

January 30, 1985

NEW CORE CURRICULUM PROPOSAL

INTRODUCTION

Many homes have a spare room. It is not the domain of anyone in particular, as is a bedroom, and it does not have the household utility of a kitchen or bathroom. It is the extra room.

So begins the 1981 essay "A Quest for Common Learning" by the Carnegie Foundation for the Advancement of Teaching. And you know what part of the college curriculum they are addressing. Not the academic major, for it has a clear purpose and easily recognized proprietors and tenants. Not the electives, for no one will deny that they are the domain of the student. Yes, it is the required general education component of the curriculum which, like the extra room, belongs to everyone, but often seems to belong to no one--not the faculty, not the students, not the administrators. And like a spare room, its purpose is difficult to agree on beyond acknowledging that it must serve an assortment of needs.

Our experiences with the General Studies Program at Lewis and Clark have led to a reexamination of the structure and purpose of general education at the College. When Dean Rembert arrived in the fall of 1983, he formed a task force to investigate possibilities for a new general education or core curriculum. The Core Task Force spent last year considering a variety of issues and models. At its final meeting in May, it drew up a preliminary two-page draft of a new Core Program which was too late and too little to implement for the present academic year. Over the summer Dean Rembert asked Jane Atkinson to serve as Coordinator of General Studies and to work with an Advisory Committee on the Core Curriculum to extend the work of the Core Task Force. John Abele, Susan Kirschner, Steve Seavey, and Jim Wallace make up the Advisory Committee.

When the Advisory Committee began its work in September, we took up where the Core Task Force left off. We assumed that the Core Program would involve four specially designed courses that would somehow integrate the liberal arts education of students at Lewis and Clark. As we worked, we became frustrated by the task of uniting into four courses all the issues that faculty feel are worthy of the core. These issues begin with concerns that Society and Culture faculty have had in the areas of history, values, cross-cultural perspectives, and gender, and extend to science, technology, and values, class perspectives, knowledge of Western culture and more specifically, the U.S. and contemporary issues. We realized that to design four courses that would include everything deemed worthy would result in four courses that would be as incomprehensible to students as they would be impossible for faculty to teach.

Then it was called to our attention that the General Studies Program, as outlined in the College Catalogue and Registration Bulletin is not limited to the Society and Culture sequence and Contemporary Issues courses. Instead, it is equivalent to the General College Graduation Requirements. In other words, in concept, if not in practice, it represents the third of the curriculum devoted to general education. Recognizing this fact helped us refocus our planning. Instead of trying to compress all the worthwhile goals that have been identified into four courses, we began to think about how to reconceptualize the general college requirements in ways that would make sense given the needs of today's students.

PURPOSE OF THE CORE

General education is not synonymous with a liberal education. A liberal education is what we hope students have received once they have completed the college curriculum, comprised of a major, electives, non-classroom activities, as well as general education requirements. Each of these components of a liberal education is important. The major encourages students to examine one field in depth; electives invite students to explore any and all fields within the limits of time and curiosity. General education is one piece--one very important piece--of a student's education at Lewis and Clark. The distinction between general and liberal education is a critical one, for confusion or disagreement about this point leads to unrealistic expectations about individual components of the whole. It is our opinion that the Society and Culture Program has suffered for having to carry a disproportionate degree of responsibility for students' liberal education.

In the proposal that follows, the general education curriculum is referred to as the Core Program. It constitutes slightly under one third of the required credits for graduation. The major goal of the Core Program is to introduce students to intellectual inquiry in the liberal arts, to general knowledge, traditions, and modes of inquiry in the humanities, sciences, and social sciences, and to the relationship of that inquiry to the wider world. In conjunction with other parts of our academic offerings, it is intended to contribute to the total liberal arts curriculum.

We chose the term Core Program to connote the importance of general education in the curriculum. We prefer it to the term General Studies which has come to imply different things to different people (ranging from four specially designed courses to the entire set of general college requirements). The term "core" should come to denote those studies that the Lewis and Clark faculty agrees to identify as valuable to all students, regardless of major or career aspirations.

THE PLAN

The Core Curriculum proposed here consists of three

vertically linked Inquiry courses and three pairs of Perspectives courses representing the fields of humanities, natural sciences, and social sciences:

INQUIRY COURSES

Advanced Inquiry (1)
(to be taken in the junior/senior year)

Critical Inquiry (1)
(to be taken during the first three years)

First Year Inquiry Course (1)
(to be taken fall term of the first year)

PERSPECTIVES COURSES

Humanities (2), Natural Sci. (2), Soc. Sci. (2)
(to be completed in the first three years)

[The numbers in parentheses above represent Core credits required.]

RATIONALE

Inquiry is at the heart of a liberal arts education. Virtually all their academic work at the College will involve students in some form of inquiry. Over four years of study, students will move from course to course, from discipline to discipline. In doing so, they will encounter a variety of ways of formulating and solving questions, as well as different determinations of what constitutes a satisfactory resolution of those questions. They will also discover that their own capacities and skills for engaging in intellectual inquiry will grow and change over their college years.

A general education curriculum cannot and should not bear the full responsibility for developing a student's knowledge and powers of inquiry. But it can and should provide a foundation and a framework for that task. The present plan proposes to do that in the following way:

1) by offering first year students a first term Inquiry course that a) involves them intensively through writing with fundamental techniques of intellectual inquiry as it b) engages them in thoughtful examination of important questions as they are defined in several major fields of knowledge.

2) by acquainting students with major assumptions, knowledge, and approaches of the natural sciences, humanities, and social sciences through 6 Perspectives courses, two in each field.

3) by engaging students through a Critical Inquiry course in a focused consideration of crucial human issues using modes of thought that are not only descriptive and explanatory but also

evaluative and may in fact offer a critique of traditional disciplinary theory and methods.

4) by engaging upper division students in intellectual inquiry that encourages them to arrive at informed and thoughtful solutions to important issues.

5) by developing students' awareness of crucial issues throughout their education. The present institutional concerns with international/cross-cultural relations, gender, and the relation of science and values have bearing on such perennial human concerns as truth, justice, equality, and indeed, survival. For this reason they should receive consideration wherever possible across the curriculum.

1) FIRST YEAR INQUIRY COURSE

Purpose:

In the autumn of their first year, all students will take a one term course designed to

a) build and sharpen students' skills in thinking and writing to enable them to approach college level work with confidence and competence;

b) demonstrate to students that regardless of field, clear language is inseparable from clear thinking;

c) lead directly into Perspectives courses in the humanities, natural sciences, and social sciences;

d) awaken students' interest in and taste for liberal arts learning.

The first year first term Inquiry course is not intended to provide students with a distillation of all knowledge that we consider important for them to know. There will be time later on in the Core, specifically in the Perspectives courses, to insure that students are introduced in a systematic way to the history and development of ideas. Instead, the course is intended to prepare and motivate students by teaching them the art of asking questions, generating ideas, giving shape to ideas through writing and discussion, recognizing how arguments are constructed and supported. In contrast to curricula which begin by attempting to provide students with a history of ideas before students have awakened to the value of tracing the historical roots of intellectual problems, this plan is designed to assist students in discovering the reasons for and the value of such study.

Course Description:

To illustrate how a course of this sort might work, we shall present here one model that might be tried. The course would be built around a set of three controversies, each one representing one of three "fields of inquiry" in which students will be doing work later on in the Core Program, namely, humanities, science, and social science. The controversies should be available through

major texts and broad commentary in the form of secondary readings.

Initially students will need to define the problem field. What is at issue? Why is there controversy? What are the different sides to the controversy, its roots, its history? Why is it important? They will read primary sources as well as commentary from several sides of the issue. They will learn how to develop an argument and how to change it when confronted with compelling evidence. They will find themselves starting out on one side of the issue, only to find themselves changing their minds as they read more, learn more, discuss more. Such experiences, they will discover, are essential to the process of inquiry.

In this course writing will be the means of exploring the texts and the controversies. Students will have extensive experience responding to an issue in writing, preparing first drafts, then developing the critical detachment necessary for revision, and sharing writing with teachers and peers.

Proposal for an Inquiry Course to be taught Autumn '85:

"Commonality" is a word that meets with enthusiasm in some quarters and horror in others at Lewis and Clark. For some, it connotes an idyllic meeting of minds. For others, it smacks of regimentation and loss of academic freedom. For the Advisory Committee, it means neither of these things. The Inquiry course promises to provide students with a shared intellectual experience during their first year at the institution. For most of their time here, students share a common structure in their academic and extracurricular life, but at no point in their education is there (at present) any common content to engage them as a cohort. The first term Inquiry course can serve as an occasion for dialogue to help first year students forge intellectual bonds and a sense of identity with each other, with a group of faculty, and, we hope, with the institution.

To cite the Carnegie Foundation again,

This portion of the curriculum is rooted in the belief that individualism, while essential, is not sufficient. It says that the individual also shares significant relationships with a larger community. In this manner, general education affirms our connectedness.

(p. 18)

We recognize that there are a number of ways of affirming "connectedness," ranging from a single syllabus for all Inquiry classes to one or more shared texts or issues. In our proposal, we would like to maintain flexibility regarding how this goal of shared intellectual dialogue might be met. Accordingly, we ask approval for a one-year experiment for academic year '85-'86 that will engage Inquiry faculty in coordinating their efforts to meet the goals outlined above.

Additionally, we anticipate that this group will consist of faculty who view commonality in the Inquiry course as a desirable goal. Commonality will be defined operationally by this group.

We expect to organize and to fund a faculty team to meet this spring and next fall with the Coordinator of the Core Program to design and teach the Inquiry course. A faculty seminar will provide faculty with support in defining, selecting, and developing problems and materials for use in the course. In addition, regular meetings of the teaching team next fall will lend intellectual and pedagogical support to the participants.

In order to enhance the collective involvement of faculty and students in the process of inquiry, we would urge that this course be coordinated with the Fall Forum Series, a film series, theatre and musical productions, art exhibits, a "reading week," and other common ventures as well.

Writing and the Inquiry Course:

We propose that this course be a part of the College Writing Proficiency Requirement. (In contrast to the present Society and Culture Program, it would not bear sole responsibility for certifying students as proficient writers.) Exploring issues of student writing will be an integral part of the faculty seminar proposed above.

Staffing:

With an incoming class of 400, the Inquiry course would involve 16 sections of 25 students each (maximum). Some faculty in the program may teach two sections of the Inquiry course as their fall term load. The annual teaching staff for the Inquiry course would be on the order of 12 faculty.

2. PERSPECTIVES COURSES

At present, students are expected to fulfill distribution requirements in four areas--science, social science, creative arts, and physical education. The Society and Culture Program serves tacitly as a humanities distribution requirement. In most fields, what constitutes a suitable course to meet the distribution requirement is determined by what a department deems is important for its majors to learn at the 100-level. There is no formal expectation that such courses serve the interests of general education. The current distribution requirement serves principally to distribute students among departments. The relation of these courses to general education goals is serendipitous.

To adapt the old proverb about not seeing the forest for the trees, one could say that our current distribution system sends students directly to a close-up examination of the trees without giving them an overview of the forest. The risk is that with no wider sense of the historical and intellectual development and

significance of what they are learning, our students may graduate overspecialized and undereducated.

As a substitute for the present distribution system, we propose the following: to fulfil Core Curriculum requirements students should be expected to take specially designated courses in three fields of inquiry sometime during their first three years of college. The point of these courses is to introduce students in a serious way to the intellectual traditions of the liberal arts. The three fields are:

- A) Science (2 credits)
- B) Humanities (2 credits)
- C) Social Science (2 credits)

It is important to note that the fields listed above are not the same as the current divisions that carry these names. Each of the fields outlined here may be represented by faculty from a variety of academic divisions.

To consider what might constitute courses bearing Core Curriculum credit in these different fields, four Working Groups of faculty met for approximately eight hours of discussion during the weeks of January 7 and 14. They were asked

- 1) to explore what united their disciplines as a field;
- 2) to identify what they as representatives of a responsible generation of educators wanted students to know about their field;
- 3) to define criteria for courses that could achieve the goals they identified for question #2;
- 4) to draw up some sample course proposals.

The Working Group discussions were decidedly worthwhile. (Members of one group resolved that such discussions among faculty in related disciplines should be held annually to improve curriculum and pedagogy in their field.) Summaries of Working Group discussions are included in an appendix to this proposal.

PLEASE NOTE: In previous drafts of this proposal, we have spoken of a fourth field entitled Critical Perspectives. The Working Group on Critical Perspectives substantially revised our earlier version of the Core Curriculum. The group distinguished its purpose from that of the other Perspectives groups. Rather than constituting a "field" paralleling the three Perspectives fields, the Working Group chose to identify its domain and aims as belonging in the Inquiry category. They also constructed a very useful statement on the need to integrate what they identified as critical concerns and approaches throughout the curriculum. Please consult the Appendix for their statement.

What follows is what the Advisory Committee now proposes as Perspectives requirements for the Core Curriculum, based on what it gleaned from Working Group discussions and modified in a few cases in light of Curriculum Committee discussions. It is important to note that not every member of each group necessarily

endorses every detail presented here. But we have tried to heed majority sentiment in preparing these criteria.

A) Science

The Science faculty Working Group has identified five content areas that should be studied by all students prior to graduation. The areas are 1) matter, 2) life, 3) energy, 4) motion, 5) the cosmos. Each of these areas represents a substantial group of sub-topics, as elaborated in the Appendix. Science Perspectives courses will be grouped into two categories. Students will select one course from each category. Together these courses will provide intensive study of the content areas listed above.

Faculty expect that by revising current courses and possibly replacing others that a course selected from each group will include study of at least four of the five essential topics. It is apparent to science faculty in the Working Group that such coordination of non-major science course content is overdue. It is their intent to move toward this goal.

Major Tracks within the Sciences:

Science faculty were concerned about requiring these Core courses of science majors. First, they felt their majors should be encouraged to take courses in other fields instead of adding extra courses in the sciences. Second, they felt that science majors would be beyond the proposed courses by the time they reached college. Also, they were concerned about the intimidation factor in mixing majors and non-majors in general science classes. After all, students intending to major in the sciences typically arrive at college with four years of high school math and science. Few non-science majors have this high school background. By contrast, there is no such dramatic difference in high school preparation among students taking college courses in the humanities and social sciences.

In light of these concerns, we propose that science majors meet the science requirement by accomplishing the following two steps:

- 1) By substituting an introductory level science course for one Perspectives requirement;

- 2) By taking an Inquiry course from a list of courses emphasizing issues of science and society to be designated by the Natural Science Division. The intent of this requirement is to give science majors historical and critical perspectives on science as a way of thinking.

Students who initially intend to be science majors and later switch to another major will be allowed to count two introductory science courses toward the natural science Perspectives requirement. Other students who have strong backgrounds in the sciences may wish to fulfil this requirement by taking two introductory science majors courses.

Staffing:

These courses would extend and revise the general science courses for majors now on the books.

B) Humanities

What should constitute a fundamental Core sequence in the humanities is one of the most hotly debated topics in education today. Calls for reinstituting a traditional humanities curriculum meet with justifiable cries of distress from those who fear an uncritical return to a conservative canon. Our position is that there is a Western heritage of which students need to be aware, but in the context of wider comparative and critical perspectives.

Students will be expected to take two Perspectives courses in the humanities. Guidelines for these courses will include the following concerns:

- 1) raise questions about what it means and has meant to be human, by studying history, philosophical and religious thought, artistic, musical, dramatic, and literary expression;
- 2) present materials and perspectives from more than one discipline;
- 3) focus on periods, themes, or issues using texts that "speak to" each other through historical and/or intellectual ties;
- 4) provide historical, philosophical, and socio-cultural contexts for texts and issues studied;
- 5) make interpretation and critical examination a crucial part of what is studied and taught;
- 6) focus on language both as the mediator of meaning in written texts, and as the essential instrument of creating meaning in interpretation.

Courses fulfilling this requirement may or may not be two term sequences. They may be individually or team taught.

The "Civ. Option" group is proposing a sequence that could fulfil the two credit Perspectives requirement in the humanities. Some of existing Society and Culture courses as well as a number of courses currently being offered by departments could be included or reworked to fulfill the requirement.

Major Tracks within the Humanities:

Departments in the Arts and Humanities will determine on an individual basis whether one of the Humanities Perspectives courses may be put toward their majors.

Staffing:

It should be recognized that the Humanities Perspectives requirement replaces two terms of the Society and Culture

Program. It does so without having to carry the total burden of orienting first year students, managing the entire writing requirement, and providing all that is valuable in a liberal education. Arts and Humanities faculty have been the primary support for the current Society and Culture Program. (To take a representative year, in '83-'84, of the 9.00 FTE staffing the Society and Culture Program, 8.33 came from the Humanities and the Arts Divisions.) The switch to a two term Perspectives requirement should not be an added burden on faculty in this field. What is more, with the proposed first year Inquiry course defined in such a way so as to draw on materials, ideas, and faculty from across the liberal arts, these faculty may find their load lightened.

C) Social Science

The goals of the Perspectives requirement in the Social Sciences are

- 1) to give students a sense of what social science is by acquainting them with the assumptions and practice of a particular social science discipline;

- 2) to frame social scientific inquiry in the broader context of human society and thought.

The current social science requirement achieves the first goal quite well. To enhance the possibilities of achieving the second, we propose the adaptation and development of courses in the history, philosophy, and methodology of the social sciences as ways of meeting Core requirements in the social sciences. Such courses will provide another means for students to gain a broad understanding of social science inquiry.

Under the new Core plan, courses meeting the Perspectives requirement in the social sciences could be drawn from two categories:

Category A would consist of discipline-focused courses that introduce students to the assumptions, present knowledge, and approaches of a particular social science discipline.

Category B would consist of division-focused courses that frame the social sciences historically, conceptually, and methodologically as a distinctive mode of inquiry.

Regarding Category A, introductory level courses in the social sciences would be appropriate here. Certain instructors may wish to identify other courses available without prerequisites that achieve the same end. Keeping in mind the two goals identified above, some instructors may wish to couch their discipline in comparative terms to convey a sense of its place in broader social science inquiry.

Regarding Category B, two kinds of courses have been identified as suitable for meeting this requirement:

- 1) Courses that deal historically with some phase in the

development of social scientific inquiry;

2) Courses that explore the assumptions of social scientific theory or methodology. (Narrowly defined discipline-based courses would not suffice.)

The Perspectives requirement in the social sciences is designed with recognition of the fact that there are multiple ways to gain exposure to and understanding of social scientific inquiry. We propose that students meet this requirement in one of two ways:

1) by taking two courses from Category A, provided these courses came from two different departments;

2) by taking one course from Category A and one course from Category B.

In other words, some students may elect to develop their breadth of understanding in social science by exploring approaches in two different disciplines. Others may elect to augment their introduction to a single social science discipline with a course that explored the development, assumptions and methodology of the social sciences.

Major Tracks within the Social Sciences:

Students majoring in a social science department may count one (and only one) of their two social science Perspectives requirements toward their major.

Staffing:

At present the College offers on the order of 45 sections of introductory social science courses. By taking two of these, students meet the existing distribution requirement in the social sciences. By creating the Category B option, some pressure may be taken off the introductory courses in at least some departments.

We expect Category B courses to be developed both through the adaptation of existing courses in the social sciences, in other divisions, and in the Society and Culture Program, and through the development of new courses. What is more, one term of the proposed "Civ. Option" could be adapted to serve as a Category B course fitting option #1 described above. We also recommend that some Category B courses be allowed to carry a 100-level social science prerequisite, but only if those courses are division-focused and not discipline-specific.

3) Critical Inquiry

Critical Inquiry courses engage students directly with questions of international and cross-cultural relations, of gender, and of science and values. These courses are "critical" in two senses of the word: they deal with issues that are crucial for the human community, and they involve modes of thought that are not only descriptive and explanatory but also evaluative and may involve a critique of traditional disciplinary theory and method. Each Critical Inquiry course will address at

least one of the concerns that have been identified as institutional priorities. While these concerns should pervade the entire curriculum and figure prominently in the Core, integrating these concerns is not the same as focusing on them. These courses offer students an opportunity to investigate these concerns in some depth.

The following criteria apply to courses fulfilling the Critical Inquiry requirement:

- 1) Courses will focus on issues within at least one of three areas of concern: international and cross-cultural relations; gender; science and society;
- 2) Courses are topical and/or thematic;
- 3) Courses go beyond description to include both comparative or creative and evaluative dimensions;
- 4) Courses are concerned with praxis and consider the relationship between thought and action.

(Please consult the appendix for a fuller treatment of these criteria.)

NOTE: The "critical issues" that currently constitute this requirement are those which have surfaced in the first half of the 1980's as concerns which pervade much of our thinking at Lewis and Clark. In a vital academic community, we must anticipate that new concerns will arise in coming years. The "Critical Inquiry" portion of the Core is intended as a place for these concerns to surface and to be explored in depth. For this reason, it should remain flexible to accommodate student and faculty investigation of future concerns that are crucial for the human community and involve modes of thought that are not only descriptive and explanatory, but also evaluative and may involve a critique of traditional disciplinary theory and method.

Minor Tracks within Critical Inquiry:

Students with an interdisciplinary minor in area studies or gender studies could possibly apply a course in their interdisciplinary minor to meet this requirement.

Staffing:

We expect that a number of the courses being proposed for interdisciplinary minors in gender studies and area studies would meet this requirement. In addition, faculty leading Overseas trips would be encouraged to develop courses to fulfil this requirement.

3) ADVANCED INQUIRY COURSES

To date, the General Studies Program has been weighted toward students' first year of college. The Core Program we envision is organized in steps from students' first term through advanced junior and senior level work. The proposed program is designed to help students become aware of different modes of

inquiry. The first year course is intended to show students how their understanding of issues and materials is dependent upon the questions they ask. The Perspectives courses introduce students to a variety of ways of knowing. Unlike a standard distribution requirement which too often funnels students into divisions and departments with little or no awareness of the epistemological differences that exist among fields, the Perspectives courses will be designed to bring out an appreciation for different forms of inquiry. Outside the Core Program, students will be pursuing majors and electives including disciplinary and interdisciplinary minors. When they have finished a substantial portion of the work for their majors (some time in their junior or senior year), we propose that they take one interdisciplinary course that once again will bring home the theme of inquiry, only this time after several years of college study.

This interdisciplinary course should involve no more than twenty to twenty-five students. It may be taught by one or two instructors. It should focus on a concern or set of concerns that transcends a single discipline. This issue may be a local, national, or world problem that students will be asked to address. Alternatively, it may be a theoretical issue or set of issues that arises at the borders of two or more disciplines or fields. The course is intended to help students to recognize the possibilities and limitations of their training in a discipline or field of inquiry by tackling and proposing solutions for hard problems alongside other liberally educated students representing other fields. The course will call upon students not only to recognize different perspectives on a problem, but also to develop and articulate to others their own informed and thoughtful answers to those problems.

Clearly, one option here resembles the current Contemporary Issues courses. We like the notion of encouraging liberally educated students to look beyond the academy and to apply their education to understanding--even solving--problems beyond Palatine Hill. We would encourage such courses to foster awareness of the kinds of questioning students apply to such problems. The other option has value for both students and faculty who want to pursue advanced interdisciplinary work involving their own and related fields. Anything from biophysics, to mathematical models in the social sciences, to culture and history, to structuralism and post-structuralism would be appropriate topics for such courses.

In addition to faculty initiated courses, student initiated courses would also be a standard option for the requirement. This option would encourage students to assume fuller responsibility for their own education.

Tracks for Majors: It should be left to the discretion of departments whether to grant credit toward the major for particular Advanced Inquiry courses.

Staffing Needs: These should match the current needs of the

Contemporary Issues courses, although the option for team teaching advanced level interdisciplinary courses may attract some additional faculty as well.

CONCLUSION:

We have sought to design a Core Program that will lend both stability and flexibility to general education at Lewis and Clark. The model proposed here attempts to introduce much needed order to the "spare room" of which the Carnegie Report speaks. At the same time, it should accommodate experimentation and reformulation of faculty goals in the coming years. It is, in short, a structure designed to bend, not break with future intellectual and pedagogical developments at the college.

ADMINISTRATIVE STRUCTURE

The current General Studies Sub-committee of the Curriculum Committee would become the Sub-committee on the Core Curriculum. It would be chaired by the Coordinator for the Core Program and would include appointed representatives for the fields of inquiry represented in the Core Program. Clear guidelines would be drawn up for courses meeting Core Curriculum requirements at each level. All courses intended to fulfill Core Curriculum requirements would be subject to approval and periodic review by this sub-committee as well as approval by the Curricular Review Sub-committee of the Curriculum Committee. If the three-divisional model proposed by the Working Principles Committee is adapted, it would provide an excellent way for faculty to plan and coordinate their Core participation within and between fields.

FINAL NOTE: In the introduction to this proposal, we explained how the Advisory Committee on the Core Curriculum came to rework some of the general college requirements. Several existing requirements have not been reformulated by this committee.

- 1) The Writing Proficiency Requirement is being redesigned by another committee;
- 2) The Math Proficiency Requirement was established by the faculty several years ago. While we, like others, would like to see Lewis and Clark graduates held to higher standards than the present ones, we recognize that revision of this requirement is not feasible at the present time without systematic study.
- 3) The Health and Physical Education requirement and the Creative Arts requirement are in the process of being reworked by faculty in those two areas. The HPE faculty are developing a Fitness for Life plan involving possibly 2/3's credit. The Arts faculty are similarly reworking the creative arts requirement. The Advisory Committee on the Core encourages these efforts and underscores that the present proposal in no way should be construed as undercutting those requirements.

APPENDIX

WORKING GROUP REPORTS

1. Science
2. Humanities
3. Social Science
4. Critical Inquiry

Science Working Group Report

This working group identified five content areas important to all liberal arts graduates. It also discussed the importance of dealing with questions of methodology and scientific understanding. These three areas are elaborated in the materials which follow:

- A. Content (Essential Topics)
 - B. Methods of Science
 - C. Nature of Scientific Understanding
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A. Content (Essential Topics)

1. Matter

An understanding and appreciation of the nature and structure of matter is essential for all students. It is important to be aware of some of the developments during the early part of this century that led to the formulation of the atomic model and how this model forms the basis for our understanding of more complicated chemical and biological structures. The way in which atoms are bound to each other to form molecules should be appreciated and the different forms of matter comprised by molecules should be discussed.

Students should have an understanding of the principle of conservation of matter as it applies to chemical and biological processes. Some understanding of the nature of the nucleus of the atom and how nuclear processes occur in chemistry and physics should be discussed.

2. Life

By the time students graduate from LC they should be able to discuss the differences between organic and inorganic states of matter, as well as contemporary theories regarding the origin of life. Also, they should be able to describe the cellular nature of organisms, the self-replicative function of cells, and the physical basis of heredity.

3. ENERGY

Every graduate from Lewis and Clark College ought to have an understanding of the concept of energy. They should be able to use the word "energy" correctly and be able to discern when it is used incorrectly. For example, they should not confuse energy with power, force, tension, or other basic concepts which have fundamentally different meaning than energy. They should be aware of the close connection between energy, heat, and work. (The First Law of Thermodynamics.)

They should also be aware that energy tends to be shared among interacting elements of a system with the result that the system naturally becomes more "disordered" as time goes by. (The Second Law of Thermodynamics.) They should have at least a passive knowledge of the term "entropy" as it is used in relating to the Second Law.

Students should be aware that energy can exist in many forms, such as kinetic energy, gravitational energy, electrical energy, chemical energy, mechanical energy, and others. They should know that to extract useful energy from any source always results in the production of "waste" products. Sometimes the waste can be recycled (with the aid of some other energy), and sometimes it can be a serious public problem.

Students should be aware of some practical sources of energy and be able to discuss topics such as fossil fuels, solar radiation, gravital, chemical, nuclear, food, etc. In particular, they should understand the need for living systems to acquire energy from food by means of chemical reactions resulting in some waste. Living systems also need matter for growth, but even without growth, they need some energy to maintain life (metabolism).

4) Motion

We believe that all students should be acquainted with the principles governing the motion of everyday objects. It is crucial that students understand the concept of inertia, the relationship between force and acceleration, velocity, and position, the notion of static equilibrium, the equality of the forces of action and reaction, and the corresponding conservation of momentum. We expect that examples could be drawn from a variety of areas possibly including bicycle riding, planetary motion, human anatomy, architectural design, and skiing. We hope that they will overcome Aristotelian tendencies to see velocity as proportional to forces and to see the motion of objects about them as displaying patterns that are both intelligible and beautiful. Students should be aware of the limitations of these principles when applied on the atomic scale.

5) Cosmology

We believe that students should have some acquaintance with the origins, condition, and possible future of the physical universe. Just as these issues are important when considering humankind they are important when considering the universe which provides the medium for humankind's existence. We would like all students to be aware of the Big Bang theory of origins and experimental evidence for it, the development of matter (i.e. the evolution of the chemical elements) that is assumed in our discussion of the structure of matter, and to consider the possible futures of the universe that are consistent with present knowledge. Steven Weinberg's The First Five Minutes might serve as an excellent reference. We expect that this will be a short component of a course but that it may have significant influence upon how people view the world.

B. METHODS OF SCIENCE

Students should be able to:

1. Demonstrate several techniques of observation and measurement.
2. Describe the role of experimental design and the use of statistical inference.
3. Distinguish between systematic and random error.
4. Demonstrate the ability to reduce data to table and graphical form.
5. Distinguish between science and technology.
6. Distinguish between applied and basic research.

C. NATURE OF SCIENTIFIC UNDERSTANDING

Students should be able to:

1. Describe the tentative nature of scientific knowledge.
2. Identify the assumptions of science.
3. Identify some of the limitations of science.
4. Relate how conceptual developments in the sciences have altered our understanding of human nature.

The Humanities

The humanities are not one field, but many. To study the humanities is to become acquainted with and involved in a wide range of human inquiry and expression. Students and teachers of the humanities study painting and quilts; symphonies and dances; sagas, songs, plays, poems and novels; histories, myths, religions and philosophical systems. We study them for several reasons: to understand the people who made them and their worlds; to become participating members of human culture, able to appreciate and continue the development of that culture; and to acquire and extend the knowledge of the world and human life which these activities provide.

The human activity studied in the humanities develops historically. In part, this development is unconscious, the result of taking part in social and cultural change we do not perceive. But criticism and interpretation also play essential roles in cultural innovation. Every generation of cultural producers assimilates the past but also transforms it. The works of the past yield new meaning in the present through interpretation. And each generation discovers limits in the thought and the sensibility of the artifacts of other times. In the works we call classics there are assumptions to be questioned, silences about cruelty and oppression to be filled in. For instance, the teacher of Locke's political theory can share his critical animus against absolutism, his excitement at the prospect

of founding government on the real and expressed needs of men, but such a teacher may well demonstrate, explain and criticize his marginalization of women and his defense of slavery. The humanities seek not only new meaning but more adequate knowledge, though the relationship between interpretation and truth are complex and controversial. If culture proceeds by the interpretation and evaluation of the past, then as participants in culture, and not merely its archivists, we must demonstrate to our students the habits and techniques of interpretation and criticism.

The flow of human expression which humanities teachers and students join is passionate, not distanced from what provokes it. In humanities courses students learn by engaging great issues, minds and texts, and by developing their own abilities to speak and listen, read and write to the fullest. The humanities are taught and learned with passion, with love for the forms of expression we are seeing and hearing, but also for the human situations which give rise to them.

Humanities Perspectives Courses

Students meet core requirements in the humanities by taking two perspectives courses designed to:

1. raise questions about what it means and has meant to be human, by studying history, philosophical and religious thought, artistic, musical and literary expression;
2. present material and perspectives from more than one discipline;
3. focus on periods, themes or issues using texts that connect and relate, that "speak" to each other;
4. provide historical, philosophical and socio-cultural contexts for texts and issues studied;
5. use interpretation and critical examination as crucial components of what we study and teach;
6. focus on language both as the mediator of meaning in written texts, and as the essential instrument of creating meaning in interpretation; that is, when we listen and read, or speak and write we are making meaning through the use of language.

WORKING GROUP ON THE SOCIAL SCIENCE PERSPECTIVES COURSES

1. Definition of the field:

The Social Science Working Group identified a series of concerns common to their disciplines:

- 1) the structure of human life and consciousness;
- 2) relationships that obtain among individuals, between individuals and society, and among societies;
- 3) the intra-individual, inter-individual, institutional, and cultural factors that shape social experience;
- 4) social change, social policy, and visions of a better world.

The social sciences share common historical and epistemological roots. Like the humanities, the social sciences focus on human social experience, but they emphasize scientific approaches to describing and explaining that experience. They share with the sciences such methodological strategies as systematic observation, quantification, controlled comparison, hypothesis-testing, and theory-building. From the humanities, some branches of the social sciences have adapted interpretive strategies and concern for language and text. The social sciences struggle with common problems such as questions of objectivity and subjectivity in conducting human research, generalizability of findings, and the significance of history for social science models.

2. Goals: Group members generally felt that they wanted students 1) to gain exposure to what social scientists do in a particular field; and 2) to gain an awareness of the development and/or distinctiveness of social scientific inquiry.

It was agreed that the current social science requirement achieves the first goal quite well. The second goal is less evenly and only superficially met in most courses that fulfil the current requirement.

To achieve both goals within the resources of the institution, the majority of the group favored the following proposal. Students would be expected to take two courses--one from Category A and one from Category B.

Category A would consist of discipline-focused courses that introduce students to the assumptions, present knowledge, and approaches of a particular social science discipline. The current introductory courses in the social sciences would meet this requirement. In addition, it was felt that instructors should be permitted to propose other beginning level courses which they felt gave students exposure to a social science discipline.

Category B would consist of division-focused courses that frame the social sciences as a distinctive mode of inquiry in the broader context of human life and thought. The group engaged in lengthy debate about different ways this requirement might be

met. Three types of courses were identified which could achieve this end:

1) courses that explore some phase of the development of social scientific inquiry, namely, the application of scientific investigation to social phenomena.

Courses in this category might include examination of social thought in key historical periods such as 5th and 4th century Greece, the European Enlightenment, and the 19th century. Courses that trace the links between historical and societal developments and the emergence of certain key ideas about human nature and social institutions would be appropriate here as well.

2) courses that focus on dominant theoretical and/or methodological approaches in the social sciences. (Narrowly defined discipline-based courses would not suffice. Some faculty stressed the notion of preparing students to be "critical and literate" consumers of the social science research that pervades our society.)

3) courses that investigate a major social issue through the lenses of several social science disciplines. Such courses should convey a sense of what unites these different approaches and distinguishes them from other forms of intellectual endeavor. They should also explore the institutional and policy links between social science investigation and the world of which it is a part.

Clearly these represent diverse options. But whether dealing with the history, epistemology, the multiple lenses of social scientific inquiry, or the status of social science itself as a societal institution, all students would attain a grasp of how the social sciences figure in the broader context of intellectual inquiry and human society.

Critical Inquiry courses engage students directly with questions of international and cross-cultural relations, of gender, and of science, society, and values. We think of these courses as "critical" in two senses of the word: they deal with issues that are crucial for the human community, and they involve modes of thought that go beyond (and may involve a critique of) traditional disciplinary theory and method. We have agreed upon the following criteria for designating existing courses (including overseas programs) as fulfilling the Critical Inquiry requirement, or for designing new courses.

1. Critical Inquiry courses focus on issues within at least one of the three areas of concern: international and cross-cultural relations; gender; and science, society, and values.
2. They are topical and/or thematic, not just surveys.
3. They are not just descriptive, but include both the comparative or creative and the evaluative dimensions.
4. They are concerned with praxis, and consider the relationship between thought and action.

Critical Inquiry courses focusing on international and cross-cultural relations must do more than simply expose students to cultures that differ from their own; they must also explore cultural differences and cross-cultural relationships. While some may focus on non-Western societies, others may examine European or Latin American societies or the cultures of American minority groups. A Critical Inquiry course on Development and Underdevelopment, for example, would concern the political economy of relationships between advanced industrial and Third World nations;

a Critical Inquiry course on Inequality would compare and contrast forms of oppression based on race, class, and gender. Critical Inquiry courses concerned with gender issues may focus on the biological, social, and cultural construction of masculinity and femininity, and/or on the social relations among women and men. A course on sex differences and social inequality, for example, would examine the biological bases of sex differences and their relationship with social forms of gender differentiation. Courses which focus on science, society and values can deal with any set of issues that address the theoretical and practical interrelationships between science and society, in so far as these affect values issues broadly construed to include values determinative, on the other hand, of personal and social views of humans and their place in the universe. Critical Inquiry courses of this type would address such issues as the eugenics movements, question of IQ, intelligence and equality, science and warfare, evolution and creationism, biomedical ethics, environmental ethics, human sociobiology, genetically based behavioral differences in males and females, religion and science, science and ideology, etc. These examples suggest that while Critical Inquiry courses may focus on only one of these crucial concerns, they may deal with an issue that involves the intersection of two or three of them.

We strongly encourage the development of interdisciplinary Critical Inquiry courses. Critical Inquiry courses differ from many courses within specific disciplines both in their critical perspective and in taking a crucial issue as their subject. These courses must be topical and/or thematic, rather than surveys;

they focus on a particular question, but explore it from a variety of perspectives and in broad historical, social, and/or cultural context. These courses should be concerned not only with "what is," but also with "what might be"--alternative possibilities derived from comparative analysis or generated through creative thought--and with "what ought to be"; students should become engaged in making judgments and scrutinizing the bases of their judgments. The relation of thought and action, too, should be considered as students examine the implications of particular positions and test out the adequacy of various solutions to problems.

Critical Inquiry courses provide students with the opportunity to focus directly upon at least one of the concerns that have been identified as priorities for the college. Questions of international and cross-cultural relations, of gender, and of science, society and values should pervade the entire curriculum, and shape the core program in particular. Yet integration of these concerns is not the same as focusing upon them. A gender-balanced course, for example, might include the experiences, perspectives, and voices of women as well as men without making the similarities and differences between them its central question; its primary focus might be on an historical or literary problem, of which gender is but one dimension. Similarly, a course that includes both Western and non-Western materials, or draws upon both dominant and minority American cultures, need not make cross-cultural relationships its primary subject; materials would be chosen for their relevance to some other question, as well as for their representative qualities. It is our conviction that matters of gender and culture shape the ways people

apprehend the world, and that teaching and learning in all fields are enriched by attention to the full range of human experience. There is heuristic value in approaching any inquiry with the assumption that gender and culture matter. To be aware of these dimensions of inquiry, however, is not the same as undertaking a systematic investigation of the differences that gender makes or of the relationships among cultures. Balancing and integration alone are not enough; students should explore these crucial areas of human concern directly and in depth.

Students will be introduced to these questions in the first-term Inquiry course. This course will be gender-balanced and cross-cultural, and will draw upon the natural sciences as well as upon the social sciences and the arts and humanities. In addition, the model course description provides that two of the three controversies with which it might be concerned would involve questions of international relations, gender, and science and values. In the Perspectives courses that follow, the points of view of other cultures and of women will be integrated into the material, but not necessarily singled out for special study. The relation of science and society bridges the divisions within which Perspectives courses will be offered, and is not central to any of the proposed syllabi. The Perspectives courses address the humanistic, natural, and social scientific methods for solving both the problems introduced in the beginning Inquiry course and the other major human problems that students consider during their college careers. The Perspectives courses deal methodologically with matters of gender, of culture, race, class, and ethnicity, and of science, and with the connections of all these matters with values; that is, their working hypothesis

is that these dimensions of inquiry are possible sources of both information for and ways of thinking about the problems under consideration. The actual relevance of these sources and modes of thought will, of course, be problem-dependent. Critical Inquiry courses differ from Perspectives courses in that they substantively as well as methodologically upon these matters; they not only approach issues with the hypothesis that gender, culture, and science matter, but subject that hypothesis itself to direct examination.

Students may take Critical Inquiry courses at any time after the initial Inquiry course, preferably during the first or second year. Like other courses in the core program, classes should be small enough to allow students to participate actively in the inquiry. A substantial number of existing courses meet the criteria for designation as Critical Inquiry courses, and many more would do so if they were modified to some degree. Specially-designed courses will strengthen the interdisciplinary dimension of the program and enable students to consider the intersection of these critical issues in theory and in practice.

SUMMARY OF CORE PROPOSAL

January 30, 1985

| CURRENT | PROPOSED |
|--------------------------|---|
| Society and Culture (3) | First Year Inquiry (1) |
| Natural sciences (2) | Natural Science Perspectives (2): Either One of each type Or Two science-major intro (Science majors strongly encouraged to take a Science and Society course as Critical or Advanced Inquiry) |
| Social Sciences (2) | |
| Creative Arts (2/3) | |
| Physical Education (1/3) | |
| Contemporary Issues (1) | Humanities and Arts Perspectives (2): At the Department's discretion one may be used in the major Social Science Perspectives (2): Either one A and one B Or two A's ...if different departments (one may count toward major) Critical Inquiry (1): One may be used in Interdisciplinary Minor Advanced Inquiry (1): At discretion of department one may be used toward major Creative Arts...as currently defined...(2/3) Physical Education...as currently defined...(1/3) |
| 9 credits | 10 credits |

Clarifications of Core Curriculum Proposal of January 30, 1985

(page 8..... Science Perspectives.....)

Students will meet this two course requirement in either of two ways:

1. Most non-majors will select one course from each of the above categories.
2. Science majors and others with similiar backgrounds may take two introductory science majors courses.

Science majors will be strongly encouraged to select one of their Critical or Advanced Inquiry courses from a list of courses emphasizing issues of science and society to be designated by faculty in the Natural Sciences Division.

(page 9.....Humanities Perspectives.....item 6.....)

6) focus on language both as the mediator of meaning in written texts, and as the essential instrument of creating meaning in written interpretation.