Chapter 12

THE DEVELOPMENT OF AN ETHIC OF SERVICE TO A PLACE

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Monroe would have dismissed such beliefs as superstition, folklore. But Ada, increasingly covetous of Ruby's learning in the ways living things inhabited this particular place, chose to view the signs as metaphoric. They were, as Ada saw them, an expression of stewardship, a means of taking care, a discipline. They provided a ritual of concern for the patterns and tendencies of the material world where it might be seen to intersect with some other world. Ultimately, she decided, the signs were a way of being alert, and under those terms she could honor them. Charles Frazier, 1997.

In higher education we work at challenging students to see issues in a framework that goes beyond the limitations of their parochial, or locally based experiences—college is meant to be a broadening experience. This is easy because, using the words of Eric Zencey (1996, 15-19), most faculty are themselves "rootless professors." Professors are supposed to belong to the world of ideas rather than places. An alternative is to see education as a deepening of local understanding. When we deepen our understanding of the places where we live, we gain a greater understanding of who we are, the intricacies of our place, and our responsibilities. Then, we may in turn have the skills to learn to appreciate and care for other places. Perhaps broadening experiences include the route of understanding the "other" via a deepening of our understanding of who and where we are. Historian Christopher Lasch (1991) claimed that allegiance to the world is ineffective because it stretches our capacity for loyalty too thin. In reality, we love particular people and places; abstract ideals need to be made concrete through loving, understanding, and caring for particular people and places.
The Calvin Environmental Assessment Program (CEAP) builds on this need to serve and show caretaking through the process of paying attention to that which is closest at hand. CEAP involves faculty across the college, but mainly in the sciences, who each dedicate regular lab sessions or projects to collecting data that contribute to an overall assessment of the environment of the campus and surroundings areas. Some of the initial findings show how the runoff from streets and yards of the surrounding neighborhoods impact the water quality of campus ponds. The open spaces created by the ponds are in turn used as recreational space by our neighbors. Thus, CEAP is increasing our understanding of what it means to be embedded in a natural and social system. CEAP is built on the philosophy that this knowledge must then be put to the service of the campus and the larger community, perhaps becoming the basis for a more community-based approach to campus planning. Ultimately, the hope of the Calvin Environmental Assessment Program is that students and faculty will become better caretakers and citizens on this piece of the creation and that they may in turn learn what it means to take care of the other places they encounter throughout their lifetimes.

**A Reformed Christian Environmental Ethic**

The overall goal of the CEAP project, to learn how to serve the creation in this place, arises from Calvin College’s roots in the Reformed Christian-faith tradition. This faith perspective calls those from within this tradition to (1) understand how the creation works, (2) make creation’s concerns our concerns, (3) develop ways of living that demand more sacrifice for us and less torture for everything else, and (4) work to redeem creation (Van Dyke, et al. 1996, 98-99). The CEAP program has as a goal the development of an environmental ethic built on the faith tradition of Calvin College. The Reformed Christian tradition emphasizes the continuity between this physical earth and any future eternal existence as well as the unity of mind, body, and spirit. Thus, there has never been a conflict between faith commitment and environmental concern. The universe is seen as itself a creation of God (Van Dyke, et al. 1996, 31). The redeeming work of Christ is thus not seen to apply only to individual humans. God’s redemptive power can be seen in all his works, including nature (Van Dyke, et al. 1996, 34-35).
Because the earth is God’s creation, its value is in glorifying God rather than just in fulfilling the use needs of humans. The creation has intrinsic value that is found outside humans and itself. God requires us to not just preserve, but to restore, bringing wholeness wherever possible (Van Dyke, et al. 1996, 48-49).

Science, Place, and Faith

CEAP is embedded in a larger discussion within the natural- and social-science academic communities over the universality versus the particularity of knowledge. Science has typically removed questions of value from the creation while valuing the development of universally applicable theories. The scientific enterprise has not been interested in complete understanding of a specifically situated phenomenon but rather emphasized partial understandings of widely dispersed but similar phenomena. This reductionism, according to its critics, has involved loss of context and applicability (Flora 1992, Kloppenburg 1991, Reisner 1992).

Local knowledge, more akin to the CEAP project, differs from scientific knowledge because it has a variety of ends rather than one, is not concerned with universal explanation, is valid only for a particular situation, and includes multiple factors rather than controlling for just one. It allows for practical experience as a valid measure of success and includes detailed knowledge of local ecological and environmental factors (Reisner 1992, 8). Local knowledge implies that understanding may be inseparable from a particular place in the sense of being embedded in the natural features of that place as well in particular labor process—environmental and social embeddedness (Kloppenburg 1991, 537). Place-based knowledge—that produced from a limited location—provides an alternative to contemporary science (Flora 1992, 93).

The Reformed Christian faith tradition has some similarities with this increased understanding of the limitations of traditional science. The Bible’s presuppositions and its doctrine of creation lead in a direction different from that of traditional science and its treatment of nature. If one confesses that God has created all, then it follows that everything is dependent on God alone for its existence; thus denying that status to anything else (Clouser 1991, 173). Hence, no matter how hard scientists try to isolate aspects of reality, all of them continue to display unbreakable connections to all the others (Clouser 1991,
Such wholeness is best understood through the emphasis on local knowledge and place.

Traditional science associates rational knowledge with certainty, truth, and justification. This rationalism in turn is founded on reductionism and the independence of individual aspects of reality. In contrast, the biblical tradition is that “knowing” is usually a function of relationships (Hart 1984, 356) for after asserting the truth of God, the Bible is mainly concerned with clarifying the ways God relates to us. God has made this the model of what it is to be rightly human (Clouser 1983, 394, 405).

Douglas Hall argues that one of the basic or foundational biblical understandings is the concept that humanity is created in the image of God. While traditional theological reflection has centered on traits possessed by humans that image God, Hall suggests that a minority tradition has identified the image of God not as a quality of being but as a quality of relationship (Hall 1988, 12-13). Hall says that this relational quality of the created order includes the natural world. This relational characteristic of our being describes our unique calling: to be in responsible relationship with God, each other, and the rest of creation (Wilkinson 1991, 285).

The Christian faith, while it has a strong element of personal commitment, demands that we soon move to the level of community, to taking care of each other. This community, especially expressed in the image of the body of Christ, is not a “building” contracted by individuals acting out of self-interest but takes on a life of its own. Suggestions of what this means are found in the New Testament. Oikonomia is a well-known word found in the New Testament. In its biblical context, it implies responsibility, care, and acting on another’s behalf. A related term, oikonomos, means steward, or the steward of a household (Goudzwaard 1992, 5). Again we find these associated concepts: household and managing wisely for the good of the community (household). This is clearer in Luke 12:35-48. The wise steward is the one taking care of the household while he waits for the master. He does not settle into complacency, eating and drinking and thinking only of himself. Rather, the wise steward gives each member of the household his or her portion of food at the proper time. He is busy taking care of the household.

While the New Testament implies a certain stewardly attitude toward resources and the rest of creation, the Old Testament in particular ties body and household images, or covenantal relationships, concretely to land resources. The
Israelites were given land by God to be kept as long as they were in a covenant relationship with him. When they repeatedly mistreated the land and/or treated their fellow community members unjustly, they were banished from community and from the land. Thus, individual ownership was affirmed, but the right to the land was directly tied to one’s relationship to God, the fruits of which were seen in the concern for brother or sister and for the land itself. The Law of Jubilee (Lev 25:10) guarded against speculation or the removal of land from these relationships and concerns. Again the connections are there: covenant, household, and house-building in association with wisdom and stewardship (taking care of the whole and of the land). Humans and land are part of an intertwined whole the expression of which is found at a level where covenantal relationships form.

The Reformed Christian tradition purports that the relationship between humans and the nonhuman world has implications for eternity. A Calvinistic interpretation of the future—that Christ’s return will bring about a new heaven and a new earth—means that Christ will restore and redeem nature as well as humans to a wholeness not seen since the Garden of Eden. The present physical reality is connected to eternal physical realities that makes our present choices relating to the land into sacred choices. In addition, the tradition connects obedience to God’s laws (most clearly expressed in the Ten Commandments) with effects on nature. Our treatment of each other and the nature of institutions are tied to the wholeness or lack of wholeness we see in nature. Perhaps the nature of the physical landscape becomes part of the ethical system of boundaries. The absence or presence of wild birds tells of obedience or disobedience. The health of a city or an institution of higher education is the measure of shalom—the coherence of people, worldview, and nature: the measure of the health of a place.

Does the commitment to a place and its intertwined relationships lend itself to alternative ways of seeing? Hassanein and Kloppenburg (1995, 727-28) contend that the development of great attentiveness to natural systems changes relationships to physical places. The process of observation and interpretation of a dynamic system leads to new ways of seeing and thinking. Those who pay attention transcend the reality of the multiple variables and acquire a wisdom that allows them to know the impact of the interrelationships of those variables. This wisdom is irreducible. Local knowledge and the practical become intertwined with the cosmological, with how one sees the world (Hassanein and
Kloppenburg 1995, 736). In this way, CEAP both reflects and enhances the tradition out of which Calvin College comes.

Wes Jackson, critic of traditional science and founder of the Land Institute, points in a similar direction. He uses Exodus 20:25 as his model. Moses has just delivered the Ten Commandments and receives instructions to build an alter of unhewn stone “for if thou lift up thy tool upon it, thou hast polluted it.” Jackson interprets this to mean that we are to be more mindful of the creation, more mindful of the original materials of the universe than in our own cleverness in using them: The scientist and the artist must remain subordinate to the larger Creation (Jackson 1987, 9). The humility he requires, grounded in the origins of the Creation, asks us to approach research and teaching as though we believed that the wisdom of nature is more important, in the long run, than the cleverness of science (Jackson 1987, 10).

He states, “There is no higher standard of your performance than the land and its natural community” (Jackson 1987, 158). The land, again, perhaps tells us the story of the measure of our faith commitments.

**History and Structure of CEAP**

CEAP arose out of cooperation between the Natural Science Division of Calvin College and the efforts of the Academically Based Service-Learning Office. Its overall goals are:

- To engage students and faculty, particularly in the sciences, in service-learning.
- To engage students in meaningful learning in a real-life context in terms of application of course material and a group-work environment.
- To use the first two goals to provide a context in which students, faculty, and the administrative planning process on campus are meaningfully linked with the surrounding community.
- To provide data for an overall environmental assessment of Calvin College and its surrounding neighborhoods.
- To engage students at all levels and across all disciplines in quality research.
- To encourage creativity, collaboration, and curriculum change across campus.
- To develop a habit of stewardship based on attentiveness to place.
CEAP’s inception came in 1997 when the science division faculty coordinator for service-learning, a geography and environmental studies professor, and the director of academically based service-learning organized a three-day summer workshop to develop the overall structure of the project. The provost’s office provided the seed money for this workshop. The initial CEAP group included nine faculty from the Geography, Physics, Biology, Chemistry, Math, and Computer Science Departments. They developed a working input-output model of the campus environment, which helped to identify different areas that needed data collection and monitoring, to visualize the environment in its totality. Participants then redesigned specific lab assignments from existing courses to contribute to the data collection on various aspects of the assessment. Faculty have submitted and received equipment grants in support of the proposed research (National Science Foundation and Dreyfus Foundation). The college also received a Universities as Citizens grant on the basis of CEAP’s development as a service-learning model.

The college supported a second workshop during the summer of 1998 to expand the group of participants. Faculty from the Engineering, English, Political Science, Geology, and Sociology Departments, as well as, the campus architect joined the previous participants, bringing the courses involved to twenty. In this second workshop, the overall direction of the project was designed to develop working groups of courses that addressed common problems, a strategy to increase Calvin’s ties and service to the surrounding community, and an effort to integrate CEAP into the college planning process. During the summer of 1999, faculty were added from the Social Work, Economics, Religion, and Communication Departments. Throughout this process of development, the motivating force for CEAP and the philosophy of the program have been clearly grounded in the Reformed Christian tradition to which the college belongs.

The Calvin Environmental Assessment Program is unique in the country in that its structure encourages multiple goals and broad-based involvement. CEAP includes over twenty courses, and more than two hundred students in some semesters, in an ongoing environmental assessment of Calvin College and its surrounding area. At the same time, CEAP involves faculty and students in interdisciplinary engagement, undergraduate research, and academically based service-learning. CEAP is a model of a strategy to meet the national need for involvement of science faculty in service-learning while also providing a
comprehensive program of undergraduate research and interdisciplinary work. CEAP’s strategy of environmental assessment that, in comparison to others, is cost effective, ongoing, and well integrated into the science curriculum gives the project long-term sustainability. In addition, the structure of CEAP allows for maximum creativity among faculty and extensive impact on students while requiring a minimum time commitment by either.

These goals of sustainability, integration into the curriculum, and minimum time commitment are accomplished through involved faculty who each dedicate regular lab sessions, course projects, or focus entire courses around collecting data that contribute to an assessment of the surrounding areas. Classes sometimes form working teams and share data and specialties, modeling real-world working-group strategies. The data forms the basis for recommended changes in campus policies, for programs that target individual behavioral changes, and for identifying issues that involve and have an impact on the adjacent neighborhoods and thus form the basis for cooperation.

The major innovation of this project is its development of a model of interdisciplinary engagement for science faculty in academically based service-learning. This model directly addresses the weakness of service-learning in general as articulated by Zlotkowski (1995)—the need to ensure its full integration into American higher education through addressing the needs of individual disciplines and allying service-learning with particular academic interest groups. While ABSL has translated well into the social sciences and the humanities, ABSL organizations nationwide, such as National Campus Compact and Michigan Campus Compact, are presently targeting SEAMS (Science, Engineering, Architecture, Math, and Computer Science) faculty. Part of the difficulty of engaging SEAMS faculty in service-learning has been the time constraints that SEAMS course material places on faculty. The subject material is not easily organized around a service-learning component. In addition, labs must cover particular techniques and topics. The structure of CEAP overcomes both time and subject-matter constraints, allowing service-learning to arise naturally out of course content.

Integration among service-learning participants happens at several levels. CEAP participants are required to attend and present at end-of-the-semester poster sessions in which all data is displayed. A keynote address, focusing on environmental issues, starts off the event. These addresses have included the campus architect who talked about the state of the campus; a speaker from the
TargetEarth organization; a Christian environmental group; a local congressman, who spoke on the environmental challenges for the next millennium; and Wendell Berry, who spoke in honor of a late Calvin English professor who, like Berry, was both a writer and a strong environmentalist. The CEAP website has been developed to be used by courses as a depository of results for use by the next semester’s courses. Its main purpose is to maintain continuity for all involved and to serve as a source of information for faculty, students, administrators, and people from outside the campus (www.calvin.edu/academic/geology/ceap/). Major integration of all these aspects of the campus take place during regular summer workshops that involve the academically based service-learning director, faculty, and student representatives of the campus environmental organization, as well as student’s involved in summer research and service-learning and staff such as the campus architect. At that time, participants share data, set goals, identify areas of interest or need; form collaborative partnerships between faculty, between courses, and with student groups; orient new faculty into the project; and work on the next year’s project proposals.

Benefits

CEAP benefits students and faculty in many ways. The CEAP program has great flexibility. Different models of learning fit different courses. One English course was entirely organized around CEAP subject matter, while most science courses include only one lab exercise. The CEAP program crosses the boundaries between academic learning and student life as well as between academic programs and campus planning. The CEAP program has increased excitement in teaching among faculty as they become connected to a larger whole. Additional faculty benefits include an increased cross-disciplinary interaction (among science faculty; between science faculty and others), less alienation from the planning process; a growing connection between word and deed; and a sense of the wholeness of research, teaching, and personal commitments. CEAP has provided a basis for getting science faculty involved in community issues based on their expertise but within the time and subject-matter constraints found within the sciences.

CEAP provides students with a greater understanding of the interdisciplinary nature of problems and the role of group work in their solutions
by providing a context within which data must be shared across disciplines and through formal working groups from different courses. For example, geography students collected data on students’ use of campus space to be analyzed by an advanced statistics class. This sharing of data forced the geography students to be thorough and pay closer attention to the reporting format of the data collection because others depended on their clarity and because it was going to be used for campus planning.

The CEAP project meets the need for increasing student involvement in research at all levels of their college careers. Currently, CEAP classes range from first year to senior level. Lower-level courses have tended to take on the task of environmental monitoring of elements such as water and air quality. Upper-level students have taken on more complex tasks. For example, general chemistry students identified problems of those earlier mentioned nutrient loads flowing into a set of college ponds from an adjacent neighborhood. A senior engineering design team proposed and designed a constructed wetland as a possible solution. A technical-writing class wrote a newsletter that discussed the issue in a general way for the people in the neighborhood.

Calvin College is situated in an environmental context, sharing its watershed with the surrounding community, as well as being situated in an urban context, subject to the zoning regulations of several municipalities. CEAP data provides a starting point for engagement with the surrounding community by providing natural links and service to surrounding municipalities, neighborhoods, and environmental groups. For example, analysis of the water quality of Calvin College’s ponds led to engagement with the surrounding neighborhoods over chemical use on lawns and to links with local environmental groups that work to ensure the quality of the larger watershed into which Calvin’s ponds drain. Concerns by neighbors over diminished property values due to proximity to Calvin’s campus were addressed through an economic-geography project that found that proximity might in fact raise property values. The conservation and enhancement of open space, wetlands, and walking paths on campus are necessary for the continued enhancement of such benefits to the adjacent neighborhood.
Care of Place and Educational Philosophy

The emphases on relationship, context, and serving the place where we live are grounded in a Reformed Christian philosophy but also find support in the work of nationally known educational philosopher Nel Noddings. She starts by taking relationship as ontologically basic, meaning that we recognize human encounter and affective response as a basic fact of human existence (Noddings 1984, 4). Moral decisions are, after all, made in real situations.

The tradition of Western philosophy typically begins with a supremely free consciousness—an aloneness and emptiness at the heart of existence—and identifies anguish as the basic human effect. The view put forth in this chapter, supported earlier by theologian Douglas Hall and by Noddings is that we are rooted in relation, with the joy of relational wholeness as a basic human effect (Noddings 1984, 6).

Wholeness of relationship involves perceptive-creative modes alongside judgmental-evaluative modes. It calls forth human judgment across a wide range of fact and feeling, and it allows for situations and conditions in which judgment may properly be put aside in favor of faith and commitment. Danger occurs when a teacher is too eager to move students into abstraction and objectivity if such a move results in detachment and loss of relationship (Noddings 1984, 182). The cared for, in this case Calvin’s natural setting, becomes a “problem” rather than something “cared-for” (Noddings 1984, 25). This is similar to Jackson’s emphases. Our cleverness and problem solving replaces our attentiveness to the place, to nature, to the cared-for. The art of teaching is turning away at the right moment from the abstract back toward the concrete. The objective mode must continually be reframed from the base of commitment. Otherwise, science begins to serve itself, detached from nature, the object of caring (Noddings 1984, 26).

The CEAP program attempts to keep this balance. Science becomes grounded in a real place. It incorporates the range of human experiences from the aesthetics of a place to water quality—always grounded in the context of place. The attentiveness that is required leads to continual grounding that ties to basic commitments and to the development of an ethical ideal.

CEAP’s goal, to develop the habit of stewardship, grows out of this attentiveness to a place. As Noddings argues, the memory of our own best moments of caring and being cared for are analogous to a transfer of learning.
(Noddings 1984, 79-80). It is our best picture of ourselves caring and being cared for in an attainable way (Noddings 1984, 80). Caretaking skills are thus developed and enhanced.

**Future Goals**

One of the future goals of CEAP is to form interdisciplinary summer research teams built on the research done during the academic year. For example, a recent CEAP workshop identified the need for a carbon-cycle working group. This group would need the following team members:

1. A biology student would develop a measure for biomass production among different groundcovers on campus.
2. A geography student would bring computer-mapping skills needed to build a geographic information system (GIS) model to map the homes of all staff and students. The GIS model would aid in building estimates of vehicles’ contribution to atmospheric CO$_2$. GIS skills are also needed to aid the biology student in mapping campus groundcover areas in order to compute the biomass production figures for the entire campus.
3. Economics and sociology students would bring skills in modeling different options for behavior change such as increasing mass-transit ridership and car pooling as well as aid in compiling figures on energy use and consumption over time.
4. A physics student would build on preliminary work on energy consumption by appliance type to construct a model of energy consumption on campus.

Other goals include increasing the natural vegetation plantings on campus. CEAP research has identified already existing rich native plant sites and has been involved in planting new sites with native species. At present, because of CEAP research, the college has invested in a wetland structure and berm that aids in filtering runoff as it comes off adjacent yards and flows into the college ponds. Native vegetation has been planted along the berm as well as on other places on campus. The CEAP program has the goal of increasing the visibility of these plots of native vegetation through educational materials that would
encourage neighbors to come and view the wildflowers at different times of the year. Several inner-city groups have requested that CEAP aid in the development of similar projects. Those sites that already exhibit unique native biodiversity are now identified, and such identification is used to hold the planning process accountable for their conservation.

The enhancement of the physical setting of Calvin College, while crucial, does not yet address another critical issue for the Calvin Environmental Assessment Program—the reduction of the waste that is produced on campus and exported to local landfills. CEAP is beginning to address this issue as well. An archaeology class, through its CEAP garbology project, has determined baseline levels for present recycling behavior. An environmental economics course has identified the necessary institutional structures needed for effective recycling programs. The recent addition of a faculty member in business and marketing provides the missing piece that could lead to dramatic changes in waste production by the campus.

CEAP has the potential of fulfilling many of the goals that Noddings puts forth as essential for good pedagogy. The emphasis should be on the development of skills that contribute to competence in caring, not on skills for vocational ends (Noddings 1984, 187). CEAP attempts to do this through the extension of its program beyond the scope of science majors. Noddings says that all students should be involved in caring apprenticeships, and these tasks should have equal status with the other tasks encountered in education (Noddings 1984, 188). Inherent in the CEAP program is its goal of caring for that which is close at hand which confirms Noddings who asks that professional structures that separate us into narrow areas of specialization be dismantled (Noddings 1984, 188). CEAP has been instrumental in increasing interdisciplinary interaction. Finally, Noddings says that subjects should be laid out along the entire range of human experience so that students may make multiple and potentially meaningful contact with it. This way, both personal and cultural aspects of the subject are revealed, including the meaning of the subject in individual lives (Noddings 1984, 191). CEAP crosses the range of human experience from religion to nature writing to water analysis; exploring the depth and breadth of what it means to glorify God through service to a place—a place that itself, in turn, glorifies God in its wholeness.
References


