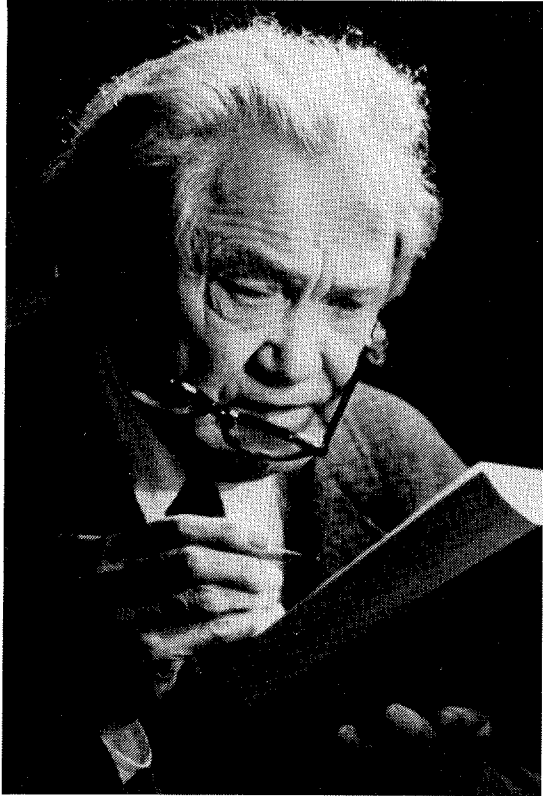


The Fifth International Conference on

Critical Thinking and Educational Reform



Sonoma State University



Henry Steel Commager

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

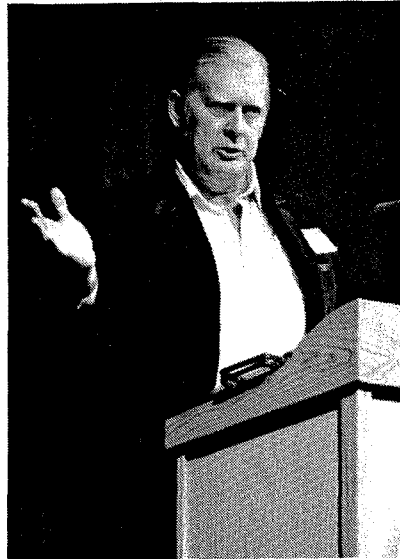
The Seventh Annual & Fifth International Conference on

**CRITICAL THINKING
AND
EDUCATIONAL REFORM
AUGUST 2-5, 1987**

Program
and
Abstracts

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

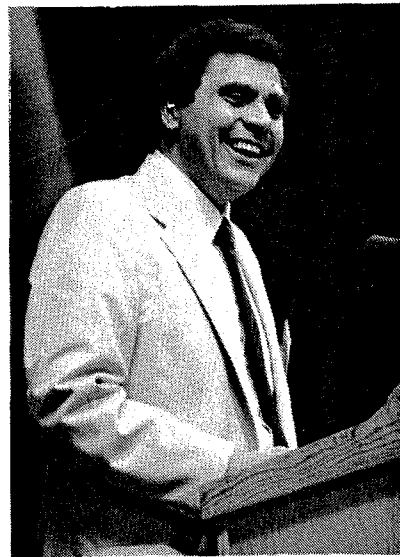
From Previous Conferences:



Michael Scriven



George Hanford



Neil Postman



Delores Gallo

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INTRODUCTION

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 also driven 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 opposition 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 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 regular time to meet with colleagues to observe and learn from each other's successes and failures. They need access to critical thinking materials. They need to join with the administrators and parents in making a commitment to school environment conducive to critical thinking. 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 unrewarding 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 1987 conference on Critical Thinking and Educational Reform reflects the development implicit in the six 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, 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 was 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 modeling 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 the 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 address 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 simplistic explanation of life with opposing groups being identified as essentially "good" or "evil", the growing threat of nuclear holocaust—all argue for the pressing need for fair-minded critical thinking skills.

ORGANIZATION OF THE CONFERENCE

It is our assumption 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 years need to understand and appreciate the superstructure that is to be built upon the foundations they help to lay. Those who teach the middle years need to understand and appreciate what has come before and what is to follow. And those who teach the later years 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 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 a network (See page 103) for more information on these special interest meetings.)

Virtually all sessions have been scheduled for 1½ 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 modeling 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: TEACHING CRITICAL THINKING: SKILL, COMMITMENT, AND THE CRITICAL SPIRIT, 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 are 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 foundation 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 highlights 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, fair-minded and independent thinking are required by the very nature of what is done. Examples of assignments and practices that foster the critical spirit can be found in the Handbooks on Critical Thinking, K-6, which have been published by the Center.

All of the presenters have been asked to make the relation of their presentation to these distinctions apparent to their audience so that the relationships of the various presentations to each other will be more clear. Participants should feel free to question presenters in this regard to ensure that they understand whether the presenter is simply focusing on the intellectual skills (without regard to the problem of transfer to domains of vested interest and ego-involvement) or whether the presenter is conceiving of his or her objective as bearing upon this higher order use of critical thinking.

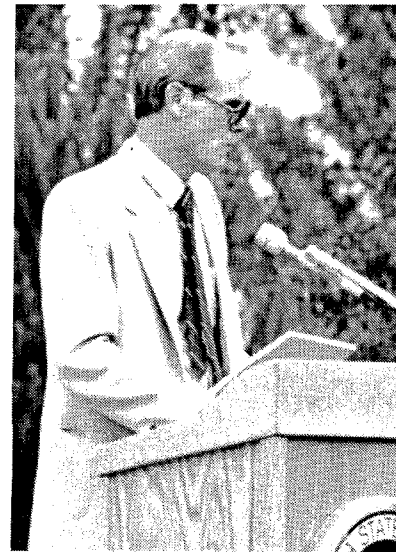
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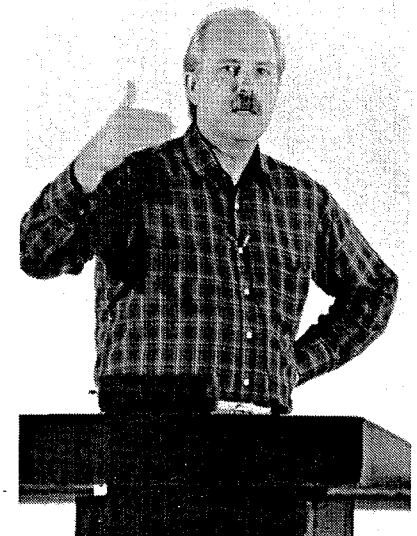
Dianne Romain



Doug Martin



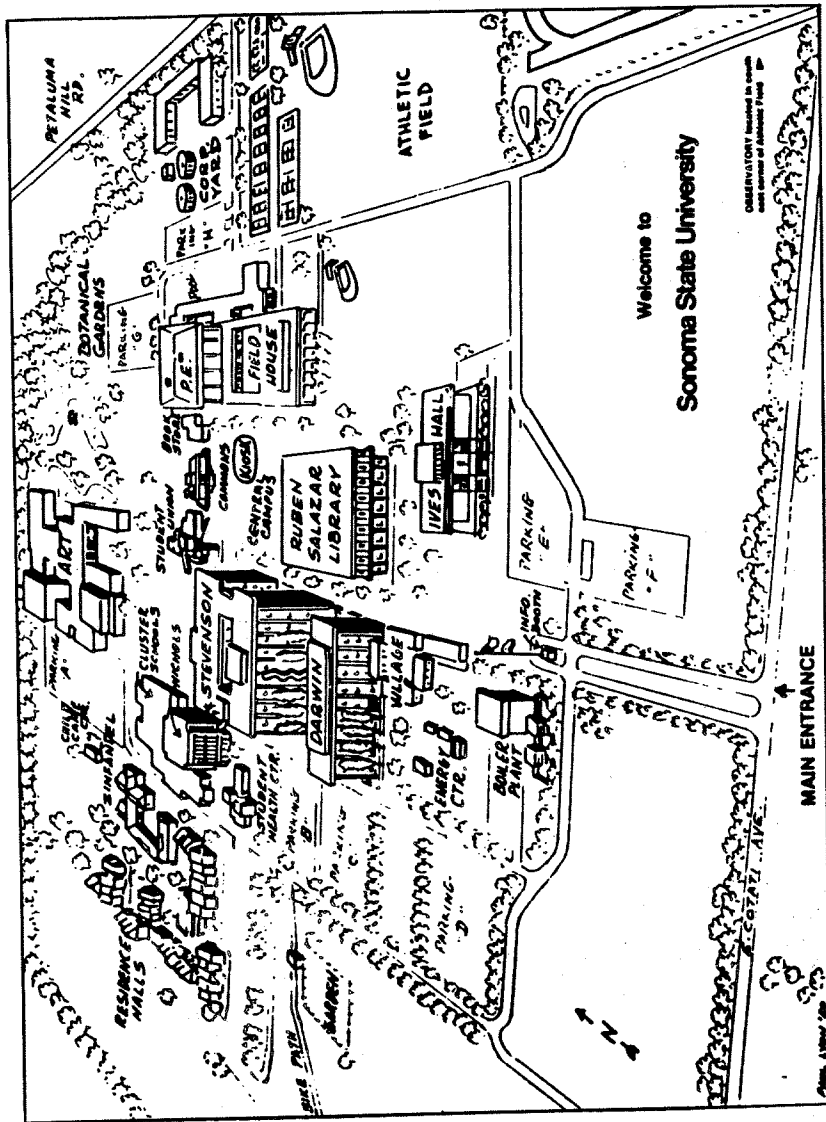
Ralph Johnson



Ken Bumgarner

ABBREVIATIONS

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



SUNDAY, AUGUST 2

- 8:00-9:00 am REGISTRATION
 Student Union
- 9:00-10:15 am Richard W. Paul Director, Center for Critical Thinking and Moral Critique
Teaching Critical Thinking: Skill, Commitment and the Critical Spirit, Kindergarten through Graduate School
 Commencement Area
- 10:30-12:00 noon
- Carol Tavis
Thinking Critically about Emotion—and the Role of Emotion in Critical Thinking
 IVES: Warren G
- Perry Weddle
Deeds and Words: Critical Thinking Activities through Critical Thinking Vocabulary
 IVES 119 G, K-U
- William Dorman, Carl Jensen, Lenore Langsdorf
Critical Thinking and the Media
 SU:MP G
- Robert Swartz
Integrating Teaching for Thinking into Mainstream Classroom Instruction
 STEV 1002 K-12
- M. Neil Browne
Designing Faculty Development Programs for Integrating Critical Thinking Across the Curriculum
 ART 108 G, CC, U
- Vincent Ryan Ruggiero
Profile of a "Thinking Person"
 DAR 108 G
- Gerald Nosich
Teaching Critical Thinking Across the Curriculum
 CS 68 G, CC, U
- Robert Ennis
Writing Critical Thinking Tests, Part I
 STEV 3008 G
- Connie DeCapite
Language Arts and Critical Thinking for Remedial and ESL Students
 DAR 112 G, K-12
- Harvey Siegel
Critical Thinking and Indoctrination
 STEV 3046 G, CC, U

(Sunday, August 2
10:30-12:00 cont.)

Mark Weinstein
Critical Thinking and Moral Education
STEV 3040 G

12:00-1:30 pm

Lunch

1:30-3:00 pm

David Perkins
What Makes Science Concepts Hard to Understand?
IVES: Warren G

Jan Talbot
*Effective Integration of Critical Thinking Across the Curriculum:
Johnny and Jane CAN Think*
IVES 119 K-12

Robert Swartz, Richard Paul, Luiza Amodeo
*What is the Appropriate Role of Critical Thinking in
Pre-Service Education?*
SU:MP G

George Hanford
Unexpected Connections
STEV 1002 G

John Chaffee
Teaching Critical Thinking Across the Curriculum
ART 108 CC, U

J. Robert Hanson
*Critical Thinking: Teaching Strategies to Involve All Students in
Higher Level Cognitive Processes*
DAR 108 K-12

Stephen Norris
Observation in Science Education
CS 68 G

Robert Ennis
Writing Critical Thinking Tests, Part II
STEV 3008

Gerald Nosich
*Mini-Critical Thinking Course: Constructing Arguments for
Opposing Points of View*
STEV 2049 G

Ogden Morse
*Subject Matter and Moral Development in Domain Specific
Classrooms*
DAR 112 HS

Mark Weinstein
Integrating Thinking Skills into the Curriculum
STEV 3046 K-12

Art Pearl
Thinking Critically about Critical Issues
STEV 3049 G

(Sunday, August 2
1:30-3:00 cont.)

3:15-4:45 pm

Eugene Garver
Faculty Development for Critical Thinking
NICH 173 CC, U

Richard Paul
*Critical Thinking Staff Development: Developing Faculty Critical
Thinking and Critical Teaching Skills*
IVES: Warren G

Perry Weddle
But That's Just Your Opinion
IVES 119 JH-U

Greg Sarris, Abelardo Brenes, Angel Villarini
Critical Thinking and Third World Communities
SU:MP G

John Pihoda
Critical Thinking and Ethics in Education
STEV 1002 G

Vincent Ryan Ruggiero
*Teaching Thinking Across the Curriculum:
A Holistic Approach*
ART 108 G

Douglas Martin
*A Definition of Critical Thinking for Science
Instruction, K-12*
DAR 108 K-12

William Dorman
Coming to Grips with the Mass Media
CS 68 G

M. Neil Browne, Stuart M. Keeley
Questioning Strategies that Facilitate Critical Thinking
STEV 3008 G

Harvey Siegel
*Mini-Critical Thinking Course: Epistemological Underpinnings of
Critical Thinking*
STEV 2049 G

Connie DeCapite
Critical Thinking Through Thematic Units
DAR 112 JH-U

John May
*Teaching By Bad Example: Optimal Cases for Helping Intermediate
Students to Think Critically, Part I*
STEV 3049 CC, U

Ralph Johnson
Why Do We Reason Poorly? Psychodynamics vs. Psychologic
NICH 173 G, CC, U

Marlys Mayfield
*Teaching Recognition of Viewpoint: Working with Student Naivete
About Where Ideas Come From*
STEV 3040 G

(Sunday, August 2)

8:00-11:00 pm

Beer and Wine Social
Dining Commons

Informal Exchange of Ideas
Dining Commons Faculty Lounge

Videotape Program
Dining Commons Alcove

MONDAY, AUGUST 3

8:45-10:15 am

Richard Paul, David Perkins
What's In a Name? "Thinking" vs. "Critical Thinking."
IVES: Warren G

John Chaffee, Anthony Corso, Eugene Garver, Carol Knight
Critical Thinking Across the College and University Curriculum
SU:MP CC, U

Linda M. Phillips
The Design and Development of a Test of Inference Ability in Reading Comprehension
STEV 1002 G

Ralph Johnson
The Whole Enchilada: An Outline of a Theory of Reasoning
ART 108 G, CC, U

Marek Zelazkiewicz
The Contribution of Moral Critique and Critical Thinking to the Emergence of the Independent Education Movement and the Alternative Society in Poland (1976-1986)
DAR 108 G

Robert Swartz
A Framework for Infusing Critical Thinking into Science Instruction
CS 68 K-12

Debbie Walsh
The AFT Critical Thinking Project: The Hammond, IN Pilot
STEV 3008 K-12

Joanne Kurfiss
Understanding Knowing: Developing Foundations for Critical Thinking at the College Level
STEV 2049 CC, U

Thomas Jackson
Philosophy for Children: A Hands-on Demonstration, Primary Level
DAR 112 E

Marlys Mayfield
Grounding Critical Thinking in Observation Skills
STEV 3049 G

(Monday, August 3
8:45-10:15 cont.)

George Collison
Supposing in Geometry and Algebra: Induction and Computers in the Mathematics Curriculum
NICH 173 E, JH

Lauren Coodley
Math Without Fear: Teaching Students Critical Thinking about Math Education, Technology, and the Tyranny of the Right Answer
STEV 3040 K-12, G

T. Edward Damer
Teaching Critical Thinking with Fresh Real-Life Arguments
NICH 166 CC, U

Joel Rudinow
How to Use the Media Critically, Part I
STEV 1063 G Space limited; Session to be taped;
No late admissions.

10:30-12:00
noon

Doug Minkler
Art is not a Mirror Held Up to Reality But a Hammer with Which to Shape It
IVES 119 G, K-12

Will Robinson, Marek Zelazkiewicz, Frans van Eemeren,
Rob Grootendorst, Alec Fisher, Richard Paul
Critical Thinking in European Education
SU:MP G

Vincent Ryan Ruggiero
Dispositions—The Neglected Aspect of Thinking Instruction
STEV 1002 G

Kate Sandberg
Reflective Thinking: Variations on a Theme
ART 108 G

Mark Weinstein
Philosophy for Children: Hands-on Workshop
DAR 108 Grades 5-6

Perry Weddle
What a Lovely Generalization!
CS 68 JH-U

Anthony Corso, Dianne Romain
Faculty Development in Critical Thinking
STEV 3008 JH-U

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

Connie Missimer
Humor and Other Fun Ways to Achieve Empathy
DAR 112 G

(Monday, August 3
10:30-12:00 cont.)

Stuart Keeley
*Beyond the Term Paper: Designing Assignments that Encourage
Critical Thinking*
STEV 3046 G

Ann Kerwin
Ignorance, Illumination and Inquiry
STEV 3049 G

Rita Manning
*Workshop in Dilemmas, Role-Playing and Simulation in Moral
Education*
NICH 173 G

Roy Erickson
*Celebrating the Bicentennial of the Constitution through Materials
and Activities which Emphasize Critical Thinking*
STEV 3040 K-12

Jere Jones, Fred Korn
*Strong Sense Critical Thinking: How to Probe Our Own
Conceptual Framework*
NICH 166 G, CC, U

Joel Rudinow
How to Use the Media Critically, Part II
STEV 1063 G Space limited; Session to be taped;
No late admissions

12:00-1:30

Lunch

1:30-3:00 pm

Rexford Brown
*Who's Accountable for Thoughtfulness: Policy and the Higher
Literacies*
IVES: Warren G

Harvey Siegel, David Perkins, Carol Tavis, Wes Hiler
Psychology and Critical Thinking: The Affective Dimension
SU:MP G

Vincent Ryan Ruggiero
The Administrator's Role in Thinking Instruction
STEV 1002 G

Joanne Kurfiss
*Successful Models for Developing Critical Thinking in the College
Classroom*
ART 108 CC, U

Kathleen Dean Moore
Gullibility and Mistakes in Scientific Reasoning
DAR 108 HS, CC, U

Lou Miller
Critical Thinking and Self-Growth
CS 68 G

John Barell
Long Range Staff Development for Fostering Critical Thinking
STEV 3008 K-12, U

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

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

Gerald Nosich
On Teaching Critical Thinking
DAR 112 CC, U

Thomas Jackson
*Philosophy for Children: A Hands-on Demonstration,
Secondary Level*
STEV 3046 JH, HS

Edward D'Angelo
Teaching Critical Thinking in Third and Fifth Grade
STEV 3049 E

George Collison
Problem Solving in the Writing Curriculum
NICH 173 E-HS, G

Rob Grootendorst, Frans van Eemeren
*Argumentation and Fallacy Analysis in a Pragma-Dialectical
Perspective, Part I*
STEV 3040 U

T. Edward Damer
Can Critical Thinking Save Us From Relativism?
NICH 166 G, CC, U

Richard Paul
*How to Help Teachers to Infuse Critical Thinking by Helping
Them to Develop Skill in Remodelling Their Present Lessons*
STEV 1063 E Space limited; Session to be taped;
No late admissions

3:15-4:45 pm

John Barell, David Perkins
Supervision for Critical Self-Reflection upon Teaching
IVES: Warren K-12

Donald Lazere, Glenn Irvin, Jere Jones, Fred Korn,
Rexford Brown, George Hanford
*Critical Thinking and Curricular Reform in Secondary and
Higher Education*
SU:MP JH-U

Edward M. Glaser
*Using the Watson-Glaser Critical Thinking Appraisal (CTA)
as a Teaching as well as Testing Tool*
STEV 1002 G

John Alexander, Nancy Shea, Pat Harveson, Kerry Anderson,
Cindy Korach
*The Philosophy for Children Program at Elk Grove School District:
A Report*
ART 108 E

(Monday, August 3
3:15-4:45 cont.)

- Debbie Walsh
Integrating Critical Thinking Skills into the K-12 Curriculum
DAR 108 K-12
- Connie Missimer
*Critical Thinking and Intellectual Virtues: Can You Have Your
Cake and Eat It Too?*
CS 68 G
- Sharon Bailin
The Myths of Creativity
STEV 3008 G
- Susan Olds
Using a "Thinking Jigsaw" to Explore Supreme Court Decisions
STEV 2049 JH, HS
- Dorothy Kobak
*Raising the C.Q. (Caring Quotient)—Edu-Caring: Teaching
Children to Think Caring*
STEV 3049 G
- J.S. Porter
How to Expose and Correct Assumptions
NICH 173 G
- Rob Grootendorst, Frans van Eemeren
*Argumentation and Fallacy Analysis in a Pragma-Dialectical
Perspective, Part 2*
STEV 3040 U
- Mark Battersby
*Arguments and Individuals: A Theoretical Look at the Status of the
Arguer in the Assessment of Arguments*
STEV 3046 U

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

Informal Exchange of Ideas
Dining Commons Faculty Lounge

Videotape Program
Dining Commons Alcove

TUESDAY, AUGUST 4

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	STEV 2049
Community College	DAR 108
4-year College/University	STEV 1002
Critical Thinking Literature/Language Arts	DAR 112
Critical Thinking in Social Studies	CS 68

(Tuesday, August 4
7:35-8:35 cont.)

8:45-10:15 am

- Critical Thinking in the Arts NICH 173
- Critical Thinking in Science/Math NICH 166
- Critical Thinking Assessment STEV 3049
- Critical Thinking for Slow/
Disadvantaged Learner STEV 3040
- Art Costa
*What Human Beings Do When They Behave Intelligently and
How They Can Become More So*
IVES: Warren K-12, G
- Ralph Johnson, John Hoaglund, T. Edward Damer
Critical Thinking and Informal Logic: How Do They Relate?
SU:MP CC, U
- Greg Sarris
*The Multi-Cultural Classroom as Model for the Teaching
of Critical Thinking*
STEV 1002 G
- Bertram Bandman
The Role of Belief in Critical Thinking
ART 108 G, U
- Glenn Irvin
The Loaded Case Against General Education
DAR 108 U
- Joel Rudinow
*Philosophy Comes Down to Earth: Critical Thinking
in the Community College*
CS 68 CC
- Ken Bumgarner
Effective Design for Critical Thinking Inservice
STEV 3008 K-12
- Ian Wright
*Decision-making and Critical Thinking for Elementary School
Students*
DAR 112 E
- Rob Grootendorst, Frans van Eemeren
*Teaching Argumentation Analysis and Critical Thinking in the
Netherlands*
STEV 2049 G
- Paul Baker
*Preparing Well Informed Citizens: A Critical Thinking Approach
for Social Studies*
STEV 3046 JH-U
- Corrinne Bedecarré, Sherry McCowan
Power Relations and Ideology in the Classroom
STEV 3049 G
- James B. Freeman
Critical Thinking and the Life of the Mind
NICH 173 G, CC, U

(Tuesday, August 4
8:45-10:15 cont.)

Alec Fisher
Critical Thinking about Thomas Malthus
STEV 3040 G, CC, U

Ann Kerwin
Making the Most Out of Nothing: Looking Critically and Creatively at Absences, Silences, Things Ignored and Things-to-be
NICH 166 G

10:30-12:00
noon

David Perkins
What the Mind is Made Of
IVES: Warren G

Ralph Johnson, Lenore Langsdorf, Perry Weddle, Robert Ennis
Self-Serving Versus Fair-Minded Critical Thinking: How Important is the Weak Sense/Strong Sense Distinction?
SU:MP CC, U

Mark Weinstein, Ken Bumgarner, Fran Claggett
What Are State Departments of Education Doing About Critical Thinking?
STEV 1002 E-U, G

Michael Rich
The Use of the Emotions in Critical Thinking
ART 108 G

Angel Villarini
Teaching Critical Thinking Through Moral Deliberation: An Interdisciplinary Approach to the Humanities
DAR 108 G, CC, U

Dianne Romain
Critical Thinking, Creativity, and Play
STEV 3008 K-12, G

M. Neil Browne, Stuart Keeley
Mini-Critical Thinking Course: The Unnecessary Tension Between Values Analysis and Critical Thinking
STEV 2049 G

John Barell
Networking Electronically for Teaching Critical Thinking
DAR 112 K-12

Donald Lazere
Composition for Civic Literacy
STEV 3046 G, CC, U

Sheldon Berman
A Thinking Skills Model for Teaching About Controversial Issues
STEV 3049 JH, HS, U

(Tuesday, August 4
10:30-12:00 cont.)

Judi Hirsch
Teaching Critical Thinking to Students in Remedial and Special Education Classes: Feuerstein's Theories on the Nature of Learning and Intelligence
NICH 173 K-12

Alec Fisher
Critical Thinking and A Key Question
STEV 3040 G, CC, U

Judith Collison
Critical Thinking in the Classroom: Information, Implication, Inference
NICH 166 K-12, G

12:00-1:30

Lunch

1:30-3:00 pm

Jan Talbot
Teaching Thinking Strategies Across the Curriculum: The Higher Order Thinking (H.O.T.) Project
IVES 119 K-12

Richard Paul, Carol Tavis
Culture and Critical Thinking: The Danger of Group- or Culture-Bound Thought
SU:MP G

Paul Baker, Ian Wright, Chuck Stanearth
Critical Thinking and Social Studies
STEV 1002 G

Donald Lazere
Bias in Academia
ART 108 G

Ann Kerwin, Marlys Witte
Learning and Teaching the Unknown Pathway to Finding "Intellectual Virtues"
DAR 108 G, U

Donald Hatcher
Critical Thinking Techniques and Methodological Absolutism
CS 68 CC, U

Linda Bomstad, Linda Forsyth, Phil Fetzer
The Folsom-Cordova Critical Thinking Project
STEV 3008 K-12

T. Edward Damer
Mini-Critical Thinking Course: What the Fallacies Can Teach Us About Good Arguments
STEV 2049 G

Carol La Bar
Critical Thinking Distinctions
DAR 112 HS, G

(Tuesday, August 4
1:30-3:00 cont.)

Nancy Kubasek
*Selection and Design of Textbooks and Supplements that Foster the
Development of Values Analysis and Critical Thinking Skills in the
Business Classroom*
STEV 3046 CC, U

John Hoaglund
*Critical Thinking and Teaching Informal Fallacies:
The Old Approach and the New*
STEV 3049 CC, U

Judi Hirsch
Combating the Tyranny of Standardized "Intelligence" Tests
NICH 173 K-12, G

Abelardo Brenes
Critical Thinking in Costa Rica
STEV 3040 G

C. Blaine Carpenter
*Teaching and assessing Critical Thinking in an Outcome-focused,
Assessment Based General Education Curriculum*
NICH 166 CC, U

3:15-4:45 pm

Nancy Lyons
Dance-Critical Thinking with the Body
IVES: Warren G

Donald Klein, Paul Wheatcroft, John Feare, John Prihoda
*Critical Thinking in Community Colleges: The Title Five Mandate
in California*
SU:MP CC

Fran Claggett, Jan Talbot, Linda Phillips
Reading, Writing, and Critical Thinking
STEV 1002 G

Alice Iaquina, Sharon Scull, Chuck Wiederhold, Joel Peterson,
Theresa Booker
*Critical Thinking Programs: Strategies for Implementing the
Teaching of Critical Thinking*
DAR 108 G, CC, U

Gus Bagakis
Teaching Critical Thinking—A World View Approach
ART 108 G, U

Dianne Romain, Sarah Taylor
Academic Partnership: Critical Thinking and Social Studies
CS 68 JH, HS

A.J.A. Binker, Karen Jensen
Lesson Remodelling for Critical Thinking (K-6)
STEV 3008 E

James B. Freeman
Mini-Critical Thinking Course: Argument Diagraming
STEV 2049 G

Susan Olds, Joel Rudinow
*Critical Thinking and the Constitution: The Bicentennial
Connection*
DAR 112 5-12, CC

(Tuesday, August 4
3:15-4:45 cont.)

Eugene Garver
Rhetoric and Logic in Critical Thinking
STEV 3046 CC, U

Vivian Rosenberg
Introducing Affective Awareness as a Critical Thinking Skill
STEV 3049 G

M. Neil Browne, Stuart M. Keeley, Nancy K. Kubasek,
Andrea M. Giampetro
*Are We Really Teaching Critical Thinking?:
How Would We Know?*
NICH 173 G, CC, U

Priscilla Agnew
The Critical Thinking Worksheet
STEV 3040 JH-U

Richard L. Mendelsohn
Logic and Critical Thinking
NICH 166 CC, U

8:00-11:00 pm

Beer and Wine Social
Dining Commons

Informal Exchange of Ideas
Dining Commons Faculty Lounge

Videotape Program
Dining Commons Alcove

WEDNESDAY, AUGUST 5

8:45-10:15 am

David Perkins, Richard Paul, Sharon Bailin, Lou Miller
*Can One Think Critically Without Thinking Creatively? Can One
Think Creatively Without Thinking Critically?*
SU:MP G

Abelardo Brenes
Critical Thinking and the Ethics of Development
STEV 1002 G

Donald Hatcher
Critical Thinking and Ethical Absolutes
ART 108 CC, U

Vivian Rosenberg
*Modifying Traditional Writing Instruction: Strategies to Facilitate
Critical Thinking*
DAR 108 G, HS-U

Thomas Leddy, Rita Manning
On Teaching Creativity, Part I
CS 68 G

John Hoaglund
*Mini-Critical Thinking Course: Stimulating Thinking About
Thinking with Logical Puzzles*
STEV 2049 G

(Wednesday,
August 5
8:45-10:15 cont.)

Joe Edwards, Allan Edwards, David Duran
*Strategies for Critical Thinking Implementation at North Humboldt
Union High School District*
DAR 112 HS

Sheldon Berman
*Considering Multiple Perspectives: An Exercise in Methodological
Belief*
STEV 3046 K-12, G

Rosemarie Bezerra-Nader
Critical Thinking and English—An Integrated Curriculum
STEV 3049 JH-U, G

George Freund, Jack Perella
The Role of Philosophy and Rhetoric in Critical Thinking Instruction
STEV 3040 CC, U

C. Grant Luckhardt
Assessing the Credibility of Authorities
NICH 166 CC, U

10:30-12:00
noon

Perry Weddle, Jan Talbot, Robert Ennis
*State Wide Critical Thinking Testing in California:
What Has It and What Has It Not Accomplished?*
SU:MP G

Vivian Rosenberg, Roberta Kern, Vincent Ryan Ruggiero
*Exploring the Interaction of Thoughts, Feelings and Emotions in
Developing Critical Thinking*
STEV 1002 G

Judith Collison
Critical Thinking in the Classroom: Setting Goals
ART 108 K-12, G

Thomas Leddy, Rita Manning
On Teaching Creativity, Part II
CS 68 G

William Payne
American History on Trial
STEV 3008 JH-HS

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

Dianne Romain, Sarah Taylor
Critical Thinking and High School Science
STEV 3046 HS

Maurice A. Finocchiaro
Three Ideals of Critical Thinking (Socrates, Galileo, Marx)
STEV 3049 CC, U

(Wednesday,
August 5
10:30-12:00 cont.)

Lenore Langsdorf
Reflection, Interpretation, and the Critical Spirit
NICH 173 G, CC, U

Priscilla Agnew
Teaching Fallacies
STEV 3040 JH-U

12:00-1:30

Lunch

1:30-3:00 pm

Judi Hirsch, Gus Bagakis, Richard Lichtman
Taking Care of Ourselves
SU:MP K-U

Fran Claggett
The California Assessment Program Direct Writing Assessment
STEV 1002 HS

Jenna K. Brooke
Forces Against Critical Thinking—Dealing with the Moral Majority
ART 108 G

Rosemarie Bezerra-Nader
Critical Thinking—An Antidote for Negative Stress
CS 68 K-12, G

Thomas Warren
What's Wrong With the "Critical Thinking" Movement?
STEV 3008 G, CC, U

William Exton, Jr.
*A Proven Approach to and a Primary Resource for the Teaching of
"Critical Thinking"*
STEV 2049 G

John D. May
*Teaching By Bad Example: Optimal Cases for Helping Intermediate
Students to Think Critically, Part II*
STEV 3049 CC, U

James B. Freeman
Meaning, Commitment, and the Critical Spirit
NICH 173 G, CC, U

John Feare
*Critical Thinking and the Cultivation of Intellectual and Moral
Virtues Within a Theological Dimension, K-Graduate School
and Beyond*
NICH 166 G, CC, U

Randall Ackley
Educating a Trained Society: Emotional Maturation/Development
CS 20 U

3:15-4:45 pm

Wrap-up Session
IVES: Warren

PRESENTERS AND ABSTRACTS

Ackley, Randall

Visiting Scholar,
St. Edmund's College, England
323 6th Avenue #191
Fairbanks, AK 99701

Educating a Trained Society: Emotional Maturation/ Development

Educators tacitly assume that humans are, at least potentially, rational creatures, though hampered by undersirable emotions and perhaps subconscious drives. If these emotions can be subdued, or ignored, and if these drives can be "channeled," then the rational person will appear, capable of and ready to make moral choices.

Twenty-five plus years of teaching has made it clear to me that students, people, learn because they "want to." Eight years teaching in prisons made it clear that "rational" choice is not "human" choice. People have to *want* to learn, to do the right thing. How are we to understand the process by which they develop rational and moral desires? In this regard I will explore two basic ideas: 1) "We 'think' with the entire body." 2) "Our *initial* perception is entirely emotional." With these ideas I will attempt a synthesis that provides a theoretical base for a practical approach to the problem of moral development.

(August 5 1:30-3:00 CS 20)

Agnew, Priscilla

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

The Critical Thinking Worksheet

The Critical Thinking Worksheet is a pedagogical tool for introducing students to critical thinking. Many students acquire the technical skills such as identifying premises, assumptions and conclusions, distinguishing between strong and weak arguments, clarifying ambiguous terms and so on. However, these students often experience frustration in grasping the overall structure of the project of critical thinking. The worksheet provides a visual aid for integrating all of these technical skills. In this workshop, the use of the worksheet will be demonstrated. Participants will have the opportunity to experience the process of critical thinking from the point of view of a beginning student of critical thinking. This session is especially intended for those who are introducing critical thinking skills to high school and college students.

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

Agnew, Priscilla

Teaching Fallacies

In teaching fallacies, I have encountered a challenge: students enthusiastically learn the traditional fallacies and then proceed to find fallacies everywhere, even in good arguments. For example, once the appeal to authority is presented, students refuse to accept any authority as appropriate. Because I feel that the fallacies are helpful tools for critical thinkers, I have restructured my presentation of the fallacies by introducing different modes of arguments which have a Good Form as well as a corresponding Fallacious Form. In this workshop, these distinctions will be explored. In addition, a new worksheet for evaluating generalizations and causal arguments will be demonstrated.

(August 5 10:30-12:00 STEV 3040)

Alexander, John

Professor
Department of Philosophy
Southern Oregon State College
Ashland, OR 97520

The Philosophy for Children Program at Elk Grove School District: A Report

Co-Presenters

Shea, Nancy

Critical Thinking Resource Teacher
Elk Grove Unified School District
Elk Grove, CA 95624

Harveson, Pat

Teacher
Markofer Elementary School
9759 Tralee Way
Elk Grove, CA 95624

Korach, Cindy

Teacher
Markofer Elementary

Anderson, Kerry

Teacher
Dillard Elementary
9721 Dillard Road
Wilton, CA 95693

This report will be structured as follows: 1) opening remarks from John Alexander regarding the nature of the workshops and the follow-ups given, 2) general remarks by Nancy Shea regarding the number of classes and levels involved and administrative considerations, 3) at least two videotapes of two different classes using two different programs (Harry and Pixie) with comments by the classroom teachers on their success and difficulties encountered, including opportunities for questions from the floor, 4) remarks by Nancy Shea, including the impact of IAPC program on student behaviors and performance. Opportunities for questions from the floor, and 5) concluding remarks by John Alexander on workshop arrangements, costs, etc., with more questions from the floor.

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

Bagakis, Gus

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

**Teaching Critical
 Thinking—A World View
 Approach**

The range of what we think and do is limited by what we fail to notice. And because we fail to notice that we fail to notice, there is little we can do to change until we notice how failing to notice shapes our thoughts and deeds.

R. D. Laing

In this presentation I will discuss how and why I introduce a world view perspective to students. I find that when students begin to consider issues, they often interpret and analyze them from a particular standpoint which they assume is natural. In this case the use of a world view approach is a powerful tool with which to assist students to outstrip their egocentricity.

I have classified the many perspectives that students hold into three world views: "wholistic", "individualistic", and "process". We will discuss these world views and try some exercises to see if these three viewpoints are useful in discussing racism and sexism.

I will further argue that a critical thinking perspective is consistent with the process world view. I will also point out some of the pedagogical difficulties and student reactions to the world view approach.

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

Bagakis, Gus

Co-Presenters

Hirsch, Judi**Lichtman, Richard**

Professor
 Wright Institute
 2728 Durant Avenue
 Berkeley, CA 94704

Taking Care of Ourselves

In order to be effective models of critical thinking in the strong sense it is necessary for teachers to find ways of coping with an oppressive and alienating education system. Separation and competition as well as poor working conditions and poor pay make it difficult for teachers to be effective models. Join us for a discussion of ways to develop networks, cooperation and to empower ourselves so that we can most effectively teach our students.

(August 5 1:30-3:00 SU:MP)

Bailin, Sharon

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

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.

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

Baker, Paul J.

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

**Preparing Well Informed
 Citizens: A Critical
 Thinking Approach for
 Social Studies**

This workshop addresses the problem of developing more sophisticated literacy in the social studies curriculum. Students are taught to bring reading and thinking together as an integral process. Social issues are examined through various active learning exercises. A systematic critical thinking model is presented that can be applied to a wide array of case materials: newspaper editorials, Time cover stories, chapters from textbooks, political speeches, articles from popular social science periodicals. The workshop will also explore numerous teaching-learning strategies that use critical thinking skills inside and outside the classroom.

(August 4 8:45-10:15 STEV 3046)

Bandman, Bertram

Professor
 Department of Philosophy
 Long Island University
 University Plaza
 Brooklyn, NY 11201

**The Role of Belief in
Critical Thinking**

Several writers identify critical thinking with belief, e.g. Ennis. But beyond a cryptic remark or so, little has been shown about the role of belief in critical thinking. I try to show how appeal to critical thinking helps us decide what is worth believing. Justifying beliefs is sometimes expressed by referring to a right to believe. This presents a dilemma. In one sense, one can believe whatever one wishes. Yet, one prefers the company of people with true, right or justified beliefs. What then makes a belief worth holding? A four part proposal is designed to help resolve this dilemma, and to help us decide what is worth believing.

(August 4 8:45-10:15 ART 108)

Barell, John

Professor
 Department of Curriculum
 and Teaching
 Montclair State College
 204 Chapin Hall
 Upper Montclair, NJ 07043

**Long Range Staff
Development for Fostering
Critical Thinking**

Teaching thinking K-12 and in college involves developing long range programs based upon current research on effective school change, adult role re-orientation, curriculum development and the nature of critical thinking. This session describes a process in place in public schools and college stressing needs assessment, creating the environment for critical thinking, identifying appropriate models of thinking, goal setting and skills education in critical thinking and problem solving. Teaching for "intellectual humility" requires creating supportive, collegial environments over long periods of time and may involve nurturing new roles for adults.

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

Barell, John**Networking Electronically for
Teaching Critical Thinking**

In this session I would like to share with all interested persons the growing electronic networks among practitioners that are helping us reduce our isolation from one another. I will report on efforts to establish a local network among six school districts as well as efforts to link ASCD's Elementary School Consortium on Teaching Thinking.

(August 4 10:30-12:00 DAR 112)

**Barell, John
Co-Presenter
Perkins, David****Supervision for Critical
Self-Reflection upon
Teaching**

How do we help teachers engage in critical thinking in the 'strong sense' and develop those dispositions, such as intellectual humility and openness to diversity, that are fundamental to critical inquiry? In this session, David Perkins and I will model a teaching episode followed by a post observation conference. The purpose of the conference is to exemplify processes designed to help adults become more analytic and reflective about their own performance. This process is related to the research on staff development, adult growth, metacognition and achievement motivation.

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

Battersby, Mark

Professor
 Department of Philosophy
 Capilano College
 North Vancouver, British Columbia
 Canada V7J 3H5

**Arguments and Individuals:
A Theoretical Look at the
Status of the Arguer in the
Assessment of Arguments**

It is widely agreed that the credibility or validity of an argument is generally independent of its author; failure to respect this principle is to commit the fallacy of *ad hominem*. The main exception to this principle is appeals to authority where those who lay their reputation on the line in support of a position become fair game for criticism. The traditional justifications of this fallacy were largely based on the study of formal arguments and it is not clear that such a position can be sustained when reflecting on informal arguments. The thesis of this paper is that the stature and credibility of the arguer plays a much more legitimate role in assessing argument than has normally been allowed and that therefore the application of the *ad hominem* fallacy criticism must be severely restricted.

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

Bedecarré, Corrinne

Doctoral Student
 General College
 University of Minnesota
 216 Pillsbury Drive, S.E.
 Minneapolis, MN 55455

Co-Presenter**McCowan, Sherry**

Doctoral Student
 Department of Philosophy
 University of Illinois
 105 Gregory Hall
 810 South Wright Street
 Urbana, IL 61801

**Power Relations and Ideology
in the Classroom**

The influence of feminist theory and the writings of Michel Foucault (together with having taught Logic and Reasoning for four semesters) have increased our concern with the issue of power relations in the classroom, especially with respect to teaching critical thinking in the strong sense. While our position is that the most effective way to teach students to begin to acquire the skills that will enable them to become critically and morally competent is to focus in (relative) depth on a very limited number of issues (rather than using a broad range of issues to illustrate fallacies and logical principles), we do not think this approach is without problems. These problems arise in part because of the context in which the instruction takes place, namely within the hierarchical structure of the university or college, and the authoritarian structure of the classroom which most students expect and to which they are accustomed. Our discussion will focus on the effects the power relations in academia have on students who are learning to think critically, and on their instructors. We will suggest some ways to minimize these relations, a project that will be essential in strengthening the critical spirit of student and instructor, alike.

(August 4 8:45-10:15 STEV 3049)

Berman, Sheldon

President
 Educators for Social Responsibility
 23 Garden Street
 Cambridge, MA 02138

**A Thinking Skills Model for
Teaching About Controversial
Issues**

Students need to confront our most important social and political problems so that they can feel connected to the larger society and enter the adult world as informed and responsible decision makers. But when we teach about controversial issues—the possibility of nuclear war, threats to the environment, and issues of social injustice—we find that students often seek simple answers to complex problems. They have difficulty tolerating the absence of “right” answers. In this workshop we will examine a process which helps students understand divergent positions on issues and the complex nature of controversial issues. It also helps students examine the logic, facts, assumptions, and values inherent in differing positions in order to strengthen their ability to reach their own conclusions. Curriculum materials that best support this process will be presented as well.

(August 4 10:30-12:00 STEV 3049)

Berman, Sheldon**Considering Multiple
Perspectives: An Exercise in
Methodological Belief**

Conflict situations breed “us-them” polarizations and simplistic positions. Through understanding multiple perspectives, we can transform these situations into mutual problem-solving opportunities. ESR has been examining educational strategies which help students tolerate the complexity of conflict situations, understand perspectives other than their own, and find common ground among competing positions. This workshop focuses on one practical exercise in considering multiple perspectives.

(August 5 8:45-10:15 STEV 3046)

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

*Lecturer, California State
 University, Fresno*
Teacher, Edison-Computech School, Fresno
 7645 N. DeWolf
 Clovis, CA 93612

Participants will be given specific methods for integrating critical thinking in English classes. Topics will include: literature, term paper writing on controversial issues, using analogies in writing, and the use of TV and video productions. Sources of information, student work, and a student made video production will be shared. Hand-outs will be given.

(August 5 8:45-10:15 STEV 3049)

**Bezerra-Nader, Rosemarie Critical Thinking—An
Antidote for Negative Stress**

Participants will gain an understanding of the use of critical thinking skills as antidotes for reducing negative forms of stress which are widespread in schools (e.g. peer pressure, drugs, depression, poor self-esteem, and decision making). Specific model lessons will be presented and shared; these lessons rely on critical thinking skills to facilitate a teacher in addressing the issue of stress at the same time he/she is teaching in content areas. Numerous hand-outs will be given.

(August 5 1:30-3:00 CS 68)

Binker, A.J.A.

Research Assistant
Center for Critical Thinking and
Moral Critique
Sonoma State University
Rohnert Park, CA 94928

Co-Presenter**Jensen, Karen**

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

In this session we will briefly describe the lesson remodelling process, illustrating with samples created by teachers in the Pre-Conference Workshop. We will then lead a discussion on the strengths and weaknesses of the process.

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

Lesson Remodelling for Critical Thinking (K-6)**Bomstad, Linda**

Professor
Department of Philosophy
California State University, Sacramento
6000 J Street
Sacramento, CA 95819

Co-Presenters**Forsyth, Linda**

Consultant
Gifted and Talented Education
California State Department of Education
P.O. Box 944272
Sacramento, CA 94244-2720

Fetzer, Phil

Teacher
Cordova Senior High School
2239 Chase Drive
Rancho Cordova, CA 95670

We will begin with a description of a two-year project that involved the following four parts: 1) a three-day capsule course in informal logic for thirty of the district's K-12 teachers; 2) a study of the teacher behaviors, classroom designs, and strategies that stimulate critical thinking; 3) an applications workshop where teachers wrote curriculum, developed peer coaching and clinical supervision techniques, and filmed their lessons for critique; and 4) the development of a trainer's box of films, curriculum, handouts, and lesson plans.

Materials will be displayed. Evaluation techniques and subsequent programs will be discussed.

(August 4 1:30-3:00 STEV 3008)

Brenes, Abelardo

Professor
Universidad de Costa Rica
Ciudad Universitaria
Rodrigo Facio
Costa Rica, America Central

Critical Thinking in Costa Rica

An adaptation of a Critical Thinking Program developed by Professor Eugene Meehan, of the University of Missouri—St. Louis, was experimentally applied in Costa Rica in 1982. The subjects were last year high school students and university freshmen. Whereas the program had been considered successful with similar age students in various educational institutions in the U.S., the results in Costa Rica were discouraging. The paper will attempt to analyze various factors that may have contributed to this result and consider, in more general terms, some of the problems inherent in cross-cultural translatability of critical thinking metalanguages and pedagogical strategies.

(August 4 1:30-3:00 STEV 3040)

Brenes, Abelardo**Critical Thinking and the Ethics of Development**

Societal development always poses choices which must be met by governmental agents, development specialists and the informed citizen. These choices relate to competing goals and images of what is to be considered a good life, as well as the diverse ways in which these are to be achieved. Most of the development models that have been guiding governmental and private agents in the past decades are now considered to be bankrupt, particularly in the context of Third World Development. This paper will examine what is the nature of these models, particularly from the point of view of their inherent value assumptions. It will be argued that rather than attempting to create new models of development which attempt to provide a complete set of answers to all normative questions involved in societal change, emphasis should be placed rather in creating those arrangements that will assure a fuller participation of citizens in choices referring to public policies. In order for this to be exercised effectively, critical thinking capacities will have to be promoted in the educational programs. These programs, in turn, need to give an important emphasis of attention to the normative dimensions of development from early on in the curriculum. Some general guidelines for such a program will be suggested.

(August 5 8:45-10:15 STEV 1002)

Brooke, Jenna K.

P.O. Box 833
Cotati, CA 94928

**Forces Against Critical
Thinking-Dealing with the
Moral Majority**

Phyllis Schafly and her Eagle Forum organization actively campaign to eliminate any educational approach in the classroom, including the teaching of "higher order critical thinking skills", which may result in children questioning attitudes, behavior, values, standards, beliefs, and so on, whether their own, those of their family and friends, the government, or society at large. The Eagle Forum in effect demands that educators support and participate in teaching students to accept, without question, anything they are told by those in positions of authority (namely those who hold the particular religious and political points of view espoused by the Eagle Forum and the Moral Majority at large).

Schafly and her followers, under the guise of preventing "child abuse" in the classroom, present a very real threat, in particular, to critical thinking programs and, in general, to the very democratic ideals on which this country was founded. Ms. Brooke will provide a brief overview of two of Schafly's works, then guide participants through a brainstorming session to develop strategies for dealing with and countering attacks against the educational process as it should exist in a democracy.

(August 5 1:30-3:00 ART 108)

Brown, Rexford

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

**Who's Accountable for
Thoughtfulness: Policy and the
Higher Literacies**

At a moment when there are calls for yet another wave of reforms in K-12 and undergraduate education, it is critical to assess the influence of various education policies on schools and colleges. It is particularly critical when the aim of reforms is to instill much higher levels of literacy in a much broader range of students than ever before in American history, since most education policy of the last two decades has been aimed at ensuring minimum levels of performance and minimum standards of access to knowledge. We have to ask what minimums-oriented policy can do to promote such "higher literacies" as critical thinking, problem solving, ethical discourse and greater thoughtfulness in general.

With a grant from the John D. and Catherine T. MacArthur Foundation, the Education Commission of the States is investigating crucial intersections of policy and higher literacies programs. We want to know to what degree various policies constrain the development of much higher levels of literacy in a much broader range of students and to what degree various policy mechanisms could be used to promote those goals. We are particularly interested in four clusters of policies: testing assessment and accountability policies; curriculum and textbook policies; policies with regard to teacher training, inservice and pedagogical behavior; and policies that direct the flow of money in the system either toward or away from innovation. In each of these clusters, there are opportunities either to strangle innovative higher literacies programs or to empower them. We want to detail some of those opportunities.

We are currently pulling together research that bears on this issue and will translate it into terms useful for policy making. We are working on a manuscript on the politics of literacy and we'll be conducting case studies in the following year or next year in a number of schools making various efforts to develop higher literacies curricula. We hope to detail in those case studies the policy environments that either support or discourage higher literacy efforts.

(August 3 1:30-3:00 Ives: Warren)

Browne, M. Neil

Professor
Department of Economics
Bowling Green State University
Bowling Green, OH 43403

**Designing Faculty
Development Programs for
Integrating Critical Thinking
Across the Curriculum**

Many teachers who desire to encourage critical thinking have no formal training in either critical thinking or pedagogical techniques that might stimulate such thinking. Administrators often respond with some form of faculty development program, designed to at least partially rectify those weaknesses. What works? What kinds of pitfalls do faculty development programs typically encounter? What can be done to encourage long-term effects of faculty development?

The format for this presentation will be a dialogue between someone planning a faculty development program and a potential participant in the program. The content of the dialogue will reflect both the author's research on effective faculty development, as well as his own experience as a facilitator at numerous faculty development workshops.

(August 2 10:30-12:00 ART 108)

Browne, M. Neil

**Co-Presenter
Keeley, Stuart M.**

**Questioning Strategies
that Facilitate Critical
Thinking**

Few questions of any kind are asked in classrooms. Yet, a variety of teaching objectives can be achieved by asking appropriate questions. Participants will be shown a videotape demonstrating the use of specific questions from *Asking the Right Questions* to teach critical thinking. Several questioning strategies for eliciting different levels of cognitive activity will be demonstrated through questioning of workshop participants. Additionally, an explicit order and logic of questioning for generating critical thinking will be presented and contrasted with more traditional questioning strategies. Teacher and student resistance to classroom questioning will be addressed directly.

(August 2 3:15-4:45 STEV 3008)

Browne, M. Neil

**Co-Presenter
Keeley, Stuart M.**

**Mini-Critical Thinking Course:
The Unnecessary Tension
Between Values Analysis and
Critical Thinking**

The dichotomy between values and thinking is one that many embrace. Our approach to critical thinking, explained in *Asking the Right Questions*, denies the dichotomy and builds into the critical thinking process the identification and assessment of value assumptions. Values are thereby given credit as potential support for reasoned opinions.

The format for this workshop will be a modeling exercise in which the presenters will conduct a brief class in which values analysis is used as a component of critical thinking. Included in the exercise will be a process for identifying value assumptions and then reacting to them. Then participants will be invited to join the class to experience the integration.

The workshop will conclude by creating a dichotomy between types of values education that are inappropriate to the critical spirit and those consistent with critical inquiry.

(August 4 10:30-12:00 STEV 2049)

Browne, M. Neil

**Co-Presenters
Keeley, Stuart M.**

**Kubasek, Nancy K.
Giampetro, Andrea M.**

Professor
Department of Management and Law
Loyola College
Baltimore, MD 21210-2699

**Are We Really Teaching
Critical Thinking? How
Would We Know?**

Assuming that assessment of critical thinking frequently requires brief, essay instruments, this presentation describes a process for adapting essay tests, such as the Ennis-Weir Test, to particular educational contexts. The presenters will illustrate the process by sharing preliminary results from an assessment project comparing the critical thinking competencies of honors - nonhonors students, state university - liberal arts college students, and students taking a critical thinking course - students not taking a critical thinking course.

Scoring formats that make essay tests more sensitive to identifying various levels of critical thinking will be demonstrated. This workshop will provide an opportunity for those anticipating or experiencing assessment demands to design an approach that will contribute to improved teaching of critical thinking.

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

Bumgarner, Ken

Director of Basic Education
State of Washington, Superintendent of
Public Instruction
Old Capitol Building, FG-11
Olympia, WA 98504

**Effective Design for Critical
Thinking Inservice**

A team approach has been used effectively in the State of Washington to institute and improve the teaching of critical thinking in elementary, secondary and higher education. Central to this team is effective networking that exists between and among the educational service districts (ESDs) and the curriculum and instruction leadership of the state office. Employee and curriculum organizations as well as parent, citizen and business associations have joined in this team effort focused on the teaching of thinking skills at all levels. Organizing and networking techniques employed will be discussed at the presentation along with approaches taken to garner support of the educational groups, citizen organizations, and outside enterprises.

(August 4 8:45-10:15 STEV 3008)

Carpenter, C. Blaine

Professor
Department of Biology
Clayton State College
Morrow, GA 30260

**Teaching and Assessing Critical
Thinking in an Outcome-
Focused, Assessment-Based
General Education Curriculum**

The purpose of Clayton State College's project is to develop a coherent, unified general education program which contributes to the development of generic skills and perspectives and the integration of these into a framework within which an individual is able to approach learning and living. Clearly defined outcomes which provide focus for curriculum and instruction and valid procedures for assessing these outcomes must be the foundation of such a program. Two of these outcomes - Critical Thinking and Communication - are skills-related, and six of these - aesthetic, contemporary, historical, mathematical, scientific, and value - are knowledge-based frames of reference within which one understands, interprets, and evaluates what he encounters.

In April 1984, multidisciplinary committees (Outcome Councils) were appointed and charged to plan and coordinate all work related to the incorporation of these outcomes in the general education program of the college. Since their inception, these Councils have been working on the description, components and the development of a process and means for the college-wide assessment of the outcomes. It is the intent of this workshop to 1) give a brief historical view of CSC's general education program, 2) describe the current status of the Critical Thinking, Contemporary Perspective and Value Perspective Outcomes, 3) discuss the "Conceptual Framework" for integrating Critical Thinking into the CSC curriculum using Contemporary and Value Perspectives as examples, and 4) give examples of potential assessment instruments that are to be used on a pilot basis to assess Critical Thinking at CSC.

This project was supported in part by a grant from the U.S. Department of Education: Fund for the Improvement of Post-Secondary Education. Grant #116AH31114

(August 4 1:30-3:00 NICH 166)

Chaffee, John

Professor / Author
Department of Philosophy
La Guardia Community College
Long Island City, NY 11101

**Teaching Critical Thinking
Across the Curriculum**

This session will explore an established interdisciplinary program which teaches and reinforces fundamental thinking skills and critical attitudes across the curriculum. The program is centered around *Critical Thought Skills*, a course specifically designed to improve the thinking, language and symbolic abilities of entering college students. The course has been integrated into the curriculum through an NEH funded project of faculty training and curriculum re-design. In addition to reviewing the structure, theoretical perspective and evaluative results of the program, special attention will be given to exploring practical approaches for developing thinking abilities.

(August 2 1:30-3:00 ART 108)

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 problem solving approach which is useful for analyzing complex problems in a creative and organized fashion. Participants will work through a sequence of problems, individually and in small groups, and will be given the opportunity to discuss and critically reflect on the learning process. In addition, participants will explore ways of incorporating problem solving approaches into the courses that they teach.

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

Claggett, Fran

Educational Consultant
14165 Green Valley Road
Forestville, CA 95436

**The California Assessment
Program Direct Writing
Assessment**

The CAP Direct Writing Assessments is an assessment program designed to involve teachers in all phases of composition curriculum reform. The California Assessment Program boldly assesses many of the different kinds of writing that make up an exemplary school writing program. In this session, participants will receive an overview of the types of writing currently tested at grade eight and proposed for high school, the innovative scoring system devised to assess the thinking and writing skills involved in each type of writing tested, and observations based on the first statewide reading conducted last month.

(August 5 1:30-3:00 STEV 1002)

Collison, George

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

**Supposing in Geometry and
Algebra: Induction and
Computers in the
Mathematics Curriculum**

Computers offer a very rich environment for both study and exploration in elementary and secondary school mathematics. They provide ways to promote interest and active involvement in mathematics, as well as assist students to become effective manipulators of symbols.

On the elementary and junior high level *Logo* offers a very rich environment to develop students' geometric intuition and problem solving skills. Geometry has always been a difficult subject to teach in a way that involves personal activity and discovery on the part of students. Traditionally, students of geometry are passive learners of truths discovered ages ago. A curriculum using *Logo* in intermediate grades and continuing with the *Geometric Supposer* at junior and senior high school does encourage learning through personal discovery and induction in geometry.

A general graphing utility like *Compucalc* can extend this personal, inductive approach into instruction in Algebra and Pre-Calculus. Programs such as these encourage a "problem solving lab" approach in these subjects that was not possible before. Limited-English speaking students have shown considerable success using math curricula based on this laboratory approach, as the center of learning is their own interaction with the mathematical material rather than concepts set out in a text they have difficulty comprehending.

(August 3 8:45-10:15 NICH 173)

Collison, George

Problem Solving in the Writing Curriculum

The heart of our writing curriculum is the development of critical thinking and problem solving skills through the Polya model. We use the word processor as a tool, the Polya model of problem solving as the framework, and a journalistic, expository format as the vehicle for teaching thinking skills through writing.

The journalistic, expository format best suits the needs of beginning students. The form is limiting but it does provide students with a model for clarity, conciseness, sense of audience, logical connection, and style that all students can appreciate. Also the structure demanded by journalistic writing gives beginning writers a framework to organize their thoughts as well as clear criteria to evaluate the work of others. Writing in this form is taught as a problem solving activity, with definite purpose and guidelines.

The four steps of the Polya model are: (1) define the problem; (2) choose a plan; (3) execute the plan, and (4) verify solution. Each of the four steps of the model has a direct application in process writing instruction.

Editing and classroom publishing techniques are described which detail how to develop problem solving skills using the Polya model in order to aid students in clarifying their thoughts and refining expository skills. The goal is to develop good thinking that is both critical and reflective. Computers are used to make students active participants in their own education.

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

Collison, Judith

Assistant Professor
Department of Philosophy
Westfield State College
Westfield, MA 01082

Critical Thinking in the Classroom: Information, Implication, Inference

The traditional goal of education has been the teaching of information to students. Although lipservice has been paid to teaching them how to use such information, teaching and testing have concentrated on the banking model of learning. The proliferation of information in our times has made the situation more serious. Students seem unable to distinguish between strings of facts and implied relationships. Similarly, in constructing arguments they often "let the facts speak for themselves", they establish no explicit connections between the facts. The sheer volume of information surrounding us makes establishing connections almost superfluous. It must be shown that 'almost' is not good enough.

As a first step, it is essential that information be acquired, clarified, organized and understood. The use of information in reasoning processes must then be taught. The study of logical implication connects information acquired with the process of inference. My courses and workshops in teacher education in critical thinking are organized around this structure. At each stage, teachers use the same overall format, so that no skill is taught in a vacuum. Each lesson or unit must incorporate this goal. Gathering information, rules of implication and methods of inference are connected in all teaching.

(August 4 10:30-12:00 NICH 166)

Collison, Judith

Critical Thinking in the Classroom: Setting Goals

Critical thinking needs to be incorporated into classroom instruction in two stages. The first stage is the overall organization of the course in such a way that connections are made explicit. The second stage is the redesigning of actual units or lessons to promote critical thinking.

This workshop is based on the following ideas:

- 1) The goals should be organized around one or few germinal ideas. Information or concepts with internal connections are easier to learn than is unconnected material.
- 2) Learning must be put in perspective to provide continuity with the history of ideas, educational history of students and personal experiences of students.
- 3) Curriculum must be geared to encouraging independent and creative thought.
- 4) Goals of instruction need to be clearly stated to the students.

(August 5 10:30-12:00 ART 108)

Coodley, Lauren

Professor
Department of Psychology
Napa Valley College
Napa, CA 94558

Math Without Fear: Teaching Students Critical Thinking about Math Education, Technology, and the Tyranny of The Right Answer

I will share resources and ideas for using students' math anxieties as the bases for a critical approach to education and technocracy. Their past histories with math serve as a basis for a critique of how math was taught to them, of their own perceptions of mathematics, and of the role of thinking skills in math. They are empowered by understanding the hidden history of women in science and invention, and become aware of the critical ethical debate regarding the uses of science and math in projects such as "Star Wars" and genetic engineering. They learn to critique statistics, to write their own word problems, and to use problem-solving skills in their private lives. The history of the grade system and criticisms of testing are explored and debated. Educators' current debates on the teaching of mathematics are introduced. I will be sharing my syllabus, handouts, and classroom techniques.

(August 3 8:45-10:15 STEV 3040)

Corso, Anthony

Professor
 Management Program
 St. Mary's College
 P.O. Box A-C
 Moraga, CA 94575

Co-Presenter**Romain, Dianne**

Are you not sure whether you are teaching critical thinking because you are not sure what critical thinking is and how it applies to your discipline? In this workshop we will talk about how to discover and articulate the critical thinking processes you use in your disciplines. We will also describe faculty development workshops in critical thinking at Gonzaga University and St. Mary's College. Handouts on general critical thinking skills, socratic questioning, and critical thinking pedagogy will be available.

(August 3 10:30-12:00 STEV 3008)

Costa, Art

Professor / Author
 Department of Education
 California State University, Sacramento
 6000 J Street
 Sacramento, CA 95819-2694

**What Human Beings Do
 When They Behave
 Intelligently and How They
 Can Become More So**

Studies of efficient thinkers by Feuerstein, Sternberg, Glatthorn and Baron, and others have yielded some rather consistent characteristics of effective human performance. Studies of home, school, and classroom conditions, and the significance of mediative behaviors of parents and teachers are increasing our understanding of how to enhance the acquisition and performance of intelligent behavior. In this session, twelve qualities of human intelligent behavior will be cited; indicators of their presence and increased performance in the classroom will be identified; and school, home, and classroom conditions that promote their development will be presented.

(August 4 8:45-10:15 IVES: Warren)

D'Angelo, Edward

Professor
 Department of Philosophy
 University of Bridgeport
 Bridgeport, CT 06601

**Teaching Critical Thinking in
 Third and Fifth Grade**

A curriculum approach of integrating affective and cognitive dimensions in teaching critical thinking to third and fifth graders will be presented with special emphasis on using examples from literature, social studies and science.

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

Damer, T. Edward

Professor / Author
 Department of Philosophy
 Emory and Henry College
 Emory, VA 24327

**Teaching Critical Thinking
 with Fresh Real-Life
 Arguments**

This workshop will demonstrate ways of teaching a course in critical thinking which utilizes only current real-life arguments. The arguments treated in such a course 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.

(August 3 8:45-10:15 NICH 166)

Damer, T. Edward

**Can Critical Thinking Save Us
 From Relativism?**

This paper will examine the question of whether the skills and techniques of critical thinking have the power to deliver us from the relativism which it was, in part, designed to combat. If two thinkers come to opposite conclusions about a substantive issue, can both of them still qualify as critical thinkers - at least with regard to that issue? Are contrary positions equally deserving of acceptance by critically thinking minds? If so, what are some of the implications of such a view? Shouldn't critical thinking help one to ascertain which idea or course of action is the best of the alternatives? If not, in what sense is critical thinking a worthwhile enterprise?

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

Damer, T. Edward

**Mini-Critical Thinking Course:
 What the Fallacies Can Teach
 Us About Good 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.

(August 4 1:30-3:00 STEV 2049)

DeCapite, Connie

Reading Resource Specialist /
Mentor Teacher,
Santa Ana Unified School District
601 W. Alpine
Santa Ana, CA 92707

**Language Arts and Critical
Thinking for Remedial and
ESL Students**

This workshop will focus on two specific components. Initially, the presenter will discuss the benefits of using critical thinking skills to help low achieving or ESL students develop language, reading and writing proficiency. The second part of the workshop will focus on how to develop and implement a language arts program consisting of activities utilizing critical thinking strategies and interdisciplinary materials. Teachers will receive units of study which were designed for use with Chapter I middle school students. However, since the strategies and content are universal in nature these units could be modified to serve any student.

(August 2 10:30-12:00 DAR 112)

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

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 Model Curriculum Standards. A sample one semester thematic unit entitled *Critical Thinking, Ethics and Principles of Decision Making*, suitable for intermediate and high school students, will be presented.

(August 2 3:15-4:45 DAR 112)

Dorman, William A.

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

**Coming to Grips with
the Mass Media**

Critics from C. Wright Mills to Neil Postman have made a persuasive case for the possibility that the popular media do far more to undermine critical thinking than encourage it. Given that the cultural apparatus shows no sign of undergoing a major change in the near future, teachers must help their students devise strategies for living in a second-hand world manufactured to a significant degree by the news media and popular arts. Toward that end, the emphasis in this presentation will be on 1) analyzing problems in how the media present the world, particularly in the realm of foreign relations; 2) developing standards for judging media performance that go beyond personal opinion; and 3) devising instructional exercises for critical analysis of media.

(August 2 3:15-4:45 CS 68)

Edwards, Joe

Teacher, Social Science
McKinleyville High School
1300 Murray Road
McKinleyville, CA 95521

**Strategies for Critical Thinking
Implementation at North
Humboldt Union High School
District**
Co-Presenters**Edwards, Allan**

Teacher, English
McKinleyville High School

Duran, David

District Superintendent
North Humboldt Union High School Dist.
1300 Murray Road
McKinleyville, CA 95521

The purpose of this demonstration is threefold: 1) to demonstrate the value of a strong, ongoing staff development program as a prerequisite to implementation of critical thinking into 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.

To achieve the above aims, we 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 infusion of critical thinking into the district's curriculum. In this context, we 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 avoids the danger of superficial "reform."

(August 5 8:45-10:15 DAR 112)

Ennis, Robert H.

Professor
Department of Educational
Policy Studies
University of Illinois,
Urbana-Champaign
1310 South Sixth Street
Champaign, IL 61820

**Writing Critical Thinking
Test, Parts 1 and 2**

Robert H. Ennis, co-author of five critical thinking tests, will examine problems in making critical thinking tests, and will suggest guidelines for writing critical thinking test items and tests. Participants will form small groups and practice writing items. Results will be discussed. *Participants should plan to attend both sessions.*

(August 2 10:30-12:00 STEV 3008 Part 1)

(August 2 1:30- 3:00 STEV 3008 Part 2)

Erickson, Roy

Consultant, Center for Civic
Education / Program Specialist,
San Juan Unified School District
3738 Walnut Avenue
Carmichael, CA 95609-0477

**Celebrating the Bicentennial
of the Constitution Through
Materials and Activities which
Emphasize Critical Thinking**

The goal of this session is to present the rationale and methodology of the Center for Civic Education's 1987-91 National Bicentennial Competition on the Constitution and the Bill of Rights. Participants will examine materials developed to increase student knowledge, understanding and critical thinking skills. The Competition calls for student cooperation in the learning process and has a non-competitive alternate form of participation.

The Center's K-12 Law in a Free Society curriculum will also be discussed with a focus on lessons which relate Constitutional issues to fundamental concepts, call for involvement in decision-making activities and use "intellectual tools" to develop more thoughtful positions. The presentation will involve the participants in activities and will include handouts of sample lessons.

(August 3 10:30-12:00 STEV 3040)

Exton, William

President
Institute of General Semantics
40 Central Park South
New York, NY 10019

**A Proven Approach to and
a Primary Resource for
the Teaching of
"Critical Thinking"**

General Semantics provides a systematic, workable discipline for relating effectively and relevantly to "the world outside the skin", including "the world of words". General Semantics helps us to be more aware of the assumptions that govern our own and others' evaluative processes; to discern more functionally whatever "solid territory" there may be behind the verbal "maps"; and even to infer the purpose of the "map maker".

(August 5 1:30-3:00 STEV 2049)

Feare, John

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

**Critical Thinking and the
Cultivation of Intellectual and
Moral Virtues within
a Theological Dimension,
K-Graduate School
and Beyond**

Progress toward a genuinely free society, entailing "not merely self-determination and self-realization, but rather the determination and realization of goals which enhance, protect, and unite life on earth" (Marcuse), would be facilitated by the cultivation of such intellectual/moral virtues as humility and empathy (Paul); of such "great virtues" as love of truth and generosity (Ginzburg); and of such "cardinal virtues" as honesty in submitting to criticism and justice in giving due recognition to others (MacIntyre). These are four of the increasing number of contemporary voices which dare use such terms as "moral" and "virtue," indicating that we have come, thankfully, a long way from the days in academe when nothing was "better" or "worse" than anything else but only "different."

But why are humility, empathy, love of truth, and generosity better than their opposites or than any other characteristics? The arguments will be presented that "virtues" remain simply a matter of preference or taste if not founded in a theological or transcendent dimension; that consideration of such ultimate questions should permeate the curricula, K-GS; that the deliberate cultivation of a "critical spirit" in all students is not only compatible with but essential to the development of meanings that come from the creative depths of the life force of increasingly autonomous individuals who encourage the autonomy of others; and that integrating teaching for critical thinking, moral integrity, and citizenship must be a collaborative effort among all facilitators of learning, e.g., instructors, librarians, and counselors.

Ample time will be allowed for discussion.

(August 5 1:30-3:00 NICH 166)

Finocchiaro, Maurice A. Three Ideals of Critical Thinking (Socrates, Galileo, Marx)

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

I discuss a university course I have been teaching for about fifteen years and some of the philosophical problems and conclusions it suggests. It 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 first explain the aims, content, structure, and rationale for such a course, and I report on some of my pedagogical experiences. Then I reflect on these three 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 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.

(August 5 10:30-12:00 STEV 3049)

Fisher, Alec

Professor
School of Economic & Social Studies
University of East Anglia
Norwich, England, NR47JT

Critical Thinking about Thomas Malthus

Thomas Malthus published his famous *Essay on the Principle of Population* in 1798. It contains a beautiful argument which is still widely believed. I will use this example (and others if there is time) to illustrate a new method of critical thinking about arguments. Its essential principle is, 'If you understand a (factual) sentence you must be able to give at least some account of how you could decide whether it was true or false, what argument or evidence would show it to be true or false (otherwise you don't understand it at all)'. Using this approach reveals surprising flaws in Malthus' argument. To obtain maximum advantage from this workshop you should collect a copy of Malthus' basic argument and write your own answers to the attached questions before the class begins. Copies are available from the conference desk.

(August 4 8:45-10:15 STEV 3040)

Fisher, Alec

Critical Thinking and a Key Question

A novel method of argument analysis/critical thinking is demonstrated in the author's other workshop *Critical Thinking about Thomas Malthus*. This workshop is a discussion about the underlying principles of that method, especially 'If you understand a (factual) sentence you must be able to give at least some account of how you could decide whether it was true or false, what argument or evidence would show it to be true or false (otherwise you don't understand it at all)'. This workshop will look at some examples which present problems for informal logic and critical thinking and will show how the author's approach overcomes them. It will stress how far one can get by 'thinking things through for oneself' and it will answer some philosophical questions raised by this approach.

(August 4 10:30-12:00 STEV 3040)

Freeman, James B.

Professor / Author
Department of Philosophy
Hunter College/C.U.N.Y.
695 Park Avenue
New York City, NY 10021

Critical Thinking and the Life of the Mind

This is an introductory presentation on the exciting breadth and depth of issues involved in critical thinking. Critical thinking will exhibit three distinctive hallmarks: it will be *relevant*; it will *demand adequate reasons*; and it will be *rational*. Thinking exhibiting just the first two hallmarks is weak sense critical thinking. Strong sense critical thinking demands the third condition be satisfied as well. But this is where the excitement begins, especially when we ask how rationality may be expressed. According to Aristotle, there are three goals of a rational person—Right Thinking (Believing), Right Willing, and Right Wanting. Thus we can claim that rationality embraces all of our mental life, since we may express our rationality in pursuing these three goals. We shall discuss what is involved in each of them. The issue of Right Wanting in particular leads directly into the issue of the critical spirit or the rational temper. This involves a willingness to test one's beliefs, choices, desires—it involves a sense of non-attachment. A commitment to strong sense critical thinking then involves the whole person and has ramifications for the whole of how we live. I hope my survey will spark discussion to further explore these issues.

(August 4 8:45-10:15 NICH 173)

Freeman, James B.

Meaning, Commitment, and the Critical Spirit

In my presentation, "The Human Image System and Thinking Critically in the Strong Sense" at last summer's Fourth International Conference on Critical Thinking and Educational Reform, I discussed how one central factor in the growth of the image system—the totality of our images of self and world, together with our values and stereotypes—is the desire for meaning. I characterized this desire as a basic but nonetheless subjective human need. I argued for the need to have a comprehensible picture of the world, to feel at home in the universe. This can put us in jeopardy as critical thinkers, however, since we may develop images, with their component beliefs and attitudes, not based on how the world is but on how they may serve this subjective need.

This, however, may put the human quest for meaning in an unfairly negative light. Is the quest for meaning a basic human quest, as much a part of our being human as our thinking, knowing, talking, breathing? If this is so, then critical thinkers, insofar as they are human, are as much involved in seeking meaning as anyone else. I will look at scientific inquiry as one expression of this quest for meaning. Following Thomas Kuhn in *The Structure of Scientific Revolutions*, I shall explain how possibilities for meaning invite commitment. I will then explore whether these scientific commitments are antithetical to critical thinking or whether they reveal how commitment can be rational. Can we develop a charitable way of thinking critically about commitments? I will conclude by discussing rational commitment and the critical spirit.

(August 5 1:30-3:00 NICH 173)

Freeman, James B.

Mini-Critical Thinking Course: Argument Diagramming

Many recent texts have incorporated a way of displaying the structure of arguments through so-called tree or circle-and-arrow diagrams. This is becoming a standard component of basic critical thinking instruction. The purpose of diagramming is to display perspicuously what supports what, or what is claimed to support what, in an argument. The utility of this is obvious. How can we cogently criticize or evaluate an argument unless we perceive what supports what? This unit of the critical thinking course will present argument diagramming as developed in my forthcoming text *Thinking Logically: Basic Concepts for Reasoning* (Englewood Cliffs, N.J.: Prentice-Hall, 1988). I shall present the four basic argument structures: convergent, serial, divergent, and linked. I shall point out how these structures may be motivated by very straightforward questions which could easily arise in concrete situations where two people are deliberating some issue. I shall also present some structural notions developed by Stephen Toulmin in *The Uses of Argument* (Cambridge: Cambridge University Press, 1958), which I have incorporated in the diagramming technique of *Thinking Logically*. Again, these notions can be motivated by questions arising in an argumentative discussion. I shall then apply this diagramming procedure to display the structure of various sample arguments.

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

Freund, George

Professor
Department of Philosophy
Santa Rosa Junior College
1501 Mendocino Avenue
Santa Rosa, CA 95404

Co-presenter

Perella, Jack

Professor
Department of Speech Communications
Santa Rosa Junior College

Although the fields of rhetoric and philosophy have traditionally perceived themselves as being at odds with one another, professors from both disciplines are frequently expected to teach courses which meet critical thinking requirements. Two instructors at Santa Rosa Jr. College — Jack Perella in Speech and George Freund in Philosophy — have collaborated on a team-taught class which presents both the rhetorical and the philosophical approaches to critical thinking. The purpose of this course is to give the students an opportunity to 1) benefit from the insights of both traditions, 2) evaluate for themselves the relative strengths and weaknesses of the two approaches, and 3) to observe the process of critical thinking as exemplified in the dialogue between the instructors in the classroom. In our presentation at the conference, we will discuss the results of this experiment. Specifically we will consider both what the students and instructors gained and sacrificed in this particular team-teaching environment. Finally we will discuss what this experience has taught us about philosophy, rhetoric and critical thinking.

(August 5 8:45-10:15 STEV 3040)

Garver, Eugene

Professor
McNeeley Chair in Thinking
Saint John's University
Collegeville, MN 56321

Rhetoric and Logic in Critical Thinking

Practical reasoning presents a danger parallel to the danger of hasty generalization in scientific thinking. In practical reasoning, the chief danger is a too rapid movement from premise—"This is good"—to conclusion—"I want it," "It's good for me," or "I will do it." Classical rhetoric offers useful resources for slowing inference down, making the move from universal affirmation to particular conclusion more deliberate. I will consider three of those resources, the discrimination of *kinds* of practical thought, the injection of the character of the speaker and the emotions of the audience as part of a practical argument and of its evaluation, and the discovery of practical truths that need multiple voices for their enunciation.

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

Garver, Eugene

**Faculty Development for
Critical Thinking**

Saint John's University, with the assistance of the Joyce Foundation, has been able to hold workshops on critical thinking for faculty from a variety of disciplines. This session will begin with an informal account of those workshops, and then move to some general conclusions about what is successful and what should be avoided in faculty development projects on critical thinking. Participants considering similar projects, or with experience in faculty development in critical thinking, are especially invited, since the focus of the session should be on deciding which features of such projects are or should be transferable or replicable.

(August 2 1:30-3:00 NICH 173)

Glaser, Edward M.

President
Human Interaction Research Institute
1849 Sawtelle Boulevard #102
Los Angeles, CA 90025

**Using the Watson-Glaser
Critical Thinking Appraisal
(CTA) As a Teaching as well
as Testing Tool**

Prior to this session at the conference, Form A of the CTA will be administered to a group of students. From this group, several individuals who scored low but give other evidence of having superior intelligence and up-to-grade-level reading comprehension skills will be invited to participate in a video-taped feedback by use of a modified Socratic dialogue session related to performance on the CTA. The tape from the interaction with one such student will be played and discussed at the conference session. The expectation is that by leading the student to examine his/her own reasoning, the individual will come to see principles (not just the logically correct answers to test items that had been answered incorrectly), and achieve a significantly higher score on retest with Form B of the CTA. The actual scores on the two Forms will be reported, with interpretive commentary.

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

Grootendorst, Rob

Professor
Universiteit van Amsterdam
Instituut voor Neerlandistiek
Spuistraat 134
1012 VB Amsterdam
Netherlands

Co-Presenter

van Eemeren, Frans H.

Professor
Universiteit van Amsterdam
Instituut voor Neerlandistiek

**Teaching Argumentation
Analysis and Critical Thinking
in the Netherlands**

Having sketched the situation with regard to the teaching of argumentation analysis and critical thinking in Western Europe, Frans van Eemeren explains in more detail the educational situation in the Netherlands. In particular, he will give an overview of the research done to develop textbooks and other educational tools for the teaching of informal logic. He differentiates between the various educational fields and traditions, and outlines the approaches which proved to have been the most fruitful. He will illustrate this by way of some practical examples.

Having sketched the Dutch education system, Rob Grootendorst explains in which types of schools argumentation analysis and critical thinking are being taught, and on what level. In particular, he describes the methods used in the curricula and the position taken by this type of education in the curriculum as a whole. Using the Faculty of Law as an example, he shows the various components of one such curriculum as far as informal logic is concerned. He also indicates in what other fields argumentation theory is applied in the Netherlands.

(August 4 8:45-10:15 STEV 2049)

Grootendorst, Rob

**Argumentation and Fallacy
Analysis in a Pragma-
Dialectical Perspective,
Parts 1 and 2**

**Co-presenter
van Eemeren, Frans H.**

Starting from the theoretical background sketched in their book *Speech Acts in Argumentative Discussions* (1984), van Eemeren and Grootendorst systematically point out that argumentation discourse can be analyzed as part of a critical discussion between two parties who are trying to resolve a dispute and that fallacies can be analyzed as violations of a code of conduct aimed at furthering such a resolution. For this purpose Searlean insights concerning speech acts and Gricean insights concerning co-operative verbal interaction are integrated into a comprehensive approach to communication. This approach is used by van Eemeren to deal with the problems encountered when interpreting argumentation discourse and when analyzing complex argumentation.

Having supplied the instruments for examining the stages in which a critical discussion develops, rules will be suggested for each stage, and fallacies analyzed as specific violations of these rules. In this way, an endeavour will have been made to lay new and sound theoretical foundations for the analysis of argumentation and for systematically detecting and characterizing fallacies. Starting from this pragma-dialectical perspective, van Eemeren will concentrate upon the problems concerning argumentation analysis, whereas Grootendorst will concentrate on problems concerning fallacy analysis. In both cases practical examples will be presented to illustrate the main points.

(August 3 1:30-3:00 STEV 3040 Part 1)

(August 3 3:15-4:45 STEV 3040 Part 2)

Hanford, George

President Emeritus
The College Board
45 Columbus Avenue
New York, NY 10023

Unexpected Connections

An educational bureaucrat's interest in critical thinking has led to some unexpected encounters with such diverse topics as legislation, hoola hoops, *Howards End*, the bulls of Pamplona and the Sistine Chapel — encounters generated by the growing influence of the critical thinking movement.

(August 2 1:30-3:00 STEV 1002)

Hanson, J. Robert

President
Hanson, Silver, Strong &
Associates, Inc.
Corporate and Publishing Offices
Box 402
Moorestown, NJ 08057

**Critical Thinking: Teaching
Strategies to Involve All
Students in Higher Level
Cognitive Processes**

This presentation will assist participants in better understanding different styles of thinking, and the use of particular teaching strategies to deliberately invoke different forms of the higher order thought processes. A model for appraising different forms of critical thinking will be presented and strategies will be demonstrated for concept attainment, concept formation and metacognition.

(August 2 1:30-3:00 DAR 108)

Hatcher, Donald

Director
Center for Critical Thinking at
Baker University
Baldwin City, KS 66006

**Critical Thinking and
Ethical Absolutes**

This presentation will examine ways that critical thinking can be employed to help students discover ethical principles and avoid the pitfalls of ethical relativism when asked to evaluate particular social and ethical problems.

(August 5 8:45-10:15 ART 108)

Hatcher, Donald

**Critical Thinking Techniques
and Methodological
Absolutism**

It has been argued that the techniques employed by most critical thinking texts are overly analytic and guilty of methodological absolutism, that such techniques stultify student creativity and tend to create an illiberal attitude of intolerance towards alternative approaches. I shall argue that such criticisms are unreasonable; that critical thinking courses need to be even more analytic because any method of evaluation will ultimately be subject to the canons of logical analysis; that knowledge of critical techniques, especially formal logic, enhances creativity; and that intolerance of beliefs which are not supported by argument is a virtue.

(August 4 1:30-3:00 CS 68)

Hirsch, Judi

Resource Specialist,
Oakland Public Schools /
Assistant Professor, California
State University, Hayward
114 Echo Avenue
Oakland, CA 94611

**Teaching Critical Thinking to
Students in Remedial and
Special Education Classes:
Feuerstein's Theories on the
Nature of Learning and
Intelligence**

Feuerstein's *Instrumental Enrichment* is the most widely-used cognitive intervention program in the world. The aim of this workshop is to familiarize the participants with the theories of Mediated Learning and Structural Cognitive Modifiability, and also to provide hands-on experience with several levels of this program. There will be ample time for questions. The presenter lived in Israel and worked with Prof. Feuerstein for eight years.

(August 4 10:30-12:00 NICH 173)

Hirsch, Judi

**Combatting the Tyranny
of Standardized "Intelligence"
Tests**

A recent federal court decision has severely restricted the use of IQ tests in California. Educators are now seeking alternative means of assessing "intelligence." This presentation will focus on a method of evaluating cognitive processing rather than academic achievement. Feuerstein's *Learning Potential Assessment Device* is especially useful for populations whose "thinking skills" have traditionally been ignored.

(August 4 1:30-3:00 NICH 173)

Hoaglund, John

Professor / Author
Department of Philosophy
Christopher Newport College
50 Shoe Lane
Newport News, VA 23606

**Critical Thinking and
Teaching Informal Fallacies:
The Old Approach and
the New**

Considerable progress has been made in the conception and analysis of informal fallacies, especially since C.L. Hamblin's *FALLACIES* in 1970. As a result fallacies can be taught better today, and the aim of this workshop is to give an idea how. First several fallacies will be analyzed as they were taught a generation ago. Then participants will employ the same techniques on fallacies selected to illustrate the shortcomings of the techniques. This helps expose some questionable presuppositions of older treatments and prepares the way for a view of how today's are an improvement.

(August 4 1:30-3:00 STEV 3049)

Hoaglund, John

**Mini-Critical Thinking
Course: Stimulating Thinking
About Thinking with Logical
Puzzles**

This is a practical workshop on using logical puzzles in ordinary language (no symbolism) for teaching critical thinking skills. Participants will work one relatively straightforward puzzle, then solutions will be shared. This brings an awareness of the challenge and some of the skills brought into play. Next, a second puzzle will be worked together by the grid method. Then this solution will be studied from the vantage points of the logical relations of consistency, inconsistency, implication, and contradiction. Finally a method of teaching these relations along with examples and sample problems will be treated.

(August 5 8:45-10:15 STEV 2049)

Irvin, Glenn

Associate Vice President,
Academic Affairs
California Polytechnic State University
San Luis Obispo, CA 93407

**The Loaded Case Against
General Education**

It's a truth universally acknowledged in academia that a program seeking legitimacy must be in want of its own administration. In order to have a successful general education program, an institution must provide it an effective administrative structure. Such a structure, however, must recognize the relative autonomy of the faculty in curricular matters and acknowledge the diverse and largely parochial and political interests that shape most general education programs. It must also make clear that general education is to be coherent in a manner similar to major degree programs, and that some individual on campus will advocate for general education just as a department chair advocates for a department's programs. Unless a university is prepared to organize a separate college or school dedicated to general education, and bear the costs of such an enterprise, it will have to find some other arrangement that guarantees the integrity of general education while acknowledging the authority of academic departments and disciplines.

In most middle-to-large universities, almost everyone affirms the importance of general education. But the actions of special interests (or distinterests) send quite another message, and when combined with a number of administrative and external factors, the result is an environment inimical to general education. In this session, I will provide a review of the attitudes and forces which make this point clear and conclude with a number of proposed solutions.

(August 4 8:45-10:15 DAR 108)

Jackson, Thomas

Professor
Department of Philosophy
University of Hawaii
Honolulu, HI 96822-2383

**Philosophy for Children:
A Hands-on Demonstration
Primary Level**

This presentation will involve: 1) A brief introduction to the Philosophy for Children curriculum with special reference to the program in Hawaii, and 2) A hands-on demonstration of the "Philosophy for Children" developed by Matthew Lipman and Ann Sharp for use at the elementary level. Participants will read through a section of one of the novels (*Pixie*). Questions will be elicited and then a discussion will be developed out of these questions, modelling actual classroom experience. Through this it is hoped that participants will experience some of the enjoyment of the novel and be able to see the way the program nurtures intellectual and moral virtues in both teacher and students as the classroom becomes a community of inquiry.

(August 3 8:45-10:15 DAR 112)

Jackson, Thomas

**Philosophy for Children:
A Hands-on Demonstration
Secondary Level**

This presentation will involve: 1) A brief introduction to the Philosophy for Children materials developed for use at the secondary level (*Lisa, Suki, and Mark*), and 2) A hands-on demonstration of the *Mark* text which focuses on Social Studies. Participants will read a section of *Mark*. Questions will be elicited and a discussion developed out of these questions, modelling actual classroom experience. Through this it is hoped that participants will experience some of the excitement of the program and will have a better sense both of the content and the methodology of the "Philosophy for Children" materials and the way these together nurture both intellectual and moral excellence.

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

Johnson, Ralph

Professor / Author / Editor, *Informal Logic*
Department of Philosophy
University of Windsor
Windsor, Ontario
Canada, N9B 3P4

**Why do we Reason Poorly?
Psychodynamics vs.
Psychologic?**

What is the best explanation of the mistakes we make in reasoning? The explanation given from the viewpoint of psychodynamics is that we reason poorly because we are under the influence of our prejudices and biases. The explanation given from the viewpoint of psychologic is that we reason poorly because we do not know the appropriate cognitive strategy or because we lack essential information.

Among the competing explanations which I shall review and analyze are, first, the argument given by Nisbett and Ross (*Human Inference*) that psychodynamic explanations are unsatisfactory, and, second, the exchange between Richard Paul and David Perkins from the 1986 Sonoma Conference ("Critical Thinking's Original Sin: Round Two"). Also in this paper, I intend to examine several different kinds of mistakes in reasoning from various viewpoints, and try to decide which is correct, or whether some other viewpoint offers greater promise.

(August 2 3:15-4:45 NICH 173)

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:

- 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?
- the conflicting views about the role of affect and cognition in the development of critical thinking—and indeed in reasoning generally
- the debate as to whether formal or informal logic is best suited to the needs of the critical thinker
- the appropriate methods for teaching critical thinking
- 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.

(August 3 8:45-10:15 ART 108)

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 it 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, what to watch for, and this does not mean combing 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.

(August 3 10:30-12:00 STEV 2049)

Jones, Jere

Professor
Department of Philosophy
Somerset County College
Somerville, NJ 08876

**Strong Sense Critical
Thinking: How to Probe Our
Own Conceptual Framework**

Co-Presenter

Korn, Fred

Consultant / Lecturer, University of Washington
Washington Higher Education Coordinating Board
908 East Fifth Avenue, EW-11
Olympia, WA 98504

Strong sense critical thinking is vital to a student's intellectual and educational development. However, the examination of one's point of view itself admits of stronger and weaker. More fundamental than the truth or evidential warrant of premises is the assessment of one's conceptual framework. It is well known that a conceptual framework may have blind spots, unrecognized biases, or structure reality misleadingly. But many problems in one's point of view stem from mistaken ideas and assumptions about one's conceptual framework. As with problems of the framework itself, these are difficult to correct because the person is almost always oblivious to them.

We will present a pedagogical approach that teaches students to detect, understand and remedy this problem, and which fosters their intellectual and educational development by demonstrating there is something to learn even about what seems obvious and unproblematic.

(August 3 10:30-12:00 NICH 166)

Keeley, Stuart

Professor
Department of Psychology
Bowling Green State University
Bowling Green, OH 43403

**Beyond the Term-Paper:
Designing Assignments that
Encourage Critical
Thinking**

Well-designed assignments provide the student with an important opportunity to practice and to internalize critical thinking skills. This session stresses the design of such assignments. First, characteristics of effective assignments will be discussed. Then, types of assignments that facilitate critical thinking in general will be shared. Finally, assignments that encourage the learning of each of a logically ordered series of specific critical thinking questions will be described. Participants will be provided an opportunity to actively participate in several brief assignments and to design and share additional assignments.

(August 3 10:30-12:00 STEV 3046)

Kerwin, Ann

Professor
Humanities/Honors Program
University of Arizona
Tucson, AZ 85721

**Ignorance, Illumination
and Inquiry**

This participatory workshop is designed to offer teachers from primary through university levels a "hands-on" exposure to teaching and learning from the point of view of the not-known. Dr. Kerwin will share her experiences and materials from a seminar she recently led: topics include Creativity; Wondering; Discovery; "Frontier" Thinking; Reason, Intuition, and Observation; Ambiguity, Complexity, and Uncertainty, etc. Participants will explore collectively issues of choice from the point of view of the not-known and will prepare a concrete design based on their own teaching interests.

(August 3 10:30-12:00 STEV 3049)

Kerwin, Ann

**Making the Most Out of
Nothing: Looking Critically
and Creatively at Absences,
Silences, Things Ignored and
Things-to-be**

According to cognitive psychologists, we human beings are biased toward positive information; consequently, we neglect or underestimate the import 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.” Architects and planners include *space* as well as objects in their designs. Counselors are sensitive to *lacks* of communication, intimacy, support or self-esteem. While educators ask “Why *can't* Johnny read?,” Sherlock Holmes fans recall the clue of the “dog who did *not* bark in the night.” 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. Participants will then design innovative exercises which they can implement in their teaching next year.

(August 4 8:45-10:15 NICH 166)

Kerwin, Ann
Co-Presenter
Witte, Marlys

Physician
Department of Surgery
College of Medicine
University of Arizona
Tucson, AZ 85724

**Learning and Teaching the
Unknown: Pathway to Finding
“Intellectual Virtues”**

While traditional education focuses on reciting the facts of the day and to a lesser extent cultivating analytical problem-solving skills, the challenge of learning and teaching the unknown, the uncertain, and the ambiguous—the bulk of the challenge of our daily lives—and making decisions in this context has received little attention. Drs. Kerwin and Witte will review their own findings to date in designing and developing the Curriculum on Medical Ignorance at the University of Arizona and also the results of the field “ignorance” experiments conducted by last year’s Sonoma Conference participants in their institutions and disciplines. Special attention will be focused on evaluation of this innovative curriculum in terms of changes in attitudes, knowledge base, skills, and behavior of both students and faculty and specifically how well this curricular approach inculcates “intellectual virtues” needed for “critical thinking in the strong sense” and responsible citizenship in our complex and rapidly changing society.

(August 4 1:30-3:00 DAR 108)

Kobak, Dorothy
Executive Director,
The Edu-Caring Foundation
47 Surrey Way
Exton, PA 19341

**Raising the C.Q.
(Caring Quotient)—
Edu-Caring: Teaching Children
to Think Caring**

Caring is a learnable, teachable subject. It responds to pedagogical skills in terms of teaching such skills and commitments. The critical spirit, along moralistic lines (care, concern, cooperation)—*not “sin,”* can be taught and learned at any and all ages and grades. As a “practitioner” I shall deal with philosophical as well as specific skills to accomplish this necessary component of education.

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

Kubasek, Nancy
Professor
Department of Legal Studies
Bowling Green State University
Bowling Green, OH 43403

**Selection and Design of
Textbooks and Supplements
that Foster the Development
of Values Analysis and Critical
Thinking Skills in the Business
Classroom**

This workshop is premised on three assumptions: that every course should be designed to improve students’ abilities to engage in critical thinking and values analysis; that, in fact, real understanding of subject matter cannot occur unless students engage in these processes; and that business students find it especially difficult to analyze problems from any perspective other than that of a business manager, both because that is the perspective from which most of their textbooks are written and because of the internalized values that led these students to seek careers in business. Most business textbooks do not make the task of teaching critical thinking and values analysis easier, however, armed with a set of criteria, teachers of business courses can learn to select those texts which will help their students develop these skills. This workshop will introduce participants to a three step process by which educators in the Business College can select and develop textbooks and curricular materials to facilitate the integration of critical thinking and values analysis into their classes.

(August 4 1:30-3:00 STEV 3046)

Kurfiss, Joanne

Professor
Center for Teaching Effectiveness
University of Delaware
Newark, DE 19716

**Understanding Knowing:
Developing Foundations for
Critical Thinking at the
College Level**

Students frequently believe that their job as learners is to acquire "knowledge" from "authorities" and report it back on multiple choice tests. Freeing students from such beliefs is the major challenge of critical thinking instruction. William Perry's model of college students' development charts their gradual acceptance of the pluralistic world view and personal responsibility for managing epistemological complexity that are assumed when we ask students to think critically. In this session we will consider how instruction for critical thinking can help students along the path toward the contextual relativism, dialectical reasoning and capacity for commitment that characterize intellectual maturity in our culture.

(August 3 8:45-10:15 STEV 2049)

Kurfiss, Joanne
**Successful Models for
Developing Critical Thinking
in the College Classroom**

Although many educators and researchers have recently become interested in the problem of teaching to develop students' higher-order reasoning abilities, only a few empirical studies document results of educational programs designed to achieve these purposes. In this workshop, I will introduce instructional models that have successfully fostered students' intellectual capabilities within the traditional discipline-based classroom. We will identify common features of the models and consider strategies for integrating critical thinking processes into participants' coursework and academic programs.

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

LaBar, Carol

Professor
Faculty of Education
University of British Columbia
Vancouver, B.C.
Canada V6T 1Z5

Critical Thinking Distinctions

Making decisions about significant personal and social issues requires the ability to use certain distinctions. In this workshop, we will examine some of these distinctions (for example, empirical and value claims, principles and rules, moral and prudential reasons). Methods and exercises suitable for secondary school students will be utilized.

(August 4 1:30-3:00 DAR 112)

**LaBar, Carol
Co-Presenter
Wright, Ian**
**Mini-Critical Thinking Course:
Practical Reasoning and
Principle Testing**

Critical thinking includes reasoning about what ought to be done, 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 agent 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 about what ought to be done—that is a practical judgment. This session will focus on the use of principle 'tests' as a way of assessing the value standard.

(August 5 10:30-12:00 STEV 2049)

Langsdorf, Lenore

Professor
Department of Philosophy
University of Texas at Arlington
P.O. Box 19527
Arlington, TX 76019

**Reflection, Interpretation,
and the Critical Spirit**

Critical thinking in the "strong sense" implies the ability to reconstruct the clearest, fairest, and strongest versions of our own and others' points of view. In her paper, Dr. Langsdorf discusses how, in addition to formal and informal logic, phenomenology and hermeneutics provide the basis for methods that aid in the understanding of positions and claims. She will introduce some of these methods in an approach that does not assume any prior familiarity with the philosophic traditions that gave rise to them. Her ultimate goal is the encouragement of a positive critical spirit concerned with clarity and truth rather than the destruction or imposition of viewpoints and values.

(August 5 10:30-12:00 NICH 173)

Lazere, Donald*Professor*

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

Composition for Civic Literacy

This workshop is based on Don Lazere's college course in argumentative writing and the research paper, which also focuses on the development of civic literacy. One aim of the course is to counteract the fragmentation into disparate units of reading and writing assignments typical of courses in composition and most other subjects. Coherence is achieved by centering reading and writing assignments throughout the term on a single issue in current civic life—in this case, President Reagan's State of the Union Address and the implications of Reagan's economic policies stated there and elsewhere for the rich, the poor, and the funding of public services including national defense and education. Discussion of and research on this issue provide a concrete body of knowledge to which principles of critical thinking can be applied.

(August 4 10:30-12:00 STEV 3046)

Lazere, Donald**Bias in Academia**

The singling out of bias in leftist teachers by conservative groups like Accuracy in Academia exemplifies the fallacy of stacking the deck or selective vision. The majority of activities in American education are openly and directly in the service of the conservative business, professional, government and military establishment. If liberal and leftist teachers have a bias, it is that of a minority attempting to compensate for the greater bias of the majority. But conservatives fall victim to an axiom of sociocentrism: criticism of the status quo is more likely to be perceived as biased than uncritical support of it, which tends to be regarded simply as the norm of neutrality. Moreover, partiality toward knowledge over ignorance, calm reason over unreasoning zealotry is often misunderstood by uneducated conservatives simply as "liberal bias." What conservatives sometimes seem to be calling for in education is equal time for ignorance and prejudice.

(August 4 1:30-3:00 ART 108)

Leddy, Thomas*Professor*

Department of Philosophy
 San Jose State University
 One Washington Square
 San Jose, CA 95192-0096

**On Teaching Creativity,
Parts 1 and 2****Co-Presenter****Manning, Rita**

This is a two part workshop. The first is led by Professor Manning and explores creativity in practical contexts and in science, and the second, led by Professor Leddy, explores creativity in the arts.

Part One Professor Manning begins by looking at a Sherlock Holmes story, "Silver Blaze". She briefly recounts the story and then contrasts the reasoning used by Holmes and by the police detective, Inspector Gregory. She then uses this example to focus on several elements of critical thinking: recognizing anomalies, asking appropriate questions, considering alternative explanations, and collecting new data. She closes by suggesting other examples which can be used in the classroom.

Part Two Professor Leddy considers two contemporary psychologists' views of creativity in the arts focusing on their use of think-aloud techniques to study the creative process. The psychologists are Perkins (*The Mind's Best Work*) and Weisberg (*Creativity*). Professor Leddy uses two of their laboratory examples to illustrate problems with their approach and then raises further questions in connection with a series of slides that follows the development of Picasso's *Guernica*. He then considers various suggestions for encouraging creativity in arts and humanities classrooms.

(August 5 8:45-10:15 CS 68 Part 1)

(August 5 10:30-12:00 CS 68 Part 2)

Luckhardt, C. Grant*Professor*

Department of Philosophy
 Georgia State University
 Atlanta, GA 30303

**Assessing the Credibility
of Authorities**

In this paper I develop and argue for a set of some two dozen criteria to be used in assessing the credibility of authorities. Based partly on philosophical considerations and partly on research results in cognitive psychology, these criteria will then be used to assess the credibility of several examples of arguments that rely on authority.

(August 5 8:45-10:15 NICH 166)

Lyons, Nancy

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

**Dance - Critical Thinking
with the Body**

Every movement or action we make involves assumptions and concepts of how the world is. Each action can provide a feedback loop to test the validity of our assumptions on a moment to moment basis. A dancer must continue to test his or her assumptions constantly, or it can all be over in a split second. In the act of dancing and in the act of making dances, the critical thinking that is essential springs not only from the conscious mind, but from the intuitive, the body knowledge, the instincts. The workshop will look at some of the ways the body serves as a critical thinker.

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

Manning, Rita

Professor
 Department of Philosophy
 San Jose State University
 One Washington Square
 San Jose, CA 95192-0096

**Workshop in Dilemmas,
Role-Playing and Simulation in
Moral Education**

I begin by discussing the three options available to the teacher who wants to "teach" morality: indoctrination, values clarification, and cognitive approaches (Kohlberg). I briefly criticize both the indoctrination and the values clarification approach, the first because it violates some principle of respect for students and is ineffective, the second because it assumes that some sort of relativism about ethics is true. I then focus on the Kohlberg approach and show how one uses dilemmas to promote moral growth. I offer one of the criticisms of Kohlberg, that the cognitive approach ignores motivation to be moral (Gilligan). I go on to discuss role-playing and simulations as techniques for achieving both the goals of the cognitive and the motivational approach. Throughout, I give concrete examples which can be used in the classroom.

(August 3 10:30-12:00 NICH 173)

Martin, Douglas

Professor
 Department of Chemistry
 Sonoma State University
 Rohnert Park, CA 94928

**A Definition of Critical
Thinking for Science
Instruction, K-12**

The term "Critical Thinking" has been discussed widely in a general context. Each of the intellectual disciplines, however, requires some individual consideration in order to apply these general considerations in a practical way. In this presentation I provide one possible definition of critical thinking in science, a rationale for the importance of this definition, and a discussion of the implications of this definition for instruction in grades K-12.

(August 2 3:15-4:45 DAR 108)

May, John D.

Professor
 Department of Government
 University of Queensland
 St. Lucia, Qld. 4067
 Australia

**Teaching by Bad Example:
Optimal Cases for Helping
Intermediate Students to
Think Critically, Parts 1 and 2**

Much instruction in higher education is done by means of cases, primarily from "classic" texts on philosophy, law, and literature and is approached with an attitude of respect bordering on reverence. For the cultivation of critical thinking, however, this pedagogical orientation is less than satisfactory and is especially unsuitable when students are intermediate in either cognitive abilities or educational years. Texts most suitable for developing critical faculties in intermediate students meet the following tests: brevity, substantive bite, cumulative diversity of character, etc. Dr. May will clarify, rationalize, and test the foregoing prescription.

Session I: Crude Adventures in Critical Thinking. Session II: Sustained Adventures in Critical Thinking.

(August 2 3:15-4:45 STEV 3049 Part 1)

(August 5 1:30-3:00 STEV 3049 Part 2)

Mayfield, Marlys

Author / Consultant
 P.O. Box 5406
 Richmond, CA 94805

**Teaching Recognition of
Viewpoint: Working with
Student Naivete About
Where Ideas Come From**

Left wing, right wing, liberal, radical, conservative, gay, feminist, libertarian. Have you ever asked your students to define these terms? Can they identify a liberal viewpoint when they read or hear it? Can they recognize communist or right wing rhetoric? You may be surprised to find that most of them don't know how, and are quite bewildered by your expectation that they demonstrate a skill you take for granted. No wonder so many of our students equate reality with the six o'clock news. How do you teach students to recognize viewpoint and consider its influence on content? Marlys Mayfield, author of *Thinking for Yourself*, will demonstrate through written and oral exercises how this basic critical thinking skill may be developed. Work will also include recognizing unconscious viewpoints, such as those based on ego and ethnocentricity, racism, sexism, and religiocentricity.

(August 2 3:15-4:45 STEV 3040)

Mayfield, Marlys

Grounding Critical Thinking in Observation Skills

Why stress teaching students how to reason better when they still base their reasoning on inaccurate information gleaned from a careless untrained use of their senses? The teaching of critical thinking can begin with training in observation skills. This presentation will offer exercises for classroom use, both oral and written, for the development of observation skills. Marlys Mayfield will also demonstrate from her research how students trained in observation skills are better prepared on a learning gradient to work with the basics of inductive reasoning and move from there into the more complex cognitive problems of analyzing and advocating ideas.

(August 3 8:45-10:15 STEV 3049)

Mendelsohn, Richard L. Logic and Critical Thinking

Professor / Author
Hebert Lehman College, C.U.N.Y.
Bedford Park Boulevard West
Bronx, NY 10468

Traditional formal logic serves as an excellent base on which to fashion a critical thinking course. Most of the virtues of critical thinking courses pertain to the *teaching* of the content. Combine these critical thinking activities with a content aimed at making precise the underlying concepts engaged in, and one creates an extremely potent educational experience. Students come to understand and recognize elementary logical relations—like inconsistency and validity—by using them to explore their own judgments about what is logical and what is not. In probing their language and thought with the abstract model of the truth functional connectives, students develop a vocabulary needed for reasoning as well as points of focus for identifying positions and evaluating them. Indeed, logic is precisely the type of subject matter amenable to classic Socratic techniques, since it emerges out of self-reflection on rational processes, processes that students have engaged in for years but never clearly articulated. This is the heart of the approach we have adopted at Lehman College for a typical population of inner city students who are deficient in reading and writing: reasoning is not the content of the course, but rather the framework within which it is taught. In class, students are required to identify the logical relation that holds between a number of statements, and then to defend that position—using the vocabulary and concepts of the course—against criticisms and alternatives other students develop. Serving as part of an integrated program makes it possible to apply readily this mode of logical analysis to material learned in other courses.

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

Miller, Lou

Associate Professor
Hutchins School of Liberal Studies
Sonoma State University
Rohnert Park, CA 94928

Critical Thinking and Self-Growth

The ultimate purpose to which critical thinking in the "strong" sense can be put is to develop a more profound understanding of one's inner self. The stronger our critical capacities become, the more capable we are of viewing with objectivity those assumptions, philosophies, and beliefs which form the core of our beings. The Socratic method of questioning aims not only at improving our abilities to become better thinkers and more responsible citizens, but at strengthening our souls. While most teaching does not attempt to influence students at this level, any critical undertaking is aided by an understanding of the deepest sense in which this process can be employed. In support of this viewpoint I will present a model which provides a conceptual foundation for this approach to strong sense critical thinking, clarify the model using examples from a variety of disciplines and classroom experiences, and close with a slide show which offers an aesthetic statement about the subject.

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

Minkler, Doug

Garage Artist / Teacher, Nystrom School
2209 Gaynor Avenue
Richmond, CA 94801

"Art is Not a Mirror Held Up to Reality But a Hammer with Which to Shape It"

—Bertolt Brecht

Using the poster as their medium, students in my fifth and sixth grade art classes have taken on the oil companies and the tobacco industries. Come see the *Barfboro* and *Virginia Slime* full color counter-ads as well as the oil refinery posters. Let's discuss similar projects you've taken on, thought of taking on, or never even dreamed you would be able to attempt, and brainstorm on how to make the theoretical abstract classroom into an activist workshop.

(August 3 10:30-12:00 IVES 119)

Missimer, Connie

Author / Consultant
4836 N.E. 40th Street
Seattle, WA 98105

**Humor and Other Fun Ways
to Achieve Empathy**

Alas, critical thinking contains the work "critical", the first definition of which is "to judge harshly." So already we're off on the wrong foot if we want students to achieve empathy for views opposed to their own. Although humor has certainly been used in harsh judgment, it can do wonders to create a sympathetic hearing of opposing arguments. It doesn't require a stand-up comic to create this effect (you can steal material from funny people). Further, light-heartedness as a general stance paradoxically produces more serious critical thinking and greater empathy. A "mini-lecture" along with other examples will be happily provided, and ideas solicited from the group.

(August 3 10:30-12:00 DAR 112)

Missimer, Connie**Critical Thinking and
Intellectual Virtues:
Can You Have Your Cake and
Eat It Too?**

Implicit in critical thinking is readiness to challenge basic principles. Then wouldn't critical thinking have to leave open to question the very intellectual virtues on which it rests? Shouldn't we question the validity of intellectual virtues such as courage to face our prejudices, or the obligation to hear out the strongest counterargument to what we believe? Yet implicit in intellectual virtues is their fixity. As Paul puts it, "... we must typically *persevere* over a period of time, for learning to empathically enter a point of view against which we are biased takes time and effort." This lecture grapples with the dilemma that critical thinking requires intellectual movement while moral virtue requires intellectual constancy.

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

Moore, Kathleen Dean

Professor
Department of Philosophy
Oregon State University
Corvallis, OR 97331

**Gullibility and Mistakes
in Scientific Reasoning**

Students tend to be gullible; they are particularly vulnerable to claims purportedly based on experimental or scientific evidence. Thus, helping students develop critical judgment about scientific reasoning is both important and difficult.

In this workshop, I demonstrate two classroom exercises through which students encounter their own gullibility and, by examining their errors, come to appreciate the strengths and weaknesses of scientific reasoning. The lessons are based on the technique of "dehoaxing," which tricks students into accepting a hoax and then invites them to analyze the reasoning which led them into error. The first lesson uses carnival tricks to lure students into thinking they have seen convincing experimental evidence of extra-sensory perception. In the second lesson, the students pose as hand-writing analysts in order to observe similar faulty reasoning in others. In both lessons, students are invited to analyze critically the reasoning that led to error, and to develop a set of standards for the evaluation of experimental evidence. Students are then encouraged to apply those standards to more traditional scientific arguments.

The lessons are appropriate for high-school and college age students, in science or critical thinking classes.

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

Morse, Ogden

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

**Subject Matter and Moral
Development in Domain
Specific Classrooms**

Our belief is that moral development occurs best through a process which, over a period of time, allows a student to consider a range of ideas and values, to test these ideas in the marketplace, and to integrate them into a personally and socially acceptable philosophy. Is this approach possible in a subject-matter classroom at the secondary level? Do we have the right to engage students in this area? Or is it an obligation? Is there enough time? Won't the student's knowledge of the subject suffer? What techniques or strategies can the classroom teacher use? The purpose of this workshop is to answer these questions by illustrating how classroom texts can be used to generate moral questions, how collaborative learning techniques can stimulate the exploration of these topics, and how critical thinking skills control the analysis and evaluation of ideas and concepts. Participants will function as secondary school students as they go through the classroom activities of a model lesson. There will also be material from thinking skills texts, a learning model, and a videotape of a class in action.

(August 2 1:30-3:00 DAR 112)

Norris, Stephen P.*Professor*

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

**Observation in Science
Education**

Good observation is fundamental to thinking critically and the science subjects are often taken to be ideal places for teaching it. There are three general assumptions which underlie the teaching of observation in existing science courses: (1) that observations can be distinguished from inferences without attention to the contexts in which the observations and inferences are made; (2) that scientific observation is linked tightly to human sense perception; and (3) that scientific observation is taken to be a simple mental process. In this presentation I will show how each of these assumptions is in error. Specifically, I will argue that the distinction between observation and inference is context bound, and changes as scientific knowledge changes. Furthermore, scientific observation is only historically, not necessarily, linked to human perception and to certain information-carrying mechanisms such as electromagnetic radiation and sound waves. Finally, I will illustrate that scientific observation is often not at all simple, requiring the operation of complex and elaborated mental processes. Once these points are made it becomes clear that the view of observation found in the science education field is not suitable for the conduct of scientific investigation. In addition, because one legitimate goal of science teaching is to promote accurate views of the nature and role of scientific investigation, the science education view of observation is not suitable as a guide to science instruction.

(August 2 1:30-3:00 CS 68)

Nosich, Gerald*Professor / Author*

Department of Philosophy
University of New Orleans
New Orleans, LA 70148

**Teaching Critical Thinking
Across the Curriculum**

This seminar is designed for people who do not teach a course specifically on critical thinking, but who want to incorporate teaching critical thinking skills and the critical spirit into courses in different areas. The seminar will cover some specific and practical methods for fostering the intellectual virtues and teaching these skills in Social Science courses (History, Psychology), in Humanities (English Lit, Fine Arts, Music), and in the Natural Sciences.

(August 2 10:30-12:00 CS 68)

Nosich, Gerald**On Teaching Critical Thinking**

The workshop will focus on a method for teaching students how to construct arguments of their own and how to criticize arguments of others. The method will be the one used in my *Reasons and Arguments*; the essential steps are how to paraphrase well, how to fill in missing premises, and how to evaluate the truth of claims. Also covered will be some specific classroom techniques and some ways to combat ethnocentric thinking.

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

Nosich, Gerald**Mini-Critical Thinking Course:
Constructing Arguments for
Opposing Points of View**

In this workshop, I'll go over some techniques and steps for constructing arguments as well as some strategies for teaching argument construction. The techniques covered include how to clarify what you're trying to argue for, how to give plausible, relevant reasons, how to identify and support the weakest parts of the argument, and how to use argument construction as a basis for writing term papers. In the spirit of strong-sense critical thinking, we'll concentrate on constructing arguments for positions to which we're opposed, and we'll try to make the best case for them we can. (I would like participants in the workshop to think of one or two examples of positions that (a) are held by vocal minorities today but which (b) in your opinion seem dead-wrong or ridiculous.)

(August 2 1:30-3:00 STEV 2049)

Olds, Susan

*Teacher, Davis Joint Unified
School District
445 Edwin Drive
Vacaville, CA 95688*

**Using a "Thinking Jigsaw" to
Explore Supreme Court
Decisions**

This interactive session models a process for analyzing key Court decisions by attempting to solve a hypothetical case. The cases in the model deal with government regulation of business and commerce, but the process can be duplicated for other situations. Case descriptions are drawn from *Lessons on the Constitution*, published by Project 87.

In order to decide the hypothetical case, participants must work in small-groups using the jigsaw technique, a cooperative learning strategy. This session is designed for teachers of U.S. government or economics, at high school or freshman level, who have some previous understanding of the role of the Supreme Court in our system.

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

Olds, Susan
Co-Presenter
Rudinow, Joel

**Critical Thinking and the
Constitution: The Bicentennial
Connection**

Issues of Constitutional interpretation are not only timely for the application of Critical Thinking skills; they are also extremely useful as vehicles of Critical Thinking instruction, particularly for cultivating skills as defined in the California Assessment Program and also for cultivating an appreciation of subtle but important epistemological distinctions. This session is designed for teachers in grades 5-12 and Community College who have little experience in teaching about the Constitution and who would like to use it as a vehicle for Critical Thinking instruction.

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

Paul, Richard W.
Director
Center for Critical Thinking and
Moral Critique
Sonoma State University
Rohnert Park, CA 94928

**Critical Thinking Staff
Development: Developing
Faculty Critical Thinking and
Critical Teaching Skills**

The problem of long term staff development is a central problem in any attempt to bring critical thinking into the curriculum. Whatever else, we want critical thinking to be infused into all subject matter instruction. But we cannot do this unless, and to the extent that, faculty become comfortable articulating and utilizing critical thinking skills and dispositions. The standard mindset to instruction is an impediment.

Furthermore any short-term strategy is, by itself, bound to fail. In this session Richard Paul will present a general model for staff and discuss ways of adapting it to different educational levels: elementary, secondary, and college.

(August 2 3:15-4:45 IVES: Warren)

Paul, Richard W.

**How to Help Teachers to
Infuse Critical Thinking by
Helping Them to Develop
Skill in Remodelling Their
Present Lessons**

The basic idea behind lesson plan remodelling as a strategy for staff development in critical thinking is simple. To remodel lesson plans is to develop a critique of one or more lessons and formulate one or more new lessons based on that critical process. A staff development leader with a reasonable number of exemplary remodels with accompanying explanatory principles can develop a series of staff development sessions that enable teachers to begin to develop new teaching skills as a result of their experience in lesson remodelling. Before a limited studio audience, Richard Paul will illustrate this mode of staff development using the Center's *Critical Thinking Handbook, K-3, a Guide For Remodelling Lesson Plans in Language Arts, Social Studies, and Science*.

(August 3 1:30-3:00 STEV 1063)

Paul, Richard W.
Co-Presenter
Tavris, Carol

**Culture & Critical Thinking:
The Danger of Group- or
Culture-bound Thought**

One danger for thought is social or cultural blindness. In this case our critical thinking results in misjudgments of others. Another, but opposite, danger is the refusal to make any judgments about any culture but our own. Carol Tavris and Richard Paul will discuss the nature and significance for education of these deepseated problems. The issue is, in other words, how can we so structure instruction so that students learn how to recognize and overcome their group-bound and culture-bound thinking?

(August 4 1:30-3:00 SU:MP)

Paul, Richard W.
Co-Presenter
Perkins, David

**What's in a Name? "Thinking"
vs. "Critical Thinking"**

Some theoreticians talk about teaching for "thinking", others about teaching for "critical" thinking or "creative" thinking. Are these differences insignificant? Should Critical Thinking be used in a wide sense to cover all good thinking or only in a narrow sense to cover the evaluative dimensions of good thinking? Will a good program in Critical Thinking teach the dimensions of generativeness and novelty. Richard Paul and David Perkins agree on some of the answers to these questions and disagree on others.

(August 3 8:45-10:15 IVES: Warren)

Payne, William
Teacher, History
Moreno Valley High School
23300 Cottonwood Avenue
Moreno Valley, CA 92388

American History on Trial

The American History on Trial program is based on the belief that historians and lawyers are engaged in similar activities. They are both charged with reconstructing the events in order that their audience may make judgments about the actions of individuals and groups in the past. There is a shared commitment to the principle that the conflict between opposing viewpoints of the past will lead to a better understanding and perhaps the truth. In order to reconstruct the past, both the historian and the lawyer must critically evaluate evidence, logic, and values. This workshop will present a unit on Colonial history as an example of how reasoning skills can be introduced in the context of grappling with major issues of historical interpretation in a modified trial setting. Participants will receive a complete set of materials for the sample unit.

(August 5 10:30-12:00 STEV 3008)

Pearl, Art

Professor
Department of Education and
Psychology
University of California, Santa Cruz
Santa Cruz, CA 95064

**Thinking Critically About
Critical Issues**

Democratic Schooling consists of four interrelated components: 1) equal preparation for debate of critical social issues — war, poverty, justice, ecocide, dehumanization; 2) equal opportunity for everyone to participate in meaningful decision-making; 3) universal rights of expression, privacy, due process (presumption of innocence, right to counsel, right not to testify against self, access to independent judge and tribunal, and protection from cruel and unusual punishments) and movement; and, 4) equal encouragement of all to succeed in all of society's legal endeavors—work, politics, culture, leisure and interpersonal relations. A democratic school is a place where students do an apprenticeship in all of the above. This will be a talk that calls for excellence in education but it differs greatly from the popular movement that is advertised as "excellence." It is my contention that only with democracy can there be true excellence; the new "reforms" are coercive, unaccountable in any meaningful sense and ultimately intellectually inadequate.

Be prepared for a lively, challenging discussion and debate. This presentation is open to all areas of education.

(August 2 1:30-3:00 STEV 3049)

Perkins, David

Co-director, Project Zero
Graduate School of Education
Harvard University
Cambridge, MA 02138

**What Makes Science Concepts
Hard to Understand?**

The learning of science with genuine understanding has emerged as a pressing educational problem not only in pre-university education but even at the university level. Science "misconceptions" prove prevalent in students even after a year or two of physics or chemistry. In this informal lecture, we explore through examples some of the factors that lead to deeply rooted misunderstandings of scientific concepts and examine some of the educational strategies that might serve to help students toward real comprehension.

(August 2 1:30-3:00 IVES: Warren)

Perkins, David**What the Mind is Made Of**

The mind can be conceived and modeled in innumerable ways. Two contemporary views of the nature of mind strike a particularly provocative contrast. Alan Newell, in his SOAR model, proposes that the mind is a "production system," a computer-like mechanism that operates by checking for what the situation of the moment is and then "firing" an action that responds more or less appropriately to the situation. In seemingly stark contrast, Marvin Minsky, in his "society of mind" model, proposes that the mind is composed of a loose society of semi-autonomous subminds—"agencies" that have very specialized jobs. One agency and then another seizes control in order to get things done. In this informal lecture, we explore the contrasts and similarities between these models. We also ponder whether the question, "What is the mind made of?" even makes sense, and what kind of sense it might make.

(August 4 10:30-12:00 IVES: Warren)

Phillips, Linda M.

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

**The Design and Development
of a Test of Inference Ability
in Reading Comprehension**

This paper describes the design and development of an inference test in reading comprehension for intermediate grade students. Current standardized tests of reading were found to be problematic because it was not easy to make any decision as to what the tests measure. Implicit assumptions in reading testing are challenged—for instance, the assumption that when a reader selects the keyed answer that the reader has done so for the right reasons. Results from student verbal reports will be presented to illustrate potential item ambiguities, vocabulary problems, hidden cues, as well as to provide a window into the processes readers are using to arrive at their answers. Preliminary findings will be presented.

(August 3 8:45-10:15 STEV 1002)

Porter, J.S.

Professor
Department of Language Studies
Mohawk College
Hamilton, Ontario
Canada, L8N 3T2

**How to Expose and Correct
Assumptions**

Assumptions, often unexposed and unexamined by educators, about students, teaching and education generally underpin, and sometimes undermine, our approach to learning. This workshop provides practical experience in learning to expose and correct our assumptions so that some impediments to critical thought can be removed. The more we are aware of our assumptions, the more we are free to explore new options of thinking and teaching. After all, the unexamined life isn't worth living. Is it?

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

Prihoda, John

President
Iowa Valley Community College
District
P.O. Box 536
Marshalltown, IA 50158

**Critical Thinking and
Ethics in Education**

One of the greatest concerns of faculty and administrators is how to provide time for critical thinking to occur in the classroom. In this workshop, participants will be guided through a review of the findings of the mini-session held during last year's Sonoma Conference, a discussion of prevailing instructor and administrator practices and how we arrived at this point, and ways to work within current classroom and administrative structures to provide opportunities for critical thinking to occur. The underlying theme is ethics in teaching and administrating. This session is for administrators and faculty at all levels.

(August 2 3:15-4:45 STEV 1002)

Rich, Michael

*Lecturer, California State
University, Chico*
2892 Buena Tierra
Benicia, CA 94510

**The Use of the Emotions in
Critical Thinking**

Critical thinking in the strong sense involves a commitment to moral integrity. It involves a commitment to overcoming one's own self-deception and reconciling one's avowed moral beliefs with one's actual moral beliefs (those reflected in one's behavior). The problem is that self-deception is, by definition, extremely difficult for an individual to detect in his/her own case. Quite simply, if one is self-deceived, one does not know one is deceiving oneself. In this paper I will examine the relationship between moral appraisals, the emotions, and strong sense critical thinking. I will argue that although our emotions represent, on the one hand, obstacles to the achievement of moral integrity, they provide, on the other hand, an invaluable tool for overcoming our self-deception about our moral commitments.

(August 4 10:30-12:00 ART 108)

Romain, Dianne

Professor
Department of Philosophy
Sonoma State University
Rohnert Park, CA 94928

**Critical Thinking, Creativity,
and Play**

In this workshop I will provide puzzles, games, songs, poems, pictures and dances designed to teach critical thinking concepts. Participants will have the opportunity to exercise their imaginations to develop other ideas for their classes.

(August 4 10:30-12:00 STEV 3008)

Romain, Dianne**Critical Thinking and High
School Science****Co-Presenter****Taylor, Sarah**

Director
California Academic Partnership
Vacaville Unified School District
751 School Street
Vacaville, CA 95688

In this workshop we will present lesson plans and assignments in Biology and Chemistry developed by high school teachers with Critical Thinking Consultant Dianne Romain. The skills encouraged include a) general critical thinking skills such as analysis of language, recognition of bias and slanting, developing an appreciation for opposing viewpoints, and socratic questioning, and b) scientific process skills such as observing, communicating, comparing, organizing, relating, and inferring. Participants in the workshop will work in small groups to develop other lesson plans and assignments.

(August 5 10:30-12:00 STEV 3046)

Romain, Dianne**Academic Partnership: Critical
Thinking and Social Studies****Co-Presenter****Taylor, Sarah**

In this workshop we will discuss a two-year, two step partnership process enhancing the teaching of critical thinking and writing in Social Studies. In the 1985-86 period, CAPP teachers worked with post-secondary consultants. In the dissemination phase, 1986-87, CAPP teachers developed and presented to other teachers the knowledge and skills gained in the previous year.

We will recommend ways to develop effective partnerships, and where to look for funding, and we will provide examples of critical thinking lesson plans and instructional strategies.

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

Rosenberg, Vivian M.

Associate Professor
Department of Humanities
& Communication
Drexel University
Philadelphia, PA 19104

**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 four 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.

(August 5 8:45-10:15 DAR 108)

Rosenberg, Vivian M.

**Introducing Affective
Awareness as a Critical
Thinking Skill**

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.

Affective awareness is a teachable skill; it can—and should—be taught and practiced not only in Critical Thinking courses but in any course where personal psychological insight and empathy with others might improve comprehension and performance. Those involved in the study of literature, history, psychology, social work, education, nursing, and many other subjects will benefit in their professional lives from such a program; that affective awareness benefits all of us in our personal lives is obvious.

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

Rudinow, Joel

Research Associate
Center for Critical Thinking
and Moral Critique
Sonoma State University
Rohnert Park, CA 94928

**Philosophy Comes Down to
Earth: Critical Thinking in the
Community College**

A critical review of current educational policy debate concerning the status of Critical Thinking instruction in the community colleges. Objections are raised against increasingly influential arguments offered in support of the thesis that Critical Thinking be classified as essentially ‘remedial’.

(August 4 8:45-10:15 CS 68)

Rudinow, Joel

**How to Use the Media
Critically, Parts 1 and 2**

A unique experiment in the Socratic use of television technology as a tool of media criticism and as a tool of education in media criticism. A panel involving advanced students of Critical Thinking will critically analyze a segment of nationally televised public affairs programming using the “stop action” and “instant replay” capabilities of television technology, before a live television studio audience.*

*(Seating is limited, and latecomers cannot be admitted to the studio)

(August 3 8:45-10:15 .STEV 1063 Part 1)

(August 3 10:30-12:00 STEV 1063 Part 2)

Ruggiero, Vincent Ryan Profile of a “Thinking Person”

Professor / Author
Department of Humanities
SUNY at Delhi College
Delhi, NY 13753

Despite all the books and articles that have been written on the subject of thinking instruction, particularly during the last decade, teachers continue to ask several basic questions: What is critical thinking? What is creative thinking? How exactly should a course in thinking change a student? What are the characteristics of a “thinking person”? This presentation will address these questions.

(August 2 10:30-12:00 DAR 108)

**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, covers both problem-solving and issue-analysis, and fits a 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.

(August 2 3:15-4:45 ART 108)

**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.

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

**Ruggiero, Vincent Ryan Dispositions—The Neglected
Aspect of Thinking Instruction**

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.)

(August 3 10:30-12:00 STEV 1002)

**Sandberg, Kate Reflective Thinking:
Variations on a Theme**

Professor
Anchorage Community College
2533 Providence Avenue
Anchorage, AK 99508-4670

Is it possible to create a reflective thinking model which integrates experience, emotion, intuition, and more standard models of thinking to serve a variety of purposes? Could this model clearly show the structure of designing solutions, making informed judgments, and understanding concepts? After a presentation of such a model, participants will apply their knowledge of thinking to discuss possible modifications. Annotated bibliography included.

(August 3 10:30-12:00 ART 108)

Sarris, Greg
Lecturer
Department of Modern Thought
and Literature
Stanford University
Stanford, CA 94305

**The Multi-Cultural Classroom
as Model for the Teaching of
Critical Thinking**

The multi-cultural classroom, with its students from diverse backgrounds, provides teachers and students alike an opportunity for open dialogue about immediate perceptions or long-standing thought or belief which not only *opens* the knowledge base to others, in that others can challenge and affect that knowledge base, but enables us access to others so that we might in turn become more sensitive and responsible teachers and students of critical thinking. We must begin, then, to see the multi-cultural classroom as an asset, a repository of differences, from which the very stuff of critical thinking in the strong sense is brought to light and examined by all and not just a pre-selected few.

In addition to providing theoretical background regarding critical discourse and the culturally different student, I will present several practical exercises that will help to open critical discourse and promote critical learning in the multi-cultural classroom. Most exercises will come from the teaching of writing at the high school and college levels, but will be relevant to other subject areas and grade levels as well.

(August 4 8:45-10:15 STEV 1002)

Siegel, Harvey
Professor
University of Miami
P.O. Box 248054
Coral Gables, FL 33124

**Critical Thinking and
Indoctrination**

In wanting students to be critical thinkers, we want them to value critical thinking and reason, for we want them to believe and act in accordance with reasons. How do we develop in students these wants and values? It appears that the only option is to indoctrinate students into the beliefs and values constitutive of critical thinking. But this is incompatible with critical thinking, since beliefs which are held critically are held on the basis of reasons, while indoctrinated beliefs are not. Thus, our problem: is it possible to educate for critical thinking without indoctrinating the student into the beliefs and values of the critical thinker? After discussing the nature of indoctrination, and distinguishing between indoctrination and non-indoctrinative belief/value inculcation, I address this question. I argue that non-indoctrinative education for critical thinking is possible, and describe such an education.

(August 2 10:30-12:00 STEV 3046)

Siegel, Harvey

**Mini-Critical Thinking Course:
Epistemological Underpinnings
of Critical Thinking**

To be a critical thinker is to base one's beliefs, opinions and actions on relevant reasons. The notions of "reason" and "rationality" are, however, philosophically problematic. Just what is a reason? How do we know that some consideration constitutes a reason for doing or believing something? How do we evaluate the strength or merit of reasons? What is it for a belief or action to be *justified*? What is the relationship between justification and *truth*?

These questions are the meat and potatoes of that branch of philosophy known as *epistemology* or the theory of knowledge. They might be thought of as abstract and unrelated to education for critical thinking. But so long as critical thinking is thought of as essentially involving *reasons* and *rationality*, these questions are central to the critical thinking student's understanding of her subject matter. So it is important for a critical thinking course to help students understand the epistemology underlying critical thinking.

In this workshop we will examine these epistemological questions, and explore their relevance for critical thinking. Beginning with ordinary, everyday examples, we will consider the concepts of reasons, evidence, justification, and truth. Our aim will be not only to get clear on these notions, but also to grasp the connection between these concepts and education for critical thinking.

(August 2 3:15-4:45 STEV 2049)

Swartz, Robert

Co-director
Critical and Creative
Thinking Program
University of Massachusetts
Boston, MA 02125

**Integrating Teaching for
Thinking into Mainstream
Classroom Instruction**

Robert Swartz of the Critical and Creative Thinking Program at the University of Massachusetts at Boston will demonstrate and discuss lessons and techniques that infuse a focus on critical thinking into classroom instruction by restructuring traditional content. The concept of critical thinking that is utilized will be discussed as well as issues about the structure of instructional programs in schools and school systems that can foster this kind of integration. Lessons will be demonstrated at both elementary and secondary school areas.

(August 2 10:30-12:00 STEV 1002)

Swartz, Robert

**A Framework for Infusing
Critical Thinking into Science
Instruction**

This presentation will involve a demonstration of newly designed lessons constructed to infuse teaching for critical thinking into regular science instruction through restructuring the way standard curriculum materials are used. Examples from elementary science, high school biology, and high school chemistry will be presented to illustrate a lesson structure which is designed to teach for the acquisition, assimilation, and transfer of all of the important critical thinking skills useful in science. Techniques for constructing teacher-designed lessons using standard content material from the sciences will be discussed, and the conception of critical thinking underlying this work will be explicated.

(August 3 8:45-10:15 CS 68)

Talbot, Jan

*Educational Consultant/
Chairperson, Subcommittee for Critical
Thinking/Writing in History-Social Science*
5307 Rimwood Drive
Fair Oaks, CA 95628

**Effective Integration of
Thinking Across the
Curriculum: Johnny and Jane
CAN Think**

"Thinking" teachers have integrated the teaching of thinking across the curriculum in their classrooms (K-12). Specific lessons and motivating activities that have been particularly successful for students and teachers will be shared. Ways we can know when thinking in the strongest sense is becoming an integral part of our lives will be explored.

(August 2 1:30-3:00 IVES 119)

Talbot, Jan

**Teaching Thinking Strategies
Across the Curriculum: The
Higher Order Thinking
(H.O.T.) Project**

This session will describe development of the Higher Order Thinking (H.O.T.) Projects currently underway, under the direction of H.O.T. Project Director, Edys Quellmalz in Sacramento County, San Mateo County, Center Unified School District and Arkansas. The projects involve teachers at all grade levels in a collaborative effort to develop and monitor students' higher order thinking skills within existing curricula. In the instructional component, teachers examine textbooks, other classroom resources and course guides to design activities that will involve students in sustained reasoning about significant concepts and problems typically encountered in academic and practical situations. In the assessment component, teachers evaluate student essays, projects and presentations to determine how well students use and explain explicit higher order thinking strategies. Following an overview of the project, Jan Talbot, Project Coordinator of H.O.T. will describe lessons which have been developed and discuss samples of student work.

(August 4 1:30-3:00 IVES 119)

Tavris, Carol

Author / Visiting Scholar
 Department of Psychology, UCLA
 1847 Nichols Canyon Road
 Los Angeles, CA 90046

**Thinking Critically about
 Emotion—and the Role of
 Emotion in Critical Thinking**

Historically, philosophers and psychologists have divided emotion and cognition into two camps: the "bestial" and the "human," the irrational and the rational, the bad and the good. One implication of this perspective has been that emotion is death to critical thinking; that human beings would be able to think logically and solve their problems if only they didn't have those nasty old mammalian emotions in the way. This talk will discuss how new research is breaking down old dichotomies: for example, the role of cognition in generating emotion; the role of emotional arousal in influencing thought; and ways in which cognition can be "irrational" and emotion "rational."

(August 2 10:30-12:00 IVES: Warren)

Villarini, Angel R.

Professor
 Faculty of General Studies
 University of Puerto Rico
 San Juan, PR 00931

**Teaching Critical Thinking
 Through Moral Deliberation:
 An Interdisciplinary Approach
 to the Humanities**

After seven years of practice, research and reflection on the teaching of a general education course in the Humanities (Western Civilization) and very much influenced by my reading of such thinkers as John Dewey, Jean Piaget, Hans-George Gater, Paolo Freire and Paul Hirst and my work with Alverno College of Milwaukee, I have developed some ideas about critical thinking and the teaching of the Humanities that I would like to share. Although these ideas were developed initially for a university course, they have also been used to orient a process of curriculum revision and integration of Puerto Rico's public school system. I will focus on the following: 1) Critical thinking in the "strong sense" is an outgrowth of our metacognitive capacity in the direction of the dimensions of executive control, dialogical, logical, epistemological, contextual and teleological thinking. 2) The Humanities are a way of experiencing reality, an hermeneutical and critical event, that must be approached as a continuation and reconstruction of the student's experience. 3) The Humanities are particularly suitable to foster critical thinking in relation to moral deliberation in the context of contemporary controversial ethico-political issues which are basic for personal and citizenship development. 4) The fundamental problem of teaching is to bridge the gap between the "horizon of experience" of the student and that of "disciplined knowledge" represented by the teacher. Through a teaching strategy of exploration, conceptualization and application, the teacher's role is to serve as a mediator of knowledge. 5) The basic task of the teacher is to design activities, foster relations and develop instructional and evaluational instruments and artifacts that will help in the development of critical thinking. Several of these will be presented.

(August 4 10:30-12:00 DAR 108)

Walsh, Debbie

Assistant Director
 Educational Issues Department
 American Federation of Teachers
 555 New Jersey Avenue N.W.
 Washington, DC 20001

**The AFT Critical Thinking
 Project: The Hammond,
 IN Pilot**

An overview of the Critical Thinking Project developed by the Educational Issues Department of the American Federation of Teachers with specific focus on the piloting of AFT's 35-hour training-of-trainers component of the project. The pilot was a cooperative effort of the AFT, the Hammond Teachers Federation and the Hammond Public Schools to train a cadre of 23 teachers who will provide the training throughout the Hammond school system. The program has now grown nationwide: The AFT videotape on thinking skills will also be previewed.

(August 3 8:45-10:15 STEV 3008)

Walsh, Debbie
**Integrating Critical Thinking
 Skills into the K-12
 Curriculum**

This introductory workshop will provide an overview of the critical thinking "movement," approaches to the concept and what the research tells us. Sample strategies will be illustrated for infusing classroom instruction and assessment of critical thinking skills and abilities within the disciplines. Small group activities will provide participants with an opportunity to analyze their existing approaches and to share and apply new strategies and techniques.

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

Warren, Thomas

Professor
 Department of Philosophy
 Solano Community College
 P.O. Box 246
 Suisun City, CA 94585

**What's Wrong with the
 "Critical Thinking"
 Movement?**

It is evident that something is fundamentally wrong with the "critical thinking" movement that has gained so much momentum in American education over the last several years. Specifically, I want to argue that 1) the general content of critical thinking pedagogy is not truly centered on human *thinking* at all, but on some *other* vital, but radically different, mental faculty which might better be called "reasoning;" and 2) the development of the capacity for thinking, and *not* merely reasoning, is profoundly important and may even be the crucial condition for the development of individual moral consciousness (and, thus, the so-called critical thinking movement, while intending to develop moral insight and knowledge, may actually restrict itself from the subject).

(August 5 1:30-3:00 STEV 3008)

Weddle, Perry

Professor/Author/Editor, CT NEWS
 Department of Philosophy
 California State University, Sacramento
 6000 J Street
 Sacramento, CA 95819

But That's Just Your Opinion

Participants in this workshop will explore relationships between mere conjecture, the educated guess, reality, falsehood, firm grounding, creativity, babble, brainstorming, truth, emotions and fact. Method: Socratic. Pace: Frenetic. Level: Middle school—College. Goal: Straightening things out, and realizing the depth of the problem. Focus: Sciences, Language Arts, Social Studies, Math.

(August 2 3:15-4:45 IVES 119)

Weddle, Perry**What a Lovely Generalization!**

This workshop is two themes—"Generalizing Responsibly," and "Shooting Down the Airy." Under the former, participants will explore the topic of sampling, projecting generalizations from samples, public opinion polling, and industrial applications. Under the latter, participants will explore the techniques of counter example and *reductio ad absurdum*, and explore various ways in which generalizations may be rationally hedged. Levels: Middle school—College. Focus: Language Arts, Social Studies, Math, The Sciences.

(August 3 10:30-12:00 CS 68)

Weddle, Perry**Deeds and Words: Critical Thinking Activities Through Critical Thinking Vocabulary**

Thesis: The natural way to impart critical thinking skills is through the English language. A hundreds-of-terms list will be distributed, terms ranging from fundamental ("because," "so," "reason"...) through sophisticated ("burden of proof," "redefine the issue," "world view"...). Participants will be asked to project classroom activities which might instill and cement the concepts embodied in the terms. Levels: Elementary—College.

(August 2 10:30-12:00 IVES 119)

Weinstein, Mark

Director, Reasoning Skills Project
 College of Education
 Queens College, CUNY
 Flushing, NY 11367

Critical Thinking and Moral Education

Critical thinking has an essential normative component. Theorists like Richard Paul and Matthew Lipman have insisted that values education is at the heart of critical thinking in its most significant sense. This paper addresses this issue within the context of developmental psychology and the theory of virtues, contrasting the critical thinking perspective with, especially, that of Kohlberg and Peters.

(August 2 10:30-12:00 STEV 3040)

Weinstein, Mark**Integrating Thinking Skills into the Curriculum**

For the past two years the Reasoning Skills Project has worked with New York area schools to develop thinking skills programs that meet their instructional needs. An analysis of the Project's strategies and outcomes points to common features that need to be addressed when thinking skills curricula are introduced into school settings. Curriculum samples of materials developed by participating teachers will be available.

(August 2 1:30-3:00 STEV 3046)

Weinstein, Mark**Philosophy for Children: Hands-on Workshop**

Philosophy for Children is among the most widely used and well respected thinking skills programs available to the schools. The workshop will include participatory demonstrations of two of the most popular curricula: The PIXIE program for grades three and four and HARRY STOTTE-MEIER'S DISCOVERY for grades 5 and 6. The demonstration will be followed by a discussion of issues of program implementation.

(August 3 10:30-12:00 DAR 108)

Wright, Ian

Professor
Faculty of Education
University of British Columbia
Vancouver, B.C.
Canada V6T 1Z5

**Decision-making and Critical
Thinking for Elementary
School Students**

Critical thinking includes reasoning about what to do. If we wish to teach students how to make intelligent decisions in their school and out of school lives, then we must teach them how to think critically. Through the medium of a simulation game, participants will focus on some of the critical thinking abilities, standards, and dispositions needed in decision-making.

(August 4 8:45-10:15 DAR 112)

Zelazkiewicz, Marek

*Professor of Sociology, University of
Warsaw, Poland / Visiting Professor*
Department of Sociology
University of California, Los Angeles
Los Angeles, CA 90024

**The Contribution of Moral
Critique and Critical Thinking
to the Emergence of the
Independent Education
Movement and the Alternative
Society in Poland (1976-1986)**

During the last ten years, Polish society has experienced dramatic and unexpected changes which have resulted in the emergence of a so-called alternative or self-organizing society. This part of the Polish nation crystallized itself as an alternative to both the monopolistic party-state system and the Catholic Church and has evolved to a significant extent on the basis of moral critique and critical thinking, initially in the weak and finally in the strong sense.

In the area of education during the last ten years such groups as the Flying University, the Society for Academic Studies, students' and workers' self-education circles have organized seminar courses and lectures both openly and secretly in churches and private homes. Recently, independent networks of scholars and students stimulated by the national renewal during the solidarity era have proliferated and persisted. Similar new social patterns have evolved in many other areas of social life, partially in the underground. Critical thinking and moral critique have been the driving force behind this development on a mass scale of new social phenomena.

(August 3 8:45-10:15 DAR 108)

PANELS

**Critical Thinking Across the College and University
Curriculum**

Carol Knight

Professor
Tidewater Community College
Chesapeake, VA 23320

Eugene Garver

John Chaffee

Anthony Corso

This panel will focus on alternative models and strategies for fostering critical thinking instruction across the college and university curriculum.

(August 3 8:45-10:15 SU:MP)

**Exploring the Interaction of Thoughts, Feelings and
Emotions in Developing Critical Thinking**

Vivian Rosenberg

Vincent Ryan Ruggiero

Roberta Kern

Educational Consultant
1314 N.E. 43rd Street, Suite 212
Seattle, WA 98105

Assuming that there is an on-going set of interactions between the thoughts, feelings, and emotions of the thinker, how should we take this into account in attempting to foster fair-minded critical thinking? The panelists will explore this question.

(August 5 10:30-12:00 STEV 1002)

Critical Thinking in European Education

Chair: Richard W. Paul

Frans van Eemeren

W.D. Robinson

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

Alec Fisher

Rob Grootendorst

Marek Zelazkiewicz

This panel will focus on the nature and role of critical thinking in European Education today, with special attention to Great Britain, the Netherlands, and Poland.

(August 3 10:30-12:00 SU:MP)

**Critical Thinking and Informal Logic:
How Do They Relate?**

Ralph Johnson

T. Edward Damer

John Hoaglund

This panel will explore the interrelations of critical thinking and informal logic and the significance of those interrelations for pedagogical purposes.

(August 4 8:45-10:15 SU:MP)

**What is the Appropriate Role of Critical Thinking
in Pre-Service Education?**

Robert Swartz

Richard W. Paul

Luiza B. Amodeo
Dean
School of Education
Sonoma State University

If public school teachers are to foster critical thinking in all of their teaching, how should pre-service education be designed to accomplish this end? What are some of the obstacles and dilemmas to be faced in moving in this direction?

(August 2 1:30-3:00 SU:MP)

Critical Thinking and the Media

William Dorman

Lenore Langsdorf

Carl Jensen
Director, Project Censored
Department of Communications Studies
Sonoma State University

This panel will consider the many challenges and opportunities which are posed by the powerful influence for good or ill of the mass media today. The role that critical thinking needs to play for the media consumer and the implications of this for education will be canvassed.

(August 2 10:30-12:00 SU:MP)

**Critical Thinking and Curricular Reform in Secondary
and Higher Education**

Chair: Donald Lazere

Fred Korn

Glenn Irvin

George Hanford

Rexford Brown

Jere Jones

This panel will focus on institutional obstacles to a unified curriculum for critical thinking and explore possible means of overcoming them.

(August 3 3:15-4:45 SU:MP)

**Statewide Critical Thinking Testing in California:
What Has It and What Has It Not Accomplished?**

Perry Weddle

Robert Ennis

Jan Talbot

This panel will consider the nature and impact of mandated statewide critical thinking testing in California.

(August 5 10:30-12:00 SU:MP)

**Self-Serving Versus Fair-Minded Critical Thinking: How
Important is the Weak Sense/Strong Sense Distinction?**

Lenore Langsdorf

Perry Weddle

Ralph Johnson

Robert Ennis

This panel will explore the extent to which it is important to distinguish self-serving from fair-minded critical thinking in designing instruction for critical thinking.

(August 4 10:30-12:00 SU:MP)

**Can One Think Critically Without Thinking Creatively?
Can One Think Creatively Without Thinking Critically?**

Sharon Bailin

Lou Miller

David Perkins

Richard Paul

This panel will consider the degree of interrelationship and interdependence of what are sometimes designated as two different modes of thinking: critical and creative thinking.

(August 5 8:45-10:15 SU:MP)

Critical Thinking and Third World Communities

Greg Sarris

Abelardo Brenes

Angel Villarini

This panel will explore the special challenges and obstacles to fostering critical thinking in "third world" communities.

(August 2 3:15-4:45 SU:MP)

What Are State Departments of Education Doing About Critical Thinking?

Mark Weinstein

Fran Claggett

Ken Bumgarner

This panel will explore the general approaches being used to facilitate the infusion of critical thinking into the curriculum in three vanguard states: Washington, California and New York.

(August 4 10:30-12:00 STEV 1002)

Critical Thinking Programs: Strategies for Implementing the Teaching of Critical Thinking

Alice Iaquinta

Professor
Department of Communications and
Social Service
Moraine Park Technical Institute
2151 North Main Street
West Bend, WI 53095-1598

Chuck Wiederhold

Curriculum Consultant
Placer County Office Education
360 Nevada Street
Auburn, CA 95603-3779

Theresa Booker

Coordinator
Reading/Reasoning Center
Northeastern Illinois University
5500 N. St. Louis Avenue
Chicago, IL 60625

Joel Peterson

Professor
Department of Philosophy
North Hennepin Community College
7411 85th Avenue North
Minneapolis, MN 55445

Sharon Scull

Associate Professor
Department of English
Glendale Community College
1500 North Verdugo Road
Glendale, CA 91208

This panel will introduce a variety of approaches to infusing critical thinking into subject matter instruction, secondary through community college and university level.

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

Reading, Writing and Critical Thinking

Fran Claggett

Linda Phillips

Jan Talbot

This panel will explore the interdependence of critical thinking and reading and writing skills.

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

Critical Thinking and Social Studies

Paul Baker

Ian Wright

Chuck Stanearth

*Chair, Region 7 History-Social Science
Assessment Steering Committee*
Huntington Beach Unified High School District
10251 Yorktown Avenue
Huntington Beach, CA 92646

This panel will consider some of the contributions that the new emphasis on critical thinking can have in Social Studies instruction, as well as the various obstacles that need to be overcome in making that emphasis a common classroom reality.

(August 4 1:30-3:00 STEV 1002)

Critical Thinking in Community Colleges: The Title V Mandate in California

Chair: John Prihoda

Donald Klein

*Professor / Facilitator, Title V
Critical Thinking Group*
Gavilan College
5055 Santa Teresa Boulevard
Gilroy, CA 95020

John Feare

Paul Wheatcroft

Professor
Department of Philosophy
Grossmont College
8800 Grossmont College Drive
El Cajon, CA 92020

This panel will focus on critical thinking in community college curriculum and teaching, with special consideration of the "Title Five" mandate which requires that all community college courses be so structured that the "ability to think critically" is essential to participation in the course.

(August 4 3:15-4:45 SU:MP)

Psychology and Critical Thinking: The Affective Dimension

Hiler, Wesley

Clinical Psychologist
300 Stony Point Road
Santa Rosa, CA 95401

Harvey Siegel

David Perkins

Carol Tavris

This panel will focus on the affective dimension of critical and uncritical thinking, with special consideration of the contribution of clinical and social psychology. Implications for teaching and everyday living will be explored.

(August 3 1:30-3:00 SU:MP)

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:

Gerald Nosich	Constructing Arguments for Opposing Points of View Sunday, August 2, 1:30-3:00 pm STEV 2049
Harvey Siegel	Epistemological Underpinnings of Critical Thinking Sunday, August 2, 3:15-4:45 pm STEV 2049
Ralph Johnson	Critical Thinking and Advertising Monday, August 3, 10:30-12 noon STEV 2049
John Chaffee	Critical and Creative Problem Solving Monday, August 3, 1:30-3:00 pm STEV 2049
M. Neil Browne, Stuart Keeley	The Unnecessary Tension Between Values Analysis and Critical Thinking Tuesday, August 4, 10:30-12 noon STEV 2049
T. Edward Damer	What the Fallacies Can Teach Us About Good Arguments Tuesday, August 4, 1:30-3:00 pm STEV 2049
James Freeman	Argument Diagramming Tuesday, August 4, 3:15-4:45 pm STEV 2049
John Hoaglund	Stimulating Thinking About Thinking with Logical Puzzles Wednesday, August 5, 8:45-10:15 am STEV 2049
Carol LaBar, Ian Wright	Practical Reasoning and Principle Testing Wednesday, August 5, 10:30-12 noon STEV 2049

EVENING: INFORMAL EXCHANGE OF IDEAS

During the social hours, there will be small group discussions in the Dining Commons Faculty Lounge on the following topics:

Carol Knight	Analyzing Arguments in History and Social Science: An Interdisciplinary Problem and Approach	Sunday, August 2 8:00 pm
Joan Rosen	Guessing: Reading as Prediction	Sunday, August 2 8:00 pm
Alice Iaquinta	Incorporation of Critical and Creative Thinking into the Community College Curriculum: One Unique Approach	Sunday, August 2 8:00 pm
Roberta Kern	The Positive Role that Emotions Play in Critical Thinking	Monday, August 3 8:00 pm
Joel Peterson	Creative Problem Solving	Monday, August 3 8:00 pm
Theresa Booker	Critical Thinking/Reading a Critical Bridge to Academic Achievement	Tuesday, August 4 8:00 pm
Harvey Lape, Sharon Schwarze	Reaching the Abstract Through the Concrete	Tuesday, August 4 8:00 pm
* * * * *		
Facilitator: Donald Klein	Roundtable Discussion: Critical Thinking Title V Mandate: Strategies for Implementation	Tuesday, August 4 8:00 pm CS 68

SPECIAL INTEREST GROUPS

(Tuesday, August 4 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.

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|--|-----------|
| ① Elementary (K-6) | STEV 3046 |
| ② Middle School (7-8) | CS 20 |
| ③ High School (9-12) | STEV 3008 |
| ④ Critical Thinking Staff Development (K-12) | STEV 2049 |
| ⑤ Community College | DAR 108 |
| ⑥ 4 Year College and University | STEV 1002 |
| ⑦ Critical Thinking in Literature and Language Arts | DAR 112 |
| ⑧ Critical Thinking in Social Studies
(including Sociology, Anthropology, History and Psychology) | CS 68 |
| ⑨ Critical Thinking in the Arts | NICH 173 |
| ⑩ Critical Thinking in Science and Math | NICH 166 |
| ⑪ Critical Thinking Assessment | STEV 3049 |
| ⑫ Critical Thinker For the Slow or Disadvantaged Learner | STEV 3040 |

VIDEOTAPE RESOURCES

Videotapes are one of the most important developing 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 the following Videotapes will be available at the conference registration desk.

- Critical Thinking in Science
- Critical Thinking in History
- Dialogical Practice, Program I
- Dialogical Practice, Program 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
 Moral and Practical Reasoning: Differences, Relations, Applications
 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 High 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 in 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

Debbie Walsh

Assistant Director, Educational Issues
 Department, A.F.T.

Trudy Govier

Formerly University of Calgary

John Prihoda

President/Superintendent, Iowa Valley
 Community College

Jim Williamson

Mathematics Coordinator, Billings
 Public Schools

Ian Wright

University of British Columbia

Vincent Ruggiero

S.U.N.Y. Delhi College

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

President Emeritus, A.S.C.D.

John Hoaglund

Christopher Newport College

Ronald Giere

Indiana University, Bloomington

Dolores Gallo

Co-director, Critical and Creative
 Thinking Program
 U-Mass.-Boston

Richard W. Paul

Director, Center for Critical
 Thinking and Moral Critique

Jonathan Adler

Brooklyn College, C.U.N.Y.

Art Costa

California State University

Carol La Bar

University of British Columbia

Edys Quellmalz

Formerly Stanford University

S. Morris Engel
University of Southern California

Robert Swartz
Co-director, Critical and Creative
Thinking Program, U-Mass.-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
President, Human Interaction
Research Institute

David Hitchcock
McMaster University

Donald Lazere
California Polytechnic
State University

Dan Dolan
Montana Office of Public
Instruction

Perry Weddle
California State University,
Sacramento

Lenore Langsdorf
University of Texas

Donald Nolan
Parkland College

Joel Rudinow
Research Associate, Center for Critical
Thinking and Moral Critique

Harvey Siegel
University of Miami

Ronald S. Brandt
Executive Editor, Educational
Leadership

Diane Halpern
California State University,
San Bernardino

Rita King
History-Social Science
Assesment Advisory Committee

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, Founder, 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.

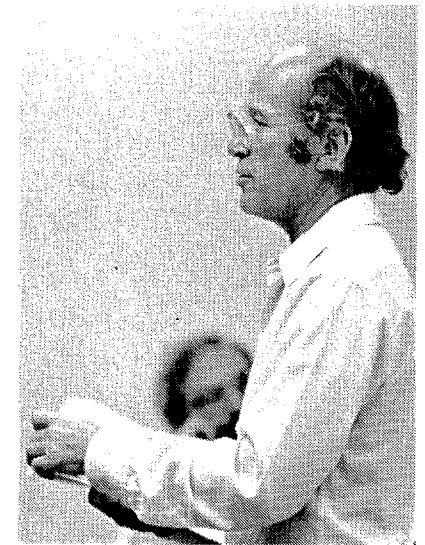
Center for Critical Thinking and Moral Critique
Sonoma State University
Rohnert Park, CA 94928

*Israel Scheffler, *Reason and Teaching* (1973, Bobbs-Merrill Co., Inc.) page 137

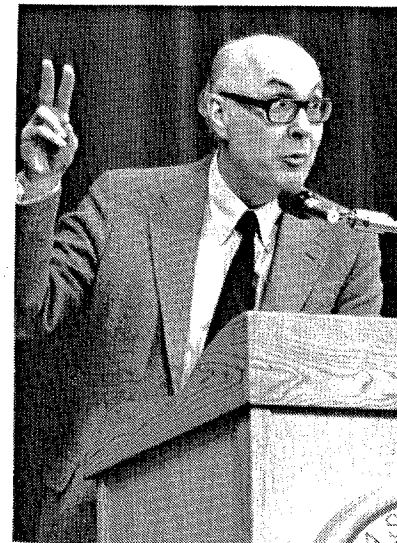
From Previous Conferences:



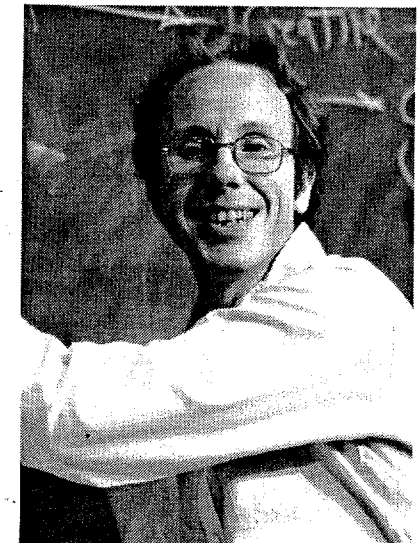
Edward M. Glaser



Robert Ennis



Matthew Lipman



David Perkins

NOTES



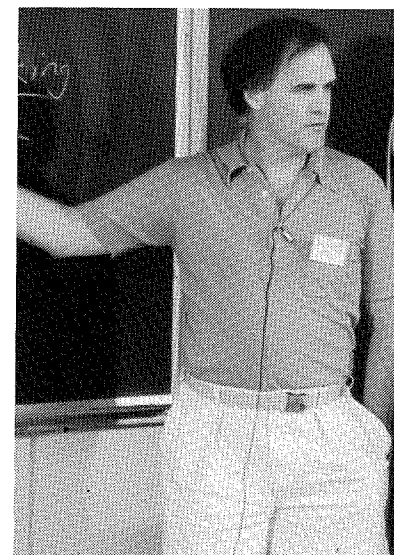
Richard Paul



Carol Tavris



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Tony Blair