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Literary Theory, Philosophy of Science, and Persuasive Discourse: Thoughts from a Neo-premodernist

Interview by Gary A. Olson

British logician Stephen Toulmin suggests that his many books could be "regarded as sketches toward a *novissimum organum*," in that they are all "in different ways concerned with rationality, reasonableness, the operations of the human reason, and so on." For decades he has waged a relentless attack on rationalism, associating it with "a kind of worship of algorithms, a worship of formal arguments, and an insistence on getting the right answer." He argues that we need to reconceptualize rationality as non-systematic, but he views this project to be in sharp contrast to that of Jean-Francois Lyotard and the deconstructionists, which he interprets as an attempt to replace rationality with absurdity. For Toulmin, a postmodern rationality would be situational and contextual, much more akin to "reasonableness" than to "rationality" as strictly defined. This is why he applauds the recent tendency among philosophers to engage in applied, contextual philosophy, such as the philosophy of law, the philosophy of science, or the philosophy of art: "I think philosophers often do their best work when they turn their skills to helping to hoe other people's vineyards . . . clearing away the underbrush that stands in the way of understanding." Its also why his own recent work entails spending time each week in the University of Chicago Hospital, "working alongside doctors whose business is to think about and discuss and arrive at conclusions about the moral problems that arise in the context of the clinical practice of medicine."

Thus, like Stanley Fish, Richard Rorty, and many others, Toulmin sees "no legitimate role for theory" and advises that we "be prepared to kiss rationalism goodbye and walk off in the opposite direction with joy in our hearts." These views are entirely understandable given the fact that Toulmin's mentor at Cambridge and his principal intellectual influence was Wittgenstein, from whom he inherited "a kind of classical skepticism." As a committed pragmatist, then, Toulmin's life's work has concerned "the recovery of the tradition of practical philosophy that was submerged after the intellectual triumph of theory in the seventeenth century." Clearly, to Toulmin, "pragmatism is not just another philosophical theory on a parallel with the others." Yet, he is wary of the "many people who have claimed to break with Descartes in the last few years," seeing many of them (including Lyotard) as "really rejecting Descartes for Cartesian reasons."

In the interview recorded below, Toulmin discusses these and several other issues relevant to scholars in rhetoric and composition. Noting the importance of clear writing and ample revision--especially in philosophy, "where obscurity is regarded as a mark of profundity"--he offers Toulmin's Law of Composition: "*The effort the writer does not put into writing, the reader has to put into reading.*" He criticizes Chaim Perelman's "new rhetoric" for failing to open "up the broader perspectives within which the new rhetoric



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functions as richly as I would like to see done." In fact, much in the spirit of many of us in rhetoric and composition, he argues for a substantially broad conception of rhetoric: "What we call rhetoric has to be understood as including dialectic, topics, all those bits of the discussion about argumentation that are not analytic." In addition, he takes issue with strict social constructionist theory and with Chomskyan nativism, approving only of "weak" versions of both: "I would need a lot of convincing in a very specific case before I was prepared to concede a particular grammatical structure was hard-wired in"; nevertheless, it seems "to go without saying that in many important respects the human capacity for language not only is an inherited capacity, but it has certain physiological preconditions, not least neurophysiological preconditions." In addition, Toulmin comments on feminism and the woman's movement, crediting the latter with making him "in important respects emancipated," and saying, "I really felt through much of my life this business of living in an oppressively structured society."

Of course, most compositionists know of Toulmin through his work on persuasion, detailed in his *The Uses of Argument*. Toulmin states that he didn't think he was "writing a book on the theory of rhetoric, or really even on the theory of argumentation," nor was he even certain that he was "writing a book with a model in it." Nor, for that matter, is he convinced today that "the Toulmin model could be used equally well for argumentation in all fields or of all kinds." This last position is in keeping with his general stance against theory: "No algorithm is self-applying." Thus, "every text has to be understood in relation to a situation." For decades scholars have observed that Toulmin based his model of argumentation on a jurisprudential model, but he takes this opportunity to correct this common misunderstanding, claiming that he added the comparison with jurisprudence as an afterthought. He also points out that he's dissatisfied with the book's discussion of "backing," commenting that were he to write the book today he would substantially strengthen the treatment of backing.

Given Toulmin's attempt to dismantle rationalism and his concern with establishing a useful postmodern philosophical tradition, his project shares numerous similarities with that of the poststructuralists. Yet, he seems to have no patience for the French deconstructionists. Acknowledging that he cannot make "the investment of time needed in order to penetrate their terminology" because he is "too old," he nonetheless believes that deconstruction is "game playing so far as I'm concerned." It's no wonder that he prefers Montaigne to "nearly everybody I've read who's consciously postmodernist." Consequently, Toulmin would rather be known as a "neo-premodernist" than as a postmodernist; he believes "the thing to do after rejecting Cartesianism is not to go on through the wreckage of the temple but to go back into the town where this heretical temple was built and rediscover the life that was lived by people for many centuries before the rationalist dream seized hold of people's minds." Perhaps the work of this eminent neo-premodernist will be of use to many of us in rhetoric and composition as we continue to construct a discipline responsive to the intellectual challenges of a postmodern age.

Q. You've written an impressive number of successful books, articles, and lectures over the last several decades. Do you think of yourself as a writer?

A. Yes, I suppose I think of myself as a writer. I get more direct and intense satisfaction out of writing something to my own satisfaction than I do out of, for instance, teaching; and if the choice is between being a writer or being a teacher, I'm a writer. I'm not sure that just being a writer is an honorable way of spending a whole life, but that's another matter.

Q. We in rhetoric and composition are interested in how successful writers compose.

Would you describe your writing process? For example, do you outline before drafting? Do you revise substantially? Do you use a computer?

A. Well, I've been writing for more than forty years, and the process has changed (some people never leave the quill pen behind). I wrote out my first ethics book with pen and ink. What I tend to do most often now (though not with the most difficult material) is to talk a draft into a tape recorder, have that transcribed onto a Macintosh disk, and then do the really hard work, which is the editing, on the word processor. To me, this is the most satisfactory, up-to-date technique given what's available. I underline, though, that the really hard work is the editing. When I wrote things with ink or when I had a typist who typed things out, I was inhibited because it embarrassed me very much to send the same thing back for retyping seven or eight times just because I wanted to rephrase things or to move a clause from one place to another. So, I find the word processor a great invention from the moral as well as the technological point of view: I don't have the sense that I'm exploiting the secretarial help in the way I did. Let me say, too, that by and large I never begin to write anything until I have the whole thing worked out. I don't embark on a writing project to see how it looks. I typically, even in my books, even in the *Cosmopolis* book, have a pretty accurate idea about what will go into every stage.

Q. So, you give a great deal of thought to the subject before actually dictating a text.

A. It's not that I think about it; it's much more like architecture. I have to have a sense of the architectonic of it, a sense of where I'm headed and how it's all fitting together. Obviously, some of that goes down on paper or in the computer in the form of headings and a sort of blocking out of rough chapter sections and so on, but the actual writing process, which may be the dictating process, really begins only at the point at which I know what the entire opus is supposed to be. I said a moment ago that editing is the most important factor. Having lived all these years with the texts of philosophers, let me say that there are few things more irritating in reading a philosopher (well, it's partly irritation, partly the joy of discovery) than when you read a text for the seventh time and suddenly realize what it is the writer is trying to say. Especially if it is a very good point that you've previously come to recognize for *yourself*, it's a little irritating that it hadn't been made clear that this is what the person was saying. I have this trouble particularly with a man I immensely admire: John Dewey. I have a sense sometimes that he just kept writing and periodically tore off the lengths and sent it to the printer. I'm quite sure that Dewey didn't do what I do, and I almost mean this dead literally (though a lot of it actually goes on in my head subvocally rather than vocally): I go through all my material repeatedly to see how it will *sound* to a reader and how the rhythms of the prose will come out and contribute to the reader's understanding. The effect of this is that a lot of people say to me, "Oh Stephen, you're so lucky to be able to write so clearly." To which I state Toulmin's Law of Composition: *The effort the writer does not put into writing, the reader has to put into reading*. The only trouble is that since I put immense effort into the editorial stage so as to make sure not only that I have said what I wanted to say but that it comes off as having a kind of natural rhythm, I rather resent being told that this came easily.

Q. Quite a few compositionists will be pleased with your emphasis on the revising and editing processes.

A. It's especially important in philosophy, where obscurity is regarded as a mark of

profundity. As a result of deliberately avoiding being obscure, philosophers have at any rate made *some* effort to write with non-Germanic clarity, and thank God on the whole this has been part of a longstanding tradition among philosophers of English origin from John Locke and David Hume on.

Q. Who would you say has had the most influence on you intellectually?

A. Well, let's take a whole string of people. If we're talking about who influenced me philosophically, well obviously Wittgenstein. I went to his classes in Cambridge in the last couple of years of his time there; I wrote the Wittgenstein/Vienna book with Allan Janik; and certainly Wittgenstein's whole approach to philosophy was tremendously influential on me. In certain respects, attending Wittgenstein's lectures gave me the courage of previous convictions; that is, I was already strongly inclined to move in the direction that he encouraged us to move in: toward a kind of classical skepticism. I've written an essay in which I draw attention to the parallels between Wittgenstein and Sextus Empiricus, with Montaigne as a kind of intermediate figure. It's not that I think for a moment that Wittgenstein had read these people, but I think that where he ends up in regard to all matters of technical philosophy is in a classical Pyrrhonist position of saying that the thing to do with philosophical questions is not to answer them but to avoid answering them and to step back and ask, "How on earth did we get into this trap?"

Wittgenstein was a major influence partly because, like him, I began in physics; my first degree was in math and physics. I earned my living during the Second World War working on radar, and I discovered that my reasons for being interested in physics were not the same as those of my successful colleagues in the discipline. When I was given a piece of apparatus to work with, I tended to break it. It was clear that I was not going to make a living as an experimenter. Besides, most theory had by that time become too brazenly mathematical. (Sometimes when I'm talking to scientists, I say that I've spent the years since 1942, fifty years now, trying to figure out what it was I'd been taught at Cambridge.) So, I started in the exact sciences, then moved to the philosophy of science, then to the history of science, then to the broader sociology and politics of science, and finally to the whole place of the exact sciences in the overall march of intellectual history. I see it as a sort of constant building; it's kind of the reverse of Peer Gynt: whereas Gynt starts outside the onion and starts taking it to pieces, I see myself as having started in the empty center and built the onion around it layer by layer. So that's the point about my being a physicist. Wittgenstein had, of course, been terribly interested in physics to begin with and to the end of his life acknowledged Heinrich Hertz as one of the major writers from whom he had got ideas and in whom he found something of his own philosophical attitudes. He had wanted to work with Ludwig Boltzmann, but Boltzmann committed suicide just before Wittgenstein was due to go there. (It was a time of suicides, as you know; Durkheim writes about it.) However, you were asking about influences, and the next point is that although I found Wittgenstein's general philosophical method very congenial, I didn't find his approach to ethics anything like as congenial.

Q. That was your first book.

A. Well, yes. I don't think that at that stage I understood at all clearly what Wittgenstein's attitude toward ethics was. He didn't really talk about it very much, certainly not in his regular lectures. What I found particularly unsatisfactory was his

failure to pay any attention to the long-term intellectual significance of history. Like so many people who have claimed to break with Descartes in the last few years, Wittgenstein was just a tiny bit inclined to attack Descartes with Cartesian weapons. (As you know, I think Lyotard and such people are really rejecting Descartes for Cartesian reasons.) And Wittgenstein follows Descartes; he says in one of the early notebooks, "What is history to me? Mine is the first and only world." That is, there is a strong element of narcissism that comes out in a form of a philosophical solipsism, and *that* he does not really get the better of philosophically until around 1930. However, that meant that at a certain stage it was quite apparent to me that you couldn't really get the account of the operations of the human reason that I was interested in without looking at how concepts change; that was how I got onto the human understanding project, but this was after having again read, and been encouraged by reading, Collingwood. Collingwood is a strong influence at a certain stage. Actually (and perhaps I'll write an essay about this sometime), for those who are interested, the entirety of my work could in fact, from a certain point of view, be regarded as sketches toward a "*novissimum organum*"; that is, all my books are in different ways concerned with rationality, reasonableness, the operations of the human reason, and so on. In fact, I've often put a little teaser at the end of works, not with any intention of teasing people, almost as a kind of reminder to myself about what it is I ought to be thinking about next. There's a little postscript at the end of *The Uses of Argument* in which I say, "Strictly speaking, all this examination of argumentation and concepts and the rest should be conducted with an eye to the historically changing character of argument forms and basic concepts," and I mention Collingwood there as being a philosopher for whom that's a starting point rather than something to be disregarded.

- Q. *The Uses of Argument* has received an enormous amount of attention. Are you surprised by the overwhelming critical reception of that book and of the so-called "Toulmin method" of argumentation?
- A. It was not initially overwhelming, particularly in England. I was still living in England when I wrote that book. If ever a book imitated Hume's *Treatise* by falling stillborn from the press but, like Hume's *Treatise*, turning out to have a longer life than the obstetrician predicted for it, it was *The Uses of Argument*. I published it in England, and Peter Strawson wrote a dismissive review in *The Listener*, the BBC's intellectual weekly; that was the end of the matter so far as my colleagues in England were concerned. The few who bothered to read it said, "Oh, it's an antilogic book" (pragmatism wasn't in vogue yet in England). So, I was surprised that it kept selling so well, and then I discovered that it was being used up and down the Mississippi Valley. Recently, I spent two days at a boot camp in Kalamazoo with members of the Speech Communication Association who have a subgroup that deals with what they call "communication ethics." I'm deeply aware of the book's reception; I feel I have to do something to pay back what these people have done for me. However, when I wrote *The Uses of Argument*, I certainly didn't think I was writing a book on the theory of rhetoric, or really even on the theory of argumentation. I wasn't clear that I was writing a book with a model in it. I had two agendas in writing the book. The deeper agenda arose out of a perception about the argument in epistemology--particularly empiricist epistemology, from Locke to Kant, and again from Mach and Russell on through to the Cambridge people like G.E. Moore and the younger people. This argument was largely generated as a result of confusion between substantive arguments and formal arguments and sprang from a demand that substantive arguments meet formal criteria of a sort that seemed to me (and to Aristotle) inappropriate. So, I wrote the book seeking to demonstrate that

these epistemological problems would dissolve if only you looked more seriously at what substantive argumentation was about. Now, that's the deeper agenda. The more superficial agenda was that, after all, I had already by that time written first the *Reason in Ethics* book and then the little *Philosophy of Science* book, and it seemed natural to give a more general account of the kinds of considerations I'd been concerned with in these two special cases. On the face of it, *The Uses of Argument* was intended to show people explicitly on a more general level the points that had been exercising me when I wrote first about ethics and then about science in the earlier books.

- Q. Many compositionists use your method as a kind of heuristic for helping students develop argumentative essays. Do you approve of this pedagogical application of your work?
- A. I'd approve of anything people find fruitful, so long as they don't use my ideas dogmatically. I was having a chat with the people at the SCA communication ethics meeting, and they were a little unhappy when I said that it wasn't plain to me that the Toulmin model could be used equally well for argumentation in all fields or of all kinds. I wanted to say, "I have a lot of mottoes of the form, No algorithm is self-applying, or No theory is self-validating." So, you have to find out as you go along in what areas this model works best and in what areas one has to use it with qualifications.
- Q. Some scholars in composition and others in speech use your method as a tool of discourse analysis, as a critical tool for examining persuasive essays and speeches. Are you also pleased with this application of your work?
- A. If you give people a crutch, they can walk into a marsh, or they can walk down the center of the road. If I help people get to the right conclusion more quickly, I'm pleased. I'm quite uncritical in general about this, though I might well be critical in particular cases.
- Q. Many scholars in numerous disciplines are preoccupied with the nature of persuasion. Clifford Geertz, for example, has spent decades pondering exactly what makes a text in anthropology persuasive. (He said recently in *JAC* that it has more to do with an author's ethos than with presenting a body of facts.) What would you say is at the heart of persuasion? What above everything makes a text persuasive?
- A. I have to start with a prefatory remark. We find ourselves in a situation in which the word *context* is used to mean two quite different things: on the one hand, the larger text of which a particular text is a part, the other bits of text which are around it; on the other hand, the situation, the situation into which a text is put. I have to be rather careful because in writing *Cosmopolis*, at a certain stage about halfway through it, I realized that all the things I'd said about "decontextualization" and "recontextualization" were really "desituation" and "resituation." I suppose it might have been a good idea if I'd gone through it with my word processor's search and replace; however, my editor convinced me that people wouldn't be grateful with being stuck with neologisms and that if there is this ambiguity in words like *decontextualize*, we're stuck with it for the time being. With that said, I believe every text has to be understood in relation to a situation. In this I agree with Habermas that all knowledge is related to a human interest of one kind or another. This human interest may be that of molecular biologists, in which case what makes a text

persuasive has something to do with the role of that text in whatever conceptual clarification and refinement is occurring in a particular corner of molecular biology. And that's not a simple matter; it isn't a matter of finding out that two and two make four. The whole of philosophy of science is concerned with deciding what's at issue when a new paper is regarded as having made a deep and important contribution to molecular biology, for instance. Obviously, the less well-defined the situation within which a text is made public and the shared goals of the author and the audience toward which the publication of the text is intended to make a contribution, the harder it is to say what makes something persuasive. When Mr. Churchill gave speeches in the House of Commons in the early 1940s, they were, as I recall, wonderfully persuasive, but in a different kind of way from the texts in molecular biology. We can reread those speeches now and admire the craftsmanship involved in their composition and the flawless actors way in which throw-away phrases and such things were inserted, but when we reread them now there's nothing to say they're persuasive because the occasion for persuasion has passed. We can see what *might* have made them persuasive, but that's a piece of historical reconstruction now.

- Q. So there's nothing inherent in a speech or a text that ensures persuasion; it's always contingent upon a specific context or situation.
- A. All language functions in situations. I'm still enough of a Wittgensteinian to believe that there has to be a *Lebensform* [life-form] in order for there to be a *Sprachspiel* [language game]. Unless there are human beings engaged in shared activities, there is no scope for language to be put to use in a way that will convey anything.
- Q. It's been almost four decades since you published *The Uses of Argument*. Have you thought of any ways to refine your model, or would you like to alter or retract any part of it?
- A. Oh, sure. If I were writing it again today, especially knowing what kind of audience would actually want to make use of it, I would say a great deal more in particular about the variety of different things that go by the name of "backing." It's too much of a kind of carpetbag concept in the book. When Rieke, Janik, and I did the *Introduction to Reasoning* book much later, we did something to make the discussion of backing a bit more sophisticated, particularly in the final chapters where we talk about argumentation in different spheres. Philosophically speaking, the discussion of backing is the part that's least satisfactory in the original book and needs a lot of brushing up.
- Q. Many scholars in communication talk about the "Toulmin revolution" in argumentation, characterizing your work as *descriptive* (as opposed to older *prescriptive* models) and as in the forefront of the "process view of human communication." However, others, such as Charles Willard, attack your descriptive diagrams for creating "conceptual confusion" and for unjustly simplifying the phenomena they seek to describe. What is your response to criticism that your descriptive diagrams are reductive and fail to account for the true complexity of persuasive communication?
- A. Well, they can't be said to fail to do something they were not intended to do. I know Charlie; he and I always have a nice argument. He's a bull terrier: he likes to go into a situation and find a rag that he can chew hard on. I'm one of his pet rags. But I like him; he's a nice fellow, and he's serious. He's got points he wants to make, and he's

certainly entitled to make those points To the extent that the Toulmin model has developed a life of its own, he's welcome to tear it apart. It doesn't affect my ego.

Q. It's been said that you based your model of argumentation on the workings of jurisprudence in order to move away from the traditional model of logic based on mathematics and a form of reasoning that seemed too abstract to be relevant to real-world situations. Similarly, the "critical thinking" movement that swept the nation in the 1970s and 80s was an attempt to situate logical reasoning in realistic scenarios, to contextualize logic and argument. What is your opinion of the critical thinking movement? Do you see your work on argumentation as a part of that movement?

A. There's an assumption in the first part that's false. For the record, I didn't base *The Uses of Argument* on a jurisprudential model. I wrote the book almost entirely, and then at the very end it occurred to me that as a way to add a bit of clarity to the exposition, the comparison with jurisprudence would do no harm. I brought that in right at the end; it wasn't in my mind or part of my plan when I was first working up the content of the book.

Q. That's interesting, because numerous commentators have made quite a point about your basing your model on jurisprudence.

A. I know; people just assume things without bothering to inquire. You're the first to raise this with me, and, therefore, I take the opportunity to correct this widespread misapprehension. For what it's worth, I believe I was right to think that it was illuminating to use the jurisprudential model and the "court of reason." In some ways, I regret that things did not happen the way they're reputed to have happened.

Q. So, do you see your work in trying to situate logic this way as related to the critical thinking movement?

A. I was never part of the critical thinking movement. I only have a kind of newspaper reader's gossipy, acquaintance with the movement and therefore don't know much about it. I never attempted any involvement in it.

Q. Your work on argumentation is often cited along with Chaim Perelman's (his coauthor, Olbrechts-Tyteca, seems to get lost in the shuffle) as the two works that have changed the face of argumentation. What is your assessment of Perelman's "new rhetoric"?

A. Let me step back and say something larger, first. I said earlier that I had great admiration for John Dewey. Some people commenting on my general philosophical approach have noted how surprising it was for a pragmatist to be born in England. As you've probably gathered, it does seem to me that pragmatism is not just another philosophical theory on a parallel with the others. I think the long-run thrust of pragmatism is concerned with what I call the "recovery of practical philosophy," the recovery of the tradition of practical philosophy that was submerged after the intellectual triumph of theory in the seventeenth century. So, although the birth of pragmatism was painful--in that William James, for instance, generated pragmatism from within an extraordinary epistemological framework that was deeply pre-Wittgensteinian--by the time you get to Dewey, Dewey already had remarkably well-formed all the main sense of what practical philosophy should be and also a

deep understanding of what was wrong with the tradition from Descartes on. (His *Quest for Certainty* book is still worth reading.) What I find interesting is that Richard Rorty claims to be an admirer of Dewey, and yet he seems to miss an awful lot of the points that Dewey is sound on. In particular (and this is curious in somebody who knows the whole Wittgensteinian move), Rorty still has a highly individualistic attitude toward all philosophical issues and even toward language: anybody's welcome to invent their own language, so to say, and if you want to talk a different language that's your privilege. But Dewey is quite clear that language functions within collective enterprises, and we get involved in all these different things in which we share language with our fellow baseball players, or our fellow Democratic party members, or our fellow ornithologists, or our fellow criminal defense lawyers. And we share not only the language but the *Lebensform* which provides the situations within which different language games can operate. Thus, it seems to me that looking back down the road, historians of philosophy will see this revival of practical philosophy, of which pragmatism is a phase, as a major change in the history of philosophy. Now, it's not surprising if parallel sorts of things happen in different places. It's difficult to be a pragmatist in a country whose philosophical life is dominated by Leuven, one of the most conservative Catholic philosophy schools in Europe. Was Perelman Jewish? I suppose so. (Just a few weeks ago I was at a conference in Lisbon organized by Michel Meyer, who is Perelman's leading surviving student and who runs the successor program at the Free University of Brussels.) His new rhetoric is fine, though it's narrower than I would like it to be. Neither Perelman nor Meyer really opens up the broader perspectives within which the new rhetoric functions as richly as I would like to see done.

- Q. You've said, "Since the mid-1960s, rhetoric has begun to regain its respectability as a topic of literary and linguistic analysis, and it now shares with narrative an attention for which they both waited a long time." What role do you see rhetoric playing in a postmodern age?
- A. I think "rhetoric" is kind of a code word. When I refer to my own work as sketches for another organon, what goes with this is a sense that what needs reviving is not just rhetoric but all the bits of the organon that are not analytic. And I think theoretical philosophy as it has existed since the seventeenth century has generally attempted to confine the discussion of argumentation and the validity of arguments to the zone occupied by the *Prior* and *Posterior Analytics* of Aristotle. Why? For the very good reason that it appeared that one could keep those under sufficient control to say (roughly speaking) that there was only one valid answer to any given question, and only one valid form. Whether the argument was valid or not is a question that can be established and to which the answer can be given without peradventure, whereas once you get into ethics, politics, poetics, rhetoric, and the other things that Aristotle also regards as worth including in his entire series of linked projects, the thing becomes inescapably hermeneutic. So for me, what we call "rhetoric" has to be understood as including dialectic, topics, all those bits of the discussion about argumentation that are not analytic. Whether it's prudent to go on calling these things "rhetoric" when there are still many people for whom the word *rhetoric* has all kinds of bad overtones, is another question.
- Q. Siegfried Schmidt has argued in *New Literary History* that "if literary science is to . . . liberate itself from the (self-adopted) ghetto of the humanities, it must evolve into a consciously and *critically argumentative* science." He then proceeds to outline such a "science" based almost entirely on your method of argumentation. What is your opinion, first, of this kind of use of your work and, second, of attempts in general to

create a science of literary criticism?

A. I would regard it as a catastrophe. Where does Mr. Siegfried Schmidt come from?

Q. I assume he's from Germany, since he was at the University of Bielefeld when his article was translated from the German by Peter Heath.

A. In that case, we're deceived by the translator because I'll bet he used the word *Wissenschaft*. The word *Wissenschaft* does not mean the same as the word *science*; it means "discipline." Obviously, if the question reads, "If literary criticism is to become a serious *discipline*, it has to do this, that, and the other," that's different from saying in English that it has to be a "science." Also, I don't like this "self-adopted ghetto of the humanitie." I don't know who or what he is referring to. I'm not going to say anything of the shallow relativistic kind, but it's the general "situation" problem again. The point is that when you find yourself getting involved with arguments that come out of a situation in another country, you have to do a bit of checking to determine what was at stake in the debate from which this thing was taken. For example, Habermas comes here to Northwestern most years, and we have a jolly two or three days when he's here. He gives a couple of lectures, usually on Kant's ethics as being the ultimate font of universalization and impartiality and the rest. He and I have a kind of joking relationship: he gets up and denounces the neo-Aristotelians, by whom he means some people in Germany who call themselves neo-Aristotelians; then I get up like St. Sebastian, take the arrows full in my chest, and say, "I'm happy to be a neo-Aristotelian." So we chew that one a bit. Sometimes I ask my colleague Tom McCarthy, "What's really biting Jürgen; why does he have so much investment in his pragmatics being universal?" Tom explains how different it was growing up in Germany after the Second World War from growing up in England just before and during the Second World War. We really do come out of situations in which what reasonably mattered to us was very different. For me it's of crucial importance that Descartes died two years after the end of the Thirty Years War, while Leibniz was born two years before the end of the Thirty Years War. They lived in totally different situations, and what an intelligent young man would have regarded as of supreme intellectual importance in the 1630s was quite different from what an intelligent young man would have regarded as of supreme intellectual importance in Germany in the 1680s. This is the "situation" factor.

Of course, being a classical skeptic helps one in this respect; it enables one to make this point. If I thought there were definitely right answers to overly general philosophical questions, then I wouldn't be allowed to say this; this would be what they call the "genetic fallacy" and things of this kind. But since, like Wittgenstein, I think that to try to answer philosophical questions definitively on that level of generality is a piece of self-deception, then the question is, "What was at stake for people that they felt it indispensable to find some self-validating proposition like *cogito ergo sum* or some principle of judgment that would compel the attention of scholars of all kinds, like the principle of sufficient reason?" I used to find Leibniz totally opaque until I realized that he was the first ecumenist. He spent thirty years trying to organize a congress to which theologians of every orientation would come and arrive at agreement about which of the basic doctrines of Christianity stood to reason--conformed to the principle of sufficient reason--and which were sufficiently idiosyncratic that everybody could see that different people would have different opinions about them but that it wouldn't matter.

Q. What, then, do you see as the role of literary theory, especially if it is not going to be looking for universals?

A. Now you approach a very delicate area for me. I find the role of theory in literary studies exceedingly limited. Basically, I don't believe that this is an area in which there should be a concern with theory. In my experience, a preoccupation with theory in this area does more harm than good.

Q. For the same reasons that we talk about theory being limited in a general sense, or is there a specific reason?

A. I think it's worth specifying the reasons. The first step you take in developing a theory is to abstract: you find some examples that seem to exemplify with particular clarity some patterns that you would like to use as general patterns about which to develop a method of theoretical analysis, and you choose initially to ignore both all other situations which don't exemplify the patterns so clearly and also all other features even in those situations which are not directly relevant to the pattern from which you are abstracting. You end up with an analysis that is abstract. This is what in practice abstraction is. Now, that's okay if at the end of the day you understand that you have to argue your way back to real life before what you say has any direct application to the particular regard with which you're concerned. You can't just say, "Texts that don't fit the criteria of my theory are bogus." The question arises, "What light if any does your theoretical analysis throw on these other texts that are somewhat different from the ones from which you arrived at your initial abstraction?" Most of the authors whose literary productions I find commanding my attention, irresistible, and seizing my imagination, are attempting to show us something about our lives in all their complexity in a way that would be falsified quite misleadingly if one were simply to use them to abstract some bits and throw the rest away. Consider Tolstoy. I reread *Anna* every second year. There is this sense that you can quarrel with the old man; you can dislike his attitudes in certain respects; you can be unclear what his attitudes are from reading to reading. Every time I reread *Anna*, I have a slightly different sense of what the author's attitude toward his heroine was. It's a very rich and complex book, both for authorial reasons and, of course, because of the way he stuffs detail into the picture.

Q. Do you have a literary critic in mind who would provide the kind of illumination you're talking about while avoiding limiting abstraction?

A. Saul Bellow, when he writes criticism, is quite good. I remember being heartened when Bellow gave his Nobel lecture. (I've heard him give some very bad lectures, but that was one of his better ones.) I share his sense that any literary theory which entails, for example, that Tolstoy is not a great novelist is self-refuting--or self-discrediting, rather. I wouldn't want to say self-refuting; that would be giving it too much credit. That's my feeling, and, to that extent, Mr. Siegfried Schmidt seems to me to be a bit of a barbarian if he really regards the humanities as a ghetto. I'm enormously grateful for having been a physicist; on the other hand, all the very best physicists I know are also deeply interested in those aspects of life which the humanities are there to record.

Q. What about the use of the French deconstructionists in literary criticism? Do you have any opinion about that?

- A. Honestly, about ten years ago I had to decide whether to make an investment: the investment of time needed in order to penetrate their terminology. I decided I was already too old for that to be a prudent investment. My sense is that they take us about as far as the *Tractatus*, that there's a great deal of humane wisdom even in the *Philosophical Investigations*, and it's game playing so far as I'm concerned. It's very unfair of me to say so without having made this investment, but it's based on a partial judgment that is not totally uninformed.
- Q. You take Thomas Kuhn to task for his theory of how knowledge in science is created, saying that "the contrast between normal and revolutionary change has acquired something of the same spurious absoluteness as the medieval contrast between rest and motion." Do you disagree generally with the thesis that knowledge is a social construct?
- A. I never know what that phrase means. Saying that knowledge is a social construct need only be to say the same thing I've already said--namely, that for me all questions about knowledge have to be situated. If being a social construct only means situated, well yes. But I'll tell you, I don't like the word *social*. It's too narrow. It pushes one in the direction of sociology and politics in cases where more may be at stake than sociology and politics. Just to mention another influence on me, I spent a fair amount of the most impressionable years of my growing up at King's College Cambridge, and one of the people who was there in the later part of my time at Cambridge was E.M. Forster. He was very old and was retired. He was like a door mouse: he was so tiny and retiring, you could feel his whiskers twitching. He was like a character out of Beatrix Potter. He had an enormous sensitivity for priorities. He wrote the famous essay "Two Cheers for Democracy," in which he says he's full of admiration for democracy and is quite prepared to believe that it is the best sketch for a form of government one could have; nevertheless, he reserves three cheers for, how does he put it, his "beloved republic." Forster was, I suppose, the chief literary figure who understood G.E. Moore's *Principia Ethica* in its kind of practical moral interpretation. And in his *Essays in Biography*, John Maynard Keynes explains what Moore meant to the Bloomsbury people and how they took his rather abstract arguments and turned them into a kind of gospel, so that the chapter on the Ideal, the last chapter in Moore's *Principia Ethica*, became a kind of moral handbook so far as they were concerned. Moore, who belonged to a generation very much concerned not to reject utilitarianism so much as to criticize the preoccupation of its parents and grandparents with the sewers and public works, so to say, called parts of his theory "ideal utilitarianism"; but that was because for him the goals of action should not only be concerned with eliminating disease and hunger and other important issues, but it should also be concerned with the pleasures of friendship and the appreciation of beauty in art and nature and so on. So Forster was very much a Moorian in that way, and, in particular, he could not bring himself to believe that we were right to esteem society above our friends. I've never thought of it this way before, but one can say that there are certain parallels between Forster and Tolstoy in this respect. I have argued that Tolstoy did not believe that moral relationships were possible except with other people who lived within walking or at most horse-riding distance from you. Tolstoy's conception of the moral universe is of those people with whom you have occasion to interact on a day-to-day basis.

If I may, let me just expand on this a bit because it's a very nice point in some ways, especially if you're interested in the late nineteenth-century novel. There was a very intelligent conservative politician called Edward Boyle who died ridiculously young.

I remember having an amusing conversation with him in which he was explaining how there were certain nineteenth-century novelists--the one he chose to talk about was Thomas Hardy--who could only have written after the invention of the railway and before the invention of the automobile. Chekhov is similar: everybody in Chekhov is always dreaming of going to Moscow in the same way that everybody in Hardy is dreaming of going to London. This comes out in *Anna* as well. One of the central things in *Anna* is that Anna finds herself in a series of situations that become progressively intolerable to her; she can't cope. Because the moral demands made on her are for one reason or another too intense, too unbearable, what happens again and again is that she goes down to the railway station and gets on a train to go *somewhere*. *Where* the train is going is the last matter of importance. Right at the end, of course, she is doing it again, only this time a train journey is not enough. This is why, in some ways, the invention of the private car made it much harder to distinguish between the people with whom we are actively engaged in a moral way from day to day, and other people. At any rate, all of this is because I said I wasn't happy with the word *social*. The point is that it's clear that *social* includes the *micro social*: "me and my friends." Do you see what I'm saying?

- Q. Yes, but I think those people who consider themselves "social constructionists" are beginning with both Kuhn and Rorty and are saying that knowledge, and therefore reality, is *only* a social construct; it's not external to human discourse.
- A. This is quite different. I don't mind them saying it's a social construct; it's the moment they start saying it's *only* a social construct that the trouble starts, because they then immediately bring in some object of contrast which had previously only been implied, and if you really get them to specify what they mean by that which they're contrasting, it turns out to be a load of old rope. Put it this way: theories in physics are constructed socially as external; the externality of their reference is part of the account. This isn't to say that theories in physics are as they stand metaphysical or open to attack as foundationalist. This is a point that Karl Popper grinds on and on about. This is what he has in mind when he talks about the "third world," which I think is an unhappy way of putting it. To say knowledge is a social construct and not external is open to precisely the same difficulties as Kant's references to the *Ding an sich* [the thing in itself]. Kant keeps saying, "You can't say anything at all about the *Ding an sich*." But what's he just done? You see, that's the problem. If Kant had really understood about the *Ding an sich* with, so to say, full Wittgensteinian seriousness, he would have avoided saying that; he would have found some way of gesturing in the direction of that which we can't say anything about. I think it need do no harm to say that all theories are social constructs if all you mean is that concepts are human products and that you have no theory without concepts.
- Q. In a recent book about feminist epistemology and the construction of knowledge, philosopher Lorraine Code argues that the sex of the knower is "epistemologically significant" and that it is time to move beyond mainstream epistemology, which, she argues, is Cartesian and is modeled after physics. What are your thoughts about this work?
- A. I think the defects of the Cartesian tradition come up most strikingly in the shortcomings of psychology. Certainly, psychology is growing out of this, but it's clear right through the middle of the century. I never understood why academic psychologists wanted their subject to be like physics. It is much more natural to think

of it as like biology. Think of some of the early masterpieces of psychology, such as Hermann von Helmholtz's *Physiological Optics*, which is concerned with sense perception. It's essentially a treatise on sensory psychology, and it's done within a strictly biological framework. I think it's important to understand that mental functions and even higher mental functions are refinements and extensions of organic functions; so unless you understand all the different languages of biology (and there are at least four independent languages within biology, not least the evolutionary one), you really don't have a proper launching off ground to develop either psychology or epistemology. So I agree with Code, though I should point out that it wasn't even the model of physics; it was the model that Descartes held out as being what physics *ought* to be. Physics itself has changed a lot.

Q. You say that "sexual emotion appeared the gravest threat to the hierarchical Nation-State" and that traditionalists could preserve the class basis of society only by "expelling sex from the realm of respectability." One of the final blows to modernism and its defense of nation-states was the new attitude toward sex, emotions, gender discrimination, and the role of women. Do you credit this monumental change of attitude at least in part to the women's movement?

A. Sure, the women's movement is a very important expression of it, though I hate to take on single causes in a situation of this kind. I personally feel immense gratitude for the women's movement. I think it's made an awful difference to my life.

Q. In what way?

A. On every level. I happen to enjoy cooking. In our household, my wife is an attorney, so I have more time to cook than she has, though she tends to cook on weekends. That's a silly example. The fact is that I really felt through much of my life this business of living in an oppressively structured society. I really felt it very much on my pulse. I was not able to articulate it to myself; I only knew that in my relations with people from other classes, other races, and the other principal gender, I always had the sense that these relationships were distorted by irrelevant external social demands. This has always been a source of pain for me. I could go on about this, but I won't. This is becoming a sort of testimony at this point, but I'm sure some people will resonate to it. I think some of the things that happened in the late sixties and early seventies left *me* in important respects emancipated, because I have a sense that nothing is any longer seeking to have me treat women or blacks or working class people, or aristos for that matter, with attitudes that are based on anything other than what I take the people to be. For example, I go to and fro between America and England. (I don't go back to England more often than I can help, but I have so many family members there that I really have to visit.) Within two minutes of landing at Heathrow, I realize that people are reacting to me on the basis of what they perceive me as being, not on the basis of what they find me to be. They don't wait to find out what kind of person I am. They react to how I am dressed, most particularly to what my voice sounds like. To that extent, it's still a country in which interpersonal relations have a strong stereotypical component which is based on such perceptions, and I could never stand that; it's just a knife in my guts.

Q. So beyond the personal impact on your life, you do see the women's movement as being successful in general then.

A. I know there is a fair number of women, especially in the intellectual world, who

feel that not much has been gained. If one's doing economic statistics and so on, I understand that. My wife's in family law, and given how the shoe pinches in family breakups and so on, it's obvious that women very often still get a raw deal. On the other hand, in terms of the general quality of social relations, I think there has been a major transformation. I don't know how widespread it is in terms of going from country to country. For instance, I think France is still basically a male chauvinist culture. When you're in France, turn on the early morning television and watch French MTV. It's terrible. I blush to look at those things--the women always in kind of slave positions as it were.

Q. American MTV is not much better.

A. Yes, but there's a kind of tongue-in-cheek quality about it. In France, it's clear they don't understand the images they themselves are generating.

Q. You've expressed "grave objections" to the strong nativist position of Chomsky and others that "the human language capacity is specific and unitary," and you seem to support instead a weaker version of the nativist thesis. Would you clarify your thoughts about innate language capacity, especially given the fact that nativism in general seems to be in such disrepute?

A. Is it? I didn't know that. Things change so quickly. Chomsky's own opinions change so quickly. It seems to me to go without saying that in many important respects the human capacity for language not only is an inherited capacity, but it has certain physiological preconditions, not least neurophysiological preconditions. One subject that I've from time to time read about is clinical neurology, particularly aphasiology, the study of the aphasias, the apraxias, the agnosias--all the different cognitive disabilities that are associated with different kinds of brain injury. It's obvious (and you only need a minimal acquaintance with that literature, which is not very hard to get because the fundamental phenomena are so striking) that in certain respects we must be born with a tendency to develop brains having a particular kind of complexity, in order, as they say with computers, to "support the software." The question is just how much is hard-wired in (forgive the jargon). In regard to basic grammatical structures, for me the presumption is that they *aren't* hard-wired in. I would need a lot of convincing in a very specific case before I was prepared to concede a particular grammatical structure was hard-wired in. I remember when Chomsky gave his John Locke Lectures in Oxford. I went to all of them. Chomsky was very dismissive whenever anybody brought up evolutionary questions, and his attitude was that "anybody who asks about the evolutionary precursors of language doesn't understand what language is." I quote him; those are his words. It seems to me that if there were a species in which the linguistic structures were hard-wired in on the level of detail that Chomsky supposes, this would be a recipe for a species that is too stereotypic to survive. I think the arguments which are used to suggest that transformational grammar is hard-wired in could also be used and have been used by people to argue that Newtonian mechanics is hard-wired in, or Euclidian geometry, and so on. For instance, there is a well-known essay by Konrad Lorenz in which he claims that geese perceive the world in a non-Euclidian way, whereas human beings perceive the world in a Euclidian way. He's inclined to the view that the brains of geese must be correspondingly different from the brains of human beings. Now, I'm skeptical about that. I think the fact is that there are very interesting arguments to be gone into about why Kant was able to make such play with the uniqueness of Euclidian geometry; however, I would be prepared in the last resort to argue that the

uniqueness of Euclidian geometry is rooted in pragmatic considerations, not in anything native about it that one can indeed show how it is that categories of everyday colloquial talk about spatial relations takes forms of which the Euclidian account represents a kind of legitimate idealization. There are plenty of people who don't talk that way because they don't live those lives. If you live in a jungle surrounded by mountains and you don't have enough flat land to survey and measure, and then if somebody asks you how far away a certain village is, you'll tend to answer, "Two cigarettes." You'll turn the spatial question into a temporal question. You take the question, "How far away is that village?" to mean "How long does it take to get there?" which of course is the practical question if you're living in the kind of country where cars and airplanes and so on are not available.

Let me add one more point related to nativism. Some years ago I was at McMaster University at Hamilton in Ontario, and I met a very interesting philosopher called Albert Shalom, a Jewish Québécois who had just published a book about Collingwood. We started talking about Wittgenstein, and he said cheerfully, "But of course, Wittgenstein is a cultural relativist." My eyebrows went up and I asked him to expand on this. He explained, "But of course, agreement in concepts is possible only where there are shared forms of life; different cultures have different forms of life; ergo, all concepts are culturally relative." Three months later, I met David Hamlyn (who edited *Mind*) at London University, and I reported this conversation with Shalom. He laughed airily and said, "But of course that's wrong; of course, Wittgenstein is a nativist." Again my eyebrows went up, and I asked him why he said this. He replied, "Obviously, we understand each other perfectly well across cultural boundaries; therefore, all the basic forms of life must in some way or another be hard-wired in." He didn't use that phrase, for this was some years ago, but he meant they must have some kind of physiological basis. Now, what I want to say about this is that it's clear to me that Wittgenstein deliberately avoided taking a position on this subject for reasons that seem to me to be partly arbitrary but generally sufficient. They're arbitrary in that what he's doing is seeking to draw a line between philosophical and scientific issues, and what he is refusing to do is to admit this question of nativism or relativism into his philosophical discussion. On the other hand, it seems to me that there is a perfectly good point to be made, which is that you can't generalize about it; there may well be *some* concepts, *some* modes of perception, *some* cognitive categories that turn out to be, at any rate with certain qualifications, cultural universals.

There is a very interesting woman at Berkeley, Eleanor Rosch, who has done a lot of work on cognitive categories, beginning with questions about how it is that color language has some pervasive similarities across many cultural boundaries. She was led to the conclusion that, indeed, we are so equipped in terms of our color vision that some colors, so to say, demand to be recognized (or, as she puts it, are "salient in perception"), whereas there are others that we find it harder to recognize and name. She has extended this work in many ways. But all of this is something we have to find out as we go along. The idea that we could produce arguments for demonstrating that the entirety of transformational grammar must somehow or other be physiologically available to people seems to me to be just a wild overgeneralization. Of course, it's quite compatible, as you've said, with a weaker kind of nativism. My nativism is one in which any claim that some aspect of language use has an inherited physiological basis has to be established afresh by real evidence, such as medical evidence--for instance, from research into people who have had particular kinds of brain injuries. Such work is very interesting. For example, there was a wonderful man called Alexander Romanovich Luria, who was a student of Vygotsky. He did some extraordinary work during the Second World

War while in a hospital looking after people who had been wounded in the head, and what he discovered is that people who grow up in ideographic cultures and people who grow up in alphabetic cultures display differences in syndromes of aphasia with the same brain injury. In alphabetic cultures, there's a direct relationship between language as it is spoken and heard and language as it is written and read. Indeed, there's a fair amount of evidence that when the likes of us, growing up in an alphabetic culture, learn to read and write, we do so in a way that establishes neurological pathways that are in certain respects parasitical on the pathways that have already been established in learning to talk and to understand spoken language, whereas if you're Chinese and you grow up with ideograms, this sort of phonological relationship isn't available to you. So to that extent, learning to write in Chinese is much more like learning to paint than it is like learning to write in alphabetic language: you paint a picture of the idea; you don't produce a written record of the word.

Q. So the notion of how you handle concepts is different.

A. To the extent that handling concepts is what goes on in the public domain, it could very well be the same; but to the extent that some of these operations become internalized, yes, they'd be different in different cultures.

Q. A large portion of *Cosmopolis* concerns deestablishing received views about when the modern age began. Why is this so important?

A. It's important because the most striking change that took place in the culture of Europe and that deserves to be marked as the transition from one age to another is that which followed the general availability of printed books, as a result of which you get a lay culture alongside and eventually displacing the ecclesiastical culture. If there's any single feature characteristic of what we call the Middle Ages, it is the dominance of the ecclesiastical culture and the associated creation of a transnational community of scholars, chancellors and clerics of different kinds whose task was both to define and transmit the received culture; they were the bearers of culture, and they decided what belonged in it. Of course, there were wandering scholars and other eccentric folk whose goings on we're beginning to appreciate better, thanks to such people as Helen Waddell and Carlo Ginzburg; but still, the received culture as it exists almost down to 1500 is the culture as defined and transmitted within this community of scholars who were also clerics. Of course, there was Chaucer, and of course there were exceptions (especially in Italy, where the Renaissance began early), but still I see this as the vital transition. Things that happened in the seventeenth century, with the emergence of the exact sciences and Cartesianism and all the rest, would have been impossible if not for events occurring at the very end of the fifteenth century but primarily in the sixteenth century. After all, it's not for nothing that Erasmus, Rabelais, Cervantes, Montaigne, and Shakespeare all lived in a situation in which there was a minimal amount of exact sciences to pay any attention to. Their conception of what there was to write and talk about was formed in this situation. This is why we call them humanists; their preoccupations were those of the humanities, and they were the people who recovered and made more widely available the bits of classical antiquity that had never been properly attended to in the High Middle Ages: Plutarch, Sophocles, Ovid, and the rest.

That's only the beginning of an answer; the reason why this is important is that, as I argue at the end of the book, it's only by placing our inheritance from the exact

sciences within the context of our inheritance from the humanities that we give ourselves an agenda which has a future. Think of the 1992 Rio Conference. The idea of more heads of government meeting in the same place at the same time than ever before in history--the idea that Rachel Carson did *this*? This is an extraordinary exemplification of what scientific thinking becomes when it finds the salient points at which you can touch political nerves. I'm not saying that I overrate the Rio Conference, only that it's phenomenal that it happened. The issues that the conference was intended to address have some very deep, difficult, and important intellectual questions associated with them. It's impossible to say those questions are only scientific ones or only humanistic ones, because they are precisely the kinds of questions that arise within this new overlap of the exact sciences and the humanities.

Q. You say in *Cosmopolis*, "The opening gambit of modern philosophy becomes, not the decontextualized rationalism of Descartes *Discourse* and *Meditations*, but Montaigne's restatement of classical skepticism in the *Apology*. . . . He believed that there is no general truth about which certainty is possible, and concluded that we can claim certainty about nothing." Yet, these values are often cited as "postmodern." In fact, some composition scholars point directly to Montaigne and his "open-ended inquiry" and his "resistance to closure" as desirable facets of a postmodern pedagogy. What are your thoughts about this seeming contradiction?

A. At the meeting with the speech communication people, one comment seemed to me to be both extremely intelligent and amusing. Somebody was wondering what to call the attitude I'd been presenting in my lecture for them and came up with this wonderful phrase: "neo-premodern." I confess that in some ways I'm more a neo-premodernist than I am a postmodernist. I think the thing to do after rejecting Cartesianism is not to go on through the wreckage of the temple but to go back into the town where this heretical temple was built and rediscover the life that was lived by people for many centuries before the rationalist dream seized hold of people's minds. I'd never thought of calling myself a neo-premodern, but there is a sense in which this does capture some of my preoccupations. I didn't know that others were actually seeking to develop a pedagogy based on postmodern ideas. I'd be interested to see what this cashed in for and how it was worked out in detail.

Q. So you don't find a problem with people using Montaigne as a precursor to postmodern ideas?

A. I think Montaigne is much better than nearly everybody I've read who's consciously postmodernist, so I think the idea of their reading Montaigne and learning from him is desirable. They may end up writing in a less grandiosely theoretical and more illuminatingly concrete style. Montaigne may help to cure them of their habits of abstraction. By the way, since we're speaking of Montaigne and since you mentioned Geertz earlier, let me point out that one of the important points I argue in *Cosmopolis* is that there was no reason in the world that we shouldn't have had a perfectly well-formed program for cultural anthropology by the end of the seventeenth century, given the impetus Montaigne potentially provided. But because of this shift of attention to rationalism and the goal of unique theories, the kinds of questions that cultural anthropologists were to ask during the twentieth century came to appear not intellectually serious. So I think the creation of cultural anthropology was deferred for two-hundred years as a result of the intellectual influence of the rationalists, and that seems to me to have been a pity. That's an exaggeration but an exaggeration in the right direction. One could make the point that Diderot and others

in the intervening period had a feel for these issues; on the other hand, persuading the academic world to take cultural anthropology seriously was like pulling hen's teeth--it was a problematic business.

- Q. You argue in *Human Understanding* that if we are ever going to be able to increase our understanding of human understanding we must halt the increasing tendency to compartmentalize academic areas and disciplines, "For the very boundaries between academic disciplines are themselves a consequence of the current divisions of intellectual authority, and the justice of those divisions is itself one of the chief questions to be faced afresh." And in *Cosmopolis* you say, "The intellectual tasks for a science in which all the branches are accepted as equally serious call for more subdisciplinary, transdisciplinary, and multidisciplinary reasoning." How can we stop the trend toward increasing compartmentalization and instead encourage the kind of intellectual border crossing that you espouse?
- A. On a certain level, I'm less pessimistic than perhaps I was earlier. If you take a historical view, what you find is that transdisciplinary inquiries are always being started up, and it's sort of a natural sequence that after awhile what had previously appeared to be transdisciplinary comes to appear to be centrally disciplinary. I can't tell you how transdisciplinary and eccentric molecular biology was when it was first thought up; it was the ultimate transdisciplinary activity. Now it's almost stuffy; it's really one of the central pillars. I honestly think the situation is better now than it was thirty years ago; I think people are more aware of the danger of compartmentalization, and I think that federal funding agencies such as the National Science Foundation and the MacArthur Foundation are more on the lookout for new interbreedings between established academic disciplines. I see these groups as facilitators; there's a better recognition that it's no good feeding all the financial support into the long-established disciplines because you'll end up getting stereotyped stuff again and you'll miss the winners.
- Q. You have written, "When Wittgenstein and Rorty argue that philosophy is at the end of the road, they are overdramatizing the situation. The present state of the subject marks the return from a theory-centered conception, dominated by a concern for *stability* and *rigor*, to a renewed acceptance of practice, which requires us to *adapt* action to the special demands of particular occasions. . . . The task is not to build new, more comprehensive systems of theory with universal and timeless relevance, but to limit the scope of even the best-framed theories and fight the intellectual reductionism that became entrenched during the ascendancy of rationalism." This is reminiscent of Geertz's "local knowledge" and Fish's campaign "against theory." Do you believe there will be *any* role for theory in the postmodern age other than the limited scope you refer to?
- A. I don't know what people mean by "theory" in this situation. To talk Rortian for the moment, there's a contrast between theory with a capital *T* and theories with small *ts*. As I said, I was a physicist and lived among scientists, and so I have a general feel for the way all of *that* language goes. Their theories tend to have small *ts*, and it's plain that there will always be lots of them. This is "theory" in the sense of playing hunches and thinking of possible explanations of things not necessarily confined to science. You know, detectives involved in criminal investigations have their theories about who did it, and Miss Marple is full of theories with small *t*'s. When people ask about the future role of theory and they're talking about theory with a big *T*, I'm inclined to shake hands with Rorty and say there is probably no legitimate role for

theory with a big *T*; we should be prepared to kiss rationalism goodbye and walk off in the opposite direction with joy in our hearts. However, all those theories with little *t*'s (and some of them may aim prematurely to achieve slightly more grandiose things than are there to be achieved) will be part of what goes on in the intellectual world in the future as in the past. It seems to me that when we look back historically and discuss matters of an ideological tendency we tend to see the things that happened in previous centuries too much in terms shaped by the categories we inherited from rationalist philosophy. The early decades of the social and behavioral sciences were terribly damaged by the tendency to think that what the inductive logician said about science was the same as science, so people busily tried to put psychology into a form that would be acceptable to the inductive logicians. But if you'd really been a physicist and knew about the life of the exact sciences as it goes on at places like Rockefeller University, then you knew that what the inductive logician said was really beside the point.

There's a very interesting group of people now doing what they call the ethnography of science; there are many of them, but Sharon Traweek comes to mind. (I've always had the feeling there should be a subject of this kind.) What I'm leading to is a wonderful essay by the later Peter Medawar called "Is the Scientific Paper Fraudulent?" He points out that a scientific paper tends to be presented in such a way that it looks as though it were a historical narrative, but that's absolutely irrelevant to what it's there to do. There's no guarantee whatever that the way things are presented in the paper was historically the order in which they were done in the actual lab or in the research inquiry which is being reported on. The purpose of the scientific paper is to make a point, to provide substantive foundation for some new twist in the science in question.

Q. It's persuasive, argumentative.

A. Yes, it's intended to be persuasive, argumentative. But that means there are all kinds of limitations on the view of science you get if all you have to go on is the printed texts. I always enjoyed sitting in the bar at Rockefeller University at the end of the afternoon and listening to scientists talk to each other because what they talked about among themselves when they weren't writing papers was much more revealing about what was bugging them, why they were having difficulties, what they hadn't yet figured out, what kind of sense they were going to make of their results; it's all quite a different story. So an intellectual history based on the categories of rationalism is like an account of science that only looks at printed texts. You must dig down and find out what the people are really up to and why certain things are perceived as difficulties and others are glossed over; that's part of reinserting the activity of science within the humane world.

Q. You write that the thesis of *Human Understanding* is that "in science and philosophy alike, an exclusive preoccupation with logical systematicity has been destructive of both historical understanding and rational criticism." You go on to say that people "demonstrate their rationality, not by ordering their concepts and beliefs in tidy formal structures, but by their preparedness to respond to novel situations with open minds." Then, in *Cosmopolis*, you argue that in the postmodern age we don't need to replace "rationality" with "absurdity," as you say Lyotard and the deconstructionists believe; rather, we need to reconceptualize rationality as non-systemic. How would you characterize this new postmodern rationality? How would it work?

A. First, within this new situation, we should be much less tempted to contrast "rationality" with "reasonableness." One of the mysteries of the whole rationalist era was the way in which reasonableness was pushed aside as not being intellectually serious; only rationality counted. I think this was associated with a kind of worship of algorithms, a worship of formal arguments, and an insistence on getting the "right answer," with the assumption that there *is* a "right answer." Let me give you an example. I have tended, over the last few years, to spend about one half-day a week in the University of Chicago Hospital working alongside doctors whose business is to think about and discuss and arrive at conclusions about the moral problems that arise in the context of the clinical practice of medicine. Now, there's no way you're going to answer *those* questions by some kind of formal algorithm. I'm not saying that mathematics is entirely irrelevant, but in the last resort the question of how the decision to turn off the life-support system is going to be arrived at is one that (I certainly wouldn't want to say this is an "irrational" or even a "nonrational" question) has to be dealt with with an immense awareness of all that is at stake: what the possibilities are, what the presumed wishes of the unconscious patient are, what the attitudes of the family are, and a lot of other factors. I'd be inclined to say that this is a nice exemplar of the demands of rationality, the demands of reason within the new situation where theory has a highly circumscribed status. I talked earlier about the Rio Conference and the questions that arise in ecology. There is a point in *Cosmopolis* (and also in my "Recovery of Practical Philosophy" lecture) at which I say that the crucial questions now have to do with environmental issues, medical ethics, psychiatric issues, and things of that kind. If there is a mind-body problem left, one could only throw some light on it by philosophers sitting down with and among and listening to working psychiatrists--clinical psychiatrists, not just psychiatrists theorizing but psychiatrists who are actually figuring out how they can help patients and what is feasible and what can be done.

There is a more general point I should make. At the speech communication conference, I talked with a woman who'd been trained at Berkeley's Department of Rhetoric. She commented, "Everything we do these days, all the dissertations written in the Berkeley rhetoric department, are always about the rhetoric of this, the rhetoric of that, the rhetoric of the other. They never talk about rhetoric as a subject that could be discussed in isolation from all the other enterprises within which language is used in ways that students of rhetoric are interested in." It seems to me that philosophy is in the same position. Ronald Dworkin writes about current problems in law from a philosophical point of view, and his long complex essays come out in *The New York Review*. Philosophy of science is done increasingly by people who understand the problems of science from *inside* science. My friend and colleague David Hull writes about evolutionary biology as a result of being continually engaged in the study of evolutionary biology and discussions with biologists; so philosophers are engaged in helping to clarify the way ahead for evolutionary biology as much as people like Dworkin are engaged in, for instance, finding ways of stymieing the promotion of Judge Bork. Arthur Danto's essays in *The Nation* on contemporary art are both very philosophical but also very much concerned with the actual substance of what's going on in the New York art scene. Hence, you've got philosophy of law, philosophy of science, philosophy of art. I think philosophers often do their best work when they turn their skills to helping to hoe other people's vineyards, which of course is John Locke's old crack about being an underlaborer clearing away the underbrush that stands in the way of understanding.

Q. So a new kind of rationality would be contextualized within specific areas.

- A. Yes. The trouble is that the word *rationality* is like the word *rhetoric*. It's got too much of a historical burden now; it's too much concerned with the development of algorithms and the use of formal procedures. As I've said, we need to break down the distinction between rationality and reasonableness. It would be much less misleading to say that we have to make sure that we make the decision whether and when to turn off the life-support system in a "reasonable" manner than to say that we have to have a "rational" procedure for making that decision.
- Q. It's akin to the big and little *t*'s of theory; now we have a big and little *r*.
- A. Yes, that's actually a very interesting thing to say because the critical theory literature oscillates between using the word *rational* with, as it were, a small *r* and then referring to "rationality" in a way that I think immediately springs a capital *R* in Rorty's sense. The arguments built around the concept of rationality tend to be themselves Cartesian, even if they are turned against the inheritance of Descartes. They are Cartesian in that you can only understand what is being said by understanding it as referring to some sort of foundationalist mode of talking about the products of the human reason, and that's not there for us anymore.
- Q. You've put forth numerous controversial propositions in several disciplinary areas, including logic, philosophy of science, and rhetoric. Such work has led to a considerable amount of criticism. Are there any criticisms or misunderstandings of your work that you would like to address at this time?
- A. I have shamelessly failed to pay attention to criticism of my work. I have a colleague at the University of Pittsburgh, Adolf Grunbaum, who is so hurt by criticism that if you write even a friendly three-page note in some journal he'll come back with a twenty-one page correction of your misunderstandings of his position. He was once sleepless for a long time because *Philosophy of Science Quarterly* had devoted a whole issue to his ideas, and there in print were all of these papers by people who he thought were his friends and who thought of themselves as his friends, but the papers were so full of misunderstandings that he didn't see how he would ever succeed in correcting them. It's unfair of me to cite Adolf; he's a nice fellow but feels he can't let anything pass. I'm absolutely the opposite: I quite shamelessly let everything pass because I'm much more interested in writing the next book. To return to the very first thing we were talking about, I know well that I put as much work as I possibly could into making what I said plain and intelligible. And I do find that a surprisingly large number of people turn out to have read my work and understood perfectly well what I was saying. On the whole, the people who are captious are those who have their own axe to grind. They use what they take my views to be, not always in as friendly a spirit as Charlie Willard, as a whipping post of some kind or another. It's all a question of priorities. By the time the criticisms of any one book come out, I've moved into another area, and I feel disinclined to go back and root around in a field I've left.

