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Dialogue

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Okay, so the last game was too hard. Nobody did it. I think we've proved our point. This time, the questions are simple identifications. Of course, you'll have to read your Dialogue and maybe do a bit more research, but you should be able to get it.

Entries are due by March 20, and will be judged by the following Monday. The first two winning entries will earn their executors the usual fabulous prizes.

Good luck.

IDENTIFY:

1) Six philosophers pictured in Dialogue. Give their full names, birth and death dates, and the names of the philosophical movements they founded or participated in.

2) The symbol of the medical profession pictured in Dialogue. What is its origin, and what does it stand for?

3) A piece of good news in “What You Will.” When did it happen?

4) An analogy between reading Shakespeare and reading philosophy. What work is quoted and what is the reader's approach?

5) The man who made prints of fifty-three stages. Of what were they? What is #48 a print of?

6) “The mouth.” Where was her son assaulted? How does she differ from her neighbors?

7) Principle which gained a theory because of the dissolution of a republic. What was the name of the republic? What was also essential for the acceptance of the principle?

8) The two views of the essential nature of humanity in two different articles. How do they differ?
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**What You Will**

**To Aspire and Perspire**

A historian (whose courageous wedding with a philosopher is currently being interpreted as an extreme attempt to implement the Hegelian dialectic to produce a flesh and blood synthesis of antithetical principles) writes us this jaundiced sidelight to the eternal battle between Diachronic and Synchronic.

As a jogger but not a runner, and a hiker in mountains but not a rock climbing mountaineer (until recently I thought K2 referred only to a very early work of Mozart), I have found myself something of an outsider in the two departments at Calvin to which I am closest, history and philosophy. In recent years it has become notorious that if one wants full acceptance in one of these departments, one must adopt with cultic fervor the respective departmental sport. Philosophers, particularly of the analytic ilk, are usually rock climbers. Historians tend to be long-distance runners.

The connections between disciplines and sports are by no means accidental. Indeed, the same traits are necessary for success in both the discipline and its special sport. Rock climbing, true to modern analytic philosophy, involves discreet and limited problems that go nowhere. Occasionally rock climbers will climb real mountains, but largely with the purpose of attacking the problems of spectacually high rock climbs. As to reaching the summit of the mountain itself, their only justification is “because it’s there.” This is, of course, the well-known ploy of justifying what one has no reason for by calling it a “basic belief,” and hence making it as philosophically legitimate as belief in God.

Pure rock climbing is, however, the apogee of the discipline. In pure rock climbing, as in pure analytic philosophy, the goal is to resolve an artificially set problem. The outcome involves no ambiguity. Either you solve the problem or you do not; either you make the climb, or you fall off. The time involved is of no importance. Elaborate technical equipment and specialized training are required. No novice will be able to follow an expert’s lead up the more difficult cliffs.

Historians, by contrast, are much more ordinary, and so is their sport. It is straightforward and commonensical. No technical equipment or training is essential. Amateurs readily follow courses set by experts. Most non-participants consider the activity boring; but practitioners see the fault lying with the non-participants. Rather than attacking set problems, historians impose their own structures on their material, determining its beginning, middle, and end. The time involved is a very important consideration. Unlike the philosophers, historians cover a great deal of territory, though perhaps rather superficially. Hence, here, the differences end. Historians/runners, like philosopher/rock climbers, do not go anywhere. Almost always they end up where they began.

Historians, who like to model themselves on someone in the past, aspire to imitate the first marathon runner, Pheidippides. Pheidippides was an early Greek historian who in 490 B.C. ran twenty-six miles to Athens to deliver a lecture on the defeat of the Persians at Marathon. Pheidippides died before the lecture was finished. No matter. Modern historian/runners, like philosopher/rock climbers, do not go anywhere. Almost always they end up where they began.

The most alarming trait of modern historian/runners, however, is that although they almost always try to tell the truth about the past (they will not intentionally falsify the past, and may even look for some bright spots in it, they will be irrepressibly pessimistic about the future. The Thirty Years War may be over; but a historian will be unable to restrain himself from adding that something worse is on its way.

Legend has it, in fact, that Pheidippides was prepared to deliver a discourse on how everything after the victory was bound to be a letdown. Fortunately for the Athenians, Pheidippides proved to be less long-winded than most historians. Otherwise, they might have been so demoralized that there would have been no Golden Age, no Greek philosophy, and, hence, perhaps, no rock climbing.

**Heartfelt Reflections**

Rhonda Bruxvoort, a junior Sociology major at Calvin, sent us these thoughts about her recent interim as an Outreach Worker.

Sometimes I pretend to myself that my interest and involvement with the deteriorated downtown area of Grand Rapids over the past two years is due solely to my humanitarian concern, my Christian love, and all sorts of other noble and self-sacrificing reasons. But when I'm honest, I admit that Heartside, a downtown neighborhood, is simply intriguing. The most interesting facet of this neighborhood is the people. I have made the absolutely amazing discovery that beyond all the complex social problems which are concentrated in this area, there are real people; people as varied and complex as shells on the seashore. For a predictable sort of Dutch person, interacting with my friends on Division Avenue has been a unique stimulant and a whole lot of fun.

This interim, for an independent study under Calvin's Sociology Department, I worked as an Outreach Worker for the Heartside Neighborhood Association. The Association works to help Heartside deal with special issues and problems, many of them unique to that neighborhood. My job in that organization was to promote a Food-Cooperative they were starting, and to get people involved in it. I did this primarily by contacting
people in their apartments or rooms during the day. I found knocking on doors in strange places an uneasy prospect. Yet, this became my introduction to the people of Heartside, and I became involved, at least in a limited way, in their lives.

Often, as I pounded the pavement of Heartside, I wondered what sort of person lives in a neighborhood like this? And how do they live in this situation? The answers I found were as different as the people I met and as varied as their situations.

I spent one afternoon in the Carlton Hotel on South Division. The Carlton used to be a nice place to stay when Grand Rapids' city center was the center of business and culture. Today the Carlton is a shabby hotel, primarily inhabited by single men, many of them in their twenties and thirties. It was one of the most oppressive places I have been in: a grayish sort of place with narrow hallways, odd little stairways, and windows tucked away in inconspicuous places. It reminded me of a setting for a drug bust in a TV cop show. Every time I walked up to a new stairway or entered a new hallway, I looked for exits and planned my escape route. After a couple of hours talking with people, I felt as if the walls were closing in and would swallow me whole.

It is difficult to describe the typical Carlton resident because having met some of them I can think of exceptions to all the rules. Many live at the Carlton out of economic necessity. They don't have family resources to draw upon and their personal resources are meager. The Carlton is the home of unstable people and people for whom the street is a way of life. My impression is that alcohol flows freely and illegal drugs are readily accessible. Not all the residents are unemployed, however. Some have full-time jobs or use the hotel as a location from which to look for part-time work or day labor. Nor are all the residents criminals or even engaged in criminal activity. I met one eighty-year-old man who could afford to live elsewhere, but who lives at the Carlton because he finds it interesting to observe the situations and the people there. His next-door neighbor, a man who desperately wants to move out, can sing hymns as well as anyone in my home church.

I enjoyed walking into the lobby of the Carlton. I would usually see some people I knew just hanging about. They were curious about me. Once they found out that I wasn't a case worker they warmed up to me and were friendly and helpful. They showed me around, gave me their opinion on where I should put my signs for the co-op, and warned me that "this was no place for a woman." I listened to complaints about thievery in the building, complaints about the landlord, and about the general moral character of some of the other inhabitants. I began to feel what it's like to live in a situation where you can't trust anyone; living with the fear that one of your neighbors might steal from your room when you're out or harm you when drunk. I also wondered how I would change if I lived in the Carlton Hotel.

Another building which intrigued me was an apartment house at 303 1/2 Division Avenue. Given the address, try to imagine what sort of tenants live there. No, they weren't alcoholics, drug pushers or sluts. The residents of 303 1/2 Division are mostly nice old ladies: the grandmother type. Their building is not very secure. The door to the street is not locked during the day and the locks on the doors are not especially good. How do these ladies get in and out of their apartments or rooms? I think that part of the answer lies in the fact that these ladies know each other and each other's business. When I walked up the stairs into 303 1/2 I would usually meet the same little lady, putting around in the large entryway, sweeping or changing light bulbs. Even if she wasn't in the hallway, her room was the first one at the top of the stairs, and she often left her main door open behind a locked screen door. I think that would take a lot of ingenuity to get into 303 1/2 without this lady knowing it.

The first time I came, I told her I was bringing information about a food co-op. She said she wasn't interested because her son takes her shopping, but there was a lady who lived down the hall who could probably use something like that. After I'd shouted awhile with that particular old lady about the conveniences of the Heartside Food Co-op, I went upstairs and bumped into another lady who was just leaving to get her hair done. She asked me what Heartside could do about their landlord and directed me to another old lady who might be interested in the Food Co-op. She checked her neighbor's door and somehow knew that she was out of bed. "You might have to spend some time explaining it to her," she advised me. "She's kind of deaf and has a hard time understanding things." The ninety-year-old lady I met inside the apartment was not nearly so dull as the impression I had gotten of her from her neighbor. She described to me what several of the residents had been doing that morning and chatted with me about Senior Neighbors and how her neighbors helped her get her groceries. She showed me her apartment: four small, but well heated rooms for which she pays one hundred and fifteen dollars a month. She has lived in that building for fifteen years. Later I learned that several of the residents had lived at 303 1/2 for ten to fifteen years. I am still amazed when I think of that defenseless little old lady living fairly comfortably at 303 1/2 Division. But it is possible for her because she has something the young men at the Carlton do not have: good neighbors.

Finally, one of the most interesting people I met was a lady named Ruth, who refers to herself as "the mouth." Ruth lives in an apartment a few blocks up from Division Avenue with her two sons. She is a typical Heartside. Most Heartside dwellers don't get involved with each other or with neighborhood concerns. Ruth is involved with the Neighborhood Association, not only because she enjoys the interaction, but also because she sees that people in the Heartside Neighborhood need to help each other to make the neighborhood a pleasant and safe place to live. She would like to see people in the area trading skills and services and stepping out to help each other. Ruth is proud of Heartside and thinks it's a good place to live. She tries to convince her friends at work that Heartside would be a more convenient home for them. "When my friends ask me why I live in such a high crime area," she remarked, "I'm proud to say that the only time my son was assaulted was in East Grand Rapids, not in Heartside."

The men at the Carlton, the ladies at 303 1/2 Division, and Ruth represent three very different ways of living in Heartside. I could talk for hours describing my friends in Heartside, each of whom brings a different life history, a different outlook on life, different personal resources, and different adaptations to life in that neighborhood. The exciting thing about my interim was meeting these people within their own environment. Heartside has both given and taught me much.
and he gave them permission to lie as many times a day as they
should trust their surgeons implicitly in everything appertaining
to patients. In the late twentieth century, however, conceal­
ment remained virtually unchanged for the next twenty-four
century left medicine with the powerful tools of chemotherapy,
radiation and advanced surgical techniques. But riding on the
outburst of new power to increase and maintain
man’s health was a greater capacity for harm and a host of
ethical dilemmas. With the ability to alter harmful genes has
come the risk of inducing harmful or lethal mutations.
Chemotherapy for cancer uses toxins of such strength that
patients may be overcome by drug toxicity, radiation therapy
carries with it possibilities of infertility and ulceration, and the
very method that detects cancer may in turn cause it. The

Kathy Faber, a pre-med philosophy major, wrote a paper on
medical ethics for an independent study in Biology. This is a
condensed version written exclusively for Dialogue.

medicine of the 1980’s, then, is a mixture of exciting cures and
treatments along with the potential for harmful consequences.
Coupled with the explosion of medical technology was the
proclamation of individual rights. A woman’s right to vote was
recognized in 1920, and women made great strides toward
equality in the 1970’s in religious, economic, and social
structures. Rights for Afro-Americans became an issue in the
post-World War II era, and the 1950’s and 60’s were dominated
by the fight for legal and social acknowledgement of those
rights. The seventies, perhaps more than any previous decade,
was saturated by people insisting on their rights, jealously
guarding their autonomy.

But such inundation with personal rights is a rather recent
development in western history. Notions of man as
autonomous, self-reliant, and independent are firmly rooted in
the eighteenth-century enlightenment which brought forth the
Declaration of Independence, the Newtonian scientific
revolution, and the writings of Immanuel Kant. With the dawn
of the Enlightenment, the concept of man’s dependence on a
supernatural being, the emphasis on eternity, and the
religiously saturated atmosphere of sin and bondage to a finite
world all faded, replaced by an emphasis on the individual
person and his rights.

It is out of this post-Enlightenment, technologically.
advanced context that philosophers, patients, and physicians
alike began to assert the rights of patients. In 1914 the American
courts clearly recognized the patient’s right to self-determina-
tion when Justice Cardozo pronounced:

Every human being of adult years and sound mind has
a right to determine what shall be done with his own
body; and a surgeon who performs an operation without
his patient’s consent commits an assault, for which he is
liable in damages.

Notice that in the court’s guideline, no mention is made of
weighing the morality of revealing the truth against any nega-
tive effects that information might have on the patient. But this
did not necessarily require the exchange of information regard-
ing the patient’s condition and alternatives; doctors routinely
dispensed of this duty by merely telling the patient what pro-
cedures were to be done, declining to mention possible risks or
options. In 1960 the courts clarified their position in Nathanson
v. Kline, arguing:

Anglo-American law starts with the premise of thorough-
went self-determination. It follows that each man is con-
sidered to be master of his own body, and he may, if he be
of sound mind, expressly prohibit the performance of
life-saving surgery or other medical treatment.

Riding on a wave of autonomy, the doctrine of informed con-
sent had come into its own.

The question of informed consent is based on a man’s duty to
reveal the truth to another, and there is a wide range of opinions on the extent of this duty. Immanuel Kant, the eighteenth-century philosopher, took an absolute stance toward this duty, emphatically stating:

*Truthfulness in statements which we cannot avoid making is the formal duty which each one owes to all men, no matter how great a disadvantage may result therefrom to him or to another.... Every man has not only a right but the strictest duty to be truthful in his statements, and this duty he cannot avoid whether it harms him or others.*

In contrast to Kant, who relegates the possible effects of revealing the truth to secondary importance, a utilitarian view such as that of Machiavelli considers the desired end as of paramount importance and is unconcerned with the means used in achieving that end:

*Be it known, then, that there are two ways of contending, one in accordance with the laws, the other by force.... But since the first method is often ineffectual, it becomes necessary to resort to the second. A prudent Prince neither can nor ought to keep his word when to keep it is hurtful to him.*

Inasmuch as doctors in the western world have been ascribed a princely status, they, too, have been exempted from telling the truth in situations where it would not be expedient. The notion that truth must be modified or even negated arises from a utilitarian ethic which justifies lying in the interest of gaining a desirable end. For Machiavelli, this end was the effective rule of the people, for medicine, the end is the healing of the patient.

The dogmatism and unyielding fervor of Immanuel Kant are a bit too simple in this complex world which resists neat categorization. Kant refuses to deal with the consequences of his ethic which demands unflinching revelation of the truth. Of those who tell the truth Kant writes:

*"He himself does not inflict harm upon whomsoever may suffer from that truthfulness; the harm is caused by accident. For he who acts is not free to choose; truthfulness being his unconditional duty, if he is bound to speak at all.*

But Kant does not satisfactorily establish the primacy of truth over all other goods—its status as an "unconditional duty" needs a stronger base than he provides.

Kant does have a valid point however, in his condemnation of those who use others as means to an end; he repeatedly argues that men in themselves are ends and must be respected as such. A utilitarian ethic potentially encourages the denial of individual rights by those in authority, leading to an undue emphasis on expediency. In reacting against the categorical imperatives of Kant, the utilitarian ethicist often sacrifices any sense of pervasive, unchanging morality. He is rendered unable to accept the biblical directives for specific moral action and is left with hollow or transient standards.

I will argue for an ethic based on moral principles—but principles tempered by the realization that moral choice involves competing goods and must be a result of careful reflection, of weighing priorities, of considering the consequences, and of acknowledging the artificiality of imposing unbending categories on our complex world.

Although notions of dependence, responsibility, autonomy, and human dignity are all relevant to a study of informed consent, the debate over informed consent has been stated in other terms. When one peels away the humanistic concept of man, theologies of personhood, and utilitarian considerations, what remains is a moral dilemma. The controversy over informed consent, one could argue, stems from two competing goods: the duty of the physician to do everything in his power to facilitate healing (and, therefore, to refrain from doing anything which would be harmful) and the moral obligation to tell the truth. Joseph Fletcher, writing a decade before developing his *Situation Ethics,* casts the dilemma in terms of competing evils and argues:

*In all such affairs the evil committed (fully foreseen as a tragic or undesired consequence) is condemned by claiming that the good desired is at least proportionate to, if it does not overbalance, the evil. These moralists usually avail themselves of a semantic confusion. A closer examination will show that of the two evils between which they urge us to choose, one is moral evil (or sin) and the other is some physical or social evil (suffering). Now in Christian ethics, at least, one is not forbidden to suffer for the sake of his obedience to the claims of love, for doing good. This ethic certainly offers no advice to weigh the ethical satisfaction of acting virtuously against the costs or consequences of doing so, in some hedonistic scales balanced on self-regard and self-protection.*

The humanistic philosopher Nicolai Hartmann counters with the claim that opting for one moral good necessitates the violation of the other (thus, one commits an evil in doing good). Here it is Hartmann who advocates a situation ethics, observing:

*There are situations which place before a man the unescapable alternative either of sinning against truthfulness or against some other equally high, or even some higher value.... It is a portentous error to believe that such questions may be solved theoretically.... It is inherent in the essence of such moral conflicts that in them value stands against value and that it is not possible to escape from them without being guilty.*
Real moral life is not such that one can stand guiltless in it. . . It is only unavoidable guilt which can preserve a man from moral decay.\footnote{8}

Hartmann's only advice to the physician is to follow his conscience and accept the responsibility for whatever ensues: "The physician should decide according . . . to his own living sense of the relative height of the respective values, and to take upon himself the consequences, external as well as inward, ultimately the guilt involved in the violation of one value."\footnote{9}

But Hartmann's method for solving ethical dilemmas is untenable in two respects. Hartmann's final authority for choosing between competing goods is the individual's conscience, and, while this assumption constitutes good humanism, it is unacceptable to the Christian. Authority for what is right lies with God, not fallen man. Despite Satan's promise that eating the apple would bestow certain knowledge of good and evil, time has failed to prove his claim; what one man condemns as twisted evil, another lauds as naturally good. Furthermore, the whole notion of conscience is somewhat indefinite in its meaning. Is it an innate sense of the good, the just, and the prudent? Is it the learned schema of what is socially acceptable? Or is it the whispering of the Holy Spirit in a man's ear, as the Sunday School teacher proposes?

Hartmann's directive is also unworkable in that the physician is often incapable of accepting the responsibility for the consequences of his choice. Suppose he opts for concealing the truth in a given situation in the interest of aiding his patient's well-being. In refusing to answer the patient's question, he may cause greater distress in the patient who, in the absence of knowledge, now imagines all sorts of dark possibilities (and impossibilities). What would it mean for the doctor to accept responsibility for the patient's emotional distress? Can the doctor actually bear any weight of the patient's psychological burden? The doctor is responsible only in that he is the cause; he cannot accept responsibility in the sense of paying the penalty—he is powerless to do this. The outcome of the doctor's choice is visited upon the patient, and it is the patient who will either reap the benefits or suffer the consequences.

Must we then opt for Fletcher's choice of the moral good over the physical (or mental) good? Fletcher commits the same error as Hartmann—he writes, "In Christian ethics, at least, one is not forbidden to suffer for the sake of his obedience to the claims of love, for doing good." Although the physician is the agent of obedience here, any suffering which may result from this obedience will be the patient's, not the physician's; this is precisely why the submission to treatment should be the patient's decision, not the doctor's.

The fatal defect in Fletcher's position in his rigorous choice of the moral over the physical or mental good. Fletcher here is caught up in what the Reformed theologian and ethicist Lewis B. Smedes terms the "lust for virtue," the insatiable thirst to do the good, even at the expense of inadvertently harming another. The lust for virtue proclaims the primacy of the moral good over healing and comfort, leading to pharisaical rigorism and short-sightedness.

The Christian life is not a call to do good but to love, and the moral proscription against lying is proclaimed not because "the true" is some transcendent absolute, but because lying harms people, destroys trust, and is simply not loving. Thus Christ summed up the law not as a guide to virtuous living, but with the command to love God above all else and one's neighbor as oneself. Fletcher's choice here ignores personal responsibility for the harm (physical or mental) of one's "virtuous" decision; such ignorance misses the proper thrust of the Christian's call to reflect Christ's love.

We will return now to the disparity between truth and healing; so far we have assumed that they are in conflict. Although ethical dilemmas may be posed with such stark contrast, the experiences of life do not always bear out such sharp distinctions. Historically, medical professionals believed that, were the patient told the seriousness of his condition, he would suffer a relapse; this attitude persists even today. One physician explained, "The longer I practice medicine, the more I am convinced that every physician should cultivate lying as a fine art . . . lies which contribute enormously to the success of the physician's mission of mercy and salvation."\footnote{10}

But the art of lying is one which some doctors choose not to cultivate, opting rather for the art of truth-telling. This second art is the key to escaping the dilemma as posed. The claim that revelation of a patient's condition impedes healing is not at all documented; in fact, there is a substantial body of evidence to the contrary. And revealing the truth to a patient need not involve giving him a computer printout analyzing his prognosis and listing the probability of every conceivable side-effect. Neither does informed consent entail a tedious recapitulation of a gross anatomy course or an understanding of the biochemical mechanisms of enzyme activity.

Such extremes do not inform the patient but only confuse him. Richard Cabot, an American physician in the early 1900's, advocates tempering the truth:

\begin{quote}
A straight answer does not mean for me what is often called the "blunt truth," the "naked truth," the dry, cold facts. The truth that I mean is a true impression, a fully drawn and properly shaded account.\footnote{11}
\end{quote}

It is by cultivating this art of truth-telling that the doctrine of informed consent can normally escape from the dilemma of truth and harm; thus, our primary emphasis is on this art.

But to hope that tact and sensitivity in telling the truth will always be sufficient in preventing harm to the patient's mental or physical well-being is naive indeed, and occasionally a situation may arise where explaining the illness and prognosis to the patient will cause him considerable distress. To approach an answer in this situation, it will be necessary to delve deeper into the basis for informed consent.

The prevalent basis is the humanistic concept of the individual's autonomy, also disguised as self-determination, independence, or personhood. By virtue of his humanity, man has an intrinsic worth, a dignity which demands that he be recognized as worthy in his own right and is not merely an instrument to be used to achieve a desired goal. Man is a rational being, and therefore is capable of making reasonable decisions, acting upon those decisions, and assuming responsibility for the consequences of his own actions.

\begin{center}
\textbf{"The more I practice medicine, the more I am convinced that every physician should cultivate lying as a fine art."}
\end{center}
Autonomy hinges on a man’s freedom of self-determination; it implies freedom from coercion and the competence to act rationally. Beauchamp and Childress, in their Principles of Biomedical Ethics, trace the concept of autonomy to Kant’s freedom of the will and John Stuart Mill’s freedom of action. Kant’s emphasis is on the recognition of the validity of an individual’s standards and calls for respect of the individual and his decisions because of his intrinsic, unconditional worth. Mill, on the other hand, emphasizes that a man must be free to act in accordance with his own principles as long as his actions do not diminish the autonomy of those around him, even if his actions entail risk to himself or if his standards differ from those of the community. Thus, a patient’s refusal to submit to treatment for a rapidly growing tumor must be honored if the decision stems from deliberation based on his scale of priorities, even if that refusal would result in certain death.

Christians in particular may find such concepts as man’s intrinsic worth and independence to be unpalatable, insisting rather that man’s worth is only through his relationship to God—man is ascribed worth by the Creator; it is not his intrinsically. True as that may be, such objections over man’s intrinsic worth and self-dependence do not deal a serious blow to the concept of autonomy. The issue here is not man’s relationship to God, but that of one man to another; while the former is exclusively one of dependence, the latter is a relationship between two human beings, each with his own standards and responsibilities.

Others will be repulsed by any assertion of man’s rights; instead, whenever a person’s rights are abused, they suggest turning the other cheek. Although their advice is based on Scripture, not all Christian ethicists find the distinctions so sharply defined. Man is created in God’s image; by virtue of the image of God, as long as God has given him the ability to deliberate and to act on his deliberations, he is obligated to act responsibly and others are obligated to treat him with respect. Nicholas Wolterstorff, in his recent book Educating for Responsible Action, reflects on man’s responsibility:

"The core of our uniqueness among earthlings is that human beings and human beings alone are responsible. They and they alone have duties, obligations. They and they alone are capable of guilt, for to be guilty is to violate one’s responsibilities. Christians do not see these responsibilities as free-floating. They see them as given by God. Humanity alone God has graced with responsibilities." Man is responsible, Wolterstorff continues, not only to God, but in how he acts in relation to himself and to his fellows. It is not that man is a bundle of self-determination and intrinsic rights, but that, by virtue of his unique relationship to God and his reflection to the Creator, that he is to be treated with proper respect and held responsible for his well-being. Thus, active involvement in one’s own health care is not merely a right (which may or may not be asserted), but it is a duty.

Essentially, then, informed consent when devising treatments or recommending procedures, is justified in modern medicine precisely because the weighing of the tremendous curative powers of the science against its sometimes formidable potential for harm is a moral, not medical, choice, and moral choice is the responsibility of the individual. Deciding what one is willing to risk to effect a cure is a decision which should be made by the patient, not the physician. In some cases, little deliberation is needed—the possibility of a decreased platelet count from high doses of aspirin is of little concern to the patient with a raging fever. But in other situations, the benefits do not so completely overwhelm the risks; consider a woman four months pregnant with a slowly growing abdominal malignancy—treatment to save her life could risk that of the fetus, while waiting until the birth of the child would jeopardize the mother’s life. Considerations here—value of the mother’s life, value of the child’s life—are non-scientific. The decision as is increasingly the case in medicine, is not scientific in nature but is based on priorities and moral judgments. As Ramsey says, “No man is good enough to cure another without his consent;” for the doctor to make such decisions solely on the basis of his own priorities is presumptuous.
Even in revealing a diagnosis or prognosis, the doctor owes his patient truthfulness out of respect for, to use Ramsey's phrase, the patient as person. The physician should address the patient not merely as a diseased body but as the union of physical, psychological, social, and moral aspects. Stob writes:

"The patient) is to be treated always and only as a person—never as an anonymous entity, never as mere patient or object, never as a shallow existent without those dimensions of depth and height by which he . . . is constituted religious." 18

Holistic medicine, with its goal of treating the entire person, may be a bit idealistic, but its attempt to return to a humane approach in medicine is certainly laudable. And, if the claims of holistic medicine are valid, recognition of the patient as a person with privileges and responsibilities will not harm but further his well-being.

"Knowing that the physician lied to his wife, would the man have any reason to trust the doctor now?"

As noted before, the most persuasive argument against informed consent is that informing the patient will harm his health, either by destroying his will to live or by inducing side-effects by the power of suggestion. But the alternative to this is lying, and, while lying may be immediately beneficial, its long-range effects are destructive. If trust is the essential ingredient in a proper physician-patient relationship, lying is the most potent destroyer of that trust. Suppose a doctor does not tell a dying woman the seriousness of her condition but reveals the prognosis only to her husband so that he can make "the necessary arrangements." Ten years later the husband falls ill and is told by the doctor that he is merely working too hard and should ease up a bit. Knowing that the physician lied to his wife, would the man have any reason to trust the doctor now? Richard Cabot, arguing from a utilitarian ethic, eloquently states:

"We think we can isolate a lie . . . and let its effects die with the occasion that brought it about. But is it not common experience that such customs are infectious and spread far beyond our intention and beyond our control? They beget, as a rule, not any acute indignation among those who get wind of them . . . . but rather a quiet, chronic incredulity which is stubborn, just in proportion as it is vitally important in a given case to get at the real truth . . . . A lie saves present pain at the expense of a greater future pain, and if we see as clearly the future harm as we see the present good, we could not help seeing that the balance is on the side of harm. It is intellectual shortsightedness." 19

Notice here that Cabot is not concerned with Kant's notion of the primacy of truth as a moral value; rather, arguing on the basis of minimizing harm, he concludes that the physician is obligated to be truthful in the interest of preserving trust.

To sum up, informed consent is justified by the responsibility of the individual, the non-scientific balancing of risks against benefits, the inability of the physician to assume responsibility for the deleterious consequences of his treatment, and the erosion of trust by concealing the truth. When diagnosis and prognosis are revealed with tact and sensitivity, the physician can help the patient cope with his situation and maintain his hope. While I hesitate to make informed consent an unbending requirement, to admit of exceptions paves the way for a relativistic ethic emptied of significance. If Hartmann is correct, if moral life necessarily implies unavoidable guilt, I choose to be guilty on the side of ethical rigorism.

Up to this point the discussion of truth-telling and informed consent has been for the most part, blissfully theoretical. But to show merely that informed consent is a good idea, or even to prove that it is morally required, is insufficient. A physician's duty is not primarily to debate moral questions but to deal with the sick, and all of this philosophical talk will be naught if it has no practical implications.

The main concern in the implementation of informed consent is to sensitively give enough information so the patient can make a rational decision based on the risks and benefits of treatment, but not to give so much information that the patient becomes overwhelmed, confused, or hysterical. Neither may we become enamored with some lofty notion of fully autonomous patients complete with encyclopedic medical knowledge:

The phrase "informed consent" now evokes the same sort of magic expectations one sees in fairy tales, where uttering magic words or performing magic deeds transforms frogs into princes. The proponents of "informed consent" seem to believe that, once kissed by the doctrine, frog patients will be autonomous princes. However, a new current of thinking worries that informed consent can, on the contrary, turn prince-patients into sickly frogs. 20

What, then, should be the standards for determining how much information to give? Historically, physicians used the local practice as their guide: the doctor was expected to follow the standard of his community and relay as much information as his colleagues. But this relativistic standard was struck down by the courts as early as 1903, when Judge Homes of Texas argued, "What usually is done may be evidenced of what ought to be done, but what ought to be done is fixed by a standard of reasonable prudence whether it is usually complied with or not." 21

This sentiment was upheld in later judicial decisions, and the guide for determining the extent of information to be offered became that which a reasonable man would want to know. Not only does this standard negate the idea of "if everyone does it, it must be right," but it avoids having one standard for the independent, assertively autonomous patient and another for the dependent or extremely sensitive patient.

First and foremost, the discussion of prognosis and alternative treatments must use unambiguous language which the patient can understand. Donagan charges that "a physician is simply not competent if he is unable to describe, in words intelligible to his patients, everything that could matter to them as patients about the character of any course of treatment he proposes." 22 For example, an oncologist may tell a newly diagnosed cancer patient that a certain regimen of chemotherapy has an 80 percent response rate. Although "response rate" merely means the percentage of patients whose tumors shrink by at least half after therapy, the cancer patient may interpret the oncologist's words as promising an 80 percent chance of cure. When a radiation therapy patient is warned of the possibility of "mucous membrane reaction" the physician must be certain the patient explicitly understands this phrase; does the patient know that mucous membrane reaction means inflammation of the lungs (leading to chest pain and respiratory dysfunction) and digestive system (leading to diarrhea, lesions, and ulceration)? If not, the informed consent procedure is
meaningless.
The minimum requirements in obtaining informed consent are as follows:
1. a description and explanation of the patient's condition and prognosis,
2. a presentation of the alternatives (if applicable),
3. an explanation of the recommended treatment which includes the intended results and collateral risks,
4. an offer to answer any questions and to provide the patient with more detailed information if he so desires,
5. If the patient refuses treatment, he should be informed of the probable medical consequences of this refusal.

Consent forms by themselves are of dubious value. While they are necessary to codify the agreement between physician and patient and provide evidence of the permission granted to the physician, they do not guarantee that the patient understands the information given him or has made his decision after considering the intended benefits and possible risks. Consent forms should be presented only after the patient has discussed the matter thoroughly with the physician and has been given the opportunity to ask any questions. The oral discussion should be supplemented by written descriptions, booklets, or directions which provide the patient with a permanent record of the information. Some hospitals are experimenting with visual aids such as slides, filmstrips, and videotapes. Whereas consent forms may discharge the legal obligation of the physician to obtain consent, forms by themselves seldom discharge his moral obligation. Comprehension varies greatly from patient to patient and every effort must be made to translate the medically significant facts into easily accessible language. The use of multiple forms of communication and repetition will also facilitate comprehension. Quizzing the patients after presentation of the information may bring to light difficulties and deficiencies in the presentation.

Precise data on patient reaction to information concerning diagnosis, prognosis, treatments, and risks is sketchy and conflicting; more controlled research needs to be done in this area. Preliminary studies suggest that, on the whole, patients are much more resilient than expected in dealing with serious illness. G.J. D'Angio, in a study of long-term lymphoma and leukemia survivors, writes:

Adults react in a variety of ways ranging from calm acceptance to rage and suicidal despair. It is nonetheless generally believed that a full and frank discussion is the best approach to most patients.23

When patients do react to the truth with despair or hypochondria, the physician is responsible for trying to alleviate these problems; depression or despair can usually be conquered and does not constitute grounds for abandoning the principle of truth-telling.

Ethical deliberation is not the selection of the good over the evil but necessitated by the conflict of competing goods. Opting for one good may hamper or even destroy the other—this is the dilemma of ethical life. Physicians and patients alike must recognize the patient's responsibility to take an active part in his health care, and if confronting the patient with the truth jeopardizes his confidence in the physician's ability to help or dampen his hope, that risk must be taken. While I have chosen to sacrifice the exceptions for the sake of the rule, the situational ethicist sacrifices the rule for the exception. Relativizing ethical norms for the sake of the exception leaves the door wide open to the abuse of patients by doctors too eager to effect cures or blind to the limitations of their treatments. Truth-telling and informed consent, imperfect and exceptional as they may be, protect us all.

FOOTNOTES:
2Tom Beauchamp and James Childress, Principles of Biomedical Ethics (NY: Oxford University Press, 1979), p. 65.
3Beauchamp and Childress, p. 65.
6Kant, p. 22.
8Nicolai Hartmann, "Truthfulness and Uprightness," Ethical Choice, pp. 41-42.
9Hartmann, p. 42.
10Joseph Collins, "Should Doctors Tell the Truth?" Ethics in Medicine, p. 221.
12Beauchamp and Childress, pp. 57-59.
13Matthew 25:34-40.
17Ramsey, p. 7
18Stob, pp. 225, 224.
19Cabot, p. 216.
20J.F. Fries and E.F. Loftus, "Informed Consent: Right or Rite?" CA 29 (September-October, 1979), p. 316.
Words and Works:

Tim Grubbs is a senior participating in Calvin's Bachelor of Fine Arts Program. He came to Calvin from Korea where his parents are involved in mission work at Jeonju.

At Calvin, the media with which I have worked are those used for drawing, printmaking (specifically woodcut and intaglio), and painting (acrylic and oil). In each area I enjoy pushing the media to an extreme. I don't believe that it is necessary to use only an unadulterated medium i.e. using paint only in painting, pencil only in pencil drawings. Rather, I've been combining the various media and processes in mixed media pieces. For example, I might work into an etching using paint, crayons, pencil, perhaps elements of collage...

I like to deal with things that relate to my experience and human experience in general. I attempt to do art that functions as a "window onto reality." By this I mean that I wish my art to be more than just a manipulation of media resulting in a self-contained art object. It is that, of course, but I don't want its significance to end there. I want it to go further, that through the media and imagery it might get at a perception of a reality of human experience—one which is not limited to what we can see with our eyes. At times I really struggle with this tension: the work functioning as an art object that can be looked at strictly in terms of aesthetic concerns and the work functioning as something like an icon that points to something beyond itself.

At the moment I feel I can best depict such a reality through thematic, figurative works. Sometimes I work from Biblical themes, sometimes from imaginary themes which are either preconceived or which evolve during the working process. The Biblical themes are usually quite indirect or subtle. For instance, last semester I did a series that dealt with the Temptation of Christ. But I wouldn't expect someone to necessarily recognize it as such. So much of the interpretation of a piece depends on who the viewer is. I'm not trying to appeal to a specific audience and certainly not to an exclusively Christian audience. All of the themes I deal with are highly personal, regardless of whether they are Biblical themes or not. The most important thing for me is that I am faithful to the Lord as an artist (since I consider this my vocation). I would hope that my work might be an instrument as an icon can be, in directing one towards God.

Although I'm working with figures and landscapes, I'm not working in a truly representational vein. That is, I'm not trying to copy nature and don't usually work from models. The figures and their settings come out of my memory or my imagination. The way I handle the subject matter results from a synthesis of modeling in the classical sense and non-objective treatment of media and composition. For example, a figure's face will be modeled but not at all as a photographic image; the body might be treated as almost pure, flat textured pattern, the environment might be similarly simplified into flat textural forms.

Perhaps this type of abstraction can best be understood in...
terms of “symbol.” The figures I do are more like symbols of people than photographic renderings of them; the tree in “I am nothing without You” is a symbol of an apple tree: a massive green shape with red dots and a brown shape. A red dot doesn’t make an apple. It’s only a symbol of an apple. Along with this simplification, comes a flattening out of space into pattern. In “Children be Vulnerable” the figures are ‘in front’ of a plane of polka dots and ‘behind’ a plane of stripes: the figures are seated at a table with a striped tablecloth in front of a wallpapered wall.

The painting called “After the Tempest” is based on the theme of Christ in the wilderness with the angels after the Temptation. It’s like a window onto four figures dancing and ministering to each other and yet parts of the figures are represented simply by large flat shapes with little modeling. These, along with bands that echo the support bars of the frame, witness that this is indeed a flat canvas. It is an art object, and yet it is more than just that.

Sometimes the symbols that I use touch on a universal perception of elements of the world in which we live. For instance, I might paint an area blue because it is sky; another
Nothing Without You,

area green because it is grass. But, then again, I have no rules for doing these things and I might just as easily make a river brown as I have done in the wood-cut "The River." I enjoy working with a play of representation, flat pattern, shape, texture and color using a variety of media and technique and I try to be as intuitive about it as I can. Things usually don't work for me when I am too rational and analytical.

When I think of influences on my work, I think of people like Bruce Cockburn and Thomas Merton or a magazine like Sojourners. Bruce Cockburn, for instance, a contemporary Canadian musician, fascinates me by the way he integrates his Christianity and his art form. His lyrics are very thoughtful and visually oriented and yet remain subtle. There's an integrity to his work that sometimes comes out in playfulness, sometimes in rawness, but always in sincerity.

I think the concept of the artist as a suffering masochistic hero is foolishness. One's artistic abilities should be seen as a gift rather than an ego-trip. It's crucial, especially for a Christian artist, to have a sense of justice for other people. In our society art has become so much of a frivolous luxury that artists participate in oppression of the poor. Their entire lives tend to be wrapped up in a system that gives very little thought to these problems.

I would like to see a little bit of my art stay with me, some of it go to my friends, a little bit of it go to those who want to buy it and someday I hope that most of it will go to those who can't afford it. I don't know how I'd be able to channel my art into the lives of those who don't normally see art because I suspect that they might not be interested in it. But it's something I seriously think about. With this type of goal it's doubtful that I'll be able to live off my art; I'll probably have to get a job to support myself unless I'm able to do my art in the context of a supportive community.
The Laboratory of History:

What to Write On Your Tabula Rasa

Arvin Vos

Recently William Harry Jellema, Professor of Philosophy Emeritus, the doyen of Calvin philosophers, lunched with the philosophy department. Jellema's first question to the members was this: "Are you taking the history of philosophy seriously?" For those familiar with Jellema's views, the question will come as no surprise. Jellema has always had a lively interest in, and a great love for, the history of philosophy. One sometimes has the suspicion that for him there is little or no great philosophy in the twentieth century. In the context of positivism, analytic philosophy, ordinary language philosophy, Wittgensteinian language games, and more, Jellema turned to the classics in the philosophical tradition. He saw them as the primary means by which to acquire and to transmit a philosophical education.

In reply to Jellema's question, one's initial reaction is to say, "We teach classes in the history of philosophy, just as we always have." This, however, would sidestep the thrust of the question. The real issue is whether the history of philosophy is being taken seriously. Whether it is or not, I leave to others to decide. I will limit myself to asking why this history should be taken seriously, and, granted that it should be, how this is to be done.

Looking at mathematics, the natural sciences, and even the social sciences, one finds little or no attempt being made to acquaint students in these areas with the history of their respective disciplines. Nor does it seem to be the case that the best scientists in these areas are necessarily aware of such history; indeed, they usually are not. One wonders why the situation should be any different in philosophy. In light of the fact that in mathematics and the empirical sciences one can function quite well without a knowledge of history, the burden of proof is on the person who wants to argue that philosophy is different. I am going to argue that there are a number of reasons why the history of philosophy is important—for its cultural significance, for the teaching of philosophy, and for philosophy itself.

First, there is the relation between philosophy and culture. Philosophy provides, among other things, a broad understanding of reality; it is not only a study of what is but a vision of what can be. As such, philosophy becomes the basis on which men act and so it shapes history. So, to understand our own age, it is important to understand Marxist thought. Closer to home, to understand the Reformed tradition one will do well to study Augustine, for Augustine's conception of Christian philosophy is still to be felt in various currents at Calvin.

The sciences also have an impact on culture, but the impact of philosophy is both more profound and longer lasting. Sciences determine man's understanding of the world about him and even aspects of his own being, but philosophy goes beyond this to articulate man's conception of himself. Hence its influence is more profound. It is also longer lasting for science soon becomes dated, but philosophy has a perennial relevance. Greek science is of merely historical interest, but its philosophy continues to inspire today.

A second reason for studying the history of philosophy is that there are memorable moments in it which simply are not found elsewhere. There are in the philosophical tradition works which appeal both to the imagination and the understanding. Think of Socrates' defense in the Apology, Plato's allegory of the cave as a picture of intellectual enlightenment in The Republic, the
moral earnestness of Marcus Aurelius in his Meditation, Augustine's account in his Confessions of his conversion to Christianity. And so one might continue. To grapple with the issues and to relive the struggles recounted in these works enriches greatly. Works of this kind embody a range and depth of human experiences to which everyone should be exposed and which often cannot be found elsewhere.

These works are powerful precisely because they teach on more than one level. For teaching this is an important factor. Students who will not be moved in the least by an abstract statement of an issue can be roused to puzzle over it when it is put concretely. The Individual versus the State as a topic for discussion might leave most students unmoved, but there are very few who, when reading the Crito, will not be roused to try to find some way in which Socrates can both live according to his principles and yet avoid execution. The history of philosophy is a repository of interesting materials which can be very helpful in the teaching of philosophy. It is foolish to neglect them.

Thirdly, in the history of philosophy one can find discussions which help to enlighten current discussions. Often in reading a contemporary philosopher, one finds both that the viewpoint is very complex and that it can be understood only against the background of his predecessors. Current discussions of an issue typically assume knowledge of a great deal that went on before. The idea is that one can unravel some of the complexity of contemporary discussions by returning to earlier debates. In this way the history of philosophy can play a useful role in clarification.

The history often does more than this however. In philosophical discussions it often happens that bringing the position of some historical figure into the discussion is not a reverting to the past, but is more like calling upon a contemporary. Copernicus was a great scientist, but one would hardly call on him in a discussion of current issues in astronomy. Plato, by contrast, continues to be relevant to current philosophical discussions. The work of great philosophers does not become dated in the same way as that of scientists. Why this is the case will be explained later. Here it is enough to note the fact.

Given the fact that there is development in the complexity of philosophical discussions, one way of making the entrance to philosophical thinking less difficult is by introducing the new student to earlier discussions which were simpler in form. In this way one can follow the main stages in the history of philosophy and so have a context in which to set contemporary discussions. Often this will require that students gain some knowledge of the original context in which philosophy was written, but this added labor will have its own rewards. The emphasis on philosophy will complement the emphasis on history, both of which seek to promote our understanding of ourselves.

Fourthly, the history of philosophy expands the scope and depth of one's thought. At any given time, there are relatively few philosophical issues which are the focus of intensive debate. On other issues, one finds that philosophers adopt relatively uncritical positions. For example, when questions concerning ontology—questions about the general structure of what there is—are the focal point of discussion, then epistemological issues—how we know—are often handled relatively simplistically; logic may be probed in detail, but philosophy of man neglected, etc. While it is no doubt beyond the ability of most persons to be creative in a variety of areas at once, through familiarity with the history of philosophy, one can remain better informed with relatively less effort.

The same point can be made in another way. The history of philosophy can be regarded as the laboratory of philosophy. In the history of philosophy one can see the implications of a position being worked out. Decartes proposed a method and adopted a criterion; his successors picked up where he left off, trying in various ways to resolve the difficulties which remained in the Cartesian framework. In other philosophical movements one can see the same phenomenon at work. The essential point is this: one cannot hope to discover on one's own what a whole series of brilliant men in the past worked their entire lives to clarify. Just as one would not presume to work out mathematics on one's own but consults mathematical texts, so in philosophy, besides the hard way of making discoveries for oneself, there is the easier way of following out the clues left by others. Just as Socrates served as a midwife for the slaveboy, so the history of philosophy serves as a midwife for philosophers.

In this same vein, the medievals sometimes spoke of themselves as pygmies on the shoulders of giants. On his own, a pygmy cannot see far, but perched on the shoulders of a giant he can see farther than the giant himself. One's own ability may in no way be comparable to that of a Plato or an Aristotle, but if one can first learn from them and then add one's own contribution, there is the possibility that one may be able to see more than they did. There is an accumulation of wisdom in the
philosophical tradition which it would be unfortunate to miss.

A fifth consideration stems from a peculiar situation that obtains in philosophy but is not found in the sciences. In the sciences, a student is normally able to assume that there is a body of knowledge in the field that is well-founded. He must become acquainted with this body of knowledge, must understand the method by which it was derived, and be able in principle to derive it for himself; but there is no need for him to verify all the experiments for himself. While one must know the current status of the science, the reasonable thing to do is to assume that what others have done is correct and to go on to specialize in some area to make a contribution of one’s own.

Now in philosophy such an approach is unworkable. The problem is not that there is no philosophical tradition, but rather that there are a variety of philosophical traditions. Whereas a science normally has one accepted viewpoint which dominates the field, in philosophy one normally finds a variety of traditions. The variety has its roots in the fact that philosopher’s use fundamentally different approaches. These different approaches have their basis in different conceptions of the nature of knowing and of objectivity. Moreover, they lead to different results.

If the co-existence of diverse, competing traditions is the usual situation in philosophy—and here I simply want to claim that this is the usual situation without explaining why this is so—then the student of philosophy faces a problem which students of the sciences do not normally have to face. (I say “normally” because there are times when there are competing traditions in a given science, as when a basic viewpoint is undergoing revision or when philosophical commitments have caused a division as seems to be the case with the divisions in psychology.) From the very beginning philosophy has been divided into schools, most of which have their new adherents in every era. The student of philosophy cannot simply join whatever philosophical movement is current, but he must attempt to make an informed choice. The various philosophies are competitors, each having its own methods and its own results. Platonism, Aristotelianism, Kantianism, Idealism, etc. have their own methods and their corresponding conceptions of reality. In philosophy, results and method are tied together. The choice of a method involves a personal commitment; one must defend his choice of method as well as his results.

What is desirable is that this choice of method be made as intelligently as possible. The implications of a particular method cannot be ascertained in the abstract. Should one use a deductive method in philosophy or a method of universal doubt or some other? It is not possible to determine by some criterion of pure reason which of these methods will be most adequate. They can be judged only by their results. It is in the history of philosophy that these results are available for inspection. For later thinkers it is the history of philosophy which makes a pre-

limentary investigation of the merits of various methods possible. While the pre-Socratics set up one philosophical position after another, Aristotle was able to profit from their efforts by noting how in their works there was a progressive clarification of various types of cause. It seems that the history of philosophy reveals the relation between various methods and their results, so making possible for later thinkers an informed choice with regard to their own choice of method.

There is a sixth and final point. The content of the history of philosophy is necessary to complete the all-inclusive viewpoint which philosophy seeks. Most philosophies aim at presenting an all-inclusive viewpoint. Even those that do not witness to this demand when they feel compelled to explain why this goal must be abandoned. An all-inclusive viewpoint does not attempt to incorporate all the details of reality, but rather to integrate the methods by which the details of reality can become known. In other words, philosophy is not concerned with the details of everyday experience and of physics and of biology, etc., but it is concerned with determining how these methods can be integrated into one unified whole. Now Platonism, Aristotelianism, empiricism, rationalism, Kantianism, etc. are just so many proposals as to how this project is to be carried out.

In seeking to establish an all-inclusive viewpoint, a philosophy cannot ignore the differences in its own history. Because the empirical sciences are concerned only with one aspect of things, they are under no obligation to explain their own development nor the fact of various conflicts that may be found in the field. Philosophy, by contrast, precisely because it endeavors to attain an all-inclusive viewpoint is also under the obligation of explaining its own history, especially the fact that it has been dominated by different schools and traditions since it began. Without such an account, one has the irony that the very science which has a goal which is all-inclusive has itself a fragmented and unintelligible history, where one position after another arises and falls for apparently no reason at all. In fact, there are reasons, and it is one of the tasks of philosophy to sort these out and so explain its own checkered history.
 Granted that the history of philosophy should be studied, how is this to be done? The answer is philosophically! Just as the scientists must ask the right questions of the object he studies, so the philosopher must ask the right questions of the history of philosophy. Failing to do this, one will find the history of philosophy a closed book. I will indicate three ways of studying this history, the first two of which are inadequate and the third of which is satisfactory.

1. The impressionistic approach.

The person using the impressionistic approach turns to the history of philosophy and reads in it, but attends only to those ideas which happen to interest him or which are an anticipation of his own views. He focuses on these and regards the rest as quaint. Like a traveller in a foreign country who goes from one tourist hangout to another and makes no real effort to enter the life of the culture he is visiting, this kind of philosopher makes no attempt to enter into the philosophical world of his predecessors. He tends to read the history of philosophy in much the same fashion that scientists have been prone to look upon the history of their respective areas. The history usually consists in noting some brilliant insights which, alas, were before their time and so failed to reach their potential in the past, but which have finally come to their own in the present. There are books on the history of philosophy which use such an approach. As one of my colleagues has remarked, such books could be subtitled, “Thoughts which occurred to me while reading...”—filling in the name of the appropriate philosopher. Both tourist and philosopher in the cases mentioned fail to gain what is essential—having one’s horizon enlarged.

2. The “purple passage” approach.

This type is taken from literature, where I suspect that it is found even more than in philosophy. In the literary case a person finds a favorite passage and simply lifts it out of its original setting. He may be found quoting:

Life’s but a walking shadow, a poor player
That struts and frets his hour upon the stage
And then is heard no more: it is a tale
Told by an idiot, full of sound and fury,
Signifying nothing.

In connection with this passage he thinks edifying thoughts about the futility of life, its meaninglessness, its stupidity, its senselessness, and so on, but he never troubles to find out what the passage meant in the context in which Shakespeare placed it. The problem is not that the edifying thoughts which such a person thinks are uninteresting, but rather that they are simply his own thoughts. Such a person is merely introducing his own perspective into the passage; he does not get beyond himself. Instead of being broadened by Shakespeare’s world, a literary narcissism results.

In philosophy there is a similar phenomenon. One finds an interesting passage and simply lifts it from the context in which it was originally found. Having done this, one begins to analyze such a passage intensively. With great subtlety, possible meanings for the various terms in the passage are explored. If no meaning which renders the argument valid occurs in the course of the analysis, then one sets about giving possible reconstructions of the argument. This too can be interesting and even valuable. Analyzing an argument in great detail is an important skill. The problem is, nevertheless, the same as with the literally parallel. Basically, one finds in the argument only what one puts into it. One may happen to have the same understanding of the basic terms as the author, but if that understanding is lacking, there is nothing in this method which will enable one to overcome this basic deficiency. Such a reader, for all his skill and ingenuity, will also only find his own perspectives in an argument lifted and isolated from its original context and meaning. If there is literary narcissism, there is also philosophical narcissism.

3. Some observations on a critical reading of the history of philosophy.

How is the history of philosophy to be read? It must be read philosophically. But what does this mean? First of all, this is the opposite of the view that one should approach the history of philosophy with a blank mind, a tabula rasa. One learns only when asking questions. It is the one who is the most active questioner who is most likely to learn. The way to learn is not by keeping all one’s preconceptions out of the picture, but by bringing all one’s abilities to bear upon a text.

Necessarily we begin with our own understanding. When we first read a term, we will understand it in the context in which we have known it before. However, if our own understanding of the term differs from that of the author we are reading, we will soon find that he uses a term in a context where we would not use it or use it in a fashion that we do not recognize. The key is to follow up such clues, to work our way around another’s thought until we can anticipate his every move. From the original context we must move on to other contexts in which the same term appears, comparing, evaluating and analyzing. Systematically, we will try to enlarge the context, relating the term in question to other terms as well as to its employment in other works. We move on to the author’s opera omnia and even the writings of predecessors, contemporaries, and followers. By recovering the context, we are gradually drawn out of our own world with its preoccupations and interests into the world of the author we are studying. When such a change occurs, then the history of philosophy is being taken seriously.

To understand other’s language it is necessary to understand his thought. To do this it is necessary to acquire a set of insights which comprise the basic structure of that author’s position. Here is the real worth of the study of the history of philosophy, for engaging in such study, we will find that in order to understand the greats of the past, we will have to rise to their level of understanding. But then the result will not just be a grasp of some position held in the past, but there will be effected a change in ourselves. This is the benefit to be gained from the history of philosophy. This change will have prepared us to make a contribution in the present, a contribution which will be all the richer for having been informed by the thought of others.

Returning to Professor Jellema’s question, we can see why it is worth pondering. Today the dominance of the empirical sciences might lead us to suppose that their ahistorical method was appropriate in philosophy also. Consideration of the special character of the philosophical enterprise calls this view into question. Scientists carry on their discussions only with contemporaries because the empirical method renders past findings obsolete. In philosophy the situation is different. The issues are perennial, and so the contributions of the great philosophers of the past are never merely of historical interest. The voices from the past continue to influence and inform current discussions. For philosophers Plato, Aristotle, Augustine, Thomas Aquinas, and so many more are contemporaries.
African: Idoma Mask

Masks are a major form of visual ideological expression in most cultures. Used as props for masquerades, masks embody individual and universal ideas through emblematic decoration and their use in performance.

This mask, from the Idoma people of the cultural belt in Nigeria, is a grouping of faces rising in an exponential curve. William Fagg, a noted Africanist, interprets this curve as symbolic of the continuity of life.

The mask type, called ungalali, is used many times during the year. The wearer carries the mask on top of his head; palm fronds, grasses, or fabric are strung through the small holes at the base to cover his face. Many similar masks have beak-like pinchers protruding approximately four inches from the bands between the carved faces.

The mask is made of light wood called maligna and painted with natural pigments. Except for the birds (eating ripe fruit) at the top, the entire mask is carved and hollowed from a single piece of wood.

—James Kuiper

Idoma mask obtained in 1968 from James Ijabo, an Idoma student at Wm. Bristow Secondary School.
My Mother Never Said Anything Like That:

A Critique of Pure Science

Recently Dialogue sponsored a discussion, organized by Steve Van Till, among Professors Arie Leegwater (chemistry), Del Ratzsch (philosophy), David Van Baak (physics), and Gordon Van Harn (biology) with a little help from Paul Baker (ill-informed layperson). The topics ranged from "everyday table-top experience" to quantum physics. Here, Dialogue presents a shortened version of the actual discussion: as usual we have tried to strike a happy balance between free conversational style and the conventions of written prose.

Baker: We've brought together three natural scientists and one philosopher of science to discuss the common ground of their disciplines. Before beginning, we may as well discuss how far such a discussion is appropriate, and what it is they have in common. Should the scientist be expected to examine the philosophical implications of his discipline? Should a philosopher of science also be a doer of science? Are the fields mutually exclusive? How do the disciplines relate?

Ratzsch: The important things done in the last twenty years in the philosophy of science have been done because some philosophers of science have finally decided, "Okay, instead of theorizing about what's going on or what should go on, perhaps we should find out exactly what it is scientists are doing and then try to figure out why it's working and what they should do." That's been a complete turn around in a way. Earlier in the century, philosophers said, "Well, let's look at scientists because they're making progress, and let's do our philosophy like that." But, at first they got it completely confused and even got some scientists confused.

Of course, you can't just take science as a given either. You can't just philosophically step back and think about it for a while without any background. It is important for students at an undergraduate level to get some historical and philosophical appreciation of the questions in the scientific discipline. A familiarity with the history of science and some philosophy of science would keep scientists from making some of the bizarre statements that they make. Just a few months ago I heard a cosmologist stand up and claim, "We now know everything we need to describe everything that happens in the entire universe." What person who has heard that claim made fifteen times over in the last two hundred years—and seen every one of those claims blown away within five years—could stand up and make that sort of statement?

Van Harn: My experience in the laboratories I've worked in, is that scientists pay very little attention to that sort of question. Only a very few begin thinking about it. Once when I attended a conference, I asked some post-docs in the physiology labs if they knew anything about the conference or had attended any of the lectures. They just sort of snorted and laughed and said, "No, we don't want anything to do with that." It seems to me that's typical of other scientists. Often, philosophy seems to be something which many scientists leave until they're near retirement.

Ratzsch: That may be true of the young scientists in the middle of the talent hierarchy, but the really good scientists express and have an interest in philosophical questions all along the way. Look at the list of people who were doing tremendously important things earlier in the century. Almost all of them were deeply interested in these questions early on. Some of them actually got into physics because they initially came across some of these philosophical questions and decided that the answers they were finding couldn't be right.

Leegwater: That's also part of their training.

Ratzsch: Yeah, they're European. They were aware of the history of the discipline. They were forced to participate in philosophical discussion, and it came very natural.

Van Baak: The revolution in geology in the last decade, in tectonics and all that, seems to have been almost free of philosophical questions. A classic scientific revolution where the entire community of geologists swung over from snorting at a point of view to accepting it wholeheartedly, and yet there was no soul searching of the philosophical implications. On the other hand, in physics, sometimes the progress is made by asking these philosophical questions.

Leegwater: Some disciplines too seem to lend themselves more to a philosophical reflection—there is a lot of philosophy of physics. But you have to look hard to find a philosophy of chemistry article.

Baker: Some scientists may not always be too excited about philosophy, but certainly other "softer" disciplines have in the last century or so, become enamored of the scientific method. Schools of philosophy and literary criticism, for example, have wholeheartedly adopted the notion that the search for objective knowledge by the scientific method is the road to truth. Is this appropriate? Should the scientific method be normative for other disciplines?

Ratzsch: When you ask whether or not the scientific method should be normative, the answer to that might be yes, but the people who have claimed to be applying scientific method to various other disciplines, in particular philosophers early in this century, just plain were confused about what scientific method was; they weren't applying scientific method. They thought they were, and they came up with these utterly bizarre results, and accepted the results instead of wondering if they'd gotten the scientific method right. So it seems to me that just looking at the disasters that have been caused by people in other fields claiming to have applied scientific method, in fact, isn't clearly relevant to whether or not scientific method should be normative. First we have to settle on what scientific method is, and that's still a question that hasn't been settled. I mean, many scientists know how to do it quite well, but when you ask them, "Okay, what are you doing?" you don't always get quite the answers that you might want.

Van Baak: But suppose you take as a summary statement of the method that you want to check whether the logical consequences of your hypothesis are in agreement with experience. Then the question is, "What really is experience?"
Does experience include the feelings you get when you read certain literature? When you weep or laugh? And to deny that these items of experience have any standing because they're somehow not quantifiable or not scientific is to confuse the fundamental assumption of scientific methodology with its trappings: measurement, mathematics, quantification, and those qualities. If people take scientific methodology and produce a description of human behavior, for instance, which is fundamentally mechanistic, and strikes us as not true to our everyday experience, why then I think that's a good example of not using the scientific method, because the scientific method is supposed to produce something that is in agreement with experience. It works in the sciences because the problems you put it on are sufficiently simple. If the problem were intrinsically complicated, that method would either not be used or it would be used wrongly.

**Leegwater:** It has to solve the simple. It can't solve the three body problem for example.

**Van Baak:** That's right. If you have two bodies moving under mutual gravitation, that's an easy problem to solve. Three bodies: it doesn't work. In any discipline where the subject is intrinsically complicated I'd be surprised if the scientific methodology made results that have any value.

**Van Till:** Aristotle said that if you ask a scientific question, then you will get something of a scientific answer, but it's only a scientific answer. After that it's all finished.

**Van Baak:** In addition, in physics, we consciously idealize a particle, then we idealize that particle into an isolated particle, and then we consciously treat it as a passive recipient of outside forces.

**Leegwater:** I sometimes think that people in the humanities aren't conscious enough of that deliberate technique or misappropriate it when they apply it, for example, to psychology.

**Baker:** On the other hand, physics, for example, has led to a view of the universe, only put forward within the past half century, that violently conflicts with our common sense experience. And since the conclusions of science seem so often to reflect the world view of the times, one might suspect that scientific method is governed by, not pure reason or experience, but by social, political and psychological structures. The argument is we don't just think objectively, in a straight line; our thought isn't so much governed by what, say, some particles are doing, as by the structures in our own minds and how we're arranging our experience. Suppose a physicist's conclusions are merely the outcome of his discipline's peculiar assumptions; what implications would this have? How does a scientist counter this?

**Ratzsch:** See, Dave, if you hadn't gone through physics grad school then you could think straight like the rest of us.

**Van Baak:** That brings up the question of scientific revolutions, because I think one of the lessons about a scientific revolution is that people adopt a new way of thinking. It's not just a matter of coming to terms with new experimental data or having a new model. Fundamentally, the vocabulary and the thought processes change. But I like to think that those changes are almost forced upon us by the observations. In effect, nature is teaching us in what terms it wants to be described.

**Ratzsch:** Well, the historical evidence is kind of mixed. Some of the major revolutions came about without new information at all.

**Van Baak:** As a reinterpretation of old information.

**Baker:** Then one can always link these revolutions very nicely to the social atmosphere of the times.

**Leegwater:** Yes, there are studies like that. For example, supposedly the dissolution of Weimar Germany allowed the reception of the indeterminacy principle to gain a foothold. There are arguments that way. You can always place it in a social setting. It isn't a cause and effect relationship, but I think we're becoming more and more aware of the social setting in which scientific revolutions take place.

**Baker:** And if you push that to the radical extreme by the now familiar argument that we see nothing beyond our psychological, social, political, etc. structures, what's the scientists' response to that?

**Van Baak:** I think that's fundamentally fallacious. However disillusioned Germany might have been in the 30's, the indeterminacy principle would not have been accepted if it disagreed flatly with experiments in atomic physics. No matter how disillusioned people are, they can't foist upon the scientific community a law of that magnitude unless they somehow have data to back it up.

**Van Till:** Well, you were talking earlier about how in psychology sometimes "scientific method" yields results that don't comport with experience; they explain away so many of our experiences—like the religious. But couldn't these psychologists turn around and tell the physicists that "their" results aren't in keeping with experience either? I mean, in quantum mechanical physics, macroscopically you're still just looking at dials and so on, not at the atoms themselves. You say that these quantum phenomena are part of experience; and nature is telling us this is the way things are, but other people could say, "you're just looking at dials. That's not really the way it behaves; that's an artificial experience. It doesn't have as much weight as, say, looking out the window and seeing a kid on a red bicycle drive by."
Van Baak: But the redness of the bicycle is a quantum phenomenon. It really is.
Ratzsch: So is the kid not falling through the bicycle.
Van Baak: That’s right.
Ratzsch: So is the fact these lights are on.
Baker: When you say something is a quantum phenomenon, what are you saying?
Van Baak: That is to say: the fact that a fluorescent light is shining is not describable by classical mechanics but by a quantum mechanics of atoms—excited mercury atoms in this case—inside the fluorescent light.
Van Till: In other words, if Newton had been right, we would be sitting here in the dark. But still, you have not immediately experienced those mercury atoms. How do you know your interpretation isn’t just a reflection of your cultural paradigms?
Van Baak: Because, if that’s true, then that strikes me as an amazingly cynical thing to say about the place of natural revelation. But it’s an interesting question of hermeneutics. How are you going to “interpret” natural revelation? Theology decides internally how special revelation is to be interpreted. I wonder, is it fair that science decides internally how natural revelation is to be interpreted, or does theology have to tell it, so to speak?
Baker: Yes. Does grace perfect nature? Or is nature autonomous? And then the question comes up of the relationship between the church and science. What’s the church saying about that? What’s the scientific community saying? The scientific community is certainly not saying “we believe that we may know,” but I’m not sure the church is saying that any more either. Should the church still dictate to the scientist what are the proper cosmologies and the proper objects of study, or not?
Van Baak: Well, to say that one cannot approach some questions in a scientific way is to arrogate the spiritual side of things, which, in effect, denies the existence of natural revelation.
Leegwater: Science properly exercised is also a gift given to mankind.
Van Baak: That’s right. And I think one has to take absolutely seriously the results of science because they are natural revelation.
Leegwater: Well, I wouldn’t equate the results of science with natural revelation, but one is able to do science because of the revelational character of the reality we live in.
Van Baak: Somehow one is pursuing a form of revelation when one pursues scientific knowledge. To deny that is to lead eventually to the perfectly cynical view that one is just acting out one’s cultural presuppositions. Because reality is a form of revelation, I think it has some intrinsic truth to it; that makes it more than just cultural determinants.
Van Till: And so finally you just assert that objective truth.
Van Baak: Well, right. I take that on faith. Or as a gift from theology, if you will. If theology is so generous as to admit the existence of natural revelation.
[laughter]
Van Till: What about the old notion of the rational fit of man to the universe? Now the contemporary idea in physics that particles can behave both as particles and waves, and notions like that, defy any sort of common sense experience. What do you think that rift between science and experience has done, if anything, to our view of man’s relation to the universe?
Van Baak: That’s interesting because I find in an everyday sense that quantum mechanics is easy to understand. The real problem is in English, not in physics. The problem is that people are taught when children that waves and particles are different and mutually exclusive things.
Ratzsch: (My mother never said anything like that.)
Van Baak: But I think fundamentally—well, I shouldn’t say “fundamentally.” I don’t know anything about fundamentals; I’m just a physicist—I think that really, it’s not that complicated. It’s just that the real world, if I may use that bold phrase, teaches us that electrons have wave properties, and particle properties. And if we hadn’t been told early on that waves and particles were different things, we would say, “Yes, well.”
Baker: Well, surely though the English language is as it is because that’s what comports with experience.
Van Baak: Ah, but that’s the problem: your experience and the full experience, so to speak, are different matters. I agree, in everyday tabletop experience, waves and particles are different things, but that just means the experience is incomplete.
Baker: But that’s why it’s difficult, because the everyday experience breaks down. And what Steve’s talking about is that, in the relationship between man and the universe, we expect the table to remain solid for us and it hasn’t done so. It has decided to become something that down deep may even be a wave of energy, rather than an actual something I can knock my knuckles on.
Leegwater: If it were a quantum mechanical entity your cup could fall through it, so to speak?
Van Baak: But that lesson has been learned before. A century earlier, the idea of matter as something real was all of a sudden turned into the idea of matter as mostly space and just atoms, fundamentally indivisible rather than continuous. I think you’re right that once you learn a new level of physics, your everyday experience is shaken a bit, but I don’t think that’s so different from the culture shock you get when you travel to a new country. I mean, when you’re in a new domain of the world, you expect new ideas to apply.
Leegwater: I think it’s also true that our everyday experience is conditioned by the classical Newtonian mechanics we’ve been taught. I wouldn’t fault everyday experience so much as, perhaps, the cultural way in which science has been presented to us.
Ratzsch: But everyday experience counts as at least part of it. One standard idea of explanation is that it’s just redescription in terms of, or reduction to, the familiar. And we simply aren’t familiar with quantum mechanics. We simply don’t experience quantum type behavior.
Leegwater: Well, we do. Liquid helium crawls out of the . . . Van Baak: That’s true, there are some . . .
Leegwater: There are some macroscopic quantum manifestations.
Ratzsch: Yeah, right. But that’s not your standard sort of experience.
Van Baak: It’s a pity in a way.
Ratzsch: You don’t find that in your freezer at home, right?
Van Baak: It is a pity. If people did, all these philosophical questions would be revealed as cultural shocks; once they’re past, things seem quite natural.
Ratzsch: Well, perhaps. But there’s a whole raft of competent physicists who claim that quantum mechanics is fundamentally incomprehensible. People like Feynman; I mean, not just the people who can’t make it.
Van Baak: Yeah, I know. Sometimes I wonder if he’s not just being literary.
Leegwater: He wants to sell his books, you know.
Ratzsch: Well that’s always the move: If he disagrees with me, he’s not being a physicist any longer.
Van Baak: Yeah, and you hate to say that about Feynman. No, I suppose there’s a sense in which that’s true. It’s a domain of experience that, so to speak, we don’t live in; we can only be tourists.
Van Harn: I think the interesting thing is that the Newtonian
mechanical picture has had such long staying power despite anomalies to the contrary. And that's where Kuhn's idea of the paradigm has a hold of something. It's not just an organized way of looking at things. It's also a reflection of the staying power of the theory, that you can manipulate it, work on it from various angles and the whole thing doesn't collapse immediately. At least in the history of science, people are becoming more and more aware of these so-called social factors and other factors. The difficulty is in weighing these different factors.

Van Baak: That's true of history in general, right?

Van Baak: So you kill it and bury it in the back yard. . . .

It might be worthwhile asking, as long we've brought up Kuhn, whether anyone hears the rumblings of a paradigm shift in any contemporary science. Are we in the middle of any scientific revolutions?

Van Baak: If there is one coming, it's in the behavioral sciences. Skinner is the apostle of an attempted coup d'état. It's not clear what the future of that idea is. But, that's the field I see it coming in, in the next decade or two.

Leegwater: It took a while to come in classical physics. It took two hundred years. So, even physics is not without its possible changes.

Van Baak: That's right. But we had our revolution so recently, I would be surprised to see another one. Some physicists find it disconcerting that the fiftieth anniversary of the American Institute of Physics just happened this year. The 1920's and 1930's were the big years in physics. And physicists ask themselves, "Why aren't we making progress like the greats, like the giants of the earth in those days?" You can't always have revolutions. In physics the consequences are still reverberating. I would be surprised if another happened.

Van Harn: In biology, or more precisely, physiology, I would most likely foresee a revolution, or new paradigms and organizing themes, in neurology.

Leegwater: It's hard to say in chemistry. But we are taking quantum mechanics more seriously all the time. It's encouraging to me to see how the disciplines of chemistry and physics are becoming more or less one.

Baker: To change the subject a bit, I'd like to pursue the relationship between science and culture, especially Western culture. In the third world countries I've lived in, western science and culture are talismans of power. The people who make it with that power are the westernized people. Those who maintain their own culture can't use it so well. So technology ends up as a sort of missionary of Western culture; only insofar as people accept Western values, can they use our technology. Science brings the good and the bad in our culture to these people. So, the question seems to be: can what we call "science" be done outside of, or apart from, our cultural framework? And should it? Is there such a thing as non-Western science?

Ratzsch: Well, I'm not sure exactly what you mean by Western or non-Western science. Years ago, I read a kind of interesting science fiction story in which some alien culture had developed something that looked very much like science, except it had a completely different ontology. They could explain radio broadcasting, but the explanations were that the surrounding ether was filled with angels, and when you touched this key, it would call the angels and they would travel at a certain speed and line up, and—depending on how closely the angels were packed and depending on their wing height—you would get different sounds coming out of the radio. Now, is that Western science?

Baker: Well, in essence, I would say yes. I would suspect that the methods are the same.

Ratzsch: Alright, so then what's non-Western science? I'm not sure what the question comes to yet.

Van Baak: Well, I could easily believe something was non-Western science if it didn't have an idea of cause and effect, for instance.

Ratzsch: So Liebniz was not a Western scientist?

Van Baak: Well, I couldn't say from personal experience.

Baker: It's not so much what an individual believes, but the ways of thinking, the categories that are in the air of a culture
and that he uses to structure his own thought. Can science be done apart from our culture's priorities and categories? Do we do science because we value certain things and think certain ways. Without our Western values, would we even want to do science?

Ratzsch: Well, that sounds more as though you're asking if any of these other societies have any motive or motivation for doing something that resembles science, not "if they were doing something, would the results be science."

Van Baak: The fact that science started in Protestant, Northwestern Europe is, I think, somehow not accidental. It is connected to the culture.

Baker: Of course, the tendency there is to say, "If we've got something nobody else has, then we must be superior." And we do undeniably have this power: we can make guns.

Van Till: The undeniable fact that science gives us this power forces us to consider the question of the ethics of science. Genetic engineering, for example: there the potential for great good and great harm has provoked vehement discussion of whether we can "play God." How should that be resolved?

Van Harn: "Can we play God?" That's something we do all the time. The whole notion of man being in the image of God says that he is God's representative. In that sense that's our mandate: we're representing God. So I don't think it's a question of whether or not we should; I think it's a question of what direction should the genetic engineering go, or any sort of scientific work. Genetic engineering isn't particularly unique. I think the scientific community, the biological community, is very immersed in trying to decide to what extent it should be done. There's genuine disagreement. Some are very much opposed to some of the directions that genetic engineering is going. Sinsheimer argues that we shouldn't be involved in it unless we know in what direction it's going, how we can control it, and he particularly objects to certain areas that may have extreme social consequences. He's really saying, "You've got to ask what are the social consequences before you begin to do some of the work." He was an opponent of the DNA recombination work because he didn't know what the consequences would be. But on the other hand, there are people all over the world who are very much in favor of it.

Leegwater: I think there is something healthy to the Asilomar conference that was held. I know it was a false alarm in a sense, but I found it very encouraging that people were willing to step back and ask, "Now should we be doing this type of experiment?"

Baker: What conference was that?

Van Baak: Before the general world woke up to the fact that new techniques in genetic engineering were going to be available, the biologists themselves organized a conference to ask what sort of techniques would be possible and whether they should put any restraints on themselves collectively. And they came up with a declaration which was self-policing for a number of years.

Van Harn: And they also had a moratorium on work until the guidelines were set up for control and regulation.

Van Till: The problem, of course, is that there's no way of knowing ahead of time whether your discoveries will be used for good or bad.

Leegwater: That's very, very difficult. With the hydrogen bomb, I think, or genetic engineering, it might be a little easier, but there are many cases where one simply can't oversee.

Baker: Is that something the scientist should do, or has to do: that is, should he think about how other people are going to use what he comes up with? Can't the scientist simply say, "There's that objective empirical reality out there; I'm going to tell you what it's like and what it can do, and what you do with that is up to you?"

Van Harn: Well surely, in the scientific community there is that group that thinks objective knowledge is the highest value and that all we have to do is pursue the facts and leave the use of that information to others, but I think that isn't the trend within the scientific community.

Leegwater: I think we shouldn't dismiss the fact that most science is done in a kind of industrial/technological complex. Once something has been discovered, supposedly by pure science, quite often it gets translated very quickly into something that's marketable.

Van Harn: There isn't very much science that is done simply to satisfy curiosities about the natural world.

Van Baak: That's always been true.

Baker: So, how does science go forward? From people with money asking for certain things? Or what happens?

Van Baak: Well, I think the curiosity of the investigators does push them forward in the sense that at the given stage of their work they're curious to find out what would happen if they tried the next thing. It's a much more difficult question to decide how much of it is their own curiosity and how much is the direction of the people paying for the research.

Van Harn: There's very heavy influence by the federal government as to which sort of research they are going to fund. Do they fund basic research, or are they going to do work which is directed toward some immediate goal? You're going to find a lot of people who direct their research so that it can be supported by the federal government.

Van Baak: I think the government is infinitely pragmatic. It has almost no curiosity, so to speak (by which I mean us. I mean, that's how we spend our money, right?). And it devotes a billion dollars a year to the National Science Foundation to see what will come of it, to see if the nation can be improved as a result.

Leegwater: That is, if the money is put in, at least something should come out.

Van Baak: That's right. It's hard to believe when you listen to congressional hearings on space money or National Science Foundation money that the aesthetic appeal or the curiosity has anything to do with it at all. You see scientists bend over backwards to make a popular social justification for research that you know and they know they're pursuing for fundamental reasons of curiosity and aesthetic appeal.

Leegwater: Well, it even happens in philosophy if I'm not mistaken. Philosophy of medicine is booming right now, and that's primarily because that's what's being federally supported. But it's true that the government is very interested in projects these days of science and human values, engineering and human values, technological assessment.

Van Till: Why do you think that interest has come up lately?

Van Baak: Well, the consequences of ignoring that facet of reality have become all too clear. It's not clear to me that the supposed fix is going to fix anything, but it's being tried and in a pragmatic way: "Well, look what happens when we neglect these things; let's try to do these things, and see if that'll help." That's all.

Van Till: I'd like to examine the question of science and religion more closely. These two institutions have been interacting in Western culture for thousands of years: how are they relating these days? Have scientists become religious again...?

Leegwater: They've always been religious. That is the very nature of human experience—just to be religious. So there has always been "interaction" between science and religion. We tend to play it down, I think, because sometimes it's very difficult to see how our scientific work and results reflect religious direction in life. But I don't see it as much as saying, "Here are two areas: how do they interact?" I would rather start from a point of integrity.

Van Till: Okay, we start with this man who's basically religious,
but there's still conflict and antagonism. For instance, there's a
group who thinks, "Well, if this world is run by a God who's
sovereign and essentially rational, then there must be some sort
determinism or predictability to nature! But people have dis-
covered the uncertainty principle, and they say "we can't know
certain things, and that shouldn't be the case with a God who is
essentially rational." So, you've got two groups which exhibit a
conscious antagonism. So even if there is an integrity to man,
you still have this opposition between the practicing members in
each group.

Baker: I think that if you want to focus this question, what you
have to think about are institutions, or people as they represent
institutions: the institution of the church vs. the institution of
science, or in cooperation with it.

Leegwater: I don't want to neglect that discussion. The World
Council of Churches is saying, for example, "We're concerned
about science. As an ecclesiastical institution, we'd like to invite
you scientists in. We can learn from you, and perhaps you can
learn from us."

Van Harn: The Free University last fall convened a conference
which was modeled after the World Council Conference
primarily concerned with science. So there is at least more con-
versation between the institution of science and the institution
of the church than there was half a dozen or ten years ago.

Baker: Still, there's always that underlying feeling in many
people's minds: that science has made religion untenable, has
"proven" that the real things are the empirical things and if
anyone tries to explain the universe spiritually it's just laughable
in the face of science, right? That's a popular notion. You run
into it over and over again.

Van Baak: Somehow it has always struck me as
a measure of the adolescence of a scientific
discipline that it makes those claims. Physics
made those claims about the picture of the New-
tonian world machine. When Napoleon asked
Laplace whether he needed God in his book on
astronomy, he replied, "Sir, I have no need of
that hypothesis." Then, nineteenth century
biology made the claim that evolution explains
away God. Perhaps, in the twentieth century,
the adolescent science is behaviorism. It's strik-
ing to find that sciences outgrow that stage; I
think that twentieth century physics has gotten
past it. Very few physicists any more will argue
that physics explains away the need for God.
They may use biology or the sociology of reli-
gion to explain away the need for God, but
rarely is the matter decided on physical
questions any more. I would be surprised if the
other sciences didn't also get beyond that stage
because as a Christian I find the alternative im-
possible to contemplate. That a science could,
by its own methodology consistently applied,
prove the nonexistence of God would, of course, to me as a
scientist, carry some weight. And since I don't believe in the
possibility of the consequence, I'm forced to admit the impos-
ibility of the premise.

Ratzsch: There's the view, though, that we've finally got some-
thing that's going to allow us to explain absolutely everything.
Is that something that's functionally intrinsic to the early stages
of any science?

Van Baak: It's important. It's crucial. From the point of view of
scientific methodology, it's essential that you push the
hypothesis as far as it will go and learn what its limitations are.
It's scientifically treasonable not to do that. And, of course, in
the process you always get grandiose claims which subsequently
will be shown to be excessive. But until you try it out, you don't

know.

Van Harn: In general, you find outsiders trying to use some of
those ideas and suffering the consequences of that.

Van Baak: The atmosphere generated by the claims of the
particular scientific discovery always includes that pushing of
things too far.

The problem, of course, is that the obvious temptation is to
conclude that all there is can be learned by physical methods.
Then you have non-Christian science. I think I can say that the
fundamental lesson that physicists learned in the twentieth
century was humility. That's a very welcome change from late
nineteenth century times when physicists displayed on occasion
a certain arrogance: physics was certainly going to explain
everything there was, and the supposition that anything in the
material world could be unexplainable was just fundamentally
untenable. Since 1930, I think it's been clear that some things
are unobservable physically. The lesson that's been learned, in
general, is that those things are outside the province of physics,
That's not always carried over into what you might call a
theological application, but it certainly influences the develop-
ment of quantum physics. You start right away writing down
what you call "observables," and the rest you consciously leave
out.

Leegwater: Some physicists haven't learned that humility yet,
supposedly. The hidden variabilists, for example, are still
pegging away at trying to find something objective that's there.

Van Baak: Well the original, the simplest form of so-called
hidden variable theory is probably not tenable, but you can
construct forms of such theories that are deterministic at base
and still testable. I think the case is still open, although I'd be

surprised if a hidden variable theory ever turned out to be true.

Baker: May a layperson ask what the hidden variable theory
might be?

Van Baak: Yes. That is the claim that below the apparent inde-
terminacy of quantum behavior there is an unknowable but
nevertheless determined level of behavior. It's not clear what the
aesthetic attraction of a hidden variable theory is; it's like that
philosopher's whipping boy, the invisible gardener. If life is
determined at base but the agency of determination is
unknowable in principle, it's not clear what you've bought.

Ratzsch: There's a mathematical result that has come out,
perhaps ten or twelve years ago, called the Bell inequality,
which turns out to have some experimental consequences

Del Ratzsch
concerning whether or not hidden variable theories of certain sorts are viable. The experimental thrust, as much as I can make out, seems to be for indeterminacy, but it's by no means a settled question.

Baker: It's curious that in talking about the aesthetic attraction of this, you should bring up the invisible gardener who is himself an analogy of God. Maybe that's the aesthetic attraction: while we're looking for an Invisible Gardener, somebody else is looking for a Hidden Variable. Would you say that the motivation behind all this is to find some kind of foundation, to try to banish the indeterminacy, relativity and what have you?

Van Baak: Yeah, I'd say that some people find a philosophical attraction in having a world which is deterministic at base, and some people, Einstein among them, find it very unappealing to have a world which is fundamentally probabilistic and indeterminate, uncertain in those senses.

Van Till: Has that unsettled a lot of people, do you think, that indeterminacy?

Van Baak: No. I think in every generation, only a very few are ever troubled by the philosophical presuppositions of a scientific discipline. Most of them are competent workers who are content to work in their own sphere, and I think that's in some sense right.

Ratzsch: But the people who have objected to indeterminism, the hidden variable theorists, have not traditionally been slouches. I mean, they're Einstein and Schröedinger and Bohm and ....

Van Baak: That's right. I mean they're clearly good people, but it's just that it's too hard a question to bring into the everyday doing of the discipline.

Ratzsch: I think what it comes down to is that some people think that indeterminacy doesn't allow for adequate explanation, that there's something essentially just incomprehensible about fundamentally uncaused events. What's being sought after are explanations that are complete in some sense. You just can't have them if you settle for indeterminacy. There's Einstein's famous quote, of course.

Van Baak: Yes, "God does not play dice."

Leegwater: You think that Steve Weinberg is doing this with his attempted unity of various forces? Is it simply out of intellectual curiosity? Perhaps, but I doubt it, I think ....

Van Baak: No, he has another ax to grind. He wants the scientific description to apply throughout, to cover the whole scope of the universe: from the fundamental particles to the whole cosmos and from the big bang to the infinite future. It's just not palatable to that sort of person to have some theories that only apply here and now, and other theories that apply there and then. And I agree, there's some sort of unity ....

Leegwater: Although he does admit in the latter part of his book, The First Three Minutes, the more comprehensible it seems to be, the more meaningless it is. I'm not sure that I have the quote accurately ....

Baker: But that's not just a single individual's impulse, it seems to me. That's one of the underlying rules of all scientific investigation: to look for the most elegant, the simplest, the most all-encompassing solution.

Leegwater: Well, and if truth is simple it has to be one.

Van Baak: That there can only be one truth and that it has to apply universally is, I think, as much a scientific presupposition as religious. That is to say all those ways of looking at reality seem to share that presupposition.

Ratzsch: What about all these claims that people like Cap and Zukov and, to some extent, Torrance, are making about our contemporary physics ultimately heading in exactly the direction where Buddhism has always been.

Leegwater: You mean the Tao of Physics.

Ratzsch: Yeah, that and The Dancing Wu Li Masters by Zukov, and so forth. If, as was intimated earlier, these Eastern holistic ways of thinking are fundamentally opposed to the Western scientific method, why is it the case, if it is the case—and I guess that's the question—that contemporary particle physics in particular is heading in exactly that direction? I mean, isn't it heading toward holism? You've got these beta functions that give you a value for every point in space and they interfere and do all kinds of nifty things and if you get the right equation, one equation, you're going to be able to deduce absolutely everything—according to some scientists at least.

Baker: On the same line, haven't some asserted that the basic claims of mysticism and frontier physics are becoming rapidly indistinguishable?

Van Baak: Those statements always strike me as fashionable and almost cocktail party conversation, and, at base, void in some deep sense. It just strikes me as an imperfect understanding of either how physics is done or how mysticism is done. If that's true, then you would expect a parallel development in what we're calling the non-Western cultures where they would have started with the holistic view, made a whole bunch of holistic discoveries, and would have then progressed in their turn toward the more particular.

Ratzsch: And why would you think that?

Van Baak: Well, it's just .... I mean, logic is symmetrically; why shouldn't it work on both sides?

Baker: Yes, but when you start with a holistic view, you don't work down; you stop.

Van Baak: But that has no more persuasive power than the claim that when you start with a particular view you don't work up to the holistic. Besides, I'm not sure that the thrust of particle physics is anything toward the holistic unity that people see in mysticism or Buddhism or anything like that. It strikes me that fundamentally it's just exactly an enlargement of the scope of the domain in which particularistic methods work to include the whole domain of the physical universe.

Leegwater: But hasn't there also traditionally been that movement in physics—Einstein for example—to try to establish some unity? There's a whole plethora of physical phenomena, and there's almost an underlying wish and a hope that there is some unity there.

Van Baak: That's a thirst of economy of description. Now it's not clear to me that that is so specifically a Western idea.

Leegwater: This idea that it has to be a simple physical explanation or that it has to be on a maximum level of objectivity. That, I think is ....

Van Baak: Well, the objectivity I'm sure is part of it, but I don't know. Is it shared in other schemes of thought than scientific that the fundamental truth has to be simple? I'm not sure. I mean, would we say that about religious belief or mystical truth or something like that?

Baker: In general, yes.

Van Baak: That seems to be some sort of, I don't know, innate human thirst. I'm not sure.

Baker: That's why you can't say the East ought to evince a symmetrical movement from holism to particularity, because if the Oriental thought systems are already holistic, they're not going to say "we need some more particularism;" they're going to rest in the simple unity they have achieved.

Ratzsch: Of course the ultimate simplicity—and this is a theory I have actually heard expounded—is that there is precisely one particle in the universe which just keeps buzzing around back and forth and all of us are composed of it.

[laughter]
Ichiryusai Hiroshige, 1797-1858, is one of the best-known Japanese artists in the medium of wood-block prints. Of the 5,400 wood-block prints which Hiroshige produced during his life, the series called *The Fifty-Three Stations of the Takaido* proved to be the most popular and the most enduring of his works. During his career, he produced, according to some estimates, more than forty different series of the prints bearing that title, and extant prints of some of the stations indicate that, in later editions of the prints, Hiroshige used scenes significantly different from the original versions of the series.

Why did Hiroshige's prints become "best sellers" in Japan? Why did his work appeal to the "masses," the common people?

From 1600 until 1867, the Tokugawa Shogunate, something like a military dictatorship, ruled Japan. The Tokugawa Shogunate replaced the aristocratic hierarchy which had governed on behalf of the emperor of Japan. With the emergence of the Tokugawa Shogunate, a new caste or class of people began to assume importance in the Japanese economy: the non-titled, the non-nobility, the commoners. And art shifted its focus in the new society where businessmen were the new "aristocrats." Ihara Saikaku began to use plebeian heroines and businessmen heroes in his novels. His novels provided the new "aristocrats" with a chronicle of their experiences paralleling the content of pre-Tokugawa literature which had told tales of the nobility and the imperial court.

Hiroshige, a commoner and artist, lived in the last half century of this new society. He was born and raised in Edo, (Tokyo), the headquarters of the Tokugawa Shogunate. His father died when Hiroshige was thirteen, and the boy succeeded to his father's position as minor official in the fire brigade. Hiroshige's interest, however, was painting, not fires. When he was twenty-six, he turned over his role in the fire brigade to someone else. He then devoted himself to painting, and ultimately, to the entire process of making wood-block prints.

In 1832, Hiroshige was invited to accompany a military escort for several horses which the Shogun was presenting to the emperor in celebration of the rice harvest. Hiroshige was to make sketches and paintings of this journey. The group followed the route of the Tokaido: i.e., "the road facing the eastern ocean." The route began at Nihonbashi, in Edo, and ended in the imperial capital, Kyoto. At fifty-three places a day's journey apart along the route, travelers could stop to rest, to refresh themselves, and to sleep.

In 1834 Hiroshige produced the results of his trip to Kyoto: a series of wood-block prints entitled *The Fifty-Three Stations of the Takaido*. In addition to representing each station with a print, Hiroshige also produced a print of the place from which the trip began, Nihonbashi, and the place at which the trip ended, Kyoto: altogether fifty-five prints.

These prints are classified as Ukiyo-e, "pictures of the floating world." The term *ukiyo-e* describes the temporal world
of the commoners in Edo, the Tokugawa capital. *Ukiyo-e* originally were paintings commoners produced for the enjoyment of other commoners. But they were not produced for the masses. They were intended only for the houses of rich commoners, the new “aristocrats.” In the seventeenth century, however, the Japanese developed the process of wood-block printing. As a result, artists could produce a fairly large volume of very impressive pictures, and this accessible wood-block print attracted the masses. The new art form acquainted them graphically with the manners, customs and attractive features of geographical districts other than their own. (Cf. Ichitaro Kondo, ed., *Hiroshige's Fifty-Three Stages of the Tokaido*, p. 3).

Of course, one should not think that Hiroshige functioned merely to provide the common people of Edo with a visual chronicle of places along the Tokaido whose reputation for beauty or for special foods was known throughout the country. Hiroshige was an artist. He did not simply reproduce “nature” as he found it. Rather, he manipulated the materials he saw for his own purposes. Station #16, Kambara, is an excellent illustration of Hiroshige's artistic character. Although he travelled to Kyoto during the early summer, the representation of Kambara is a winter scene. Two observations can be made about this. First, it rarely snows in Kambara. Second, no scene around Kambara can be identified as the locale of Hiroshige’s print. The print is of an imaginary scene, one which is acknowledged as one of the greatest wood-block prints ever made in Japan.

The print which represents Station #46, Shono, is considered the second wood-block print in this series that deserves to be called a “masterpiece.” What catches one's attention is the superb technique Hiroshige has used to make a violent rainstorm vivid and real—reminiscent of a typhoon. One feels the discomfort of the travelers bending into the wind, their backs blasted by driven sheets of rain. Hiroshige used slanting lines to picture rain—a technique which Europeans admired and one which effectively transports the viewer into the midst of the typhoon. The entire scene, again, is a creation of Hiroshige's imagination. The vicinity of Shono harbors no scene reminiscent of this print.

In the first two prints mentioned, the artist's techniques and his creative use of the landscape were highlighted. The print of Station #36, Gozu (see overleaf) is one in which Hiroshige's concern for the common people comes to visible and vibrant expression. Several female employees of an inn are forcibly enticing a few travelers to stay at their inn. The scene has a comic aura. One traveler is being choked; his face reddens as he struggles to free himself from the hotel employee. It is a very human situation in which all the actors are recognizable people in real-life situations.

One should note too the signs located in the entry of the inn. From right to left, they read: (1.) “Continuation of the Tokaido pictures,” (2.) “Jirobei, Engraver,” (3.) “Heibei, Printer,” and (4.) “Ichiryusai” (i.e., Hiroshige). In many wood-block prints, one finds devices in the design which identify the publisher. Prints, moreover, are signed by the artist. The printer and the engraver, however, are not identified; these two occupations are regarded as some of the most lowly among artisans. That Hiroshige here identifies these men reflects his concern for the common man. This former fire brigade official remembers the importance of the ordinary person and his contribution to society. Hiroshige pays tribute to the lowly craftsmen whose work has contributed to the making of these prints which delighted the masses in Tokugawa society.

Nowhere does Hiroshige exhibit his concern for the common people more than in the print identified as Station #54, Otsu. Otsu is located on the shores of Lake Biwa, the largest lake in Japan. This city is the location, furthermore, of many well-known Buddhist temples and Shinto shrines which attracted many travelers and pilgrims.

How does Hiroshige represent Otsu? By a shrine? By a scene in which the beautiful shoreline of Lake Biwa blends into the grounds of a temple or of the city, itself? Hiroshige, in the
original edition and in several subsequent editions of The Fifty-Three Stations of the Tokaido, represented Otsu in a scene which focuses on heavy wagons containing bags of rice and packaged charcoal. Lumbering oxen led by draymen pull the wagons, Hiroshige, the artist of the people, portrays a scene in which the common people of Edo can see the customs and manners of an area different from their own.

Hiroshige earned the reputation which still is his. In the new society which was created by the Tokugawa Shogunate, the common people gained a new importance. Hiroshige the artist, from commoner stock, made available to these commoners art in an inexpensive form in which the artist celebrated the beauty of Japan’s landscape and the character and the beauty of Japan’s common people.
Snow tires

Chris Plescher