PROJECT THEORIA -- Interactive Video Media for Ethical Reasoning

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PROJECT THEORIA

- Interactive Video Media for Ethical Reasoning -

Testing Hypotheses in Ethics:
Observation, Realism, Imagination, and Affect

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Project Abstract

Learning the art of ethical reasoning, like the art of surgery, requires at the very least an operating theater; like the art of scientific inquiry, a laboratory. Our project is to develop interactive video media to provide analogues of these facilities and 'hands on' experience in the relevant skills.

Our focus will not be on theory, but on its crux: hypothesis testing — and all that this down-to-earth activity ordinarily entails: acute, analytical observation; attention to reality; a good dose of imaginative experimentation; and a respect for the human sensorium, its rich and problematic data (which, in ethics, includes the perplexing deliverances of our feelings).

We will develop an interactive videodisc on the topic of euthanasia

1. To simulate the multiple perspectives, sensations, perceptions, and feelings that must inform our reflective moral experience (whatever the topic) and

2. To stimulate the cognitive and affective skills required for reflective reasoning, weighing and balancing evidence, principled decision-making, and competent moral judgment in realistic problem settings, under realistic duress.

Students using our videodisc will be cast in the role of a hospital ethics committee member who must deliberate whether to allow a severe burn victim to die, as he wishes. The Level III program will allow Socratically guided exploratory tours of rich case material, both documentary and dramatized. A Notebook facility will allow the student to make notes or draft material for associated paper assignments.

For classroom use, the videodisc will include a Level O linear presentation of "Dax's Case," the case upon which our simulated material will be based, and a Level I program allowing selected tours through the case material from the perspectives of different principals (on the Roshomon model).

We will also produce a textbook, Values, Facts, and Feelings: A Pragmatic Guide to Ethical Inquiry, a companion Study Guide, and an Instructor's Manual.
1. Project Summary

1.1. Significance: Innovation and Approach

This project is innovative in part because it exploits interactive video technology in the humanities and in an area, ethics, where technological applications are unheard of if not anathema. But the heart of the project is not its technological vehicle but its vision of how a crucial subject, ethics, can better be learned and explored.

We propose an approach and an exploratory environment for ethical inquiry that is innovative in two respects:

1. With regard to the topical subject matter, applied ethics, and in particular issues of euthanasia, the project is innovative in bringing the full richness and reality of the case material to bear in a visual and interactive learning environment.

2. But the topical subject matter, important as it is in itself, doubles as a vehicle for a deeper agenda: the project is innovative in exploiting the data-rich 'theater' of interactive video media

• to simulate the full-blown, perplexing mix of perspectives, sensations, perceptions, and feelings that typify our moral 'reality,' our reflective moral experience (whatever the topic)

• to vigorously test and stimulate the observational, affective, and analytical skills required for reflective reasoning, the weighing and balancing of evidence, principled decision-making, and competent ethical judgment in all their dimensions, in realistic contexts, under realistic duress.

Our technological vehicle, interactive video, makes possible — perhaps in a unique way — a powerful experiential approach to ethical reasoning within traditional academic settings.

1.2. Significance: Audience and Impact

We expect that our videodisc programs (including a Level 0 documentary on the case of Donald Cowart, a Level I presentation, a' la Roshomon, of conflicting perspectives on the case for classroom use and guided discussion, and a Level III program allowing varied, guided exploratory investigations of the case and associated issues) will have value for a wide range of audiences, including:

• community college or college undergraduates in general and applied ethics, critical thinking and other applied philosophy courses;

• professional students in nursing, health care and administration, and
medicine;
• practicing professionals in clinical settings;
• graduate students (in applied philosophy, biomedical ethics . . .), who as interns in applied settings (such as those fostered by Bowling Green State University) or as future teachers will learn from both the innovative delivery system and our innovative approach to the problems of ethical reasoning;
• adult learners in non-traditional programs or members of the public given access to the videodisc through public or college libraries.

We also project that our videodisc package will have innovative impact on two levels or dimensions of the teaching of ethics/applied philosophy:

1. The topical agenda of biomedical ethics and how it is taught, particularly as regards the use of interactive video presentation of case material.

2. The teaching of ethical reasoning and critical thinking generally, particularly as regards attention to the affective dimension of critical inquiry in ethics, observational skills, and the roles of imagination and sensibility in testing hypotheses in ethics.

1.3. Collaborators

The project involves collaboration among: a research and script development team at the Center for Design of Educational Computing, Carnegie-Mellon University; a video production team at WQED, Pittsburgh; a videodisc design and production team at MetaMedia/On-Line Systems in Maryland; Concern for the Dying in New York (the source of our documentary material); an evaluation team at the Center for Instructional Development and Evaluation, University of Maryland; the promotion and distribution facilities of the Great Plains Library for Interactive Television; and an advisory panel of six distinguished content and technical consultants, including Mr. Donald 'Dax' Cowart, the burn victim whose case is the basis for our videodisc programs.

1.4. Principals

The project will be led and administered by Dr. Preston K. Covey, Director of the Center for Design of Educational Computing and Associate Professor of Philosophy at Carnegie-Mellon University.

Dr. Robert Cavalier, Assistant Professor of Philosophy at Towson State University, will coordinate the schedule and activities of the various teams while working on
1.5. Project Schedule

The project will begin in June 1986, without Annenberg funding, supported mainly by the Center for Design of Educational Computing, Carnegie-Mellon University. This is to allow the research and script development team to draft script material in advance of the design treatment work in the fall of 1986.

Project activities supported by the requested Annenberg/CPB funding begin in the fall of 1986 and proceed through December 1987 in the following stages:

1. Design Treatment, Fall 1986
   (Including research, scripting, detailed storyboarding, interactive authoring, programming design, and formative evaluation.)

2. Production, Winter/Spring 1987
   - Preproduction and Video Production (WQED)
   - Videodisc Production (MetaMedia)
   (Including premastering, mastering, replicas, and packaging.)

3. Workshops for test-site faculty, Summer 1987

4. Test-Site Implementation, Fall 1987

5. Summative Evaluation, Fall 1987

6. Distribution, Fall 1987 - Winter 1988
   (Promotion will begin Spring 1987.)

1.6. Test Sites

Our test sites include a representative variety of schools, both large and small, public and private, religiously affiliated and secular:

1. Carlow College, Pittsburgh

2. Georgetown University, Washington DC

3. University of Maryland, College Park

4. University of Notre Dame, South Bend IN

5. Case Western Reserve University Hospital, Cleveland

6. Queensborough Community College, NYC
1.7. Products

The project's products will include:

1. The videodisc itself, which will contain three programs:
   - A Level O linear program containing the video documentary "Dax's Case."
   - A Level I interactive program for selective classroom presentations.
   - A Level III interactive program allowing varied exploratory tours through case material by students.

(The contents of these programs are described briefly below.)

2. A NoteBook Program and Disk.

A word-processing desktop accessory program bundled around the Level III video program. This utility, which will appear as a window on the screen, will allow the viewer to write down impressions, comments, etc. A printout and file transfer function will also be available. This can be used to produce draft material for papers.

3. Ancillary materials included with the videodisc package:
   - A Study Guide for viewers.
   - An Instructor’s Manual.


1.8. The Videodisc Programs

The videodisc programs will contain the following:

1. The Level I Program

This program will contain programmed tours (a’ la *Roshomon*) of contrasting perspectives on a patient who wishes to be allowed to die: the patient's own, medical staff, family, members of the hospital ethics committee. The tour can be used by a teacher (with the class viewing the monitor) for the purposes of eliciting guided responses to the issue at hand. For example, one set of sequences can involve the patient’s perspective; another can show the doctor’s perspective. The complexity of the issue can emerge as the various angles develop. Thematic discussions of, for example, autonomy and paternalism can be vividly contrasted through the development of a hypothetical case of a 26 year old burn victim. The case, in this level and in level III, is based upon the actual case of Donald "Dax" Cowart ("Please Let Me Die" and "Dax's Case").

2. The Level III Program
The exploratory tours on this level will involve the following general elements. The setting will be a simulated ethics committee meeting of nine members, eight in the program plus the viewer. The hypothetical case is used to explore the parameters of the entire issue of euthanasia. The committee members are evenly divided in their reasons and attitudes (thus leaving the viewer in the position of deciding the committee's majority recommendation). These committee members will serve as Socratic guides, providing counter-examples, analogies, and dialectical exchanges. The situation, which can include visits to the patient and family as well as consultation with doctors, nurses, social workers, and clergy, unfolds according to the decisions that the viewer makes. The program will contain many possible scenarios and the disc tours can lead to several possible resolutions to the problem.

While the material for this program will be primarily dramatized 'documentary', it will include real documentary scenes depicting the treatment employed in the Donald Cowart case on which our own case treatment will be based, with Mr. Cowart as consultant.

3. The Level 0 Program

This contains "Dax's Case," a video documentary of Donald Cowart's actual case history. Eleven years after his accident, Dax has built a life for himself, despite his disfigurement and the loss of his fingers, sight and partial hearing. Interviews with Dax, his wife, his mother, his physicians, his lawyer, a friend, and a nurse, along with footage from the original "burn tape," recount and reevaluate the religious, ethical, legal, and personal dynamics that led to his being treated against his wishes. Dax still feels very strongly that he should not have been forced to endure the painful treatments required by those charged with his care.
2. Context and Significance

In this section, I take the liberty of stepping into informal first-person address, for easier recourse to anecdote and personal observation.

It also seems natural to combine the mandated sections on Significance and Context, since significance in any case is context-dependent; at least this is a regulative assumption of our whole project.

The relevant contexts for comparison (ethics, teaching ethical reasoning, philosophic problems in ethical reasoning, educational strategies exploiting visualization, cognitive psych research on instructional functions of visualization, educational applications of video technology, etc.) and the associated points of significance cannot possibly be justly dealt with in reasonable space.

I will be very selective, trying to pick points of significance that are representative, illustrative, and (I hope, richly) suggestive.

My observations will perforce be suggestive, neither analyzed nor argued. Given another 100 or so pages, I would be glad to oblige those who feel the need for the latter.

After reading this and the following section (Significance and Impact), you may want to refer immediately to Appendix I on sample material.

2.1. Some Observations from Teaching Ethics

Like a lot of observations derived from personal experience, I expect mine to find some resonance and confirmation in the experience of my colleagues.

For several years teaching ethics in university was my main mission in professional life. Then came a day when I lost interest in academic ethics. As if I had been trying to teach surgery without an operating theater, by lecture, textbook, and discussion; or natural science without laboratory and apparatus.

2.1.1. The Breach: Teaching About vs. Learning To Do

The problem was obvious: I simply discovered that I wasn’t interested in teaching about ethical issues, about how we might best reason about ethical issues, or about what philosophers think ethical reasoning is; what really engaged me was how students could be helped to learn to do ethics — to learn how to do better what
philosophers and others do when they wrestle well with ethical issues.

(When it comes to questions of how to do philosophy or, say, proceed in ethical inquiry, whether there's 'objectivity', truth or method to the madness, it's best to look closely, not only at what philosophers say, but at what they do when they work, write, debate... especially in applied contexts. Unfortunately, such an 'empirical' approach to the matter is apparently not widely in favor in my profession.)

More than that, I wanted to help students develop the capacity for 'situated' albeit reasoned judgment about, what can I call them?, 'real' issues, issues to which 'real' people are attached; issues of principled judgment, decision, and policy in 'real' contexts where someone 'really' cares about the outcome — where we're fully in touch with and truly and typically confounded by all that we deeply care about; where we are forced to take account of the facts and conditions that in 'real life' make ethical issues so bloody difficult.

(Let me say, without argument, that what I have in mind here is not ye olde situation ethics or mere casuistry; I see rather a direct experiential learning path to the higher realms of theoretic wonder in all its analytical finery that would allow my students to read all the latest journal articles as well as anyone else's.)

Well, it might well seem that all ethical issues, by definition, are of this 'real' sort; but, like a lot of things philosophical, this is really only true 'by definition' or, as we like to say, 'in principle'; it’s certainly not widely the case in (teaching) practice; the teaching of ethics is, for all the argle bargle about 'applied' ethics, just not very practical. (Please see the excerpt in Appendix II for a typical textbook piece of applied philosophy.)

I won't say that teaching about ethical issues, theory, and methods is not worthwhile; it's just that there's so much more to it than we typically 'let on' or 'get at' in traditional academic settings.

Furthermore, the really 'good stuff' in the field is hopelessly over — not necessarily the heads, but — the experiential and imaginative reach of most students' sensoriums.

So what's missing? I'll cut right to it, disregarding the philosophic problems that trammel my way, in hopes that there lies an experiential path to my message that doesn't require seven courses in philosophy to appreciate.
2.1.2. Why Is Surgery Taught in Theaters But Ethics Only in Theory?

(The answer to the above question may seem obviously to lie in the life-and-death importance of a lot of surgery; but any who find this answer satisfactory can’t take ethics very seriously; perhaps that’s our problem?)

Our common frustration is that what we want to help students learn can not be well learned from disinterested, discontinuous episodes of reading, listening, discussion, and paper writing; like the feel and art of surgery, it requires an operating theater and at least some clinical however contrived ‘hands on’ experience.

(At what age did Aristotle say one needed to be to do politics or ethics? Whatever, where life’s own experience is wanting, some other measure must be found; isn’t that part of what education, as well as upbringing, is all about? Or do we all need to die in order to understand the dying?)

Inquiry in ethics, as in science, cannot be taught solely from books and secondhand experience; what needs be learned is not only the textbook pointers on method, but the subtler heuristics, the ‘feel’ and fine tuning of the instrumentation (which, perforce, in ethics means the judgmental capacities and sensibilities of the human judge and decision-maker, mediated and conditioned by a larger, and in some wise, wiser, culture).

I recently co-chaired a seminar for practicing psychiatrists with a cosmologist, on comparative methodology in science (cosmology), psychoanalysis, and ethics. The premise of our gathering was that these three fields had in common the study of things remote in time or perception and ‘evidence’ of a very indirect and problematic sort.

In this seminar, the cosmologist, who held the undisputed scientific credentials, said, in effect, that in his business the human instrumentation with all the hunches, headaches and tired eyes was the biggest problem; that he didn’t know what if anything made his business scientific; but that in his experience it was 90% plumbing, engineering and keyboard-diddling and 9% instinct that got results; and, if that was science, then cosmology was science. For a world-class physicist, this modesty was at least as telling as it was false. Perhaps I could fairly paraphrase the cosmologist’s view: science is science, for all that matters, but the doing of science is 90% art, judgment, and adjusting the instrumentation, which includes cleaning your glasses and taking the aspirin.)
My prejudice or assumption is bound to be obvious: for all their real differences, science, in practice, and ethics, in practice, have a lot instructively in common. It's too bad that their differences are artificially magnified by requiring science students to actually do the thing, where in ethics we have them read about it and analyze its 'concepts.'

Instructive also is the artificial difference that in science it is thought that data, and quite a lot of it, is a relevant commodity, whereas in ethics, the study, after all, of how life should be lived, we seem content to dabble in abstracted case material that makes *Time* magazine articles thrilling by comparison.

(Of course, there's the nasty problem that in philosophy we claim not to know really whether there is any such thing as 'data', so this makes it very hard to find; philosophers tend to prefer those well-behaved abstractions called 'good reasons' to 'data', which, of course, are supposed to be more evidently to hand.)

2.1.3. Observation in Ethics: Where's the Reality?

In place of the obligatory analysis of what 'observation statements' are and whether there are any to be found to support ethical claims, or whatever that could mean for the status of ethical knowledge and belief, I will be dutifully *meta* by just making some observations about observations in ethics.

I remember the curious report from our Advisory Center some years ago: the majority complaint of the freshmen in our Philosophic Methods and Social Values course was that they were bored with the topic of abortion. Why?, I asked. The most frequent reason was to the effect: *We had that in high school already.*

What a curious idea, I thought. Are we such miserable teachers? Are the issues so removed from their experience? Is abortion too unreal and unimaginable? Or too real and painfully conflicted? The issues of conflicting rights too abstract? Do we let them see no further into the philosophic depths of this heart-rending, society-wrenching question than *My Weekly Reader*?

2.1.3.1. Moral Sensations

I remember the time, not that long out of highschool, that my first wife and I decided to get an abortion. It was clear cut: we couldn't afford a child; our interests, our 'rights', to our lights, prevailed; we allowed that would-be child to be killed; and went on with our studies. No sweat, no sensations.
Things change. I’m shocked and shamed today at the callowness of that decision; I find myself crying. . . beset with terrible feelings . . . hoping for a god I can’t believe in to please bless that life that never knew our love. . . breaking down as I recall. . . not for the badness, for that seems a nasty inevitability of hard choices; but for the sheer irremedial pain that makes right and wrong pale to near insignificance; an experience without which, right or wrong, such a decision, such an act is not, what?, a competent moral matter.

The dimensions of feeling about this issue that tear people apart, that divide society today indecently over matters of decency, are probably ones we don’t want young people to have in high school, or ever, for themselves. But without a vivid sense of these dimensions of feeling, the choice situation so laboriously debated cannot competently be assessed. If then we only teach about the issue, abstracted from the dimensions that make it a real as opposed to a philosophic dilemma, it’s no wonder that students feel they’ve learned all about the topic and perceive little consequence to the philosophic variations we play on it.

2.1.3.2. When imagination fails . . .

Is there a way to let students see and feel what all is at issue here, the irreducible agonies to be faced, without actually putting them through the decision itself? Can we teach students how to think competently about such a topic without a very real sense of how people feel when they have to face or live with the choice? Is it any wonder that students get bored with intellectual debates about problems that to them are not ‘real’?

Students may lack a sense of their stake in exotic issues with which they’ve had no experience, but what about more prosaic moral matters, the everyday stuff, cheating, lying. . . .

2.1.3.3. . . . and they take leave of their senses . . .

I remember the day a student had the temerity in class discussion to object (the point at issue is neither here nor there): But that would be lying! A wave of guffaws rolled out of the back row, a male chorus announcing to the class their macho worldly-wise cynicism, Like, hey, so what?

What was going on here? A typical lapse; people take leave of their senses, especially in classrooms; in this case, their sense of the real stake they have in whether people, as a rule, lie or don’t lie (which is distinct from the question of
when or whether lying is wrong). I don’t know whether this is a special problem in the typical academic philosophy classroom, that students lose touch with what they really care about, but I found this sort of thing disheartening and, like any conscientious teacher, looked for strategems to counter these phenomena of detached interest and sensibility.

For one thing, I began using films. An obvious strategem.

2.1.3.4. . . . we import ‘reality’ into the classroom.

There was the case of the Downs Syndrome baby with *duodenal atresia* (blockage of the esophagus). The question was: May the parents deny permission for surgery to correct the blockage, thereby causing the mongoloid infant to die of starvation. Not the abortion issue, but close; and equally removed from the students’ own experience, I supposed. But here I could introduce a bit of. Do we shirk from the term (so debatable for centuries)? . . . reality, to compensate.

The film showed the agony of the decision to withhold surgery, the agony of the infant’s slow death by starvation. Film over, lights on, dead silence, no motion to leave. Of course. Who could fail to be moved?

At last I had their undivided attention? At last life-and-death issues were no longer boring? This was a movie they hadn’t seen in highschool? All this was surely true; but there was more than engagement by the novel and dramatic.

2.1.3.5. Moral Perception: ‘Seeing is Imagining’

One example: In the next class, two days later, I asked the students what were the highlights of their reaction to the case. Most said surprise. Surprise at something they’d never thought of in reading about the case beforehand. Surprise to see how painful it was for the nurses who had to watch that infant die in their care, for two whole weeks. But, I pointed out, we *did* read and talk about the objections of the medical staff to the decision. Yes, *but we didn’t realize what that would be like . . . like for the nurses.*

It wasn’t the principled noble argument from the hypocratic oath that impressed them; it was that *no one should have to go through that.* Suddenly an interest of the previously anonymous ‘personnel’ was made vivid to them — and, imaginatively generalized: *no one* would want to go through that. Their surprise at this discovery eclipsed the equally obvious pain of the parents in making the decision.
2.1.3.6. Perplexity in Discovery

The crucial element here to me was not the emotional impact of the film, which would go without saying; nor the ability of the students, whatever their previous or considered judgment on the case, to appreciate the dilemma for the parents as a genuinely painful one, which of course was an important step forward.

It was their surprise, their discovery of something they had not imagined: the palpably compelling interest the nursing staff had in not suffering that infant's death. This discovery did nothing, by their lights, to solve the dilemma of what was right or wrong in the matter. The only lesson, perhaps, is that some things have to be seen to be imagined.

No one thought the nurses' interest bore decisively on the case; but all felt it was important to be aware of it. Why?, I asked; What difference does it make to be aware of the nurses' feelings if they don't tip the scales in the case? Now that, we all agreed, was an intriguing question.

Films were one obvious ploy; thought-experiments, sometimes known as lies, were another.

2.1.4. Experiments in Ethics: Where's the Apparatus?

Another class: the topic was Who gets the dialysis machine? How should we decide? The papers I received rehearsed the standard arguments pro and con. I told the class the papers were lackluster, Time magazine could do better; facile in their treatment of the cases; unimaginative in what they considered relevant factors and further information they thought they needed to make a decision; whatever.

Mainly, I said, I didn't think they gave a damn who got the kidney treatment or how.

How was that supposed to make a philosophy paper better?, someone asked? A good question. I needed an experimentum crucis.

So I lied. I said I had gotten the cases from a colleague on the ethics committee at Presbyterian Hospital; that these were real patients, alive today, awaiting a decision on treatment, some of whom, without that treatment, would die within weeks or months. I told them these patients' had agreed to read the students' papers, and that I was going to give them these papers, with the student names
blanked out, for their reactions. To my shame, the students believed this.

The shock of the very thought evidently obliterated the thorough implausibility of this arrangement. They were stunned; some were angry. Why do you care?, I asked; They won't know who you are? No quick answer to this. Why do you care?, I asked. We didn't think they were real, someone said. What difference does it make?, I pressed; Your papers aren't going to decide the case. Wouldn't it be interesting to know what they think? Aren't you curious?

That's gross!, one said.

So you care about these people's feelings? Of course. What about who gets the life-saving treatment? Of course. If I were to give your papers to the patients or ethics committee deliberating the case, would you want a chance to rewrite them? Of course. Why? Do you think anything you might come up with will make a difference or make it clear how to decide the matter? Probably not. Then why rewrite them? What difference could it make? That's not the point. Yes? Well, what is the point? We all agreed that was an intriguing question; they would want to rewrite their papers, but didn't quite know why.

I came clean with the class. No recriminations; as if that's what they'd expect in a philosophy class. Just a little thought experiment. A reality trip, someone said. Would you really have done that? Are those really real people, though? I said they weren't and I wouldn't. Would they like to rewrite their papers anyway?

Yes. And they did.

Now, what was going on here?

Getting personal was another strategem, though necessarily a more opportunistic one. . . .

2.1.5. Affecting Students -- The Famous Fallacy: Appeal to Emotion . . . or is this the Ad Hominem?

(Fallacies so-called are supposed to be guide-posts away from faulty reasoning; this is curious, since most 'fallacies' most of the time provide indispensable horsepower to all manner of inquiry: where would law courts be without the ad hominem? The fallacy of appeal to emotion is an especially pathetic case, because it is obviously
one of the most important appeals, and one of the most precious capacities, we depend on in ethics. Then there is the fallacy of concluding that the fallacy lies in the appeal rather than in what we make of it all . . . something like confusing premise with conclusion . . . but I forget the Latin. . . .)

Peter Hempel, a distinguished philosopher of science, was the guest speaker at the joint Pitt-CMU Philosophy Club one evening. The topic was free will and determinism.

Peter was having a devil of a time getting one student, I'll call him Determined, to admit any intuitive appeal whatever for the notion of free will; Determined thought this notion one of the great gratuitous delusions of the sleepy masses and of no consequence. Students of philosophy often cleave to hard-nosed versions of determinism, skepticism, nihilism, whatever; philosophy seems to invite this license to take leave of one's commonsense. Be that as it may, Determined seemed genuinely non-plussed by the idea that anyone should feel compelled to believe in 'free will.'

Kindly and patient, Peter was trying every angle he could simply to get Determined to see the semblance of sense to the position, to admit that important consequences followed from its denial . . . else we have no dilemma.

Determined could only smile indulgently; that's just the point, there is no dilemma here; there's just no basis for this fuzzy illusory commodity, and rational kind will give it up.

Throughout the talk and this discussion, Determined's girl friend was all aglow over his performance and demonstrably, affectionately all over Determined. Determined seemed to enjoy this and was hand-holding and chummy in return.

At one point, as Peter Hempel was speaking, the girl gently kissed Determined on his cheek. Determined smiled at her; happy young love, the very picture.

I interrupted. Determined, uh, sorry, but I couldn't -- I'm sure we all couldn't, uh -- help noticing; your girl friend is very fond of you, and you of her; she just kissed you. That was nice. You liked that? Sure. You think she meant it, to be nice, to show you she likes you, loves you? Sure. Do you think she loves you, that that's why she kissed you? Ummm. You really think she meant it? Yeh, sure; what do you mean? You really think her kissing you meant something? It was meaningful to you? Yes,
what of it? Sure it was. You feel it meant something that she felt like kissing you, that she likes to kiss you, that she did kiss you -- rather, than, say, not kissing you or, say, . . . sneezing, or, uh, biting her fingernail? You think this kiss was something she did sincerely, not just something that, say, happened, like a hiccups or a twitch? Sure, yeh, sure; what's the deal?

Well, I was just wondering why, since you're such a hardball determinist, why you feel this thing she did has any more meaning than a leaf falling off a tree . . . a heart beating its beat . . . or her chewing her gum . . . or her not doing these things or . . . anything else? Can you tell me why you attach any special meaning to her kiss, when, in your view, it's just another ball bouncing off another ball bouncing off another ball in the great chain of deterministic hardball?

Like, how do you reconcile this? Perhaps you have this sadly mistaken delusion about your friend here because you're determined to?

Or, perhaps, you feel a little tug, a little compulsion to believe that, banish the thought!, she deliberately sincerely did this nice thing, as we opiated fools are wont to say . . . out of her own free will?

That was a terrifying moment for me, because I didn't know how this intrusion into Determined's intimate space would affect him; I didn't know whether he, or she, would feel hurt.

2.1.5.1. Discovery in Perplexity
The short of it is that this ploy worked well. That does not mean that Determined became a believer in free will; I have no idea about that, nor was that my point; rather he suddenly found himself possessed — by the common human sense of its ineluctable allure, the common human sense that important things did seem to hang on this fuzzy but strong sensation, things that he deeply cared about, that he could not exactly explain or explain away. He was possessed by a sense of the dilemma. He said, in response to my somewhat rude, somewhat playful questions . . . that he honestly didn't know what to say.

2.1.6. Progress in Ethics?
Like the indeterminate perplexities in which my other stories ended, this was progress. But to what effect, by what measure?
I rely here on these observations themselves to convey some import, like any raw but telling data, presently unexplained.

The open, indeterminate questions raised in these situations assuredly caused the students to wonder, to get curious, to want to know the why's and wherefor's of what they'd seen, felt, sensed — pretty inexplicably — to matter.

Isn't this where we like to say philosophy is supposed to begin, in wonder and genuine perplexity? Why not wonder about the seeming imponderables of what we so care about, we know not why?

Well, this stuff, it seems to me, needs to be mined in the teaching of ethics and ethical reasoning. And we should find ways to get the students to do the mining, to get their hands on it.

Before departing this level of observation, it's noteworthy that in these instances not a single inch of progress was made on those very proper questions of ethics, what is right? what should be done?

I hope the intent is clear, not to throw the baby out with the bath water.
2.2. A Theater for Ethical Theory: Observations on Ethical Reasoning

For those who wish to save time or be selective, since this material is lengthy, I hope the detailed table of contents provides a suitable guide.

2.2.1. What's in the Name: THEORIA — Acronym and Allusion

The title of this project is obviously a contrivance, for mnemonic purposes and to carry some significance and context 'up front.'

The name, Project THEORIA, may unhappily be more pretentious than portentous and cause the mind to trip as well as to stop and take notice; the well-intentioned allusion to the Greek theoria (pronounced tay-o-REE-ah) may prove as allusory in meaning as it is in pronunciation.

These are the risks. But it means a lot to me. Let me try to make it meaningful to you.

2.2.1.1. The Acronymonious Crux of the Project

There are myriad important concepts, techniques, heuristics, and dimensions to ethical reasoning.

I've tried to focus on what, for our project, is the crux and crucial dimensions by employing an acronym (so popular in techno-culture); hence, we have this bit of self-indulgence:

T: Testing
H: Hypotheses in
E: Ethics:
O: Observation,
R: Reality (Realism),
I: Imagination,
A: and Affect (feelings and their source, sensibility).

For all one might argue endlessly about what ethical reasoning is all about (as we do in philosophy to the bane of students and others who would like the matter de-mystified), these foci (I believe) identify and fully implicate all that is — at once — crucial, mysterious, deeply problematic philosophically, and unabashedly but
shamefully neglected in typical treatments of the subject.¹ But apart from its acronymonious role, theoria bears its own significance — and its own context.

2.2.1.2. The Ancient Roots of 'Theater' and 'Theory'

We seem to lack in our culture an educational analogue to ancient Greek theater, accessible to all (like its Shakesperean progeny), in particular the tragedy genre.² As I understand it (and, in school, I found it very hard to understand Greek tragedy and its impact on its audience), The Greek audience not only experienced 'real life' in their theater, but life writ very large. Not the parochial perturbations of soap opera, but, at once, their own very lives situated in the greater landscape of the human condition. (That demi-gods suffered the same straits as humankind presumably reinforced this impact.)

The experience was a paradoxical one, perhaps well labeled as detached engagement³.

The tragedy genre, in practice, was at once terrifically affecting but — with the help of the chorus of humanity at large — dispassionately reflective. In that experience was audience interaction with reality, both the particular and the general, both reactive and speculative.

Thus: in theater, theory. Theory brought to ground, as it were.⁴ Such, in any case, is the myth of the matter.

Whether true or not, the mythical model of ancient Greek theater provides an apt and inspiring metaphor.

Our project — our model of ethical reasoning, our pedagogical strategies and heuristic appeal to affective, visual data — aim to exploit this metaphor of the

¹ Save, of course, in the admirable likes of Hume and a lot of the new professional literature, which is pretty inaccessible to students by virtue of being entirely too theoretical and academic.

² I discount Hollywood and TV fare not out of snobbery; on the contrary, I'll take a good movie over any ethics text case study I know any day. The reason to disqualify these popularly accessible media is two-fold: they do not carry their own immanent interpretive and dramatic conventions to the same extent as olde theater; and they do not compare favorably with interactive media, as we describe — see Sample Materials.

³ Cf. the quotation from a letter by a group of Dartmouth professors about "Dax's Case," in Appendix I

⁴ There is a methodological law, for all flights of theory: What goes up, must come down (to earth).
The crucial connection between theory and theater is suggested by the wisdom of their etymology, their common root in the ancient Greek verb theorein, to view, behold, contemplate.

We are given to believe that this connection was made real in practice in ancient Greek theater, in the experience of the polar but inseparable modes of theorizing: contemplation of the universal and engagement with the particular, detached thought and engaged sensibilities, abstraction and affect.

We look to interactive video media to provide just this connection.

To move from the sublime to the prosaic, where we all live, we prefer to focus not on theorizing but on its nitty-gritty crux, hypothesis testing — and all that that entails: acute and analytical observation, attention to reality, a good dose of imaginative experimentation, and a respect for the profoundly problematic human sensorium and its data (which, in ethics, includes the perplexing subjective deliverances of our feelings).

2.2.2. Problems of Ethical Reasoning

A discussion of the significance of this project should make explicit an answer to the question What's problematic about ethical reasoning?

The answer, like Quine's to the boggling question What is there?, would be everything.

So I won't attempt the discussion. Against the background of the suggestive material above, I can at least identify the crucial sorts of difficulty we expect to address effectively in our project.

2.2.2.1. Hypothesis Testing in Ethics

Philosophers may want to argue about whether hypothesis testing in anything like its familiar or effective forms is possible in ethics.

We simply submit that it's done all the time, else there wouldn't be anything to study anyway.

What in the teaching context are often called theories, as in Harris's text Applying
Moral Theories (see Appendix II), are just amorphous propositions that more modestly should be called notions or principles (if that's a nicer flavor), or — what the hell hypotheses; whatever, they're bloody well in need of testing.

If testing seems too strong a term, let it be a regulative ideal; call it interrogation, call it inquisitorial duress, call it Socratic inquiry. We'll call it testing because we want that methodological standard firmly planted as a goal.

Hypothesis is just a nice not terribly pretentious name for the hunches, suppositions, opinions, principles, convictions, barely articulate feelings, intuitions, judgments . . . all those quasi-propositions and ideas that propel our everyday inquiries and provide crutches for our everyday decisions.

Whenever a student has a tickler of a notion about whether something is right or wrong, there's a hypothesis to be made explicit and subjected to interrogation. Behind many seemingly personal, purely subjective feelings, there's often a hypothesis wanting scrutiny.

An example is in the reactions of my students (reported above) to the Down's Syndrome case: no one should have to go through that! This is a normative generalization, and open to inquisition. It's based on another conviction: no one would want to go through that. This is an empirical generalization.

The conventional wisdom tells us that we shouldn't speculate about empirical matters. The fact is we do this — and have to do it — all the time. Ethics, in fact, dragoons us into speculations and hypotheses about the most fundamental and far-flown empirical matters: human nature and 'the human condition'; inevitable speculations about the common exigencies and contingencies of human life and society that prompt feelings or judgments like no one would want to go through that, no one should have to go through that.

In the shared 'inter-subjective' reaction of many is the possibility of confirmability or confirmation. This is a pretty raw beginning, but it is a beginning of a useful line of inquiry — which we could press after more familiar models of hypothesis generation and testing.

The bottom-line question for our project is not whether hypothesis testing can be done in ethics, but how it's done — and how we can better help students to learn
and explore how it's done in a properly realistic laboratory.

2.2.2.2. Observation

Again, without argument and with only my suggestive anecdotes to appeal to your own observations for confirmation, I say simply that there are such things as moral sensations and moral perceptions.

For understanding their nature and proper treatment we'll find instructive analogues to ordinary 'physical' sensations and perceptions — this also goes for what's problematic about them and what we want to make of them. We'll get nowhere in illuminating the dark recesses of ethical reasoning by ignoring these commodities.

Similarly, we need to explore — and devise ways for students to explore — analogies (as well as dissimilarities) between our 'physical/physiological' and moral sensoriums (if, indeed, this distinction comes to anything).

2.2.2.3. Reality / Realism

I take it that the point of realism in teaching/learning ethical reasoning is painfully obvious.

Yet it's not obvious what constitutes the 'reality' we're supposed to be sensing and perceiving when we make observations to generate and test hypotheses in ethics.

So making this level of reflection explicit while exploiting devices for importing 'reality' into the learning environment is imperative: if we're importing it, and we know that, we should find illuminating things to say about what it is we're importing that was lacking before we imported it.

An important operational point about the meaning of 'reality' or realism in ethics: it is a scandal that in science we expect students to process data that is rich in both quality and quantity, but in ethics we demand neither quality nor quantity. Both are essential to the integrity of findings in either domain.

Quality is important for realism in obvious ways. Quantity is important for the higher-order skills we seek to teach in problematic ways.

Students are typically asked to consider a half dozen relevantly similar and dissimilar cases, among which they are to find their way to some plausible, reflectively-equilibrated principles — principles that provide a coherent account of
how and why they judge or treat those cases one way rather than another. Society
or its institutions of law typically deal with countless cases in the search for the
ever elusive reflective equilibrium of rules and regulations. Somewhere in between is
a ‘realistic’ quantity or problem space that students should be able to negotiate.

We have an answer to the qualitative problem in our project. We do not yet have
an answer to the quantitative problem: how much, how varied a reality is enough?
This seems important to admit; we fully intend to work on it — and to make
instructive points about it in our curriculum.

The most natural way for this to occur is to force the student (role-playing a
decision-maker on an ethics committee) to articulate a general policy for decisions of
the kind, and principled grounds for the policy: she can then be queried with putative
counter examples to the principle or policy drawn from cognate cases of euthanasia.

This more general level of hypothesis testing — the basic challenge for any
decision-maker — can at least be modeled in our environment if not fully
implemented.

Full implementation for rigorous exercise in adjusting principles or policies into
'reflective equilibrium'/consistency would require the next generation of interactive
video: a distributed network of video-data/case-study archives, with an intelligent
inquisitorial interface (see notes on John Vries, M.D., one of our technical advisors,
under Personnel and Facilities).

2.2.2.4. Imagination

Imagination is the capacity to perceive or understand matters without the benefit of
direct experience. Without this capacity, ethics and society (not to say human life as
we know it) would be impossible.

Imagination is the principal lab site for ethical inquiry.

One problem with it is how we regard its deliverances; this is an epistemological

A more immediate concern that we address is how it fails us and needs to be
stimulated. Like any sense, it can be enriched or made more acute with training.

Affective impact, appeal to feelings, shocks to sensibility are crucial to training the
(moral) imagination; shocks and impacts tend to make for lasting lessons. My anecdotes above suggest this.

Here's an example; a case where we'd like imagination to be able to substitute for the 'real thing', but where a good dose of the real thing may be what's needed to heighten this imaginative capacity: in this case, the capacity for vivid representation of the interests of others, one of the (perhaps indisputed) sine qua non's of competent ethical judgment.

I had been studying issues of environmental and workplace risks for a couple of years; I was interested particularly in problems of consent and involuntary exposure to risk, and how, in policy, these should be mediated.

I take myself to be fairly sensitive and felt a fair sympathy for workers put at various risks; but the fact was that I didn't really know anything about the 'business end' of this problem. I felt sympathy for the would-be victims, but, admittedly, this was a rather remote, detached feeling. By my lights now, I would say it just wasn't enough.

What happened was, during dinner one evening, I was watching a program on worker hazards on WQED. There came the case of a brown lung victim. In his interview, the man could barely finish a sentence; in walking about, he could not take many slow steps before halting for air. I don't know how to describe this: this picture, this quiet, unassuming man, amidst his excruciatingly pained wife and wondering children, halting . . . hardly able to catch breath.

I've seen many gruesome things on TV while eating dinner and never been phased. This was not gruesome. This was somehow just profoundly affecting. I cried as if my own mother had just died; I sobbed uncontrollably and was sick. I so wanted to embrace that man and make him well. . . . I was just sick at heart and depressed the whole evening. How can this sort of thing be done?

Now, my position on no issue changed. But I've not felt the same about this issue since. What I now feel and am able to imaginatively appreciate across the board of many similar issues is nonetheless invaluable to my 'moral education' and, I believe, my ability to reason competently about such matters. How so?

Say, we believe that homicide in self-defense is justified/ permissible. Don't we also believe it important to have, retain, reinforce certain feelings about the matter
of killing another person, no matter what? even if the killing is permissible?

Recall the scene from "All Quiet on the Western Front": Henry Fonda jumps into a shell crater in 'no man's land', landing bam onto a live enemy soldier already sheltered there; reflexively he bayonets the man...soon he's looking through the soldier's wallet...here, the photo of a child, here the wife...this is a man, a probably decent man I've killed, a man like me, as good as me.

This image is one we want to preserve; it doesn't change what was justifiable to do; it makes a difference to what we are.

These lessons of sensibility — preserved or evoked by the imagination — transcend issues of right and wrong as well as they condition our judgments about them. These dimensions of moral competence transcend even the operational value of the imagination for experimentation in ethics. These dimensions of imaginative capacity need training; not to be found in traditional academic settings.

2.2.2.5. Affect

Operationally, our moral sensibilities are a repository of cultural learning and lore, if not ultimate wisdom. Sensibility provides good data about what we deeply and most commonly care about. Ethics or ethical norms, rules, principles are presumably meant to help define and guide the protection of these common concerns. We ignore the deliverances of our feelings in ethics at our peril.

But what reason is there to believe these affective matters can be found tractable or useful in our reasoned deliberations?

Since fallacy has been my main ploy in advancing my case here, I'll resort to an argument from authority.

Business schools, like other professional schools, do a couple of things worth imitating in moral education. One, they favor realistic, delich case studies; after all, it's money that's at stake. Two, they know a good thing when they see one. In the January/February '86 issue of Teaching Thinking and Problem Solving there's an article about a new curriculum in Drexel University's business school (by Vivian Rosenberg): "Affective Awareness as a Critical Thinking Skill." Who would have thought?

The utility of feeling for thinking, the evidence-bearing function and evidentiary
status of sensibilities are matters for investigation in ethics, not doubt (a philosophic luxury).
3. Significance and Impact: Letters of Support

This section contains letters of support for the significance and impact of the project, from several pertinent perspectives, regarding several target audiences.

You may wish to read Appendix I: Sample Materials, before this section.

We expect that our videodisc programs (including a Level 0 documentary on the case of Donald Cowart, a Level I presentation, a la Roshomon, of conflicting perspectives on the case for classroom use and guided discussion, and a Level III program allowing varied, guided exploratory investigations of the case and associated issues) will have value for a wide range of audiences, including:

- community college or college undergraduates in general and applied ethics, critical thinking and other applied philosophy courses;
- professional students in nursing, health care and administration, and medicine;
- practicing professionals in clinical settings;
- graduate students (in applied philosophy, biomedical ethics . . . ), who as interns in applied settings (such as those fostered by Bowling Green State University) or as future teachers will learn from both the innovative delivery system and our innovative approach to the problems of ethical reasoning;
- adult learners in non-traditional programs or members of the public given access to the videodisc through public or college libraries.

We also project that our videodisc package will have innovative impact on two levels or dimensions of the teaching of ethics/applied philosophy:

1. The topical agenda of biomedical ethics and how it is taught, particularly as regards the use of interactive video presentation of case material.

2. The teaching of ethical reasoning and critical thinking generally, particularly as regards attention to the affective dimension of critical inquiry in ethics, observational skills, and the roles of imagination and sensibility in testing hypotheses in ethics.

The appended letters are meant to support these projections.
3.1. Stuart Youngner, M.D. and Mary Mahowald, Ph.D., Center for Biomedical Ethics, School of Medicine, Case Western Reserve University.

Dr. Youngner and Professor Mahowald testify to the utility of our video media (Level 0, I, and III) in several settings within both undergraduate and medical education; specifically: for their own several courses for undergraduates, graduate students from Bowling Green's Applied Philosophy Program, medical students; as well as for medical house officers and practitioners in clinical care settings.

3.2. Andrea Guidoboni, Editor, College Division, St. Martin's Press.

The target audiences for our videodisc include undergraduates in both general and applied ethics courses as well as students in professional programs like nursing. Andrea Guidoboni provides figures for the dimensions of these audiences—including nursing ethics—and affirms the value of our videodisc therefor.

3.3. Helen McInnis, Executive Editor, MacMillan Publishing Co.

3.4. Thomas Beauchamp, Professor of Philosophy and Senior Research Scholar, the Kennedy Institute of Ethics, Georgetown University.

Professor Beauchamp supports the use of our materials with graduate as well as undergraduate students and notes that the Kennedy Institute/Georgetown teaches the largest number of Ph.D.'s entering the field of biomedical ethics.

3.5. Dr. Samuel Gorovitz, Dean of Arts and Sciences, Syracuse University

Professor Gorovitz, recently made Dean of Arts and Sciences at Syracuse University, was previously Professor of Philosophy and Affiliate Professor of Public Affairs at the University of Maryland. A pioneer in the field of medical ethics, Gorovitz testifies to the importance of explicit reflection on the role of visual and emotional experience in ethics. His illustration from his own teaching experience is very similar to Covey's observations in the previous section.

3.6. Dr. Charles M. Culver, Professor of Psychiatry and Adjunct Professor of Philosophy, Dartmouth Medical School

Dr. Culver, with helpful caveats, affirms the potential value of the proposed video media for both undergraduate and professional medical settings. He underscores the importance of one of our principal claims for the superiority of an interactive video exploration of case material: the experience of uncertainty and change in the facts
of a case, the challenge of negotiating facts which unfold or are discovered over time, in a medium open to exploration and interaction but never stable in perspective — unlike either textbook accounts or even predetermined video presentations.

3.7. Professor Scott Roberts, Carlow College

Professor Roberts provides a detailed letter in support of several dimensions of our project's significance and impact. Carlow College is an important partner in our project for demonstrating the accessibility and affordability of the technology for small liberal arts schools, as well as the educational value of our programs for the wide range of adult learners who take courses at a community-oriented college like Carlow. Among these are nursing interns and students from Mercy Hospital.

We hope to demonstrate in our collaboration with Carlow the power of video technology to remove the access barriers for small colleges and the public at large to the benefits of innovative educational technology. We expect our project to motivate curricular innovations at Carlow, to motivate its Center for Business Ethics to incorporate our strategies, and to help Carlow become a leader among regional schools (for example through our Benedum Regional Consortium) for innovative technology transfer among its small liberal arts neighbors.

3.8. James P. Sterba, Professor of Philosophy, University of Notre Dame.

Professor Sterba, author of a major applied ethics text, Morality in Practice (Wadsworth), is committed to use of our videodisc package in his teaching as an experiential learning environment.

3.9. Professor Bernard Rosen, Ohio State University.

Professor Rosen was in fact responsible for Preston Covey's learning of the original videotape on the Donald Cowart case, "Please Let Me Die" several years ago. Rosen, author of Strategies of Ethics, one of the first texts to address explicitly reasoning methods for ethics, commends the project for its innovative focus on problems in ethical reasoning and critical reasoning skills. Ohio State University is a leader in the development and deployment of interactive technology in philosophy. Preston Covey will be consulting formally with that department this summer on strategies for future uses of educational technology in philosophy.
3.10. Alphonse Buccino, Dean, College of Education, University of Georgia.

Dean Buccino writes from the perspective of oversight from his previous position as Deputy Director, Office of Science and Engineering Personnel and Education, at the National Science Foundation, as well as his present position as dean.

3.11. A. J. Levinson, Director, Concern for the Dying, NYC.

Concern for the Dying produced and distributes the videotape "DAX's Case," the case upon which our interactive video curricula are based; this documentary video will be wholly incorporated onto side 2 of our videodisc. Ms. Levinson affirms the value-added by interactive treatment of the kind of case material already powerfully represented in "Dax's Case."
4. Tasks, Methods, and Products

4.1. Stages of Development

To insure the integrity of the product and the successful outcome of the project, we propose the following stages of development: (1) Design Treatment (Summer and Fall 1986); (2) Production (Winter/Spring, 1987); (3) Summative Evaluation with Test Site Implementation (Fall, 1987); and (4) Packaging and Distribution (Fall and Winter, 1987 — see Dissemination/Distribution section). Formative evaluation will be conducted throughout the first two stages.

4.1.1. Design Treatment (Summer and Fall, 1986)

4.1.1.1. Research, Pedagogical Design, Preliminary Scripting

This project is innovative in part because it exploits interactive video technology in the humanities and in an area, ethics, where technological applications are unheard of if not anathema.

But it is ideas and a vision that drive this project; the heart of the project is not its technological vehicle but its vision of how a crucial subject, ethics, can better be learned and explored.

We propose an approach and an exploratory environment for ethical inquiry that is innovative in two respects:

1. With regard to the topical subject matter, applied ethics, and in particular issues of euthanasia, the project is innovative in bringing the full richness and reality of the case material to bear in a visual and interactive learning environment.

2. But the topical subject matter, important as it is in itself, doubles as a vehicle for a deeper agenda: the project is innovative in exploiting the data-rich ‘theater’ of interactive video media

   • to simulate the full-blown, perplexing mix of perspectives, sensations, perceptions, and feelings that typify our moral ‘reality’, our reflective moral experience (whatever the topic)

   • to vigorously test and stimulate the observational, affective, and analytical skills required for reflective reasoning, the weighing and balancing of evidence, principled decision-making, and competent ethical judgment in all their dimensions, in realistic contexts, under realistic duress.

Our technological vehicle, interactive video, makes possible — in a probably unique
way — a powerful experiential approach to ethical reasoning within academic confines.

However, our model of ethical reasoning — and, therein, the nature, interdependence, and roles of hypothesis testing, observation, ‘real’ data and evidence, imagination, feelings and sensibilities — is hardly unproblematic. The methodological and epistemological assumptions that drive our project (and whose ‘proof’ we hope to see in the ‘pudding’) are not uncontroversial.

We believe it is a virtue of the project that it will not attempt to import a lot of academic philosophic ‘theory’ into the curriculum; the reflective moral experience we aim to stimulate in a pragmatic, Socratic spirit will not be an ‘academic’ exercise — although it will be an excellent testbed and provocation for any number of academic exercises.

But we would be remiss if, in developing our pedagogy and pragmatic model for ethical reasoning, we did not take account of the variety of theory and practice abounding in our profession.

Our epistemological concerns with ethical reasoning and moral sensibility are at least as old as Hume, and in the last few years have attracted a great deal of renewed interest in both the research and teaching literature in philosophy — a sign that our own demonstration project is very timely if not overdue.

In addition, we want our project to be thoroughly informed by the literature on euthanasia, cognate issues of autonomy, paternalism, and consent, health care practice, etc.; and we need to review the video treatments of these issues that are currently available and define the state-of-the-art in ‘realism,’ pedagogy, and production values. We need also be familiar with other creative pedagogical strategems for implementing similar educational strategies in the teaching of euthanasia or ethical reasoning.

The need for responsible background research is obvious; we want our project not only to be an effective educational innovation but a useful demonstration of potential research interest (these two levels of concern in philosophy are, for better and worse, not neatly separable anyway).

Of course, we have already done a great deal of work in these areas. Preston Covey has been compiling a massive computer-based bibliographic collection, key
books and articles on moral reasoning and epistemology, euthanasia and associated issues on autonomy, respect for persons etc. for several years. It remains to carefully cull and distill the essential material that should inform our project in its various dimensions.

For this purpose, our core research and script development team (Covey, Alleva, and Roberts — Cavalier will contribute to this effort as well, but at long-distance, residing with the MetaMedia design team), working with our content experts (especially, Stuart Younger, who is close at hand in Cleveland), will spend the summer reviewing relevant materials in all categories and working on a draft for our Level III and Level I scripts.

A draft of the scripts will be presented for critique and discussion at our plenary Advisory Panel meeting in September. From that time, the research and scripting team will work and communicate closely with the technical design treatment team at MetaMedia, to see the initial script through development into a detailed storyboard and format sheets.

Roberts, with the help of the team, will draft the Study Guide and Covey will also begin collateral work on the outline and development of his textbook during the fall.

This team of three philosopher/teachers will make possible richer brainstorming and more systematic criticism and creative design than one alone, as well as assure a realistic division of labor for careful, comprehensive coverage of the pertinent literature, issues and angles.

The preliminary summer work will be essential to timely delivery as well as the integrity of the videodisc script, but the most intensive detail work will take place in the fall when the script is developed in fine-grained detail into the design treatment of the videodisc Level III and Level I programs.

4.1.1.2. System Design

*System* here refers to a computer-controlled, interactive videodisc environment for teaching/learning ethical reasoning. Steps 1 through 3 have already been developed during the course of this proposal.

1. The first step involves (1) identifying the purposes and goals of the videodisc and (2) establishing the objectives that can accomplish the purposes and goals.
2. The second step involves, within the context of an interactive simulation environment, a preliminary integration of the system components. The goal, from the perspective of system components, is to produce and demonstrate a product that is both affordable and transportable. This purpose will guide our delivery strategy. We hope to create an interactive videodisc environment that will run on several systems (e.g. IBM, DEC, and AT&T). One aspect of our test site implementation will be to demonstrate such transportability.

But for the purposes of system design, we will choose specific materials developed at MetaMedia/OnLine Systems, Inc. The initial software and hardware system includes the following elements:

a. the PILOTplus Authoring Language for courseware development,

b. an IBM PC XT (10 mb hardfile) with 512K memory,

c. the GL-512 Color Graphics Card,

d. a 12" Sony PVM 1271Q RGB monitor, and

e. a Sony LDP-2000 videodisc player.

3. The third step involves (1) designing a plan for the efficient allocation of time, personnel, materials, and other resources for the development stage which follows and (2) beginning plans for the formative and summative evaluation processes for the system.

4.1.1.3. System Development.

The previous steps prepare the way for the development of concrete program specifications (to be completed during the Fall of 1986).

Specification of the overall design entails a systematic development of interactive treatments in the light of system objectives, informational hierarchies, and evaluation procedures. Writing scripts (narratives, dramatizations, and scenarios) and developing storyboards will form an essential part of this phase. Designers and content experts will work jointly to produce a carefully thought through script for the videodisc.

In addition to a detailed narrative description of the treatments, this step also involves (1) the development of flowcharts (both macro and micro) which depict the branching to be included in user interaction with the system and (2) the development of preliminary storyboards for the major audiovisual sequences in the program.

During this phase of the system development, MetaMedia designers will prepare format sheets which will represent each frame presented in the various sections of the interactive program. These detailed documents will be a paper version or mock-up
of the screen displays, video specifications for both still and motion, graphic art specifications (both videodisc resident and computer generated), and the computer notes and instructions. Anyone reviewing this material will be able to analyze the instructional strategies and branching exactly as it would occur after the production and programming are completed. This is a time consuming task, but it will result in far fewer revisions later on. Indeed, these format sheets will guide the assignments for the production phase.

4.1.1.4. Ancillary Materials

During the fall 1986 we will also begin work on the Instructor's Manual and Study Guide. Dr. Cavalier, with the aid of a technical writer from MetaMedia and in conjunction with Dr. Covey, will start writing the Instructor's Manual for the videodisc. Dr. Roberts, in conjunction with Drs. Covey and Alieva, will start writing the Study Guide that will accompany the videodisc. The texts will be placed on a word processor in order to be printed out in "camera ready" form on a laser printer. First drafts should be completed in four months, with final revision taking place during the test site evaluation period. The contents of these texts are described below in the System Package.

Covey's textbook will also be started during this period; however, the textbook, being broader in topical scope, will not be packaged with the videodisc and auxiliary materials. It will, of course, be a recommended text for anyone using the package, just as the package will be recommended to anyone using the textbook; but the textbook will be written to stand alone, or to be used as a supplement to other packages (such as Covey's previous WARRANT project, when this critical reasoning/writing software is used in critical thinking or other philosophy courses). (By the way, our Annenberg videodisc package would be a fine complement to the WARRANT writing package in a networked workstation environment.)

4.1.2. Production (Winter/Spring, 1987)

This stage involves completing the video material and videodisc production.

4.1.2.1. Programming

The first step will involve designing a plan for computer programming. During this phase the MetaMedia programming team will write the PILOTPlus code that will actually control and present the information via the interactive videodisc system. The programs will involve both level I and III interactivity.
A level I program is a prescribed sequence of steps ("chapters") chosen by the viewer from an index (to be written in the Instructor's Manual). Once a choice has been made, the story will unfold according to the desired sequences. The teacher can control the chapter presentations from a hand-held keypad.

A level III program is a highly interactive, branching program that unfolds according to the choices of the viewer (choices made by typing from the keyboard). There will be many decision nodes throughout the disc, and the combination of choices will virtually assure that different viewers will experience different sequences and hence different situations.

A (Notebook) function will also be designed and programmed during This stage. The goal will be to produce a note-pad-like screen editor that will provide the reviewer with access to a basic word processing program to take notes, record responses, or draft material for papers.

4.1.2.2. Videodisc Production

Though the specifications for the videodisc are developed during all phases of the design process, the videodisc is considered separately here because of several production tasks that are unique to the technology. MetaMedia Systems and WQED Pittsburgh will have the primary responsibility for producing the elements on the disc.

Preproduction coincides with most of the design phases described above. This process will involve the following elements: (1) schedule videodisc mastering window, (2) schedule production facilities, (3) develop shot list, (4) hire talent, (5) identify locations, and (6) select prop lists. Design team members from MetaMedia will work with Molly Youngling and WQED Pittsburgh during this phase.

The production phase proper involves the actual video taping, still photography, and audio production required for the videodisc. The actual video footage for use on Side One of the disc will be approximately 23 to 28 minutes in length. (The contact time for the user will be considerably longer cf. below "The System Package.")

During this phase the following tasks will be accomplished: (1) film production, (2) video production, (3) 35mm production, (4) audio production, and (5) graphics production.

The postproduction involves the 3/4" off-line video editing required before entering
the 1” editing studios. At this time all materials are compiled and selected for inclusion on the videodisc. Molly Youngling and WQED Pittsburgh will be responsible for this task. They are to deliver the video with edit decision list and time code numbers to MetaMedia for the next stage in the production process.

The premastering phase involves the final editing of all materials (including character-generated text, audio dubbing, and time coding) onto a 1” premastered videotape. This stage will also involve the inclusion of “Dax’s Case” on the second side of the videodisc. This is a Level 0 (traditional, linear film) production which will be transferred to Side Two of the videodisc. MetaMedia will be responsible for these tasks.

The mastering phase involves sending the premastered tape to a mastering facility to be pressed into actual videodisc. Side One will be pressed to accommodate constant angular velocity (CAV) and Side Two will be pressed to accommodate constant linear velocity (CLV). We will use the 3-M mastering facilities because of their extensive experience and quality work in this field. A check videodisc will be produced and evaluated before the initial quantity of 100 discs is produced.

4.2. Evaluation Plan

4.2.1. Formative Evaluation

The formative evaluation for this project will be implemented under the direction of Dr. Thomas C. Reeves, Assistant Professor of Instructional Technology at the University of Georgia. Dr. Reeves’ Ph.D. dissertation (Reeves, 1979) at Syracuse University focused on formative and summative evaluation of curricular innovations in higher education, and he has been involved in numerous evaluations of interactive videodisc applications including adult literacy, medical education, military training, and patient information. In addition, Dr. Reeves has published some of the few articles directly related to evaluation of interactive instruction (Reeves, 1986; Reeves & Lent, 1984).

Formative evaluation activities are of critical importance to the revision and improvement of interactive videodisc programs during all stages their development and implementation, but especially during the early stages of “Design Treatment” and “Production.” A key to effective formative evaluation is providing early and direct formative information to all project participants so that such information can be used
to make meaningful improvements in the program. Formative evaluation methods such as internal review, expert review, and pilot tests will be employed at every phase of the program's design and production from earliest treatment drafts to actual programmed materials.

Sometimes formative evaluation is devalued as being little more than a "smiles test" to find out whether program users like an instructional program or activity. However, formative evaluation methods such as questionnaires, interviews, observation, and expert review can be used to collect data much more useful than simply the degree of program acceptance. Information about the appropriateness of program objectives, content, instructional methods, sequence, and pace will be collected during the design and production stages to increase the program's effectiveness.

Figure 1 (below) illustrates the various formative evaluation methods which will be employed during the design and production phases of the development of the ethical reasoning program. An early task of the design treatment phase will be refining the instrumentation required for these methods and finalizing the data collection, maintenance, analysis, and reporting procedures for the formative evaluation. Most of the required instrumentation has been developed and validated within the context of other interactive videodisc projects.

Formative evaluation will begin this summer when the preliminary design for the program is refined during the "Seminar in Applied Ethics" to be held at Towson State University. In addition, the findings of literature reviews concerning euthanasia and moral philosophy will be subjected to expert review by the project participants and members of the advisory panel.

The formative evaluation effort will go into full operation at the onset of the project in the Fall of 1986. An interactive videodisc, similar to, but more complicated than linear video, goes through many stages of development, from the broad strokes of early treatment design documents, through scripts, format sheets, and program code, to the final integration of videodisc, text, and graphics on the users' screen. One role of the formative evaluator, working with the project director, will be to assure that all parties (managers, designers, video producers, programmers, etc.) review the program as it proceeds through these stages, and further, to assure that each party is informed regarding the formative feedback of all other parties.
In addition to the usual paper documentation associated with these tasks, the formative evaluator will maintain regular updates regarding formative feedback on a computer-based bulletin board located at the Department of Instructional Technology at the University of Georgia. An 800 toll-free number will be available so that project participants will have easy access to this data base of evaluation information. Training in the use of this bulletin board as well as in implementation of the evaluation methods listed in Figure 1 will be provided to all participants at the earliest possible project meeting.

Finally, the formative evaluator will work with Dr. Kerry Johnson (the summative evaluator for the project) to assure that all methods and findings of the formative evaluation are integrated into the summative evaluation wherever feasible. Even the most rigorous design and production stages cannot yield interactive programs which cannot be improved once implementation has begun, and therefore, a formative aspect will be included in the summative evaluation. Dr. Reeves and Dr. Johnson are graduates of the same doctoral program in Instructional Technology at Syracuse University, and they have collaborated on interactive videodiscs before.

4.2.2. Summative Evaluation

The University of Maryland, University College, through its Center for Instructional Development and Evaluation, will conduct the final summative evaluation effort of this project. It will focus on whether or not the learning goals are accomplished when the program is administered. The complexity and expense of production in the CBIV (Computer-Based Interactive Video) medium warrant early and continuous review prior to committing the instruction to disc and the details of this component are found in the formative stage described earlier. The summative review, however, focuses on cost, delivery, and validation of the courseware.

4.2.2.1. Evaluation Issues

The evaluation effort will address five important questions related to the design, production, distribution and use of CBIV as a medium for the development of ethical reasoning. The evaluation outcome will be to validate the course materials, and to provide guidelines for the future developments and use of CBIV in this content area. Specifically, the evaluation activities will address the following questions regarding the production of courseware, its validation and the analysis of the production process.
1. Is this prototype application of CBIV instructionally effective for traditional and adult distance students in undergraduate curricular such as philosophy?

* How does this course material compare in its effectiveness for its students with the effectiveness of the same topic dealt with in traditional classroom settings (e.g. lecture, readings, discussion)?

The crux of any instructional system evaluation is determining the instructional integrity of the product. It is essential that students learn what is taught and that subordination of instructional effectiveness to technological innovation does not occur. For successful dissemination of future CBIV, establishing the comparability of CBIV for on-campus outcomes is necessary, not in establishing the effectiveness of the media, but rather for the acceptance of the approach by the traditional academic community.

Also, students who pursue nontraditional modes of learning often differ demographically and psychologically from on-campus students. It is important to know if students utilizing CBIV course materials are comparable in their achievement of course objectives not only to traditional, campus-based students in general, but also to subgroups of students having similar characteristics.

2. What are the student’s attitudes toward the content in this learning environment?

* What adjustments are necessary to make CBIV as appealing as possible to the distant student?

3. What revisions are necessary to insure the success of this demonstration project?

* What additional delivery considerations need to be addressed for widespread distribution.

During development, formative evaluation activities will diagnose changes to be made to the CBIV supporting material. However, once the discs have been mastered and the scripts programmed, the evaluation emphasis shifts to delivery, implementation, and validation concerns. Essentially, all stages of evaluation will be designed to generate corrective feedback to all aspects of the system (including on- and off-line instructional materials). With this information, the evaluation unit will determine where adjustments can be made to promote course use and enhance course effectiveness.
4. What are the costs of this prototype application of CBIV?

* What costs can be projected in a future full-scale development, implementation, and operation of CBIV in this setting?

* Relative to other instructional modes, what is the cost-effectiveness of CBIV to an institution and to an individual student, and what are the determining factors?

Assuming that the evaluation effort determines the CBIV approach to be positive in its instructional effectiveness and in its appeal to students and institutions, the question of cost becomes the major issue to be examined. The evaluator will generate a plan for data gathering and analysis that will carry through the life of the project. This individual will start by identifying project management and the major cost categories, establishing data gathering mechanisms, and developing analysis tools. All strategies will be designed to be minimally intrusive in project procedures.

Factors tentatively determined to affect the cost-effectiveness of alternative instructional systems will be identified during the early stages of system development. Costs of all phases of development, production, and implementation will be documented and applied to interim and final analyses. Tentative effectiveness measures will also be determined and incorporated into the latest stages of evaluation. Despite the difficulty of determining the relationship of cost to effectiveness in instructional settings, attention to this issue from the outset will assure that strides are made toward minimizing costs and maximizing effectiveness.

5. What is unique about the CBIV teaching/learning environment that enhances individual ethical decision making?

* What makes it distinctive from other forms of distance learning or campus-based instructional settings?

* What does it do better or worse than other systems?

These questions relate to both the delivery and cost-effectiveness issues described earlier. However, the answers to these questions can also contribute to knowledge in the general field of educational technology.

4.2.2.2. Evaluation Activities

When the videodisc is completed and ready for dissemination, field test data will be gathered on course implementation in six test sites. These sites will be selected to represent a cross section of student populations. Sites will be selected from
public/private and secular/non-secular university and college settings. The test sites are the following: Carlow College (PA), Georgetown University (Washington, DC), University of Maryland (College Park), University of Notre Dame (IN), and Case Western Reserve University Hospital (OH), Queensborough Community College (NYC).

Student and faculty evaluators selected from the home universities will operate the field test sites under the direction of the University of Maryland evaluator. During the design stage on-line pretesting/post-testing procedures and question banks will be created to assess student change. Data collection concerning student choices during instruction will be identified. The field testing will take approximately four months (Fall term of 1987).

4.3. Products: The System Package

The end result of this production will be a system package with the following elements: one double-sided videodisc, a Notebook disk, an Instructor’s Manual, and a Study Guide. The contents of this package are described below.

4.3.1. Interactive Videodisc - Side 1

4.3.1.1. The Level I Program

This program will contain programmed tours (a’ la Roshomon) of contrasting perspectives on a patient who wishes to be allowed to die: the patient’s own, medical staff, family, members of the hospital ethics committee. The tour can be used by a teacher (with the class viewing the monitor) for the purposes of eliciting guided responses to the issue at hand. For example, one set of sequences can involve the patient’s perspective; another can show the doctor’s perspective. The complexity of the issue can emerge as the various angles develop. Thematic discussions of, for example, autonomy and paternalism can be vividly contrasted through the development of a hypothetical case of a 26 year old burn victim. The case, in this level and in level III, is based upon the actual case of Donald “Dax” Cowart (“Please Let Me Die” and “Dax’s Case”).

Time frame (user experience): approximately 20 minutes per selection.
4.3.1.2. The Level III Program

The exploratory tours on this level will involve the following general elements. The setting will be a simulated ethics committee meeting of nine members, eight in the program plus the viewer. The hypothetical case is used to explore the parameters of the entire issue of euthanasia. The committee members are evenly divided in their reasons and attitudes (thus leaving the viewer in the position of deciding the committee's majority recommendation). These committee members will serve as Socratic guides, providing counter-examples, analogies, and dialectical exchanges. The situation, which can include visits to the patient and family as well as consultation with doctors, nurses, social workers, and clergy, unfolds according to the decisions that the viewer makes. The program will contain many possible scenarios and the disc will contain several possible resolutions to the problem.

While the material for this program will be primarily dramatized 'documentary', it will include real documentary scenes depicting the treatment employed in the Donald Cowart case on which our own case treatment will be based, with Mr. Cowart as consultant.

This level can be utilized by the teacher as a homework assignment to be used after introductory lectures and/or readings. The assignment in turn can be used for the purposes of classroom discussions and/or essay or term paper requirements.

Time frame (user experience): approximately 1 to 2 hours per session.

4.3.2. Videodisc - Side 2 ("Dax's Case")

4.3.2.1. The Level 0 Program

The film in this package is of Donald Cowart's actual case history. Eleven years after his accident, Dax has built a life for himself, despite his disfigurement and the loss of his fingers, sight and partial hearing. Interviews with Dax, his wife, his mother, his physicians, his lawyer, a friend, and a nurse, along with footage from the original "burn tape," recount and reevaluate the religious, ethical, legal, and personal dynamics that led to his being treated against his wishes. Dax still feels very strongly that he should not have been forced to endure the painful treatments required by those charged with his care.

Time frame: 59 minutes
4.3.3. A Notebook Program and Disk

There will be word processing desktop accessory program bundled around the Level III program. It can be called up at any time during "the meeting" by hitting a special key. This utility, which will appear as a notebook window on the screen, will allow the viewer to write down impressions, reflections, comments, etc. A printout and file transfer will also be available. As an aid to later review, those notes can also form part of an essay and/or term paper assignment.

4.3.4. Ancillary Materials

4.3.4.1. An Instructor's Manual (30 pages)

This text will orient the instructor to the nature and content of the program. It will contain (1) a discussion of the nature and use of Interactive Videodisc Systems, (2) a detailed description of the content of the Level I and III programs, and (3) suggestions for curricular implementation of this particular course material. The latter section will discuss the pedagogical issues behind the development of this program and suggest strategies for classroom assignments (including ways to diagnose your own course requirements and ways to utilize the program for maximum effectiveness). For concrete examples of this utilization, see the "letters" in the appendices of this proposal. In regard to alternative uses of the videodisc in curricular implementation, associated issues of privacy and propriety, raised by the presentation of intimate personal case material as 'evidence', topics in other areas of applied ethics (journalism, privacy, etc.) for which the videodisc is useful will also be highlighted.

These issues were addressed at the May 22-23 Conference on Dax's Case held at Dartmouth; material from this conference, attended by Robert Cavalier, will be incorporated into the curricular implementation suggestions.

4.3.4.2. A Study Guide (70 pages)

This text will contain an introduction to the topics of euthanasia, the case of "Dax" on which our interactive case material is based, and a series of analogous case studies. It will also highlight the methodological dimension of our videodisc: reflections on the crucial interdependence and roles of hypothesis testing, observation, 'realism,' imagination, and affect (feelings, sensibilities) in ethical reasoning. Associated issues of privacy and propriety, raised by the presentation of intimate personal case material as 'evidence', topics in other areas of applied ethics (journalism, privacy, etc.) for which the videodisc is useful will also be highlighted.
It will conclude with a bibliography and suggested auxiliary readings.

4.3.5. Textbook

Preston Covey will produce a textbook for this project, groundwork for which began years ago and whose design has more recently been informed by the empirical research completed for his WARRANT project on novice and expert reasoning/writing strategies in ethics (the topic was 'paternalism,' directly relevant to the topical focus of our Annenberg project). The textbook, drawing as well on the pedagogy and design of our videodisc curriculum, has the working title, *Values, Facts, and Feelings: A Pragmatic Guide to Critical Inquiry in Ethics*. Sustained analysis of Dax's case, analogous cases and cognate issues will be the vehicle for the textbook's concern: moral epistemology and ethical reasoning. It will not be a 'trip to the zoo' of applied ethics.

However, the textbook, being broader in topical scope, will not be packaged with the videodisc and auxiliary materials. It will, of course, be a recommended text for anyone using the package, just as the package will be recommended to anyone using the textbook; but the textbook will be written to stand alone, or to be used as a supplement to other packages (such as Covey's previous WARRANT project, when this more generic critical reasoning/writing software is deployed in critical thinking or philosophy courses).

4.3.6. Delivery System

4.3.6.1. Hardware Requirements

The hardware requirements for the system package are as follows:

For the Level 0 and Level I programs, the user will need a Video Monitor (any standard color monitor will do), a Laser Disc Reader (e.g., Sony 2000, Pioneer 6000), and a remote controlled keypad.

For the Level III program, additional equipment will include a desktop personal computer (265K) with two disk drives (e.g., IBM PC or AT&T 6300), a Graphics Card (e.g., MetaMedia's GL512) and an RGB color monitor (e.g., Sony PVM 1271Q). Complete interactive Videodisc Systems are available from vendors such as IBM, AT&T, and DEC.
4.3.6.2. Availability and Feasibility

MetaMedia/OnLine Systems, Inc. has the capability of supplying complete student workstations.

Schools that already possess microcomputers can add the necessary peripherals for a cost of about $3,700.

The Notebook Disk will have a print option. Utilization of this option will require a printer (a dot matrix printer can cost $300 - $500).

We believe that interactive videodisc systems (and their incorporation into the advanced-function workstation environment) will become more and more a part of the educational climate. The key to adaptation will be the development of quality programs that demonstrate the unique potential of the medium. But cuts in the cost of production and hardware will also be a key factor for budgetary reasons. Mr. Rockley Miller, editor of The Videodisc Monitor, has stated in personal conversation that such cuts are on the way, as can be seen in, for example, the use of the Tagga Board to digitilize images in order to reduce the cost of producing graphics. He also noted the tradition of price decline in hardware products. In regard to these issues, Dr. Wertheim of MIT's Project Athena has written that "the coming year should see some important developments that will make interactive video cheaper and more prevalent" (letter dated April, 1986).

But the feasibility of our demonstration project does not depend on the limited number of delivery systems currently in use in the educational market. We seek, along with the charter of the Annenberg Foundation, to "test specific applications" of technology with the goal of demonstrating how these can provide a powerful and unique "enhancement of learning." We believe that successful demonstrations will in turn create the market for delivery systems, just as the availability of software helped to create the market for personal computers.

To address the issue of compatibility, we will seek to produce a system package that will be as "transportable" as possible. The program design is MS-DOS based, thus making our videodisc available for the widest potential market. The computer hardware that will be used in our test sites will be intended to demonstrate this transportability.

We recognize, furthermore, that financial constraints placed upon educational
institutions require minimal cost to the user. To address this issue, we have tentatively priced our system package at $475.00. This price compares favorably with other Level III interactive videodisc market prices. For example, Dxtex sells its medical disks for around $900.00, GPN sells the Annenberg Videodisk Biology Program for $425.00, and Systems Impact Inc. sells its Core Concepts in Science videodisks for approximately $600.00 per disk. We thus hope to produce an affordable product and to make it available to any educational institution that wants it - both now and in the future.

Finally, the feasibility of our project does not depend on breaking new ground in technology or programming techniques. Rather, we are using tested computer technology and established computer programming to break new ground in pedagogy. The success of this demonstration project thus depends on the effectiveness of the "software" and the teaching tools. To this end, care will be taken to evaluate the progress of the project from its initial design to the completion of its test site implementation.
5. Dissemination and Distribution

To insure that our project not only demonstrates its stated goals, but that the attainment of those goals is seen, employed, and modeled by others throughout the educational community, we have embarked upon the following dissemination and distribution strategies.

5.1. Dissemination

The main thesis behind our project, and its specific incorporation into the medium of interactive video, has already attracted the attention of teachers and professionals throughout the country.

Project personnel have given presentations and written announcements regarding the proposal. Preston Covey spoke on this topic at a meeting of the American Association of Higher Education (Washington, DC/March 4th, 1986). The talk was entitled “Computer Environments for Critical Thinking,” but focused almost exclusively on this project.

Preston Covey also discussed the topic at a round table session of a conference for “Developers of Computer-Assisted Instruction in Philosophy” (Cleveland State University, March 22-23, 1986). A flyer containing a description of this project was passed out at both this and the AAHE conference. (Both Dr. Cavalier and Dr. Covey were among the conference organizers). Notice of the project will be published this summer in the first issue of the Computers and Philosophy newsletter, headquartered at CDEC/CMU.

Robert Cavalier has included this project in a list of future developments for CAI in an article for the Proceedings of the American Philosophical Association. The article is entitled “The Convergence of Philosophy and Computers” and will appear in the June issue.

Dr. Cavalier was awarded a grant from the National Endowment for the Humanities to pursue curriculum and pedagogy development for this project during a summer seminar at the University of Virginia (June 16 - August 8, 1986). His topic is “Embedding Principles and Metaphors in a Hypermedia Exploration of Euthanasia.” Besides sharing this information with the seminar members, he will produce an article exploring the pedagogy behind the interactive video project.

Dr. Cavalier will also be presenting the idea behind this project in a workshop
sponsored by the American Association of Philosophy Teachers, August 4-8. The workshop is entitled "The Educational Use of Interactive Video." He has also been commissioned to write a chapter in the next edition of *Using Video* (eds. Dowrick and Simms). The chapter, to be entitled "The Nature and Use of Interactive Video," will describe the results of this project.

**Target journals and conferences:**


**Target Conferences:** Division Meetings of the American Philosophical Association, The American Association of Philosophy Teachers, the 18th World Congress of Philosophy (Brighton, UK 1988), etc.

Tom Held has mentioned this project at various interactive videodisc conferences and it has already generated considerable enthusiasm (as witnessed by the support of AT&T, DEC, and IBM). The program would be demonstrated at annual meetings of the videodisc trade e.g., "DECWorld," SALT, "Symposium on Computer Applications in Medical Care" (SCAMC), "Videodisc, Optical Disk, and CD-ROM Conference & Exposition," etc., as well as IBM's AEP consortium meetings.

**Target Consortia** include the "Forum for Interactive Technologies" (University of Pittsburgh), The Inter-University Consortium for Educational Computing (ICEC), the Benedum Regional Consortium. The Center for Design of Educational Computing is headquarters for the latter two consortia and publishes their newsletters.

### 5.2. Distribution

As can be seen from above, "the word is already out." Once funded, it will be part of our task to continue to promote the project through writings, demonstrations, and contacts with decisionmakers. Examples of the latter are responses to Covey's address to the AAHE on this project and dean Buccino (one of our letter writers). Preston Covey, as Director of CDEC and Chair of the APA's Committee on Computer Use in Philosophy, is himself a key decisionmaker in the educational community, including the ICEC and Benedum consortia (above). Covey is a program organizer for the national EDUCOM '86 Conference to be hosted at CMU next November.
The next considerations are (a) how will the product be distributed and (b) who will adopt it.

MetaMedia has agreed to use its facilities to package the product. This will be done with the aid of Reed International, a firm that utilizes MetaMedia as its electronic publishing arm. The Great Plains National Library (GPN) has agreed to promote and distribute the package. Furthermore, Reed International can serve as a conduit for the European market.

The audience for this package includes colleges whose undergraduate curriculae involves both traditional and nontraditional students and whose needs encompass the course area discussed elsewhere in this proposal, centers like the Concern for Dying whose goal is to educate both specialists and the general public in matters dealing with the content of our disc, university hospitals and medical schools where faculty and administrators can use the program to improve the quality of education for their students, graduate programs in applied ethics, and university public libraries.

Concrete examples of these audiences can be seen in our test sites and in the interest expressed by letter writers such as Helen McInnis (Editor, Macmillan), Andrea Guidoboni (Editor, St. Martin's Press), and A.J. Levinson (Director, Concern for Dying).

In sum, we have sought to insure that the audience will have been contacted through our projected dissemination process and that they will be reached through our distribution strategy.
6. Personnel and Facilities

In order that the project succeed in promoting the Annenberg Foundation’s commitment to excellence in education, we have assembled a superlative project team and have utilized the finest facilities. The main personnel and key facilities are discussed below.

6.1. Personnel

6.1.1. Principals

6.1.1.1. Dr. Preston K. Covey, Project Director

Dr. Covey is Director of the Center for Design of Educational Computing and Associate Professor of Philosophy at Carnegie-Mellon University. He holds a joint Ph.D. in Philosophy and the Humanities Graduate Program from Stanford University (1978) and received a B.A. in psychology from Stanford in 1965.

In addition to earlier work on informed consent and risk management issues on NSF and NEH grants, Dr. Covey has written and spoken extensively on the topic of computer utilization in the humanities. Publications and addresses include *Formal Logic and the Liberal Arts* (editor), "Computer-Assisted Instruction in Philosophy" (in *Computer-Aided Instruction in the Humanities*), "Using Computers in Teaching Reasoning and Writing" (Collegiate Microcomputer), and "Computer Applications and Educational Software Development Strategies in Philosophy." He is currently Chair of the American Philosophical Association’s Committee on Philosophy and Computer Use in Philosophy.

Dr. Covey’s work includes the production of a computer-assisted instruction package in logic, called *ANALYTICS*, to be published by McGraw-Hill in 1986. With colleagues in CMU’s English Department, he is also developing an extensive computer curriculum in critical reasoning and writing skills called WARRANT (funded by a FIPSE grant), and directing the development of intelligent tutors in logic for the advanced-function workstations at CMU.

Dr. Covey has received the university’s Elliot Dunlap Smith Award for Distinguished Teaching and Educational Service (1983-84) and he has done extensive teaching in Ethics and Biomedical Ethics over the last 18 years.

Covey and CDEC Staff will be responsible for the financial management of the
project. Covey will direct the research, conceptual and substantive development for the project's pedagogy and curriculum (script) and produce a textbook incorporating the project's methodology and case material, entitled Values, Facts, and Feelings: A Pragmatic Guide to Critical Inquiry. As Director of CMU's Core Curriculum course, Philosphic Methods and Social Values, for seven years, Covey used the case material for the present project as a centerpiece for the curriculum on applied ethics.

Dr. Covey will devote 3/8 to 1/2 of his time to the project (1/8 to 1/4, as necessary, as part of a distributed sabbatical from the Philosophy Department). Covey/CDEC will donate half of his time during the summer of '86 for the initial research and scripting work.

6.1.1.2. Dr. Robert J. Cavalier, Project Manager

Dr. Cavalier is Assistant Professor of Philosophy at Towson State University. He is editor of Ethics in the History of Western Philosophy and has participated in various projects on Computer-Assisted Instruction. He is co-author of courseware in logic called ALICE.

Dr. Cavalier received his Ph.D. and M.A. in philosophy from Duquesne University and his B.A. in philosophy from New York University. Aside from publications and conferences, Dr. Cavalier has received numerous grants including support from the Matchette Foundation for his work in the History of Ethics, TSU Faculty Summer Research Stipend for work in applied ethics, and a grant from the National Endowment for the Humanities for work on the present project.

Dr. Cavalier will manage the project's extensive subcontracted activities among the several sites and actively participate in the design treatment in-house at MetaMedia throughout the project.

Dr. Cavalier will devote 66% of his time to the project. Cavalier will donate half the summer of '86 (supported by an NEH grant) to curricular design and scripting work for the project.

6.1.2. Staff
6.1.2.1. MetaMedia, Design Treatment and Videodisc Production

Mr. William Aggen is Project Manager and Senior Instructional Designer at MetaMedia Systems, Inc. He received an M.Ed. in Instructional Development from Utah State University and a B.S. in Learning Resources from Western Illinois University. Mr. Aggen is a regular presenter of Interactive Videodisc technology and experiences at conferences and professional association meetings. He is also an active contributor to professional and trade publications.

As Senior Instructional Designer, Mr. Aggen will oversee the entire design and production team of MetaMedia. This team includes Jonathan Davis (Executive Producer/Director, Video Productions), Patricia Dear (Instructional Designer), and Mark Wilson (Instructional Technologist and Programmer). Dr. Cavalier (project co-principal) will also work actively on the design and production, and Mr. Tom Held (President of MetaMedia) will take active interest in all stages of development.

Mr. Aggen will devote 50% of his time to the Design Treatment.

Mr. Wilson will devote 25% of his time to programming.

Mr. Davis, Ms. Dear, and others at MetaMedia will devote 10% of their time to project development.

Mr. Held will devote 10% of his time to the project.

6.1.2.2. Mr. Gary Hettinger and Dr. Kerry Johnson, Summative Evaluation

Gary Hettinger is project director and coordinator of evaluation at the Center for Instructional Development and Evaluation. He received an M.Ed. from Pennsylvania State University and is currently ABD. He received a B.A. from Bloomsburg State University. Mr. Hettinger is responsible for the design, implementation, and coordination of evaluation methodology for CBI and CBIV courseware.

Dr. Johnson is Acting Director, Center for Instructional Development and Evaluation, University of Maryland University College. He received his Ph.D. from Syracuse University (NY). He received an A.B. from Gettysburg College (PA) and his M.S. from Queens College, City University of New York. Dr. Johnson is responsible for directing Center activities in the areas on instructional development and evaluation with particular emphasis on interactive videodisc computer-based instructional systems.
Mr. Hettinger will devote 50% of his time to the Summative Evaluation, Fall 87.

Dr. Johnson will donate 10% of his time to the Summative Evaluation, Fall 87.

6.1.2.3. Dr. Thomas Reeves, Formative Evaluation
Dr. Reeves is Assistant Professor of Education at the University of Georgia. He received his Ph.D. and M.S. in Program Evaluation and Instructional Development at Syracuse University (1979). He received his B.S. in Education and an M.L.M. in Instructional Development from Georgia State University.

Dr. Reeves will devote 10% of his time to the Formative Evaluation.

6.1.2.4. Dr. Scott P. Roberts, Design Treatment and Research
Dr. Roberts is Assistant Professor of Philosophy and Director of Curriculum Analysis at Carlow College. He brought computer-assisted instruction in logic to Carlow two years ago (a collaborative venture with Carnegie-Mellon University), and has done extensive evaluation of the success of this approach in the liberal-arts college setting.

Dr. Roberts received his Ph.D. in philosophy from the State University of New York at Buffalo, and his M.A. and B.A. in philosophy from the University of South Florida at Tampa. His lectures and publications focus on the topics of verification and evidentiary support. Dr. Roberts has received several grants for his own and institutional research.

Dr. Roberts will be a researcher and script writer during design treatment, and will write the study guide.

Dr. Roberts will devote 100% of his time to the project during design treatment, and will donate 1/8 thereafter (having been freed from committee and administrative duties for this purpose). Carlow College is freeing Roberts from committee and administrative duties starting this summer for this project; he will donate half his time during the summer of '86 to research and initial scripting work.

6.1.2.5. Dr. Ernest Alieva, Research and Design Treatment
Ernest Alieva is Assistant Professor of Philosophy at Carnegie-Mellon University. His research and teaching interests cover a wide range of issues in moral and political philosophy, including problems in metaethics, moral reasoning, political authority, distributive justice and individual liberty. Much of his work in these areas
has been interdisciplinary, drawing on theory and research in the social sciences and the humanities.

In his doctoral dissertation, "The Justification of Workers' Self-Management", Professor Alieva developed a normative justification of democratic decision making in the workplace. In addition to the analytic and normative issues concerning property rights and theories of democracy, the study involved discussion of recent empirical work on the economics of worker-managed enterprises.

In the summer of 1985 Professor Alieva was a participant in a NEH Seminar for College Teachers on "Philosophical Issues in Childhood". His research project and presentation in the seminar was on the theories of moral reasoning and development, centering on the psychological work of Kohlberg and Gilligan. This work is clearly relevant to the design of our videodisc curriculum and pedagogy.

Professor Alieva is deeply committed to undergraduate teaching and has developed several courses which are designed to encourage and to develop critical thinking in moral contexts through the examination of contemporary moral problems and the use of interdisciplinary materials. Among these are courses in Applied Ethics, Utopian Thought, World Hunger and Moral Obligation and Property Rights. At the present time, he is teaching a course on problems of individual liberty and paternalism, entitled, "Sex, Drugs, Rock 'n Roll and Seatbelts". The course covers a variety of theoretical, empirical and practical issues which are contemporary sources of controversy, such as restrictions regarding sexual behavior, drug use, pornographic literature, suicide, euthanasia, driving without seatbelts and other forms of risk taking.

"Dax's Case," the case material for the project will form one unit of Alieva's summer course. A conscientious skeptic of educational technology, Alieva was recruited for this project as our "house Luddite," to help keep us honest!

Alieva will devote 3/8 to 1/2 time to the project as researcher, script writer and evaluator, during the Design Treatment phase, and 1/8 thereafter as needed. CDEC is supporting Alieva at 2/3 time during the summer of '86 to work with Covey and Roberts on the research and initial script for the project.
6.1.2.6. Molly Youngling, Video Production

Ms. Youngling is a freelance television producer and writer with extensive experience in Public Broadcasting. Her credits include the "Previn & The Pittsburgh" Series and the "Kennedy Center Tonight" Series. She was Production Supervisor for the European Broadcasting Union during the 1984 American political conventions. Among her credits is the following: "So Many Voices: Abortion in America" (Production Manager, DHS Films — nominated for Emmy). She is currently producing a series on divorce that is designed for educational distribution.

Ms. Youngling will devote 100% of her time during the video production.

6.1.3. Advisors

6.1.3.1. Dr. Daniel Callahan, Content Expert

Daniel Callahan is co-founder and Director of the Hastings Center, Hastings-On-Hudson, N.Y. The Center is a research and educational organization founded in 1969 to examine ethical issues of medicine, biology, and the professions.

Dr. Callahan received his Ph.D. in philosophy from Harvard, an M.A. from Georgetown University, and his B.A. from Yale. He has taught at the University of Pennsylvania and Brown University.

Dr. Callahan is the author or editor of 25 books. They include "Abortion: Law, Choice, and Morality" (1970); "The Tyranny of Survival" (1973); and "Ethics in Hard Times" (1982). He has contributed articles to Daedalus, Harper's, The Atlantic, the New England Journal of Medicine, The New Republic, and other journals.

6.1.3.2. Dr. Tom L Beauchamp, Content Expert

Dr. Beauchamp is Professor of Philosophy and Senior Research Scholar at the Kennedy Institute of Ethics, Georgetown University. He received his Ph.D. in philosophy from The Johns Hopkins University in 1970. He received his M.A. and B.A. from Southern Methodist University.

Dr. Beauchamp is the author or editor of 15 books. They include "Principles of Biomedical Ethics" (1979); "Philosophical Ethics" (1982); "Ethics and Public Policy" (1982); and "Ethical Issues in Death and Dying" (1978). He has published over 50 articles in professional journals.
6.1.3.3. Dr. Stuart Youngner, M.D., Content Expert

Dr. Youngner received his medical degree from Case Western Reserve University in 1970. He did his Residency in Psychiatry at the University Hospitals of Cleveland and received his Diplomate from the American Board of Psychiatry in 1976. He is currently Assistant Professor in the Department of Psychiatry, Case Western Reserve University, School of Medicine and Co-Director, Center for Biomedical Ethics, Case Western Reserve University School of Medicine.

Dr. Youngner has worked extensively with the critically ill and has written and talked on the topic of euthanasia. His presentations include "Voluntary Euthanasia and Suicide: A Patient's Perspective" (1982); "Medical Ethics and Terminal Care" (1982); "A Request for Voluntary Euthanasia" (1982); "Active Euthanasia: Murder or Mercy" (1982); and "Refusal of Life Sustaining Treatment: Medical and Moral Perspectives" (1984). Dr. Youngner has also investigated the role and nature of ethics committees in presentations such as "Patient Attitudes Toward the Role of an Ethics Committee in Clinical Decision-Making" (1982) and "Survey of Existing Ethics Committees and an In-Depth Analysis of a Functioning Committee" (1983).

He has produced a video, distributed by Concern for the Dying, entitled "A Request for Voluntary Euthanasia." This is an interview with a middle-aged victim of multiple sclerosis who wants the doctors' assistance in ending his life.

6.1.3.4. Dr. John Vries, M.D., Technical Consultant

Dr. John Vries, M.D., is a neurosurgeon at Children's Hospital, Associate Professor of Neurosurgery, University of Pittsburgh, and has recently been appointed Assistant Vice President for Health Sciences in the University of Pittsburgh School of Medicine. Vries has developed MARS: An Intelligent Retrieval System for Laser Disc Medical Archives.

Dr. Vries is a national pioneer in AIM (artificial intelligence in medicine) research and allied work in interactive video archives. He has worked for some time now on finding educational and research applications for videodisc archives of pictorial information in medicine (particularly neuropathology) and is especially interested in building links between user-interface programs and expert systems for information retrieval.

Dr. Vries is committed to working on future collaborative ventures with Carnegie-Mellon in this area, as educational and research applications of interactive video
technology migrate from stand-alone installations to distributed networks of powerful advanced-function workstations such as CMU is deploying across its campus. With his help, we look forward to the near future when video case material such as our own and inquisitorial interface programs no longer are trammeled by the limitations of present videodisc technology.

6.1.3.5. Dr. Philip Miller, Technical Consultant

Dr. Philip Miller is Director of the Center for Art and Technology (CA&T) and Senior Lecturer in Computer Science at Carnegie-Mellon University. Preston Covey and Dr. Miller will be working together in future to develop authoring tools and production facilities for the design and development of interactive video programs at Carnegie-Mellon. Miller has already made considerable progress in joining expert-systems technology to drive interactive video systems for the arts. Under development are PianoTutor for studying piano technique and ArtTutor for the study of art history. Dr. Miller has also developed MacGNOME, a Macintosh-based interactive mastery-learning environment for computer programming. CA&T, under Miller's direction, has pioneered several other projects that combine artificial-intelligence and computer technology for sophisticated instructional and design aids in the arts.

6.1.3.6. Donald ("Dax") Cowart, Special Consultant

A burn victim who, against his express wishes, was subjected to hospitalization and painful treatment. From the day of his accident, Cowart insisted that he did not want to live. But his pleas with family and physicians that he be allowed to die were not granted.

Cowart now lectures widely on his case and the individual's right to die, often supplementing these lectures with two films that recount his own ordeal, "Please Let Me Die", and "Dax's Case." The latter will be included as a Level 0 documentary on side 2 of our project's videodisc.

6.2. Facilities


CDEC is both an R&D (research and development) center and a service organization for the advancement and dissemination of educational technology. Our core mission is development of applications for and deployment of advanced-function workstations for CMU and higher education; but we support and develop many projects for current technology. Preston Covey, Director of CDEC, administers the CMU Educational
Software Series, published under the auspices of McGraw-Hill; this series is targeted at the current technology market.

Major in-house development projects include authoring facilities and tools for the advanced-function workstations whose networking and wide deployment CMU, with the support of IBM, is pioneering.

Called CMU Tutor and developed principally by Bruce Sherwood, this combined authoring environment and programming language is designed to facilitate entry into the workstation world by non-experts, to function as a high-level 'control panel' for the sophisticated workstation system software (called Andrew and based on top of UNIX), as well as to provide non-experts with the means of production and high productivity in the development of sophisticated educational applications for both workstations and current technology (like Macs and IBM PC's).

Educational applications projects underway in-house include workstation software to support innovative curricula in logic, computation, and design; these include intelligent tutors for translation in logic, proof construction, and experimentation with standard AI-machinery (like Turing machines). Besides other in-house projects developing intelligent physics software, CDEC directly supports and collaborates with faculty across campus who are developing dozens of sophisticated applications for the new workstations in the sciences, humanities, arts, and engineering.

Project Theoria, our Annenberg project, is a first step by CDEC to demonstrate the power of interactive video technology for areas of the liberal arts often neglected in the advance of educational technology. On the basis of this project, CDEC aims to collaborate with the Center for Art and Technology, Dr. John Vries, the University of Pittsburgh, and WQED to make Pittsburgh a pioneering center for interactive video technology in education and information retrieval; we hope to lead the effort to migrate this technology to the environment of networked advanced-function workstations, in collaboration with our counterparts at MIT and Brown.

CDEC has established an Educational Software Library with an associated software database accessible nationally, and publishes a catalog of CMU educational software with over 100 entries. As a service and technology-transfer center, CDEC administers summer workshops for faculty from other institutions, courses and a scholarship/project program for talented undergraduates, distributes its own newsletter nationally, will publish the new newsletter Philosophy and Computers, is headquarters
and publishes the newsletters for two consortia, the Inter-University Consortium for Educational Computing (ICEC), and the Benedum Regional Consortium; our network thus includes colleges and universities both small and large, both regional and national. Senior CDEC staff consult with faculty and institutions both nationally and internationally.

6.2.2. MetaMedia/OnLine Systems

MetaMedia Systems, Inc., located in the Washington, DC Metropolitan area of Germantown, Maryland, is a high technology company furnishing total design, development, production, and premastering services for videotape and integrated optical videodisc programs.

MetaMedia Systems has an in-house staff of instructional designers, computer programmers, and a full video production staff (including producers, directors, graphics artists, and production technicians) to aid its clients in the development and delivery of interactive instruction and systems. Through its parent company, Online Computer Systems, Inc., MetaMedia can provide clients with specifications, integration, and maintenance of complex computer-based videodisc delivery systems.

Since its incorporation in 1981, MetaMedia has designed and produced over 70 video-based systems for a wide range of clients. The latter include: The J. Paul Getty Trust, the Library of Congress, the National Archives, the University of Maryland, Arete Publishing Company, Xerox Learning Systems, American College Testing, and the American Museum of History (Smithsonian).

The task of MetaMedia will be to design, develop, and produce the interactive videodisc, as well as to design and produce the computer system package.

6.2.3. WQED Pittsburgh

WQED, the world's first community-owned public television station, is the flagship of Metropolitan Pittsburgh Public Broadcasting, Inc., a multi-faceted communications organization. WQED Pittsburgh's facilities include three production studios, a videotape room, on-line computer-assisted videotape editors, videocassette editing systems, projection equipment, field production facilities, and a scenery construction shop. With these facilities and its in-house staff, WQED provides to its clients a complete system for film and videocassette production and editing.

Programs as diverse as the National Geographic Specials, Mister Roger's
Neighborhood, and Kennedy Center Tonight, demonstrate WQED's ability to produce films of the highest quality on any subject matter.

The specific task of WQED, in conjunction with Molly Youngling, will be to produce the video elements that will form a part of the interactive program.

6.2.4. Center for Instructional Development and Evaluation, University of Maryland

[Please refer to section on Summative Evaluation.]

6.2.5. Great Plains National Library for Interactive Television (GPN)

GPN will be the promotion and distribution facility for the videodisc package (including study guide and instructor's material).
7. Rights and Revenues

7.1. Rights
Concern for Dying has agreed to terms that would license the use "Dax's Case" in the context of our project in exchange for a licensing fee and a revenue share. Consequently, this arrangement will not affect the availability of the results of our project.

Carnegie-Melion University, through the Office of the Provost, wishes to propose its holding exclusive copyright to the videodisc package produced; the spirit and intent of this proposal is in keeping with the goals of the Annenberg/CPB Project. A letter from the Office of the Provost to Annenberg/CPB will follow, with a specific proposal and rationale.

We believe that these rights arrangements will satisfy the Annenberg/CPB project's goals of making production easily affordable and available to learners and to institutions of higher learning.

7.2. Revenue Sharing
Revenues that might be generated by this project will be based on the unit cost of the system package ($475.00). Although the initial press will be 100 copies, we expect sales to increase as the market base for Interactive Videodisc Systems grows. Our distributor, The Great Plains National Library, will serve as the first conduit for any monies received.

Revenue sharing for this project has been broken as follows:

1. Annenberg/CPB will receive 50%. This arrangement is in accordance with the proposal guidelines.

2. Carnegie Mellon University will receive 15% for cost-share recovery, management of project finances and revenues, and supporting further work on educational applications of interactive video technology.

3. Concern for Dying will receive 15%. This share is part of our arrangement for securing the rights to use their film, "Dax's Case."

4. MetaMedia/OnLine Systems, Inc., will receive 10%. This share is an incentive for the discounting of their student workstations (from $7,200 to $5,800).

5. The Great Plains National Library will receive 10%. This share will act as
an incentive to continue the promotion of the product beyond the initial distribution period.

The distribution of these revenues will start with Great Plains National Library. Monies received will be sent to the Annenberg/CPB project and they will in turn route the remaining funds to CMU for final distribution. CMU will also distribute the appropriate funds to MetaMedia/OnLine Systems, Inc.
8. Budget Narrative

8.1. Personnel

The budget supports Preston Covey, Project Director, at 25% and Robert Cavalier, Project Manager (coordinating the scheduling of the various subcontractor efforts) at 66% for the duration of the project. Covey and Cavalier will both be intensively involved in the substantive and design work on the videodisc and auxiliary materials (per description in Tasks, Methods, and Products).

Cavalier is donating his 2/3 summer time on an NEH stipend to work on the project; Covey/CDEC is donating 1/2 time during the summer; the research and script development work for the project begins in force in June. In addition, Covey has a 1/4 distributed sabbatical time from the Philosophy Department, half of which at least he will be donating to this project (the other half to wrap up of the WARRANT project, on which he is also project director; his substantive work for the WARRANT project curriculum and research effort has been completed).

8.2. Staff Travel

Besides the travel perspicuously itemized in the budget detail for the co-principals for travel directly related to project functions and key dissemination opportunities, Covey and Cavalier will on their own account be representing the project at regular philosophic and educational computing meetings.

8.3. Equipment

IBM, AT&T and DEC have expressed interest in this project. Furthermore, each corporation has stated its willingness to make interactive video systems available for development and test site purposes.

Detailed arrangements will be in place by the time the director and council make their decision on the full proposal. We expect to utilize seven systems at a total estimated equipment value of $70,000. No funding will be required from the Annenberg Foundation.
8.4. Materials and Production

Major costs incurred in this section arise from the design and development of the system package (including a two-sided videodisc with accompanying floppy diskettes, an instruction manual and a study guide). The main facilities concerned with videodisc production in this area of the budget are MetaMedia Systems, Inc., and WQED Pittsburgh.

The budget for MetaMedia includes costs for personnel during the design treatment. These personnel include a senior instructional designer, instructional designer, programmers, and other members of the design team.

Postproduction costs will involve production of the work tape, film-to-tape transfer, and one-inch tape editing. Audio production for level i will also be arranged at this time. MetaMedia will perform one-inch, on-line assembly of premastered video (tape stock, safety dubs, etc.), as well as video disk mastering, 30 minute CAV and 60 minute CLV. There will, in addition, be costs incurred for replication and shipping of the 100 double sided disks.

Molly Youngling (Producer) and WQED are responsible for the video elements of the project. The budget for WQED therefore includes costs for casting, dramatization, the director, the producer, graphics and effects, film transfers, audio recording, tape stock, talent, and editing of the 3/4 inch tape.

Under Design Treatment we include costs for two members of the research and script preparation team, Professors Ernest Alieva, Carnegie-Mellon, and Scott Roberts, Carlow College. They will work with Preston Covey and, less directly, Robert Cavalier to design and develop the scripts for our Levels I and III programs, write the Study Guide, and carry out the associated research on euthanasia issues, the ethical reasoning literature, and available relevant video materials. Their time will be donated during the summer and partially through the first year of the project. They are budgeted on the A/CPB side at 25% and 50%, respectively, for AY '86-'87. Alieva will also contribute to formative evaluation, and will be test-using our documentary video material in a course this summer. Further rationale for their roles is contained in Tasks, Methods, and Products.

Professor Thomas Reeves, who will carry out the formative evaluation during the fall collateral with the Design Treatment, is also included in this section at 10%. 
8.5. Administration

The central administration of the project and its budget will be at Carnegie-Mellon University, the proposing institution, through the offices of the Center for Design of Educational Computing, of which Preston Covey is Director.

Direct costs shown are for budget and financial administration, including disbursements to subcontractors, the project director's communications with principals and advisors, bibliographic database management, literature search and copying, networking, and other support services for dissemination efforts, the research and script development team, and the project director. Estimates are based on staff time off-lined for projects of lesser dimension than Project Theoria.

The Center for Design of Educational Computing will be providing the document preparation and laser printing facilities and services for production of camera-ready copy for the Study Guide, as well as for preparation of the textbook drafts.

Carnegie-Mellon University, while waiving its usual indirect cost charge at 55%, reflects indirect cost sharing at 55% on the total A/CPB budget less rights and subcontract costs over $25,000, and at 55% on the CMU component of the project's cost sharing.

8.6. Rights and Patent Expenses

Arrangements have been made with Concern for Dying to secure the right to use the film, "Dax's Case." The total production cost for this film was $300,000. On the basis of this, we have agreed to terms that would involve a $30,000 fee plus 15% in revenue sharing.

8.7. Promotion / Dissemination / Adaptation

MetaMedia, in conjunction with Reed International, will package the videodisc system. The process involves man hours and materials, and will include costs for design, art work, binding and reproduction.

The Great Plains National Library (GPN), a self-supporting division of the University of Nebraska, will promote and distribute the product.

The costs for catalog design, multiple mailings and shipping expenses are calculated at 6% of the total Annenberg funding for the project. (This is lower than their normal 7 - 10% rate in consideration of revenue sharing.) 19.75% of this percentage
of the total is to be added for supporting the administrative side of distribution. GPN will also receive 10% in revenue sharing, as incentive for their promotion effort.

8.8. Advisory Committee
Content experts (including special consultant Donald Cowart) will work closely with us during the design treatment stage of the project (Fall, 1986). Fees have been set at $300.00 per day (Dr. Callahan requests his standard fee of $500.00 per day).

An important meeting of the project personnel and CE's has been scheduled for fall 1986 at the Hastings Center. Utilization of the facility will cost $200.00.

Technical experts will follow the development of the format sheets and design choices. They will be compensated at the $300 per diem rate.

Travel expenses include round trip fares and overnight accommodations in New York (for meeting at the Hastings Center). Also included are eight round trip fares from Case Western Reserve University to Carnegie-Mellon University, plus two round trip fares from Pittsburgh to Washington (for the Technical Advisors).

8.9. Summative Evaluation
The costs for the University of Maryland summative evaluation team are listed perspicuously in the budget detail; their activities are described under the Evaluation Plan in Tasks, Methods, and Products.

8.10. Other
The Center for Design of Educational Computing has already committed to the purchase of several relevant video tapes on the euthanasia issue, to review and analyze as part of our research and scripting effort. We include a roughly equivalent budget for obtaining further video material as we pursue our research.
9. Budget Summary and Detail
10. Budget Cash-Flow Projections
Appendix I
Sample Materials:

Dax's Case - Video Treatments

I.1. "Dax's Case" -- The Videotape

Provided under separate cover with this proposal, for discretionary viewing by internal Annenberg/CPB reviewers, is Concern for the Dying's videotape on Donald Cowart ten years after the original presentation of his case in "Please Let Me Die."

In a joint letter, several professors at Dartmouth described the video as . . . sometimes quite hard to watch, but . . . clearly suitable for its purpose to provide the stimulus and basis for the activity in which we hope our students will participate -- dealing with multi-faceted issues with an intellectual coherence and a rational tolerance of several incompatibilities.
(From Concern for Dying Newsletter, Vol. 11, No. 4, Fall 1985; the videotape was presented at Dartmouth last fall as part of Orientation Week.)

This video material will be included in its entirety (59 minutes) as a Level 0 linear program on side 2 of our project's videodisc.

It is therefore, "sample material."

However, we submit it principally to give reviewers

1. A direct sense of the sterility of the typical traditional presentation of case material, the shallowness of the associated issues, and the lack of appreciation or reflection liable to be fostered thereby; as against the richness of data to be sifted and sorted and the perplexing texture of 'the real thing'.

2. By comparison, a concrete sense of the power of the visual presentation of the case material, especially in the orchestration of perspectives and the presentation of the rich and perplexing data that sets the standard for competent ethical reasoning.

We admit, however, that this comparison with the textbook account (Appendix II) is really a 'cheap shot'; of course, the video presentation is superior.

Hence, its third function, less direct, as "sample material" is more important:

3. By inference and imagination, a concrete sense of how the multiplicity and orchestration of different perspectives — like Dax's, the doctors', his mother's, etc. — could be made variously. . .
• more coherent or more contrapuntal, by turns, as appropriate
• more pointed, or more more strikingly to a point
• more surprising, to motivate hypotheses or responses on the part of a viewer
• or more surprising by virtue of coming in counter-point to a viewer’s responses or hypotheses
• but, in any case, more deeply and variously instructive in the difficult art of negotiating, not to say deciding, ‘live’ ethical issues

-- if access to the material were controlled or selected according to the pedagogical plan of an interactive exploration, guided, by turns, by the programmed agenda and the viewer’s choices.

Unfortunately, not all reviewers will have access to the videotape in order to perform this imaginative comparative exercise on behalf of our proposal.

We provide the following sampler, which, regretfully, becomes even more meager without the experience of the videotape to draw upon.

I.2. Sample Strategems: Level III Video Treatment

This is worse than a ‘Whitman’s Sampler’: its like the miniature sampler they sell at cashier counters; it should at least be the three-tiered assortment, to give the impression of depth and richness. But, there it is... a few suggestive bits and pieces.

In the interactive medium, the ‘editing’ of the material, the sequence of any exploration would be a function of pedagogical design/programming and the viewer’s options; the pace and direction of the presentation of the material would be under the control of the viewer interacting with the program’s Socratic guides and queries.

Even in linear format, the video presentation provides a concrete appreciation of the value of the interplay between various perspectives.

But some illustrations of how, in interactive format, a programmed tour would be superior to the linear format are these:

One of the most contestable issues in cases like this is the force of what Mill calls the *general presumption*, based on past cases, that — after whatever amount of
travail and adjustment — the patient, if forced to undergo treatment, will eventually affirm the value and sufficient quality of his life.

A collateral contested issue is the justificatory force of retrospective consent, should the patient come to allow that he's indeed now glad to have undergone the treatment and to be alive. There is also the question of what exactly would constitute this 'consent', even if it were to have justificatory force.

In "Dax's Case," the linear video, we learn rather immediately and by-the-way that Dax has regenerated an impressive new life for himself.

Pedagogically this is bad; it gives away too much; it doesn't make the viewer work for his facts, or question his reactions.

One wants the viewer/inquirer into the issues to feel the full force of the uncertainty that Dax/any patient felt/would feel back in the beginning — ten bloody laborious years earlier.

There are at least three deep problems with the matter of general presumption that never come to sharply experienced, pointed issue in the sweep of a linear presentation:

1. It does not follow that the rule will apply to any or every given case; the presumption may come to be defeated in fact.

2. In any event, the reality that impresses the patient is not the conventional wisdom enjoyed by detached observers but the agony of the uncertainty, indeed the sheer unimaginability of such a felicitous outcome in the longer term.

3. The deeply felt (if exaggerated or even illusory) indignity of having one's ever-so-real interests not to say judgment overriden and relentlessly disregarded by others whom you know can't possibly know how you feel.

To bounce through these issues, with them and others all a-tumble over one another, as does the linear presentation, is not only to a miss a powerful pedagogical opportunity, but to do a great disservice to both the dilemma and the person being gored by its horns.

(Granted, the dramatic impression one is left with is respect for both issues and patient; the problem with linear video/TV programs is that the gross impressions created do not substitute for acute perception or clear focus on decomposable
issues; the linear medium is essentially passive and reactive; whereas the interactive format can dragoon the viewer into more reflective, discerning, analytical response as well as more acute empathy and sympathy with the various perspectives and parties.)

The pedagogical opportunity is to keep the viewer in the dark about the outcome of this particular (say, Dax's) case, to play up the realities of the pain, the egregious slowness and doubtfulness of various dimensions of recovery, the haunting uncertainty — like any good Hollywood suspense treatment — so that the viewer can fully immerse in what all this must feel like and come as thoroughly as possible to suffer the same failure of hope and imagination as the patient.

I taught this case, in narrative form, for years and found the vast majority of students would leap easily to the conclusion that, so many people have managed recovery, why not this guy? To them ten years' struggle, pain, and doubt is a moment of ugly truth on the way to the next sentence. They need to be steeped in the patient's predicament before they learn of the happy outcome ten years later.

Once immersed in his predicament, analogous insults to their own sense of dignity, in less extreme or exotic cases, should be conjured, to sharpen the point of the issue, to make the viewer feel it acutely.

The power of discovery or perplexity in surprise should be exploited fully wherever possible.

For example, it's one thing to assume that a successful recovery and affirmation of one's new life is tantamount to retrospective consent. (The viewer's sense of this issue — of any key issue — should always be interrogated via the program's variety of inquisitorial ploys and agents: voice-over, graphic overlay, a 'talking head' in a window representing the patient, family, doctors, committee members . . . .)

But the fact that the patient still adamantly condemns the fact that he was forced to undergo his treatment, in spite of affirming the value of his recovered life, should be saved for dramatic counter-point — especially for those inclined to conclude with any confidence that such consent is implied in Dax's present state of mind; or, notwithstanding, that the decision to force treatment was justified: the victim of the treatment still says adamantly that it was not. This revelation about the case should be reserved to strategic effect.
Another example of the pedagogical power of controlled access to/revelation of crucial visual material (which, in linear version, risks rolling by the wayside):

Visual 'evidence' of the reality of Dax's treatment should not come cheaply.

'Facts', in typical narrative report, regarding the treatment, that it's painful, that the patient is given pain killers, that he's unconscious during the bath immersion, etc. etc. should be given in measured doses. The viewer should be queried continously about what further facts about the treatment he would like or thinks relevant; to elicit, test, and calibrate his own imaginative capacity to assess what's relevant.

The viewer's judgment about the justifiability of forced treatment should be eeked out by discrete stages, open always to revision, as further facts — still in narrative/narrator form only — are requested and revealed. If the viewer is tending to favor treatment, one wants to get the hook in good and deep before startling his sensibilities with the visual evidence.

Before being allowed to actually see the treatment, the viewer should be warned of its impact on others, its extremely upsetting nature, and asked, in effect, formally to consent to the exposure. The consent issue then becomes personalized, a micro experience of the macro issue. Getting personal, at every opprtunity, is crucial. (The ethical contestability of this or other pedagogical/issue-forcing ploys can themselves become matter for class discussion!)

In addition, the issue of propriety should be raised: Are you merely morbidly curious? Don't you think your viewing this indignity is an invasion of privacy? Would you want anonymous others gawking at a film of you undergoing such treatment? Etc. (An optional excursus here is wanted, into analogous experiences, to sensitize the viewer. Perhaps it should even be mandatory, with other sensitizing exercises, before the viewer is allowed to see the visuals on the treatment.)

More to the point, what do you think it will prove, your seeing this treatment? You know the 'facts' already? What more do you expect to learn and why is it relevant? Why should seeing what you already 'know' be important? (This is a typical juncture to invite or demand written response, in the notebook facility, from the viewer, with the help of a graphic overlay 'study guide'/protocol on the issues. An on-line interactive test, as a gateway check at the door to the treatment sequence, could also be administered; with critical responses from the program or inquisitor; and with the
results 'dumped' to the viewer's notebook file.)

This line of inquisition serves two points:

1. to get the viewer to think seriously about the weight, relevance, or evidentiary value of the visual evidence, as an important evidentiary issue;

2. to sensitive and heighten to the viewer's sensibilities and imaginative response to to the issues.

The issue of privacy and propriety could also be countered by the putative obligation the viewer has (in the role of ethics committee member) to face as well as know the facts; this distinction and this alleged duty could be further interrogated after the 'fact facing' sequence (with interrogation, on-line test, etc.).

Let's say, ex hypothesi, this viewer is inclined to mandate the treatment. (The program knows this from the continual querying, testing and choices the viewer has made.) Once having seen it, on this occasion and that, a further stratagem would be to subject the viewer to an experiential analogue of the treatment: a relentless repetitious 'special effects' montage of the agonies/realities . . . , to simulate the sense of the relentlessness, the helplessness, the lack of control and lack of respect the patient must feel. Have you seen enough? Yes? Well, sorry, here it is again. . . we've found that viewers who are subjected to these bloody awful scenes again and again and again . . . are later glad for the insight gained. It's been found that this is, after all, good for people. Issues of relevant similarity and justifiability of this 'treatment' — pedagogical or ethical — could be joined here: the rule being, give the viewer every opportunity (some we force) to interrogate his own experience in/with the program, its relevance, effect, evidentiary or instructive value; the pedagogy of the program and the ethical issues of the curriculum are usefully intertwined.

Another stratagem is to exploit, play upon the role-play foisted upon the viewer: if her decision is for treatment, she can be made to suffer the direct—entreaties of the patient, as if directed to her personally; to view the consequences and bear the resentment, to be made to feel as if she were directly responsible, to feel the weight of the realities entailed by such a decision, to attach that 'academic' decision to the real costs born by the patient, as if the viewer's decision has caused the consequences that follow.

If her decision is to remit treatment and let the patient die, as he wishes, analogous duress can be brought to bear by having to face the mother's pleas and
arguments, etc. These are standard ploys of video training programs: tie a scenario, a sequence of consequences immediately to the viewer’s decision; reinforce the sensation that she is the driver, the cause, not the viewer of the program.

The possibilities are myriad; the potential for repeated and quite varied inquisitorial ‘tours’ through the material — emphasizing different perspectives, issues, lessons (methodological or ethical), layers of facts and evidence, networks of consequences — is great.

To design and orchestrate these possibilities to best effect, to respect the issues and the real people behind them, to respect the rights of the viewer, to make this withall both personally illuminating and philosophically instructive — this will be the work of many specialists for many months.

There are clearly serious ethical and pedagogical issues to be brooked here. This is just a sample of the kind of thing that might be done with structured but flexible/inquiry-driven access, in an interactive, inquisitorial way, with the sort of material you would view without exploratory options, reflective pause, or interrogation in the linear videotape.

In viewing the videotape, the opportunity for introducing surprise, tactical counterpoint, strategic withholding of information, inquisitorial duress, forced reflection and response, and direct response or argument to the viewer’s choice or judgment by the patient or other principal — such advantages to the interactive exploration can be kept in mind.

We submit the videotape in the hopes that its own power can be perceived and the interactive possibilities effectively imagined with our goals, anecdotes, and strategies in mind.
1.3. The 'Roshomon' Plan: Level I Video Treatment

This is the basic plan and possible classroom strategies for the Level I program.

*Roshomon,* the film, was the story of an event. A central question it raised and played upon was: What really happened? The event was a garden-variety matter of direct everyday observation, with eyes, ears and such. Nothing tricky or special in the way of observational apparatus necessary; nothing specially problematic about the nature of the observation statements or evidence — at least no more so than with the stuff of everyday experience. Of course, we all know that, without getting philosophically skeptical, these everyday matters of observation can be pretty problematic.

So it was in *Roshomon,* a lesson in what constitutes the *truth* in (ordinary or not) human affairs.

A man and his new bride are traveling along... A bandit accosts them; ties up the husband; and rapes the wife. It also happens that part of these events is witnessed by a passer-by (objective observer?) 'in the bushes.'

The question is what 'really' happened? Did the wife want to be raped? enjoy being raped? love her husband? resent her husband? give in too easily? fight bravely? etc. etc.

We get the story (and a different one) from each of the participants/observers.

Where, in the conflicting testimony and perspectives, is *the truth*?

So, the point at play is obvious, if not simple.

If one could control the presentation of events and testimony any way one liked, how would one present and orchestrate these perspectives/testimonies to best advantage in order to give the most instructive play and acute twists to the questions of what truly happened and how do we determine this?

We will address an analogous challenge in the design of our Level I video program. We want an instructor to be able to take a class through any of the key perspectives selectively. Key perspectives on whether the patient should be forced to undergo
treatment, against his express wishes, include: the patient's, his doctors'/the medical
staff's, family members' (Dax's mother; his father died in the accident), other ethics
committee members (who could represent different lay or professional roles as well
as different philosophic, religious, personal viewpoints).

Programmed tours of access to visual evidence, to back claims (as retrospective
views of the 'actual' event are used as 'evidence' in Roshomon) and support these
viewpoints would also be possible.

The programming task is analogous to selecting slides for a carousel.

The idea is to program 'tours' of the perspectives and putative evidence of each
representative principal.

This would allow the instructor to take the class through them in whatever order,
for discussion of the case from different angles. As perspectives were added (in
successive class discussions/presentations), discussion could focus on how students'
perception or judgment changes, if it does, and why.

One classroom experiment might be to show different perspectives to different
parts of the class, then bring the class together (with or without knowing that
different groups had seen different slants on the case).

Students could also be assigned the project of making 'fair,' or 'persuasive'
presentations to the class, to play with the questions of how best to 'understand' the
issue or how best to make the case for their own judgment on the matter.

The Roshomon film, or its hollywood counterpart (or both), could be gotten to show
to the class, to provoke discussion of the analogue issues of observational validity,
subjectivity, and 'truth' or 'fairness' in the contexts of an 'empirical' case and the
ethical matter of the burn treatment: the differences between the empirical/'factual'
and the ethical/normative cases and the respective problems of what's 'true' or how
one decides could be explored — as could, and should, the similarities, analogous
issues.

And so forth. The possibilities here, we think, are rich; but leave much to the
imagination of the instructor.
Appendix II
Supplementary Material:

Dax's Case - A Typical Textbook Treatment

Critical Preface

The following is verbatim from a recent text, *Applying Moral Theories* by C. E. Harris (Belmont, CA: Wadsworth Publishing Co., 1986).

We do not mean to single out this particular text for special critical attention; it's as good or not as most any of its kind. It just happens that Harris chose to use the Donald Cowart case as a case study, so comparison of treatment was compelling.

It should probably be disclaimed that Harris' treatment of this case is in any way deserving of special criticism; the point is precisely that it is typical of the presentation of case material in ethics textbooks and anthologies.

However, we think the treatment of Dax's case in this text is less sensitive, compelling, and 'factual' than even an abstract narrative need be.

We are in a position to criticize this particular case treatment, however, because we have in fact seen the visual evidence on the case. We are in a position to know, on independent grounds (not available to most readers of case abstracts) that, for one example, the statement *but the dressing of the burns after his bath is still quite painful to him* is a terrible understatement and hardly an adequate summary of the 'facts' regarding the duress of Dax's treatment.

Thus, we still claim that this textbook treatment is telling and typical in its vapidity. We just are not in a similar position to know how similarly and gratuitously insipid and 'unfactual' other textbook case abstracts are (compared to the real cases on which they are based) — this is precisely the problem with such (the typical) material.

I taught a case, called Mrs. W (an Alzheimer's victim), for many years out of another textbook, on the basis of which we (the class) tended to conclude that it was wrong of her family to commit her involuntarily 'for her own good' because she was subject to dangerous wandering episodes; she wanted to be allowed to take her own chances.
The case was slanted entirely on the issue of paternalism. No facts about the costs to family and society were presented in the case abstract; or even suggested. Since my own mother-in-law has succumbed to the early stages of Alzheimer’s, I have a very different perspective on what Mill calls the ‘other-regarding’ reasons for involuntary commitment; this doesn’t ‘solve’ the question of what should be done in the case of Mrs. W (we’re hardly in a position to know), but the social-cost factors, when made plain (let alone vivid), certainly change the face and feel of the dilemma!

The Textbook Account

II.1. A Burn Victim’s Desire To Die

In July of 1973, an unmarried 26-year-old man, whom we shall call James, was severely burned when he and his father set off an explosion from a leaky propane gas pipeline. The father died before reaching the hospital, and James sustained second- and third-degree burns over two-thirds of his body. He is now blind in both eyes, although he might possibly be able to recover sight in one eye. After nine months of treatment, the tips of his fingers have been amputated, his hands are useless, he cannot get out of bed by himself, and the burns are still not healed. In order to keep the open burns from becoming infected, James must be immersed daily in a bath of antiseptic solution. The baths are preceded by an injection that makes James unconscious, but the dressing of the burns after his bath is still quite painful to him.

James in an intelligent and articulate young man. He has persistently pleaded to be allowed to leave the hospital and go home to die. He says that he will not wait to die a natural death from the infection that would begin in the open burns but would take measures to end his own life. He has recently refused permission for further surgery on his hands. The physicians have called in a consulting psychiatrist with the intent to have James declared incompetent, both the psychiatrist has concluded that James is rational. James’s argument for wanting to end his life is that he has been an active person, has participated in sports, and is fond of the outdoors. He does not find enough value in living blind and as a cripple to make it worthwhile to endure the painful treatments and the problems of adjusting to a new lifestyle. James has asked the physician to help him get out of the hospital, so he can go home and die. Should the physician honor James’s request? Let’s apply the concepts discussed in this chapter.
**Factual Issues.** The physician must answer a number of factual questions before he can make a decision. One of the questions is whether James could adjust to his new lifestyle. James says he would never find life worth living as a disabled person, but the physician has access to histories of other victims of catastrophes and will want to make a determination on his own of James’s prospects for future happiness. The physician will also want to know the law governing these situations. What can he do legally without incurring unacceptable liabilities for himself or the hospital? You may think of other factual issues that are important in the case.

**Conceptual Issues.** Two important conceptual issues arise in the case. The first is whether this proposed action is a case of suicide. Because James wants to end his life by some direct means and out of concern for his own well-being, most people would consider this action to be suicide. The second question, which is more difficult, has to do with the concept of rationality. Is James rational enough to make such a serious decision about his own future? The physician has to have a clear concept of what he means by *rationality* before he can answer this question. Of course factual issues can be raised here as well. The physician might have a clear concept of what it means to act rationally but might still be puzzled over whether James is acting rationally. If he defines *rationality* as involving, among other things, making decisions on the grounds of all available evidence, he might still wonder whether James fully understands the degree of which he will be able to manage his own affairs at home. Nevertheless, having a clear concept of rationality is an important first step in determining whether James is rational.

**Moral Issues.** This case has two important moral issues. One is the morality of killing oneself. This question is especially interesting because James is not dying. Given sufficient time, the burns will heal and James will be sent home. He should be able to live out his normal lifespan, even though he will be handicapped. The second issue has to do with the obligations and prerogatives of the physician. Does the physician have an obligation to help James end his life if he is asked to assist? Does he have the right to try to keep James in the hospital if he thinks James is not rational? Does he have the right to try to keep James in the hospital if he disagrees with James’s decision to end his life, even if he believes James is rational?

**Moral and Factual Statements.** Recall that moral conclusions do not follow directly from the facts of the case. For example, the fact that James will recover and can eventually be sent home does not necessarily mean that ending his life would be
wrong, although this consideration is relevant to the issue. The fact that the 
physician is prevented by law from directly administering a lethal injection to James 
at his request does not settle the question of whether he should legally be allowed 
to do so. The fact that the physician may be opposed to all forms of suicide does 
not necessarily mean that he should act to prevent James from killing himself.

Characteristics of Moral Statements. The moral questions at stake seem to exhibit the 
four characteristics of moral statements. First, the answers given to the moral 
questions at issue prescribe the conduct that James and his physician should follow. 
The statement that it is wrong for James to commit suicide implies that James 
should not take any measures to end his own life. The conclusion that the physician 
has an obligation to help James get out of the hospital implies that he should take 
steps to achieve the goal. Second, the moral statements made about this case are 
ordinarily made from an impersonal standpoint. If we are making judgments about 
the case from an observer's perspective, this impersonal standpoint can be assumed. 
But, even if we take the physician's standpoint, we would presumably ask what 
should be done based on his moral and professional obligation. Self-interest is not 
a legitimate consideration unless it would apply to any other physician in the same 
situation. If injecting James with a lethal drug would result in the physician's 
incarceration, that consideration would appropriately carry some moral weight. But it 
would carry moral weight with any other physician in the same situation. Third, the 
moral issues have a serious and overriding importance. The moral issues are more 
important than issues of medical etiquette or the aesthetic questions regarding 
James's burns. They are even more important than the legal issues in the case, 
because we might conclude that the laws should be changed to accommodate our 
moral beliefs about what should be done. Fourth, the issues cannot be settled 
merely by an appeal to authority or to consensus or tradition. Deciding whether it is 
wrong for James to take his own life or whether the physician should help him take 
his life involves more than taking a vote or determining how the issues have been 
decided in the past.

Concepts in Moral Philosophy. We can look at this problem from either a 
consequentialist or a non-consequentialist perspective. An egoist would ask about the 
consequences of the alternatives for James's or the physician's self-interest. A 
utilitarian would ask about the consequences for the general human welfare. Non-
consequentialists, such as natural-law theorists and advocates of the ethics of 
respect for persons, would approach the issues differently. They would ask whether
James's or his physician's actions were in accordance with human nature or the respect due the person. We shall leave the steps of this determination for another time; the important point is that the consequences of alternative actions are not the decisive point. For example, by the standards of natural law, James should not kill himself, even if the remainder of his life produces no benefit for him or anyone else. Finally, in a discussion of the case, we would use the terms good or bad, intending thereby to commend or condemn the actions, motives, or people involved. We would also refer to the actions of the people involved as right or wrong, intending thereby to classify them as morally obligatory (permissible) or as morally impermissible. The concepts and distinctions we have discussed in this first chapter, then, are an essential part of our moral discourse.

II.2. Concept Summary

An important part of ethics is making distinctions. When analyzing a moral problem, you should first distinguish between questions of fact, questions involving the definitions of concepts, and questions that directly involve moral principles.

Moral statements themselves are a type of normative statement, as are statements in such areas as aesthetics, etiquette, law, and grammar. Normative statements differ from factual statements in that normative statements make value judgments that appeal to norms. Most moral philosophers believe that moral statements cannot be derived from factual statements. An important corollary of this belief is that moral statements cannot be justified by an appeal to facts. This point is important in moral arguments.

Several characteristics, taken together, give a good description of moral statements. Moral statements prescribe conduct, they are based on impartial considerations, they have overriding importance, and they cannot be established or changed by the decisions of authoritative bodies, nor can their truth be established by a mere appeal to consensus or tradition.

To understand a moral theory, you must know whether it is a consequentialist theory (one that judges actions, persons, or motives according to their consequences) or a non-consequentialist theory (one that judges actions, persons, or motives by their conformity to moral rules). Egoism and utilitarianism are consequentialist theories, and natural law and the ethics of respect for persons are non-consequentialist theories. We shall use the word good as a general term of moral commendation and the word right to mean "morally obligatory."
Appendix III
Four Critical Questions

III.1. The Four Questions

These are the four questions the Annenberg panel posed as I understood them.

1. The Comparative Value of the Level III Program.
   - It's hard to imagine the experience of the Level III program.
     Just exactly what happens, step-by-step at any point, the branching, the interaction, the mixture of narrative and dramatic material etc.?
   - So, it's hard to imagine how or believe that the Level III simulation would be better than the Dax tape itself.

     How, in particular, could the dramatized material be as powerful as the Dax documentary itself?

     Given the power of the Dax tape itself, is the Level III simulation really worth doing?

2. Comparative Quality of the Level III Docu-Drama Material: Production Quality and the Competence of the Video Production Team.

     What about Molly Youngling's experience makes her qualified or appropriate for the project; what evidence is there that she can create quality dramatic video material that will not pale against the quality of the actual Dax tape?

     (I take it that what is needed here is assurance that the video production team (a WQED operation of which Molly is a part) will produce quality docu-drama material for the Level III program, material that will compare well with the Dax tape documentary.)

3. The Cost-vs-Value Added of the Level III Program.
   a. How is the proposed simulation an improvement over the powerful Dax tape itself? What can dramatic simulation add to the real thing? Or, why would the dramatized program be better than the Dax tape?

   b. Is the value presumably added worth the cost?

For example:
   - The Dax tape is so 'realistic' already, how could the dramatized program possibly compare (in realism?)? (This particular overlaps with questions 1 and 2 above.)

   - In another sense of 'realistic,' wouldn't the Dax tape or the dramatized program present the viewer with a quite UNrealistic
opportunity or situation, access to information that in quantity and realistic or dramatic quality would not normally or 'realistically' be available to decision makers (members of a hospital ethics committee)?

I.e., the proposed videodisc would not realistically represent the type and amount of case material available to an ethics committee member.

Wouldn't a merely narrative, discursive interactive computer program be both more realistic/appropriate for the setting simulated as well as less expensive?

• Is the existence of the Dax tape limiting or enabling? (This is/may be two questions:)
  a. One is the same as above: Won't any dramatized video material pale by comparison and therefore be ineffective and not worth the cost?
  b. Is the material on the Dax tape appropriate for interactive video treatment? Does the tape contain the right things for the purposes of the proposed project, the right visuals, the right dialogue, etc.?

(The latter question runs counter to the premise of the first question: it supposes that we will try to use the Dax tape material in our Level III treatment and asks whether it is appropriate in form or content for Level III purposes.)

4. The Value of the Level III Program as a Demonstration Project.

• How would/could others pick up on the idea(s) demonstrated by the proposed project; how would what we demonstrate be implemented by others in future?
  ■ The idea of interactive video?
  ■ The use of interactive video to provide a learning environment for open-ended inquiry and critical reasoning skills?
  ■ The use of interactive video for teaching/learning ethical reasoning?

• What would it cost them?

What sorts of projects/products would ours specially inspire on the part of others and what would it cost them?
III.2. The Plan for Addressing these Questions

11th Hour Commentary

The plan was far from fully realized, as the holes in the later sections make painfully clear. What began as a systematic address to the questions raised degenerated under duress and administrative crossfire into what could be called format-intensive automatic writing.

The four questions have overlapping concerns.

I sort out two basic problems or needs, subdivide and address them as follows:

1. The Value of the Project's Central **Product:** The Level III Program
   a. In part, the problem is having no concrete basis for comparing the proposed Level III product with the linear documentary "Dax's Case."

   We need some concrete basis for comparing the proposed Level III program with the powerful Dax tape: ideally, a prototype disc; a mock-up interaction on video tape; a partial or draft design treatment, a script; or at least a sample scenario that illustrates the difference between the interactive docu-drama material and the linear documentary.

   - In Section 11 I provide sample scenarios. A script would not exist in draft until September and the design treatment would not be complete until December. A prototype video treatment would not exist until January/February.

   b. In part, this is a value-vs-cost-added problem:

   Supposing the docu-drama material compares well in production quality to "Dax's Case," in what ways will the interactive docu-drama program improve upon the powerful linear documentary of "Dax's Case"?

   Apart from the question of production quality, this question has three dimensions:

   1. How will the interactive program be superior to the linear program?

   2. How will the docu-drama material be superior to the documentary material of "Dax's Case"?

   3. Will the value-added be worth the cost?

   - I address this problem in Section 12.
c. In part, this is a question of production quality:

Supposing an interactive Level III docu-drama could be more effective than the linear but powerful "Dax's Case" for certain educational purposes, what reason is there to believe that the docu-drama material will be of sufficient quality to compare favorably with the documentary material of "Dax's Case"?

This requires evidence that the video production team can do the job, that the would-be value-added of our Level III program will not be compromised by unfavorable comparison with 'the real thing' presented in "Dax's Case."

- In Section 13, I provide a resume for Molly Youngling and letters from Youngling and Marc Pollock, Director of Educational Project Development at WQED, addressing the question of why they are appropriate and adequate to the task.

2. The Value of the Project as a Demonstration Project

I decompose this into two questions.

The second is the panel's question, which in turn has two parts. But the first provides important context.

a. What all will the project demonstrate, what levels of significance and impact will it have?

b. What about the project will inspire replication and at what cost?

- I address these issues in Section 14.
11. Sample Scenarios for Level III Program

THE PROBLEM

For compelling reasons explained in Sections 2 and 3, we decided to script and shoot our own docu-drama on a hypothetical case analogous to that of Dax, for our Level III program, rather than try to edit or tailor "Dax's Case" to our pedagogical purposes.

Limitations of the videodisc medium, limitations of the Dax material, propriety, and the advantages of constructing our own case material (commented upon here and outlined in Section 2) all dictated this decision.

Allowing that our reasons may well be compelling, we confront a two-fold problem:

1. On the one hand stands the powerful treatment of the affecting case of Dax Cowart, eloquent testimony to the value of a linear video presentation.

2. On the other hand stands our 'idea' of how such a case — the general and acute issues it represents, the complex of thoughts and feelings such a case evokes — can be more instructively negotiated by means of hypothetical docu-drama in a Level III treatment.

The mere 'idea', lacking concrete embodiment or illustration, evidently pales by comparison to the available documentary treatment.

Anyone might well ask — as our own resident skeptic, Ernie Alleva, did ask — after viewing "Dax's Case": How could you possibly improve on this for powerful presentation of the relevant viewpoints and issues?

THE POINT

It's important to keep in mind that representation of issues and viewpoints — fair, balanced, affecting or whatever — is not the only or ultimate point of our Level III program (let alone of combined use of the Level 0, I and III treatments of euthanasia issues): we aim to simulate, stimulate, and sustain dimensions and processes of critical inquiry which, we posit, are necessarily given short shrift in typical classroom, narrative, or even powerful (linear) documentary treatments.
In Appendix I to our final proposal, I tried to illustrate the sort of pedagogical strategems that a Level III treatment would allow and why such strategems were important to promote critical inquiry in ethics in ways even powerful films could not.

In this and Section 2 of this supplement, I will try to illustrate the value of a Level III docu-dramatic treatment of a hypothetical case, its educational advantages over the linear treatment of Dax's very powerful documentary case material.

Here I also try to provide a more concrete picture of what a Level III treatment would be, scenarios to show how interactive treatment of tailored material would allow a viewer to be more focused, reflective, probing, challenged and (even) affected than would a linear presentation of already very affecting, 'real' case material. Unfortunately, time did not permit as full a narrative illustration of the Level III curriculum as I would have wished.

CAVEATS

The design and construction of a script -- by comparison to which my scenarios are quick, speculative sketches -- will be based on our interrogation of students who studied "Dax's Case" this summer, ourselves, members of the NEH seminar Robert Cavalier is presently attending, our advisory panel, the relevant literatures and many video treatments of similar cases and issues. I will try to sketch here the sort of thing four of us, in consultation with many others, will be working out over the next three months.

The design and construction of the storyboard and technical formatting of the Level III program will be based on the interrogation of our script by the professional design and programming staff of MetaMedia who are versed in the opportunities afforded by screen windows, voice overs, graphic overlays, programmed challenge-and-response interactions, still frames and motion sequences. This dialogue between the technical and pedagogical environments of the design treatment will determine the texture of both script and ultimate product.

In addition, our formative evaluator will interrogate our designs, as will we, from the perspective of the learning objectives we have espoused and our target audiences. Ernie Alieva is on board in large part because of his background in the moral development debates and literature, and will bring this critical perspective to bear throughout the design and formative treatment.
Thus, the artfulness of the composition of the Level III program will be a function of six months of collaborative research and interaction by many professional team members and advisors. This is the burden of the design treatment phase of the project for which we seek support.

With those caveats, here are some scenarios to roughly sketch a more concrete picture of a Level III treatment, in the narrative medium from which we wish and must ultimately be able to depart.

Several scenarios or vignettes I hope will help to convey different sample dimensions and trajectories of the Level III inquiry.
11.1. SCENARIO #1: Presentation of the ‘Facts’ of the Case

11.1.1. COMMENTARY

I don’t know whether the panel will feel the need or justification for the following commentary, but I cannot see how to avoid it: some explanation of the pedagogical and design context in which a scenario would fit.

Whether wasted or necessary, these words of commentary indicate the difficulty of telling what we intend to show.

Any sketch or tissue slice of our Level ill programme is bound to raise as many questions as it answers. I say this because I’ll wager that I have more questions about any point or strategy in the programme as your panel.

In this case, I am aware of one particular line of questionning (see Question 3 under Four Critical Questions, and response below) that it would be opportune to address here.

I’ve thought of others that if I didn’t address might undercut the effectiveness of the illustrative scenario. I’m sure there are more that could do so anyway. The telling that would have to be done to show and justify against all reasonable onslaughts what we want to do here has unfortunately to be answered with *therein hangs a tale!*

In trying to think what could be shown in 8 to 10 pages without some context and explanation, without raising more questions than it answers, I have a real failure of imagination.

If you want the sketch without the argle bargle, go to the next subsection.

Here’s some context to set it up:

11.1.1.1. First Phase: The Set Up / Setting

Let’s call the patient in our hypothetical case Dale.

The viewer (hereafter, for convenience, ‘V’) has visually met, as a round-table ensemble, the other members of the ethics committee deliberating Dale’s case. The committee consists of eight other members plus a physician moderator, the chair
(who does not vote). The set up is such that V will find herself cast in the difficult position of tie-breaker in disputes or votes.

The commission of the committee has been explained to V and her colleagues by the chair: they are to decide whether to recommend that Dale be released from the hospital and allowed to die, as he wishes, or not. Additionally, they are to decide whether, if released to die, Dale should be given the benefit of (within the course of his dying, probably addictive) pain relief. The alternative is to recommend continued treatment of Dale's burns, against his express wishes, leading to rehabilitative physical therapy.

Four of the other eight committee members will prove more actively inquisitive or argumentative than the rest, to serve as interlocutors or Socratic 'guides' for V. They will come out as evenly divided, but for different and shifting reasons, in their vote or favored recommendation. Their views and feelings will be constructed to represent important paradigmatic perspectives on the issues; their life roles or professions will be designed accordingly.

One male and one female member will come out on each side of the issue: to release or to treat Dale. (V will have opportunity to learn the views of the other four less active/vocal committee members; the degree to which we can exploit them as interlocuters will depend on trade-offs among disk storage, views requiring representation, and pedagogical economies as we develop the script and design treatment. These background members can be used opportunistically to voice views or challenges that cannot be well or consistently put in the 'mouths' of the better defined active members.)

The most visible four of this committee of nine (where V is the ninth) will represent their views and queries to V as talking heads in a window through voice over, sometimes reinforced with queries or statements printed in another (read-text) window on the screen for V's response (on the keyboard), sometimes reinforced by arguments or points printed on the screen for V's contemplation or response.

11.1.1.2. Second Phase: Narrative/Discursive Presentation

This phase of the Level III treatment (for convenience, 'the programme,' to denote the curriculum as well as its computer-programmed implementation) presents the viewer with only narrative facts and discursive argument, large amounts of which can be stored on the computer disk (saving space on the videodisc) and which is
representative of the kind of material available to either students or ethics committee members in ordinary circumstances.

This phase is sketched out in SCENARIO #1 below.

11.1.1.3. The Role-Play Device of the Viewer as Ethics Committee Member

One of the sub-questions raised by the panel (see Four Critical Questions, under Question 3,) was whether a more 'realistic' and less expensive approach to the ethics committee member role would not be a narrative/discursive presentation of facts, views, and issues through an interactive computer program without the video dimension.

Response:

• The Level III programme is not an ethics committee training video.

• Our project is to produce an environment to simulate, stimulate, and sustain critical inquiry in ethics, not to simulate the decision context and procedures of ethics committee deliberations.

• The role-play involved, putting the viewer in the role of an ethics committee member, is a pedagogical device for encumbering the viewer with some sense of responsibility for her deliberations — among other things.

• Our allegiance is not to how ethics committees normally operate, but to dimensions and processes requisite to competent ethical inquiry and deliberation.

• There is, in any case, no uniform norm for ethics committee procedures (see the set of reviews on ethics committees in the June 1986 issue of The Hastings Center Report, "Ethics Committees: How Are They Doing?").

• What variety of norms and procedures there are could undoubtedly use some review, reform, and evolution. (In any case, the license we take in setting up our committee procedures will be no greater than variations in current practice.)

• One potential target for reformative impact by our project and the controversies we hope it stirs are ethics committee procedures:
  - If ethics committees do not interview patients and principals, then perhaps they should.
  - If ethics committees do not have available video case material, on pending or analogous cases, then perhaps they should.
  - If ethics committees do not have the benefit of interactive 'experiential' learning environments such as we propose, then perhaps
Moreover, two of our letter writers say as much for the impact of our project and product on clinical practice and practitioners generally.

- If the deliberations of ethics committees are not informed by something like our cognitive-affective model of ethical reasoning, then I would say they should be — and this would call for helpful learning and reasoning aids such as we propose.

- If there are controversies to be raised about all this, then let's let them be joined.

• One point of our project is to force just such issues about practice and standards, in professional as well as educational as well as ordinary settings of applied ethical reasoning.

The role-play device is subordinate to the larger agenda to stimulate reasoning of fuller dimension than is likely to take place in current contexts — whether they be classrooms, dorm rooms, or committee rooms.

It is not our only device for generating challenge and perspective.

There is also what I could call Dicken's license, the device used in *A Christmas Carol*, where Scrooge is visited by the various ghosts who by fantastical artifice induce in him the kind of experiential learning he could not attain by his own wits, experience, or conventional practice.

This is what experiential learning devices are for.

This could as well be called Dante's license, the device used in *The Divine Comedy*, where Dante (the inquirer) is guided by Virgil through the metaphorical vision of human damnation, purgation, and salvation.

In our programme, this role will be played by the less fantastical device of the committee chair or moderator, as well as by the prompts and options offered by the programme itself.

Our viewer will be transported or invited to visit principals and scenes outside the committee room. If such opportunities are not open to ordinary ethics committee members, then the question is well raised whether they should be.

This license is allowed our committee members in any case, as well this variant
procedure might be, for the larger purpose of inducing experiential learning of the manifold dimensions of ethical reasoning and judgment, the formalities of committee procedures aside.

The point of taking Dicken’s license here is both to do what the Annenberg panel member suggested but to do more, to a further point.

11.1.1.4. The Pedagogical Opportunity

I include the narrative presentation of facts, views and issues as a sample scenario because the question the Annenberg panel member raised is nonetheless apt and speaks to our plan.

The plan is to design the first phases of V’s odyssey as an exploration of the relevance and limitations of narrative ‘facts’ and discursive treatment of issues.

The plan is not to abet current practice but to question it, and to demonstrate and stimulate the further dimensions of the inquiry by experiential contrast.

For this one wants initial exploration of what typical narrative reports and discursive treatments can provide.

As a politician looks for photo opportunities, we look for pedagogical opportunities, opportunities to show rather than tell: say, the difference between the experientially insular processing of narrative facts and the assault on the sensibilities afforded by vivid visualization.

The point, of course, of the odyssey between these two (not the only) poles of critical inquiry is the same as Odysseus’: to negotiate the straits between Scylla and Charbdis, to avoid losing either one’s head or one’s heart, to recon but avoid both extremes.

Immersion in the narrative context provides the pedagogical opportunity to compare and contrast the data, evidence, and understanding afforded by the visual medium, as well as to interrogate the narrative facts for relevance and to question what more one needs to ‘know’ or understand that has not been represented in the narrative tour.

This comparison and contrast, this particular pedagogical opportunity, one might think would be well afforded by simply giving the students narrative material and
exposing them to “Dax’s Case.”

The shortfall or lost opportunity in this juxtaposition of linear video and linear narrative material is the interactive interrogation of both experiences, as they interact in turn within a continuous learning environment or ‘problem space’ (the Level III programme). This is a question of the value added by the Level III treatment overall — another example of how it’s hard to tell in a linear way what we want to show in a non-linear medium without getting into a long tale indeed. The following sketches offer some indication.

11.1.2. SCENARIO #1

To save space and time, suppose V and the committee have been presented with the case of Dale as C. E. Harris presents the case of Dax (he calls him James) in Applying Moral Theories (see Appendix II to final proposal). (While we may want to change some ‘facts’ of the case for Dale, a Harris-type treatment of the ‘facts of the case’ is the sort of thing we would use at this stage: something typical of case abstracts and typically incomplete — incomplete both in relevant information that could be communicated in narrative and data that could only be seen to be understood.)

V has been invited to read (on-line, in a window on the screen) the case abstract along with the other members of the committee.

(The aim of the programme at this stage is to press V to interrogate her assessment of the case, her sense of what more she needs to know, and allow some argument from other committee members pursuant to a straw vote on the issue of whether to release or treat Dale.)

(The issue of whether V is a he or a she is a problem we must wrestle with, by the way. Gilligan aside, there are bound to be significant differences between male and female responses to case material. For example, a woman may assess Dale’s quality of life prospects differently according to how she imagines herself to be able or unable to respond to such a person as a possible friend, wife or lover. The same issues may not affect a male viewer of a male patient’s case in the same way; the differences and opportunities for interrogating them could be important. And, therein hangs a tale. It seems a generic virtue of our project that we would force such
issues to light, along with their extraordinary complexity, in very concrete ways, even if our own solution were not optimal.)

V knows about Dale what Harris has told us about James. Dale wants to be allowed to die. His reasons are the pain of the treatment and the implausibility of his adjusting to his blindness and inability to use his hands. This, against the background of his previously active, athletic lifestyle. He has been certified competent psychically. Etc.

The facts of the case are summarized by the chair as follows:

- Dale is blind and crippled.
- He has insisted repeatedly that he wants to be released from care and allowed to die.
- He cites the pain of his treatment (in particular, the dressing of his wounds) and the awful prospect of a life as a blind cripple.

The question is: Should his wish to be allowed to die be honored by the hospital?

This episode might appear as a still shot of the chair(person) with voice-over announcing the summary, with the summary and central question appearing as a list in the window for reading the programme's text.

(The chair will be a resident physician, hence a medical authority, who serves as moderator of the proceedings and remains neutral in both argument and the committee's vote on its recommendation. The chair will serve as the programme's Virgil, in effect, although other members of the committee or principals in the case can still also serve as 'Socratic guides' or interlocutors for the viewer.)

V is then asked by the chair if there is any fact or aspect of the case as presented left out of the summary.

If V responds 'yes', she is asked to add them to the list. Her responses are typed into the NoteBook window and recorded in her NoteBook file under Case Summary and Notes.

(All V's input will be in the NoteBook window, stored in the NoteBook file, and indexed under both date/time and a topic heading on the NoteBook 'page'. The NoteBook contents can be searched and reviewed or printed out by date or topic. The topic index, while controlled by the programme, can be reviewed in a pop-up)
window, as can the NoteBook program functions and options. All responses requested and input by V are recorded in the NoteBook. When input is in response to a query, the source and question are recorded in V's NoteBook file automatically. Viewers whose installation lacks a drive and disk for saving the NoteBook file beyond a given session will lose this material but not the benefit of active written response to queries and challenges.)

Once V has added facts or items to the case summary other committee members are invited by the chair to do the same. Input by others is announced by a still shot with voice-over; the input itself appears in the read-text window. This material can be recorded in V's NoteBook file.

After, say, our four active committee members have made their additions, the chair presents the revised case summary, with perhaps redundant items (depending on what V has added).

Committee members can add items that collectively are redundant. This allows features of the case to be highlighted by being left out in the first summary and being noticed by V or picked out and thereby emphasized by others.

Examples for the revised case summary list would include:

- Dale was examined and judged competent by a psychiatrist.
- Dale is intelligent and articulate.
- Dale had led an active, athletic life before his accident.
- Dale in particular has lost his finger tips and apparent use of his hands.
- But he has refused surgery, which perhaps could salvage some use of his hands?
- He might recover sight in one eye.

(The simple strategem illustrated in this sketch is to draw attention to and induce V to think actively about these surface facts of the case, rather than to lay them out in textbook fashion. Active noticing is encouraged by asking V to add to the summary; passive noticing is assured by having others draw attention to items neglected in the original list. This very elementary exercise illustrates a simple process that can be reiterated wherever it is pedagogically useful to make the presentation of facts or issues interactive rather than passive. For cooperative
viewers, there is the added benefit of having notes and a record of their and the committee's deliberations on the case. For uncooperative viewers, presumably there's nothing lost.)

11.2. SCENARIO #2: Initial Straw Vote

Undoubtedly premature in any real committee deliberation, the chair's asking for a straw vote after initial summary of the case induces V to take a reading of her intuitions on the case and should sharpen her sense that more information, more explicit criteria, more interrogation of the case and the committee's views and would-be arguments is needed. Preemption of further information and discussion highlights this need; the more abrupt it seems, the better perhaps.

Allowing that it's a mere formality to get a reading of where the committee stands, the chair calls for a show of hands on the question: Should we honor Dale's request?

V is instructed by the programme to please register a yes or no vote (in her NoteBook window); there will be opportunity for discussion and revision.

The committee members are to raise their hands if in favor of granting Dale his request to be allowed to die.

Upon casting her vote, the committee members' show of hands is displayed in the video window: four hands are raised. V thereby learns that her response decided the straw vote.

At this point the chair thanks the committee for making a difficult preliminary judgment call and invites the members, starting with V, to explore their sense of the case.

On a questionnaire that he passes out (which appears in V's read-text window) the chair requests the committe members to answer the questions before discussion begins. V is instructed, specifically, to answer the following questions as gauges of her views on the matter at hand. Each question is replicated in turn as V responds one by one in her NoteBook window, where her responses are recorded.

- Granted your responses are merely preliminary and intuitive, how sympathetic are you to the patient's request?
(This is a multiple choice on a Liker-like scale 1 to 5, where 5 is very sympathetic and 1 is very unsympathetic. Ditto below.)

- How strongly do you empathize with the patient’s request?
- How comfortable or confident are you of your preliminary decision in this case?
- How comfortable or confident would you be if the decision of the committee were to be binding on the hospital rather than a recommendation?
- How comfortable or confident would you feel if your decision were to be made a binding policy for all future cases of the kind?

At this point the chair recognizes in turn the four ‘active’ committee members who wish to voice views on these issues and the question put to straw vote. This is handled by still shots and voice-over, with their volunteered responses to the questionnaire displayed for V in the read-text window.

This is an opportunity to provide V with some introductory perspective on paradigmatic viewpoints and considerations, reflections on others’ feelings, the distinctions they draw between sympathy, empathy and their judgments on the case — and any apparent connections among these feelings and judgments — the difference between a case-specific decision and a general policy, etc.

Key points made by the committee members could be highlighted in text or outline in the read-text window, and copied, along with any notes V wishes to make, into her NoteBook file.

This scenario is just a simple example of how opportunity can be made in the interactive format to artificially but effectively stop the ‘action’ for reflective and instructive purposes at a point where the viewer’s sensitivity or receptiveness has been heightened by the demands of the scenario.

So far, these sketchy scenarios have not taken us beyond what’s presented in the first two paragraphs of the Harris textbook account, but I think it’s readily imagined that the viewer’s mind and sense on the matter has progressed, more acutely and attentively, beyond the vapid discussion that follows in Harris.

By contrast with a viewer of “Dax’s Case,” although no ‘real’ material has even been presented, our hypothesis would be that the viewer would be more attentive
and sensitive to her own intuitions about the issues and in a more thoughtful cast of mind than were she absorbed in the video tape.

In any case, this is an example of how strategems to force reflection on issues before they have been made fully explicit — putting this burden as much as possible on the viewer's own intuitive resources each step of the way — can induce the viewer to become active as well as reactive from the start in an interactive medium.

11.3. SCENARIO #3: Interrogating the Facts and Criteria

Still within the confines of narrative facts, there remains the task of determining what further facts are wanted, interrogating the surface facts for their significance, relevance or weight: in effect, explicating relevant criteria for the decision.

In the fashion sketched above, V would first be asked — along with the others, preliminary to discussion — to note down answers to the following questions:

1. On a scale of 1 to 5, where 5 is the heaviest weighting, how would you rate in importance the following facts of the case [a revised fact summary list, including V's additions, would be displayed, with each item replicated in turn as she responds in the scrolling NoteBook window].

   And please indicate whether you believe the fact or factor weighs in favor (pro) or against (con) the decision to honor Dale's request to die.

2. List what more you need to know to make a confident judgment in the case, questions to which you would like answers. In each case, please also:
   a. Speculate, make your best educated guess about the answer to the question.
   b. Indicate whether you believe this factor counts pro or con the decision to honor Dale's request.
   c. Rate the importance of this factor on the scale of 1 to 5.

At this point the responses and commentary of the other (four active) committee members is presented, with their points outlined in turn in the read-text window.

Again, this is a device for instructing V on factors which should be considered, pro or con, and how these factors might be (differently) weighted. Standard or provocative arguments could be given for their relevance and weight.
An example of the kind of issue to be raised is the legal position of the hospital. While not an ethical issue per se, this bears on what we might expect the hospital or members of its staff to do or be able to do. We found with students this summer that this issue was not sufficiently explained in "Dax's Case," and the students found this a distracting ambiguity.

Other examples are: the feelings and views of other principals in the case, Dale's parents (we could allow him both parents, with different feelings and views), best friend (to lend testimony to Dale's values and wishes), and medical staff. Examples of other possibly relevant facts would include how long the painful burn treatment and rehabilitative process would last, what the results — in quality and satisfaction with life — have proven to be with patients with similar afflictions.

Once these factors have been explicated, another round of weightings would be called for. The considerations and weightings V arrives at through these narrative exercises would provide a baseline for testing the effects of later iterations of the issues in the interactive video medium, where V would interview the principals 'in person' and have opportunity to view Dale's treatment.

Further iteration of this narrative sort of exercise would involve explicating criteria or a principle that specified relevant factors in the case, with candidates offered and discussed by other committee members and the opportunity pressed by the chair for anyone to revise her criteria after a round of comments . . .

How do we assess, by whose authority or standard, the quality of life that presumably justifies the attempt at treatment and rehabilitation? Of what relevance is the success of other patients (Dax's case and testimony could be used here in the context of Dale's case) to the case at hand? These criteriological issues, which are not probed in "Dax's Case," would be rehearsed in the narrative inquiry, for contrast with later findings in the video odyssey.

Specific criteria or factors determining competence (Are present faculties sufficient? Or is the trauma and duress of the patient's suffering and bleak outlook enough to compromise his judgment . . . ?), the standard array of issues could be interrogated in this way . . . before leaving the narrative level of presentation. Counter examples and paradigm cases, tests of competence or voluntariness (from Mill, relevant literature, and ordinary experience) could be invoked — all in narrative form — for these initial phases of V's entry to the inquiry.
Such exercises could provide a good hour or two of exploratory inquiry before any significant visuals have been invoked (or any significant videodisc data were used).

At the conclusion of this narrative session, another straw vote would be taken and commentary from committee members invited. Two members could be shown to change their votes and views on the case . . . .

11.4. SCENARIO #4 w/ Branching: The Dialectic of Feelings

Suppose a point at which it makes sense for the chair to suggest that the committee interview principals in the case and view the treatment to which Dale is subjected.

The committee and V would be queried and discuss what difference this should make: what more could be learned from interviews or viewings that cannot be adequately conveyed by the data before the committee?

A round of interrogation on the issue of relevance and evidentiary import could depart from our intuitions about courtroom testimony (an example of how intuitively familiar examples from ordinary or personal experience will be mined in the programme):

- If you were on a jury in a trial and had a choice of hearing testimony from any witness in the case in person or reading a transcript, which would you prefer and why?

- Why do you think courts require testimony on the stand rather than transcripts of testimony?

- One advantage of personal testimony is the opportunity for cross examination; but this opportunity could be provided outside the courtroom and witness of the jury:

  What advantage is there to seeing the testimony as well as either hearing it (in taped transcript) or reading it, provided the testimony is given under duress of cross examination?

  What do you think can be ‘seen’ in the way of relevant evidence that perhaps cannot be appreciated from an audio tape or written record?

Again, V would be queried for responses and then allowed to reflect on the responses of other committee members.

Similar debriefing would be held after interviews with principals.
Depending on the disposition of V's judgment in Dale's case at the end of the narrative inquiry, V (and the other committee members) would be conducted first through one of the following interviews (led by the chair, with questions put by other committee members).

These are suggestive sketches, not stepwise scenarios, of Level III components. In posing them, I will in effect be addressing Question 2 (of the Four Critical Questions) regarding the value added or advantage of an interactive Level III docudrama over the real but linear documentary presentation of "Dax's Case."

11.4.1. SKETCH 4-A: The Doctor in Charge – Against Release

Our student subjects this summer found Dax's doctor's position too unsympathetic and pragmatic. One corrective we would provide in the case of Dale would be to explore more thoroughly the scruples and sensibilities that lead doctors to refuse complicity with the wish for euthanasia (active or passive), represented by Dale's doctor. An opportunity for our docu-drama not provided by "Dax's Case" would be to elicit more sympathy and empathy with the recalcitrant physician's position, by developing it further than does "Dax's Case." The dilemma can be turned effectively back on V, by direct appeal and interrogation from Dale's physician, by placing V imaginatively in analogous straits.

One advantage of a tailored docu-drama (provided it is of compelling quality, see Section 3) is that different interview episodes with principals, say a physician, can be made as fully compelling as possible, to make the position of such a person as sympathetic as possible for dialectical purposes, to sharpen the dilemma; whereas with "Dax's Case" or any given documentary, the views and feelings of any given principal may not be represented as compellingly as possible, the position of such a person may not be fully appreciated. A docu-drama or dramatic presentation can by design make even a mass murderer seem human and sympathetic; this is the sort of thing or effect one would want in posing the ethical dilemmas of, say, capital punishment or punishment itself. The same principle applies here: as in discursive dialectic one wants to make the best possible case for each position, so in the dialectic of feeling/sensibility one wants to make the reality and human appeal of each perspective as compelling as possible. In a given documentary case one is dependent on the vagaries of the case, the luck of the draw, the judgment of the editor; in a programme of our sort, artifice is needed to make the tug and polarities of sensibility as acute as possible.
In particular, the mix of reasons motivating Dax's doctor included too much of the ambiguously pragmatic, prudentential (legal worries), and the idealistic. There's not enough exploration or explication of the bottom-line human predicament: Forget the Hypocratic oath (it can be argued both ways), forget the worries about liability, forget the high-flown ideal of saving life at all costs — Who wants to be responsible for or complicit in the death of another person, no matter what the sympathies for that person's plight?

Cases like that of the man whose brother pleaded with him to put him out of his irremediable misery, the man whose wife did the same (both of whom were prosecuted for complying, each of whom experienced different agonies and dispositions towards their merciful homicides) need to be posed, with Dicken's license, in interviews, in personal engaging appeal to the viewer.

This example points up another limitation of predetermined linear video material like "Dax's Case": the lack of opportunity to branch into the exploration of analogous case material, to challenge the viewer or deepen her appreciation of the reality or perspective represented in the present case by appealing to a wider 'authority' of human experience. One needs both access to other evidence (possibly designed docu-dramatic material or borrowed documentary material) as well as an interactive (not linear) medium.

The students this summer also wanted to hear more from the physical therapist in Dax's case, who came to be more sympathetic to the quality of life argument, having entered the case intent upon simply rehabilitating Dax. The desire for more extensive interrogation of a principal's views and how they evolve under duress of the realities of treatment can better be satisfied with a tailored-to-the-issues docu-drama.

11.4.2. SKETCH 4-B: The Patient's Mother

Our summer students who viewed "Dax's Case" also wanted to interrogate further Dax's mother and to know more about his wife and how they got together. This reaction bespeaks the need for more thorough probing of the motivations of principals than "Dax's Case" reveals.

In the mother's case, the device of direct appeal to V (and the committee) would itself make her perspective more compelling. A mother on the committee could play the role of reinforcing the disposition to sympathize or even empathize, from an authoritative but strictly disinterested perspective.
The issue of what weight should be given the interests of the mother (or a parent) should be explored in a way that it is not in "Dax's Case."

11.4.3. SKETCH 4-C: Prelude to Viewing the Treatment

In Appendix I of the final proposal I argue and illustrate the advantages of an interactive medium for getting the viewer to interrogate her reasons and motives, the evidentiary relevance, the propriety of viewing the treatment. This evidence should, for pedagogical purposes, come at a cost, only after some work by the viewer. Those pedagogical purposes and the philosophic/ethical issues they delineate are discussed in Appendix I.

11.4.4. SKETCH 4-D: Viewing the Treatment - The Patient's Perspective

One advantage of our reconstructed docu-drama over "Dax's Case" is that we would be able to add material (not included in "Dax's Case" but not found objectionable by Dax) from the earlier film "Please Let Me Die."

Two sorts of additional material are wanted:

1. Treatment scenes, for implementing the strategy discussed in the Appendix to the final proposal (p. 84 ff.).

2. Interview material, the early Dax speaking for himself.

The latter would be crucial to include, as analogous case material, to reinforce Dale's case for release and death.

The perspective that should and can be reinforced in Dale's case, using material from the early Dax tape, is the painfully uncertain, indeed forlorn prospective viewpoint of the patient as contrasted with the retrospective or 'Monday morning quarterback' perspective that unavoidably permeates "Dax's Case."

While viewers in general and our students this summer found the case for Dax's viewpoint sufficiently compelling as presented, if not indeed the bias of even the later film, it would be crucially instructive to present the viewer of Dale's case/our reconstructed case with testimony of a patient at the very time of similar plight, without the background knowledge that permeates "Dax's Case" that the issue has after all long been decided de facto by Dax finally having gained a life of apparently sufficient quality to satisfy him.

There is an advantage to having Dax (different from Dale) provide this testimony,
because we want to delineate the evidentiary issue of whether what goes for one should be taken to go for the other.

The overall strategy of our docu-dramatic programme is in any case to dwell more intensively on the perspectives, to focus more discretely and sharply on the viewpoints and feelings of the principals than does the collage effect of "Dax's Case." Being able to import and amplify evidence selectively (as is appropriate to challenge and motivate the viewer dialectically, in response to her evolving position) is crucial to this strategy -- and an advantage that "Dax's Case" (or any predetermined, linear video treatment) does not afford.

11.4.5. SKETCH 4-E: Deepening Empathetic Doubts About Quality of Life

For this strategem (outlined in Appendix I to the final proposal, pp. 82 ff.), there is a straightforward advantage to using a reconstructed case rather than "Dax's Case" (even apart from the interactivity added to the former).

It is pedagogically crucial that the viewer appreciate dramatically and deeply the doubt the patient (Dale or Dax) would feel in the beginning of treatment regarding his prospects for an acceptable life.

The advantage of a case whose outcome is in dramatic fact not yet known is clear. The viewer cannot be influenced by the foreknowledge "Dax's Case" provides that everything's going to turn out to be 'worth it' in the end. The dilemma of the case would be experienced from the perspective of real 'live' uncertainty, not mere retrospective uncertainty.

11.4.6. SKETCH 4-F: Appreciating the Force of the 'General Presumption'

Here scenes and testimony from Dax's case would be used as counter-point to the impact of the previous 'module,' to show the plausibility of the general presumption that Dale will recover sufficient quality of life to make the recovery process itself worth bearing.

The advantage of having our Level III case not be Dax's case is that the latter can then be appealed to, for different evidence on different sides of the issue, as a real analogy.
11.5. SCENARIO 5: Debriefing - Re-Assessing Factors and Evidence
12. The Value of the Level III Docu-Drama Over the Level 0 'Dax’s Case'

Apologia

Time and administrative crises simply did not permit me to fill out my outline from here on. I simply could not do the whole job wanted or intended under the circumstances.

Advantages of the artifice of docu-drama coupled with the interactive medium, as contrasted with the parallel limitations of "Dax's Case," are pointed out by the way in the sketches in the previous section.

The Nature and Content of the Level III Program

For reasons explained in Section 13, after review of the Dax documentary material and consultation with MetaMedia, we concluded that it was not possible to edit the available documentary material into concise, pointed, or discrete enough form within the limitation of 30 minutes of motion video available on one side of a videodisc.

We had essentially two options: script and shoot the principals of Dax’s case to fit our tailoring of the philosophic issues and personal viewpoints to be represented; or script and shoot material for an analogous but hypothetical case. The logistical as well as ethical objections to the former strategy were obvious and conclusive.

In addition, there are clear advantages to the latter strategy. Here are some in outline.

12.1. Value Added: Interactive Level III vs. Level 0

12.2. Value Added: Docu-Drama Artifice vs. "Dax’s Case"

12.2.0.1. Representation of Issues and Viewpoints

12.2.0.2. Selective Focus and Emphasis: Forcing Issues
12.2.0.3. Reflective Opportunity: Interrogating the Viewer

12.2.0.4. Stimulating Intuition/Imagination: Appealing to Analogous Cases/Personal Experience

12.2.0.5. Dialectical Duress: Counter Examples, Thought Experiments, Contrapuntal Feelings

12.2.0.6. Simulating Crucial Viewpoints – Deepening Empathy and Sympathy

- We could represent points or explicate issues not brought out or emphasized in “Dax’s Case.”

E.g.: Students to whom we showed “Dax’s Case” recently in a summer course wanted to interrogate the physical therapist further on his reasons for becoming more sympathetic to ‘quality of life’ considerations, on his change of mind in the course of his treatment of Dax.

They wanted to hear more from the mother.

And they wanted to know more about how Dax and his wife got together, how she regarded this relationship from the beginning, etc. This was not idle or morbid curiosity, but an interest in the facts and feelings that, in this case at least, defined and led to the possibility of marriage and a ‘normal’ relationship, facts and feelings important for demonstrating the plausibility or implausibility of such opportunity for a meaningful life by others similarly afflicted.

These are just examples. Comparison of such student reactions and the array of issues raised by similar cases will be one important basis for determining the levels of information and depth of perspective we provide for exploration in our Level III program.

We would have neither the same range of choice nor the same discretion were we limited to the material available in Dax’s case.

In this way, our Level III treatment of an analogous case can, by comparison and contrast, provoke more imaginative probing of Dax’s case (in the Level 0 and 1 programs) on issues and perspectives not as ‘fully’ represented there.

12.3. Value Added vs. Cost

By what standard does one measure and assess this trade-off?

We argue that there are crucial advantages to the artifice of docu-drama in the interactive medium proposed (assuming quality of production) over the limited and linear presentation of “Dax’s Case.”

Assume the value added obtains.
Then our Level III programme, as an experiential learning environment for ethical inquiry (not just the presentation of euthanasia issues and views) is an improvement on "Dax's Case."

"Dax's Case," I should say is as good or better than the proposed "Delicate Balance II" project, whose prospects for deepening our understanding of ethical reasoning (whatever its topical scope) were prosaic and tenuous at best.

The cost of our project is far less than the projected cost of "Delicate Balance II."

Is the value added worth the cost of our project?

And what of the value, not of the product, but of the project's impact as a moveable 'lab' site for studying the contested nature of ethical reasoning and the role of sensibility therein, as a model for rethinking educational practice in ethics, professional clinical practice, cultural norms regulating our feelings and their expression and appreciation in ordinary settings, the use of technology in open-ended areas of inquiry, the controversies motivated on all these fronts? This takes us to Section 14.
13. Production Quality for Level III Docu-Drama Treatment

A question was raised regarding Molly Youngling’s appropriateness for the production of original docu-drama video for the Level III treatment of a case analogous to Dax’s. In particular, more information on Youngling’s relevant background was wanted. (Her resume is provided along with the two accompanying letters.)

I have construed this question as one regarding the competence of the video production team to provide quality video material that will compare favorably with the documentary material on Dax’s case. Youngling will be working within the context of and with a WQED production crew. I have asked both Youngling and Marc Pollock, Director of Educational Project Development at WQED, to address the question of appropriateness and quality assurance. Youngling has been working on the development of the project with the co-principals, Covey and Cavalier, for over a year, since before WQED was chosen as our video production partner. WQED will however be the agency responsible for production quality, according to its usual standards.

Originally, we were planning to compose the Level III program primarily from edited documentary footage from the two Dax tapes. For this purpose and the minor docu-dramatic shooting required to represent principals on the simulated hospital review committee, WQED was to serve simply as a production site.

After review of the two Dax tapes and other related documentary video treatments of similar cases this year, we concluded that there was no way we could edit the documentary footage into sufficiently pointed, economical form for our purposes within the 30 minute constraint on motion video. After consultation with MetaMedia in March, we decided we must construct our own analogous but hypothetical case material, to assure optimal representation of the philosophic issues and the relevant viewpoints: dialogue and personal statements would have to be made more pointed and concise; discrete points would have to be made separately, where in “Dax’s Case,” for example, several points or arguments might be run together in a given interview sequence.

As a result, we realized we would be shooting a whole analogous case worth of
material, using actors not only for the ethics committee members but for the principals in the case as well. Documentary footage of Dax's treatment would be used, as would the spirit and substance of the different perspectives in Dax's case; but we needed to be free to tailor our video material to our purposes and the limitations of our medium; this would also allow users to explore instructive comparisons between our docu-drama and Dax's own case.

This strategy necessitated employing WQED as full video production co-principals. We retain Molly Youngling as liason producer because of her familiarity and work with the project throughout its conception, as well as her background with ethically sensitive productions.
14. The Value of the Demonstration Project

14.1. What the Project Aims to Demonstrate

14.1.1. Impact/Significance/Utility vs. Outcomes

I should distinguish 'hard product' outcomes from other dimensions of our project's impact. (See Section 3 of the final proposal for testimony to the expected dimensions of impact in our letters of support.)

Besides producing a product that should have effective and exceptionally wide adoption across a variety of educational settings and publics, it is expected that our project would inspire replication in similar products. I address this issue in the next section.

But apart from these 'hard product' outcomes, there are impacts or dimensions of influence and value that to us seem also important in assessing the benefit-to-cost ratio of the project. These dimensions of value include:

• Besides what happens within the learning environment we would develop, there are the uses for which it is exploited within the larger educational, cultural, professional, or course settings.

Besides the experiences a viewer would have within our programs, there are the uses to which those experiences in turn would be put.

Within a course, the experiences with the Level 0 and Level III programs could be interrogated or used (as outlined in our Instructors' Manual) for exercises like the following:

- What issues or positions could have been developed or explicated further in "Dax's Case"?

- Eg., what further reasons could be imagined for the physical therapist or a physician to change his mind on the weightiness of the quality of life issue? What further factors could increase one's sympathy for Dax's wish to die?

- What about Dale's case makes you empathize more or less with any principal — Dax, his mother, any of the medical personnel — in "Dax's Case"? Explain.

- What more about Dax's wife's views or feelings would you want to know? What questions would you like to be able to ask her? What would you imagine her answers to be? What difference would her answers make to your judgment or feelings about this case? about cases of the kind?
In addition, short papers or exercises could be assigned to reinforce any of the exercises illustrated above in Dale’s case; or parallel exercises could be assigned for Dax’s case.

What is depicted in the way of ethical reasoning or the experience of viewers of our programs would themselves be appropriate subjects of educational or philosophic research.

The differences in viewer’s experiences between our Level III programme and “Dax’s Case” would be appropriate subjects for interrogation or discussion.

There are narrow intellectual issues (philosophic ones), broader cultural ones (regarding how we treat, use, assess feelings and their expression in value controversies), specific ethical issues, and specific issues of institutional norms and practice—controversy about which our project will stir and, we hope, inform (quite apart from its direct classroom applications).

- This project will not define the standards for the use of interactive video media for open-ended inquiry in areas of the humanities and values, but it will set some to be reckoned or argued with and improved upon.

- It should help dispense with the myth that the value of the computer for education in a subject is only commensurate with the computer’s own intelligence as a teaching machine.

- No program or project can by itself explain or dissipate the mysteries and mires of ethics, but this project seems a necessary first step in providing an instructive handle on the matter.

- If not this, then an effort like it seems an indispensable experimentum crucis for raising the level of ethical reflection in our culture, applied settings, and schools.

Those with facilities to do it at less cost have not, to my knowledge, come forward.

None, in any case, are more dedicated to this educational and cultural experiment as a life’s work than ourselves.

There is no way to begin this work at this time at low cost.

And it’s time the effort began.

There’s no way to second-guess all the issues, reactions, or outcomes – good or untoward – that the effort will spawn; our hypotheses want testing in the crucible of practice; it’s work the world should be about, a necessary start on the critical path to an urgent end.

If you cannot bank on our team and plan, then I would hope another be found to make the start.
What we aim to demonstrate, apart from the understanding we intend our programs to induce, is the need to address expressly and, in the broad pragmatic sense, experimentally the methods in the madness of our disputes over the signal question of ethics, the manner in which human life should be lived.

This is a project to demonstrate not so much the utility of interactive videodisc for teaching ethics as the value of interactive video media for learning to inquire sensitively and sensibly; not so much the value of interactive technology as the value of visualization and sensibility to the most crucial of our reasoning processes.

It happens, *ex hypothesi*, that interactive technology promises leverage on the problem, a theater for addressing the problem, a medium so far without competition.

But the problems dramatically, palpably demonstrated are as important to our demonstration project as our approach to solution.

14.2. What the Project Will Inspire -- and At What Cost

14.2.1. The Future: A Necessary Step in the Critical Path

Already there are being developed and marketed authoring environments for 'cottage', local production of interactive video curricula on the scale of current interactive computer programs (see, for example, “Mentor & MacVideo” in *The MACazine*, May 1986).

What’s needed, besides facilities to spawn production on a wide cottage-industry scale, are driving ideas, decent models, ambitious intellectual and educational standards to inspire and guide the educational industry in video courseware that will surely proliferate as has computer courseware before it.

The question is not whether both productions and affordable means of production will proliferate in the near or foreseeable future, but to what end? by what standards?

There remains the critical problem of rights to extant, powerful material (like "Dax’s Case"), which are currently a serious expense. High-quality educational productions that want to exploit or approximate such material will continue to be capital-intensive enterprises. But the value of more costly models will in large part be realized in the intellectual standards and goals set for less costly efforts.
In any case, manned flight would not have gotten off the ground had it been necessary to justify the expense of early demonstration projects by immediate implementation of profitable passenger carriers; the inevitability of the evolution and the necessity of costly first steps to set ambitious standards seem to be our best defense as well.

14.2.2. The Present: Biting the Bullet