Teaching Critical Thinking Across the Curriculum: An Approach Through Specific Courses
STEV 3008 G, CC, U

Vincent Ryan Ruggiero
Will Thinking Instruction Succeed?
DAR 112 G

Ross Hunt
One Public School Teacher's Experience with Richard Paul's Critical Thinking Handbook in the Classroom
STEV 3049 K-8

Phyllis Berger
Teaching Critical Thinking Through the Analysis of Advertisements
STEV 3072 HS, CC, U

Maurice Finocchiaro
The History of Critical Thinking: Part I
STEV 3046 G, CC, U

Sharon Bailin
The Myths of Creativity
STEV 3040 G

Stuart Keeley
Tips for Teaching Critical Thinking: What Students Can Tell Us
CS 20 CC, U

(Monday, August 8,
8:45-10:15, cont'd.)

Marlys Mayfield
*Teaching Awareness of Feelings: Friendly Recognition of Some Blocks to
Critical Thinking*
NICH 173 G

George Collison
*Practical Strategies for Using Computer Simulations as Critical Thinking
and Problem Solving Tools in Social Studies, Science, and Mathematics*
NICH 166 Grades 5-U

10:30-12:00
noon

George Hanford, Richard Paul
*The American High School: What Needs to Be Done to Prepare Students for
College*
IVES: Warren HS, G

John Splaine
Critical Viewing: Stimulant to Critical Thinking
IVES 119 G

Lauren Coodley, Michael O'Loughlin, Judi Hirsch, Carolyn Hadley, James
Gray
Critical Thinking and Liberation
SU: MP G

Robert Swartz
*Assessing the Quality of Student Thinking: Techniques for Classroom
Teachers*
DAR 108 K-12, G

Marek Zelazkiewicz
*Social Constraints on Critical Thinking and Educational Reforms: An
International Perspective*
STEV 1002 G

John Barell
Opening the American Mind: Critical Thinking in Higher Education
CS 68 CC, U

Noreen Miller
*Strong Sense Critical Thinking for Practitioners: A Miscellany of
Experiences and Interest*
ART 108 K-12, U

Gerald Nosich
*Mini-Critical Thinking Course: Recognizing and Evaluating Misleading
Statements*
STEV 2049 G

(Monday, August 8
10:30-12:00 cont'd)

Mark Weinstein
Critical Thinking Across the Disciplines: An Ecological Approach
STEV 3008 HS, CC, U

Vivian Rosenberg
*Modifying Traditional Writing Instruction: Strategies to Facilitate
Critical Thinking*
DAR 112 G

Susan Monroe Nugent, Harold Nugent
Critical Reading: Going Beyond the Information Given
STEV 3049 HS, CC, U

Peter Kneedler
*Differences Between Girls and Boys in History-Social Science
Performance*
STEV 3072 K-12

Maurice Finocchiaro
The History of Critical Thinking: Part II
STEV 3046 G, CC, U

Frank Scardilli
*What Every Critical Thinking Educator Should Know About Law, Lawyers,
and the Tyranny of Illusion*
STEV 3040 G

Raymond Smith
*Yoking Writing Across the Curriculum and Critical Inquiry: A Cautionary
Tale and Some Replicable Models*
CS 20 G, CC, U

Stan McDaniel
Can Critical Thinking Really Do Without Formal Logic?
NICH 173 CC, U

George Collison
*Developing Skills in Definition and Analogical Reasoning: Practical
Strategies for Teachers in the Subject Areas*
NICH 166 Grades 8-U

12:00-1:30 pm LUNCH

1:30-3:00 pm Karen Jensen, Matthew Lipman, Harvey Lape, Donald Lazere, Sharon
Schwarze
Infusing Critical Thinking into Humanities
IVES: Warren K-U

(Monday, August 8
1:30-3:00 cont'd)

Lawrence Aronstein, Brendon Desilets, Robert Swartz
*Empowering Teachers to Reshape the School Curriculum to Infuse
Teaching for Critical and Creative Thinking*
IVES 119 JH, G

Donald Klein, John Feare, Jerry Emmons, Larry Dawson
*California's Recent Community College Across-the-Curriculum Critical
Thinking Requirement*
SU: MP G, CC, U

John Barell, Mark Weinstein
Reflective Supervision for Critical Thinking
DAR 108 K-12

Richard W. Paul
*Why Is It Imperative to Distinguish Weak Sense from Strong Sense
Critical Thinking? A Challenge to All Corners*
STEV 1002 G

Lee Winocur
IMPACT
CS 68 K-CC

James Toole
*The Looking Glass Program: Self-Esteem, Thinking, and the Performing
Arts*
ART 108 G

M. Neil Browne, Stuart Keeley
*Mini-Critical Thinking Course: Assignments that Stimulate Critical
Thinking*
STEV 2049 G

Angel Villarini
*Developing Skills, Concepts and Attitudes of Critical Thinking Through
Academic Subject Matter (K-College)*
STEV 3008 K-U

Zachary Seech
Philosophical Chairs: A Format for Classroom Discussion
DAR 112 JH, HS, CC, U

Judi Hirsch
*Can Teaching Critical Thinking to Retarded Performers Improve Their
School Achievement and Adjustment?*
STEV 3049 Grades 6-8

Dean Drenk
Utilizing Writing Assignments as Thinking Exercises at the College Level
STEV 3072 CC, U

20

(Monday, August 8
1:30-3:00, cont'd.)

Jack Zevin
*The Problem with Problems: "Poorly" Structured Problems as
Promoters of Critical Thinking*
STEV 3046 G

Judith Collison
*Math-Think: Critical Thinking, Math Manipulatives and Piagetian
Cognitive Stages in Elementary Mathematics*
STEV 3040 E

Lenore Langsdorf
Verbal and Visual Literacy: A Cultural Gap in Our Classrooms
CS 20 U

Peggy Dunn, James Jandrowitz, Cathleen Londino
*Mission-Process-Assessment: Implementing Critical Thinking into a
General Education Core Curriculum*
NICH 173 CC, U

Marlys Mayfield
Teaching Observation Skills: Making Perception Conscious
NICH 166 G, CC, U

Robert Allen, David Stroup
Improvements of Critical Thinking Skills in Science
STEV 1040 CC, U, G
(Apple Lab)

3:15-4:45 pm Stephen Marx, Jonah Raskin, Donald Lazeré
Critical Thinking and Literature
IVES: Warren HS, CC, U

Richard Paul, Connie Missimer, Robert Ennis, Gerald Nosich
On the Nature of Critical Thinking
SU: MP G

Rexford Brown
Six Approaches to Thoughtfulness
DAR 108 K-12

Ken Bumgarner
Designing Staff Development that Models Thinking Skills
STEV 1002 K-12

Linda Bomstad, Susan Mills Finsen
Teaching Critical Thinking Through Writing
CS 68 G, CC, U

21

(Monday, August 8
3:15-4:45 cont'd)

Joel Friedman
*Philosophy and Critical Thinking in Teacher Education: Or, How
Philosophers' Forms Might Become Teachers' Content*
ART 108 K-12

Ralph Johnson
Mini-Critical Thinking Course: Critical Thinking and Advertising
STEV 2049 G

Vincent Ryan Ruggiero
The Administrator's Role in Thinking Instruction
STEV 3008 G

Rachel Lauer
Applying Critical Thinking to International Relations and Peace Studies
DAR 112 G

Perry Weddle
Making a Good Case for X
STEV 3049 6-U, G

Greg Sarris
*Storytelling in the Classroom: Crossing Those Vexed Chasms from
Personal Narrative to Critical Discourse*
STEV 3072 K-12, G

Jerrold Coombs
Teaching Critical Concepts and Standards as Part of Subject Matter
STEV 3046 G

John DeLandsheer
Higher Level Thinking: A Basic Skill for All Students
STEV 3040 K-12

Stephen Ducat
*The Eclipse of Critical Thinking in the U.S.: The Case of the Reagan
Mythos*
CS 20 G

Judith Collison
*Evaluation of Critical Thinking Skills Using the Format for Infusion of
Thinking Skills into the Curriculum*
NICH 173 G

Nancy Kubasek
*Critical Thinking from Day One: Infusing Critical Thinking into the
Syllabus*
NICH 166 CC,U

(Monday, August 8, cont'd.)

5:30-8:00 pm Banquet Purchase tickets at Conference Desk; space limited.)
Dining Commons

8:00-11:00 pm Beer and Wine Social
Dining Commons

Videotape Program
Dining Commons Alcove

TUESDAY, AUGUST 9

7:35-8:35 am Special Interest Groups

Elementary (K-6)	STEV 3046
Middle School (7-8)	CS 20
High School (9-12)	STEV 3008
Critical Thinking Staff Development (K-12)	STEV 2049
Community College	DAR 108
4 year College and University	STEV 1002
Critical Thinking in Literature and Language Arts	DAR 112
Critical Thinking in Social Studies (including Sociology, Anthropology, History and Psychology)	CS 68
Critical Thinking in the Arts	NICH 173
Critical Thinking in Science and Math	NICH 166
Critical Thinking Assessment	STEV 3049
Critical Thinking for the Slow or Disadvantaged Learner	STEV 3040
California State Department of Education's Thinking Skill Network	STEV 3072
Learning and Tutorial Centers	ART 108
Feminist Education	IVES 44

8:45-10:15 am Richard W. Paul
*Remodelling Lesson Plans in Middle School and High School to Infuse
Critical Thinking*
IVES 119 JH, HS

Lenore Langsdorf, Joel Rudinow, Dennis Rohatyn
Critical Thinking and the Media
SU: MP G, HS, U

John Chaffee, Gerald Nosich, Patricia Foster
Critical Thinking Across the College/ University Curriculum
DAR 108 CC,U

Nicholas Michelli, Wendy Oxman, John Barell, Mark Weinstein
*The Montclair State College Institute for Critical Thinking's Approach to
Critical Thinking Across the Curriculum*
STEV 1002 CC,U

(Tuesday, August 9,
8:45-10:15, cont'd.)

Sharon Bailin
Remedial Thinking
CS 68 G

Beau Jones
The Strategic Teacher as a Critical Thinker
ART 108 K-12

Carol LaBar, Ian Wright
Mini-Critical Thinking Course: Practical Reasoning and Principle Testing
STEV 2049 G

Kevin O'Reilly
Infusing Critical Thinking and Critical Viewing into Middle and High School Social Studies: Part I
STEV 3008 JH, HS

Will Robinson
Are there General Rules for Thinking or Do We Need More "Content"?
DAR 112 G

Ogden Morse
Higher Order Thinking Skills in Domain Specific Classrooms
STEV 3049 HS

Vincent Ryan Ruggiero
Dispositions—The Neglected Aspect of Thinking Instruction
STEV 3072 G

Lauren Coodley
Activities that Promote Critical Thinking About the Nature of Education
STEV 3046 G

Sharon Scull
Can ESL Students Learn that Critical Thinking Is More than Comprehension and Memorization?
STEV 3040 G,CC

M. Neil Browne, Stuart Keeley
Practical Lessons Learned from Teaching Critical Thinking for Twenty Years
CS 20 G

Carol Steedman
The Advantages of Teaching Informal Logic Within a Decision-Making Framework
NICH 173 CC,U

(Tuesday, August 9
8:45-10:15 cont'd)

Roberta Ahlquist
Developing Our Own Voice: Alternatives to "Weak Sense" Critical Thinking
NICH 166 G

10:30-12:00
noon

Richard Paul, Vincent Ryan Ruggiero, Donald Lazere
Cultural Literacy and Critical Thinking
IVES 119 G

Greg Sarris, Ogden Morse, Bruce Ronk
Infusing Critical Thinking into Language Arts
SU: MP G

Karen Jensen
Making Connections—Critical Thinking in Foreign Language Learning
DAR 108 HS,G

John Barell
Empowering Teachers and Students Towards Critical Thinking: K-12
STEV 1002 K-12

Robert Swartz
Infusing Teaching for Critical and Creative Thinking into Standard Subject Area Instruction
CS 68 K-12

Connie DeCapite
Critical Thinking Through Thematic Units
ART 108 K-12

Paul Baker
Fostering Critical Thinking for Administrators
STEV 2049 K-12, G

Kevin O'Reilly
Infusing Critical Thinking and Critical Viewing into Middle and High School Social Studies: Part II
STEV 3008 JH, HS

William A. Dorman
Mass Media and Critical Thinking
DAR 112 G

Nigel Dower
Thinking Globally
STEV 3049 G

William Zeiger
Teaching the Dialectical Essay
STEV 3072 G

(Tuesday, August 9
10:30-12:00 cont'd)

Eugene Labovitz
Sociology, Critical Thinking and Educational Reform
STEV 3049 G

Frank Scardilli
The Critical Thinker's Guide to the Art of Negotiation and Conflict Resolution—Interpersonal to International
STEV 3040 G

Judi Hirsch, Gus Bagakis, Ann Kerwin
Taking Care of Ourselves
CS 20 G

Ellen O'Connor
The Practices of Critical Thinking: Experiential Learning Exercises for College and Graduate- Level Instruction
NICH 173 CC,U

Michael O'Loughlin
Critical Pedagogy: A Necessary Prerequisite for Critical Thinking in Schools
NICH 166 G

12:00-1:30 pm LUNCH

1:30-3:00 pm Sharon Scull, John Wilson, Heidi Kreklau
Critical Thinking Study Skills and Remediation
IVES 119 K-12

Noreen Miller, Jan Talbot, Ross Hunt, Karen Jensen, Chris Vetrano
Teaching Critical Thinking in the Strong Sense: Practitioner's Perspective
SU: MP K-12

Barbara Presseisen
Teaching Thinking and At-Risk Students
DAR 108 K-12

Richard W. Paul
Cultural Literacy and Critical Thinking: Where E.D. Hirsch Is Right, Where He is Wrong, and What is Likely to Come of His Influence
STEV 1002 G

Lynda Jerit, Marilee McGowan
Women's Thought and Creative Imagination
CS 68 G

A.J.A. Binker
Workshop on Questioning: Part I
ART 108 G

(Tuesday, August 9
1:30-3:00, cont'd.)

Donna Benedetti
Philosophical Thinking and Philosophy for Children
STEV 2049 K-12

M. Neil Browne
Seven Keys to Effective Faculty Development Workshops: Stimulating Critical Thinking Across the Curriculum
STEV 3008 CC,U

John Chaffee
Critical Literacy and Critical Thinking: Partners in Education
DAR 112 G,CC,U

Mark Battersby
Critical Thinking and Basic Reasoning Skills
STEV 3049 JH, HS, CC, U

T. Edward Damer
Constructing Moral Arguments
STEV 3072 G

John Feare
Beyond the Weak and the Strong
STEV 3049 G

Perry Weddle
Argument Formats
STEV 3040 G,CC,U

Harvey Siegel
Why Be Rational?
CS 20 G

Rosemarie Bezerra-Nader
Critical Thinking—Therapy for a World at Risk
NICH 173 K-12

Harvey Lape, Sharon Schwarze
Critical Thinking Across the Liberal Arts
NICH 166 CC,U

3:15-4:45 pm Nancy Lyons
Thinking Critically with the Body and the Arts
IVES: Warren G

Richard Paul, Marijane Paulsen, Susan Oliviera, Clifford Pew, Cheri Bishop, Donald Klein, Martin Johnson
A Staff Development Plan to Model Critical Thinking Throughout a Community College
IVES 119 CC,U

(Tuesday, August 9
3:15-4:45 cont'd)

Frank Scardilli, Marek Zelazkiewicz, Dean Dorn, Angel Villarni
*Critical Thinking in Uncritical Societies: Social Constraints Imposed on
Critical Thinking*
SU: MP G

Harvey Siegel, Donald Hatcher, Lenore Langsdorf, Dennis Rohatyn,
Maurice Finocchiaro
Educating Reason
DAR 108 CC, U

John Hanson
The Oxfordshire Skills Programme
STEV 1002 JH, HS, G

Ralph Johnson
The Whole Enchilada: An Outline of a Theory of Reasoning
CS 68 G, CC, U

A.J.A. Binker
Workshop on Questioning: Part II
ART 108 G

Martha Rapp-Haggard
Developing Critical Thinking with the Directed Reading-Thinking Activity
Stev 2049 K-12

Thomas Jackson
*Philosophy for Children and the Teaching of Values: A Hands-On
Demonstration, Junior High/High School*
STEV 3008 JH, HS

T. Edward Damer
Teaching Critical Thinking Without a Text
DAR 112 HS, CC, U

Nigel Dower
Development and Critical Thinking
STEV 3049 G

Dean Drenk
Critical Thinking/Writing in Higher Education?
STEV 3072 CC, U

Jerrold Coombs
Learning Practical Reasoning in Law-Related Studies
STEV 3049 G, CC, U

(Tuesday, August 9
3:15-4:45 cont'd)

Raymond Glienna, Sharon Scull
*Medical Dilemmas in Science and Literature: Choice, Responsibility,
Ethics and Values*
STEV 3040 CC, U, G

Vivian Rosenberg
Introducing Affective Awareness as a Critical Thinking Skill
CS 20 G

Ann Kerwin, Marlys Hearst Witte
Ignorance and Critical Thinking Across the Subject Matter Curriculum
NICH 173 G

Jeremy Horne
Directed Critical Thinking—A Survey
NICH 166 G

8:00-11:00 pm Beer and Wine Social
Dining Commons

Videotape Program
Dining Commons Alcove

WEDNESDAY, AUGUST 10

8:45-10:15 am Karen Jensen, Noreen Miller, Joe Edwards, Carolyn Sweers, Clinton
Vickers
Critical Thinking K-12: The Practitioner's Perspective
SU: MP K-12

Joel Rudinow
Logic for Children
DAR 108 JH, HS

Peter Blewett
*Rediscovering Sir Francis Bacon's Lost Continent of New Atlantis in the
Classroom: A Collaborative Learning Model*
STEV 1002 G, CC

Donald Hatcher
Critical Thinking and Ethical Values
CS 68 G

Morris Lamb
Assessing Thinking Skills in Classroom Instruction
ART 108 K-12

(Wednesday, August 10
8:45-10:15, cont'd.)

J. Robert Hanson
Styles of Thinking for Critical, Creative and Conceptual Thinking
STEV 2049 G

Bradley Bowen
Confusion or Infusion: Is Religious Education Compatible with the Critical Thinking Ideal?
STEV 3008 G

Anton Anatole, Gus Bagakis
Critical Thinking as Power
DAR 112 G

Carol LaBar
But First We Must Distinguish
STEV 3049 JH, HS

Heidi Kreklau
Teaching Critical Thinking to the Learning Disabled
STEV 3072 K-12, G

Priscilla Agnew
The Use of Examples in Critical Thinking Instruction
STEV 3046 G, CC, U

Adrian Frana, Ann Kerwin
Making the Most of Nothing: Looking Critically at Absences, Silences, Spaces, Things Ignored and Things to Be
STEV 3040 G, K-U

Richard Estes
The Problems of a Non-Critical Thinker Infusing Critical Thinking into the Classroom
CS 20 HS

Vincent Comiskey
A Course in Problem-Solving Skills for Adult Undergraduates
NICH 173 CC, U, G

10:30-12:00
noon

Robert Ennis, Stephen Norris, George Hanford
Critical Thinking Testing: Recent Developments
SU: MP G

Edward Mooney
Gender Difference and Moral Education: The Ethics of Care
DAR 108 G

William Payne
The Questionable Research Paper
STEV 1002 JH, HS

30

(Wednesday, August 10
10:30-12:00, cont'd.)

Carolyn Sweers
Socratic Teaching Revisited
CS 68 G, HS

Rosemarie Bezerra-Nader
Critical Thinking and English—An Integrated Curriculum
ART 108 K-12

J. Robert Hanson
Teaching Strategies for Promoting Conceptual Thinking (Concept Attainment and Concept Development)
STEV 2049 K-12

Donna Benedetti
C.S. Peirce's Relevance to Critical Thinking
STEV 3008 G

Judi Hirsch
Paolo Freire's Pedagogy
DAR 112 G

Sr. Eileen Rice
Idea Tasting
STEV 3049 K-12, G

Alicia Moreyra
Using Thinking Frames in Staff Development
STEV 3072 K-12

John Feare
Critical Thinking and a Theological Dimension
STEV 3046 G

Dennis Rohatyn
Media Myths
STEV 3040 G

Max Thomas
A Critical Thinking Guide to Moral Decision-Making
CS 20 G, CC

Donald Hatcher
Critical Thinking and the Ethics of Belief
NICH 173 G

12:00-1:30

LUNCH

1:30-3:00 pm

Carol LaBar, Jerrold Coombs, Ian Wright, Linda Phillips
Critical Thinking in Canada
SU: MP G

31

(Wednesday, August 10
1:30-3:00, cont'd.)

Kathleen Dean Moore
Arguments by Analogy in Legal and Moral Reasoning
DAR 108 G,U

Leslie Gottesman
Newspapers: Critical Thinking Text in the ESL Class
STEV 1002 G

Pertti Yli-Luoma
The Impact of Classroom Climate on the Development of Critical Thinking and Moral Reasoning
CS 68 G

Ruth Hardy
Identifying Learning Styles Provides Links for Critical Thinking Across the Curriculum
ART 108 K-12

Dolo Brooking
Visual Art and Critical Thinking: Analyzing the Art of Social Protest
STEV 3008 CC,U,G

Bruce Ronk
Computers and Writers: A Challenge to Critical Thinking
DAR 112 G

Carol Knight
Analyzing Arguments in History and the Social Sciences: An Interdisciplinary Problem and Approach
STEV 3049 G

Ann Kerwin, Marlys Hearst Witte
Advanced Ignorance
STEV 3072 G

Kurt Bergling
Critical Thinking and the Origin of Convinced Atheism
STEV 3046 G

Sandra Meucci
Critical Thinking in Human Services
STEV 3040 CC,U

Carolyn Hadley
Critical Thinking in Interdisciplinary Studies: Humanities and Women's Studies Course Development for Meeting Criteria for Critical Thinking
CS 20 CC,U

3:15-4:45 pm Wrap-up Session
IVES: Warren

PRESENTERS AND ABSTRACTS

Agnew, Priscilla
Professor

Department of Philosophy
Saddleback College
28000 Marguerite Parkway
Mission Viejo, CA 92692

The Use of Examples in Critical Thinking Instruction

In introducing critical thinking to students, I present abstract principles, and then illustrate these principles through the use of examples. My students have reported that the examples are often more instructive than the abstract principles. This reaction has led me to study these examples, to choose them with great care and to take note of the examples which appear to be pedagogically more effective.

In this presentation, I shall discuss the choice and use of examples and shall address the following questions: (1) Are there examples which will enable beginning students to develop critical thinking skills in the strong sense?; (2) If critical thinking is being introduced in a course other than a course in critical thinking, should examples be chosen from that field or from some other field, e.g. in a history course, should examples be chosen from history or from some other area?; and (3) How should one approach examples which arouse strong emotional reactions in the students?

In addition, I shall present exercises which have been very effective for high school and community college students. Participants are invited to share their experiences with examples and exercises.

Audience: G, CC, U

(August 10

8:45-10:15 am

STEV 3046)

Ahluquist, Roberta

Associate Professor
School of Education
San Jose State University
One Washington Square
San Jose, CA 95192

**Developing Our Own Voice:
Alternatives to "Weak Sense" Critical Thinking**

"Weak sense" critical thinking dominates the literature on critical thinking currently. In this session, educators are encouraged to go beyond *Bloom's Taxonomy* and teach critical pedagogy which enables students to develop their own voice in order to grab hold of their own education and act on it for change. "Weak sense" critical thinking is contrasted against "strong sense" critical pedagogy. Critical theorists such as Giroux, Shor and Freire are discussed and a strong argument is made to take critical thinking in the "weak sense" one step further, to practice "strong sense" critical pedagogy.

Audience: G

(August 9

8:45-10:15 am

NICH 166)

Allen, Robert D.

Dean of Instruction

Inver Hills Community College
Inver Grove Heights, MN 55075

Co-Presenter

Stroup, David J.

Assistant Professor

Department of Biology
Francis Marion College
Florence, SC 29501

College science students typically exhibit serious and enduring difficulties applying scientific concepts to solve problems and practicing analytical and critical thinking skills with these concepts. We have investigated a variety of these difficulties including the ability to draw valid conclusions, make interpretations, identify assumptions and evaluate scientific procedures and have developed instructional material and procedures to improve student skills. Detailed evaluations have revealed that students make significant improvements with appropriate instruction and practice. Instructional material includes carefully designed written exercises, video-tape material, and computer-assisted instruction. Further experiments have investigated the ability to apply concepts in Mendelian genetics and mitotic and meiotic cell division and the development of specific instructional material on these topics. Investigations will be described and results presented which indicate significant improvement of student skills. Instructional procedures and material will be demonstrated and will be available for examination by conference participants.

Audience: CC, U, G

(August 8 1:30-3:00 pm STEV 1040 Apple Lab)

Anatole, Anton

Professor

Department of Philosophy
San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132

Co-Presenter

Gus Bagakis

Professor

School of Humanities
San Francisco State University

"In the last analysis, the question of what are true and false needs must be answered by the individuals themselves, but only in the last analysis; that is, if and when they are free to give their own answer. As long as they are kept incapable of being autonomous, as long as they are indoctrinated and manipulated (down to their very instincts), their answer to this question cannot be taken as their own."

Herbert Marcuse

(Anatole, Anton, cont'd.)

In this session we will present, analyze, and criticize the "Corporate World View." We will begin by surveying the evidence that corporations, through policy-making institutes, trade associations, control of media and other devices, largely determine the intellectual-political terms of discourse in our nation.

If the practice of critical thinking doesn't begin with a recognition of this context, it is merely a deception. For, in order to recognize and think critically in the face of this all pervasive "corporate world view," students must overcome their own isolation and powerlessness. Courses in critical thinking should provide assistance in overcoming isolation and obfuscation engendered by the "corporate world view." The solution that we propose is the process described by Meiklejohn's phrase "Thinking Independently Together," which we regard as the essence of critical thinking.

Audience: G

(August 10 8:45-10:15 am DAR 112)

Aronstein, Lawrence

Principal

John Glen Middle School
Bedford, MA 01730

**Empowering Teachers to Reshape the
School Curriculum to Infuse Teaching
for Critical and Creative Thinking**

Co-Presenters

Desilets, Brendon

Teacher

John Glen Middle School

Swartz, Robert

This two-part presentation will concentrate on both the process of developing critical thinking lessons infused into subject area instruction and the lessons that are the products. A case-study of the development of a system-wide critical and creative skills framework will be coupled with a demonstration of the development of critical thinking lessons through a peer-coaching process. The way a school can support such teacher-generated work, as well as the basic guidelines utilized by groups of teachers who use peer coaching as a vehicle for such lesson development, will be discussed.

Audience: JH, G

(August 8 1:30-3:00 pm IVES 119)

Bagakis, Gus

Critical Thinking for Social Change

Co-Presenter

Goldmark, Bernice

Professor

School of Education
Sonoma State University
Rohnert Park, CA 94928

Teaching critical thinking is exciting when focused on the assumptions and values of students rather than on skills development. Concerns with assumptions and values require students to reflect and act with an awareness of the larger social context. The problem is to turn classrooms into inspiring places where groups of students learn about themselves and their connection to society. One available technique for implementing this task is the use of the metaphor as a device for stimulating thought.

This working meeting will give teachers ideas and examples for their own classrooms.

Audience: K-12, G, U

(August 7 3:15-4:45 pm STEV 2049)

Bagakis, Gus

Taking Care of Ourselves

Co-Presenters

Hirsch, Judi

Kerwin, Ann

In order to be effective models of critical thinking, teachers must find ways of coping with the isolation of an oppressive and alienating educational system. Separation and competition as well as poor working conditions and poor pay often make it difficult for us to be effective models. Join us for a discussion of ways to develop networks and find other means to empower ourselves so that we can most effectively teach our students.

Audience: G

(August 9 10:30-12:00 noon CS 20)

Bailin, Sharon

Remedial Thinking

Professor

Department of Educational
Administration and Foundations
Faculty of Education
University of Manitoba
Winnipeg, Manitoba
Canada R3T 2N2

There has recently been considerable debate about the merits of teaching critical thinking through individual courses versus infusing thinking skills into the curriculum. In this paper, I shall argue that if the way we teach in all subjects at all levels does not reflect the critical and

(Bailin, Sharon, cont'd.)

creative nature of knowledge, then attempts to teach thinking skills late in a student's career will remain courses in "remedial thinking." Even the notion of infusion seems to imply the injection of additional elements into standard curriculum, whereas I shall argue that what is necessary is a reconceptualization of what it means to learn a discipline.

Audience: G

(August 9 8:45-10:15 am CS 68)

Bailin, Sharon

The Myths of Creativity

This presentation will involve a critical examination of some of the currently popular notions of what creativity is and how it can be developed. In particular, I will argue that there are serious problems both with the notion that there is a distinct creative process of thought which is different from ordinary logical thought and with the notion that it is meaningful to speak of persons as being creative independent of their production of valuable products. The alternative view which will be proposed connects creativity with skills and rules, with critical inquiry, and with significant achievement.

Audience: G

(August 8 8:45-10:15 am STEV 3040)

Baker, Paul J.

Professor/Author

Department of Educational
Administration and Foundations
331 De Garmo Hall
Illinois State University
Normal, IL 61761-6901

Co-Presenter

Dorn, Dean

Professor

Department of Sociology
California State University, Sacramento
Sacramento, CA 95826

This workshop addresses the fundamental problem of helping students read and think at the same time. Students are taught to bring reading and thinking together as an integral process. Several thinking frames are integrated in a systematic critical thinking model that can be applied to a wide array of case materials: newspaper items, political speeches, articles from professional journals and popular magazines. This workshop will also consider the larger questions of fostering well-informed citizenship through various critical thinking strategies.

Audience: Grades 8-U, G

(August 7 3:15-4:45 pm STEV 3040)

Baker, Paul J.

Fostering Critical Thinking for Administrators

School administrators encounter an endless stream of prescriptions to solve educational problems. Yet these prescriptions are often presented in a concrete and quick-fix format that is supported by the rhetoric of conclusions. Administrators need critical thinking skills to better interpret conflicting opinions about school improvement and to establish a collegial system of problem solving with teachers. This workshop addresses these issues by articulating a critical thinking model that examines various educational topics as theory, research, and practice. These three components of educational reasoning are scrutinized as parts, relationships, and a constructed whole.

Audience: K-12, G

(August 9 10:30-12:00 noon STEV 2049)

Barell, John

Empowering Teachers and Students Toward Critical Thinking: K-12

Coordinator, ASCD Network on

Teaching Thinking & Program Coordinator

Institute for Critical Thinking

Montclair State College

204 Chapin Hall

Upper Montclair, NJ 07043

This session will introduce participants to a program that focuses upon empowering students, teachers and administrators with strategies for improving performance, achievement, and the quality of life in schools. Based upon research on staff development, the nature of thinking, and strategic planning for success, this program fosters more self-direction and independent thinking through goal-setting, infusion of problem solving/critical inquiry throughout the curriculum, and written reflection upon our own thinking processes. Participants will practice these programmatic elements.

Audience: K-12

(August 9 10:30-12:00 noon STEV 1002)

Barell, John

Opening the American Mind: Critical Thinking in Higher Education

This is a seminar designed to share the results of research with faculty at one college about the nature of thinking in the disciplines. This inquiry focused upon the nature of effective teaching, thinking in the various disciplines, and strategies for challenging students. A subsequent project has led to a more in-depth focus upon the nature of critical thinking within college disciplines—an attempt to help faculty define the nature of domain specific inquiry and how that may affect our pedagogical practices. Both projects involved interviews with faculty, classroom observations of practice, and conferences. Part of this seminar will focus upon participants' observations about domain specific inquiry and how it is reflected in their teaching.

Audience: CC, U

(August 8 10:30-12:00 noon CS 68)

Barell, John

Reflective Supervision for Critical Thinking

Co-Presenter

Weinstein, Mark

How do we empower teachers at all levels to become more reflective, observant of their own teaching behavior, and critical in the strong sense? Mark Weinstein and John Barell will model a process of teaching and post observational conferencing/coaching that focuses upon achieving the goals of self-empowerment based upon research in achievement motivation, staff development and the nature of the thinking process itself.

Audience: K-12

(August 8 1:30-3:00 pm DAR 108)

Battersby, Mark

Critical Thinking and Basic Reasoning Skills

Professor

Department of Philosophy

Capilano College

2055 Purcell Way

North Vancouver, BC

Canada V7J 3H5

Being reasonable is not all there is to being a critical thinker, but the basic rules, skills, and strategies of reasoning are what empower the critical thinker and support a questioning attitude. As the idea of infusing critical thinking instruction into all courses becomes increasingly popular, there is a danger that not enough attention will be paid to the development of these reasoning skills and rules to enable the student to deal in a critical and intelligent way with a discipline's material. Merely encouraging a questioning attitude will not enable a student to confidently resist the imposition of views and may result in a defensive and even anti-intellectual skepticism.

This session is an attempt to produce a prioritized, illustrated and relatively brief list of basic reasoning skills, the acquisition of which should enable a student to deal confidently with any discipline. By making the list prioritized—prioritized both as to importance and order of presentation—the list should serve as a useful guide to the most important skills to stress within the limits of any course. The instructor that includes a judicious selection of these skills, accompanied by a healthy emphasis on questioning and skepticism, will definitely be contributing to the development of the student's ability as a critical thinker.

Audience: JH, HS, CC, U

(August 9 1:30-3:00 pm STEV 3049)

Bedecarré, Corrinne*Doctoral Student*

General College

University of Minnesota

216 Pillsbury Drive S.E.

Minneapolis, MN 55455

Do-It-Yourself Courses: Help Might Be Closer Than You Think

Models of successful Critical Thinking courses involve discussion groups, debates, written responses and written issue analysis. Even the most committed teacher finds some of the assessment and organizational work either tedious or overwhelming. In this session, I will present guidelines for involving undergraduate teaching assistants as discussion leaders and graders. The guidelines have been developed as a result of my own four years of experience as an undergraduate Critical Thinking teacher assistant at Sonoma State University and my use of undergraduate teaching assistants in General College Philosophy courses in Minnesota. I have found that the instructor's expertise is extended, students have another ally and resource person, and the undergraduate is provided with invaluable teaching experience (and often money). We will cover practical and pedagogical concerns such as: Do the students get their money's worth with an undergraduate grader? Please bring stories of successes, failures and whatever actual constraints you would like to remedy using undergraduate teaching assistants.

Audience: CC, U

(August 7

3:15-4:45 pm

NICH 166)

Benedetti, Donna*Consultant*

Philosophy for Children

210 Kenneth Drive

Aptos, CA 95003

Philosophical Thinking and *Philosophy for Children*

Judging from the existing curricula of most elementary and secondary schools, one might think that philosophy has no place in the K-12 classroom. Those who hold such a view, however, may have a basic misconception about philosophy.

In the first part of this workshop, the nature of philosophical thinking will be examined. It will be shown that such thinking consists of two fundamental elements: a critical examination of ideas and information, and a sense of wonder about oneself and the world. Next, it shall be argued that K-12 students can think philosophically and that there are good reasons for wanting these students to engage in such thinking. Finally, a program which successfully promotes philosophical thinking in elementary and secondary school students shall be described. That program is called *Philosophy for Children*. It was developed in the 1970's by professors Matthew Lipman and Ann Sharp, of Montclair State College.

In the second part of the workshop, a demonstration of *Philosophy for Children* will be presented. Workshop participants will read a chapter from *Pixie*, one of the novels in the program written for elementary school children. They then will have the opportunity to raise questions about the passages read and engage in a philosophical discussion generated by those questions. In this way, participants will be able to get a taste of the philosophical community of

(Benedetti, Donna, cont'd.)

inquiry that the K-12 philosophy students experience. It is hoped that this demonstration will persuade workshop participants of the vital educational and social value of promoting philosophical thinking in pre-college students.

Audience: K-12

(August 9

1:30-3:00 pm

STEV 2049)

Benedetti, Donna**C.S. Peirce's Relevance to Critical Thinking**

Charles Sanders Peirce, the founder of American pragmatism, wrote extensively and seminally in many areas, including logic, science, and semiotics. However, he generally is not considered to be a philosopher who addressed issues of interest and importance to the "ordinary" person. It is thought that he certainly could not have had anything to tell us about a subject which we educators of the 1980's are becoming increasingly concerned with: critical thinking.

In this paper, I hope to dispel this myth. I shall argue that Peirce provides us with many insightful views relevant to the teaching of critical thinking today. I shall examine these views in two broad categories: (1) as reasons for thinking critically, I shall consider (a) beliefs as leading principles in inferential reasoning, and (b) beliefs as establishing habits of actions; and (2) as elements of thinking critically, I shall consider Peirce's notions of (a) the irritation of doubt, (b) abduction, (c) fallibilism, and (d) the self-correcting method. I believe this discussion will show that Peirce has much to say to the critical thinker on critical thinking.

Audience: G

(August 10

10:30-12:00 noon

STEV 3008)

Berger, Phyllis*Professor*

Department of Philosophy

University of San Francisco

Ignatian Heights

San Francisco, CA 94117-1080

Teaching Critical Thinking Through the Analysis of Advertisements

Advertisements are a fruitful source of study from a critical thinking perspective. Not only do they promote immediate student interest, but they also foster active involvement in the critical thinking process by cultivating an awareness of everyday obstacles to independent inquiry and autonomous decision-making. This workshop will focus on political, product, and service ads and explore their attempts to persuade viewers to believe, buy or act in certain ways. Participants will have the opportunity to view and analyze numerous slides of ads illustrating obstacles to critical thinking in American popular culture.

Audience: HS, CC, U

(August 8

8:45-10:15 am

STEV 3072)

Bergling, Kurt
Associate Professor
Department of Theology
University of Uppsala
P.O. Box 1604
S-751 46 Uppsala, SWEDEN

**Critical Thinking and the Origin of
Convinced Atheism**

A psychological study based on a sample of 591 self-reported convinced atheists 18-75 years of age from 16 European countries is reported. The findings are interpreted from two alternative viewpoints (1) a cognitive view assuming logical thinking as the basis of atheism, and (2) a cybernetic view assuming communication as the origin of atheism. The relation between communication theory and critical thinking is discussed.

Audience: G

(August 10 1:30-3:00 pm STEV 3046)

**Bezerra-Nader, Rosemarie Critical Thinking—Therapy for a
World at Risk**

*Lecturer, California State
University, Fresno &
Teacher, Edison-Computech School, Fresno*

7645 N. DeWolf
Clovis, CA 93612

Participants will recognize that, unlike many special programs in education, critical thinking offers concrete and immediate strategies for counteracting factors which are known to contribute to a poor self-image, substance abuse, and teenage suicide. The strategies presented can be easily and inexpensively adapted to any content area. The positive and powerful impact critical thinking can have in the intellectual and personal lives of students and adults will become apparent.

Audience: K-12

(August 9 1:30-3:00 pm NICH 173)

**Bezerra-Nader, Rosemarie Critical Thinking & English—An
Integrated Curriculum**

Participants will be given specific methods for integrating critical thinking skills into English classes. Topics will include: literature, term paper writing on controversial issues, using analogies in writing, and the use of student-made video tapes. Handouts will be given.

Audience: K-12

(August 10 10:30-12:00 noon ART 108)

Binker, A.J.A.
Author/Research Assistant
Center for Critical Thinking
and Moral Critique
Sonoma State University
Rohnert Park, CA 94928

Workshop on Questioning: Parts 1 and 2

This three-hour workshop will focus on questioning that fosters strong sense critical thinking—questions that probe and clarify reasons, concepts, evidence, assumptions, implications; that distinguish and explore different perspectives; that allow students the opportunity to better understand and develop their ideas and the ideas of others. Situations in which various questioning techniques can be used will be discussed. Possible follow-up assignments and activities will be discussed. The workshop will have the following structure: introduction; modeling (in which Jill Binker will model techniques by questioning participants on the topic of education); discussion; practice (in which pairs of participants will question each other); discussion.

Audience: G

(August 9 1:30-3:00 pm ART 108)
(August 9 3:15-4:45 pm ART 108)

**Black, Sandra Teaching Analytical and Critical
Thinking: An Inservice Training
Program**

Consultant
Cognitive Skills Development Associates
P.O. Box 468
St. Augustine, FL 32085

This session summarizes the content of an inservice training series on analysis skills and critical thinking instruction. Examples of direct instruction lessons, as well as instructional methods utilizing analysis and critical thinking clarifying commonly held definitions of these skills, will be given. This theory-into-practice session combines direct instruction techniques of Black and Beyer with instructional methods recommended by Hilda Taba and Richard Paul.

Audience: K-12

(August 7 1:30-3:00 pm ART 108)

Blatz, Charlie
Visiting Associate Professor
Department of Educational Policy
Studies

University of Illinois, Urbana-Champaign
360 Education Building
1310 South Sixth Street
Champaign, IL 61820

**Enhancing The Use of Critical Thinking,
K -12: Understanding and Designing
a Schoolwide Staff Development
Program**

A concern with enhancing the use of critical thinking K-12 begins with a concern to clarify one's general and subject matter class goals. It then proceeds through the identification, introduction and practice of elements of critical thinking necessary to achieve these goals. This

(Blatz, Charlie, cont'd.)

session talks about what this process suggests for conceptualizing and designing a school-wide (content-driven) staff development program of critical thinking enhancement. Goals, objectives, needed activities and a possible timetable will be discussed.

Audience: K-12

(August 7 3:15-4:45 pm STEV 3008)

**Blatz, Charlie Enhancing The Use of Critical Thinking,
K-12: Matters of Perspective**

A concern with enhancing the use of critical thinking K-12 begins with a concern to clarify one's general and subject matter class goals. It then proceeds through the identification, introduction and practice of elements of critical thinking necessary to achieve these goals. This session talks about this process, focusing in particular on understanding and using the reasoning of taking a perspective. Lesson plan sketches, K-12, will be reviewed.

Audience: K-12

(August 8 8:45-10:15 am ART 108)

**Blewett, Peter Rediscovering Sir Francis Bacon's Lost
Continent of New Atlantis in the
Classroom: a Collaborative Learning
Model**

Associate Professor

Department of History

University of Alaska

2533 Providence Drive

Anchorage, AK 99508

A new paradigm of mind and learning is emerging and calls for radically different modes of classroom instruction. In this session, a model for collaborative learning is presented based on Sir Francis Bacon's classic triad of careful reading, dynamic discussing, and precise writing. Visualizing or imaging adds a fourth dimension of mind to the model. This collaborative learning model integrates cognitive, affective, intuitive and psycho-motor facets of mind in a holistic process of critical and creative thinking.

Audience: G, CC

(August 10 8:45-10:15 am STEV 1002)

Bomstad, Linda

Professor/Co-Editor, Critical

Thinking News

Department of Philosophy

California State University, Sacramento

6000 J Street

Sacramento, CA 95819

**Teaching Critical Thinking Through
Writing**

Co-Presenter

Finsen, Susan Mills

Professor/Coordinator, Critical Thinking

Program

Department of Philosophy

California State University, San Bernardino

5500 State College Parkway

San Bernardino, CA 92407

Participants in this workshop are invited to explore ways that longer written assignments can: (1) help students develop critical attitudes, (2) encourage strong sense critical thinking, and (3) provide interesting and familiar contexts for practicing the logical skills usually introduced in critical thinking courses. In addition, we will discuss the practical difficulties of incorporating writing assignments into standard critical thinking courses. Two concrete models will be presented. Handouts will be distributed.

Audience: G, CC, U

(August 8 3:15-4:45 pm CS 68)

Bowen, Bradley

Doctoral Student of Philosophy

734 Elkus Walk #201

Goleta, CA 93117

**Confusion or Infusion: Is Religious
Education Compatible with the Critical
Thinking Ideal?**

What is religion? What is religious education? To what extent, if any, is critical thinking compatible with religion and religious education? In this session, I will discuss historical background and conceptual groundwork needed to properly relate critical thinking to religion and religious education. I will also outline my conception of a religious education that would incorporate the central principles of the critical thinking ideal.

Audience: G

(August 10 8:45-10:15 am STEV 3008)

Bowen, Bradley

**Good Grief, More on Strong-Sense
Critical Thinking!**

In this session, I will discuss various recent criticisms of Dr. Richard Paul's conception of critical thinking. I shall present a qualified defense of Dr. Paul's position, attempt to clarify

(Bowen, Bradley, cont'd.)

the issues raised by critics and present an overview of the conflicting positions. My presentation will focus on last year's panel discussion of "strong-sense" critical thinking and on recent criticisms made by Dr. Harvey Siegel.

Audience: G

(August 7 1:30-3:00 pm NICH 166)

Brooking, Dolo

Professor

Arts Administration Program
School of Humanities and Fine Arts
California State University, Dominguez Hills
Carson, CA 90747

**Visual Art and Critical Thinking:
Analyzing the Art of Social Protest**

A humanities-oriented arts course for a class of forty upper division students, expecting to be bored and from disciplines across the University, has evolved into a multi-dimensional approach to learning. Based upon the Great Books approach to inquiry and Bloom's Taxonomy of Learning, the course includes interactive discussions, field trips, group presentations, and take-home, problem-solving exercises. An historical perspective of the art of social protest, supported by analytical experiences, introduces cultural literacy and understanding of humankind's lengthy struggle for peace and justice. Student evaluations most frequently cited critical thinking, the ability to analyze an art work, and question-asking techniques as the three most important skills learned.

Audience: CC, U, G

(August 10 1:30-3:00 pm STEV 3008)

Brown, Rexford

Director

Policy and the Higher Literacies
Education Commission of the States Project
1860 Lincoln Street, Suite 300
Denver, CO 80295

Six Approaches to Thoughtfulness

With a grant from the John D. and Catherine T. MacArthur Foundation, ECS has been exploring relationships between policy and efforts to make students more thoughtful in six school districts located in the Mississippi delta, urban Pennsylvania, southern California, the Navajo Nation, the urban midwest and Ontario, Canada. Researchers have been asking: What are the districts' policy intentions with respect to "thoughtfulness" (e.g. critical thinking, problem solving, whole-language instruction, higher-order thinking skills, etc.)? What state or provincial intentions are influencing district policy? How are these intentions understood or acted upon by people charged with carrying them out? What relationships exist between the level of student thoughtfulness and the level displayed by adults in the system?

What has emerged is a chronicle of students, teachers, administrators, and policy-makers trying to think their way through or around the complexities of modern schooling.

Dr. Brown will share some of the experiences researchers had in rural, urban, and suburban schools, in elementary and secondary schools, in all black, all native American, and racially

(Brown, Rexford, cont'd.)

mixed schools, as they looked for thoughtful people. He will draw conclusions from the study that will provide a view of: the status of critical thinking and other types of thoughtfulness in various kinds of schools and policy environments; the primary barriers to the spread of thoughtfulness in public schools; and the kind of agenda necessary to restructure schools so that they inculcate a higher level of literacy in a broader range of students.

Audience: K-12

(August 8 3:15-4:45 pm DAR 108)

Browne, M. Neil

Professor

Department of Economics
Bowling Green State University
Bowling Green, OH 43403-0268

**Mini-Critical Thinking Course:
Assignments That Stimulate Critical
Thinking**

Co-Presenter

Keeley, Stuart M.

Most of the time spent practicing critical thinking is focused on out-of-class assignments. To be effective, those assignments must be consistent with a coherent method of critical thinking. This workshop will use the model of critical thinking, presented in *Asking the Right Questions*, as a basis for organizing assignments to develop specific critical thinking skills and attitudes. Numerous assignments that can be used in any classroom will be illustrated. Workshop participants will be given the opportunity to share critical thinking assignments that they have found to be effective. This workshop will be especially beneficial to those attempting to integrate critical thinking into their classrooms.

Audience: G

(August 8 1:30-3:00 pm STEV 2049)

Browne, M. Neil

Co-Presenter

Keeley, Stuart M.

**Practical Lessons Learned from
Teaching Critical Thinking for Twenty
Years**

Based on their experience teaching a critical thinking course and their efforts to integrate critical thinking into their courses in economics, law, history, and psychology, the presenters will provide practical classroom strategies that facilitate the learning of critical thinking. Teaching tips on organizing syllabi, questioning behavior, discussion formats, assignments, and exams will be provided. The presenters will encourage dialogue among participants, focusing on typical problems that teachers face when first trying to integrate critical thinking into their course objectives.

Audience: G

(August 9 8:45-10:15 am CS 20)

Browne, M. Neil

**Seven Keys to Effective Faculty
Development Workshops: Stimulating
Critical Thinking Across the
Curriculum**

The most common instructional development activity on college campuses is the teaching workshop conducted by an expert from another campus. When integrating critical thinking across the curriculum is the primary purpose of such a workshop, specific steps can be taken to encourage its success. The presenter will draw from faculty development research and his own extensive experience as a workshop facilitator to provide suggestions for effective workshops. Participants will be asked to help diagnose common problems in workshops they have experienced. Special attention will be given to practical post-workshop tips for sustaining faculty interest after the facilitators have returned to their own campus.

Audience: CC, U

(August 9 1:30-3:00 pm STEV 3008)

Bumgarner, Kenneth

**Designing Staff Development that
Models Thinking Skills**

Assistant Superintendent

Division of Curriculum and Instruction

Bethel School District

516 E. 176th

Spanaway, WA 98387

This presentation will feature a practical and workable design for staff development in thinking skills that can be adapted to any level—school, district, regional or state. Based on information processing theory, the components of effective staff development design suggested by Joyce and Showers, Knowles and others are coupled with techniques for managing change effectively suggested by Hall and others to present workshops that not only present knowledge about thinking skills but also model the employment of these skills in the process. The design involves participants in immediate active processing and moves them to an application level with commitment to implement, using an adaptation of Fogarty's "Thinking Log." The techniques are equally adaptable for classroom teaching. Actual conferences employing the design will be described.

Audience: K-12

(August 8 3:15-4:45 pm STEV 1002)

Chaffee, John

**Critical Literacy and Critical Thinking:
Partners in Education**

Director

Creative and Critical Thinking Studies

LaGuardia Community College

31-10 Thomson Avenue

Long Island, NY 11101

The development of sophisticated thinking abilities is closely tied to the development of complex language abilities—and vice versa. This workshop will review an NEH funded program in which students enrolled in a Critical Thinking course linked to writing, reading and oral

(Chaffee, John, cont'd.)

communication courses have consistently demonstrated gains in language skills and thinking abilities. Participants will engage in a variety of activities which illustrate the integration of critical thinking with critical writing, reading, speaking and listening.

Audience: G, CC, U

(August 9 1:30-3:00 pm DAR 112)

Chaffee, John

**Mini-Critical Thinking Course: Critical
and Creative Problem-Solving**

Solving problems effectively involves an integrated set of critical and creative thinking abilities. This workshop will introduce a versatile approach useful for analyzing complex problems in an organized and creative fashion. Individually and in small groups, participants will work through a sequence of problems that will allow them to critically reflect on and discuss the learning process. They will also explore ways of incorporating problem-solving approaches into the courses they teach.

Audience: G

(August 8 8:45-10:15 am STEV 2049)

Chaffee, John

**Practical Strategies for Teaching
Critical Thinking in the Disciplines**

This session will explore an established program which teaches and reinforces fundamental thinking skills and critical attitudes across the curriculum. This NEH funded program involves an interdisciplinary course in Critical Thinking in which over 800 students enroll annually, as well as a professional development initiative consisting of faculty training and curriculum redesign. In addition to reviewing the content and pedagogy of the Critical Thinking course, the workshop will emphasize key practical strategies for fostering critical thinking and problem-solving abilities in the disciplines. Participants will examine and engage in a variety of sample activities drawn from diverse disciplines which illustrate these strategies.

Audience: CC, U, HS

(August 7 10:30-12:00 noon ART 108)

Chuska, Kenneth
Program Administrator
Gifted and Talented Division
Allegheny Intermediate Unit
200 Commerce Court Building
Pittsburg, PA 15219

Co-Presenter
Meehan, John L.
Senior Program Advisor
Division of Communications, Mathematics
& Instruction
Bureau of Curriculum and Instruction
Department of Education
333 Market Street
Harrisburg, PA 17126-0333

This session will involve participants in activities that demonstrate strategies for activating thinking in reading and writing as well as through the use of reading and writing in content areas. After explaining four conditions conducive to encouraging and activating thinking, we will involve participants in activities in which they will learn how to activate knowledge and thinking both for themselves and their students.

Audience: K-12
(August 7 1:30-3:00 pm STEV 3040)

Collison, George
Computer Coordinator
Holyoke Public Schools
500 Beech Street
Holyoke, MA 01040

**Activating Knowledge and Thinking in
and Through Reading and
Writing Activities**

**Developing Skills in Definition and
Analogical Reasoning: Practical
Strategies for Teachers in the
Subject Areas**

There is a lot more to the definition of a word than a dictionary formulation. In fact, in natural language and argumentation, we rarely use words in their standard lexical meanings. The richness of a discipline as well as its language and styles of argument can be well served by an introductory exploration of rhetorical, stipulative, and theoretical definitions of the key words or concepts. A clear grasp of the variety and use of definitions can aid students in becoming aware of their reading in depth.

Analogical reasoning is another powerful pedagogical tool; it can be used to make connections within and between disciplines. It also serves to make learning open-ended because, by nature, analogical reasoning points beyond itself.

This workshop provides instructors with practical strategies to develop students' understanding and use of definition as well as ways to clarify and extend content using analogical argument.

Audience: Grades 8-U
(August 8 10:30-12:00 noon NICH 166)

Collison, George

**Practical Strategies for Using
Computer Simulations as Critical
Thinking and Problem-Solving Tools in
Social Studies, Science, and
Mathematics**

Computers are most properly used, not as electronic workbooks, but as simulation tools that provide students a bridge between concrete and abstract understanding. Within a highly compressed time frame, simulations permit students actively to experiment with ideas governed by an accurate representation of the experimental process. Students generate data, and personally become involved in making, testing, and refuting conjectures. This workshop explores several new programs, including *The Geometric Supposer*, *Micro-Gardener*, *Heredity Dog*, and *Geography World*.

Audience: Grade 5 - U
(August 8 8:45-10:15 am NICH 166)

Collison, Judith

Professor
Department of Philosophy
Williams College
Williamstown, MA 01267

**Evaluation of Critical Thinking Skills
Using the Format for Infusion of
Thinking Skills into the Curriculum**

Accountability is an important issue in critical thinking education. Testing for critical thinking skills is a difficult task, because objective evaluation of how mental processes work is not nearly as simple as objective evaluation of information recall. The greatest problem here is that the criteria are almost hopelessly complicated, because they are used to evaluate responses that are, at least to some degree, unpredictable. Any test that includes original contributions from the students will face the same difficulty. I believe that using my critical thinking model can facilitate evaluation of original student work. Using the categories of information, implication, inference and imagination as criteria, students' work can be judged quite objectively, complete or lacking, correct or incorrect. The model provides a context for critique as well as form or guidelines for writing.

Audience: G
(August 8 3:15-4:45 pm NICH 173)

Collison, Judith

**Math-Think: Critical Thinking, Math
Manipulatives and Piagetian Cognitive
Stages in Elementary Mathematics**

Elementary mathematics instruction suffers from excessive reliance on rote memorization, a premature reliance on the students' ability to deal with abstractions, and a lack of critical organization. This workshop will introduce a structure that aims to overcome these problems. The structure integrates my model for critical thinking instruction with a Piagetian sequence of

(Collison, Judith, cont'd.)

cognitive skill development. The use of math manipulatives has a central role in bridging the gap between concrete and abstract reasoning. Workshop participants will design sample lessons using this structure.

Audience: E

(August 8 1:30-3:00 pm STEV 3040)

Comiskey, Vincent P. A Course in Problem Solving Skills for Adult Undergraduates

Teacher & Consultant, Learning Disabilities

The Norman Blesman Regional Day School
333 East Ridgewood Avenue
Paramus, NJ 07652

This presentation describes the components of a course in Problem Solving Skills given recently to a group of 20 adult undergraduates at Empire State College (SUNY) in Nyack, N.Y. The undergraduates ranged in age from 25 to 58 years, with a mean and mode of 37 years. This workshop reports on the reactions of these adults to the presentation of the theory and practice of problem-solving and on their efforts at generalizing these skills to social and work situations. They evidenced a constructive pattern of relating to one another in group problem-solving and a willingness to explore linkage to prior knowledge; these will be discussed along with student recommendations for improving the course. A comparison to the "expert/novice" literature will be attempted.

Audience: CC, U, G

(August 10 8:45-10:15 am NICH 173)

Coodley, Lauren Activities that Promote Critical Thinking About the Nature of Education

Professor

Department of Psychology
Napa Valley College
2277 Napa - Vallejo Highway
Napa, CA 94558

I will describe and demonstrate activities that promote critical thinking about education itself. Within general psychology courses and a specialized course on active learning, I have been encouraging critical thinking at the community college level for many years. Inspired by Paolo Freire, Ira Shor, and feminist Pedagogies, I have developed games, writing exercises, debates and role plays that focus on education itself. Class requirements, testing, and grades are part of the critical focus. Students love to critique schooling! It's a very successful topic and one which changes *their* role.

Audience: G

(August 9 8:45-10:15 am STEV 3049)

Coombs, Jerrold R.

Professor

Faculty of Education
Main Mall 2125
University of British Columbia
Vancouver, British Columbia
Canada V6T 1Z5

Learning Practical Reasoning in Law-Related Studies

Various kinds of reasoning are used in justifying laws and applying them to particular cases. To a considerable extent, the competencies required for good reasoning about matters of law are similar to those required for good practical reasoning, i.e., good reasoning about what to do or what one ought to do. This talk explores the ways in which initiating students into legal reasoning may be fruitful in fostering better practical reasoning as well as better understanding of law.

Audience: G, CC, U

(August 9 3:15-4:45 pm STEV 3049)

Coombs, Jerrold R. Teaching Critical Concepts and Standards as Part of Subject Matter

When one learns subject matter, one is learning, among other things, elements of content like concepts, explanations, justifications, proofs, theories, interpretations, rules and the like. Such "elements" may be more or less adequately and accurately represented in texts or class discussions. This talk considers the possible advantages of explicitly teaching students the standards of adequacy and accuracy for such elements in order to enable them to frame relevant critical questions about the subject matter presentations available to them.

Audience: G

(August 8 3:15-4:45 pm STEV 3046)

Damer, T. Edward

Professor/Author

Department of Philosophy
Emory and Henry College
Emory, VA 24327

Mini-Critical Thinking Course: What the Fallacies Can Teach Us About Arguments

This section of the "mini-course" on critical thinking will demonstrate how a knowledge of the fallacies commonly found in arguments can inform and guide us toward the construction of good arguments. A fallacy is defined by the workshop leader as a violation of one of the three criteria of a good argument. Special attention will be given to the process of identifying such errors and of finding effective ways of turning poor arguments into better ones. A handout of common fallacies from the workshop leader's *Attacking Faulty Reasoning* will be distributed to workshop participants.

Audience: G

(August 7 1:30-3:00 pm DAR 112)

Damer, T. Edward **Teaching Critical Thinking without a Text**

This workshop will demonstrate ways of teaching a course in critical thinking at the college or high school level which focuses on fresh non-textbook kinds of arguments. These arguments are never more than a week old and are provided by the students from their own reading materials and personal experiences. Attention will be given to some suggestions for structuring such a course and to techniques for evaluating student-selected arguments. An outline of such an approach will be presented with handouts of sample materials and assignments.

Audience: HS, CC, U

(August 9 3:15-4:45 pm DAR 112)

Damer, T. Edward **Constructing Moral Arguments**

Most of us have found that it is primarily moral issues that engage our attention and deserve our critical energies. Yet many critical thinking courses give little focus to the peculiar character of moral concepts and the part that they play in the force of arguments designed to persuade us toward moral commitment or action. This workshop will focus upon the important task of formulating clear moral premises. Without such premises, many of our arguments violate the criteria of good arguments and, even more importantly, fail to convince others.

Audience: G

(August 9 1:30-3:00 pm STEV 3072)

DeCapite, Connie **Critical Thinking Through Thematic Units**

*Reading Resource Specialist/
Mentor Teacher, Santa Ana Unified
School District*

601 W. Alpine
Santa Ana, CA 92707

This workshop explores how to develop a thematic unit through which central concepts are developed, expanded, clarified, reinforced and connected as one moves through a variety of studies and genres of literature. This allows for *in-depth*, holistic, interdisciplinary study through which critical thinking can flourish. This approach is compatible with the California State Language Arts and Social Studies Model Curriculum Standards. A sample one semester, interdisciplinary thematic unit suitable for intermediate and high school students, will be presented.

Audience: K-12

(August 9 10:30-12:00 noon ART 108)

De Landtsheer, John **Higher Level Thinking: a Basic Skill for All Students**

Curriculum Coordinator
San Bernadino County Schools
601 North E Street
San Bernardino, CA 92410-3093

This presentation will provide an overview of San Bernardino County's progressive three-stage professional development program for infusion of critical thinking into the K-12 curriculum. How to present critical thinking as a basic, necessary skill for all students, and how to connect this with the faculty's already established cognitive Framework will be addressed. Gradually expanding teachers' abilities to implement critical thinking from initial lesson planning to evaluation is the focus. The practical problems and successes of a program aspiring to implement critical thinking from the county level down to its numerous districts will be described. This presentation will provide helpful resources for administrators poised on the edge of change regarding large scale implementation of critical thinking. It is a glimpse into what is actually occurring in the field.

Audience: K-12

(August 8 3:15-4:45 pm STEV 3040)

Dorman, William A. **Mass Media and Critical Thinking**

Professor/Author
Department of Journalism
California State University, Sacramento
6000 J Street
Sacramento, CA 95819

This presentation takes as its starting point the proposition of C. Wright Mills that the "first rule for understanding the human condition is that [we] live in second-hand worlds" and that the "quality of our lives is determined by meanings [we] have received from others." In modern society, these "others," more often than not, are part of the entertainment and information media. In this session, I will discuss my recent struggle to design—and develop materials for—a mass media and critical thinking course at the university level. I will also encourage participants at whatever level of instruction to share their successful critical thinking activities that deal with media.

Audience: G

(August 9 10:30-12:00 noon DAR 112)

Dower, Nigel **Development and Critical Thinking**

Lecturer/Author
Department of Philosophy
University of Aberdeen
Aberdeen, AB9 2UB
United Kingdom

The question "What is development?", as applied to the development of social entities such as Third World Countries, cannot properly be answered without critical thinking. For an account of development takes us to the deepest questions about human good, basic moral norms such as justice and peace, and the place of humans in the scheme of things. Development is not

(Dower, Nigel, cont'd.)

primarily an economic process, nor should questions about development be seen merely at "technical" or "instrumental" matters for means-end reasoning. Indeed the basic issues of development relate as much to Western societies as to so-called "developing" countries. Development concerns, like environmental concerns, with which they are closely linked, illustrate well the need for an interdisciplinary approach (what might be called an ecology of the intellect). Whilst this paper argues the need for critical thinking in the identification of development, at the level of theory and reflection, it is equally true that the actual practice of "true" development cannot properly occur without well-established patterns of critical thinking.

Audience: G

(August 9 3:15-4:45 pm STEV 3049)

Dower, Nigel Thinking Globally

The question "How can we develop a morally significant global identity?" has never been more urgent, given the state of our insecure, interdependent and ecologically precarious world. What answers are appropriate? By arguing for universal values? By accepting and thus tolerating, either for pragmatic or for "higher order" moral reasons, the diversity of moral values? By stressing mutuality of interests? By fostering international institutions like the UN? By questioning the dominance of the nation-state system and the "socio-centric" patterns of primary allegiance it engenders? These questions point to the more abstract question: In what sense do we all morally belong to one world? But the further problem must be faced: Is the need for global moral identity something to be assumed as desirable so that critical thinking is itself seen as a vital means to its realization? Or is it itself one of the assumptions that critical thinking should challenge?

Audience: G

(August 9 10:30-12:00 noon STEV 3049)

Drenk, Dean Critical Thinking/Writing in Higher Education?

Associate Professor
College of Business
Montana State University
Bozeman, MT 59717

College level teaching often emphasizes the memorization of others' knowledge. In contrast, some college teachers use writing assignments to exercise students' critical thinking skills. The purpose of this workshop is to examine various writing assignments to determine if they in fact achieve the exercise of critical thinking skills. Specific student writing products will be evaluated in terms of the taxonomy of the cognitive domain (Bloom), cognitive development (Perry), embracing contraries (Elbow), and principles of critical thinking (Paul). From these analyses, a catalogue of desired critical thinking skills and thinking/writing assignments will be developed. If time permits, the collective findings of the group will focus on determining principles for the designing and grading of writing assignments which successfully exercise critical thinking skills. Participants are invited to bring their students' writing products for analysis.

Audience: CC, U

(August 9 3:15-4:45 pm STEV 3072)

Drenk, Dean

Utilizing Writing Assignments as Thinking Exercises at the College Level

Though frequently used in higher education, writing assignments are not often effective as thinking exercises. My experience has shown me that writing assignments are often unsuccessful because they are designed as presentations of knowledge, i.e., others' thinking, not designed to exercise the students' thinking in the manner of the field of study. Though the methods of critical thinking vary by discipline; designing successful writing assignments involves developmental sequencing, establishing focus, allowing for mistakes and correction of mistakes, and insistence on clarity of thought. With these concepts in mind, specific writing assignments can be designed and executed which exercise effectively the type of thinking that is required in various disciplines. In this way, students can learn to "make meaning," i.e., think critically.

Audience: CC, U

(August 8 1:30-3:00 pm STEV 3072)

Ducat, Stephen The Eclipse of Critical Thinking in the United States: The Case of the Reagan Mythos

Professor
Department of Psychology
New College of California
50 Fell Street
San Francisco, CA 94102

Encouraged by a history of narcissistic parenting and an infantilizing political discourse, Americans in the 1980's have been rendered less critical of propaganda, especially from the right, than ever before. Certain traits, shared by many in the United States,—the persistence into adulthood of regressive modes of introjection (seen in the way many people toothlessly swallow the values and ideas of social authorities), unconscious fantasies of returning to a state of maternal-infant symbiosis, associated desires for omnipotence, and a dread of dependency—have been personified by a politician with a very similar psychological history. Furthermore, most Americans, being firmly identified with the false community of the nation-state, were still reeling with vicarious humiliation at their leaders' military defeats and political scandals of the 1970's. In the 1980's, for the capitalist order to renew itself, nothing less than an "orgy of re-illusionment" was required, as Paul Erickson describes the New Patriotism. It took a political actor, Ronald Reagan, with his particular developmental deficits, to stage this re-illusionment. With his reassuring demeanor, his sincere belief in his own delusions, and his bizarre but evocative euphemisms and metaphorical constructions, he was the right man for the job. Unfortunately for the American public, it was a snow job.

By analyzing the unconscious basis of Reagan's appeal, Dr. Ducat will provide insight into the historical and developmental origins of the contemporary eclipse of critical thinking.

Audience: G

(August 8 3:15-4:45 pm CS 20)

Dunn, Peggy

Professor

Department of Communications/
Theatre

Kean College
Union, NJ 07083

Co-Presenters:

Jandrowitz, James

Assistant to the Dean of Liberal Arts
Kean College

Londino, Cathleen

Assistant Professor

Department of Communications/Theatre
Kean College

One segment of a multi-million dollar challenge grant to Kean College from the State of New Jersey has focused on strengthening the core curriculum of the General Education Program. A vital component of the core is the emphasis on critical thinking skills. This past fall a task force comprised of a representative from each core course along with learning assistance faculty and members of past critical thinking committees convened with the stated purpose of developing concrete and workable critical thinking strategies which the faculty could immediately implement. This process of implementation has now begun. The panel will (1) give a brief overview of the interdisciplinary nature of the core courses; (2) discuss ways in which the task force worked with an outside consultant to develop materials; (3) show how the work of the task force has led to the development of resource manuals containing specific critical thinking strategies as well as addressing concerns like global awareness and visual literacy; (4) focus on critical thinking activities that have helped to link courses; and (5) explain how the assessment process has been redesigned to measure critical thinking skills.

Audience: CC, U

(August 8

1:30-3:00 pm

NICH 173)

Edwards, Joe

Teacher, Social Science Department

McKinleyville High School

1300 Murray Road
McKinleyville, CA 95521

The Challenges of Keeping a Strong Staff Development/Critical Thinking Program On-Going with Enthusiasm and Energy

The purpose of this presentation is threefold: (1) to demonstrate the value of a strong, on-going staff development program as a prerequisite to implementation of critical thinking in the curriculum; (2) to review past and present strategies for full implementation of critical thinking into the curriculum and; (3) to present our current state of progress and the challenges to sustaining enthusiasm for an on-going critical thinking and staff development program.

To achieve the above aims, I will explain how our staff development program evolved and led to national recognition from the Carnegie Foundation and in turn led to first steps toward full

(Edwards, Joe, cont'd.)

infusion of critical thinking into our high school district curriculum. In this context, I will discuss the implementation of district programs and PROJECT IMPACT and how they serve the needs of our staff development model. There will be an explanation of previous strategies and challenges to implementing critical thinking that have spanned several years and how this advanced planning avoided the "quick-fix" or "here comes another educational fad".

Audience: K-12

(August 7

10:30-12:00 noon

DAR 112)

Ennis, Robert H.

Professor

Department of Educational Policy Studies
University of Illinois at Urbana-Champaign
360 Education Building
1310 South Sixth Street
Champaign, IL 61820

Writing Critical Thinking Tests, Parts 1 and 2

In this three-hour workshop (broken up into two ninety-minute sessions), participants will look at some of the issues in critical thinking testing and will participate in the construction and criticism of critical thinking items. Materials will be distributed from the forthcoming book *Evaluating Critical Thinking*, by Stephen Norris and Robert Ennis.

Audience: G

(August 7

1:30-3:00 pm

STEV 3072)

(August 7

3:15-4:45 pm

STEV 3072)

Estes, Richard L.

Mentor Teacher

Anderson High School District
1471 Ferry Street
Anderson, CA 96007

The Problems of a Non-Critical Thinker Infusing Critical Thinking into the Classroom

This section will discuss the following two problems encountered by a non-critical thinker: (1) problems when attempting to infuse critical thinking activities in the classroom, and (2) problems when attempting to influence other teachers, through the mentor teacher program, to infuse critical thinking activities in their class work.

In addition, the background, methods, and results of a two-year study of critical thinking vs. the lecture/discussion method will be presented. A control group and an experimental group were set up and the Cornell Critical Thinking Test was given as a pre-test and post-test. The results are surprising.

Audience: HS

(August 10

8:45-10:15 am

CS 20)

Feare, John*Counselor*

Grossmont Community College
8800 Grossmont College Drive
El Cajon, CA 92020

Critical thinking is fairly-mindedly analyzing, interpreting, evaluating, and synthesizing arguments, information, or experience with a composite of reflective abilities, dispositions, and values to guide our thoughts, beliefs, and actions. The desire and commitment to think critically in all important aspects of one's life is the "critical spirit." Within this holistic formulation there are not different senses of critical thinking but only *critical thinking*, a very special, rich mosaic of intellectual and affective attributes. Accordingly, each of these attributes is not in-and-of-itself a critical thinking attribute, since each can be and is used uncritically. Thus, in K-U we should teach critical thinking at different levels of sophistication, but not teach, in isolation, reasoning skills and call them critical thinking skills, any more than we would call the skills of observation and prediction scientific-method skills out of the context of teaching the complex method of science. Ample time will be allowed for discussion.

Audience: G

(August 9) 1:30-3:00 pm STEV 3049)

Feare, John**Critical Thinking and a Theological Dimension**

Are critical thinking and spirituality compatible? The argument will be presented, based on the work of sociologists Peter Berger and Ernest Becker, that not only are they compatible but that "full individuality may be liberated only by a fully critical education within a community that lives in and through the most intense religious concern" (Becker). In any case, such "absolutely serious" questions should be raised at all levels of the educational system. Ample time will be allowed for discussion.

Audience: G

(August 10) 10:30-12:00 noon STEV 3046)

Finocchiaro, Maurice A. The History of Critical Thinking, Parts I and 2*Professor*

Department of Philosophy
University of Nevada, Las Vegas
Las Vegas, NV 89154

The history of critical thinking is discussed in terms of a university course I have been teaching for about fifteen years, and in terms of some of the theoretical problems and conclusions it suggests. The course is an Introduction to Philosophy in which I present Socrates as a supreme exemplar of moral critique, Galileo as a classic model of methodological criticism, and Marx as a paradigm instance of social criticism, leading to a comparison and contrast among the three. I explain the aims, content, structure and rationale for such a course, and I report on some of my pedagogical experiences. I also reflect on these critical thinkers in order to formulate some conclusions, or at least some problems, concerning the nature of critical thinking; its relationship to moral critique and to other kinds of criticism; its relationship to philosophy, to

(Finocchiaro, Maurice, cont'd.)

logic, and to science; the variety of approaches to critical thinking; the relationship between this trichotomy and the current distinction between strong and weak senses, etc. Part I focuses on Socrates and Galileo, Part 2 on Marx and on theoretical reflections.

Audience: G, CC, U

(August 8) 8:45-10:15 am STEV 3046)
(August 8) 10:30-12:00 noon STEV 3046)

Frana, Adrian*Teacher, English Department*

Rich Township High School
Sauk Trail at Westwood
Park Forest, IL 60466

Making the Most of Nothing: Looking Critically and Creatively at Absences, Silences Spaces, Things Ignored, and Things To Be**Co-Presenter****Kerwin, Ann**

According to cognitive psychologists, we human beings are biased toward positive information; consequently, we neglect or underestimate the importance of certain negatives—among them: absent events, empty intervals, disconfirming instances, negative evidence—which are essential for thinking and learning effectively. At the same time, many of us grapple daily with concerns others dismiss as nothing. Astronomers, for example, study black holes and currently divide the universe into "stuff" and "non-stuff." Counselors are sensitive to *lacks* of communication, intimacy, support or self-esteem, while educators ask "Why can't Johnny read?" Social critics look at the absence of minorities, workers, women and others in history, literature, and social studies. Some silences speak louder than others.

In this participatory workshop designed for educators at all levels, Dr. Kerwin will explore some "pregnant nothings" central to learning, discovery, critical and creative thinking, and Mr. Frana will share results of teacher experiments using "nothing" to promote critical and creative inquiry in high school education.

Audience: K-U, G

(August 10) 8:45-10:15 am STEV 3040)

Friedman, Joel I.*Professor*

Department of Philosophy
University of California
Davis, CA 95616

Philosophy and Critical Thinking in Teacher Education: Or, How Philosophers' Forms Might Become Teachers' Content

Children have primary ability in *generic* philosophy and critical thinking. The main problem is how to get this taught in the schools so as to defeat the offensive fact-imposition now in force, with its emphasis on rote learning. In this paper, a simple model of organization is presented for a cost-effective program in which teams of philosophers and educators work together to achieve the desired goals. A key idea is that current teachers generally lack the forms of

(Freidman, Joel, cont'd)

critical thinking and philosophy *as their content*. Moreover, Education faculty generally do not have the requisite expertise to teach these forms. A select subset of Philosophy faculty are the natural experts. So, it is essential that teachers take at least a few choice contemporary philosophy courses, in addition to specifically designed interdisciplinary (team-taught) courses in teaching critical thinking in the schools. Now, philosophers, too, have a lot to learn from educators about school pedagogy, child psychology, and school curricula, and consequently must be prepared to do their homework as well. Neither philosophers nor educators can do the job alone. The main contribution philosophers can make is to help give prospective or working teachers such "critical thinking guts" and "philosophical smarts" that even under unfavorable conditions, these teachers would have the mental fortitude and disposition to create critical thinking lesson plans for their students, using, when required, even the most boring curricular materials as a base. This is a realistic plan, since teachers ultimately have control over the lesson plan (the essential unit to be targeted for change), granting they do not control their unfavorable working conditions, including pay for textbooks. Through critical thinking and philosophy, teachers may achieve intellectual autonomy in the classroom, no matter what!

Audience: K-12

(August 8 3:15-4:45 pm ART 108)

Glienna, Raymond

Professor

Department of Physical Sciences
Glendale Community College
1500 North Verdugo Road
Glendale, CA 91208

**Medical Dilemmas in Science and
Literature: Choice, Responsibility,
Ethics and Values**

**Co-Presenter
Scul, Sharon**

Two disparate subject areas are effectively combined in "Science, Literature, and Human Insight," an interdisciplinary, interactively team-taught humanities course at Glendale Community College. Throughout the course, students learn that the broader point of view must be considered and that ethical behavior is affected or defined by choices made and responsibilities accepted. One unit of study that always sparks student inquiry explores the emergence of modern medicine in terms of human perspectives. Of special interest is the controversy surrounding medical discoveries. Students examine the classic medical and ethical dilemmas occurring in the development of surgery and anesthesia and in the emergence of transplant techniques.

In Mary Shelley's *Frankenstein* (1816), crude methods are used to attach parts of many bodies to form a living creature so abhorrent that he is an outcast. The creature's complex behavior ignites student interest and establishes a basis for evaluating the possible contemporary outcomes of Loma Linda University's aggressive transplant program. Examination of the Baby Fae baboon-to-human heart transplant and the policy on harvesting organs for anencephalic infant donors provokes lively student discussion and affords opportunity for application of critical thinking skills.

(Glienna, Raymond, cont'd.)

This interactive demonstration not only explores issues brought out in materials from the unit, but also discusses team planning for thematic units of study, interactive class sessions, and essay examinations.

Audience: G, CC, U

(August 9 3:15-4:45 pm STEV 3040)

**Gottesman, Leslie D. Newspapers: Critical Thinking Text in
the ESL Class**

Instructor

College of Humanities and Social Sciences
Golden Gate University
536 Mission Street
San Francisco, CA 94105

Applying critical thinking across the curriculum hits a snag with college-level ESL. What is the curriculum? Usually it's "reading," "writing," "speaking," and "listening." All too often the content of ESL texts is a gift-wrapped version of U.S. culture. Critical thinking quickly bumps up against the walls of neat packaging. However, using daily newspapers to teach critical thinking solves several curriculum problems. Visually interesting, readily available and cheap, newspapers are (nevertheless) ideal ESL and critical thinking textbooks, providing short and medium-length forms for analysis, continuity, variation, and recycled language as the news is followed up day by day. The "inverted pyramid" shape of news stories helps ESL students analyze the structure of writing, of information, and of argument. Newspapers embody the codes and assumptions of our society and also provide many tools for cracking the codes. Newspapers bring today's political, social, cultural, economic, ethical, religious, scientific issues to the students, and even the junk—for critical thinking purposes—is valuable. There's always something students care about—they can even get their responses published. In this workshop I will show specific lessons on induction, deduction, language of argument, fallacies, assumptions, statistical evidence, hypothetical reasoning, problem-solving, decision-making, and creative thinking—all based on newspaper material and tested in my critical thinking, English composition, and ESL classes.

Audience: G

(August 10 1:30-3:00 pm STEV 1002)

Hadley, Carolyn

Lecturer

Department of Humanities/Women's
Studies
California State University, Sacramento
6000 J. Street
Sacramento, CA 95819

**Critical Thinking in Interdisciplinary
Studies: Humanities and Women's
Studies Course Development for
Meeting Criteria for Critical Thinking**

Interdisciplinary Studies presuppose the individual learner's involvement in developing a coherent view of a variety of disciplines with discrete histories, methodologies and content. A perspective on the concept 'knowledge' enables the learner to review and evaluate ideas and works as they exist relative to each other and relative to the learner. Ordinarily, students in Humanities and Women's Studies classes gain familiarity with selected original works and some

(Hadley, Carolyn, cont'd.)

facility in evaluating these works within their historical contexts. The classroom process is qualitatively different when students self-consciously apply the tools of critical thinking in their assessment of past and present "knowledge" as perspectives evolve in the various humanities disciplines. As areas of interdisciplinary studies, both Humanities and Women's Studies Programs and Departments can develop courses which meet the criteria for critical thinking.

The session format will include a step-by-step presentation of how a course for either Interdisciplinary Humanities or Women's Studies can be conceptualized to incorporate the critical thinking process and redirect the course focus without sacrifice of content drawn from the traditional disciplines. Using a slide/lecture/discussion format, the session will involve participants in the critical thinking process *vis-a-vis* the traditional teaching materials in a regular humanities course.

Audience: CC, U

(August 10 1:30-3:00 pm CS 20)

Hanford, George A Critical Connection

President Emeritus College Board

22 Central Avenue
Demarest, NJ 07627

There is a critical connection between what the Scholastic Aptitude Test measures and what critical thinking is all about. Those who call either for the abolition of or major modifications in the SAT or for a substantial decrease in its use overlook that important connection between the assessment of verbal and mathematical reasoning and the infusion of critical thinking into subject matter instruction. Is the connection, as suggested, critical? Is it understood? Does it need clarification? What will happen to SAT scores if the infusion succeeds?

Audience: G

(August 8 8:45-10:15 am STEV 1002)

**Hanford, George The American High School: What Needs
Co-Presenter to Be Done to Prepare Students for
College**

Paul, Richard W.

George Hanford and Richard Paul will informally discuss what high schools need to do to prepare students for college. Ample time will be provided for extended audience involvement in the discussion.

Audience: HS, G

(August 8 10:30-12:00 noon IVES: Warren)

Hanson, John

The Oxfordshire Skills Programme

Senior Curriculum Adviser

Education Unit
Wheatley Centre
Littleworth Road
Wheatley, Oxford
OX9 1PH England

Students come to school to learn. They bring with them a train of egocentric and sociocentric beliefs. They often find learning difficult. In a democratic society we value highly the qualities of independence, capability, effective problem-solving and critical awareness. How can we help students to desire and acquire these qualities? We seek a strategy, across the curriculum, to enhance learning skills through problem-solving methodologies and mediation, and, in engaging critical thinking, to integrate the approaches of cognitive psychology and philosophy.

The Oxfordshire Skills Programme is a Local Authority project involved in development, training and research with local schools (chiefly in the 11-18 age range this year) and schools in other parts of the UK. Its methodology draws significantly on the work of Feuerstein.

Audience: JH, HS, G

(August 9 3:15-4:45 pm STEV 1002)

**Hanson, J. Robert Styles of Thinking for Critical,
President Creative and Conceptual Thinking**

President
Hanson, Silver & Strong Associates Inc.
Corporate, Finance & Publishing Offices
10 West Main Street
Moorestown, NJ 08057

Participants will learn about a model for working more effectively with the demands of higher level thinking content, what can be done to facilitate learning, and what the dominant psychological factors are that facilitate the higher order cognitive processes.

Audience: G

(August 10 8:45-10:15 am STEV 2049)

**Hanson, J. Robert Teaching Strategies for Promoting
Conceptual Thinking (Concept
Attainment and Concept Development)**

Participants will learn practical, hands-on steps for promoting student growth in critical and creative thinking through the utilization of two specific teaching strategies.

Audience: K-12

(August 10 10:30-12:00 noon STEV 2049)

Hardy, Ruth

Director

S.U.B.S.

P.O. Box 6272

Anaheim, CA 92806

**Identifying Learning Styles Provides
Links for Critical Thinking across the
Curriculum**

This seminar is designed for people who want a smooth transition between teacher, substitute, and studies by providing help in identifying, adapting, and applying the four different teaching and learning styles to Modeling of Critical Thinking Skills. This workshop will provide practical methods for fostering an environment for critical thinking, thereby providing a common goal for and a link between the teacher, substitute, and student.

Audience: K-12

(August 10 1:30-3:00 pm ART 108)

Hatcher, Donald

Director

Center for Critical Thinking at

Baker University

Baldwin City, KS 66006

Critical Thinking and Ethical Values

After identifying a few contradictions between the values of critical thinking and contemporary attitudes towards ethical values, we will examine ways that critical thinking techniques can be employed to both undermine ethical relativism and establish certain ethical principles.

Audience: G

(August 10 8:45-10:15 am CS 68)

Hatcher, Donald

**Critical Thinking and the Ethics of
Belief**

Some persons hold that we are morally responsible for the beliefs we hold. If so, are we responsible for the content of the beliefs or for the manner in which our beliefs are acquired? In this presentation, I will argue that we have an ethical obligation to form beliefs through the methods taught in Critical Thinking courses. If this conclusion is accepted, then it follows that teachers have a moral obligation to teach students to be critical of beliefs which have been accepted uncritically. This also entails that teachers have a moral obligation to teach students how to think critically.

Audience: G

(August 10 10:30-12:00 noon NICH 173)

Hirsch, Judi

Resource Specialist Oakland Public

Schools

& Assistant Professor

California State University, Hayward

**Can Teaching Critical Thinking to
Retarded Performers Improve Their
School Achievement and Adjustment?**

114 Echo Avenue

Oakland, CA 94611

Black and Hispanic "learning disabled" junior high school students were taught to think critically using current events and Feuerstein's *Instrumental Enrichment* program. They showed significant improvement on standardized tests and report card grades when compared with a control group that received a traditional remedial education. I will share what happened and provide a hands-on and heads-on chance to experience this approach.

Audience: Grades 6-8

(August 8 1:30-3:00 pm STEV 3049)

Hirsch, Judi

Paolo Freire's Pedagogy

Come together for a dialogue on critical pedagogy. We will discuss praxis (the unity of theory and practice) and the role of the educator. In Freire's words, "in the connection between the educator and the learner, the most important factor is the development of a critical attitude *in relation to the object and not a discourse by the educator about the object.*"

Audience: G

(August 10 10:30-12:00 noon DAR 112)

Horne, Jeremy

Directed Critical Thinking - A Survey

Arizona State Prison Complex, Douglas, AZ

916 American Avenue

Bisbee, AZ 85603

Are there subpopulations of socially dysfunctional individuals for which unguided critical thinking may prove to be more disastrous than beneficial? This paper looks at the prison as a capsule within which we observe socially dysfunctional behavior and where directed critical thinking might operate to help prevent crime or homelessness by emphasizing family planning, education, drug abuse programs, and positive child rearing. I discuss how social structure, ideology and philosophy all intertwine in shaping social guidance programs. My presentation is meant only to be a prompt for discussion and is not a complete case for directed critical thinking as an element of social policy. I argue that without major economic and social restructuring that emphasizes cooperative values, little overall social integration can be expected.

Audience: G

(August 9 3:15-4:45 pm NICH 166)

Hunt, Ross

Teacher/Elementary & Middle School
& Coordinator

Effective Thinking Resources
1505 N. Defiance Building #Q102
Tacoma, WA 98406

**One Public School Teacher's Experience
with Richard Paul's *Critical Thinking
Handbook* in the Classroom**

When classroom teachers stress Critical Thinking, what are the actual consequences versus the theoretical results? Sixth grade and eighth grade students exposed to Richard Paul's strong sense critical thinking have diverse reactions and behaviors. Parents, other teachers, and administrators, also have observable positive and/or negative reactions to critical thinking instruction. We'll discuss their immediate reactions and possible consequences. This session will demonstrate practical critical thinking activities, explore fun, light-hearted group critical thinking experiences, and dialogue what does and doesn't work for us in critical thinking instruction.

Audience: K-8

(August 8 8:45-10:15 am STEV 3049)

Imig, David

Executive Director of the American
Association Colleges for Teacher Education
One Dupont Circle, Suite 610
Washington DC 20036-2412

**Preparing Teachers for Critical
Thinking: A National Perspective**

Co-Presenters

**Martin, David
Michelli, Nicholas**

If we are to be successful in infusing the teaching of critical thinking into our schools, we must prepare new teachers who are sensitive to critical thinking and are skilled in its implementation across the disciplines at the elementary level and within their disciplines at the secondary level. This need is especially critical if the projections that 50% of the work force of teachers will change within the next five to ten years are accurate. In addition to attending to the needs of new teachers, we must continue to assist in the professional development of practicing teachers as well.

Efforts to develop national standards for the preparation of teachers who are capable of teaching for critical thinking will be described and discussed. Model programs for the pre-service and in-service preparation of teachers will be discussed as well.

Audience: K-12, U

(August 8 8:45-10:15 am SU: MP)

Jackson, Thomas

Director/Philosophy in the Schools
Project

Department of Philosophy
University of Hawaii
Honolulu, HI 96822

**Philosophy for Children: A Hands-On
Demonstration, K-2 Level**

This presentation will involve (1) a brief introduction to the presenter's experiences in doing philosophy at the K-2 level, and (2) a hands-on demonstration using *Ellie*, the latest novel in the Philosophy for Children curriculum. Actual exercises used in the classroom at the K-2 level will be presented.

Audience: Grades K-2

(August 7 1:30-3:00 pm STEV 3046)

Jackson, Thomas

**Philosophy for Children and the
Teaching of Values: A Hands-On
Demonstration, Jr. High/High School**

This presentation will involve: (1) a brief discussion of what "teaching of values" means within the context of Philosophy for Children, and (2) a hands-on demonstration using *Lisa*, the novel which serves as the program's catalyst for ethical inquiry.

Audience: JH, HS

(August 9 3:15-4:45 pm STEV 3008)

Jensen, Karen

Teacher, Foreign Languages
Department

Bellevue High School
601 108th S.E.
Bellevue, WA 98004

**Making Connections—Critical Thinking
in Foreign Language Learning**

In this session, I will look at problem areas in high school students' thinking skills as they relate to foreign language study. Some of these are: fragmented learning, ethnocentricity, mindless "study," impulsiveness, fuzzy and impressionistic thinking, low or non-existent standards for accepting or rejecting reasoning. Then I will discuss some techniques of critical thinking I have used to try to remedy the deficiencies. Although I will draw my examples from my own French and Spanish classes, the principles of critical thinking may well apply to a variety of disciplines. Many of the critical thinking strategies I have used are those I studied with Richard Paul during a 1986-87 sabbatical.

Audience: HS, G

(August 9 10:30-12:00 noon DAR 108)

Jerit, Lynda

Professor

Division of Communications
Oakton Community College
1600 E. Golf Road
Des Plaines, IL 60016

Co-Presenter

McGowan, Marilee

Instructor

Office of Enrollment Management
Oakton Community College

Questions concerning gender and thinking or the place of creative imagination in the thinking process are on a frontier which is just beginning to be mapped. Though we do not offer any answers, we believe this workshop will raise many provocative questions. Based on current work in fields as diverse as women's studies, art, physics, and jet fighter design, participants will experience thinking and learning on the distaff side.

Audience: G

(August 9 1:30-3:00 pm CS 68)

Johnson, Ralph

*Professor/Author/ Editor,
Informal Logic*

Department of Philosophy
University of Windsor
Windsor, Ontario
Canada, N9B 3P4

**Women's Thought and Creative
Imagination**

**Is Conventional Logic Sexist? Is a
Feminist Logic Needed?**

The claim has been made that critical thinking/informal logic/argumentation theories have developed under the sway of militaristic—and therefore sexist—views about the nature and practice of argumentation. Thus, it may be pointed out that the terminology used in logic textbooks speaks of "attacking" and "defending a position," of how to handle one's "adversary" or "opponent"; or one may make reference to the "arsenal" of evidence, to an "entrenched" or self-sealing position, and so on.

In my paper, I plan to review such criticisms carefully. Among the authors whose views will be dealt with are: Carol Gilligan, author of *In A Different Voice*, Belenky et al., author of *Women's Ways of Knowing*, and Charlotte Perkins Gilman. After carefully reviewing these criticisms, I will see what, if any, response can be made on behalf of conventional critical thinking/informal logic/argumentation theory. I would also like to think in the paper about the alternative, often referred to as a "feminist theory of argument" to see whether it is a genuine alternative.

Audience: G

(August 7 3:15-4:45 pm STEV 3046)

Johnson, Ralph

**Mini-Critical Thinking Course:
Critical Thinking and Advertising**

Why should a mini-course on critical thinking bother with advertising? First, advertising is an important part of the cultural and information environment and, hence, cannot be ignored. Second, advertising is one of the most powerful communicators, persuaders, and shapers of values and attitudes that has ever existed and, hence, cannot be ignored.

Third, advertising often presents itself as argumentation and reasoning but in fact rarely works at that level. The logic of advertising is not the logic of argumentation. Students need to learn how to analyze advertisements and what to watch for, and this does not mean combining ads for fallacies, as some have suggested. Finally, there is a fair amount of mythology and self-deception in consumer attitudes about and responses to advertising. The premise of the mini-course, then, is that advertising is a territory rich in material for the student of critical thinking. The instructor hopes to demonstrate why and to bring with him thoughts and examples for participants to think over.

Audience: G

(August 8 3:15-4:45 pm STEV 2049)

Johnson, Ralph

**The Whole Enchilada: An Outline of a
Theory of Reasoning**

The premise of this paper is that a great many of the disputes about critical thinking stem from the absence of a comprehensive and unified theory of reasoning. Some disputes which it seems reasonable to think might be solved by a unified theory are: (1) the field dependent vs. field independent issue: Are the skills and strategies of critical thinking field dependent, as McPeck and others hold, or are there some field invariant generalist skills, as Paul and others hold?; (2) the conflicting views about the role of affect and cognition in the development of critical thinking—and, indeed, in reasoning generally; (3) the debate as to whether formal or informal logic is best suited to the needs of the critical thinker; (4) the appropriate methods for teaching critical thinking; and (5) the nature of critical thinking.

The purpose of this paper is to provide an outline (and only that) of what would be involved in an adequate theory of reasoning, and to indicate how it would be distinguished from a theory of knowledge and, indeed, a theory of rationality.

Audience: G, CC, U

(August 9 3:15-4:45 pm CS 68)

Jones, Beau

Author/Consultant

North Central Regional Educational
Laboratory
295 Emroy Street
Elmhurst, IL 60126

**The Strategic Teacher as a Critical
Thinker**

This session argues that, in order to be an effective, strategic teacher, it is necessary to think critically in ways that are domain specific. Therefore, it is the job of the strategic teacher to be aware of these domain specific issues. In science and math, for example, students of all ages have diverse and deep-seated misconceptions and "theories" about the subject matter and about

(Jones, Beau, cont'd.)

the processes of problem-solving and scientific enquiry. In contrast, critical thinking in social studies and literature focuses in part on developing and evaluating arguments as well as analyzing the author's purpose. A strategic teacher needs to be informed of these domain-specific issues and account for them in lesson plans. The presentation will provide a general framework for teaching thinking that addresses domain specific thinking skills.

Audience: K-12

(August 9 8:45-10:15 am ART 108)

Jones, Jere

Professor

Department of Philosophy
Somerset County College
Somerville, NJ 08876

**Teaching Critical Thinking in the
General Curriculum: Overcoming
Student Differences in Background,
Preparation and Ability**

Co-Presenter

Korn, Fred

*Lecturer, University of Washington &
Consultant*

908 East Fifth Avenue, EW-11
Olympia, WA 98504

Can critical thinking be taught as part of the general college curriculum? Attempts to do so have encountered a number of serious obstacles. There are great disparities among students with respect to background, ability and academic preparation. Further, an instructor cannot reasonably presuppose that students share a common knowledge of some particular discipline or body of knowledge through which critical thinking might be taught. Attempts to deal with this problem by teaching some particular discipline, such as logic, prompt legitimate questions about whether there is a difference between critical thinking and doing logic, and the extent to which critical thinking skills learned in connection with one discipline are transferable to another. Our presentation will explain how an essential element of thinking critically, the ability to analyze the concepts of one's intellectual framework, can be taught as part of the general college curriculum notwithstanding student differences and without presupposing a common discipline or body of knowledge. We will describe a pedagogical approach that accomplishes this objective and demonstrate some of its techniques.

Audience: CC, U

(August 7 1:30-3:00 pm NICH 173)

Kahane, Howard

Professor/Author

Department of Philosophy
University of Maryland
Baltimore, MD 21228

**Critical Thinking Courses as
Preparation for Adult Life in a
Democratic Society**

The traditional education most students receive in the United States, as elsewhere, does not adequately prepare students for adult life in a democratic society. It provides students with an

(Kahane, Howard, cont'd.)

overly rosy view of the way their culture functions, particularly by playing down the great gulf between high theoretical ideals and sordid everyday practice. It tends to neglect the irrational side of human nature, the wishful thinking, prejudice, superstition, and herd thinking that mar attempts at rational thought in everyday life. It tells students very little about the reliability of the various available information sources, including in particular the mass media. It does provide students with a certain amount of theory concerning valid reasoning, but it does not successfully relate theory to cogent reasoning about problems encountered in everyday life. A good critical thinking course should try to remedy all of these defects.

I intend, first, to defend the claims just made about the inadequacy of education in America today and, second, to suggest some remedies appropriate to a satisfactory critical thinking class.

Audience: G, CC, U

(August 7 10:30-12:00 noon STEV 3072)

Keeley, Stuart M.

Professor

Department of Psychology
Bowling Green State University
Bowling Green, OH 43402

**Tips for Teaching Critical Thinking:
What Students Can Tell Us**

What can students who have been exposed to an intensive 5-credit hour, 15-week course in critical thinking tell us about the short- and long-term meaning of such a course to them and about how we can maximize the impact of such a course? This session will focus upon answers to that question. I will present "teaching lessons learned" from lengthy interviews with juniors and seniors in a midwestern university who had completed a critical thinking course in the fall semester of their freshman year. Emergent themes from the interviews will be discussed in terms of their implications for teaching critical thinking. Also, the potential value of student interviews for formative evaluation purposes will be discussed.

Audience: CC, U

(August 8 8:45-10:15 am CS 20)

Kerwin, Ann

Lecturer

College of Arts and Sciences
University of Arizona
Tucson, AZ 85721

**Ignorance and Critical Thinking across
the Subject Matter Curriculum**

Co-Presenter

Witte, Marlys Hearst

Physician & Director

Medical Student Research Training Program
College of Medicine
University of Arizona
Tucson, AZ 85724

In this participatory workshop designed for educators from K-U, Dr. Kerwin and Dr. Witte will introduce educators to some positive relations between ignorance and learning. Ignorance is the

(Kerwin, Ann, cont'd.)

domain which contains all the things we know we don't know, all the things we don't know we don't know, and all the things we think we know but don't. Since we human beings can't really learn what we already "know," we learn and discover from *within* the bounds of ignorance. Moreover, the very acknowledgement of our ignorance can set the stage for critical inquiry, creativity and discovery. Through small and large group work, participants will begin to think about education from the point of view of the not-known and will design innovative pedagogy, whose aim is to stimulate inquiry. Possibilities, of course, are endless. . . after all, ignorance is never in short supply, either within or across subject matter curricula! Drs. Kerwin and Witte will share materials from the pioneering "Curriculum on Medical Ignorance" at the University of Arizona College of Medicine and from University Honors offerings on ignorance.

Audience: G

(August 9 3:15-4:45 pm NICH 173)

Kerwin, Ann **Advanced Ignorance**

Co-Presenter

Witte, Marlys Hearst

This participatory workshop is designed for acknowledged ignorami—for those who have already been introduced to ignorance as a positive tool for critical and creative thinking by Drs. Kerwin and Witte in past CT workshops, and others of a Socratic bent. An "update" on current ignorance experiments will precede a series of large and small group exercises designed to explore learning from the point of view of the not-known.

Audience: G

(August 10 1:30-3:00 pm STEV 3072)

Kneedler, Peter E. **Differences Between Girls and Boys in History-Social Science Performance**

Consultant

Office of School Improvement
California State Department of Education
721 Capitol Mall; P.O. Box 944272
Sacramento, CA 94244-2720

Dr. Peter E. Kneedler of the California State Department of Education will describe the differences observed in performance between boys and girls in California's new statewide assessment in history-social science. The new assessment tests 300,000 eighth-grade students on their knowledge of U.S. history, citizenship, government, world history, economics, geography, and also tests critical thinking skills. The session will also include recommendations for teachers on how to reduce boy/girl differences in the classroom. Handouts and transparency masters will be provided.

Audience: K-12

(August 8 10:30-12:00 noon STEV 3072)

Knight, Carol Lynn H.

Professor

Department of History
Tidewater Community College
Chesapeake Campus
1428 Cedar Road
Chesapeake, VA 23320

Analyzing Arguments in History and the Social Sciences: An Interdisciplinary Problem and Approach

This workshop is directed primarily to teaching faculty in the Humanities and Social Sciences, at any level, who are interested in a method that may be used to develop the critical thinking skills of their students. Participants will see how the teaching of thinking skills can be incorporated into course work without sacrificing subject matter content. They will practice analyzing relevant, discipline-specific materials, drawn from popular and/or scholarly publications, according to guidelines provided. Finally, they will have an opportunity to discuss how this approach may be applied in different academic disciplines and what materials might be appropriate for each.

Audience: G

(August 10 1:30-3:00 pm STEV 3049)

Kreklaui, Heidi C.

Teacher/Author

P.O. Box 784
Pennygrove, CA 94951

Teaching Critical Thinking to the Learning Disabled

Learning necessarily involves mediation. Learning disabled students have a harder than average time creating and using bridges from what they already know to what they wish to know. They often need extra help with organization, study skills, metacognition, reading, and imagery. Teaching metacognitive skills has been an area of great interest to remedial reading researchers. I have drawn upon this rich source to find several techniques that have been helpful to learning disabled students. Some techniques involved teacher choice, in terms of text and presentation strategies. Other techniques are to share with students (such as study skills). In this workshop, we will become familiar with these various techniques by first discussing and then practicing them. I will supply handouts and materials for practice. Our purpose is twofold, to understand and be able to empathize with the many problems besetting learning disabled students and also to familiarize ourselves with techniques to make learning accessible to them.

Audience: K-12, G

(August 10 8:45-10:15 am STEV 3072)

Kubasek, Nancy

Assistant Professor

Department of Legal Studies
Bowling Green University
Bowling Green, OH 43403-0265

Critical Thinking From Day One: Infusing Critical Thinking into the Syllabus

The first day of class sets the one for the entire semester. One important aspect of that first day is providing students with the course syllabus. Since the syllabus is generally the first written communication from the instructor to the student, it is the logical place to begin helping the

(Kubasek, Nancy, cont'd.)

students develop their critical thinking abilities. We have so little time with the students that no opportunity to develop these skills should be overlooked. This workshop will provide practical ways for faculty to convert their syllabi into tools for teaching critical thinking.

Audience: CC, U

(August 8 3:15-4:45 pm NICH 166)

La Bar, Carol

But First We Must Distinguish

Professor

Association for Values Education &
Research

Faculty of Education
University of British Columbia
Vancouver, British Columbia
Canada V6T 1Z5

Thinking critically about significant matters requires the ability to use a number of concepts and distinctions. This workshop will focus on some of these distinctions and how they operate in our reasoning. The strategies and exercises used will be suitable for secondary school students.

Audience: JH, HS

(August 10 8:45-10:15 am STEV 3049)

La Bar, Carol

Mini-Critical Thinking Course:

Co-Presenter

Practical Reasoning and Principle

Wright, Ian

Testing

Critical thinking includes reasoning about what to do, as well as what to believe. This former sort of reasoning, called practical reasoning, involves two logically different types of reasons (1) motivating reasons in the form of value standards which the reasoner accepts, and (2) beliefs about the degree to which the actions under consideration will fulfill the value standard. These two different kinds of reasons lead to a conclusion or judgment about what ought to be done. This session will focus on the use of principle "testing" as a way of assessing the value standard.

Audience: G

(August 9 8:45-10:15 am STEV 2049)

Labovitz, Eugene

**Sociology, Critical Thinking and
Educational Reform**

Professor

Department of Anthropology & Sociology
University of San Diego

Alcala Park
San Diego, CA 92110

The relationship between sociology, critical thinking, and educational reform will be examined. Sociologists emphasize that they not only have a field of inquiry but also a distinctive perspective which offers insight into the behavior of individuals in society. This perspective, as it is represented by the ideas of selected classical and contemporary theorists, will be explored on the basis of how it compliments and even enhances critical thinking. Finally, critical thinking as an educational reform movement will be examined in terms of the sociology of education. Will critical thinking within the school system bring about educational reform?

Audience: G

(August 9 10:30-12:00 noon STEV 3049)

Lamb, Morris

**Assessing Thinking Skills in Classroom
Instruction**

Professor

Department of Curriculum and Instruction
Southern Illinois University

Carbondale, IL 62901

The evaluation of thinking skills in the instructional act has continued to be a difficult and challenging task for the classroom teacher. Requirements for state level assessment, coupled with district level assessment, have left the classroom teacher in a dilemma about the purposes and procedures for carrying out the task of evaluating the students. Too frequently, district level inservice programs have not offered necessary information to the classroom teacher to aid in resolving this issue. The purpose of this presentation is to examine appropriate processes for evaluating thinking skills in classroom instruction on a day to day basis. A number of assessment techniques and their application to evaluating selected thinking skills will be examined. A discussion will follow, explaining how this data would be used in making judgments about the instructional needs of the student.

Audience: K-12

(August 10 8:45-10:15 am ART 108)

Langsdorf, Lenore

**Verbal and Visual Literacy: A Cultural
Gap in Our Classrooms**

Professor

Department of Philosophy
University of Texas

P.O. Box 19527
Arlington, TX 76019

Teachers are a bookish people: we are adept at discovering and developing meaning in verbal texts. Without that capacity, we wouldn't have been able to obtain the degrees that prepare us to teach; furthermore, we typically still enjoy reading and conversation. However, we spend a good part of our lifetimes with people—our students—who typically are more adept at

(Langsdorf, Lenore, cont'd.)

understanding the meaning in visual "texts," such as those provided by everyday activity and television. My thesis here is that these different capacities represent a gap within contemporary culture quite analogous to cultural gaps between different natural languages (e.g. Spanish and English). Insofar as critical thinking—and especially, Strong Sense critical thinking—is taught as a verbal activity, we teachers are, in effect, attempting to work on a sophisticated level in a language which our students hardly speak. I propose that we are more apt to accomplish our goals in teaching strong sense critical thinking if we bring students more securely into verbal language; and, that we can make a start in doing so by focusing on the similarities and differences between visual and verbal literacy. In other words: we need to develop students' capacities for understanding the meaning of verbal texts, rather than going directly into critical evaluation of arguments within those texts.

Audience: U

(August 8 1:30-3:00 pm CS 20)

Lape, Harvey

Professor

Department of Philosophy
Cabrini College
King of Prussia Road
Radnor, PA 19087

Critical Thinking Across the Liberal Arts

Co-Presenter

Schwarze, Sharon

Professor

Department of Philosophy
Cabrini College

What happens when a small Catholic liberal arts college attempts to bring critical thinking more prominently into its curriculum? Cabrini College under a Pew Memorial Trust grant spent eighteen months engaged in such a project. Although still committed to teaching critical thinking, unanticipated problems and difficulties arose. Our views about the role of critical thinking in the liberal arts curriculum have had to be revised as have those of our colleagues. Despite a high level of initial cooperation, we found that our success in helping colleagues teach students to think more critically about a content area was limited by: (1) unrealistic expectations, (2) diverging goals, and (3) insufficient background knowledge within a contact area.

Audience: CC, U

(August 9 1:30-3:00 pm NICH 166)

Lauer, Rachel

Director

Thinking and Learning Center
Pace University
New York, NY 10038

Applying Critical Thinking to International Relations and Peace Studies

In this session, I will describe a course for activists, educators and graduate students of peace. For us, critical thinking means examining five world views with which peoples create and solve problems. With analysis of these five, we can identify patterns of thought that lead to aggression or cooperation. Participants learn concepts such as interdependence, cause and effect, reciprocities, patterns of consciousness, etc., and use them to critique readings and speeches. They discover their own biases and identify assumptions behind methods of conflict resolution. Expect to participate actively in a sample lesson. Materials will be distributed.

Audience: G

(August 8 3:15-4:45 pm DAR 112)

Lazere, Donald

Professor

Department of English
California Polytechnical State University
San Luis Obispo, CA 93407

Leftist Criticism of Mass Media

In this talk, Donald Lazere will summarize the main lines of recent leftist criticism represented in the collection he edited, titled *American Media and Mass Culture: Left Perspectives*, published this year by the University of California Press. The book presents an approach by democratic Marxists, feminists, and other leftists to teaching critical thinking about mass-mediated politics, and refutes conservative allegations that both the media and higher education have a leftist bias.

Audience: U, G

(August 7 3:15-4:45 pm DAR 112)

Lazere, Donald

Literature and Critical Thinking

As critical thinking has become a popular trend in education, nearly every academic discipline has come forward to claim that it has been teaching critical thinking all along. In this workshop, Donald Lazere will defend that claim for literature, making the case that, perhaps more than any other discipline, literature and literary criticism contain the potential for fostering the kinds of reasoning and mental dispositions that comprise strong-sense critical thinking.

Audience: HS, U, G

(August 7 1:30-3:00 pm IVES 119)

Lipman, Matthew*Director*

Institute for the Advancement of
Philosophy for Children
Montclair State College
Upper Montclair, NJ 07043

Critical Thinking and Philosophy for Children

The demand for critical thinking in education is exploding in all directions: in early childhood education, special education, adult literacy education, junior college and college education, and at every stage in between. In many quarters, two assumptions prevail: it should not be taught as a separate, independent course, and it is best taught by drilling students in a specific number of cognitive skills. In this presentation, it will be argued that these assumptions are misconceived and that the goals of reflective education can be better met by making full use of the logical and conceptual powers of philosophy.

Audience: G

(August 7 3:15-4:45 pm DAR 108)

Lipman, Matthew**Critical Thinking and Reliance upon Criteria**

Current implementation of critical thinking is guided by prevailing conceptions of what critical thinking is. Improvement in implementation of critical thinking, therefore, goes hand in hand with the progressive sharpening of its definition. The view is offered here that we need to examine carefully the connection between critical thinking and the use of criteria, if the definition in question is to be improved. This is especially so when critical thinking is conceived of as the making of reasonable judgments and when such judgments are recognized as the result of reliance upon criteria. The role of criteria in critical thinking then comes to be seen as fundamental.

Audience: G

(August 7 10:30-12:00 noon STEV 3008)

Lyons, Nancy*Dancer/Choreographer/Professor*

Department of Theatre Arts
Sonoma State University
Rohnert Park, CA 94928

Thinking Critically with the Body and the Arts

How does the body "think?" How does the body think critically? How does engagement in the arts encourage thinking which embraces paradox and ambiguity, and how is this way of thinking also valuable? This workshop will address these and other questions through a dance performance, dialogue and participation.

Audience: G

(August 9 3:15-4:45 pm IVES: Warren)

Martin, Douglas*Professor*

Department of Chemistry
Sonoma State University
Rohnert Park, CA 94928

Encouraging Critical Thinking in Science Laboratories

This session will address issues in laboratory instruction in 7-12th grade science classes. We will discuss techniques designed to encourage students' active inquiry and critical thought. These techniques will include ways to have students invent labs by getting away from the "cookbook" approach. We will also explore some techniques designed to help students see into the relationships among the ideas behind lab activities.

Audience: JH, HS

(August 7 3:15-4:45 pm STEV 1002)

Mayfield, Marlys*Author, Educational Consultant in**Critical Thinking*

81 Alvarado Road
Berkeley, CA 94705

Teaching Observation Skills: Making Perception Conscious

Whether in the practice of automotive repair, dental hygiene, carpentry, anatomy, or English composition, the reliability of reasoned solutions depends upon a full and accurate use of perceptions. Student perceptual acuity can be raised when simple methods for heightening awareness are learned and individual habits of mental interference are identified. This workshop will demonstrate some lively techniques for teaching observation skills together with inductive reasoning fundamentals that are suitable for the range of subject areas mentioned above.

Audience: G, CC, U

(August 8 1:30-3:00 pm NICH 166)

Mayfield, Marlys**Teaching Awareness of Feelings: Friendly Recognition of Some Blocks to Critical Thinking**

Often all we need to clarify our thinking is to recognize and communicate our feelings. But when we deny, repress, or ignore them, we can confuse our justifications with sound reasoning, our glib answers with felt understanding, and pursue arguments that disguise hidden agendas. Working from these premises, this workshop will demonstrate methods for teaching conscious feeling awareness together with critical thinking. Topics covered will include how to help students recognize the mental disequilibrium caused by learning new skills, suggestions for creating a classroom ambiance that supports honest communication of feelings, how to take teaching cues from non-verbal responses, how to coach objective distancing from negative feelings, and how true teaching enthusiasm elevates class morale and accelerates learning.

Audience: G

(August 8 8:45-10:15 am NICH 173)

McDaniel, Stan

Associate Professor

Department of Philosophy
Sonoma State University
Rohnert Park, CA 94928

**Can Critical Thinking Really Do Without
Formal Logic?**

In this discussion, I will consider (1) why the prejudice against formal logic is not a basic concern but is a merely circumstantial development, (2) how the presentation of formal logic can be revised to make it a useful (and much-needed) tool, and (3) my own methods, enhanced by years of student input, for using formal logic as the starting point for teaching critical thinking. Not everyone will want to adopt these methods wholesale, but many of the devices discussed can be of immediate use in any critical thinking class.

Audience: CC, U

(August 8

10:30-12:00 noon

NICH 173)

Meucci, Sandra G.

Instructor & Project Manager

California Institute on Human Services
Sonoma State University
Rohnert Park, CA 94928

Critical Thinking In Human Services

Critical thinking is hardly, if ever, extended to the field of human (social) services. Rather, concerns about caregiving professions are expressed within stale and rigidified thought polarities which roughly correspond to the political traditions of liberal democratic and republican social policies. The fact that public discourse on human services is entirely circumscribed by concerns over the merits of more or less funding is a reflection of the dearth of critical appraisals of existing services, especially as they are directed to highly dependent people. Through the use of artifacts of everyday life, this presentation will briefly depict the manner by which organized services: create and maintain deviant social roles for recipients; address purported rather than real needs of people; and function to fulfill hidden social, economic and political purposes. We will then discuss some of the socio-psychological and cultural determinants of this lack of critical thinking, both within and about human services while also exploring the potential change in role of professional and graduate education to address the same issue.

Audience: CC, U

(August 10

1:30-3:00 pm

STEV 3040)

Michelli, Nicholas

Dean

School of Professional Studies
Montclair State College
Upper Montclair, NJ 07043

**The Pre-Service Preparation of
Teachers for Critical Thinking: The
Montclair State College Model**

Co-Presenters

Oxman, Wendy

Weinstein, Mark

This session is a presentation and discussion of the model adopted at Montclair State College for infusing the teaching of critical thinking into the undergraduate pre-service teacher education program. Building upon a tradition of work in the field of critical thinking at Montclair State College, including the Institute for the Advancement of Philosophy for Children and Project THISTLE: Thinking Skills in Teaching and Learning and the newly funded Institute for Critical Thinking, faculty have worked to revise the undergraduate program in light of proposed national standards for the preparation of teachers and recommendations of such groups as the Carnegie Forum on Education and the Economy.

Key features of the program to be discussed include: (1) the identification and training of public school personnel to work with prospective teachers in teaching for critical thinking; (2) the orientation of college faculty to teaching for critical thinking; (3) the development and implementation of a new course within the undergraduate teacher education sequence on teaching for critical thinking; and (4) revisions of all elements of the undergraduate teacher education curriculum to foster and support teaching for critical thinking.

A definition of critical thinking, goals for the program, and a philosophy for the program will be shared with participants and discussed.

Audience: K-12, U

(August 7

10:30-12:00 noon

CS 68)

Michelli, Nicholas

Co-Presenters

Oxman, Wendy

Barell, John

Weinstein, Mark

**The Montclair State College Institute
for Critical Thinking's Approach to
Critical Thinking Across the
Curriculum**

The Institute for Critical Thinking has been established at Montclair State College, with Challenge Grant funding from the New Jersey Department of Higher Education to support and enrich faculty development efforts toward critical thinking as an educational goal.

The primary purpose of the Institute is to serve as a catalyst in the development of educational excellence across the curriculum at the college. A collaborative, multi-disciplinary approach has been initiated, with attention to the study of both the theoretical aspects of critical thinking across the disciplines and their implications for teaching and learning at the college level.

(Michelli, Nicholas, cont'd.)

In addition, the Institute has assumed a leadership role in helping other colleges and schools to incorporate thinking skills into their curricula. It also plans to offer instructional resources to businesses and members of the professional community to enhance problem solving and reasoning skills.

As a state-funded project designed to promote educational reform at a multipurpose state college (with a distinguished past history as an institution whose primary purpose used to be the preparation of teachers), as a faculty development project involving interdepartmental collegial collaboration, and as a project with inter-institutional responsibilities, the Institute for Critical Thinking serves as a model for understanding the effects of selected change efforts within similar institutional settings.

Audience: CC, U

(August 9 8:45-10:15 am STEV 1002)

Miller, Noreen

Resource Liaison, Adams County

School District

Coordinator

New Directions

3471 Cripple Creek Square

Boulder, CO 80303

Strong Sense Critical Thinking for Practitioners: A Miscellany of Experiences and Interest

High energy and great intellectual stimulation describe the Thinking Critically and Current Issues class offered through the University of Colorado - Denver, for administrators, teachers, and community members. This class is the first step in an Adams County School District No. 12 model designed to integrate critical thinking into the personal and professional lives of participants. Within the adult seminar, issues such as the state banking and economic situation, the ozone problem, Central American policy, the relationship of principals and teachers, models and supercomputer are discussed as the guest speakers and the facilitator integrate the role of critical thinking in the strong sense with the topic.

The second step in the seminar is to apply particular strategies such as fostering reciprocity, clarifying issues and claims, or examining belief systems and assumptions to demonstrate how to remodel a particular situation into a critical thinking lesson. Through questioning strategies, the focus shifts to Socratic dialogue.

The third and practical step takes critical thinking into the work place of the administrator, teacher, or community member. Some of the dynamic results will be shared in the form of a remodeled lesson, unit, and syllabus. In addition, the role of trust and mutual rapport and the relationship to a critical thinking environment are modeled. As a District Resource Teacher and State Department of Education consultant, this presenter offers a potpourri of experience since attending a 1986 Sonoma State University workshop.

Audience: K-12, U

(August 8 10:30-12:00 noon ART 108)

Missimer, Connie

Author/ Consultant

4836 N.E. 40th Street

Seattle, WA 98105

Why Two Heads Are Better than One: Philosophical and Pedagogical Implications of a Social View of Critical Thinking

Two contrasting hypotheses about critical thinking are presented: an Individual View and a Social View. The Individual View sees critical thinking as discrete acts which can be judged by a temporal criteria; the Social View holds that critical thinking is a fabric of contrasting theories, and any work of critical thinking must weigh alternative arguments in light of their evidence. Thus critical thinking is quintessentially historical. Three advantages of the Social View are that it is: more explanatory of critical thinking, more encouraging of theoretical innovation, and insistent upon subject-area knowledge without fracturing critical thinking into discipline-specific activities. Critical thinking is seen as the engine which drives intellectual history.

Audience: G

(August 7 10:30-12:00 noon CS 20)

Missimer, Connie

Workshop on Critical Thinking About the Nature of Evidence

Little discussed but crucial to critical thinking is appreciation of the type of evidence we're offered. Does a theory rest on results of experiment/control, or on a correlation; on a speculative argument, or on a single observation? There is a place for each of these types of evidence; there are times when each of these is *misplaced*. Most students need to learn what type of evidence to expect for a good argument on a given topic in order to critically evaluate inductive reasoning. First, I will make a brief (speculative) argument about these types of evidence and their respective strengths, then invite workshop participants to break into small groups and discuss the type(s) of evidence offered in several theories suitable for classroom use.

Audience: G

(August 7 1:30-3:00 pm CS 20)

Mooney, Edward

Professor

Department of Philosophy

Sonoma State University

Rohnert Park, CA 94928

Gender Difference and Moral Education: The Ethics of Care

Kohlberg's theory of moral development is criticized by Carol Gilligan in her book *In A Different Voice*. I present her views of the difference between moral development in boys and girls and assess its implications for moral education, focusing on her outline of an "ethics of care."

Audience: G

(August 10 10:30-12:00 noon DAR 108)

Moore, Kathleen Dean **Arguments by Analogy in Legal and Moral Reasoning**

Assistant Professor
Department of Philosophy
Oregon State University
Corvallis, Oregon 97331

Analogies play an important role in allowing us to draw justified conclusions in law and morality. In law, standards of fairness are served by deciding similar cases in similar ways. In ethics, making moral decisions based on empathy or on universalizability requires the ability to understand and evaluate similarities between cases. In this session, we will learn ways to help university students work with analogies, to the end of improving both their understanding of legal reasoning and their ability to make moral decisions. Sample class activities will be demonstrated, and legal cases and examples will be provided.

Audience: G, U

(August 10 1:30-3:00 pm DAR 108)

Moreyra, Alicia **Using Thinking Frames in Staff Development**

Educational Consultant
9010 S.W. 187 Terrace
Miami, FL 33157

This session will explore the possibilities of using thinking frames in staff development. The following questions will be discussed: (1) Do thinking frames produce changes in teachers' instructional effectiveness? (2) Do thinking frames used in conjunction with Richard Paul's principles for remodelling lesson plans produce better critical thinkers? The Convergent Model for staff development, a thinking frame, will be described as it was used in a teachers' inservice of critical thinking where Richard Paul's principles for remodelling lesson plans were used, too. Participants will discuss the thinking frame in the context it was used and its possibilities for future research.

Audience: K-12

(August 10 10:30-12:00 noon STEV 3072)

Morse, Ogden **Higher Order Thinking Skills in Domain Specific Classrooms**

Chair, English Department
Joel Barlow High School
100 Black Rock Turnpike
West Redding, CT 06896

Every subject matter teacher faces the same dilemma: too much material, too many skills, too little time. This workshop is designed to suggest some practical methods by which teachers can integrate critical thinking skills with subject matter to produce a variety of student responses. Participants will be actively involved in the processes of a classroom as they work through a series of exercises, noting the methods employed and the cognitive skills required. There will be a handout containing excerpts from research, a theoretical learning model, a lesson plan, and

(Morse, Ogden, cont'd.)

excerpts from student papers. Also, the group will view a videotape—the final project of a senior high school class.

Audience: HS

(August 9 8:45-10:15 am STEV 3049)

Norris, Stephen P. **The Disposition to Think Critically in Science**

Associate Professor
Institute for Educational Research and Development
Memorial University of Newfoundland
St. John's, Newfoundland
Canada A1B 3X8

If we are not careful, critical thinking instruction will repeat the failures of subject-matter instruction in mathematics, science, and social studies. Children often learn these subjects by rote instead of with understanding. The same fate awaits critical thinking instruction unless students understand what legitimizes critical thinking and what values are served by thinking critically. The aim to develop these understandings is captured by the goal to teach critical thinking dispositions, such as open-mindedness and seeking reasons. But how do such dispositions develop? I propose that they begin with understanding, at a fundamental level, the value of critical thinking to the pursuit of knowledge. I choose science to illustrate the point. Having the disposition to think critically in science depends upon understanding how critical thinking serves science which, in turn, depends upon understanding the nature of scientific knowledge: its development, trustworthiness, and reliance upon standards of moral and ethical conduct. Understanding these fundamental issues makes sense out of being disposed to apply to scientific matters what might be considered more down-to-earth critical thinking, such as judging the credibility of scientific information. But unless students make sense out of these "mundane" acts of critical thinking, then I fear a slide toward thinking critically by rote which, of course, is not thinking critically at all.

Audience: G

(August 7 1:30-3:00 pm STEV 2049)

Nosich, Gerald **Teaching Critical Thinking Across the Curriculum: A Unified Approach**

Professor/Author
Department of Philosophy
University of New Orleans
New Orleans, LA 70148

(This seminar and the one listed immediately below mesh together in covering two aspects of teaching Critical Thinking across the curriculum, but attending one does not presuppose attending the other).

Initiating a program in Critical Thinking across the Curriculum requires doing two tasks that often seem opposed. First, you need to induce a unified idea of critical thinking (skills, attitudes, values) in both teachers and students, so that what is learned in one course can be seen to be transferable to other, different courses and situations. Second, if you're teaching a

(Nosich, Gerald, cont'd.)

course in the social sciences, you want the critical thinking skills to be integrated with the needs of teaching social sciences, and so you need methods and examples geared specifically to that discipline. This seminar will attempt to cover both tasks, but with a strong emphasis on unified ideas and methods that are central to teaching critical thinking in any courses. I'll then try to give examples of how the unified approach is transferable to some specific courses in the humanities, social sciences, and natural sciences.

Audience: G, CC, U

(August 7 1:30-3:00 pm STEV 3049)

Nosich, Gerald Teaching Critical Thinking across the Curriculum: An Approach Through Specific Courses

This seminar will try to cover both the tasks outlined in the seminar above, but with the emphasis reversed. Instead of concentrating on what all critical thinking has in common, I will here concentrate on individual courses in Social Sciences (History, Psychology, Sociology), Humanities (English Lit, Fine Arts, Music), Natural Sciences, and Physical Education. In each case, I'll offer some specific and practical methods for teaching Critical Thinking in that particular discipline.

Audience: G, CC, U

(August 8 8:45-10:15 am STEV 3008)

Nosich, Gerald Mini-Critical Thinking Course: Recognizing and Evaluating Misleading Statements

One of the main ways people deceive themselves and others is by making and believing misleading statements: statements that are true in one sense but false in another. Teaching students (and getting ourselves) to recognize and evaluate deceptive ambiguities in what they read, hear, and think is one of the hardest tasks in critical thinking. The problems go well beyond bias and stereotyping and, I would argue, are not appreciably helped by using the principle of generosity or canons of definition. This workshop will concentrate on three specific methods for teaching students how to interpret what a claim means and to see through deceptive ambiguities, especially in their own thinking.

Audience: G

(August 8 10:30-12:00 noon STEV 2049)

Nugent, Susan Monroe Critical Reading: Going Beyond the Information Given

Associate Professor
Department of English
Keene State College
229 Main Street
Keene, NH 03431

**Co-Presenter
Nugent, Harold**

Director
Developmental Studies
Keene State College

This presentation will focus on a structured approach, the Intellectual Framework Analysis (IFA), to reading expository prose. Following an overview of the psycholinguistic foundation of the approach (Bruner, Miller, Smith, and Goodman), we will demonstrate how the procedure is introduced and applied in the classroom. The Intellectual Framework Analysis, designed for high school and college students, consists of a number of questions concerning the author's subject matter, classifications, value judgements, motivation, and form-content. This systematic procedure involves the reader in both reconstructing and recoding the original material. The result is that the reader increases understanding and retention as well as evaluating the author's work. The workshop will conclude with discussion of a student-produced model and further suggestions for development and use of the IFA. Presenters will examine implications for using this approach as a heuristic for writing.

Audience: HS, CC, U

(August 8 10:30-12:00 noon STEV 3049)

O'Connor, Ellen
Lecturer, School of Business,
Golden Gate University

**The Practices of Critical Thinking:
Experiential Learning Exercises for
College and Graduate-Level Instruction**

510 Panchita Way
Los Altos, CA 94022

This workshop presents three experiential-based, structured exercises and discusses their use and learning value in the classroom setting. Such exercises give students a chance to observe, assess, and strengthen their thinking—particularly the pervasive yet elusive aspects such as bias, habit, selective perception and assumption-making.

1. The CEO's Office:
This scenario describes an office where a job interview is to occur between the student (interviewee) and the CEO (interviewer).
2. The Communication Breakdown:
This scenario describes a situation where a nonverbal expression triggers a series of events which culminates in the firing of an employee.
3. The Scientific Investigation:
Four students are asked to behave as robots—through a simple set of nonverbal instructions, one student instructs the other to move coins from one side of the room to the other.

(O'Connor, Ellen, cont'd.)

The exercises can be staged, demonstrated or simply described in the workshop, depending on time constraints. Along with each exercise, structured questions are offered for class discussion. These exercises stimulate student interest and generate a great deal of enthusiasm. A structured discussion allows students to sum up what they have learned and to develop practices for thinking critically in their daily lives.

Audience: CC, U

(August 9 10:30-12:00 noon NICH 173)

O'Loughlin, Michael

Assistant Professor

Department of Curriculum and
Teaching

Hofstra University

Hempstead, NY 11550

**Critical Pedagogy: A Necessary
Prerequisite for Critical Thinking in
Schools**

"Teachers who assume the role of transformative intellectuals treat students as critical agents, question how knowledge is produced and distributed, utilize dialogue, and make knowledge meaningful, critical, and ultimately emancipatory." Thus wrote Giroux and McLaren, two leading critical educational theorists recently. In education, considerable strides have been made in articulating a critical theory of pedagogy and curriculum in recent years, but much remains to be done in articulating the psychological basis for such a model, and in suggesting how it might be implemented in practice. My paper will address these issues. In the session I will attempt to do the following: (1) briefly explore the lack of a critical inquiry emphasis in education, both historically and in most of the recent "excellence in education" type of reform reports; (2) introduce the notion of *critical pedagogy*, as embodied in the work of Giroux and other critical educational theorists; (3) articulate a psychological model of teacher education as involving a cognitive-developmental shift in prospective teachers' beliefs from simplistic unidimensional concepts of epistemology (i.e., what is the nature of knowledge?) and pedagogy (i.e., what is the nature of learning and teaching?) to more multiplistic, relativistic and less absolutistic theories of knowledge and teaching; (4) explain how I attempt to implement this type of critical pedagogy in preservice teacher education classes; and, finally, (5) indicate the direction in which I plan to undertake research into the intellectual and critical development of teachers and their students.

Audience: G

(August 9 10:30-12:00 noon NICH 166)

O'Reilly, Kevin

Teacher, Social Studies Department

Hamilton-Wenham Regional High School

South Hamilton, MA 01982

**Infusing Critical Thinking and Critical
Viewing Into Middle and High School
Social Studies, Parts 1 and 2**

This session will focus on practical techniques for infusing critical thinking into social studies courses. A variety of lessons, including some from the presenter's four volume *Critical Thinking in American History*, will be demonstrated to illustrate the following: analyzing complex interpretation problems, writing simpler mystery problems, modifying questioning

(O'Reilly, Keven, cont'd.)

strategies, introducing skills through concrete demonstrations, using metacognition to establish the criteria for skills, and sequencing skills for guided practice. In addition, excerpts from videotapes will be shown to demonstrate strategies for teaching critical viewing skills. Issues about content vs. skills, textbooks, testing, and teaching load as they relate to critical thinking will be discussed, if time allows.

Audience: JH, HS

(August 9 8:45-10:15 am STEV 3008)

(August 9 10:30-12:00 noon STEV 3008)

Oxman, Wendy

Director

Institute for Critical Thinking

Montclair State College

Upper Montclair, NJ 07043

**Project THISTLE: Thinking Skills in
Teaching and Learning**

In this presentation, Project THISTLE will be described, in terms of its eight-year history as a college/secondary school collaborative program with a focus on the development of critical thinking.

Project THISTLE: Thinking Skills in Teaching and Learning was designed to improve the critical thinking abilities of urban college-bound high school students by working intensively with their teachers in an integrated process of curriculum and staff development. Through Project THISTLE, Montclair State College faculty have been active in the Newark, New Jersey schools continuously since January, 1980, and more than 200 secondary teachers have been enrolled to date.

The major emphasis of Project THISTLE is on the preparation of secondary classroom teachers to strengthen the critical thinking abilities of their students, helping them to develop dispositions and skills necessary for engaging in intellectually active, creative, and reflective encounters with ideas, primarily within the traditional content areas of the secondary school curriculum.

Project THISTLE cuts across disciplines to focus on thinking as an essential, integral part of both subject area learning and basic skills development. Classroom teachers in the various academic disciplines are helped to develop curriculum—not new content outlines nor new lists of discrete suggestions, but more complete, thoughtful, consistent versions of their own curricular plans. The focus of these changes in curricular plans is the development of critical, or reflective thinking, defined, in part, as the "higher order basic skills" of reading comprehension, analytic writing, and word problem-solving in mathematics.

The basic structure of Project THISTLE involves participating teachers in three "phases" of staff/curricular development; (a) an 18-credit graduate program of coursework, in curriculum development, critical thinking, and reading/writing across the curriculum; (b) classroom implementation of refined, or "remodeled" curriculum plans, with the support of college faculty, supervisors, and colleagues; and (c) extension activities depending upon individual personal and professional needs, strengths and preferences.

(Oxman, Wendy, cont'd.)

Project THISTLE has been cited as a model college/secondary school collaborative program by the Association of State Colleges and Universities (ASCU), and is currently a program associated with the Institute for Critical Thinking at Montclair State College. Support for Project THISTLE is provided, in part, by the Victoria and Prudential Foundations.

Audience: K-12, G

(August 7 1:30-3:00 pm CS 68)

Paul, Richard W. Infusing Critical Thinking into Subject Matter Instruction: The Problem of Restructuring Instruction

Director

Center for Critical Thinking and Moral Critique

Sonoma State University
Rohnert Park, CA 94928

Putting the critical thinking movement into a historical perspective, Richard Paul will give his assessment of what is most essential: the need to transform instruction in all academic subjects. He will argue for the following changes:

- (a) from a content-dense to a content-deep curriculum
- (b) from a data-oriented to issue-oriented content
- (c) from teacher-centered to student-centered instruction
- (d) from recitation-centered or lecture-centered to activity-centered learning
- (e) from thought-discouraging to thought-provoking assignments
- (f) from lock-step to flexibility-paced instruction
- (g) from a didactic to a critical concept of education

This requires school-wide or college-wide articulations of a philosophy of education that makes clear how the basic critical thinking objectives are harmonized with each other and infused in a coherent and concrete way into all subject matter instruction.

Audience: G

(August 7 9:00-10:15 am Quad Area)

Paul, Richard W. Cultural Literacy and Critical Thinking: Where E.D. Hirsch is Right, Where He is Wrong, and What Is Likely to Come of His Influence

E.D. Hirsch's recent best seller, *Cultural Literacy*, has sent educators scurrying around, making enormous lists of names, events, and facts to which students are to be exposed on the theory that even a superficial recognition of these is essential to reading what is in print. On this view, the fundamental reason why students are poor readers is that they lack the

(Paul, Richard, cont'd.)

background information presupposed in what they read. Richard Paul will spell out where Hirsch's analysis is misleading and apt to reinforce more "trivial pursuit" in the classroom.

Audience: G

(August 9 1:30-3:00 pm STEV 1002)

Paul, Richard W. Remodelling Lesson Plans in Middle School and High School to Infuse Critical Thinking

This workshop will maximize participant involvement in analyzing, assessing and constructing remodelled lesson plans. Participants are recommended to familiarize themselves—before the session, if possible—with the remodelling format used in the Handbooks published by the Center. Sample remodelled lessons will be available at the conference registration table in advance of the session for this purpose.

Audience: JH, HS

(August 9 8:45-10:15 am IVES 119)

Paul, Richard W. Why Is It Imperative to Distinguish Weak Sense from Strong Sense Critical Thinking? A Challenge to All Comers

Various reasons have been advanced for abandoning the distinction between weak sense and strong sense critical thinking. Richard Paul will respond to these concerns and explain why the distinction is essential to the field.

Audience: G

(August 8 1:30-3:00 pm STEV 1002)

Paul, Richard W. Designing an Elementary or Middle School Inservice Program for Infusing Critical Thinking into Subject Matter Instruction

Richard Paul will provide a general model for designing an inservice program for elementary or middle schools. After sketching out a brief overview of the problem the floor will be open for questions and discussion. The emphasis will be on practical, long-range strategies for a progressively deeper integration of critical thinking into subject matter instruction.

Audience: E, JH

(August 7 10:30-12:00 noon IVES: Warren)

Paul, Richard W.

**Designing a High School or College
Inservice Program for Infusing Critical
Thinking into Subject Matter
Instruction**

Richard Paul will provide a general model for designing an inservice program for high school or college. After sketching out a brief overview of the problem, the floor will be open for questions and discussions. The emphasis will be on practical, long-range strategies for a progressively deeper integration of critical thinking into subject matter instruction.

Audience: HS, CC, U

(August 7 1:30-3:00 pm STEV 3008)

Payne, William

The Questionable Research Paper

Teacher, History Department

Moreno Valley High School
23300 Cottonwood Avenue
Moreno Valley, CA 92388

Students often perceive research paper assignments as requiring them to collect, paraphrase, organize, and possibly type enough information to meet a given page requirement. The questionable approach to research attempts to modify the comfortable role of simply collecting enough information to overwhelm the teacher. Students are given the task of investigating a provocative topic and must draw their conclusions from a critical evaluation of multiple viewpoints. Research and writing is structured around asking and answering key questions related to needed information, points of view, and the reliability of sources. The workshop will provide an overview of the approach and cover lessons used to improve student questioning and writing. Participants will receive a packet containing all lessons and materials.

Audience: JH, HS

(August 10 10:30-12:00 noon STEV 1002)

Phillips, Hollibert E. On Appealing to the Evidence

Professor

Department of Philosophy
Whitman College
Walla Walla, WA 99362

Appeal to evidence—or *the* evidence, by some accounts—is common practice in supporting or establishing claims. A claim, it is held, is probably no more secure than the evidence upon which it rests. But appeal to evidence is not unproblematic. By virtue of what, for example, is any state of affairs justifiably identified as evidence? In this paper, I argue for evidence as the conferral of a status; hence, that evidence is never "out there" to be discovered.

Audience: U

(August 7 3:15-4:45 pm IVES 44)

Phillips, Linda M.

**Improving Inference Ability in Reading
Comprehension**

Associate Professor

Institute for Educational Research and
Development
Memorial University of Newfoundland
St. John's, Newfoundland
Canada A1B 3X8

The ability to make inferences is necessary to reading comprehension. Inferences in reading comprehension are good to the extent that a reader integrates relevant text information and background knowledge to construct interpretations that account completely for text information and are consistent with both the text information and background knowledge. Unfortunately, children's inferences rarely fully meet these standards. Middle grade students' interpretations usually fall into one of three categories: implausible, non-inference, and partially-correct. The first category indicates a failure to make consistent use of text information and background knowledge; the second category, failure to integrate the relevant text information with background knowledge; and the third, failure to integrate *all* relevant text information and background knowledge. Each category warrants a different instructional response. Thus, to effect improvement in the quality of students' thinking as they read text, instruction must respond to particular shortcomings in students' interpretations, rather than focus on the vague and general claim that students do not or cannot make good inferences.

Audience: G

(August 7 10:30-12:00 noon STEV 2049)

Presseisen, Barbara Z. Teaching Thinking and At-Risk Students

Director

National Networking
Research for Better Schools
444 North Third Street
Philadelphia, PA 19123

No other population is in greater need to learn how to be good thinkers than at-risk students. America has become seriously concerned about the poor achievement record of many youngsters who are "at-risk." Who is this population? What are their particular needs relative to cognitive development? What programs or projects are currently showing promise for at-risk students to learn critical thinking and problem-solving? Through discussion, interaction, and sharing, the challenge of working with the nation's most serious educational concern is the focus of this session.

Audience: K-12

(August 9 1:30-3:00 pm DAR 108)

Quellmalz, Edys S.

Consultant/Director, HOT

Project

205 Georgia Lane
Portola Valley, CA 94025

Making A Difference in Arkansas: An In-Depth Study of a Higher Order Thinking (H.O.T.) Project

This session will describe the development and formative evaluation of a three-year statewide effort headed by Janita Hoskyn, Director, Department of Reading, Arkansas State Department of Education, and Edys Quellmalz, to infuse thinking skills into the upper elementary grades. In seven school districts throughout Arkansas, 650 students in grades four through six have participated in the Multicultural Reading and Thinking (McRAT) program. A collaborative effort of teachers and Department of Education reading specialists, the project includes three components: professional development, instruction and assessment. McRAT's instructional goals focus on four categories of reasoning skills that students can use in academic subjects such as reading, literature and multicultural awareness, and that also transfer to practical situations. Students receive direct instruction on explicit strategies for each category—analysis, comparison, inference/interpretation and evaluation. Teachers and students apply criteria to determine the success of critical thinking assignments. Examples of qualitative and quantitative data on implementation and achievement will be described.

Audience: E

(August 7 1:30-3:00 pm DAR 108)

Rapp-Haggard, Martha

Associate Professor

School of Education
Sonoma State University
Rohnert Park, CA 94928

Developing Critical Thinking with the Directed Reading-Thinking Activity

An instructional strategy for use in grades K-12 which invites critical thinking and reading. Simulation, analysis, and discussion will be used to present the strategy, with specific attention given to means for using the DR-TA with both literature and subject matter texts. Suggestions will be made for combining the DR-TA with other language instruction strategies to extend critical thinking throughout the learning episode.

Audience: K-12

(August 9 3:15-4:45 pm STEV 2049)

Rice, Sr. Eileen

Program Director

Department of Teacher Education
Siena Heights College
1247 East Siena Heights Drive
Adrian, Michigan 49221-1796

Idea Tasting

"Idea Tasting" is a strategy developed by the presenter for critical and creative thinking which has been used with graduate and undergraduate college students, gifted and "regular" elementary and secondary school students, and museum docents. The process involves methods of asking divergent questions, ways of taking alternative viewpoints (e.g. via a "Meeting of Minds"

(Rice, Eileen, cont'd.)

approach), metaphorical thinking, and a communal approach to chronicling ideas in journals. Participants at Idea Tasting presentations receive multiple handouts describing practical aspects of the process which will allow them to implement the procedures in their classrooms.

Audience: K-12, G

(August 10 10:30-12:00 noon STEV 3049)

Robinson, Will D.

Professor

Edge Hill College of Higher Education
St. Helens Road, Ormskirk
Lancashire, Great Britan L394QP

Are There General Rules for Thinking or Do We Need More "Content"?

From research into computer expert systems, natural language simulation and learning systems comes evidence showing, it is said, that, apart from logic, there are no general rules of thinking (or—weaker—no very fruitful ones). What is needed always is not an enhancement of the inference engine (the rules) but more specialized knowledge. This demonstrates, it is argued, that syllabi which make room for general skills of thinking, at the expense of factual knowledge, are misguided. This session will examine this argument that threatens to put us all out of a job!

Audience: G

(August 9 8:45-10:15 am DAR 112)

Robinson, Will D.

The Development of "Teaching Thinking" Programmes in the British Isles: a Variety of Process-Based Courses

Some "Teaching-Thinking" courses reflect the introduction of critical thinking principles into specific courses, e.g. the Warwick Process Science Project. Others are attempts to develop separate thinking-skills modules, e.g. the Somerset Thinking Skills Course. This session will demonstrate some of the methods and materials, and discuss the principles of some of these projects.

Audience: G

(August 8 8:45-10:15 am CS 68)

Rohatyn, Dennis

Professor

Department of Philosophy
University of San Diego
San Diego, CA 92110

The Future of Critical Thinking

Has critical thinking a future? If so, what must critical thinking proponents do to insure its destiny? What obstacles (if any) may prevent critical thinking from fulfilling its goals? Should the leaders of the critical thinking movement pursue a common agenda? How can critical thinking compete with other cultural influences? Is critical thinking an ideology? If so, can critical thinking critique itself without begging the question? Will critical thinking disappear

(Rohatyan, Dennis, cont'd.)

or be absorbed by "mainstream" academic currents? Is critical thinking a thesis, antithesis or synthesis of contrasting philosophical views? Where will critical thinking be in the year 2000, and how shall it arrive there?

Audience: G

(August 7 3:15-4:45 pm CS 20)

Rohatyn, Dennis Media Myths

Myths are stories that resolve social contradictions. Media create, sustain and transmit myths. Media are also the subjects of myth. For better or worse, we live in a world framed by mass media. Therefore, we cannot escape from myths, though we need not accept (all of) them. Like myths in general, mass media myths involve folkloric characters, archetypal scenarios, and appeals to basic or shared values. Myths about mass media attribute mythic, even demonic powers to technology. Media myths can be examined, not just lived or retold. Today, critical thinking demands that we produce media myths with at least as much care as we consume them.

Audience: G

(August 10 10:30-12:00 noon STEV 3040)

Ronk, Bruce A. Computers and Writers: A Challenge to Critical Thinking

Professor

Department of English
Andrews University
Berrien Springs, MI 49104

Good writers must be good thinkers, a fact often ignored by rhetoric texts. Frustrated college writing teachers are too often content with grammatical sentences, if they can get that much. Thinking skills seem less important to many composition teachers who feel that they must make a choice between mechanics and content. I have developed an interactive computer program, called Autorite(TM), which uses computer technology to save time in teaching mechanics in order to stress the thinking and strategy so necessary to effective expository writing. Autorite(TM) demands critical thinking prior to writing. It teaches and monitors the thinking process throughout the composition.

In my presentation, we will examine the philosophy behind using a computer to teach composition and actually see how it works on a projection computer screen. The program takes advantage of the natural interest college students have in computers while building into their writing the principles of critical thinking. Autorite(TM) answers the technology fears of George Orwell by producing both better writers and better thinkers.

Audience: G

(August 10 1:30-3:00 pm DAR 112)

Rosenberg, Vivian M. Introducing Affective Awareness as a Critical Thinking Skill

Associate Professor

Department of Humanities/Communications
Drexel University
Philadelphia, PA 19104

Critical Thinking in the "strong" sense requires understanding how our minds work. Because human beings are not machines, we must recognize the inevitable interlacing of ideas and feelings at every level of experience. Thus, affective awareness should be included as a major component of Critical Thinking. In the past, too many logic textbooks advocated the avoidance of feelings in the interest of rational deliberation. I recommend, instead, that we learn to examine more rigorously the interactions of feelings and ideas. To illustrate how affective awareness can be taught in the classroom, I describe a program in which students are directed, *consciously and systematically*, to focus on feelings—to identify how they feel as they deal with ideas and problems, and to consider how others feel. Participants in this workshop will have the opportunity to try out materials designed to facilitate affective awareness and enhance critical thinking in any course where personal psychological insight and empathy with others can improve comprehension and performance. The materials can be used at all levels and are particularly useful for courses in history, literature, psychology, social work, education, nursing and medicine.

Audience: G

(August 9 3:15-4:45 pm CS 20)

Rosenberg, Vivian M. Modifying Traditional Writing Instruction: Strategies to Facilitate Critical Thinking

Although impressive changes have been made in composition pedagogy in the last few years, too many English instructors still follow—or are expected to follow—traditional strategies which undermine "strong sense" critical thinking. This presentation will review 4 problem areas (1) Paper Topics; (2) The Research Paper; (3) The Tone of Student Papers; (4) The Use of Literary Language. This workshop should be of interest to composition instructors and other teachers who routinely assign papers as part of their course requirements. We will consider possible ways of modifying traditional instruction strategies to foster "strong sense" critical thinking. Material for classroom use will be distributed.

Audience: G

(August 8 10:30-12:00 noon DAR 112)

Rudinow, Joel **Logic for Children**

Research Associate
Center for Critical Thinking and
Moral Critique
Sonoma State University
Rohnert Park, CA 94928

In this session, I will describe an effective pre-college instructional approach to the "inductive/deductive" distinction, the notion of "argument form" and the concept of "deductive validity".

Audience: JH, HS
(August 10 8:45-10:15 am DAR 108)

Ruggiero, Vincent Ryan **Dispositions—The Neglected Aspect of Thinking Instruction**

Professor/Author
Department of Humanities
SUNY at Delhi
Delhi, NY 13753

All the understanding of creative and critical thinking and all the skill in applying that understanding to problems and issues will profit students little if they lack the *motivation* to think well. This fact has led a growing number of authorities on thinking instruction to urge that classroom teachers give special attention to the *dispositions* that underlie effective thinking. This presentation will identify these dispositions and suggest ways to assist students in developing them. It will also examine the obstacles to such development and ways in which they can be overcome.

Audience: G
(August 9 8:45-10:15 am STEV 3072)

Ruggiero, Vincent Ryan **"Ha! Ha! I'm Thinking"**

Researchers have long noted that creative thinkers tend to have a well-developed sense of humor. Sadly, recent studies document that most classrooms are humorless places. This presentation will illustrate, with a generous helping of cartoons and jokes, how the habits of mind used to generate (and appreciate) humor can help students think more creatively and more critically. Giggling and chuckling will be permitted during this presentation, but guffawing will be prohibited.

Audience: G
(August 7 3:15-4:45 pm STEV 3049)

Ruggiero, Vincent Ryan **Teaching Thinking Across the Curriculum: A Holistic Approach**

This presentation will detail a holistic approach to the teaching of thinking that combines creative and critical thinking, covering both problem-solving and issue analysis, and fitting a

(*Ruggiero, Vincent, cont'd.*)

wide variety of courses across the curriculum. In addition to explaining this approach, the presentation will address the following related matters: setting instructional objectives, developing general and subject-specific thinking exercises, and assessing student progress.

Audience: G
(August 7 10:30-12:00 noon STEV 3049)

Ruggiero, Vincent Ryan **The Administrator's Role in Thinking Instruction**

This presentation will advance the idea that administrators have an important role to play in the thinking movement, a role upon which the ultimate success of the movement could well depend. The presentation will examine the nature of this role, identify numerous ways in which administrators can promote and facilitate thinking instruction in their schools or colleges, and discuss the benefits such initiatives will bring to administrators themselves and to their institutions.

Audience: G
(August 8 3:15-4:45 pm STEV 3008)

Ruggiero, Vincent Ryan **Will Thinking Instruction Succeed?**

The thinking movement is almost a century old. Yet thinking instruction does not yet occupy a central place in education. For current initiatives to be successful, the numerous threats to the movement must be recognized and overcome. This presentation will examine the major threats, including "cultural literacy" and the related condition of informania, misplaced loyalty to the academic disciplines, popular culture's continuing affair with irrationality, and a deeply entrenched pessimism about the human mind. It will also recommend ways for educators to combat these threats.

Audience: G
(August 8 8:45-10:15 am DAR 112)

Sandberg, Kate **Collaborative Learning: Making a Difference in Student Thinking**

Professor
Department of English
University of Alaska, Anchorage
2533 Providence Drive
Anchorage, AK 99508

Though not widely practiced, collaborative learning—group members working toward a shared goal—offers a number of benefits. It helps students think clearly by giving them the opportunity to vocalize opinions, deal with other perspectives, negotiate and take risks among a community of peers. The presentation includes a collaborative experience, a discussion of the

(Sandberg, Kate, cont'd.)

conditions, rewards and challenges for this type of learning, an example of how to develop a successful curriculum and an annotated bibliography.

Audience: G, CC, U

(August 7 10:30-12:00 noon STEV 3046)

Sarris, Greg

Lecturer

Department of Modern Thought and
Literature

Stanford University
Stanford, CA 94305

**Storytelling in the Classroom:
Crossing Those Vexed Chasms from
Personal Narrative to Critical
Discourse**

It has long been established, as Debbie Walsh has so aptly noted, that "without a knowledge base, critical thinking skills exist in a vacuum, if indeed they exist at all." The culturally diverse student is less likely to have problems with the processes of critical thinking than she is with access to a knowledge base determined and maintained by a teacher outside the cultural context with which the student is familiar. Storytelling, say about a given text, enables the student to engage her cultural experience in the classroom, which in turn opens the knowledge base, providing all students a wider and more truly representative cultural framework in which to scrutinize the nature of their thinking. After a paper presentation, participants will have the opportunity to participate in a storytelling exercise that exposes differing cultural norms and expectations so that critical reflection about what constitutes those differences can follow.

Audience: K-12, G

(August 8 3:15-4:45 pm STEV 3072)

Scardilli, Frank J.

Senior Staff Counsel

U.S. Court of Appeals
2nd Circuit, Room 2803
Foley Square
New York, NY 10007

**What Every Critical Thinking Educator
Should Know About Law, Lawyers, and
the Tyranny of Illusion**

Far more than in any other country, law, "the secular religion of America," and lawyers, exert a pervasive influence in shaping American society and institutions. Yet, even well-educated non-lawyers are often only dimly aware of how our legal system really works. This has been noted as a major void in American education. Unfortunately, the traditional rhetoric of well-intentioned lawyers and judges often tends to obscure rather than illuminate the enormous difference between law-in-the-books and law-in-action, myth and reality, shadow and substance in American justice. Using a critical thinking approach, I shall explore this endlessly fascinating subject from the perspective of a 35-year legal career as practitioner, educator and court mediator. The emphasis will be on eliciting and examining questions important to you. The following are, however, suggestive: Are law and justice synonymous? What factors are likely to affect our legal rights more than rules of law? How does the law's

(Scardilli, Frank, cont'd.)

treatment of change and the humanity of judges create illusions? Why are our adversarial trial methods increasingly falling into disrepute, and what alternative dispute resolution methods are being favored? What are some other emerging trends in law and lawyering?

Audience: G

(August 8 10:30-12:00 noon STEV 3040)

Scardilli, Frank J.

**The Critical Thinker's Guide to the Art
of Negotiation and Conflict Resolution—
Interpersonal to International**

"Some people think they are thinking when they are merely rearranging their prejudices." If you think negotiation and conflict resolution skills are not important, not intellectually challenging or too intuitive to teach, think again. Negotiation is one of the most pervasive, useful and socially powerful tools we use when we want something from someone or seek to resolve or reduce conflict. Interest and research in this subject have grown phenomenally in the past ten years, as have the number of courses, books and articles. Using an interactive format, we shall explore: (1) Insights from some of the latest research literature (especially regarding the exciting new socially responsible problem-solving negotiation); (2) Some lessons from my 11 years as a professional court negotiator/ mediator in wide-ranging matters both small and large. These include such high visibility cases as Texaco-Pennzoil and the Bhopal India disaster; and (3) How the critical thinker can bring crucial skills to the negotiation process. These include self-awareness, adroitness in communication, fair-mindedness, the ability to avoid the tyranny of assumptions and to perceive more accurately, evaluate more carefully, judge more soundly and behave more successfully.

Audience: G

(August 9 10:30-12:00 noon STEV 3040)

Scull, Sharon

*Associate Professor/Staff
Development Officer*

Department of English
Glendale Community College
1500 North Verdugo Road
Glendale, CA 91208

**Can ESL Students Learn That Critical
Thinking Is More Than Comprehension
and Memorization?**

Can we effectively teach critical thinking skills to ESL students whose education in their home countries is often based on memorization and rote learning? Is it possible to instill in these students, whose skills in language and logic are sometimes very unsophisticated, the critical spirit of challenge? The answer is an unqualified "yes." They can master the techniques of logical argument and learn the comparative and analytical skills necessary to examine intercultural values. They can develop confidence in their abilities to analyze materials that they read, synthesize their findings, and propose new ideas. They can learn to clarify and expand meanings. Indeed, ESL students *must* develop these abilities in order to succeed in

(Scull, Sharon, cont'd.)

courses across the disciplines. This workshop presents teaching strategies that are especially suited to ESL students, but are effective for all students and can be used in most courses that require student writing. Both individual and group activities that stimulate critical thinking are demonstrated.

Audience: G, CC

(August 9 8:45-10:15 am STEV 3040)

Seech, Zachary

Professor/Author

Department of Philosophy
Palomar Community College
San Marcos, CA 92069-1487

**Philosophical Chairs: A Format for
Classroom Discussion**

Philosophical Chairs encourages and develops critical thinking skills as students work together on the discovery and analysis of evidence on a specific issue. The rules of participation invite open-mindedness and constant reevaluation of a position in the light of new evidence.

Audience: JH, HS, CC, U

(August 8 1:30-3:00 pm DAR 112)

Siegel, Harvey

Professor

Department of Philosophy
University of Miami
P.O. Box 248054
Coral Gables, FL 33124

Why Be Rational?

Critical thinkers must be critical about critical thinking itself. The quest for reasons and justification which is central to critical thinking must be respected even when the quest involves reasons for engaging in critical thinking. "Why should I (or anyone) engage in critical thinking?" and "Why should I value critical thinking?" are questions which must be respected, and seen as legitimate, by proponents of critical thinking. Since such proponents conceive of their commitment to critical thinking as itself justified, they are bound to justify that commitment. If they don't, or can't, their commitment to critical thinking is inconsistent with their own ideal of having their commitments in accord with reasons which justify them.

Because of the close conceptual connection between critical thinking and rationality, the demand for reasons which justify a commitment to critical thinking is tantamount to a demand for reasons which justify a commitment to rationality. The operative question, then, is "Why should I (or anyone) be rational?" (or, alternatively, "Why should I value rationality?").

The problem of justifying rationality is a classic philosophical problem. Many eminent philosophers have dismissed the problem as confused; others have argued that it cannot be answered in a non-question-begging way; still others have argued that we should not be rational. If any one of these views is correct, however, then the advocate of critical thinking is in trouble, for her commitment to critical thinking will be uncritical and so, inconsistent with

(Siegel, Harvey, cont'd.)

her own ideal. In this paper, I consider the classic problem of justifying rationality and its relevance to the theory of critical thinking. I argue that the demand for a justification of rationality (and so critical thinking) is legitimate, and I offer a justification which I claim satisfies the demand.

Audience: G

(August 9 1:30-3:00 pm CS 20)

Smith, Raymond

Assistant Director

Campus Writing Program
University of Missouri, Columbia
Columbia, MO 65211

**Yoking Writing Across the Curriculum
and Critical Inquiry: A Cautionary Tale
and Some Replicable Models**

The Writing Across the Curriculum movement (if it can be called that) has met with resistance more often than success at large research-oriented universities. At least one reason should be clear: faculty in other disciplines seem unlikely to take on willingly what they perceive to be the work of the English department—that is, the teaching of English composition. Genuine curricular reform seems possible only when instructors integrate writing in their courses, not only to enhance communication skills but also in order to foster critical thinking skills. The presentation will include some model assignments and classroom procedures employed by teachers from disciplines as disparate as biology and history in an attempt to demonstrate how the abilities to pose worthwhile questions, to deal with quandaries and problems that have no pat or unique solutions, and to agree or disagree by measure are fostered in "writing intensive" courses.

Audience: G, CC, U

(August 8 10:30-12:00 noon QS 20)

Splaine, John

Associate Professor

College of Education
University of Maryland
College Park, MD 20742-1165

**Critical Viewing: Stimulant to Critical
Thinking**

The critical viewing of television is necessary in our electronic age. In this session, critical viewing concepts and skills will be demonstrated and explained. Suggestions for developing critical thinking through the process of critical viewing will be made.

Audience: G

(August 8 10:30-12:00 noon IVES 119)

Steedman, Carol
Director of Credit Programs
Division of Continuing Education
University of Nevada, Las Vegas
Las Vegas, NV 89154

The Advantages of Teaching Informal Logic Within a Decision-Making Framework

This presentation describes a short course developed for freshmen and returning college students which introduces them to dialogical reasoning. The course at first appears to be a practical, unified overview of the decision-making process, but with the infusion of Aristotelian rhetoric, informal logic, and a case study with an increasingly complicated plot, the course becomes a vehicle for learning how to investigate, critique, and create numerous alternative arguments for actions impacting the future. Students practice reasoning in the "strong" sense by staying with a complex situation long enough to become "expert" in creating arguments from a variety of premises and contexts. They reason dialogically within a community, and eventually experience the Aristotelian idea that knowledge is something that we do, not simply receive. The course can be used in study skills programs, or as an introduction to writing classes in English, journalism, and business. It also can be infused into informal logic classes and interdisciplinary seminars.

Audience: CC, U

(August 9 8:45-10:15 am NICH 173)

Swartz, Alma M. **Facilitating Critical and Creative Thinking Dispositions in Children**
School Psychologist, Westford Public Schools

40 Anthony Road
Wayland, MA 01278

While many in the field of critical and creative thinking acknowledge the importance of the need to teach for critical and creative thinking *dispositions*, the stress has been on the discrete critical and creative thinking *skills*. In a previous paper, I argue that teaching for critical and creative thinking attitudes and dispositions, such as openmindedness, or the tendency to seek reasons, is a necessary precondition to the acquisition and transfer of the discrete skills.

This paper explores the idea of *primary* critical and creative thinking dispositions which underly and impel critical and creative thought. These primary dispositions developmentally precede and are more global than the more specific, somewhat language-dependent dispositions which have been previously described by this and other writers. As a basis for analyzing the role of dispositions toward critical and creative thinking processes in children, this paper provides a general overview of biological aspects of cognitive development, pointing out significant correlations with play activity as an expression of these dispositions.

The primary dispositions are categorized and explored as these interact with critical and creative thinking skills. A discussion of the ways in which cultural bias, as expressed in our schools, often runs counter to the child's natural inclination toward critical and creative

(Swartz, Alma, cont'd.)

thought is provided, with suggestions for the encouragement and facilitation of the dispositions as a means of ensuring the attainment of critical and creative thinking skills in the classroom. I thus set the stage for the inclusion of these developmental needs in primary education.

Audience: E, G

(August 7 10:30-12:00 noon DAR 108)

Swartz, Robert
Founder

Critical and Creative Thinking Program
University of Massachusetts
Boston, MA 02125

Infusing Teaching for Critical and Creative Thinking into Standard Subject Area Instruction

In this presentation, a number of K-12 lessons designed to infuse teaching for important critical thinking skills into standard subject area instruction will be demonstrated. Each of these lessons involves restructuring the way regular curriculum materials are used so that both traditional content and good thinking can be learned together. The structure of these lessons will be explicated, concentrating on how they are designed to maximize chances that students will incorporate the ways of thinking taught, into their thinking habits inside and outside of school. The framework of thinking skills upon which these lessons are based will also be explained together with pointers as to how teachers can develop these lessons themselves.

Audience: K-12

(August 9 10:30-12:00 noon CS 68)

Swartz, Robert

Assessing the Quality of Student Thinking: Techniques for Classroom Teachers

While multiple choice tests have been the standard vehicle used in national and statewide testing programs, assessment needs at the classroom level to diagnose and monitor the quality of student thinking call for other reliable, but less formal, means of assessment. One important way that teachers themselves can design such ways of assessing the critical thinking skills of their students is demonstrated and discussed in this presentation. It involves constructing appropriate prompting questions raised about examples which call for the use of specific critical thinking skills and then assessing students' responses against well-articulated characterizations of these critical thinking skills which teachers use in developing critical thinking lessons. A number of specific lessons will be examined, and participants in this workshop will be shown how they can make use of what is incorporated into these lessons to construct such assessment items.

Audience: K-12, G

(August 8 10:30-12:00 noon DAR 108)

Sweers, Carolyn

Teacher, Philosophy Department
New Trier High School
Winnetka, IL 60093

Socratic Teaching Revisited

Contrary to the emphasis of Mortimer Adler, the Socratic method is not a technique for examining books. It is a method for the radical examination of people's LIVES. To a limited extent, it is possible to do this kind of examination in a classroom situation. This workshop will introduce participants to exercises which have been successful in getting students to critically examine some aspects of their lives. These exercises will be of two basic types: (1) exercises which encourage and enable persons to examine insights and beliefs from their own life experience, and (2) exercises able to elicit pre-conscious knowings that shape attitudes and actions.

Audience: G, HS

(August 10 10:30-12:00 noon CS 68)

Talbot, Jan

Teacher/Educational Consultant
5307 Rimwood Drive
Fair Oaks, CA 95628

Think and Think Again!

I will present exciting materials and innovative strategies for strong critical thinking that teachers have found to be most effective in K-12 classrooms in Sacramento County's seventeen school districts and in districts throughout the state. The materials will be aligned with California's new Frameworks for math, science, language arts, and history-social science. Student work and new ways of assessing the effectiveness of student efforts to think critically will be presented also.

Audience: K-12

(August 7 3:15-4:45 pm CS 68)

Thomas, John W.

Director
Center for Autonomous Learning
Far West Laboratory for
Educational Research and Development
1855 Folsom Street
San Francisco, CA 94114

Resource Guides for Self-Directed Learning: A Strategy for Promoting Critical Thinking by Focusing on Improvements in Students' Study Skills

When you get right down to it, there are few meaningful, teachable, subject-matter-independent, critical thinking skills. Critical thinking may best be regarded not as something to be taught, but as a way of learning. This way of learning (a) places central responsibility on students for the management of learning activities, and (b) requires students to read, listen, and construct products with a focus on the selection, interpretation, integration, and application of the central concepts and principles of the subject matter area.

John Thomas will present a model for improving students' self-directed learning that incorporates three kinds of curricular reform: (a) teaching the skills of self-directed learning within subject matter areas; (b) instituting both demands and supports for self-directed

(Thomas, John, cont'd.)

learning within the assignments and classroom activities of a course; and (c) insuring the longterm use of these skills by changing the classroom reward structure. Six resource guides for teachers have been developed and pilot tested. Their relevance for promoting critical thinking in the classroom will be described.

Audience: K-12

(August 7 10:30-12:00 noon NICH 173)

Thomas, Max

Instructor
Division of Humanities
Delta College
University Center, MI 48710

A Critical Thinking Guide to Moral Decision-Making

We make moral decisions constantly, but most decisions are not well-organized and, as a result, we often err. This workshop looks at a critical thinking tool, called "SOLVE," which provides a specific method for reaching responsible and defensible moral decisions. SOLVE is an acronym representing five essential steps in moral problem-solving. The method requires no technical expertise; it is easily integrated into a variety of courses, including those in business, health care, technology and education.

Audience: G, CC

(August 10 10:30-12:00 noon CS 20)

Toole, James E.

Teacher/Building Arts Coordinator
North Syracuse Junior High School
535 West Taft Road
North Syracuse, NY 13212

The Looking Glass Program: Self-Esteem, and the Performing Arts

The session will begin with a "brief" review of the *Looking Glass Program*. First, we will look at its creative and critical thinking skills list. This will be followed by a brief description of the program. The primary goal of the program is to improve self-esteem, self-image, through risk-taking in the performing arts of theatre, dance, story-telling and other arts, such as sculpture, architecture, and oral interpretation. The program integrates critical and creative thinking and the arts. It has been successfully infused in the classroom in academic subjects such as English, reading, social studies, science, history, etc. Most of the session will be devoted to participation in creative theatre, dance, and story-telling activities and, at the same time, understanding the thinking skills brought into play. The session will close with an assessment by the participants. Handouts will be available. Participants should plan on interacting with others through voice and movements. Dress should be casual.

Audience: G

(August 8 1:30-3:00 pm ART 108)

Vickers, Clinton J.

Headmaster

Adelphi Academy

8515 Ridge Boulevard

Brooklyn, NY 11209

What is essential in schools and how do schools go about nurturing these goals? An essential school attempts to get its priorities right. Each member school in the Coalition focuses on nine common principles, the first and most fundamental being the intellectual focus of schools, "helping adolescents to learn to use their minds well." This infuses all aspects of program and instruction.

Adelphi Academy serves as one example of what a school can do to directly alter the quality of learning and intellectual activity that students in elementary, middle and high schools are engaged in informal education. This session will pose the questions that need to be asked if education reform is to effect the quality of mind that schools nurture, and will respond to the question how that can be accomplished in any school. What are the priorities, the structure, curricular necessities, pedagogies and student dispositions?

Audience: HS, G

(August 8

8:45-10:15 am

DAR 108)

Villarini, Angel

Director

Project for the Development of

Thinking Skills

Center for the Enhancement of Teaching

University of Puerto Rico

GPO Box 4984-G de gato

San Juan, PR 00936

This will be a demonstration and discussion about a model for formulating educational objectives and designing teaching strategies to infuse critical thinking across the curriculum. This model is now being used in Puerto Rico's educational system to guide processes of faculty development and curriculum revision from K to college level. First, we will have a demonstration of the model through the specific example of a teaching-learning activity. Then, from this example we will analyze the elements, theoretical foundations, and advantages of the model for faculty development and curriculum revision.

Audience: K-U

(August 8

1:30-3:00 pm

STEV 3008)

Using the Mind Well: an Essential School

Developing Skills, Concepts, and Attitudes of Critical Thinking Through Academic Subject Matters (K to College)

Weddle, Perry

Professor/Author/Editor, Critical

Thinking News

Department of Philosophy

California State University, Sacramento

6000 J Street

Sacramento, CA 95819

Ten "formats" will be presented, structures extracted from arguments as actually found in the contexts which students and citizens ordinarily inhabit. Any given format represents the minimum necessary for good reasoning of its type. Easily digested, each format presents, as it were, a pattern, a model against which to compare real examples in order to let their strengths and weaknesses show through. The formats will be explained and tested against examples such as one might encounter in class. Most importantly, the list itself will be subjected to scrutiny by all. Suggestions for change, and about the whole enterprise, will be welcomed.

Audience: G, CC, U

(August 9

1:30-3:00 pm

STEV 3040)

Weddle, Perry

Making a Good Case For X

This workshop tackles the very general question, "What does a good case look like?" Whereas most critical thinking concerns analysis of existing argument, this session concerns the *construction* of arguments. For those willing to stay to evaluate it, a handout will be distributed on which fundamental argumentation concepts are explained clearly and simply. What a better, or ideal, handout would look like will be explored. Levels: Middle school through college. All subjects, especially language arts.

Audience: Grade 6-U, G

(August 8

3:15-4:45 pm

STEV 3049)

Weinstein, Mark

Assistant Director

Institute for Critical Thinking

Montclair State College

Upper Montclair, NJ 07043

The relevance of critical thinking requires its broad application. A natural adjunct to a specialized course in critical thinking is its infusion in courses in various academic disciplines. An ecological approach affords a model for infusion. The goal is to empower students to understand the principles and values implicit in the subjects they take and to expose the presuppositions that structure the educational milieu in which they function. (Paper written with Professor Wendy Oxman.)

Audience: HS, CC, U

(August 8

10:30-12:00 noon

STEV 3008)

Critical Thinking Across the Disciplines: An Ecological Approach

Weinstein, Mark

Integrating Thinking Skills into the Schools

An overview of typical problem areas associated with thinking skills programs in the schools is offered. The analysis of institutional, curricular and pedagogical concerns offers a framework for teachers and administrators to organize research and practice.

Audience: K-12

(August 7 3:15-4:45 pm ART 108)

Wilson, John K.

Developing Critical Thinking Skills with Developmental Students

Instructor

Division of Language, Literature and Philosophy

Mott Community College
1401 East Court Street
Flint, MI 48503

Community college open-door recruitment policies, high school deficiencies and a general societal indifference to education have combined to form a sizable developmental community college population. In addition to academic and study skill deficiencies, these students severely lack critical thinking skills. This presentation focuses on conveying critical thinking dispositions and skills in a setting where the opening challenges concern getting them there and having them turn in anything at all. It focuses on creating a critical thinking outlook for the "soft" and "natural" sciences and the use of videotapes to ensure academic transference across the curriculum.

Audience: CC

(August 7 3:15-4:45 pm NICH 173)

Winocur, Lee S.

IMPACT

National Director/Project IMPACT/ & Administrator

Center for the Teaching of Thinking
21412 Magnolia Street
Huntington Beach, CA 92646

Extensive research has shown that learning just the mechanics of basic skills and the "mindstuffing" of students is no longer acceptable. Real competency requires training in critical thinking. IMPACT (Improving Minimal Proficiencies By Activating Critical Thinking) focuses on effective strategies for infusing the direct teaching of critical thinking into existing curriculum. IMPACT has been successfully implemented in classrooms at all grade levels, K-College. This presentation will give participants an awareness of thinking skills necessary to implement such a program and, in addition, some examples of instructional techniques will be presented.

Audience: K-CC

(August 8 1:30-3:00 pm CS 68)

Wright, Ian

Deciding

Associate Professor

Faculty of Education
University of British Columbia
Vancouver, British Columbia
Canada V6T 1Z5

Critical thinking includes reasoning about what to do. Participants will focus on some of the critical thinking abilities, standards and dispositions needed in decision-making through a medium of a simulation game appropriate for elementary school students.

Audience: E

(August 7 10:30-12:00 noon STEV 3040)

Yli-Luoma, Pertti

Development of Critical Thinking Skills in Physics Studies Among Pre-Students in Nine Countries

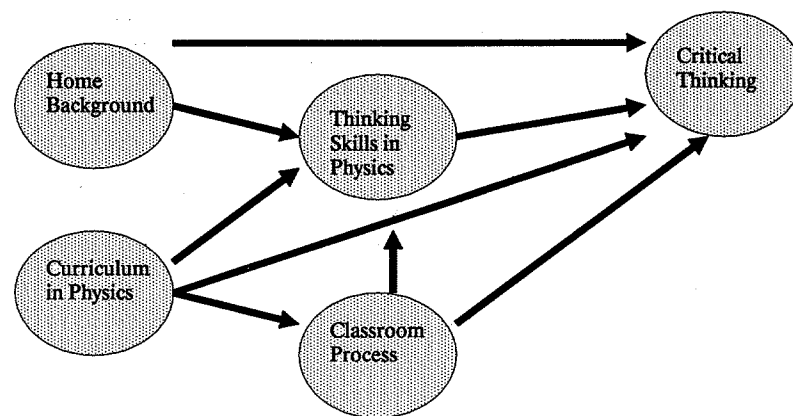
Researcher

Department of Education
University of Uppsala
Box 1604
S-751 46 Uppsala, Sweden

A simultaneous comparative study of the development of critical thinking skills in physics teaching/learning is undertaken among preuniversity students in the following countries: Australia, England, Finland, Holland, Hungary, Italy, Sweden, USA, and West Germany. In some of the countries, the critical thinking skills were not developed as expected. The reasons for this are sought through a comparative study in teaching/curriculum strategies by a structural model as shown in the figure below.

Audience: U

(August 7 10:30-12:00 noon NICH 166)



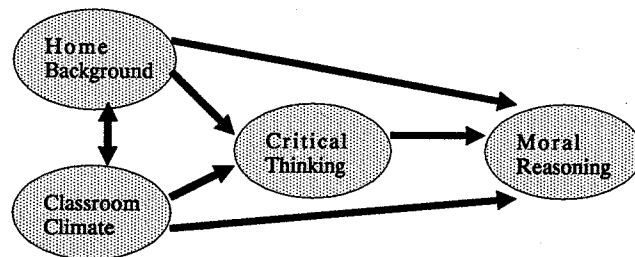
Yli-Luoma, Pertti

The Impact of Classroom Climate on the Development of Critical Thinking and Moral Reasoning

The classroom climate, as perceived by students, is studied in five different countries: Finland, Holland, Ireland, Sweden, and West Germany. The students are 10 and 14 years of age. The Linear Structural Relationships between different latent variables in the developmental model used in the study are shown in the figure below. In this model, the home background has been taken into account. The fit of the model is good in all the studied populations, even if the equivalent paths in different populations are different. This kind of simultaneous modeling in several populations has not previously been possible, but now is. Recent advances in LISREL-programming have opened up this possibility.

Audience: G

(August 10 1:30-3:00 pm CS 68)



Zeiger, William

Teaching the Dialectical Essay

Professor

Department of English
San Diego State University
San Diego, CA 92182

Critical thinking means—in one of its definitions, anyway—to examine an issue from different perspectives. Dialectical thinking works in this way—by alternating perspectives. It works as land surveyors work, or as navigators work, by triangulation. To see a distant object from a single viewpoint does not establish that object's position. The surveyor must move to a different vantage point and look at the object from another angle. This process not only pinpoints the object's position, but reveals another side of the figure. The dialectic examines abstract ideas in a similar way: a single viewpoint does not reveal the depth of a subject; an opposing viewpoint adds an extra dimension, and makes the beginning of wisdom. The dialectical essay attempts to capture this double-visioned wisdom. In the session, I will guide the group in brief writing exercises designed to locate and express antitheses and to seek syntheses in issues of the writers' own choosing. I will also provide examples of this essay form in professional and student writing.

Audience:

(August 9 10:30-12:00 noon STEV 3072)

Zelazkiewicz, Marek

Social Constraints on Critical Thinking and Educational Reforms: An International Perspective

Formerly, University of Poland,

Warsaw

Visiting Professor/Research Associate

Center for Slavic & East-European Studies

University of California

361 Stephens Hall

Berkeley, CA 94720

There is no society without constraints on critical thinking. Ethnocentrism, areas of "taboo," unnoticeable blank spots, unrevealed routine thinking, etc., can differ in various societies but do exist in each one. There is no social system without limitations on educational reforms. Conservative social groups, dependence of schools on other institutions, limited resources, complexity of the changes, the time factor, etc., can bury even the best reform. Experiences from the Soviet Union, Poland and other countries can help to identify social obstacles and barriers for successful educational change.

Audience: G

(August 8 10:30-12:00 noon STEV 1002)

Zevin, Jack

The Problem with Problems: "Poorly" Structured Problems as Promoters of Critical Thinking

Professor

Department of Education

Queens College-CUNY

Flushing, NY 11367-0904

An argument will be developed based on the work of such theorists as Bruner, Berlyne, Sternberg, and Shulman for designing "problems" that are "poorly" structured or "ill" structured in the sense that these problems contain "unknowns" or gaps, missing elements, which are crucial for promoting critical thinking by learners in the form of high-level inferencing and hypothesizing.

Materials that evoke a sense of (1) mystery, (2) controversy, (3) drama, and (4) contrast have the greatest potential to foster motivation to both discover problems and work toward solutions (with a stress on alternative approaches) in a way that reinforces a sense of playfulness and gives greater freedom for imaginative lines of inquiry.

A participatory demonstration of the inferencing process based on materials from history and the fine arts will conclude the presentation, allowing time for questions and comments from the audience.

Audience: G

(August 8 1:30-3:00 pm STEV 3046)

PANELS

A Staff Development Plan to Model Critical Thinking Throughout a Community College

Klein, Donald

Professor
Department of Philosophy
Gavilan College
5055 Santa Teresa Boulevard
Gilroy, CA 95020

Oliviera, Susan

Professor
Department of Justice Administration
Gavilan College

Johnson, Martin

Chair, Curriculum Committee/Professor
Department of Physics and Math
Gavilan College

Paulsen, Marijane

Vice-President/ Dean
Instructional Services
Gavilan College

Pew, Clifford

Professor
Department of Business
Gavilan College

Bishop, Cheri

Registrar
Gavilan College

Paul, Richard

Consultant, Curriculum Committee & Director,
Center for Critical Thinking and Moral Critique

This panel will trace the evolution of critical thinking from a group discussion of Title V mandates at a 1986 staff meeting to Critical Thinking as the Staff (Board of Trustees, Administration, Faculty, and Classified Staff) Development theme for Gavilan Community College (Gilroy, California) for the 1988-1989 school year. Each panel member will present their specific role in the plan's emergence. During the Seventh International Conference (next year), the same panel will present the outcome of the program and adjustments that could be made.

Audience: CC, U

(August 9 3:15-4:45 pm IVES 119)

On the Nature of Critical Thinking

Richard Paul

Connie Missimer

Robert Ennis

Gerald Nosich

This panel will discuss definitions of critical thinking and their applications to classroom practice at all levels, K-U.

Audience: G

(August 8 3:15-4:45 pm SU: MP)

Cultural Literacy and Critical Thinking

Richard Paul

Donald Lazere

Vincent Ryan Ruggiero

This panel will evaluate E.D. Hirsch's best-selling book *Cultural Literacy* and the relation between critical thinking and discipline-specific knowledge.

Audience: G

(August 9 10:30-12:00 noon IVES 119)

**Critical Thinking in Uncritical Societies:
Social Constraints Imposed on Critical Thinking**

Frank Scardilli

Dean Dorn

Marek Zelazkiewicz

Angel Villarini

This panel will examine the kinds of constraints imposed on critical thinking in the societies of the United States and other countries including Poland and Puerto Rico.

Audience: G

(August 9 3:15-4:45 pm SU: MP)

**Teaching Critical Thinking in the Strong Sense:
Practitioner's Perspective**

Jan Talbot

Karen Jensen

Noreen Miller

Ross Hunt

Chris Vetrano

Teacher, English Department

Lawrence Cook Junior

High School

2480 Sebastopol Road

Santa Rosa, CA 95407

In this panel, teachers will share classroom ideas they have successfully implemented for teaching strong-sense critical thinking in grades K-12.

Audience: K-12

(August 9 1:30-3:00 pm SU: MP)

Critical Thinking, Study Skills and Remediation

John Wilson

Sharon Scull

Heidi Kreklau

This panel will discuss means of incorporating critical thinking in teaching study skills to remedial students in various disciplines, K-12.

Audience: K-12

(August 9

1:30-3:00 pm

IVES 119)

Infusing Critical Thinking into Language Arts

Greg Sarris

Bruce Ronk

Ogden Morse

This panel will explore means of incorporating critical thinking instruction in the Language Arts curriculum, K-U.

Audience: G

(August 9

10:30-12:00 noon

SU: MP)

Infusing Critical Thinking into Social Studies

Gus Bagakis
Dean Dorn

Paul Baker

Bernice Goldmark
Eugene Labovitz

This panel will explore means of incorporating critical thinking instruction into the Social Science curriculum, K-U.

Audience: G

(August 7

1:30-3:00 pm

STEV 1002)

Infusing Critical Thinking into Humanities

Karen Jensen
Sharon Schwarze

Matthew Lipman

Harvey Lape
Donald Lazere

This panel will explore means of incorporating critical thinking instruction into the Humanities

(Infusing Critical Thinking into Humanities, cont'd.)

curriculum, K-U.

Audience: K-U

(August 8

1:30-3:00 pm

IVES: Warren)

Infusing Critical Thinking into Math and Science

Doug Martin
Robert Swartz

Stephen Norris
Robert Ennis

This panel will explore means of incorporating critical thinking instruction into Math and Science curriculum, K-U.

Audience: G

(August 7

10:30-12:00 noon

SU: MP)

Critical Thinking Staff Development

Charlie Blatz
John Barell
Mark Weinstein

Ken Bumgarner
Matthew Lipman
Nicholas Michelli

This panel will survey both short-term development projects, such as awareness workshops, and long-term projects, such as district-wide planning, assessment, and budgetary support, K-12.

Audience: K-12

(August 7

1:30-3:00 pm

SU: MP)

Critical Thinking in Europe: Recent Developments

Will Robinson
Kurt Bergling

John Hanson
Pertti Yli-Luoma

Marek Zelazkiewicz

This panel will feature speakers from countries including the United Kingdom, Sweden and Poland.

Audience: G

(August 7

1:30-3:00 pm

IVES: Warren)

Critical Thinking and Global Problems

James Gray

Professor

Department of American
Multicultural Studies
Sonoma State University
Rohnert Park, CA 94928

Nigel Dower

Rachel Lauer

This panel will apply critical thinking to global problems including interdependency among nations, economic development, and relations between elites and mass populations.

Audience: G

(August 8 8:45-10:15 am IVES: Warren)

Critical Thinking K-12: The Practitioner's Perspective

Karen Jensen
Carolyn Sweers

Noreen Miller

Clinton Vickers
Joe Edwards

In this panel, teachers will air problems they have encountered introducing critical thinking into the classroom.

Audience: K-12

(August 10 8:45-10:15 am SU: MP)

Critical Thinking Testing: Recent Developments

Robert Ennis

George Hanford

Stephen Norris

A panel of experts in critical thinking testing will discuss positive developments toward testing for strong-sense critical thinking

Audience: G

(August 10 10:30-12:00 noon SU: MP)

Critical Thinking in Canada

Carol LaBar
Ian Wright

Jerrold Coombs
Linda Phillips

A panel of Canadian educators will discuss recent developments there.

Audience: G

(August 10 1:30-3:00 pm SU: MP)

Critical Thinking and the Media

Lenore Langsdorf

Joel Rudinow

Dennis Rohatyn

This panel will explore the influence of mass media on critical thinking, as well as presenting approaches to teaching critical thinking about the media in high school and the university.

Audience: G, HS, U

(August 9 8:45-10:15 am SU: MP)

Critical Thinking and Liberation

Lauren Coodley
Judi Hirsch

James Gray

Michael O'Loughlin
Carolyn Hadley

This panel will discuss the approach to critical thinking and liberatory literacy associated with Paolo Freire and American educators influenced by him.

Audience: G

(August 8 10:30-12:00 noon SU: MP)

**California's Recent Community College
Across-the-Curriculum
Critical Thinking Requirement**

Jerry Emmons
Chairman
Division of Creative Arts
College of the Redwoods
Eureka, CA 95501

Larry Dawson
Coordinator
Learning Assistance Center
College of the Redwoods
Eureka, CA 95501

John Feare

Donald Klein

This panel will discuss the recent revision in Title V requiring each community college to define what is meant by the ability to think critically and to understand and apply concepts of critical thinking in each college course.

Audience: G, CC, U

(August 8 1:30-3:00 pm SU: MP)

Critical Thinking: What States Are Doing

John Meehan (PA)
Ken Bumgarner (WA)

Peter Kneedler (CA)
John Barell (NJ)

Wendy Oxman (NJ)

In this panel, representatives from departments of education in several states will survey recent developments in elementary, secondary, and post-secondary critical thinking instruction.

Audience: G

(August 7 3:15-4:45 pm SU: MP)

Informal Logic: Recent Developments In the Field

Ralph Johnson
Gerald Nosich

Perry Weddle
Edward Damer

This panel will discuss the current state of university-level studies in informal logic.

Audience: CC, U

(August 7 10:30-12:00 noon STEV 1002)

Educating Reason

Harvey Siegel
Lenore Langsdorf

Donald Hatcher
Dennis Rohatyn

Maurice Finocchiaro

This panel will be based on Harvey Siegel's new book, entitled *Educating Reason: Rationality, Critical Thinking and Education*.

Audience: CC, U

(August 9 3:15-4:45 pm DAR 108)

**Critical Thinking Across the
College/University Curriculum**

John Chaffee

Pat Foster

Gerald Nosich

Professor
School of Nursing
Loma Linda University
Loma Linda, CA 92350

A panel of university educators will survey interdisciplinary critical thinking projects.

Audience: CC, U

(August 9 8:45-10:15 am DAR 108)

Critical Thinking and Literature

Stephen Marx

Assistant Professor
Department of English
California Polytechnic
State University
San Luis Obispo, CA 93407

Jonah Raskin

Professor
Department of English
Sonoma State University
Rohnert Park, CA 94928

Donald Lazere

This panel will survey means of emphasizing critical thinking in high school and college literature courses.

Audience: HS, CC, U

(August 8 3:15-4:45 pm IVES: Warren)

Mini-Critical Thinking Course

During the conference an actual course in critical thinking will be conducted. Textbook authors and other experienced critical thinking instructors will provide a crash course on a dimension of critical thinking, as follows:

T. Edward Damer	What the Fallacies Can Teach Us About Good Arguments Sunday, August 7, 1:30-3:00 pm DAR 112
Vincent Ruggiero	Ha! Ha! I'm Thinking Sunday, August 7, 3:15-4:45 pm STEV 3049
John Chaffee	Critical and Creative Problem Solving Monday, August 8, 8:45-10:15 am STEV 2049
Gerald Nosich	Recognizing and Evaluating Misleading Statements Monday, August 8, 10:30-12:00 noon STEV 2049
M. Neil Browne Stuart Keeley	Assignments that Stimulate Critical Thinking Monday, August 8, 1:30-3:00 pm STEV 2049
Ralph Johnson	Critical Thinking and Advertising Monday, August 8, 3:15-4:45 pm STEV 2049
Carol LaBar Ian Wright	Practical Reasoning and Principle Testing Tuesday, August 9, 8:45-10:15 am STEV 2049

SPECIAL INTEREST GROUPS

(Tuesday, August 9 7:35-8:35 am)

In order to facilitate networking within critical thinking special interest groups, a special time has been set aside for such groups to organize themselves if they so wish. A facilitator for this process will be present at the meeting but the nature and extent of the organization that is set up will be dependent entirely upon the will of the members present at the meeting. The Center will continue to schedule meeting times for the groups at future conferences if interest justifies such continuance.

• Elementary (K-6)	STEV 3046
• Middle School (7-8)	CS 20
• High School (9-12)	STEV 3008
• Critical Thinking Staff Development (K-12)	STEV 2049
• Community College	DAR 108
• 4 Year College and University	STEV 1002
• Critical Thinking in Literature and Language Arts	DAR 112
• Critical Thinking in Social Studies (including Sociology, Anthropology, History and Psychology)	CS 68
• Critical Thinking in the Arts	NICH 173
• Critical Thinking in Science and Math	NICH 166
• Critical Thinking Assessment	STEV 3049
• Critical Thinking for the Slow or Disadvantaged Learner	STEV 3040
• California State Department of Education's Thinking Skills Network	STEV 3072
• Learning and Tutorial Centers	ART 108
• Feminist Education	IVES 44

VIDEOTAPE RESOURCES

Videotapes are one of the most important resources for critical thinking in-service education. They can be used in a variety of ways: 1) as discussion starters, 2) as sources of information on the nature of critical thinking, 3) as models of critical thinking, and 4) as models for classroom instruction. All of the following videotapes have been developed as low-cost resources. No attempt has been made to achieve broadcast quality. Some of these videotapes will be shown in an alcove in the Commons during the evening social hours and during the day in the Student Union downstairs lobby. A complete description of available videotapes may be picked up at the conference registration desk. A partial listing of the Center's videotape library follows:

Critical Thinking in Science
Critical Thinking in History
Dialogical Practice I
Dialogical Practice II
Critical Thinking: The State of the Field
Socratic Questioning in Large Group Discussion (4th Grade)
Socratic Questioning in Large Group Discussion (6th Grade)
Socratic Questioning in Large Group Discussion (7th & 8th Grades)
Learning How to Think About Thinking
The Attributes of a Critical Thinker
Student Insights into Metacognition
Four-Part Workshop in Critical Thinking Instruction:
 Part 1: Introduction to the Concept
 Part 2: Dialogical Practice
 Part 3: Reciprocity
 Part 4: Socratic Questions
Critical and Creative Thinking
Coaching Teachers Who Teach Critical Thinking
Critical Thinking and Women's Issues
Problems with Teaching How to Use Arguments to Decide What to Believe
Effective Design for Critical Thinking Inservice
Critical Thinking and the History-Social Science Curriculum, Grades 9-12
Bridging the Gap Between Teachers' Verbal Allegiance to Critical Thinking and Their Actual Behavior
Teaching Critical Thinking Across the Curriculum
Language Arts and Critical Thinking for Remedial and Bilingual Students
A Conception of Critical Thinking

How to Write Critical Thinking Test Questions
The Human Image System and Thinking Critically in the Strong Sense
Egocentricity: What It Is and Why It Matters
Philosophy for Children
Critical Thinking in Math and Science
Projects for Integrating Critical Thinking
Varieties of Critical Thinking Tests: Their Design and Use
Teaching Critical Thinking in the Strong Sense in Elementary, Secondary and Higher Education
Workshop on the Art of Teaching Critical Thinking in the Strong Sense
Critical Thinking's Original Sin: Round Two
Knowledge as Design in the Classroom
The Possibility of Invention
The Role of Thinking in Reading Comprehension
Critical Thinking at the Community College
Teaching Thinking Strategies Across the Curriculum: The Higher Order Thinking (H.O.T.) Project: Elementary Level
Moral Argument as a Means of Introducing Critical Thinking Skills to Elementary School Students
Why Not Debate? Strong Sense Critical Thinking Assignments
Introducing Affective Awareness
Can Critical Thinking be Taught? A Teaching Strategy for Developing Dialectical Thinking Skills
Mini-Critical Thinking Course:
 Using Arguments to Decide What to Believe
 Critical and Creative Problem Solving
 Learning About Good Arguments Through the Fallacies
 Argument Diagramming
 Stimulating Thinking About Thinking with Logical Puzzles
 Information and the Mass Media
 Practical Reasoning
 The Nature of Critical Thinking through Socratic Interrogation
 Dispositions: The Neglected Aspect of Critical Thinking
 Epistemological Underpinnings of Critical Thinking

National Council for Excellence in Critical Thinking Instruction

As the term "Critical Thinking" gains greater and greater currency in education, there is a growing number of individuals who are declaring themselves experts in the field and promising to provide short-term training for teachers and simple-to-apply programs and strategies. The purpose of the National Council is to draw upon the collective wisdom of those in leadership in the field to articulate minimal standards for quality in-service and instruction for critical thinking and to help serve as a clearinghouse for information about quality programs and strategies:

Membership

Jonathan Kozol
Fellow, John Simon Guggenheim
Memorial Foundation

George Hanford
President Emeritus, College Board

Albert Shanker
President, American Federation
of Teachers

Joseph Williams
University of Chicago

Matthew Lipman
Director, Institute for the
Advancement of Philosophy for Children

Irving Siegel
Educational Testing Service

Trudy Govier
Formerly University of Calgary

John Prihoda
President/Superintendent, Iowa Valley
Community College

Ian Wright
University of British Columbia

Vincent Ruggiero
S.U.N.Y. Delhi College

S. Morris Engel
University of Southern California

Michael Scriven
University of Western
Australia

David Perkins
Harvard University

Robert Ennis
Director, Illinois
Critical Thinking
Project

Stephen Norris
Memorial University of
Newfoundland

Carolyn Sue Hughes
Past President,
A.S.C.D.

John Hoaglund
Christopher Newport
College

Ronald Giere
University of Minnesota

Dolores Gallo
Co-director, Critical
and Creative
Thinking Program
University of
Massachusetts, Boston

Robert Swartz
Founder, Critical and Creative
Thinking Program,
University of Massachusetts, Boston

Gerald Nosich
University of New Orleans

T. Edward Damer
Emory and Henry College

Ralph Johnson
University of Windsor

J. Anthony Blair
University of Windsor

Edward M. Glaser
Past President, Human Interaction
Research Institute

David Hitchcock
McMaster University

Donald Lazere
California Polytechnic
State University

Rita King
History-Social Science
Assessment Advisory Committee

Harvey Siegel
University of Miami

Diane Halpern
California State University,
San Bernardino

Richard W. Paul
Director, Center for
Critical Thinking and
Moral Critique

Jonathan Adler
Brooklyn College,
C.U.N.Y.

Art Costa
President, A.S.C.D.

Carol La Bar
University of British
Columbia

Edys Quellmalz
Formerly Stanford
University

Perry Weddle
California State
University, Sacramento

Lenore Langsdorf
University of Texas

Joel Rudinow
Research Associate,
Center for Critical
Thinking and Moral
Critique

Ronald S. Brandt
Executive Editor,
Educational Leadership

**Center for Critical Thinking & Moral Critique
Sonoma State University**

The Center conducts advanced research, inservice education programs, professional conferences, and disseminates information on critical thinking and moral critique. It is premised on the democratic ideal as a principle of social organization, that is, that it is possible

so to structure the arrangements of society as to rest them ultimately upon the freely given consent of its members. Such an aim requires the institutionalization of reasoned procedures for the critical and public review of policy; it demands that judgments of policy be viewed not as the fixed privilege of any class or elite but as the common task of all, and it requires the supplanting of arbitrary and violent alteration of policy with institutionally channeled change ordered by reasoned persuasion and informed consent.*

It conducts its research through an international network of fellows and associates, as follows:

Honorary Fellows

Max Black, Professor of Philosophy, Cornell University, Ithaca, NY

Robert Ennis, Director, Illinois Thinking Project, University of Illinois, Champaign, IL

Edward M. Glaser, Psychologist, Author, Watson-Glaser Critical Thinking Appraisal, Los Angeles, CA

Matthew Lipman, Professor of Philosophy, Founder and Director, Institute for the Advancement of Philosophy for Children, Montclair, NJ

Israel Scheffler, Thomas Professor of Education and Philosophy, Harvard University, Cambridge, MA

Michael Scriven, Professor of Philosophy, University of Western Australia, Nedlands, Australia

Research Associates

J. Anthony Blair, Professor of Philosophy, University of Windsor, Ontario, Canada

Carl Jensen, Associate Professor of Communications Studies, Sonoma State University, Rohnert Park, CA

Ralph Johnson, Professor of Philosophy, University of Windsor, Ontario, Canada

Don Lazere, Professor of English, California Polytechnic State University, San Luis Obispo, CA

Perry Weddle, Professor of Philosophy, California State University, Sacramento, CA

Ian Wright, Professor of Education, University of British Columbia, British Columbia, Canada

Joel Rudinow, Assistant Professor of Philosophy, Sonoma State University, Rohnert Park, CA

Teaching Associates

Robert Ennis, Center Fellow

Carl Jensen, Center Research Associate

Don Lazere, Center Research Associate

Richard Paul, Director

Dianne Romain, Assistant Professor of Philosophy, Sonoma State University

Douglas Martin, Associate Professor of Chemistry, Sonoma State University

Joel Rudinow, Center Research Associate

Director

Richard W. Paul, Center for Critical Thinking and Moral Critique

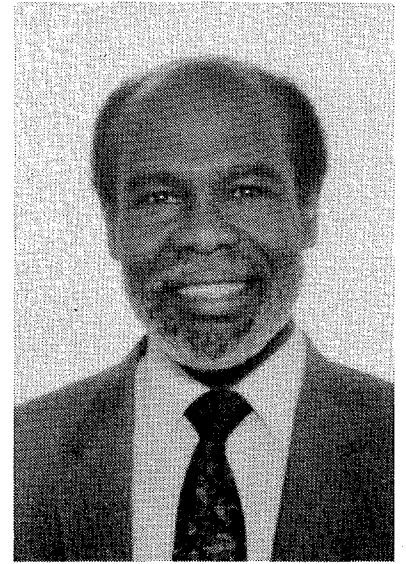
The work of the Center includes an annual international Conference on Critical Thinking and Education; Master's Degree in Education with emphasis in Critical Thinking; Supplementary Authorization Program in the teaching of critical thinking (under the Single Subject Waiver Credential Program of the State of California); inservice programs in the teaching of critical thinking; Research Intern Program (for graduate students in the field of critical thinking and moral critique); a resource center for the distribution of tests, documents, position papers; and research in the field of critical thinking and moral critique and in the reform of education based upon the teaching of reasoning and critical thinking skills across the curriculum. Other recent contributors include the historian Henry Steele Commager and George H. Hanford, President of the College Board.

Center for Critical Thinking and Moral Critique
Sonoma State University
Rohnert Park, CA 94928

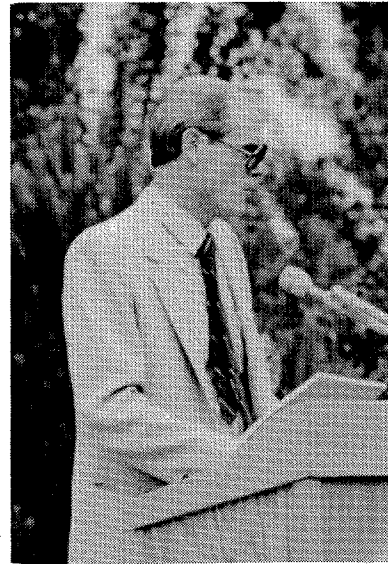
*Israel Scheffler, *Reason and Teaching* (1973, Bobbs-Merrill Co., Inc.) page 137



Sharon Bailin



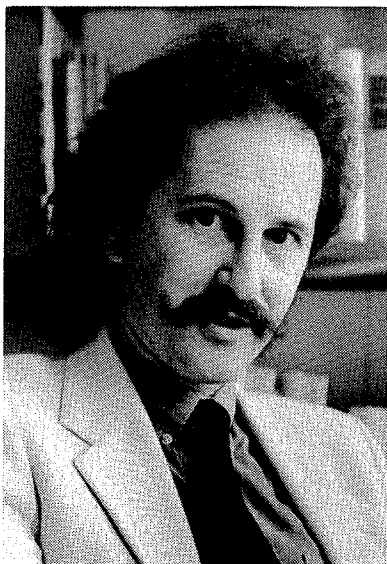
Hollibert Phillips



Ralph Johnson



Ann Kerwin



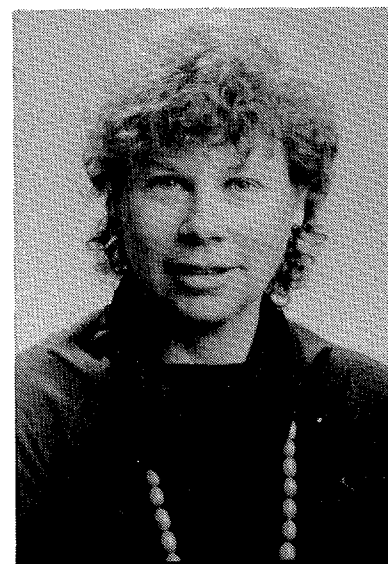
Joel Rudinow



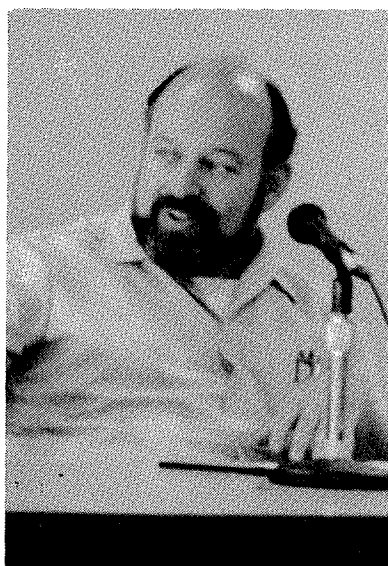
Vivian Rosenberg



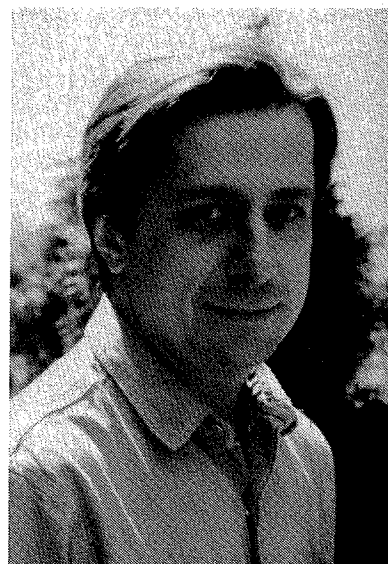
Richard Paul



Connie Missimer



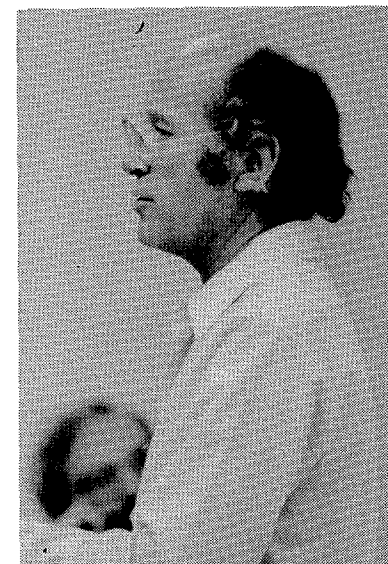
Robert Swartz



John Chaffee



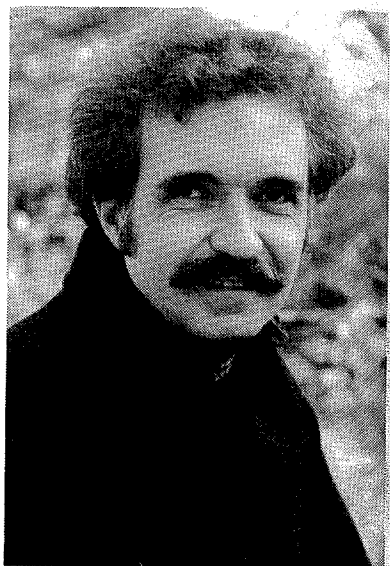
Jan Talbot



Robert Ennis



Lenore Langsdorf



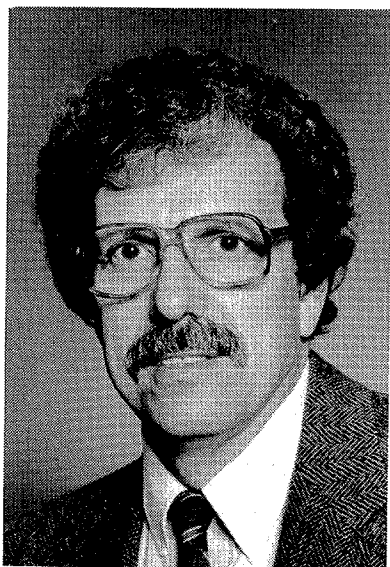
John Barell



Kate Sandberg



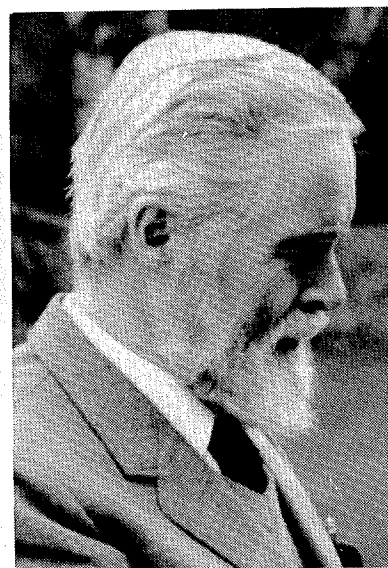
Linda Phillips



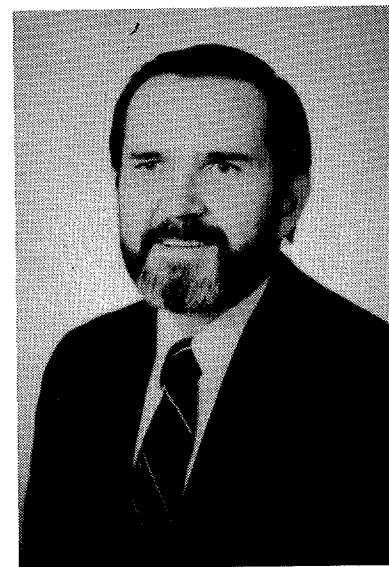
William Dorman



Lee Winocur

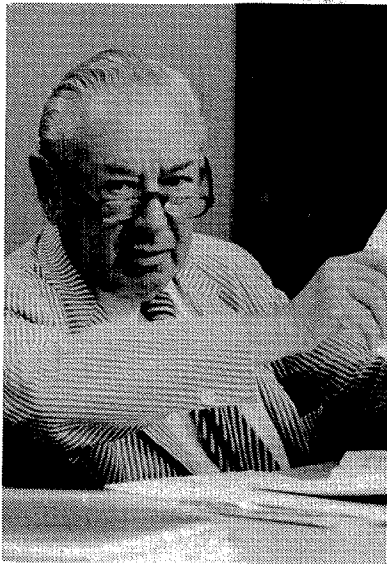


Will Robinson



Edward Damer

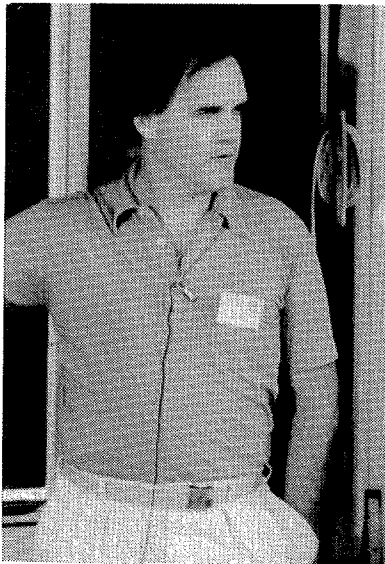
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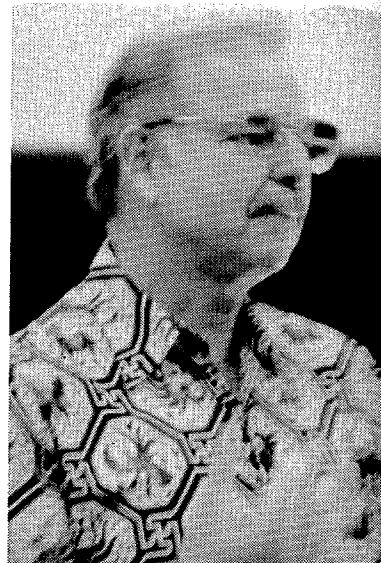
Edward M. Glaser



Delores Gallo

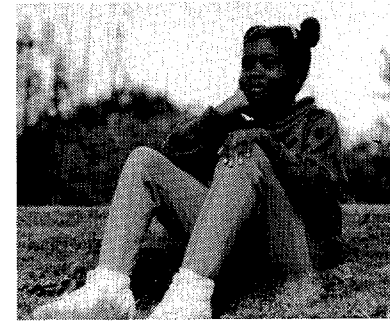
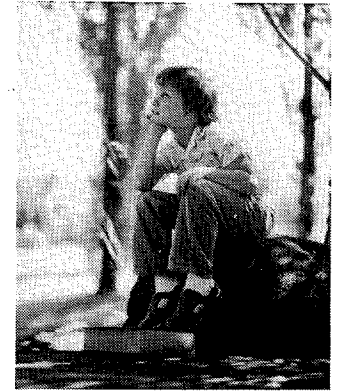


Tony Blair



Art Costa

*Critical Thinking
provides a solid
foundation for instruction...*



*...from kindergarten
through graduate school.*

