

CAST

**SCIENTIFIC SOCIETIES:
CONVERSATIONS ON
CHANGE**



**CONVERSATIONS
ON
CHANGE**

Mission and Policies

The mission of the Council for Agricultural Science and Technology (CAST) is to identify food and fiber, environmental, and other agricultural issues and to interpret related scientific research information for legislators, regulators, and the media involved in public policy decision making. CAST is a nonprofit organization composed of 31 scientific societies and many individual, student, company, nonprofit, and associate society members. CAST's Board of Directors is composed of 50 representatives of the scientific societies and individual members, and an Executive Committee. CAST was established in 1972 as a result of a meeting sponsored in 1970 by the National Academy of Sciences, National Research Council.

The primary mission of CAST is the publication of task force reports written by scientists from many disciplines. The CAST National Concerns Committee screens proposals from all sources and recommends to the board topics for approval as publication projects.

The CAST Board of Directors is responsible for the policies and procedures followed in developing, processing, and disseminating the documents produced. Depending on the nature of the publication, the society representatives may nominate qualified persons from their respective disciplines for participation on the task force. Aside from these involvements, the member societies have no responsibility for the content of any CAST publication.

Diverse writing groups and active participation by all task force members assures readers that a balanced statement on the topic will result.

The authors named in each publication are responsible for the contents. Task force members serve as independent scientists and not as representatives of their employers or their professional societies. They receive no honoraria, but are reimbursed for expenses. CAST publishes and distributes the documents.

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Additional copies of *Scientific Societies: Conversations on Change* are available for \$10.00 plus postage and handling from CAST, 4420 West Lincoln Way, Ames, IA 50014-3447, (515) 292-2125. A 12-minute video based on the workshop is \$20.00. For more information, see inside back cover. Updated information on the project is available on the CAST World Wide Web site: <http://www.netins.net/showcase/cast/>.

Membership

Member Societies

American Academy of Veterinary and Comparative Toxicology
American Agricultural Economics Association
American Association for Agricultural Education
American Association of Cereal Chemists
American Dairy Science Association
American Forage and Grassland Council
American Meat Science Association
American Meteorological Society Committee on Agricultural and Forest Meteorology
American Peanut Research and Education Society
American Phytopathological Society
American Society for Horticultural Science
American Society of Agronomy
American Society of Animal Science
American Veterinary Medical Association
Aquatic Plant Management Society
ASAE: The society for engineering in agricultural, food, and biological systems
Association of Official Seed Analysts
Crop Science Society of America
Entomological Society of America
Institute of Food Technologists
International Society of Regulatory Toxicology and Pharmacology
North Central Weed Science Society
Northeastern Weed Science Society
Poultry Science Association
Rural Sociological Society
Society of Nematologists
Soil and Plant Analysis Council
Soil Science Society of America
Southern Weed Science Society
Weed Science Society of America
Western Society of Weed Science

Associate Societies

Individual Members

Sustaining Members

Companies and Cooperatives
Nonprofit Associations

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Agricultural Research Institute
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American Academy of Veterinary and Comparative Toxicology
American Agricultural Economics Association
American Association for Agricultural Education
American Peanut Research and Education Society
American Society for Horticultural Science
American Association of Cereal Chemists
American Dairy Science Association
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American Meat Science Association
American Meteorological Society
American Oil Chemists' Society
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Society of Nematologists
Society of Wood Science and Technology
Soil and Water Conservation Society
Soil Science Society of America
Soil Testing and Plant Analysis Council
Southern Weed Science Society
Weed Science Society of America
Western Society of Weed Science

Program

Scientific Societies: Conversations on Change
October 14–16, 1995
St. Louis, Missouri

Part 1: What Is Happening in the Workplace?

Welcome and Introduction of Sponsors: W. K. Kellogg Foundation and Farm Foundation
Richard E. Stuckey, Executive Vice President,
Council for Agricultural Science and Technology

Dynamics of the Workplace: My Perspective
Panel of speakers representing academia, government, industry, and entrepreneurs
Joab L. Thomas, Past President, The Pennsylvania State University
Anne F. Thomson Reed, U.S. Department of Agriculture
Allen R. Rider, New Holland North America, Inc.
James H. Dooley, Trout Creek Associates

Small Group Conversations
What will workplace changes mean to professional societies?

Part 2: Where Are Current Studies Leading Us?

Directions of Present Studies
James R. Fischer, Clemson University
C. Peter Magrath, National Association of State Universities and Land Grant Colleges
Richard M. Foster, W. K. Kellogg Foundation

Small Group Conversations
Is the ladder against the right wall? Given the changes we are facing globally, are our current and future studies addressing the most important issues?

Part 3: Who Is Generating the Changes Taking Place?

Where Are We Headed? A Futurist's Response
Robert Theobald, Participation Publishers

Small Group Conversations
What is our future? How do we serve our members and society better? What do we do differently on "Monday?"

Report by Spokesperson from Each Group
Peter D. Bloome, University of Illinois at Urbana-Champaign

Part 4: How Will Your Society Decide When to Lead and When to Follow?

Lunch Discussion
Participants from each society seated together.

Why Is CAST involved?
Martin A. Massengale, University of Nebraska, Lincoln

Society Group Conversations
What will you recommend to your society? What will you commit to do?

Report from Each Society to Full Group
Steve Bosserman, WorkSpan, Inc.

Closing Ceremony
Richard E. Stuckey, Executive Vice President,
Council for Agricultural Science and Technology

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Foreword

The CAST Board of Directors authorized convening a Leadership Workshop for technical and professional food and fiber, environment, and agriculture related societies. The workshop was funded by grants from the W. K. Kellogg Foundation and the Farm Foundation.

The workshop was designed for 183 participants representing 48 technical and professional societies to become more aware of critical changes occurring in the workplace. Scientific societies have a responsibility to help their members adjust to these changes and to support processes addressing them. An overriding objective was to initiate conversations and discuss issues that will confront the workplace in the 1990s and beyond. Developing networks among societies and their members is a critical dimension in achieving this objective.

Planning is underway for Phase II of a multiphase program to move the outcomes from Phase I into the participating societies, develop a process support system, and reconnect the leadership from Phase I. The primary goals of Phase II are to develop the model for Phase III and to initiate the delivery of as many as five major collaborative efforts that emerged from the first phase.

The Planning Committee developed the program for the Phase I Leadership Workshop. Following the workshop, the Planning Committee, Mr. Douglas L. Bosworth, WorkSpan, Inc., and Dr. Kayleen A. Niyo, scientific editor, CAST, met to determine the format of the report. Mr. Bosworth wrote the first draft of the report using summary notes provided by Dr. Neville P. Clark, Executive Director, Southern Association of Agricultural Experiment Station Directors, College Station, Texas, and Dr. Kayleen A. Niyo, scientific editor, CAST. The Planning Committee, Mr.

Bosworth, and the speakers revised the draft of the report. The CAST Executive and Editorial Review committees reviewed the final draft. The CAST staff provided editorial and structural suggestions and published the report. The authors are responsible for the report's content.

On behalf of CAST, we thank the W. K. Kellogg Foundation and the Farm Foundation for their generous support. We thank the many individuals who gave of their time and expertise to prepare this report as a contribution by the scientific community to public understanding of the issue. We also thank the employers of the authors and speakers who made the time of these individuals available at no cost to CAST. The members of CAST deserve special recognition because the unrestricted contributions that they have made in support of CAST have assisted in the preparation and publication of this report.

This report is being distributed to all workshop participants and a number of other organizations. Individual members of CAST may receive a complimentary copy upon request for a \$3.00 postage and handling fee. The report may be republished or reproduced in its entirety without permission. If copied in any manner, credit to the authors and to CAST would be appreciated.

Warren M. Schwecke
President

Richard E. Stuckey
Executive Vice President

Kayleen A. Niyo
Scientific Editor

Acknowledgments

The Council for Agricultural Science and Technology's (CAST) Phase I Leadership Workshop was both an experiment and a positive educational experience for its 183 participants. This was the first time that the leadership of 48 scientific societies involved in the food production, natural resources, and environmental systems met to discuss the changes facing these societies, their members, and the public.

The Planning Committee for the Leadership Workshop acknowledges the many organizations and individuals that contributed to the success of this important event. They include

- Douglas L. Bosworth, WorkSpan, Inc., Mahomet, Illinois, for writing a first draft of the publication using summary notes provided by Neville P. Clark, Executive Director, Southern Association of Agricultural Experiment Station Directors, College Station, Texas, and Kayleen A. Niyo, Scientific Editor, Council for Agricultural Science and Technology (CAST), Ames, Iowa;
- the W. K. Kellogg Foundation, for their grant for and counsel regarding workshop development;
- the Farm Foundation, for their financial support for workshop planning and execution;
- the CAST Board of Directors, which sponsored the workshop, for its vision in identifying opportunities for growth and change;
- CAST Executive Vice President Richard E. Stuckey and the CAST staff, for their professional execution of the workshop;
- the outstanding speakers, mindscape artist, panel members, and facilitators who guided workshop participants;
- WorkSpan, Inc., for coordination and planning; and
- the 183 leaders/members of 48 scientific societies, who provided energy, vision, and dedication to help the Leadership Workshop achieve its objectives.

Interpretive Summary

From October 14–16, 1995, the Council for Agricultural Science and Technology (CAST) hosted a Phase I Leadership Workshop for technical and professional food, fiber, environment, and agriculture related societies. The workshop was funded through grants from the W. K. Kellogg Foundation and the Farm Foundation.

The workshop was designed to create participant awareness of critical changes occurring in the workplace. Scientific societies have a responsibility to help their members adjust to these changes and to support processes addressing them. An overriding objective was to initiate conversations and to develop networks among societies and among their members.

The four major questions considered by workshop participants were

- What is happening in the workplace?
- Where are current studies leading us?
- Who is generating the changes taking place?
- How will your society learn when to lead and when to follow?

A segment was dedicated to each question, and in each segment skilled speakers defined “current reality” and “a vision.” Eleven facilitators helped guide and focus small discussion teams deliberating on each question.

Results were encouraging; commitments, significant. Over 90% of attendees assigned an “excellent” or a “good” rating to the conference and its outcomes.

CAST leadership learned a number of lessons from the Phase I Workshop:

- Leaders of the scientific societies want to network, to learn, to share, and to plan for the best possible future.
- Workshop participants depend on CAST for leadership and vision.
- Scientific societies are looking to CAST for new strategies and vehicles with which to improve service to members.

Delegates from the 48 societies reached a number

of understandings, including the following:

- They need not “go it alone” when facing workplace changes.
- Other societies are facing the same or similar challenges.
- Cooperation and collaboration among societies and among their members are necessary.
- Member needs are changing more rapidly than their societies are able to respond.
- Traditional approaches to strategic planning, mission writing, and vision statements are not adequate to contemporary challenges.

Participants agreed with the following ideas:

- Scientific societies must reflect both significant changes in the work environment and in the relationships between societies and their members; and a belief in collaboration, cooperation, sharing, and otherwise connecting between and among themselves.
- Scientific society leadership must both rethink its missions, markets, and strategies, broaden its horizons, and be more inclusive; and develop a sense of need for an overarching vision to be shared by all societies—one that will facilitate new strategies for service and growth.

One-third of society delegates felt that their respective societies had made needed changes and were making progress in serving members. One-third said that the workshop verified the “path” being taken by their societies towards redevelopment. The remaining delegates said that immediate attention was needed if their societies were to remain relevant.

Commitments were made by over 60% of the delegates to help move the change process forward and to be an advocate for change in their own society. (This percentage was consistent regardless of which “third” the society was in.) Essentially all delegates committed to active participation in later phases of the workshop process. They also were committed to seeking new approaches and listening to voices ad-

vocating change in mission and direction of their societies.

What will come next? Planning is underway for Phase II of a multiphase program to move this process to new levels. Four general themes emerged from the workshop and were highlighted in the workshop video received by all delegates. These themes were

- taking risk;
- learning throughout life;
- advancing diversity; and
- finding balance, e.g., seeking a common vision,

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deciding how and where to market, and making connections.

Phase II will move the outcomes from Phase I into the participating societies, develop a process support system, and reconnect the leadership from Phase I. The primary goals of Phase II are to develop the model for Phase III and to initiate the delivery of five major collaborative efforts that emerged from the first phase.

The journey has begun!

Highlights of Presentations

Speakers and panelists established the direction and focus for the Council for Agricultural Science and Technology (CAST) Leadership Workshop. Key comments from each individual follow.

What Is Happening in the Workplace?

Academia: Joab L. Thomas, Past President of The Pennsylvania State University

- University “walls” will, as a result of new technology, come down and be replaced by “permeable membranes” that encourage communication.
- Restrictions of time and space on education will cease to exist. Lifelong learning and distance education will be the norm.
- Research, extension, and teaching will be integrated closely into university missions.
- The role of teachers will change dramatically, but their relevance and importance will not.
- Universities will take on the mission of providing a continuum of networks for information delivery and education, from cradle to grave.
- Universities will continue to become more global in service and scope.

Government: Anne F. Thomson Reed, United States Department of Agriculture

- Government will shrink as authority and administration become decentralized and as related functions are consolidated.
- There is a conscious effort to put customers first—if now we can just agree on who the customers are.
- The new way of doing business involves fewer supervisors, more teams, more collaboration, more work across mission areas, and more partnerships with industry.
- Congress is examining the fundamental role of government and asking itself what the govern-

ment should do and what business it should be in. There will be new roles and responsibilities for government in the areas that remain in its purview.

- How we work (in satellite offices, at home, or by telecommuting) will affect rural America by providing more economic opportunity.

Industry: Allen R. Rider, New Holland North America, Inc.

- Tremendous change is occurring in agribusiness: tractor sales are down 50% since the 1970s; jobs are down 50%; consolidations, mergers, buyouts, alliances, and joint ventures are the norm.
- Being obliged to change is not so bad when compared with the alternative. We must restructure to meet the realities of the marketplace.
- New Holland’s world headquarters today have 20 people—down from 700 as the company restructured its global management. Total employment has decreased from 31,000 to 19,000 people; production and productivity have increased.
- Three key items for success are management, employees, and technology.
- New Holland is spending a significant amount training employees in new methods and communication technology.
- Traditional, hierarchical, product development has been replaced by a team approach whereby all components and functions are considered together. New Holland team employees are empowered to make decisions. The result has been a significant reduction in development cycle.
- Professional societies may be analogous to New Holland. Perhaps they need to face realities and become organizations that are needed for the future and not the past.

Entrepreneurs: James H. Dooley, Trout Creek Associates

- Workplace and societal changes are favoring entrepreneurs.

- Many entrepreneurs are in a second (or late) career and want to make things happen, take advantage of outsourcing, and utilize their competencies, reputations, and networks.
- In the so-called “age of dejobbing,” entrepreneurs are not the risk takers. That distinction belongs to hangers-on in the old system.
- Common needs of entrepreneurs include technical currency, networks and contracts, identity, services, and a professional support mechanism.
- Entrepreneurs seek independence, control over their own professional and private lives, enjoyment from their work, and long-term financial security. They have a high respect for other professionals and greatly appreciate the institutions that helped them.

Where Are the Current Studies Leading Us?

James R. Fischer, Clemson University

- What is the role of professional societies as disciplinary departments are being amalgamated in universities?
- Many studies have identified the issues affecting agriculture and the professional societies; how will societies react to the obvious issues?
- Now that policies are being identified and plans developed outlining the future role and scope of agriculture research, teaching, and extension, what will the role of societies be in carrying these plans forward?
- Do we really need more studies and plans? Or is it time to move ahead and make the necessary changes?
- What should be the role of scientific societies in the future of agricultural programs at Land Grant Universities and in the future of those universities?

Richard M. Foster, W. K. Kellogg Foundation

- Production agriculture is only a small part of the total food supply system, but this fact often is misunderstood by the public and by policymakers.
- The Food Systems Unit within the W. K. Kellogg Foundation aims to ensure “safe, high quality food supplies for this generation and the future.” We must catalyze systemic changes in educational institutions so that they will develop highly

Scientific Societies: Conversations on Change

- qualified professionals to address food systems issues in the twenty-first century.
- Land Grant universities are beginning to realize that change is coming, risk of privatization is great, leadership is undefined, and changes in societal needs outpace the ability of Land Grant universities to change. Will universities plan their future, or will it be dealt to them?
- Margaret Mead suggested that “to really change the system, you must start everywhere at once.”
- Professional societies are pivotal to creating change and to providing critical networks and are capable of being agents of change.

C. Peter Magrath, National Association of State Universities and Land Grant Colleges

- Higher education, especially public higher education, is in the process of change. Past size and success has brought significance and therefore scrutiny.
- The Cold War is over and with it the automatic and unquestioned fuel of government support.
- The financial crunch at state and federal levels is not cyclical; it will increase incrementally. Moving power to the states will put pressure on public higher education.
- The public sees higher education as characterized by arrogance, fraud, and lack of accountability. The public approves of our mission and believes in education, but does not understand funding or system structure. Costs have been escalating, which has raised questions regarding the quality of undergraduate education and the quality of institutions.
- We must “move forward to the roots” of Land Grant institutions to be relevant to the society that we serve. We must seek the support of new allies and stakeholders such as agribusiness and corporate leaders.

Where Are We Headed? A Futurist’s Response

Robert Theobald, Participation Publishers

- “Things are getting better and better, worse and worse, faster and faster.”
- There are three models of the way the world works:

- It is a clock wound by God; it will return to what it was.
- It is a discontinuous change model; we reorganize periodically to get it right.
- It is experiencing the rapids of change. Change is a fundamental way of life, and while moving down the river on our raft we encounter a variety of environments—all changing. We are rebuilding our raft as we go.
- There are four driving forces of change:
 - We can no longer afford to use destructive powers, but must manage conflict.
 - We have increasingly unlimited productive powers; the question now involves production versus consumption issues.
 - We can no longer push the limits of the environment; the economy will not continue to be consumption driven, and the rich countries must share more of their resources with the poor.
 - We must move from a power structure to a negotiation structure. Power corrupts information.
- Professional societies have great reserves of social capital, and it is badly needed. They must discover their purpose/vision and allow diversity so that all players can be engaged. Societies can help define success and reward criteria.
- Universities live in the last apparent shelter from the river. It was thought that the health care industry was sheltered from the river, but it was

- not. Decisions now are being made on the basis of money.
- It is less risky to address change than to ignore it.
- We are undergoing a shift from problem orientation to opportunity orientation.
- Universities should be challenged to feed the world.

Why Is CAST Involved?

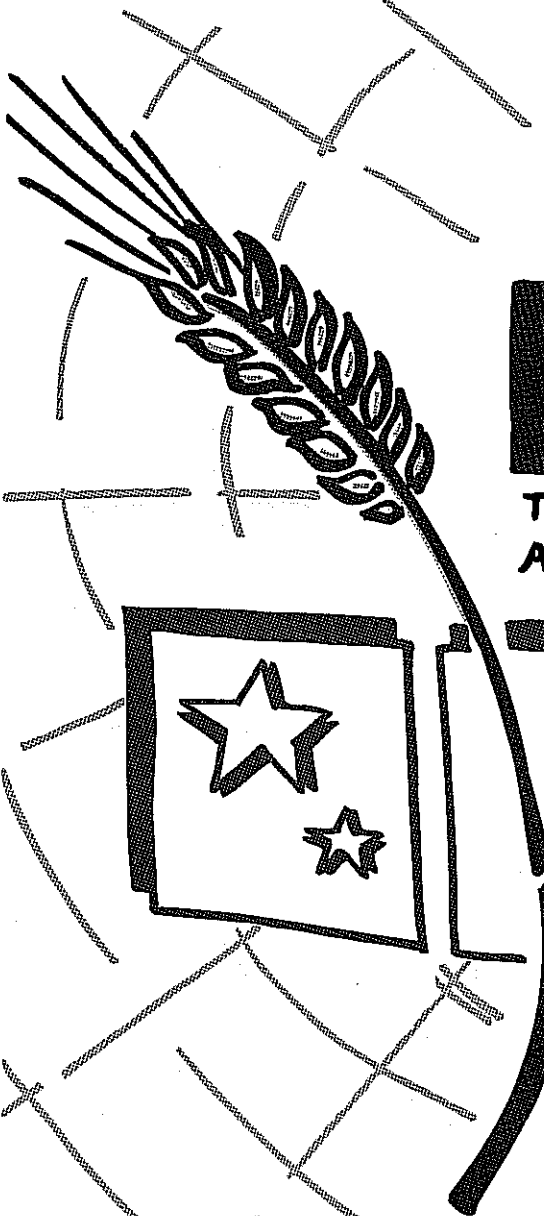
Martin A. Massengale, University of Nebraska, Lincoln

- CAST represents 31 scientific societies and is only as successful as they are.
- The Leadership Workshop provides a wonderful opportunity for CAST to serve its constituency and to grow into what it can be.
- Change is occurring more rapidly than most of us realize. Are we as professionals or as professional societies responding or placing ourselves in a position to respond?
- CAST cannot make the responses for you, but it can provide a venue for action by its constituent societies. The societies themselves must decide if they want to lead or even if they want to participate in the process of change.
- The changes discussed at this workshop will occur at an ever faster pace in the future than they have in the past. The subject is timely. Society is changing, irreversibly. Will we be leaders or casualties?

Mindscales

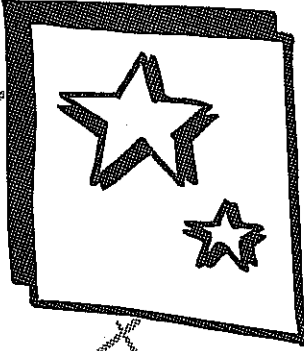
Mindscale artist Michelle Boos attended the second day of the CAST Leadership Workshop. As speakers delivered presentations, Ms. Boos distilled their ideas into a number of ingenious illustrations.

Described as “mindscales,” Ms. Boos’s drawings will help those who attended to recall the essential ideas of the day. For those who did not attend, her drawings will supplement the workshop’s summary.



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THE SCIENCE SOURCE FOR FOOD,
AGRICULTURAL and ENVIRONMENTAL ISSUES



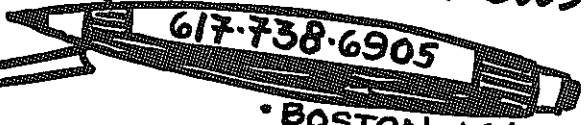
LEADERSHIP WORKSHOP FOR SCIENTIFIC SOCIETIES

OCTOBER 16, 1995
STOUFFER CONCOURSE
HOTEL

ST. LOUIS, MO

MINDSCAPES
FOR YOU TO:
★ SHARE
★ REVIEW
★ REFLECT

prepared by:
Michelle M. Boos



• BOSTON, MA •

BOB THEOBALD
FUTURIST

THINGS ARE GETTING
BETTER AND BETTER

AND

THINGS ARE
GETTING WORSE
AND WORSE

GULP!



~~STATUS QUO~~



HOLE IN THE DIKE



RAPIDS OF

OF

"IN" THE RIVER

CROSSING THE RIVER

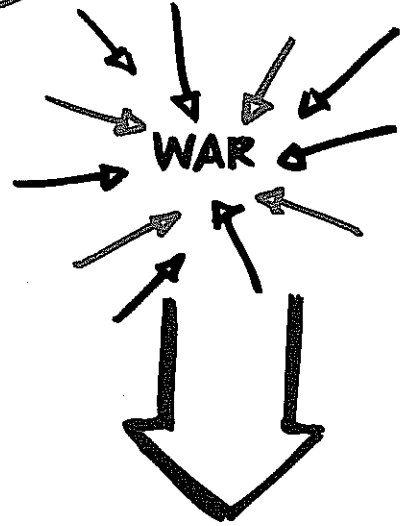
CHANGE

WE ARE IN THE
MIDST OF
FUNDAMENTAL,
RAPID CHANGE

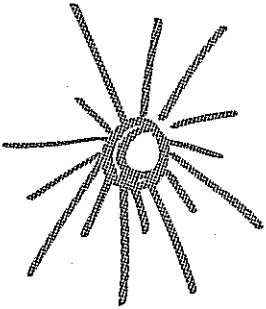
LISTEN ^{IN TERMS}
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MIND
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DIPLOMACY



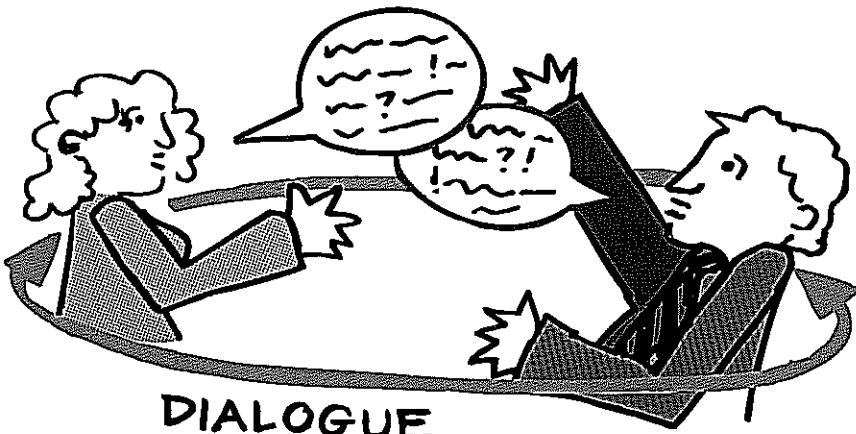
POOR



THE
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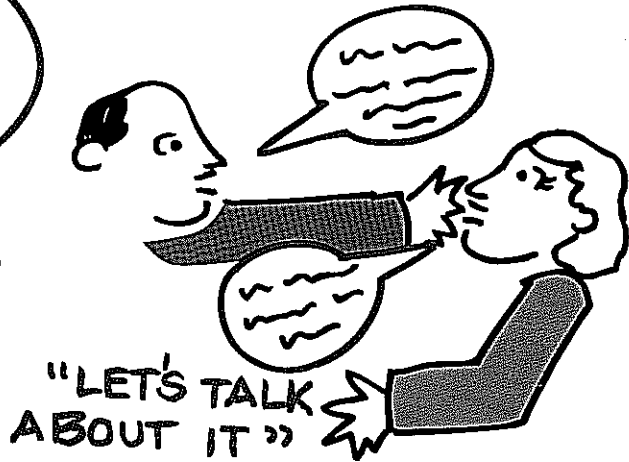


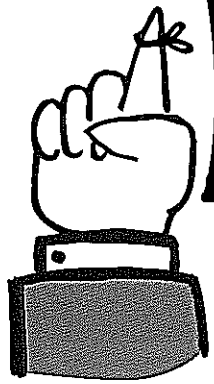


DIALOGUE



VS.



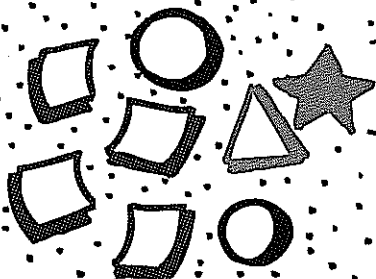


THERE ARE NO EXPERTS ON ANYTHING IMPORTANT!

INCOMPETENT!

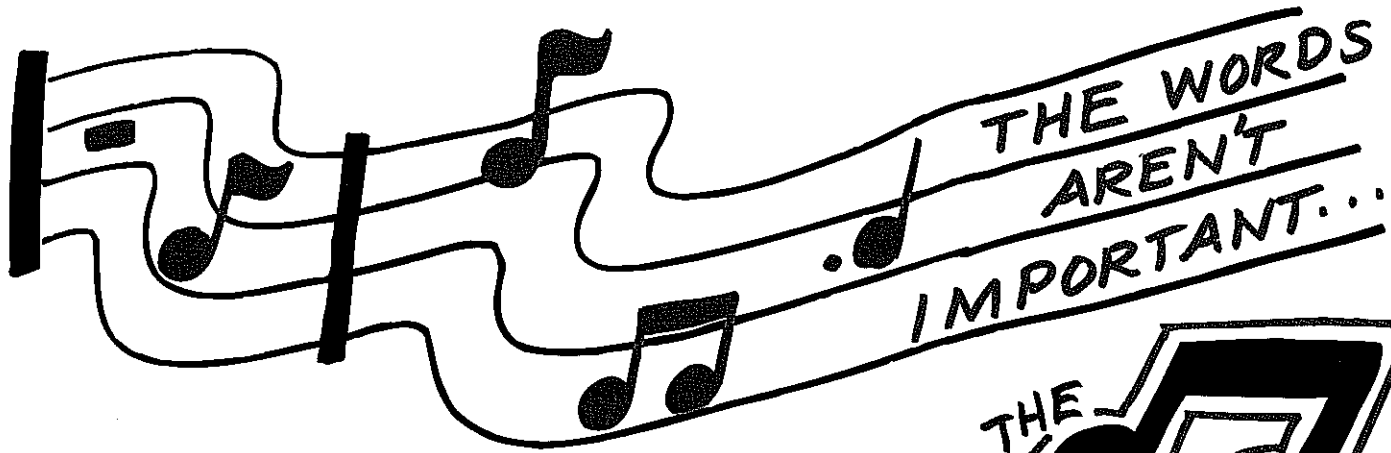


EXPERTS NEED MAKE FEEL TO YOU



MODELS HELP US TO CREATE OUR IMPRESSIONS OF REALITY





REMEMBER: DON'T WRITE A LONG-TERM STRATEGIC PLAN!

REPRESENT DIVERSITY IN YOUR LEADERSHIP!

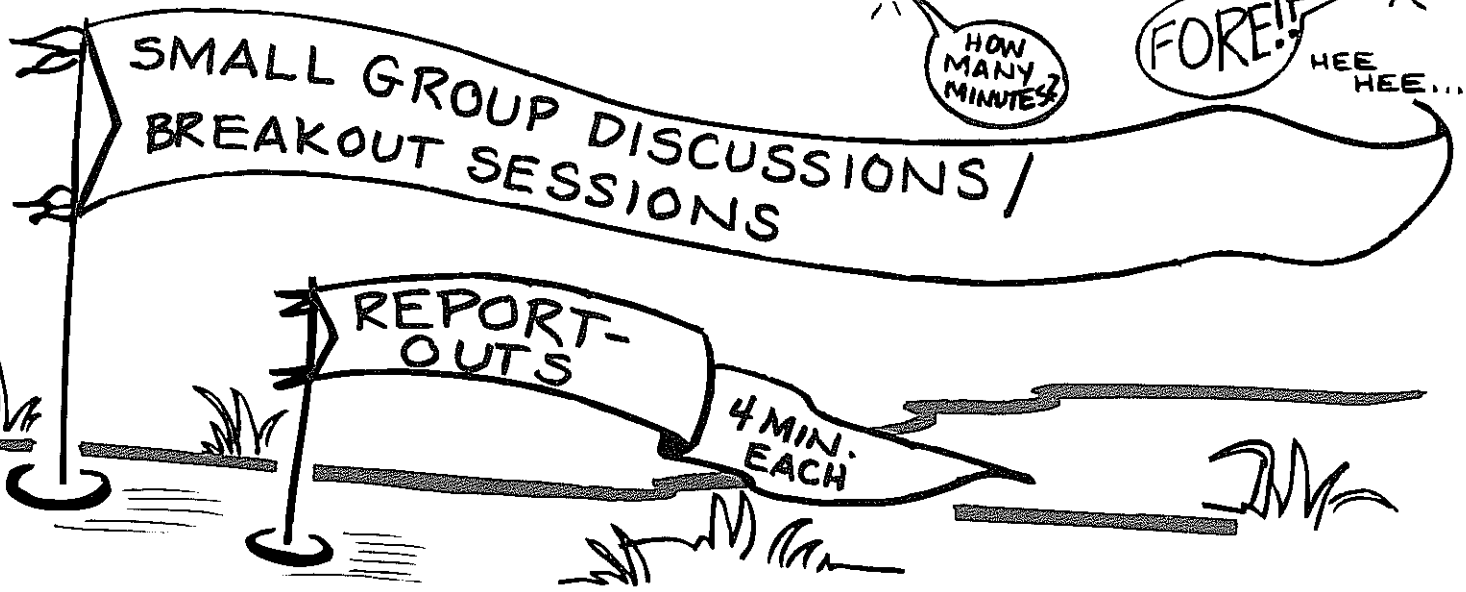


50,000 WEBSITES

... FROM 30 ORIGINALLY = ADVANCEMENT

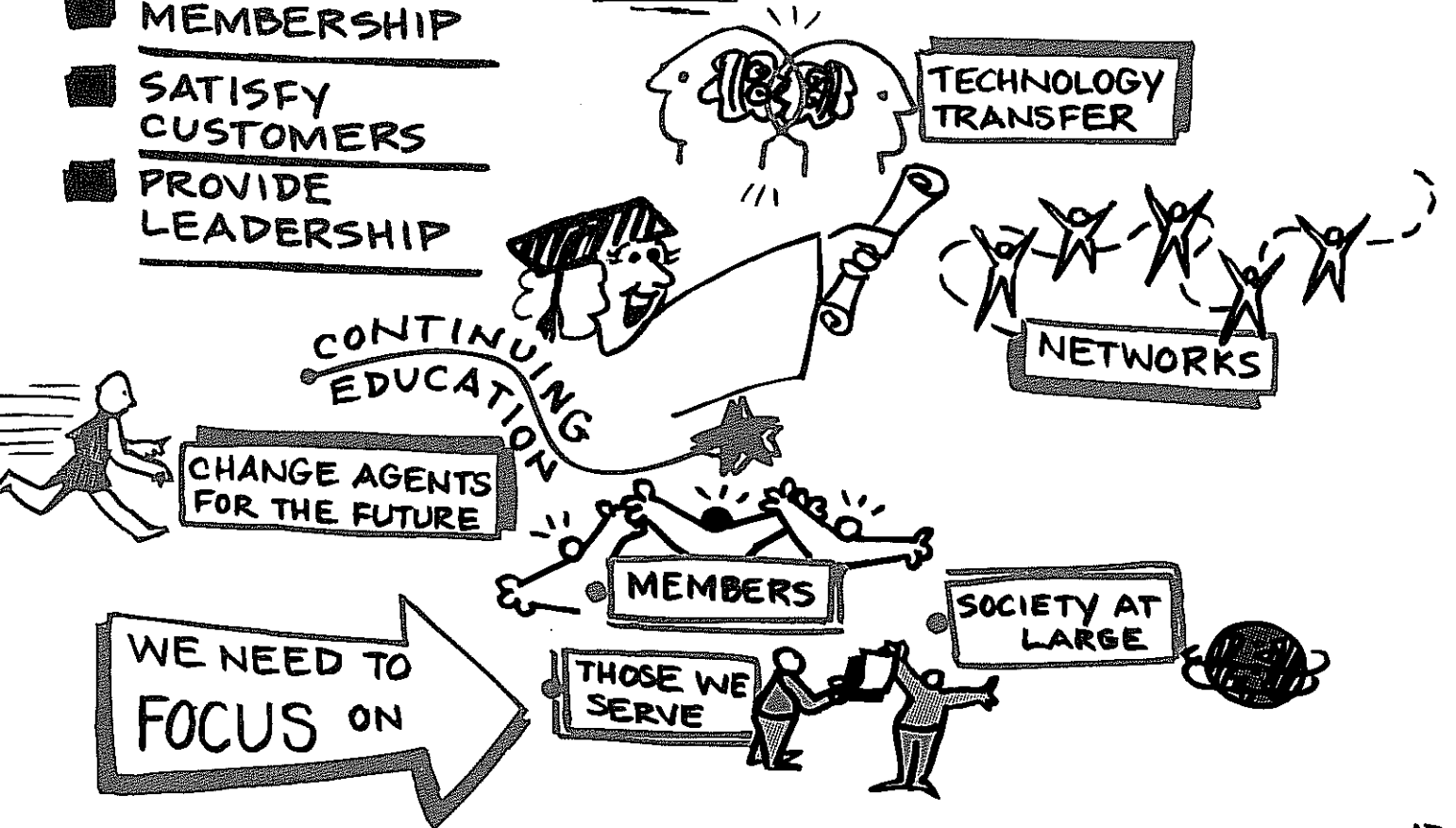
DO WE KNOW WHAT TO DO...

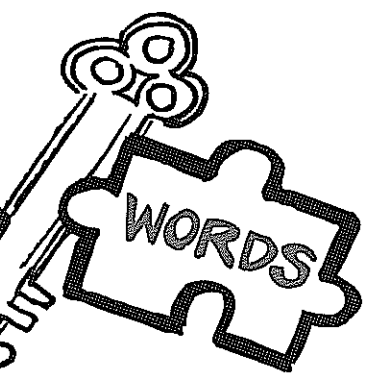
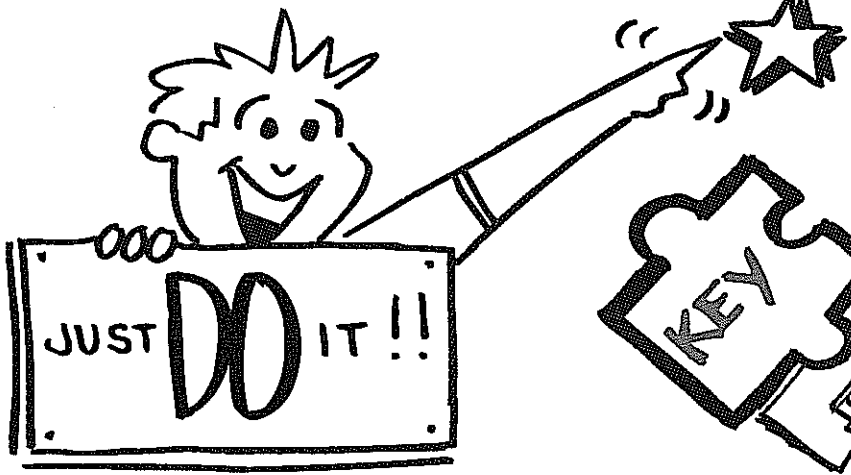
...WHEN THINGS COME UP?



There are many things we can do **TOGETHER** that we could never do alone...

- SATISFY MEMBERSHIP
- SATISFY CUSTOMERS
- PROVIDE LEADERSHIP





ACCREDITATION
CERTIFICATION

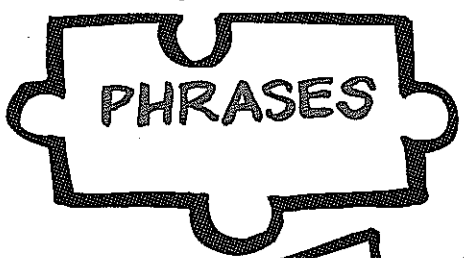
SHARED
VISION

CONTINUING
EDUCATION

AWARDS
RECOGNITION

TRAINING

...and



EDUCATION

WE NEED TO IMPROVE OUR
ABILITY TO PUBLISH

WE NEED
TO BRING
DIVERSE
GROUPS
TOGETHER

EXPAND BEYOND
RESEARCH

STRATEGIC PLANS
CAN WORK!

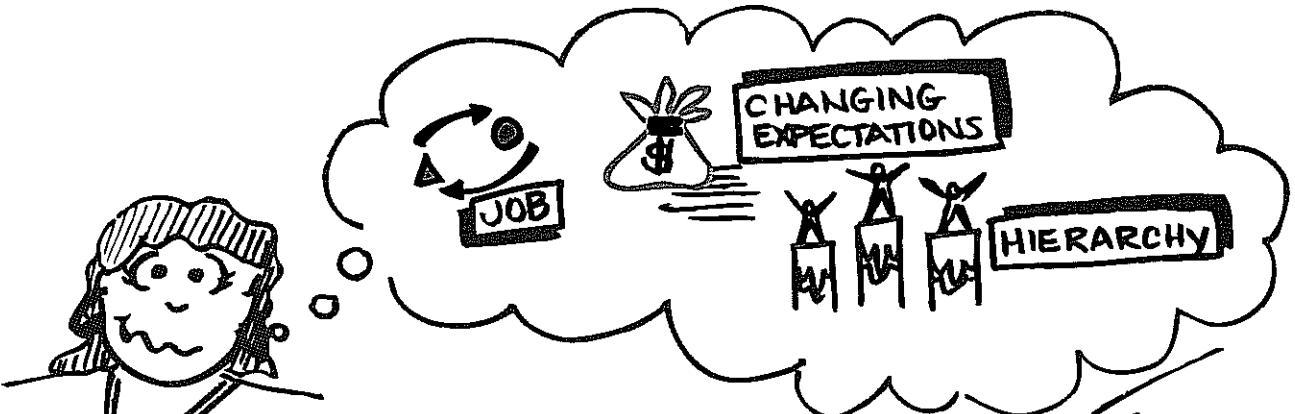
LET'S DEVELOP
LONG-TERM MGMT.
PROGRAMS



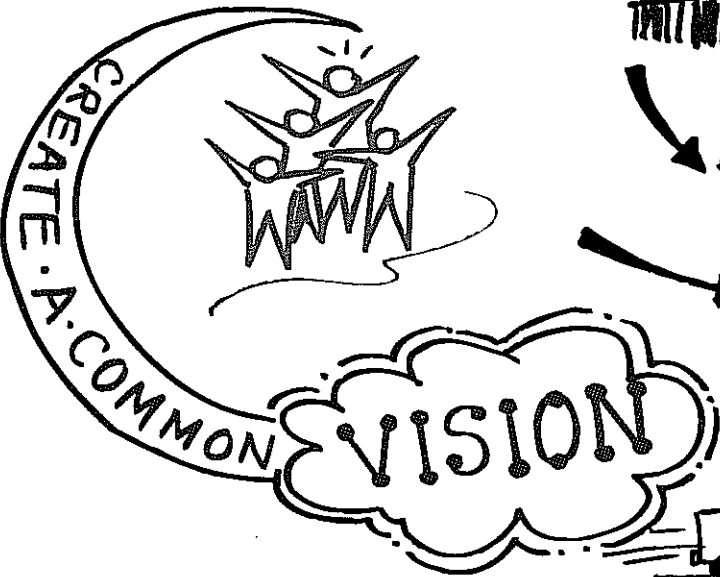
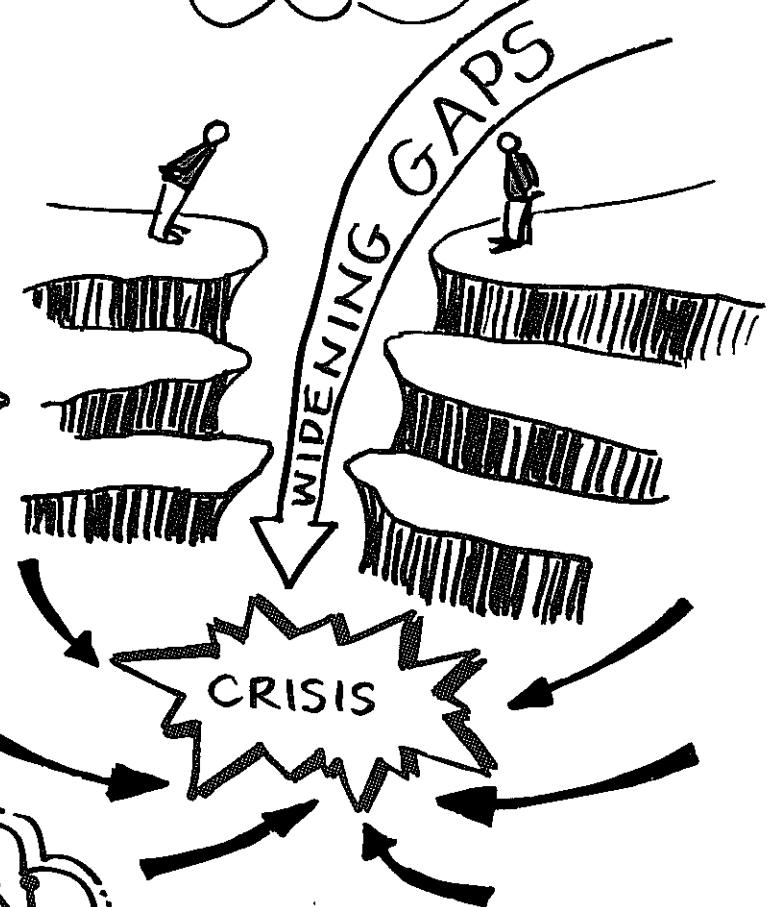
HAVE RETREATS EACH YEAR
SO THAT FOLKS CAN GET TO KNOW
EACH OTHER



TIE FOLKS TOGETHER
ON THE
INTERNET...
promote
affiliation!



WHO ARE THE NEW LEADERS?

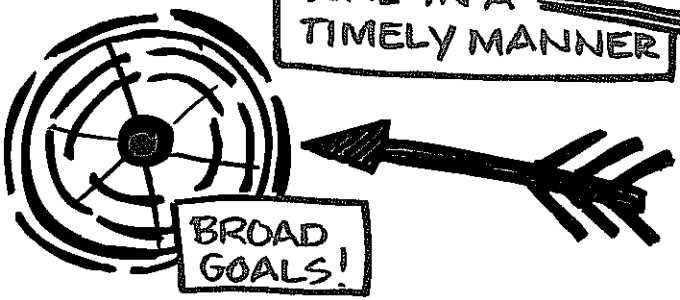
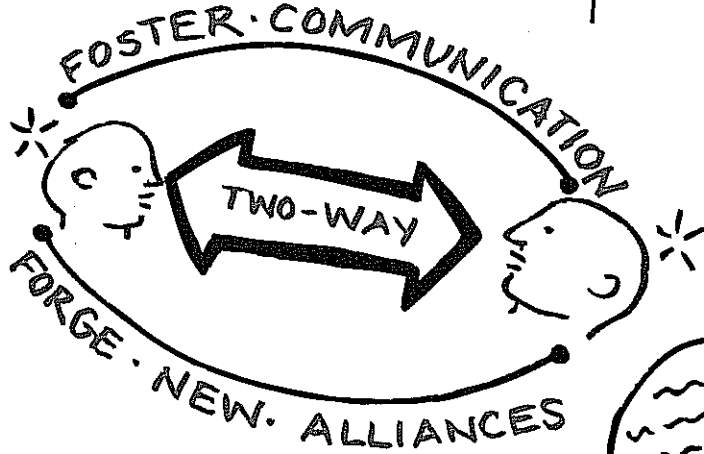
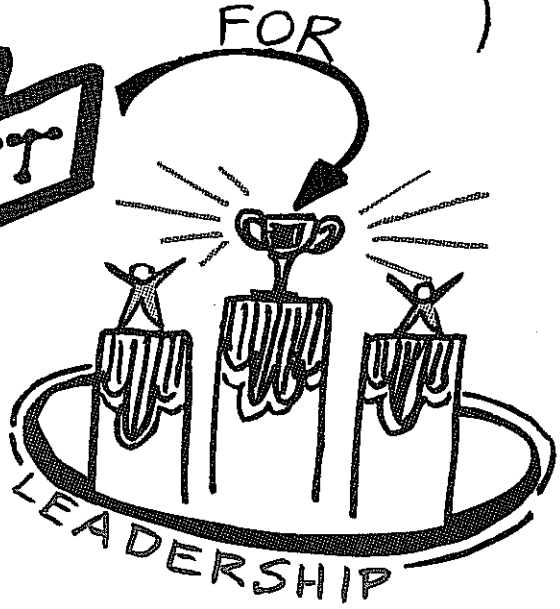
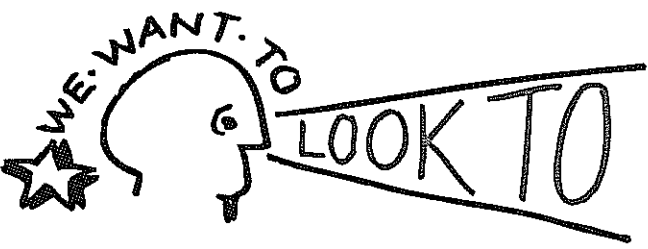
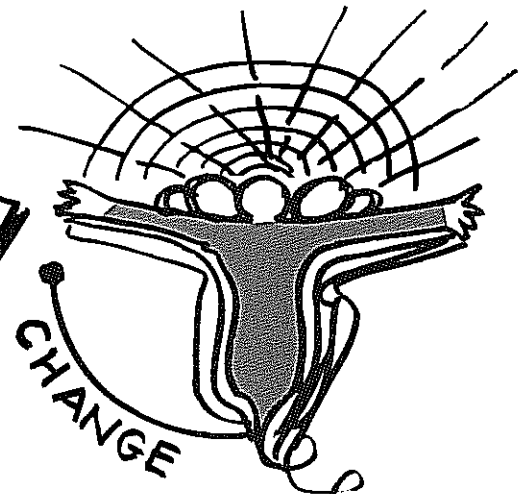


REMEMBER: IF YOU'RE STANDING STILL, YOU'LL NEVER STEP ON ANYONE'S FEET!

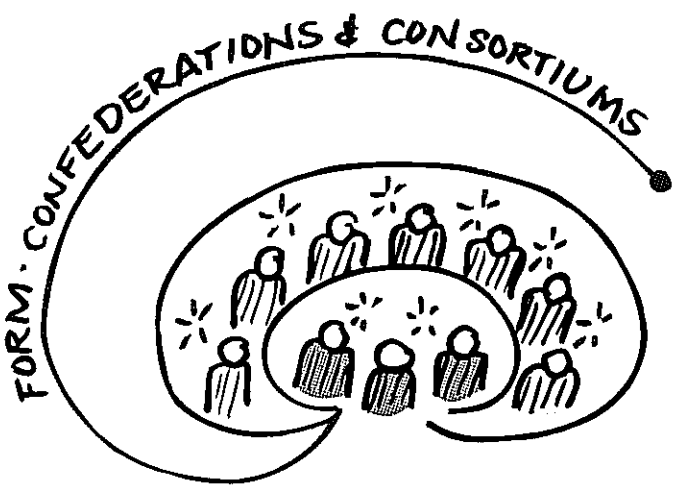




NEED TO



WHAT IS MOST IMPORTANT TO US?

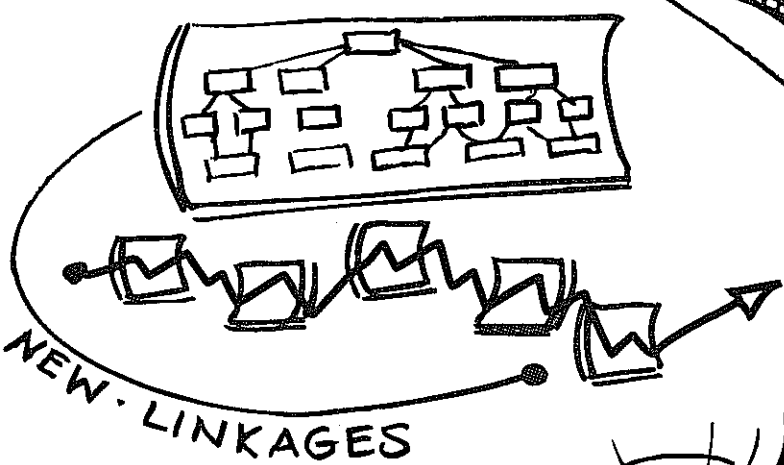


CONTINUED...



BECOME SELF LEARNERS

WHAT IS MOST IMPORTANT TO US... (CONT)



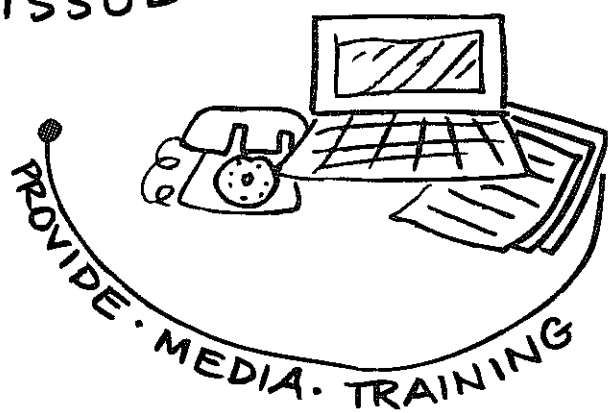
NEW LINKAGES



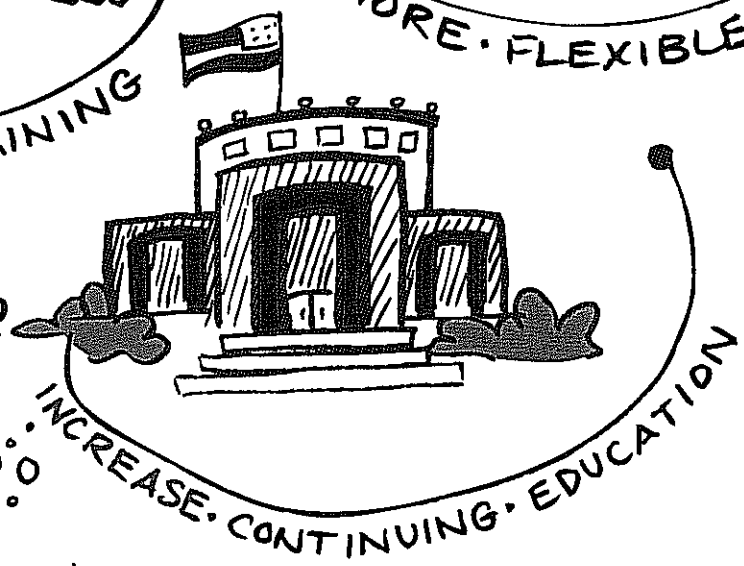
GLOBAL ISSUES



BE MORE FLEXIBLE



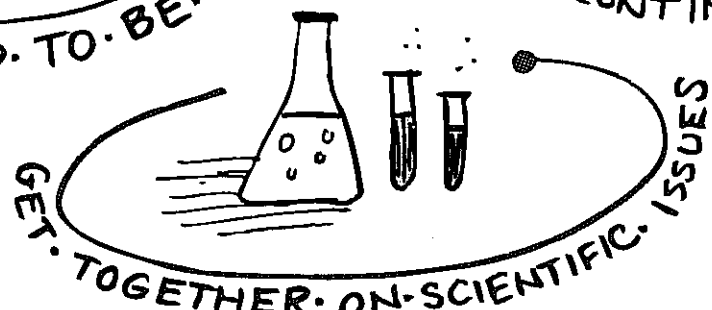
PROVIDE MEDIA TRAINING



INCREASE CONTINUING EDUCATION

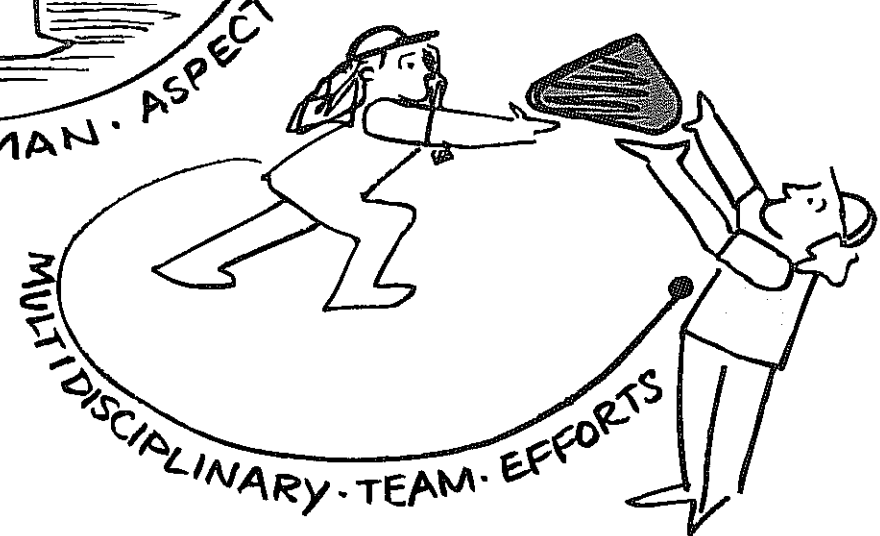
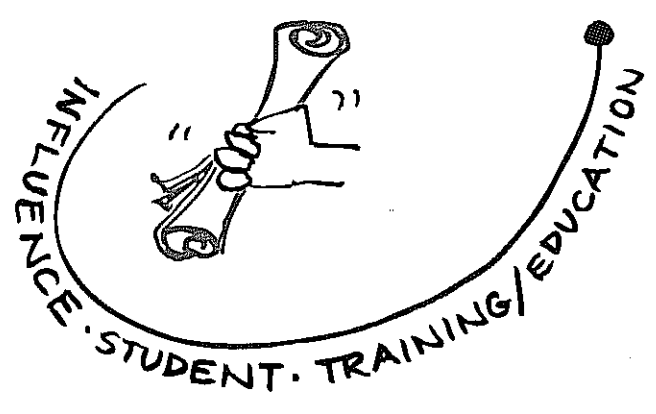
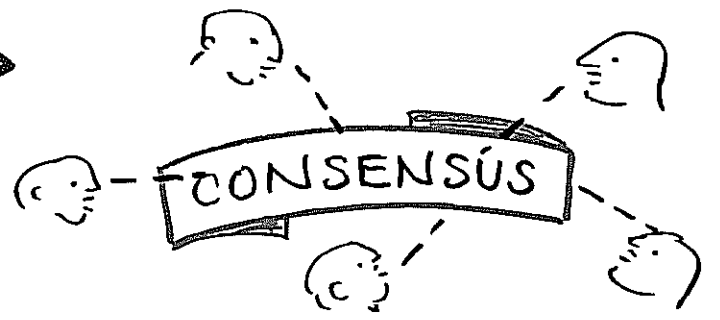
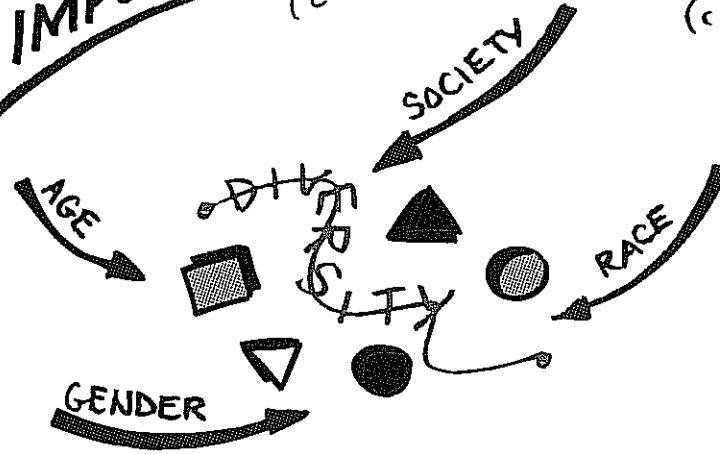


WE ALL NEED TO BE TEACHERS




GET TOGETHER ON SCIENTIFIC ISSUES

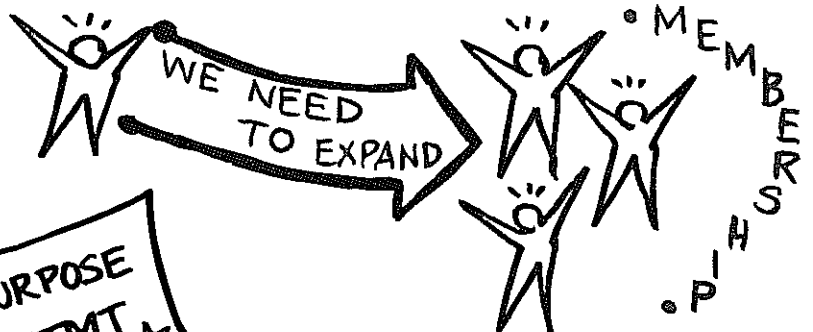
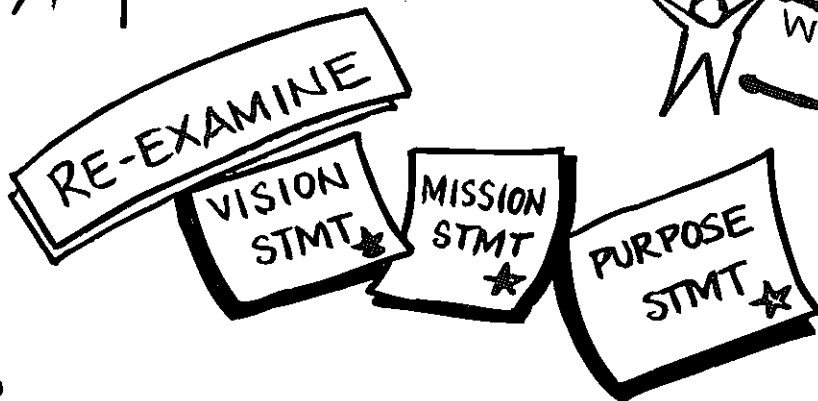
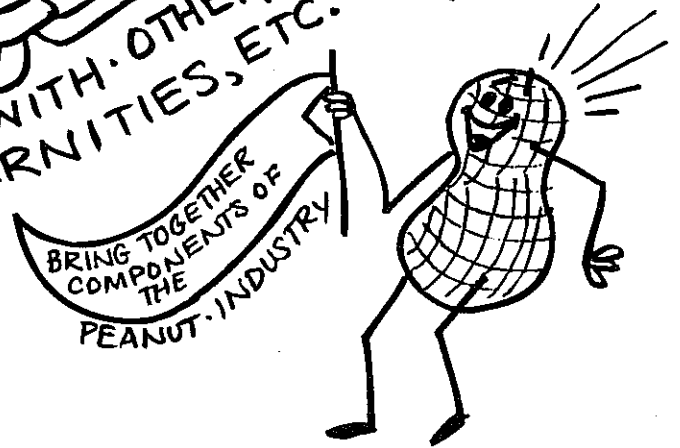
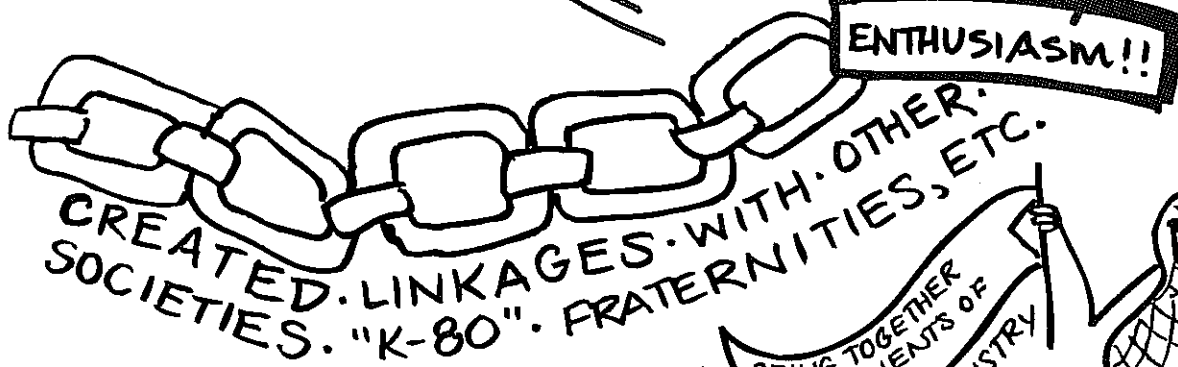
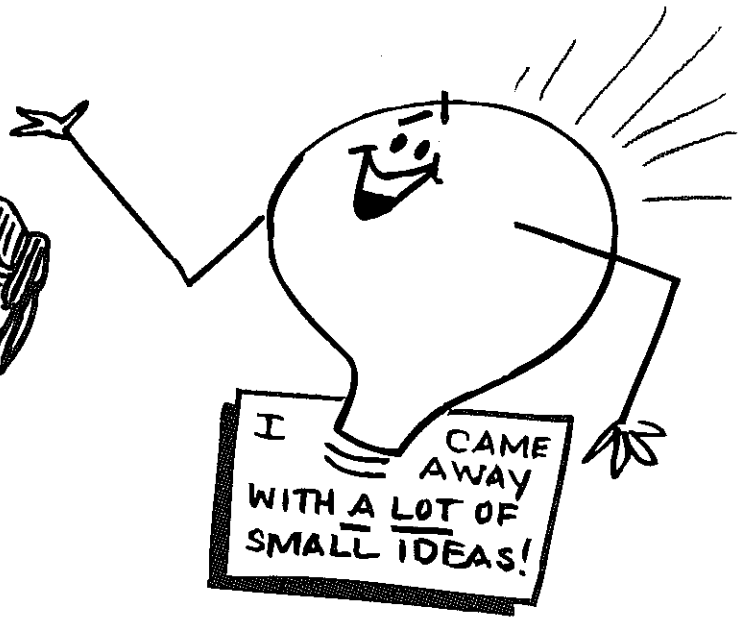
WHAT IS MOST IMPORTANT TO US?
IMPORTANT
 (CONT 2)

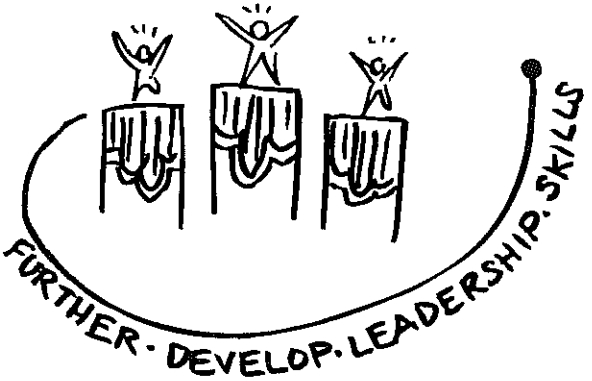
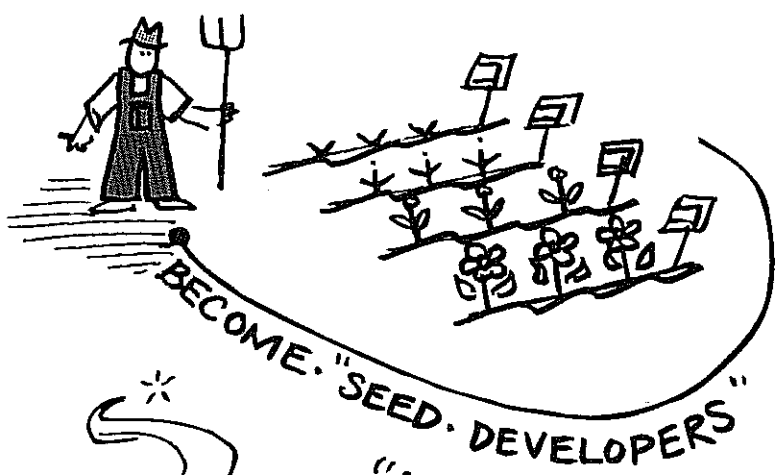
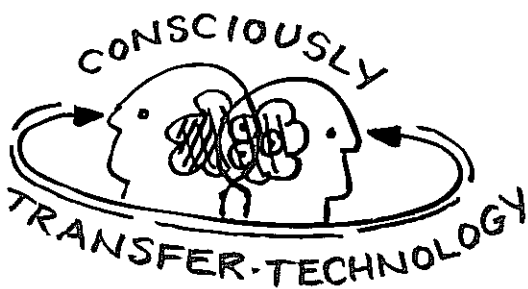


SUMMARY:

- ★ SERVICE 
- ★ INCLUSIVITY 
- ★ DIVERSITY 

- ★ LINKAGES 
- ★ BALANCE 
- ★ MARKETING 



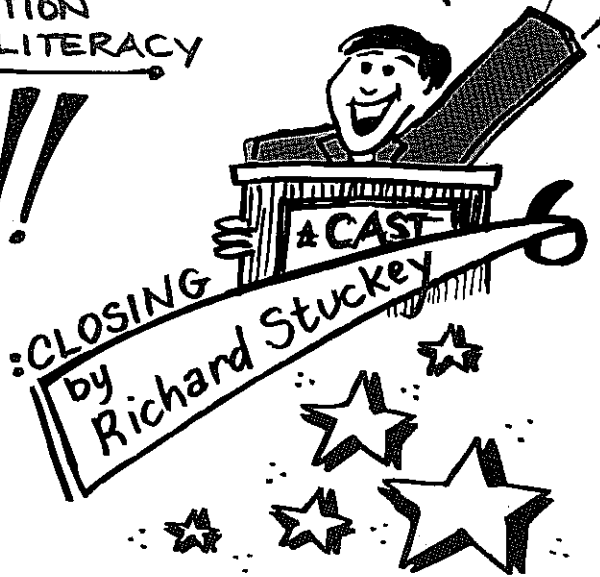


LEARNED THAT WE ARE ALL
PART OF THE VISION

WE NEED TO
SHARE



WE NEED TO
SECURE and CREATE
CONTINUING EDUCATION
and AGRICULTURAL LITERACY



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