CORRIDOR TALK / Gary Lee Downey, Joseph Dumit, and Sharon Traweek

> cor•ri•dor talk *n* **1:** the practice of passing on tips, insights, and strategies about the means of production of academic work (as at professional conferences, where, it is frequently remarked, the most important business takes place "out in the corridor" rather than inside the meetings rooms) **2:** nonascribable (off-the-record) but necessary information; practical gossip **3:** common-sense, informal (not publicly taught) mentoring; the unsaid, but frequently said anyway (though not to everyone)

CORRIDOR TALK, for which we propose the above definition, is a colloquial phrase for the kinds of knowledge one should have in order to live in the academy but which are often discussed as if they were of little formal value. In this chapter we offer some corridor talk for anthropological projects that use cultural perspectives and ethnographic fieldwork to study and intervene in emerging sciences, technologies, and medicines.

Corridor talk is a key dimension of conference friendships, those professional and personal relationships among scholars that are renewed annually through interactions ranging from the chance encounter to the intense discussion over drinks or a meal. Electronic mail has extended the corridor talk of the conference back to the office or home while expanding its boundaries outward in both public (conversations on Listservs) and private (intimate, one-on-one exchanges) directions. Corridor talk carries no formal authority; we tend to receive it as an offering of resources or advice. We listen and then take away whatever seems valuable, leaving the rest behind. Participants in the SAR seminar agreed that, despite its informality, corridor talk is a key means of intellectual (re)production, and its strategies for helping people move into and through scholarly arenas deserve more visible acknowledgment, consideration, and explicit discussion.

Corridor talk was constantly present during the seminar week. Some of our more sensitive conversations were particularly valuable, broaching issues that we all face regularly but that are not normally part of formal, professional interactions. We welcomed the opportunity to share stories and worries about our work with colleagues and fantasized about a time when such sharing might be taken for granted. We also drew up lists of journals, presses, academic

programs, and funding sources and contacts, and discussed issues we faced in doing fieldwork, getting grants, and finding jobs. Many of the issues clustered around the question, "How do you do that?" We began calling it all "corridor talk," referring generally to information that gets passed on from colleague to colleague and mentor to mentored through interactions that are usually private, rarely show up in published form, and can make the difference between the competent person and the canny, networked, competent person.

Publishing corridor talk is risky—it goes out of date fast, is often more local than general, and is always provisional—but we decided to go ahead anyway and offer some discussion of our career practices. We had two incentives for doing so. The first is that seminar participants came to study areas of science, technology, and/or medicine from widely differing circumstances and career positions and without the mentorship traditionally available to disciplinary workers; each of us would have benefited from greater guidance. Second, mentoring appears to be increasingly sporadic as programs become more interdisciplinary and as the demographics of academic researchers change. For example, as David Schneider revealed to Richard Handler (Handler 1995), Schneider came to realize that many of his early career "choices" were in fact determined behind the scenes by his mentors, for reasons he knew little or nothing about at the time. Today such direct or indirect intervention by mentors is more the exception than the rule. We feel that mentoring is an important part of the academic life, but that this traditionally private and privileged mode of transmitting the social knowledge, habitus, or savvy in negotiating academic careers should be shifted into more open and public channels.

In this spirit, we offer the following information and advice, which we would have liked to have access to earlier in our moves to conduct research on science, technology, and medicine. We hope it will inspire further development of corridor talk archives.

Career Narratives

During the seminar we were amazed by the different pathways participants had traveled to study science, technology, and/or medicine through cultural perspectives and ethnographic fieldwork. Some had made this choice in advanced stages of their careers after they had already benefited from the securities and comforts of tenure, others at earlier stages when career opportunities in interdisciplinary areas seemed worth the risks, and some, more recently, at the graduate level in a time when the job market is frighteningly uncertain. Motivating passions ranged from long-standing advocacy for social movements to bewilderment about past or present experiences, curiosity about centers of power, and experiences of pleasure in previous interventions. In making such moves, all of us had tried to map the interdisciplinary worlds in which we might travel. Each of us had made explicit efforts to sort out mazes of disciplinary boundaries, academic programs, professional organizations, and societal interests. Then, working in idiosyncratic ways, we had written speculative histories of the future—"career narratives"—that trace how choosing different projects might locate our travels on those maps and shape the career opportunities that might come our way.

Career narratives are a variation on what anthropologist Edward Bruner (1990) termed the "tenure narrative": an integrated story of an individual's career trajectory, extending through the present into the future. After serving for many years as a participant observer in promotion and tenure cases for university faculties, Bruner concluded that successful cases generally offered coherent and persuasive narratives that located the candidates in valuable places and as valuable members of the academy. These narratives provided tenure committees with easy handles for remembering who the applicants were, what they had accomplished, and where they were going.

Researchers undertaking cultural or ethnographic studies of science, technology, and medicine must find their place amidst a collection of overlapping interdisciplinary and intradisciplinary boundaries. At this writing, no academic program has made such work its main focus. While interdisciplinary work and collaboration are often important for these studies, and individual researchers often find themselves moving across disciplinary boundaries in their reading and writing practices, educational institutions still tend to rely on disciplinary categories in their hiring practices. Crossing academic boundaries may offer great opportunities, but it can also be risky.

Subdisciplinary categories are particularly important in career narratives since they often appear in job descriptions. Within anthropology, for example, subdisciplinary divisions include cultural anthropology, medical anthropology, anthropology of work, anthropology of computing, and applied anthropology. Increasingly, cultural anthropology is turning to organized science as a site of significant cultural emergence and meaning production and, hence, locating it as worthy of sustained study (Fischer 1995; Franklin, Lury, and Stacey n.d.; Hess 1995; Marcus 1995; see also chap. 1 and Hess, this volume). Medical anthropology is branching out beyond an earlier emphasis on patient perspectives to examine the cultural positioning of medical expertise and institutions (B. Good 1994; M. Good n.d.; Heath and Rabinow 1993; Romanucci-Ross, Moerman, and Tancredi 1991). Anthropology of work is extending beyond a traditional focus on blue-collar perspectives to explore the experiences of technical work wherever these are located (Dubinskas 1988; Forsythe 1993b; Hess and Layne 1992; Julian Orr 1990; Suchman 1987, 1992, 1994). The anthropology of computing, a relatively new subdisciplinary activity, contributes to growing interdisciplinary interests in user perspectives and the positioning of computing expertise in society (Downey 1992; Forsythe 1992, 1993a; Hakken 1993; Hakken with Andrews 1993b; Nyce 1996; Nyce and Loewgren 1995; Pfaffenberger 1988, 1990). Applied anthropology has gained increased status as a fertile and active area for thinking through and enacting the practices of participation and intervention (see the journal *Human Organization*). How you locate yourself in relation to subdisciplinary boundaries can affect whether or not you make the first cut in a job search or are judged appropriate for inclusion in a conference or other professional activity.

Locating yourself in relation to interdisciplinary categories can be tricky. Where you are situated in the midst of ongoing intellectual and political debates can have significant implications for how you are read, received, and located as a person. For example, what counts as science and technology studies has been contested heavily over the years (see Hess, this volume), and an

individual's account of what has been taking place is an indicator of his or her location in relation to it. Consider, for example, what is opened up, closed down, or otherwise positioned by the following science and technology studies narrative:

The earliest label, "science, technology, and society," fell out of favor because it suggested work that begins by separating science and technology from society and, hence, limited itself self-consciously to the study of impacts. The label "science studies" shifted focus to knowledge contents but, in the process, abandoned the goal of intervening in society to solve problems involving science and technology in favor of building a new interdisciplinary discipline. At the same time it emphasized scholarship on science alone, to the exclusion of technology and medicine. Meanwhile the label "technology studies," which once suggested a policy interest in technological development and innovation, came during the 1980s to mean academic work on the social construction of technology. Those who held onto the label "STS" were generally indicating a continuing interest in science, technology, and medicine as social problems and advocating work that participated and intervened in such problems, often with explicit policy considerations. Recently "science studies" has reemerged as a shorthand for any work that explores, and intervenes in, the positioning of sciences, technologies, and medicines in society.

One key to locating work on science, technology, and medicine is to position it in terms of the future of the academy as a whole. Some seminar participants speculate, for example, that the research university system in the United States may be undergoing fundamental change. This narrative goes as follows: Researchers and teachers almost everywhere seem to be experiencing new demands for accountability, demands to show how their knowledge makes a difference. While postmodernist critiques of science may have added to the calls for accountability by bringing attention to the power dimensions of official knowledges, a significant source of pressure appears to be the rise of nationalist concern about economic competitiveness since the end of the Cold War. The quasimilitary logic of competitiveness seems to reach deep into everyday lives and selves, turning every act into an economic defense of the nation. State legislatures are pressuring universities to focus on undergraduate teaching, with employment for students as the primary objective. The National Science Foundation is shifting its emphasis to strategic research and spending great sums on educational reform to beef up the work force. "Competitiveness" could become a key measure of value in teaching and research.

From one perspective, a rise of interest in how knowledges make a difference could help legitimize activities that focus on such questions and seek to improve both how they are formulated and how they might be resolved. Interdisciplinary work focusing on science, technology, and medicine could thrive. A second possibility is that an expanding logic of competitiveness could produce a dogma that undercuts the legitimacy not only of traditional research that pursues truth and purports to be value free but also of work that aims to contribute through critique and critical participation.

As one maps boundaries and builds stories that cross them, it is crucial to understand that different disciplines and subdisciplines often have radically different customs, protocols, and criteria of competence when it comes to citation

practices, conference submissions and presentations, publications, letter recommendations for jobs and grants, grant reviews, and so on. Many researchers undertaking anthropological projects on science, technology, and medicine are collecting successful grant proposals, syllabi, bibliographies, and other documents, as well as experiences in job hunting and negotiations. These are the kinds of materials that both junior and senior scholars need if they are to move between disciplines or enter new disciplines for the first time. By sharing this kind of information, we can help one another map important differences and build successful career narratives.

Managing the Field

Although many fieldwork issues and strategies in studies of science, technology, and medicine are common to other ethnographic work, some appear to be particularly salient. It can be very difficult, for example, even to pretend to be a faceless observer, a person who might have meaning only as participant observer or a scientific voice from nowhere. At the SAR seminar many of us told stories of informants who were well-read in the social sciences, had invested considerable time and energy in reflecting on and analyzing the matters at hand, and engaged our work critically. Some had read our published work. It may be worthwhile to consider how such heightened levels of visibility might sharpen issues of access and confidentiality.

The strategies seminar participants used to establish initial contacts varied from highly personal connections to formal letters of introduction, sometimes including an outline of the project and list of publications. How we positioned ourselves was crucial to these interactions. Occasionally the very idea of an anthropologist in a high-tech field was bizarre enough to permit admission, though the ethnographers involved found they had to negotiate very carefully the purpose and practice of fieldwork with virtually everyone involved. Also, our status as a junior (presumably naive) student or as a senior (presumably wise and experienced) scholar inflected whether and how the people we encountered were willing to incorporate us into their lives. Some participants explicitly inhabited the position of journalist, especially with regard to scientific conferences where the press is often accorded special treatment. Acquiring a press pass by volunteering to write for a professional newsletter or other academic news publication, for example, can give access to news releases, background documents, and interview rooms, not to mention free conference admission.

Other participants took on the role of historian in addition to that of anthropologist. Since most researchers in science, technology, and medicine do not have projects important enough to merit Nobel-like recognition and histories, many are happy for the opportunity to go down in history or otherwise set the record straight. In this case the fieldworker must negotiate with the subjects of study: Does one commit, for example, to transcribing tapes and preparing the material for deposit in an official archive or simply to mentioning someone by name in subsequent publications?

The seminar touched only briefly on the question of confidentiality, probably because of its enormity. Most of the contributions to this volume involve multiple field sites and, therefore, negotiation and positioning with regard to

more than one group. Such groups may indeed be in competition or have narrow channels of communication with one another. As an ethnographer of science, technology, and medicine, when and how do you preserve the confidentiality of your informants? Just as extended involvement in a field site offers you the opportunity to make visible experiences that might otherwise be ignored, it also tends to build your sense of commitment to those whose experiences you are studying. There are occasions when you might want to name names, such as when the study recounts historical developments or sheds light on a scientific controversy. On other occasions you might be committed to preserving someone's anonymity, such as when you are helping a subordinate perspective gain legitimacy.

During the seminar we learned that participants had used several different strategies for grappling with problems of confidentiality and had negotiated ethical issues on an ongoing basis. In other words, ethics became a practical problem with flexible boundaries. How much control should informants have over how they appear in our texts? Some participants permitted interviewees to edit texts of interviews or to approve written materials before publication. Some attempted to tape everything, others taped only when something interesting happened, and still others avoided tape recordings completely. Some dealt with the issue entirely on an informal basis; others sought approval for their projects from university or institutional review boards and made written agreements with every informant. Some relied on written materials as much as possible to maximize their critical distance; others used them mainly to support ethnographic observations. Most important, no one was entirely consistent; each of us varied strategies a bit from project to project, trying to stay aware of the ethical commitment to acknowledge and respect the rights of informants. This issue is, of course, a subject of ongoing negotiation among ethnographers both inside and outside of anthropology.

Getting Published

Seminar participants also shared stories and strategies concerning negotiations in the world of publishing. Most of us agreed that articles in peer-reviewed, disciplinary journals remain essential to professional advancement. What seemed patently unclear, and therefore contested, was the value of articles in non–peer-reviewed disciplinary journals, articles in interdisciplinary journals even if peer reviewed, and chapters in edited collections. We were surprised that our small group of ten participants had published in over forty different journals and with thirty different presses. This diversity appeared to indicate both a relative lack of traditional publishing outlets for work on science, technology, and medicine and a desire to reach audiences who did not read our disciplinary journals.

Refereed journals tend to be idiosyncratic, and successful submission generally requires becoming familiar with each one's publishing practices, including common reference points, intended audience, and the writers they publish. The period from submission to response and from acceptance to publication varies dramatically, from six months (rapid) to three years (unfortunately not uncommon). A few journals, such as *American Ethnologist*, publish this information, but most do not, and often it can be gleaned only first-hand from the editorial board

or previously published authors. Furthermore, many key disciplinary journals place the highest value on the work of senior scholars. Some do publish excellent graduate work, but the standards may be higher for these junior scholars, and requests for revisions more common. Some disciplinary journals emphasize case studies; others publish theoretical advances. Some interdisciplinary journals welcome papers that serve as placeholders for whole disciplines or fields, in which theoretical approaches and objectives are described in language that is as clear as possible, with minimal use of jargon. Other interdisciplinary journals focus on particular research topics, actively encouraging crossover and collaboration among humanities, social science, and science contributors.

Mapping exercises often prove helpful in selecting journal outlets and preparing written submissions. For example, one can investigate the publishing decisions of specific scholars via curriculum vitae, citation indexes, *Current Contents*, and interviews. Mapping subdisciplinary developments this way also proves useful as a writing strategy for career narratives. What roles have different kinds of journals, special issues, edited books, and single-authored books played in the development of specific theoretical areas and collections of researchers? How and where do you want to fit?

Book publishing raises a different set of issues, many of which are related to the objectives of publishers and a given book's potential sales. Book publishers tend to classify themselves as either "academic" or "commercial," but both groups sell books to make money. A key difference is commercial presses need to generate profits for their investors, whereas academic presses are probably trying just to break even. Many academic presses are affiliated with universities, and to varying degrees they contribute to, complement, and draw on the reputations of their namesakes. Often divided internally by discipline, academic presses emphasize particular areas, or lists, as shown in their catalogs. Commercial presses, by contrast, tend to organize internally according to the subject areas, or niches, they stake out in the marketplace. Although such divisions may have disciplinary content, commercial presses may be more likely to feature interdisciplinary, problem-oriented fields of research.

Editors of publishing houses can be found at most conferences, where they may seek out particular panels or presenters. Many editors encourage the submission of written book proposals that outline the objectives and structure of the book and its probable audience. Particular emphasis is placed on a book's potential classroom use; this is often what makes manuscripts most attractive. It now appears standard for authors to contact several presses to get a sense of how interested particular editors might be, as well as how they might market a book. Some presses, however, won't consider a project that has been presented simultaneously to multiple publishers. Try to interview other authors about their experiences with various book publishers and editors. It is important to remember that an editor is not likely to be the one making final acquisition or publishing decisions (this role may fall to an editorial board or the publisher), but instead serves as the book's advocate within the publishing organization.

The particulars of contracts are rarely discussed outside of corridors, even though academic authors appear to be the only ones without literary agents, due to the relatively small proceeds they and their publishing houses make on their books. A signed contract commits the author to the publisher, but the

publisher's commitment is generally more flexible: the publisher can reject the completed manuscript if it is found unsatisfactory. Nevertheless a contract does establish a working relationship between author and editor and commits the editor to working with the manuscript. Many items in a typical book contract are negotiable; it's always worthwhile to investigate your options.

You might want to ask the following questions: How large will the first print run be? (For an academic monograph, a small first run of 800 to 1,000 copies is common; multiple thousands are rare, especially for a first-time author.) How long will the review process take? (Three months is very good; over a year is too long but not uncommon.) Once the manuscript is accepted, how long will it take before it is released? (Many press contracts promise to take not more than twenty-four months to get a book into print; the actual time your book takes could be less, or more.) How much time and expense will be budgeted for copy-editing? What efforts will the publisher make to market the book, including attending annual meetings, sending copies to journals, and advertising by mail or in the media? Do you want to request extra copies to send to journals yourself? Authors unhappy with their publishers' efforts in getting books out have been known to buy extra copies themselves to send to journals. How much will the book cost? Will the publisher issue your book in hardbound, paperbound, or both? If both, will the two editions be released simultaneously? How are author royalties structured? Is it possible to get an advance on royalties? (Advances are common with commercial and crossover presses, less likely—and almost invariably small—from academic presses.) Finally, who owns electronic rights, translation rights, and other subsidiary rights? Who decides how much is charged for subrights? And what is the author's cut? There are some helpful guides to publishing with academic presses; Paul Parsons's *Getting Published: The Acquisition Process at University Presses* (University of Tennessee Press 1989) and Robin Derricourt's *An Author's Guide to Scholarly Publishing* (Princeton University 1996) are good places to start.

Attending Conferences and Being Seen

Interdisciplinary scholars are faced with a multitude of professional conferences that may be relevant to their work. "Being seen" can be a key part of "gaining membership." At what point should you begin to attend conferences, and how deeply involved do you want to get? Should you present a paper, organize a session, serve as a discussant, or seek election to an office? The answers will vary according to career stage and research interests, and with subdiscipline, conference organizers, department conventions, and so on. They also always depend on the availability of travel money. An inexpensive way to establish a high level of involvement and make difficult choices is to read the relevant association newsletters.

Those new to the conference scene should recognize that session organizers are subject to a number of constraints. The organization might distinguish between "submitted" and "invited" sessions; if so, how do you gain the greater visibility that goes with invited status? In the American Anthropological Association you'll need to locate, contact, and lobby the program representatives for the constituent societies. Representatives are appointed every year at the an-

nual meeting in late November or early December; though often new to the tasks involved, they must make their final decisions on the following year's program by the end of February. Attending business meetings is one way to collect the names of representatives, and early contact can help get a proposed project accepted.

If you are planning a session, how do you strike a balance between relatively prominent names and people just breaking into the area? Gaining commitments from a few prominent scholars, perhaps as discussants, can help attract others. How do you secure a good room and a good time on the program? Consider writing a cover letter with your proposal that outlines likely interest and attendance.

Negotiating a Job Offer

Today, in a time of widespread restructuring and downsizing, securing any job anywhere can be considered a success. The offer of a position carries with it the task of negotiating its details. The short period between receiving an offer and accepting or declining it is likely to be your only opportunity to negotiate the terms of employment, and small changes made then could prove highly significant later. If you handle negotiations in a reasonably positive manner, it is likely that any worries about offending someone or appearing greedy will dissolve after you start working with your new colleagues on a daily basis. Asking questions and paying attention to the details is entirely legitimate. The following bits and pieces, which focus almost entirely on academic positions, were collected from seminar participants and a dozen or so other people. We offer these observations with the assumption that readers will make their own judgments about whether or how to use them.

In negotiating for a position, try regarding the person with whom you are dealing (the department chair, for instance) as being on your side. The people interviewing you are genuinely seeking a new colleague. In addition, the very existence of the new position (and any additional resources that might come with it, like new computers) is a direct benefit to the hiring unit. If the department is unable to fill the position, it might lose it.

You might begin with this stance: "I have an intellectual reason to move, but don't want to lose what I have." Another option: "My situation, my needs, and my goals have evolved since the last job/last move/last promotion." One approach to negotiating is to explain your situation and goals and then ask the other person for help in solving your problems together. Clarify up front that you don't want to pit one institution against the other, and that you don't intend to add issues later. Be both persistent and polite, never talk or act as if an issue were closed, and present your goals as information requests rather than as demands, asking, for example, how it might be possible to do or get something. Knowing your priorities in advance, especially what is essential and what might be conceded, is important. You might also consider saying explicitly, "This is the understanding I want . . ." We've found that men and women often have very different negotiating styles; consult with your more experienced colleagues of both genders for advice in dealing with common miscues and miscommunications; also see Heim (1993).

Although many of the seminar participants agreed that money should be the last item discussed, there was much debate about whether or not you should ask for more than you expect to receive. Some suggested always asking for at least $10,000 more than you are getting now, or securing a promise for the following year. Others recommended seeking to match rather than increase current resources. It could be helpful to provide evidence of your current salary and likely increases. You might request information regarding merit raises and cost-of-living increases. Since freezes on hiring or salary increases could emerge or continue, it is important to start out at a good level.

During academic budget crises, consider trading money for time, such as time off or a reduced teaching load. Depending on your priorities, the goal might be either to match or reduce a current teaching load. You could ask for reduced teaching for the next year or two—but be sure to demonstrate a strong and permanent commitment to teaching. What are the local values regarding teaching? What has been common practice, and has it changed in recent years? How are courses and course times assigned? Are course equivalents available, such as independent studies, graduate student advising, committee activities, or center leadership? Find out if getting outside funding guarantees a research leave. Clarify any sabbatical calculations for the future; you might request, for example, that time spent at another university apply toward sabbatical leave.

What about seeking a joint appointment? This will give you access to two sets of resources, but at the cost of two sets of responsibilities, such as faculty meetings and committee assignments. At the senior level, a joint appointment might be a vehicle for greater financial support. At the junior level, fulfilling two different sets of expectations could make tenure more difficult to achieve.

With nine-month positions, you might want to inquire about routine practices for getting summer money. Are any housing allowances available, such as support for a down payment or mortgage assistance? What is included in the retirement and benefits packages; for instance, what percentage of your salary does the school contribute to a retirement fund? Can you negotiate your arrival date?

Think about other resource issues that might be significant. It could be important, for example, to secure financial support for one or more graduate students per year. Clarify your current and eventual levels of access to the following: office space, computer, E-mail, printing, fax, phone, copying, travel funds, research assistance, funds for library acquisitions, support for speakers and workshops. Are internal research funds available? Are stipends, reduced teaching loads, or other forms of support available for journal editorships or other professional responsibilities?

What kinds of service responsibilities are routine or otherwise expected? What committee responsibilities might you have? Will you have to oversee recruitment or do other heavy administrative work? What will be your responsibilities for graduate students? Will you be charged with expanding a program? The more senior your position, the more likely you will be expected to expand the recruitment of students and junior faculty. Does visibility through gender, race, or ethnicity lead to higher committee loads or multiple department obligations? If so, consider requesting extra compensation.

If a local goal is to build autonomy for a new program, you might examine the statuses of other freestanding units around campus. To whom would this program be responsible? What are the possible future sources of support? Who defines the unit's boundaries, especially regarding budgets, students, faculty, affiliated faculty, secretarial staff, space, library acquisitions, copying, phone, and mail? Gearing up a new program can be exceptionally difficult. Are other departments or programs friendly to the idea? You might consider contacting the highest-ranking person and asking her or his advice on how to proceed.

There was widespread consensus among our group that details of all employment agreements should be put in writing. Even this is no guarantee, but it is does provide a good source of shared memory. Finally, it is worth building career narratives here as well, both for yourself and for the unit(s) to which you will be committing time and effort.

Finding Money

One of the most surprising discoveries in our corridor talk at the SAR seminar was the diversity of our funding sources. Interestingly, only one of us had ever received support from the National Science Foundation's anthropology program, which might be considered the natural source for such funding. Most of us have turned instead to a variety of other sources for financial support, sometimes through creative social hacking; that is, by breaking into arenas to which we would not normally have had access. For example, members of our group have received funding from Aerojet Nuclear Corporation, American Council of Learned Societies, American Institute of Physics, Danforth, FIPSE, Fulbright, Hastings Institute, Institute for Advanced Study, the Japanese government, Luce Foundation, Murdock Foundation, National Endowment for the Humanities, National Science Foundation Ethics and Values Studies, Rockefeller Gender Research, Smithsonian, Spencer Foundation, Wenner-Gren Foundation for Anthropological Research, and grants from individual universities for pilot projects, travel, language study, and sabbaticals. Some of us have even worked for the people we studied, as lab technicians, tour guides, software developers, counseling assistants, historians, or co-authors. Aside from the residual professional taboo against being paid by one's informants, each situation posed a unique set of analytic and ethical issues. We found it reassuring to learn that others had encountered similar opportunities and had to cope with similar feelings of ambivalence, ambiguity, and even embarrassment.

Grant writing remains one of the trickiest areas of academic life. Decision-making processes are often opaque and can vary from review to review. Also, grant proposals constitute a literary genre that is underanalyzed, poorly understood except by good grant writers and reviewers, rarely a component of formal education, and often considered by their authors a huge waste of time.

Submitting a grant proposal is like buying a lottery ticket: it generates a nice fantasy, although one with a low probability of coming true. At the same time the odds are much better, the money will be given out to someone, and you will not get the grant if you do not apply for it. We offer some suggestions here based on our own experiences of grant writing and reviewing.

Some departments offer classes designed to help students find funding sources and write grants. Others leave it to the students to realize that they are supposed to make a career via grants and then to figure out which agencies to apply to and how to craft grants. To identify possible grant opportunities, seek assistance from friends and colleagues and from the office of sponsored programs or its equivalent at your college or university. On-line services such as SUNY SPIN (State University of New York Sponsored Programs Information Network) offer a huge database of grant programs that is updated daily.

In writing a journal article, you fit the audience to the work by choosing an appropriate journal. Writing a grant proposal is like trying to publish an article in the wrong journal: The audience is both fixed but largely unknown, and the author must adapt the writing accordingly. One of the most effective ways to assist grant writing is to make successful proposals and comments available to others. Surprisingly often, even a student's own mentors and advisors do not do this. We encourage grant writers to share their successful proposals with colleagues and students. Most large departments have senior faculty with experience serving on grant review committees; they are often in the best position to explain what makes one grant worthier than another.

Strategies for Grant Proposals

Begin working on a proposal at least six months prior to submission. The proposal should show evidence of strong preparation and a project already under way; it should convey the impression that the project fits an established trajectory, has already yielded interesting results, and simply needs support to come to completion.

Cultivate relationships with program officers. Write or call to request formal guidelines and any available reports on recent grants. Interview the program secretary about recent trends in the program and new initiatives that might be under way. Consider contacting previous grant recipients to learn how the process worked for them. If possible, obtain copies of successful proposals.

After reviewing guidelines and reports in detail, contact the program officer by formal letter or E-mail, briefly outlining your proposed research and indicating that you will follow up with a telephone call. Resist the urge to call right away. Program officers usually prefer to deal with written proposals. Initiating a relationship through letter or E-mail indicates your serious commitment to the process and gives the officer some control over how you fit into his or her work day. When you do make voice contact, elaborate your research objectives and plans as specifically as possible and mention the importance of your project.

The review process measures your proposal against both agency priorities and widely accepted standards of scholarship. Hence, most review mechanisms include representatives of both the organization and the field of research. The program officer at a private foundation may have great latitude in determining the appropriateness and value of a given proposal. At the National Endowment for the Humanities, in contrast, program officers must adhere closely to the recommendations of outside peer reviewers. National Science Foundation program

officers are free to depart from peer review recommendations but must provide written justification for doing so.

With the NEH, NIH, or NSF, it may be worthwhile to map the agency's internal organization so as to understand your audience and its priorities. For example, the STS effort at NSF includes two main programs: Studies in Science, Technology, and Society (SSTS) and Societal Dimensions of Engineering, Science, and Technology (SDEST). SSTS was formerly the program in history and philosophy of science and is still dominated by history proposals. SDEST proposals, by contrast, should be more problem-oriented, advancing understanding of some important social, ethical, or value issue regarding contemporary science and technology.

Since the early 1990s virtually all new funds at NSF have gone to foundation-wide "initiatives" that are built around specific classes of societal problems. The division that proposes and gets approval for a new initiative serves as its home and receives a permanent allocation to its base budget, which makes new initiatives especially attractive to existing programs. Two initiatives relevant to our interests include Human Capital and Quality Studies. Contact the NSF directly to learn about new developments, by E-mail at nsf.gov and by the World Wide Web at URL:http://www.nsf.gov.

The most popular funding award is the individual research grant, which can vary significantly. The SSTS program at NSF, for example, includes Scholars Awards, which provide release-time and summer support for tightly organized, well-developed projects that only need time to complete. A Professional Development Fellowship helps a researcher cross disciplinary boundaries by initiating training in another field. Awards for dissertation research usually involve less money but more relaxed criteria. Grants for conferences and workshops are the most difficult to get and may depend upon including a book as an outcome in your proposal. If you want to go after a lot of money, consider building a collaborative research project that includes two or three principal investigators as well as training for graduate and undergraduate students.

The scholarly review process for most programs is likely to include both "specialist" and "panel" reviews. A specialist review is an ad hoc report written by an individual chosen by the program officer; it includes both a narrative evaluation and an overall grade or score, e.g., Excellent, Very Good, Good, Fair, Poor. A review panel consists of eight to twelve participants who meet for a day or two to evaluate all the proposals in a given pool, which can range from fewer than fifty to more than 120. At least two or three panelists provide written reviews and lead the discussion. Panel members who don't write reviews of a given proposal are expected to have read enough to participate in discussions.

Panel procedures vary from program to program. One NSF panel, for example, first ranks each proposal as a "1" (clearly fundable); "2" (fundable in an ideal world with unlimited funds, but not in this world); "3" (revise and resubmit, thus making a 3 better than a 2); or "4" (not fundable under any circumstances). At the end of the meeting, each panelist divides all the 1s into top, middle, and bottom, and the program officer calculates a numerical score for each proposal. In this program, approximately 15 to 20 percent of submitted proposals receive funding.

One important lesson in all this is that readers must work very fast. Write your proposal in such a way that someone can read and understand it in fifteen minutes. Include section headings to indicate major transitions, and write clean, clear paragraphs.

Writing a proposal can be an intensely alienating experience, for it often involves describing what you want to do in ways and language that others might want to hear. Furthermore, the process is rarely a linear one, tending to come together in sections that must be not only internally coherent but also connected systematically to other sections. A good proposal is highly self-referential, clear, and easy to read. What follows is a brief account of the links between how a finished NSF proposal might look and how you might get there:

How It Looks	*What You Do*
Project Summary	Objectives
Objectives	Budget
Background/Significance	Methods and Procedures
Research Design/Hypotheses	Expected Results
Methods and Procedures	Schedule
Schedule	Background
Expected results	Appendices
Bibliography	Research Design/Hypotheses
Biographical sketch/CV	Bibliography
Budget	Biographical Sketch/CV
Appendices	Project Summary

Objectives

Begin by evaluating the types of research you plan to do and what the likely products will be. For example, do you plan to do an ethnographic study and write a book? Might the research include other methodological strategies, such as archival work or a questionnaire survey, and might the products include a series of articles, new course development, or annotated data made available on the World Wide Web? Each of these commitments has direct implications for every major section of your proposal.

Budget

Although the most difficult to conceptualize and write, the budget is the most important section to you, the PI, since the whole purpose of the proposal is to get enough money to do your work. Given the type of research project you plan to do, about how much money do you think you will need? What is the total time period you foresee for the project? Do you want to pay yourself a salary, whether for support as an individual scholar, released time during an academic year, or summer support? Do you want to pay for research assistance? How

much traveling do you intend to do, both to conduct the research and to report its results at professional meetings? What other expenses might you incur, such as costs for transcribing tapes, copying, telephone, supplies, publication, etc.? Include significant salary support, especially if you are adding 50 or 60 percent for overhead charges to your college or university.

If you fear your requested budget will be insufficient but you cannot justify asking for more, consider seeking some return of "overhead" funds to the project. Find out what percentages will be allocated to your department, your college or division, and your university or college as a whole, and ask each to return, say, a quarter or a third of the overhead funds it would receive so that you could support a particular need that would otherwise go unfunded.

Methods and Procedures

Think of this task as a detailed history or narrative of the future. Specify in as much detail as possible exactly what you plan to do with the grant money. A well-written methods and procedures section reaches out to virtually every other section of the proposal. It is linked tightly to the budget, every item of which must be justified in terms of methods and procedures. A well-written section is also linked to project objectives and proposed results, for reviewers will ask if the specific plans fit the objectives and will lead to the expected results. In other words, this section holds everything else together.

Expected Results

A good presentation of expected results can reassure reviewers that giving you all this money really will lead to something significant, so consider carrying your history of the future beyond research tasks and into writing and dissemination. If, for example, you intend to produce a book, provide a detailed outline, taking care to demonstrate that the frame of the chapters fits the frame of the research.

Schedule

Can you really complete the project in the time allotted? If not, rewrite the methods and procedures and recalculate the budget. Provide a detailed schedule of the proposed research even if you are unsure how long various steps will take. Consider describing the schedule in terms of overlapping phases. A key here is to demonstrate that you understand the different steps you will have to take and how these relate to one another.

Background

A main purpose of this section is to show the significance of the problem addressed by the project. Your probable inclination is to begin with this section, but too much work here raises the possibility that the rest of the proposal is irrelevant or poorly related to the background. Reviewers might view the proposal as a research article with a request for money tacked on at the end. If you put off writing this section until you have mapped the project in some detail, it will be more deeply connected to the section on methods and procedures and, hence, to the body of the research.

Appendices

Limits on proposal length generally do not extend to appendices. Can an appendix do any work that would otherwise be done in the proposal, thus freeing space for other things? For example, literature reviews often consume many pages. Have you completed or published a paper that already does some of this work, which you can attach at the end and cite in the proposal? How about a paper that displays the interpretive frame you plan to use in the proposed research?

Research Design (Descriptive Hypotheses?)

This section prepares the reviewer to understand and assess the detailed discussion of methods and procedures that follows. A key goal is to derive, describe, and justify your approach to the research problem by reviewing other approaches that have been or could be used. You will need to demonstrate an accomplished level of conceptual sophistication with a minimum of jargon.

Bibliography

Reviewers tend to look for their own research traditions in a bibliography and may take a PI to task if the proposal does not acknowledge a full range of perspectives. The bibliography usually is not included in the limits on page length. Make sure, however, that it focuses on the proposed project and does not appear to have been downloaded from that massive database you have been accumulating for years.

Biographical Sketch/CV

Remember that reviewers are evaluating both the proposal and the capabilities of the PI. Many reviewers begin by reading the CV in order to understand the career trajectory in which the project is supposed to fit. Be sure to account for every year of study/research/work, showing how active you have been. You want readers to have confidence that the project will indeed yield the results it promises.

Project Summary

This section will be read more closely than anything else in the proposal. It should provide an overview of the entire project rather than simply a restatement of project objectives with an additional sentence or two. Therefore it should be written last. For harried reviewers, a good summary can be a crucial resource for pointing out the strengths of a project in the midst of a debate. Be sure it includes material from every major section, especially Methods and Procedures and Expected Results.

Resources for the Anthropology of Science, Technology, and Medicine

To help readers identify departments, institutions, professional associations, publishers, and others with an interest in the anthropology of science, technology, and medicine, we offer the following listings as places to begin your search.

Departments of Anthropology or Anthropology and Sociology (English-speaking) with an Interest in the Study of Science, Technology, and Medicine

Arizona State University, Australian National University, Brandeis University, Bucknell University, University of California (UC) Berkeley, UCLA, UC Santa Cruz, Central Michigan University, University of Connecticut, University of Florida, Grinnell College, University of Houston–Clear Lake, Johns Hopkins University, University of Illinois, University of Kansas, Lewis and Clark College, University of Manchester, University of Massachusetts, Massachusetts Institute of Technology (MIT), Montclair State College, New School for Social Research, New York University, Oakland University, University of Oregon, University of Pennsylvania, Princeton University, Rice University, San Jose State University, Smith College, University of South Carolina, Stanford University, Tel Aviv University, Trent University, University of Virginia, Wayne State University.

Interdisciplinary Programs in the United States

(Note: At the graduate level, STS usually stands for Science and Technology Studies; in undergraduate programs, STS usually means Science, Technology, and Society.)

Ball State (Center for Communication and Information Sciences); UC Berkeley (Anthropology; Medical Anthropology); UCLA (Center for Cultural Studies of Science, Technology, and Medicine); UC Santa Cruz (History of Consciousness; Anthropology); UC San Diego (STS Program; Communications); UC San Francisco (Social and Behavioral Sciences); Carnegie Mellon (Technology and Public Policy); Cornell (STS Department; Program on Technology and Work); Delaware (Center for Energy and Urban Policy Research); Evergreen College (Feminist Studies; Environmental Studies); Georgia Tech (History, Technology, and Society; Literature, Communication, and Cultural Studies); Illinois (Sociology); Illinois Institute of Technology (Humanities); Indiana (Sociology); Lehigh (STS); Michigan Tech (Program in STS); MIT (STS Program); New Jersey Institute of Technology (Center for Technology Studies); New School for Social Research (Program in Feminist Research); Ohio State (Comparative Studies); Pennsylvania (History and Sociology of Science and Technology); Penn State (STS Program); Rensselaer (STS Department); Stanford (Center for Biomedical Ethics); State University of New York–Utica Institute of Technology (Technology Policy Center); Texas–Austin (Department of Radio, TV, and Film); Virginia (Division of Humanities, School of Engineering); Virginia Tech (STS Program; Center for Science and Technology Studies).

Interdisciplinary Programs Outside the United States

Australia (Australian National; Sydney; Wollongong); Canada (McGill; Quebec–Montreal); Britain (Aston; Bath; Brunel; Edinburgh; Keele; Lancaster; Manchester; Open University; Sussex); France (Ecole des Mines); Germany (Berlin; Bielefeld); Netherlands (STS Ph.D. program, Amsterdam; Limburg; Groningen; Twente); Free University of Amsterdam; Technical University of Delft); New Zealand (Women's Studies, Otago); Norway (Bergen; Oslo; Trondheim); Sweden (Goteburg; Linkoping).

Professional Societies

American Anthropological Association (Interest Group in Anthropology of Science, Technology, and Computing; Society for the Anthropology of Work; Society for Applied Anthropology; Society for Cultural Anthropology; Society for Medical Anthropology); European Association of Studies of Science and Technology; History of Science Society; Philosophy of Science Association; Society for Literature and Science; Society for the History of Technology; International Society for the History, Philosophy, and Social Studies of Biology; Society for the Social Studies of Science.

Electronic Contacts

CASTAC-L Listserv for announcements for the community of anthropologists of science, technology, and computing. Send E-mail to listserv@mitvma.mit.edu with the message: Subscribe CASTAC-L your name.

Journals

American Anthropologist (flagship journal of the American Anthropological Association; shows increasing interest in science due to widespread interest in the status of anthropological knowledge; submissions must cross subfields); *American Ethnologist* (journal of the American Ethnological Society; good place to publish ethnographic case studies); *Anthropological Quarterly* (good place to break in with work that makes both topical and conceptual contributions); *Configurations* (relatively new journal of the Society for Literature in Science; excellent location for work in cultural studies; long-term role of ethnographic work not yet clear); *Cultural Anthropology* (journal of the Society for Cultural Anthropology; strong interest in all work exploring science, technology, and medicine as cultural sites of meaning production); *Culture, Medicine, and Psychiatry* (actively encourages humanities/social science and science researchers to write together); *differences* (feminist and cultural studies); *Feminist Studies* (interdisciplinary feminist journal); *Human Organization* (journal of the Society for Applied Anthropology); *ISIS* (journal of the History of Science Society; favors archive-based historical research with extensive citation); *Knowledge and Society* (annual journal generally focused on issues in the sociology of science and technology but open to other approaches as well); *Medical Anthropological Quarterly* (journal of the Society for Medical Anthropology); *Perspectives on Science: Historical, Philosophical, Social* (good place to publish pieces that engage questions in history and philosophy of science and/or sociology of science or scientific knowledge); *Science as Culture* (good place to publish critical accounts and attempts at formulating critical participation); *Science in Context* (interdisciplinary journal focusing on the social studies of science); *Science, Technology, and Human Values* (journal of 4S, Society for the Social Studies of Science); *Social Studies of Science* (heartland of constructivist science and technology studies; focuses on the sociology of scientific knowledge and technology but open to other perspectives; emphasis on analytic accounts with clear conceptual framework and data analysis); *Signs* (interdisciplinary feminist journal); *Social Science and Medicine*; *Technology in Society* (interdisciplinary journal that tends to be more interested in impacts of technology on society, less on the construction of particular technologies); *Technology Review* (MIT magazine focusing on policy issues concern-

ing contemporary technologies in society; papers must be highly accessible with clear policy implications); *Technology Studies* (relatively new interdisciplinary journal exploring all areas of technological development and use).

Academic Presses

California; Cambridge; Chicago; Columbia; Duke; Edinburgh; Harvard; Indiana; Minnesota; MIT; Oxford; Princeton; Rutgers; SAR Press; Stanford; Temple; Wisconsin; Yale.

Commercial Presses

Beacon, Free Association Books (often with Routledge); Routledge; SAGE; St. Martin's; Verso.