

A Right to Die?

**Integrating Emotion Into
Moral Reasoning and Learning**

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Overview

A Right to Die? The Case of Dax Cowart is an interactive videodisc program developed at Carnegie Mellon University's Center for Design of Educational Computing (CDEC). The control software is written in PilotPlus to run on an IBM XT/PC, AT, or PS/2 driving a Pioneer 6000 or 4200 videodisc player and an IBM InfoWindow Touch Display system, which allows text and graphics to be overlaid on the video presentation.

Version 1.0 of the videodisc and software is available from CDEC. Earlier versions won the Best Humanities Software Award in the 1989 EDUCOM/NCRIPTAL Higher Education Software Awards Program (version 0.9) and a 1988 Merit Award from the Nebraska Videodisc Design/Production Group (version 0.1). The development of *A Right to Die? The Case of Dax Cowart* was supported in part by grants from the Claude Worthington Benedum Foundation, the Andrew W. Mellon Foundation, the Pew Memorial Trust, the Alfred P. Sloan Foundation, and equipment grants from Online Computer Systems and International Business Machines Corporation. The documentary material for the videodisc was generously provided by Dr. Robert B. White, Marie B. Gale Professor of Psychiatry at the University of Texas Medical Branch at Galveston (who produced the first documentary while Dax was still in treatment in 1974, *Please Let Me Die*) and by Concern for Dying, Inc., in New York City (who produced the later retrospective documentary in 1984, *Dax's Case*). The development team at the Center for Design of Educational Computing, Carnegie Mellon University, consisted of Preston Covey, Scott Roberts, Steven Bend, and Robert Cavalier, in consultation with Dax Cowart. This project is dedicated with special gratitude to Dax Cowart and people like him who exemplify moral experience and inquiry in their most painful forms.

The program presents the famous and now classic case of Dax Cowart, a victim of severe burns, blindness, and crippling injuries who persists under treatment to insist that he be allowed to discontinue treatment and die. Through interviews with Dax and other principals in the case (his doctors, lawyer, mother, etc.), the user investigates basic ethical issues regarding quality of life, patient interests and rights, the conflicting interests and obligations of medical professionals, etc. Throughout, the user must continually address the central dilemma:

Whether Dax should be granted his request to die and what reasons should support the decision. The videodisc program will support several hours of interactive exploration of the issues and case material. It allows the viewer to do this in two different modes. The first mode poses questions in the manner of a Socratically guided inquiry by which the user is led eventually to consider all the facts, issues, and viewpoints in the case. The program branches and questions users in order to challenge their responses with contrary views and visuals. The program uses these responses to direct the user to apt or challenging branches of inquiry and to query the consistency of an evolving position. When the viewer is asked to make a final judgment about whether or not Dax should be allowed his request to discontinue treatment and die, surprising consequences follow for either choice. When the user exits the program, answers and comments can be printed out for review. The second mode allows the user free access to video archives in which the video segments are organized by both major issues and principals. This more exploratory mode, unencumbered with questions posed by the program, can be used for review or selective browsing of the case material. The user's menu of options is outlined below:

- Introduction: Video montage: Poses the dilemma and basic task.
- Guided Inquiries: The Facts: Interactive analysis of the case narrative.
- The Issues: Interrogation follows each video segment under:
 - The Medical Professionals' Obligations
 - Pain of Treatment
 - Quality of Life Issues
 - The Patient's Rights and Capacities
- Final Position: When a final choice is made, consequences follow.
- Archives: Case Summary: For review.
- The Issues: Files relevant video segments under each issue.
- The Principals: Files the video segments under each principal.

In part because of its compelling subject matter, in part because of its interactive mode of presentation, this videodisc program has been employed in a wide variety of settings. These have included a nursing department in a community college as well as philosophy, rhetoric, writing, and general humanities courses at universities. The program has also been used within hospitals and medical schools as a learning tool for medical staff and ethics committees and in a graduate education school seminar on the design of interactive multimedia learning environments.

The videodisc can be used in a number of different ways. It has been used primarily as a stand-alone resource with individual students or small teams of students for sustained investigation of the case study and the issues it presents. The videodisc system has been used with a projector in both large classes and seminar groups as a lecture and discussion aid, similar to the use of slide carousels in the classroom. The videodisc environment is also being used as a case study in multimedia design research and in research studies of the impact and role of emotion in moral reasoning, where it provides a window on how different people reason and learn about complex, emotionally charged ethical problems in concrete contexts. The videodisc is thus suited to serve as a vehicle for educational research as well as innovative education.

Educational Problem

Students have difficulty 'respecting' ethical issues in classroom settings. It is difficult to teach *about* dilemmas in which complex ethical considerations vie for attention and resolution. Moral reflection and imagination require an experiential crucible, an analogue to the scientist's laboratory or the surgeon's theater, rich in palpable complexity that is impossible to ignore, where choices must be made under duress and uncertainty and consequences suffered. The feeling that some problems are not real until they happen to us (a costly form of education) can be obviated by sharper perception of the problems of others. Vicariously sharing others' defeat in the face of problems incapable of clear or felicitous solution, problems of surprising dimensions, undercuts the often facile, judgmental reactions that controversial questions raise in both the political arena and the classroom. It is understandably hard for students to perceive problems that they have not experienced.

I taught Dax's case, in narrative form, for six years and have taught ethics for two decades. My students had the most difficulty with three dimensions of the enterprise: (1) motivation for the rigors of analysis and argument on abstract conceptual and theoretical points; (2) the imaginative challenge to identify with the viewpoints of people whose experience or dilemmas they did not happen (yet) in fact to share; and (3) the ability to identify and sort out their own conflicted values. Students have been known to giggle at the suggestion that lying is wrong, deny any notion of 'free will' as if it meant nothing to them, argue that any desire to die reflects only insanity -- or, with equally disingenuous perversity, cleave absolutistically to the contrary views. These three difficult challenges are basic requirements for ethical inquiry. (3) and (2) are prerequisites to (1). Vivid experience, direct or vicarious--*and* the opportunity to reflect on it--opens the way to (3) and (2). At present, I have only anecdotal evidence and my own

observation that one way to students' minds, in ethics at least, is through their hearts and senses. Robert Coles (*The Call of Stories*), J. Anthony Lucas (*Common Ground*) and others attest the power of human stories at close quarters to open both our hearts and our minds to controversies that rend our souls and society alike. The content added in the videodisc is visual as opposed to narrative. It poses its own difficulties, the difficulties of opening too many (as opposed to too few) channels at once. Some students object that the material is too strong and upsetting. We must deal with this difficulty. The larger learning context, instructor- and peer-support in the use of the videodisc, like a field trip to clinical settings, is crucial; the total social-instructional environment must be considered. In the meantime, this difficulty is preferable to disrespect for the issues. One apologetic reply is, *Such is life -- that is just the point.*

Non scholae, sed vitae dicimus (Not for school, but for life do we learn -- *Epistolae Morales*). The study of ethics is too often academic and speculative in the worst senses of those terms. In serious science education we expect students to handle apparatus and process data that is rich in both quantity and quality. In ethics we typically rely on intellectual apparatus alone and demand neither quantity nor quality in the data to be explained. Nor are we accustomed to introducing *hard* or *raw* data into our studies, being more comfortable with those abstract commodities of detached academic discourse: well-formed propositions, reasons, concepts, and denatured case studies. These are not enough, if our aim is education for life in the wider world rather than life in the privileged and insulated groves of academe.

Consider the analogy: We do not attempt to teach science by acquainting students with 'scientific method' through books and hot-air disputations (even in most high schools). We do not teach scientific theory abstracted from some hands-on experience with how it is constructed. Science education involves not only the theoretical content of science, but also its art, its craft, its texture, its headaches and frustrations. Put another way, we would not think of *credentialing* scientists, engineers, surgeons, or other artists without providing them some hands-on experience with the actual stuff and rude realities of 'real life' practice.

Consider the contrast: Ethics is typically taught by exposing students, through books and hot-air disputations, to verbiage. The verbiage is presumably articulate, insightful, and about matters of great concern or practical import. But it is typically occupied with the analysis of abstract ideas about these matters. In life, ethical problems come trammelled with confounding immediacy, detail, and emotion; whereas the classroom is experientially barren, devoid of the stuff of moral experience, with meager data in minute quantity, problems faintly viewed at

grand theoretical distances, and propositions analyzed to a practically impotent fare-thee-well.

The problem in the discipline of philosophy that our videodisc addresses is not just that ethics is often poorly taught as a useful reflective discipline for life, as a reflective vessel for moral growth. The abstract, denatured practice of academic study makes for bad, armchair theory as well. Academic ethics is typically preoccupied with its own abstract conceits and grossly underwhelmed by the data and realities of moral experience. It might be fair to say that ethical theory has achieved the maturity of classical mechanics, by virtue of ignoring large confounding dimensions of human experience. This is conspicuously the case in how poorly ethical theory takes account of human emotion and sensibility, problematic forces -- and invaluable resources -- in moral affairs. Apart from a few classical thinkers (for example, Aristotle, Hume) and a recent growing literature (creditable in large part to feminist thinkers and female philosophers), feelings have been disparaged as mere sources of fallacy and bias, forces to be neutralized or overcome in moral reflection.

The limitations of rational decision models are not even as fully acknowledged in ethical theory as they are in economic or political ones. It is perhaps ironic that a recently acclaimed and contentious book, *Passion Within Reason: The Strategic Role of the Emotions*, was written by an economist (Frank, 1988). The functional and evidence-bearing roles of emotion in ethical reasoning requires more critical study than it has received in philosophy. *Interactive* environments that elicit confounding feelings can also serve as laboratories for this study, as ours does and will. Philosophers need to become more involved with the empirical dimensions of ethics; for example, observing how learners in fact wrestle with ethical issues under emotional duress. An interactive video environment provides one window on this process.

Too many real-world problems for which we aim to equip our students are not well captured in books, lectures, or class discussion. These media cannot always *simulate* the practical realities or *stimulate* the human sensibilities that motivate and confound political or ethical dilemmas. Typical students lack one important commodity for learning: life experience - - or enough of it. Typical academic settings lack adequate means to provide this commodity. In academic terms, the lack is one of sufficient *data* and *context* -- particularly in areas like ethics or politics, where much of the essential data and context are perceptual, experiential, even emotional.

Too often students (and teachers) approach the consideration of moral dilemmas as abstract, academic exercises, devoid of the excruciating perplexities of real life moral choices. For an example of the discrepancies between abstract description and palpable perception of relevant

'fact' or 'information' in ethical dilemmas, consider the case of Dax Cowart: Dax was a young man involved in a tragic accident that took his sight and left him without the use of his hands. In addition, as part of his burn therapy, he was for fourteen months subjected to daily, painful antiseptic washings. Dax asked - indeed, demanded - to have the treatments discontinued. This would certainly result in massive infection and death; a fact that he knew. The dilemma: Does Dax have a right to refuse treatments that would certainly save his life, although they would leave him a blind cripple? Would his right to die entail a right against some nameable person who then would be obligated to help him to die? What do you need to know, consider, and weigh in order to decide such an issue?

Here is a simple example of the sort of qualitative and affective information that is difficult to convey by non-visual media: The narrative facts of Dax's case tell us that Dax's hands are nearly useless, that his treatment is extremely painful, that his mother and doctors refuse to release Dax from treatment, contrary to his own articulate demands. The qualitative realities behind these facts are vividly evident in the program's visuals. Visualization conveys a direct sense of crucial questions: *How* useless are Dax's hands? *How* painful is his treatment? *How* uncertain does the future quality of his life *seem*? How do his mother and doctors *feel* about letting Dax die without treatment? How lucid is Dax? And, as you *see* it, would *you* be willing to undergo Dax's treatment and lead his life? As you *see* it, would *you* be willing to take active measures to let or help Dax die? Some problems must be seen to be imagined, to be analyzed responsibly, to be resolved sensitively. Visual material conveys the sort of raw, experiential data required by our moral sensorium for responsible analysis of ethical issues; that is, analysis that is *responsive to* the emotional and practical burdens of all parties to the case.

For six years I presented this case using traditional narrative case study materials. The typical result was that students had difficulty 'seeing' and aptly representing the ethical problems and conflicting viewpoints in the case. No surprise. How can we expect them to construct an apt and compelling representation of an ethical problem or viewpoint from a denatured case abstract? The needed but often neglected resource in moral education is palpable, concretely situated experience. As Robert Fullinwider (1988) has observed,

If moral learning is essentially learning by doing, then *the central and ongoing resource for moral education is experience, real or vicarious* . . . [In school] limitations of time, place, resources and structure mean that any major broadening of moral experience must come by way of vicariously living through the moral lives of others . . . in literature . . . history . . . through stories [emphasis mine].

The lack of an experiential base for moral education is compounded by our historical ambivalence about the role of emotion in ethical reasoning. A myth perpetrated by conventional wisdom or the typical logic textbook is: We must always deliberate impartially and unemotionally. In actual fact, we do not and we can not, in any strict sense. This is at best a simplistic rule of thumb. Impartiality is a formal ideal. In our fallibility, in material reality, we weigh a plurality of partialities and interests. The question is how we do so, or best learn to do so, appropriately. Emotions are, literally, *informative*. Our sensibilities inform our moral perceptions and are informed in turn by pragmatic experience beyond anything that we can fully analyze. Anger can be *prima facie* evidence of wrongdoing. Fear may carry an accurate perception of risk or threat. Emotional hurt, like physical pain, may accurately signal important harm. Our emotions alert us to the very commodities we seek to protect by any system of moral rules: our interests, our values, what-all, upon reflection, we most care about.

One challenge, the challenge we attempt to address with the videodisc, is to accommodate and integrate both emotion and reason in moral education. The consequences of a decision, action, policy, or general rule cannot be assessed without a vivid representation of the interests of others. The trick is not simply to learn to put yourself in the other person's 'shoes' or circumstance, but to learn to put yourself in another's 'skin,' perspective or feelings. Knowing what *I* would do in your situation does not necessarily let me understand what *you* happen to feel in your situation. Ethics demands more intellectual and emotional work on my part. To represent an ethical issue, to perceive that there exists an ethical problem, requires an appreciation of what is at stake, of the threatened values and interests of all affected stakeholders. This task is essential even to our most theoretical speculations as well as to our deliberations in the most concrete of situations.

We may situate this task of moral education in the larger context of our hopes for moral and cultural progress, characterized by Richard Rorty as progress *in the direction of greater human solidarity*. In *Contingency, Irony, and Solidarity*, Rorty characterizes the root of human solidarity in a way that is perfectly apposite to the intended function of the videodisc about Dax Cowart and the other stake-holders in his troubling case, as *a matter of imaginative identification with the details of others' lives* (Rorty, 1989). One problem addressed by the videodisc is how to facilitate such imaginative identification and its attendant empathic skills, to serve as an object lesson on the path to greater human solidarity in a pluralistic world.

Educational Solution

A Right to Die? The Case of Dax Cowart is one of a series of videodiscs conceived under the title *Project THEORIA*. As an acronym, *THEORIA* stands for "Testing Hypotheses in Ethics/Esthetics: Observation, Realism, Imagination, and Affect." One goal of the project is to vivify issues in ethics with visually rich case material. Project *THEORIA* aims to capture and facilitate the original Greek root of both "theater" and "theory," the act of reflective observation. The aim is to design a theater wherein viewpoints or bias, hypotheses or theories about human values can be challenged by one's own direct observation.

With all its powers, the computer cannot contribute much to the learning of open-ended subjects like moral philosophy . . . fields of knowledge that cannot be reduced to formal rules and procedures. Derek Bok's allegation (1985) is certainly true in its second claim. And the second claim may seem good reason for believing the first, if one's model is the computer as expert system or automated tutor, the computer as teacher. But if one takes seriously the model of the computer as navigational aid and experiential learning environment (as persuasively described and positively assessed by Bok in the self-same paper), then the first claim hardly follows. The computer can provide new channels to moral experience, new stimuli to moral imagination, as well as new opportunities for reflection on that experience.

The contribution to moral education that our videodisc attempts to exemplify is a dimension of moral learning that is lacking in typical academic study: access to the rich, affecting data of 'real life' dilemmas that reveal our own conflicted values and allow us to identify with those of others. In *Teaching Values in College*, Richard Morrill (1981) provides a sensible framework for values education, consisting of three dimensions: *values analysis*, the explicit articulation of the values, principles, and concepts that underlie our value judgments and choices (a priority of traditional ethics courses); *values consciousness*, where two crucial components are self-knowledge (discovering and 'owning' one's own often inchoate, contesting values) and empathy (coming to identify with or understand others' values); and *values criticism*, raising questions about the values posited or discovered (another priority of traditional ethics courses).

Values consciousness is a difficult objective to define and attain in academic settings, but it is crucially material to the analytic and critical dimensions of moral learning. Our videodisc aims to provide a model environment for exploring this difficult experiential dimension, a sensorium to complement other less vivid or less interactive media, a channel to experience, a route to inquiry that the students otherwise lack, with opportunity for interactive reflection. In

particular, we aim to provoke and accomodate rich and perplexing emotional responses in the very process of ethical reasoning.

Pace the conventional wisdom that warns against emotional bias and fallacies, our emotions provide essential data for moral learning. The difficult moral balancing act, the weighing and balancing of emotions and reasons together, can be learned only by doing. Interactive video provides a theater for practice and a safe exploratorium, for engaging emotions and reflecting critically on how emotions are informative, for addressing one major challenge in moral education: finding ways to accomodate, integrate, and balance both emotion and reason, both powerful experience and careful reflection. But the medium of interactive video provides a special kind of theater; it combines, in one technology, the experiential *impact* of television or film, the power of dramatic *visualization* to extend the moral imagination, with the freedom of movement and *control* afforded by the computer. The computer allows issues that are vividly experienced to be carefully weighed and reflectively explored.

Interactive video is a hybrid medium that can *complement* more traditional media to provide students a richer experiential resource for extending their moral imagination and exploring their own and others' values. The evident advantage of interactive video over other media as a vehicle for delivering the stuff of vicarious experience is its *combination* of two crucial features of experiential learning: compelling *visual* experience -- like film, but unlike books -- to extend the moral imagination where vivid first-hand experience is lacking; and computer *interaction* to challenge the viewer and to afford the viewer control over the material, to enable reflection -- like books, but unlike film.

I try to bring the reader up close, so close that his empathy puts him in the shoes of the characters. You hope when he closes the book that his own character is influenced (William Carlos Williams, in Coles, 1987). The videodisc is designed as a supplement to courses that treat ethical issues, a sensorium for moral reflection and inquiry. The objective is not to teach a body of theory or concepts, nor to change users' ethical views, but to bring learners 'up close' to the human realities, moral perplexities, conflicted perspectives and sensibilities that confound our best efforts to chart and lead decent human lives. Whatever one's views in ethics, they require testing in the crucible of hard moral experience, experience often lacking in callow youth, experience that is not supplied in most classroom regimens.

The lessons taught by the videodisc, if lessons they be, are lessons in the imagination,

sensibilities, and empathy required of competent moral judgment and reasoning; lessons in one singularly necessary condition of ethical reasoning or theorizing: the vivid representation of the interests of others, the appreciation of the moral and practical straits that--but for the grace of fickle fate or our own feckless imagination--afflict us all, our common ground for negotiating conflict in community, without which we have only a community in conflict. A second objective, ironic as it may seem, is to bring users 'up close' to their very own (often inchoate and conflicted) values; to induce the self-knowledge and intimate reflection on one's own sensibilities so often neglected or impossible in abstract academic study, which suffers from what Robert Coles (1987) terms *the ever present temptation of the intellect to distance anything and everything from itself through endless generalizations* (one's own values included).

Dax Cowart's request to die poses the kind of hard choice and hard case that makes or breaks our theories about what is right, best, or decent to do. Hard cases in ethics are born of rude realities, perplexing feelings, and conflicted viewpoints. But those rude realities rarely invade the groves of academe, while studied reflection is rarely afforded amidst the pressures of practical life. The videodisc aims to help bridge this gap between theory and practice, thought and feeling; to stimulate and simulate crucial conditions of moral reasoning in ways that other media cannot. Competent moral reasoning requires more than skilled ratiocination, *inter alia*: empathy, which presupposes the vivid representation of the interests of others; practiced confrontation with hard facts, unforeseen consequences, and strong feelings; active deliberation under the duress of hard choices; an appeal, at once, to our senses, sensibilities, and minds; with opportunity for challenge and reflection.

Exposure both to the affecting realities of 'real life' situations and to the reflective opportunities afforded by academic study, the integration of emotional reaction and reflective reasoning about ethical issues, and the imaginative identification with the experiences and interests of others are the videodisc's basic objectives. We assume that the *integration* of emotional response and reflective analysis is a higher-order (more complex) skill than the dispassionate analysis of arguments and issues by the lights of ethical theory alone; and that, in 'real' as opposed to academic life, imaginative identification with others is presupposed by any competent rational reconstruction and critique of their arguments.

Impact: Lessons Learned

The content of the program is neither the theory nor the concepts of ethics, but experiential data that any ethical theory or analysis must first behold in order to explain. The content is visual case material not delivered by ethics textbooks or other classroom media. The purpose of the program's content is not primarily to instruct, but to inform students' experience.

Five decades of research suggest that there are no learning benefits to be gained from employing different media in instruction, regardless of their obviously attractive features or advertised superiority . . . media are mere vehicles that deliver instruction but do not influence student achievement any more than a truck that delivers our groceries causes changes in nutrition (Clark, 1983).

There is some ambiguity in the term *media*. If we grant this ambiguity, Richard Clark's notorious truck metaphor is useful for gainsaying or at least limiting his generalization, which (to be fair) applies to formal instruction in the formal content and methods of science and mathematics. We need to ask: What if certain groceries are not delivered at all? Nutrition will surely suffer. The aim of our videodisc is to deliver experiential content of a sort not deliverable by non-visual, non-interactive media. For delivering vivid experience as well as reflective control, for exploiting the combined power of visualization and interactivity, interactive video is a vehicle without obvious alternatives.

I described above the *a priori* theory that informed our design of this new theater for ethical case study. Our first formative efforts to appraise the impact of the use of the videodisc by students and medical professionals were limited to subjective questionnaires and debriefing.

During development in 1987-88, we field-tested the videodisc with over two dozen professional-level users (Dax Cowart himself, representatives of Concern for Dying in NYC, our psychiatric consultant, doctors, nurses, a hospital ethics committee, media design experts, ethicists and other university faculty) as well as a small sample of students whom we observed and queried on their experience with the disc. In the fall and spring terms of 1988-89 we deployed the revised pilot version of the program (0.9) with undergraduate students in two Carnegie Mellon ethics classes and with volunteer undergraduate nursing students at the Community College of Allegheny County (CCAC).

About 70% of our undergraduate users (who, by the way, were deliberately given no manual or briefing for use of the videodisc) objected to being required to give "Yes/No" answers to

questions in the Guided Inquiries: the issues, they reminded us, are not black or white, but gray and fuzzy. These students did not perceive the obviousness of this point to the developers or the intended heuristic value of said questions. This was a problem: a naive inquirer should not be given any grounds for thinking the developers naive. We have subsequently changed this interface feature to a Likert-type scale in order to expressly allow shades of conviction and hypothesis as appropriate responses. To the other students and all of our professional-level reviewers the "Yes/No" mechanism was transparent as a heuristic for guiding their hypothesizing, for registering their inclinations. The epitome was a sophomore engineering student at a public demonstration who kept a large audience engaged in animated controversy as he plied the pathways of the disc unencumbered by its mechanisms.

Apart from that feature, our initial audiences unanimously found the videodisc motivationally powerful and preferable to either narrative accounts or the linear video documentaries (which most had viewed beforehand). They found the disc to be more engaging, because self-paced, and more challenging, because of its combination of vivid confrontation and reflective opportunity. Few saw the point of the disc to be to change their minds or to argue any particular resolution to any dilemma; those who did only browsed the contents selectively. Most commented that they discovered a lot about their own dispositions and values and that they appreciated the opportunity to do so in private. Most remarked that the content made them less sure of what they believed, even if it did not change their minds; that the visual material showed the pregnancy and protean complexities of the bare narrative 'facts' of the case. Most had very unsympathetic reactions to Dax's doctors (as they do with the documentary presentations), although this fact did not lead them to belittle the dilemma those doctors faced. Some students complained that the material was too strong and hard to view.

This summary of users reactions is gleaned merely from the students responses to our questionnaires and conversation after the fact. On the whole, these subjective reports and our own observations on the scene are in the ballpark of what we would hope and expect, but ultimately they are just that, subjective reports, as arguably informative as the students' claims that my logic class has made them 'more logical' or that our class discussions were extremely stimulating -- which I'm often sure is in some important sense the case but endlessly questionable. One merit of the videodisc environment, which most users and reviewers have remarked, is that it provides a valuable new opportunity to query and even research our own and others reactions to powerful material on difficult ethical issues in simulated 'real time.' But we have a long way to go to understand its impact as well as the moral

reasoning and learning processes upon which it purports to have positive impact. There is little evidence that anyone has developed or could develop ultimately clear objectives or success criteria in these *essentially contested* areas (cf. Gallie, 1968).

During these formative years, no attempt was made to compare the performance of videodisc users with non-users on any common assigned task of moral learning. But in 1989-90, Robert Kozma of the University of Michigan, while on sabbatical at Carnegie Mellon as a Dana Fellow in Educational Computing in the Humanities, collaborated with the author and Richard Young, a professor of rhetoric, on a formal evaluation project. Our subjects were university students from Young's Argument & Controversy course and practicing professionals enrolled in the Medical Ethics Masters Program at the University of Pittsburgh. The goal of this study (whose published results are yet forthcoming at this writing) was to compare and document the impact of this medium with learning from 'informationally equivalent' presentations in two other media more frequently used in education, linear video and text. In particular, our objectives are to:

- describe the cognitive processes of students confronted with a complex moral task
- identify the relative impact of three media (interactive video, linear video, and text) on these processes and on learning outcomes
- examine the interaction between various individual student characteristics and these media as they affect cognitive processes and learning outcomes.

A comprehensive effort to evaluate the impact and educational utility of the videodisc will be long-term, if only because the modes of use (as a stand-alone resource or as a classroom presentational aid), possible audiences and settings (undergraduate ethics courses, writing courses, graduate or in-service professional courses), and allied tasks (for example, paper assignments, group role-playing as an ethics committee, specific tasks testing the cognitive and affective dimensions of moral learning) are so diverse. Another reason that assessment will be a long march is that there are several research agendas in terms of which to try to understand the videodisc's impact (for example, theories of ethical and cognitive development, gender differences in moral epistemology, moral controversy and the role of emotions therein). There is a good decade's work here. And we need follow-on efforts, a series of refinements as well as similar applications in ethics, as vehicles.

The intended audience for the videodisc is broadly postsecondary. We are collaterally testing the videodisc with two levels of audience: professionals (medical, university faculty) and undergraduate students. Our notion is that the program and its content must pass muster in both undergraduate and professional education and the continuum between. The feasibility of this ambition is based on the assumption that visual media generally (film, TV) have a very wide 'bandwidth,' the ability to communicate meaningfully albeit variously with audiences of diverse interests, maturity, and background. But, even if correct, this assumption does not obviate the need to be sensitive to designs that may serve one part of the audience spectrum better than another. For example, the videodisc does better, all things considered, with faculty and medical professionals than with undergraduate or (young) nursing students. One hypothesis is that the former are more mature methodologically, more able to balance competing hypotheses and conflicting intuitions when confronted with open-ended issues and confounding experience.

This points to one important dimension of future work: incorporating inquisitorial as well as navigational aids into the environment, heuristics that would illuminate the methodology of ethical inquiry. Our future efforts will expand on the current model of the videodisc as a moral sensorium and incorporate more explicit instruction in method and conceptual analysis. But the priority of this first foray into the interactive video medium for ethics is to emphasize *the primacy of experience*, to remediate and allow recovery from the abstraction of academic ethics. Merleau-Ponty's observation (1964) applies equally across the broad spectrum of our intended audience, in ethics as in other domains of human inquiry:

The idea of going straight to the essence of the thing is an inconsistent idea if one thinks about it. What is given is a route, an experience which gradually clarifies itself and proceeds by dialogue with itself and with others.

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