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# INTERVIEWING AN ULTRA-ELITE*

BY HARRIET ZUCKERMAN

Based on a study of Nobel laureates in science, this article examines the strategy and tactics of interviewing members of an ultra-elite—the thin layer of individuals with the greatest influence, prestige, and power in an institutional sphere. It focuses in particular on techniques of legitimating the interview task and of tailoring interview schedules to suit the special qualifications of each respondent.

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MANY STUDIES of elites in the various institutional domains draw upon interview data. Thus, to confine ourselves to the United States, such data have formed much of the basis for studies of legislators (national, state and local),[1] business executives,[2] educators,[3] union leaders,[4] and clergy.[5] Anyone examining the fine structure of such elites will discover, at their very top, a typically thin layer of people who exhibit especially great influence, authority, or power, and who generally have the highest prestige within what is a prestigious collectivity to begin with. Thus, although senators as a whole make up part of the political elite,[6] there

* This investigation was supported by grants from the National Science Foundation to the Columbia University Program in the Sociology of Science.

1 For example, see Alexander Heard, "Interviewing Southern Politicians," *American Political Science Review*, Vol. 44, 1950, pp. 886-896; William H. Hunt, Wilder W. Crane, and John C. Wahlke, "Interviewing Political Elites in Cross-Cultural Comparative Research," *American Journal of Sociology*, Vol. 70, 1964, pp. 59-68; Donald R. Matthews, *U.S. Senators and Their World*, Chapel Hill, University of North Carolina Press, 1960; and James A. Robinson, "Survey Interviewing among Members of Congress," *Public Opinion Quarterly*, Vol. 24, 1960, pp. 127-138.

2 Lloyd Warner and James C. Abegglen, *Big Business Leaders in America*, New York, Harper, 1955; H. W. Kincaid and M. Bright, "Interviewing the Business Elite," *American Journal of Sociology*, Vol. 63, 1957, pp. 304-311.

3 Neal Gross, Ward S. Mason, and A. McEachern, *Explorations in Role Analysis*, New York, Wiley 1958; Paul F. Lazarsfeld and Wagner Thielens, Jr. *The Academic Mind*, New York, Free Press, 1958. See also David Riesman's instructive essay analyzing the interviewing process which forms the Appendix in *Ibid.*

4 C. Wright Mills, *The New Men of Power*, New York, Harcourt, 1948; Harold Wilensky, *Intellectuals in Labor Unions*, New York, Free Press, 1956.

5 Gerhard Lenski, *The Religious Factor: A Sociological Study of Religion's Impact on Politics, Economics and Family Life*, Garden City, New York, Doubleday, 1961; Rock Caporale, *Vatican II: Last of the Councils*, Baltimore, Helicon Press, 1964.

6 Systematic studies of political elites were largely inaugurated in the United States by Harold Lasswell and his associates. See Harold D. Lasswell, *Politics: Who*

is, among them, a subset of particularly powerful or prestigious influentials. Much the same holds for the structure of elites in other institutional domains. These most highly placed members of an elite can be described as an ultra-elite.

Although there is considerable knowledge and accumulated wisdom about the art of interviewing in general and some about the problems distinctive to interviewing elites,[7] not much has been reported about the strategy and tactics of interviewing ultra-elites.

This report is based on intensive interviews with Nobel laureates in science.[8] Having received the most prestigious international award in science, the laureates as a whole occupy a position in the topmost stratum, as defined both by fellow scientists and by the public at large. They do not, however, monopolize that position. As I have noted elsewhere,[9] there are a number of other scientists who, in the judgment of the scientific community, have made at least equally significant contributions, although they have not been summoned to Stockholm. Nevertheless, judged by criteria like those proposed by Pareto for an authentic elite in a particular sphere of activity—superior performance and high rank[10]—the laureates as an aggregate are at the very apex of the hierarchy of prestige and influence. Moreover, their small relative and absolute numbers heighten their visibility and the esteem in which they are held. They are, in short, an ultra-elite in science.[11]

## PREPARATION FOR INTERVIEWING

### *The Initial Contact*

Like other members of ultra-elites, Nobel laureates are comparatively easy to locate. Standard directories, for the most part, pro-

*Gets What, When, How?* New York, McGraw-Hill, 1936; Harold D. Lasswell, Daniel Lerner, and C. Easton Rothwell, *The Comparative Study of Elites*, Stanford, Hoover Institutes Studies, 1952.

[7] See Raymond Gordon, *Interviewing: Strategy, Technique, and Tactics* (Homewood, Illinois, Dorsey, 1969) and Stephen A. Richardson, Barbara S. Dohrenwend, and David Klein, *Interviewing: Its Form and Functions* (New York, Basic Books, 1965) for recent accounts of interviewing techniques. See Lewis A. Dexter, *Elite and Specialized Interviewing* (Evanston, Northwestern University Press, 1970) for an informal but thorough discussion of procedures of interviewing highly placed persons.

[8] Harriet Zuckerman, *Scientific Elite: Nobel Laureates in the United States*, Chicago, University of Chicago Press, in press.

[9] Harriet Zuckerman, "Nobel Laureates in Science: Patterns of Productivity, Collaboration, and Authorship," *American Sociological Review*, Vol. 32, 1967, pp. 391-403, and "Stratification in American Science," *Sociological Inquiry*, Vol. 40, 1970, pp. 235-257.

[10] Vilfredo Pareto, *The Mind and Society*, New York, Harcourt, 1935, Vol. III, pp. 1423-1424. Pareto observes that the two criteria vary independently of one another but does not emphasize the point.

[11] One roughly comparable ultra-elite in religion is the aggregate of cardinals and bishops interviewed by Rock Caporale, *op. cit.*

vided the necessary information. Difficulties in determining the immediate whereabouts of a few are instructive, however, for they testify to the extraordinary geographic mobility of eminent scientists and presumably of their counterparts in other social institutions.

The laureates are a scattered elite; only a few are in direct contact with one another. Nonetheless, for certain purposes, they constitute a social group rather than an aggregate, a fact which, as we shall see, has implications for the maintenance of confidentiality. Of the 55 laureates living in the United States in 1963, 41 were interviewed, evidence for the ease of obtaining interviews with members of this ultra-elite even though other investigators report having had difficulty in arranging for meetings with top-level business executives.[12] The remaining 14 were not interviewed for the following reasons:

| *Reasons for Interview Refusals* | *Number of Laureates* |
|---|---|
| Illness of laureate | 2 |
| Absent from United States | 2 |
| No reply to letters requesting interview | 4† |
| Outright refusal | 6 |

† An additional four laureates did not reply but were contacted by telephone and appointments arranged.

One of the two laureates who declined to be interviewed because of illness died within a few months of receiving the request; a second died before he could reply to my letter. One laureate, counted among the no replies, could not be located, leaving only two who never answered the three letters that were sent to them. Answers were received from the two laureates who were not at the time in the United States. Of the six who refused to be interviewed, all but one declined on the grounds of being busy. The variety and weight of the demands made on the laureates' time were frequently mentioned in the interviews—on occasion with a meaningful glance at the interviewer. In view of the many requests made of them, it is surprising that as many as 41 were willing to devote time to the interview.[13]

Not only did they consent to an interview, for the most part they did so promptly. On the average, eight days elapsed between the time the laureates received the first letter of request and the time they replied. When no answer to the first letter was received

[12] Hortense Powdermaker, *Stranger and Friend: The Way of the Anthropologist*, New York, Norton, 1966; Kincaid and Bright, *op. cit.* See Dexter, *op. cit.*, pp. 28-29 for his observations on the shortcomings of the Kincaid and Bright work.

[13] About 80 percent of the laureates in physics and chemistry and 70 percent of the Prize-winners in physiology were interviewed. Four of the 6 laureates associated with Harvard University were not interviewed. No other university had so high a refusal rate.

within three weeks, a second letter was sent. The average time between the date of receiving the second letter and answering decreased to four days.[14]

*The Letters.* The first six laureates received lengthy letters explaining the nature of the investigation. It soon became apparent from their replies that the laureates themselves did not indulge in lengthy communications; they wrote short and pointed letters. A typical example:

> Dear Miss Zuckerman:
> I will be in town on Friday August 30th, so just call me when you get in and we'll talk.
>
> Yours sincerely.

This fact, coupled with the remark by one laureate that he hadn't time to read my letter thoroughly, led to substantial changes in the original contents. Afterwards, the letter requesting an interview contained only four pieces of information.[15] The writer was identified as a Fellow of the Social Science Research Council at Columbia University and a recipient of a grant from the National Science Foundation. These allusions were intended to provide institutional legitimation for both the request and the investigation. The purpose of the study was then stated succinctly and, to provide legitimation by their peers, the names of some laureates who had already been interviewed were given.

Letters of confirmation were sent at once to all laureates who agreed to be interviewed. Whenever possible, information was supplied on how the interviewer might be reached when she arrived in their city. Within a day or two after the interview was completed, hand-written thank-you letters were sent to each laureate. The contents varied, but some mention was usually made of the laureate's distinctive contribution to the study.

*Making Appointments for the Interviews.* The initial letter stated when the interviewer would be visiting the area. Laureates located in New York and its environs were asked when it would be "least inconvenient" for them to be interviewed. About one-third of the laureates replied, giving specific dates and times; the rest asked to be notified when the interviewer arrived in the area. None of those who consented to be interviewed were unable to keep the appoint-

[14] Eleven laureates could not see me at the time specified in the first letter. A second request for an appointment was sent four months later. The average time elapsed between the laureates' receipt of these letters and their answers was six days.

[15] David Riesman, "Introduction" to *The Passing of Traditional Society* by Daniel Lerner (New York, Free Press, 1958) and Dexter, *op. cit.*, both suggest that too much information can be provided in requests for interviews.

ments that had been made, although three found that new obligations limited the time set aside for the interview. Four laureates who had not answered the first letter were reached by telephone and appointments were made at that time: in two cases on the same day, and in the other two, several days later.

*Attitudes toward the Prospect of Being Interviewed*

Long before the event took place, the laureates indicated they were receptive to the idea of being interviewed. Several offered to make hotel reservations for the visiting interviewer and five letters included invitations to lunch. Several who had delayed their answers wrote letters of apology explaining that they had been away from their offices. Three telephoned (all long-distance calls) to arrange for appointments[16] and two had their secretary leave word confirming appointments at the offices of other laureates who they assumed would be visited.

The principal factors affecting receptivity presumably were: the legitimacy of the interviewer's request, judged by her affiliations;[17] the laureates' sense of obligation to other scientific investigators; and the self-contained character of the proposed interview. One laureate described his attitude this way:

> What I didn't want was many hours or many sessions. But this kind, I think, covers very pertinent questions.

Not least, as we shall see, was the sheer interest of the laureates in the subject of the inquiry.

*Preparation for the Interviews*

Every interview was preceded by intensive and detailed preparation by the investigator.[18] Biographical data drawn from directories and other documentary sources were used in the initial phase of the interview as well as in quantitative analyses of migration of laureates, change of jobs, promotion rates, and the like. By piecing together information on the locations of scientists at particular

[16] The casual reply to the interviewer's second request for an appointment on a holiday (having been turned down once by a secretary) was, "What self-repecting physicist doesn't work on holidays?"

[17] By way of contrast, Rock Caporale, S. J. reported that his credentials were questioned by some members of the Catholic hierarchy he interviewed—in spite of his having access to the private meeting place of the Vatican Council and being attired in clerical garb (private communication).

[18] The amount of preparation appropriate for interviewing members of the ultra-elite will of course vary but it should, in every case, be more substantial than the brief biographical review prescribed by Dexter, *op. cit.*, p. 94 for elites who are less highly placed.

times, quasi-sociometric maps were constructed. These were used to develop specific lines of questioning, particularly on the conception of evocative research environments. These "career maps" of the successive locations of scientists—for example, those at Cambridge in the twenties and thirties or at Los Alamos during World War II—enabled the interviewer to ask about particular associates who might not have been mentioned by the laureates spontaneously. This preparation also gave the interviewer a detailed acquaintance with the names of the laureates' major associates and with their work.

Annual volumes published by the Nobel Foundation were the fundamental source for the second phase of preparation. They contain the laureates' addresses given on the occasion of their Prizes as well as their remarks at the Nobel banquet. Nobel addresses were a particularly rich source of information since laureates frequently use this occasion to review the work which was honored by the Nobel Prize, to mention the contributions of significant colleagues, and to describe the idiosyncratic histories of their research. Information from these lectures often suggested new lines for discussion in the interviews.

The next phase of preparation involved locating additional publications, especially those written by the laureates for lay audiences. *Abstracts* in each field were also carefully examined so that preliminary bibliographies could be constructed for each prizewinner. The names of collaborators, duration of joint-authorship, and name-ordering in the authorship of collaborative papers as well as the foci of their research were obtained from the abstracts. Later, complete bibliographies were requested from each laureate; these provided the data for the analysis of laureates' publication patterns.[19]

Finally, a summary of each laureate's career and his work was prepared for use in the interview itself. These one-page guides made a great deal of information readily available to the interviewer during the course of the interview.

*Some Functions of Preparation for the Interview.* Intensive preparation facilitated the process of interviewing in two principal ways. First, it gave evidence of the seriousness of the interviewer and helped to legitimize expenditure of time on the interview. This was an adaptive function designed to provide a firm basis for the

[19] Treatises on interviewing often suggest that "objective" data be juxtaposed with information derived from interviews in order to determine the validity of interview data. Although this is a sensible procedure, the blending of several types of data—"objective" and "subjective", qualitative and quantitative—has other merits. Each lends meaning to the other and need not be used only for purposes of assessing validity.

temporary laureate-interviewer relation. As a laureate in chemistry remarked:

> You've done your homework, haven't you? I'd feel terrible if I didn't do something for you.

Second, questions based on materials gathered in preparation often called forth responses that would otherwise not have been elicited, particularly if an entirely standardized interview guide had been employed.

Top elites are unwilling to devote time that otherwise might be fruitfully spent to projects they consider trivial. Another chemist admitted at the close of the interview:

> I said to myself before you came, "If she wants to ask me about social things, I will get her out of here fast." But you asked me about important things. What is written about science is never quite right. You have to hear it from the people who were there.

Almost all the Nobelists are acutely concerned with maximizing the use of that inevitably scarce resource, time; as one said, "I am constantly concerned with clock and calendar." In part, their commitment to the intellectually profitable use of their time led them to subject the interviewer to an almost continuous series of tests to ascertain the degree of her competence and commitment. It was here that preparation for the interviews was especially important since the results of these tests affected both the laureates' willingness to continue and the quality of their responses.

Several types of responses indicated that the laureates were continuously evaluating the performance of the interviewer, just as they subject their own colleagues to incessant evaluation. A prime indicator of this evaluation was, of course, the laureates' direct statements of what they thought of the interviewer and the interview. Often, the evaluations came in direct response to a question from the interviewer:

*Interviewer:* After you moved to X laboratory did you continue to use samples made at Y?

*Laureate:* Some, at the beginning. . . . You've read the history pretty thoroughly, haven't you?

Two aspects of the interviewer's remarks called forth these evaluations: first, the particular piece of information was not widely known, and second, the question involved piecing together quite disparate bits of data. In a few cases, it seems, explicit positive evaluations seemed to have been motivated partly by the laureate wanting to be "supportive" of the interviewer.

For some laureates, the testing of the interviewer was designed

to determine the extent of her knowledge. For example, "Have you read Hadamard? [Yes.] You have? Good." This enabled the laureates to identify the appropriate level on which to answer the questions and, secondarily, reinforced their sense that the interviewer was not totally ignorant of some aspects of the world in which they live.

Another variety of testing involved interviewing the interviewer not only on the extent and accuracy of her knowledge, but also on the intent of her questions:

*Interviewer:* [Team-research] seems to be a fairly critical issue right now. . . .
*Laureate:* In what way?
*Interviewer:* Well, for example, you mentioned declining satisfaction when you work with others. And at the same time, the kind of work you do seems to require it. And this puts a certain amount of strain on scientists.
*Laureate:* It does and it's not a good thing. It takes a lot of joy out of doing physics.

Some laureates, irritated at finding themselves in the situation of being interviewed, seemed to be testing the interviewer's tenacity. Sometimes this was expressed in outright antagonism, sometimes by more gentle indirection:

I have tried to assure the maximum of time [for research] but it always gets cut into by committee meetings and . . . interviews. That was mean but I couldn't resist. You know I really don't mean it.

Occasionally, the laureates wanted to know if the interviewer would stand her ground:

*Interviewer:* You received the Prize for a whole career of work.
*Laureate:* It wasn't put that way.
*Interviewer:* Don't you believe that this was so?
*Laureate:* Yes, I guess it was.

In most cases, when the interviewer responded with mixed sympathy and determination to continue, the mood of the laureates changed. Their responses became longer and more detailed. Sometimes their very postures changed to one of sprawling ease from one of uncomfortable vigilance, and they laughed more frequently.

Intensive preparation facilitated the *process* of interviewing top elites; it legitimized their expenditure of time by giving evidence of the interviewer's serious purpose and, to a degree, of her competence for the task in hand. Appropriate credentials were important for obtaining appointments for the interview, but intensive study of relevant documentary materials is needed to give interviewers some small insurance that covers the testing to which they may be subjected.

*The Interview Guide*

Even after initial pretesting, the interview guide was revised several times. When the interviewing began, the guide consisted of questions designed to elicit information on patterns of scientific work. The laureates were treated as respondents on matters pertaining to their own experiences and as informants in characterizing their field and its customs.

During the first interview, it became obvious that the standard pattern of interviewing was inappropriate for this top elite. Answers to any one question tended to be elaborate and to cover a number of matters that appeared later in the guide. Members of this top elite and presumably others are accustomed to being treated as individuals who have a mind of their own, following their own bent. They soon detect whether questions are standardized or tailored to their interests and histories. They resent being encased in the straightjacket of standardized questions.[20] Moreover, use of an entirely standardized format did not easily permit the use of information uncovered during the preparation phase. Since there was no intent to use the interviews as sources of data for quantitative analysis but rather as qualitative sources on the variety of experiences in science, the attempt to make the interviews strictly comparable by the use of fixed questions was abandoned. It seemed more sensible to focus the interviews on the issues most relevant for particular laureates.[21] For example, certain laureates were known to have worked with a single collaborator over a long period. Then interviews were designed to deal intensively with the character of long-term collaborations and the ways that these differ from temporary associations.

These considerations as well as great variations in the time available for the interviews led to revisions in the interview guide. Certain questions were earmarked as essential for all laureates and others designed for particular ones. After the third interview, the new procedure was used exclusively. By that time, the interview consisted of two major parts: the first dealing with detailed and specific data based on the laureate's biography—a kind of "focused interview"[22]—and the second with a comparatively standard set of

[20] This is, Dexter reports, also the standard response of lower-level elite respondents. *Op. cit.*, pp. 5-6.

[21] This decision was especially useful when the time available did not allow for intensive questioning on all issues.

[22] This part of the interview resembled the technique described in Robert K. Merton, Majorie Fiske, and Patricia Kendall, *The Focused Interview*, New York, Free Press, 1956.

questions covering types of collaboration and individual work other than those already discussed, practices of authorship, characterizations of their field and responses to having won the Prize. The latter remained essentially unchanged throughout the rest of the interviews.

*A Note on the Use of Biographical Summaries.* The summary sheets prepared for each interview were invaluable during the first part of the interview. They included information on where the laureate was located during various periods and lists of other scientists at work in the same place. The dates of major investigations were noted, as well as the co-authors of the papers reporting them. Cases of simultaneous independent discoveries, if any, were included. A second sheet consisted of lists of particular questions, usually prompted by something the laureate had written. Relevant scientific terms and their definitions were also included. Before each interview, these summaries were carefully reviewed and much of their contents committed to memory. They were, however, always used for reference during the interview.

*Revisions of the Interview Guide.* After twenty interviews were completed, the transcripts were analyzed for important and recurrent themes, so that new questions might be added to the standard portion of the guide.[23] Two social processes were identified as significant during this preliminary phase of analysis: the operation of the Matthew Effect, which identifies the allocation of inordinate credit for joint research to eminent scientists at the expense of their less well known co-workers, and the development of scientific ideas in the course of social interaction. Questions were added to elicit more detailed information on how these processes occur. Greater emphasis was also given to the structural mechanisms promoting autonomy of scientists and to scientists' ambivalence toward receiving the Nobel Prize, two issues whose significance became apparent in the first set of interviews. Merton, West, and Jahoda, and, independently, Hyman, have noted the advantages of "successive" research designs in which new hypotheses developing out of early stages of data collection are tested in later phases.[24] Successive designs can

[23] The final draft of the interview guide may be found in Zuckerman, "Nobel Laureates. . ."

[24] The research design of successive interviews with matched samples after an intervening analysis of data from the first interview is described in some detail as "the procedure of overlapping [interview] schedules" in Robert K. Merton, Patricia S. West, and Marie Jahoda, *Patterns of Social Life: Explorations in the Sociology of Housing,* New York, Columbia University Bureau of Applied Social Research, 1951, Appendix (mimeo.); Herbert H. Hyman, "Research Design," in Robert E. Ward, ed., *Studying Politics Abroad,* Boston, Little, Brown, 1964, pp. 153-188.

provide both for strictly comparable data and for new kinds of data focused on ideas newly emerging in the course of preliminary analysis.

Some brief remarks are in order on the cumulative aspects of interviewing individuals who know one another. It was particularly useful for the study of scientific collaboration to have interviewed pairs and trios of co-workers. These interviews provide valuable data on patterns of interaction and on the various perceptions of events by persons playing different roles in them. For this reason, certain interviews focused on occasions on which Prizewinners had worked with one another. Thus it was inevitable that the laureates would be aware that questions were being asked which must have been based on remarks made by other laureates. This presented certain difficulties in maintaining the confidentiality of the interviews but it also appeared to motivate these laureates to report events in sufficient detail that the record would be complete. In this sense, the contents of the interview guide was based on prior interviews as well as on earlier preparation.

*Use of a Tape Recorder*

All interviews except one were recorded on tape, thus providing an exact transcription. The usual disadvantages of recording—its tendency to provoke anxiety and inarticulateness—are not apt to be present for top elites, especially under conditions of confidentiality and especially for those parts of the interview focused on matters that are not sensitive. Laureates are accustomed to having their remarks recorded; some use tapes for their own work. They are not reticent and soon ignore the presence of the machine. Tape recording turned out to be beneficial both for interviewer and respondents. The full attention of the interviewer was focused on what was being said, and the usual pauses required to transcribe the contents of the interview did not intrude. The laureates were probably more articulate and discursive than they would have been if they were pressed to adjust the pace of their remarks to the speed at which the interviewer could take notes. The advantages of complete accuracy are obvious and the tapes themselves are historical documents of some interest.

## TECHNIQUES OF INTERVIEWING

The ideal interview includes a sequence of questions directly responsive to remarks the respondent has already made and, at the same time, covers the pertinent items in the interview guide. In exploratory interviews, there is the special problem for the interviewer of being sufficiently alert to discern new themes so that they may be pursued even at the cost of sacrificing additional ma-

terial on subjects that have already been given some measure of clarification.

*Rapport*

There were, of course, Nobelists who disliked being interviewed even though they had agreed to the venture. Their discomfort or irritation was usually evident in their remarks. There were also behavioral cues. At the beginning of one interview, the laureate sat about four feet from the interviewer in a chair on rollers. He began to retreat so that by the end of the interview he was at least ten feet from his original position. Interviewers must recognize these signs of faltering interest or of hostility in order to make new efforts to interest or pacify the respondent. There were, however, two or three cases in which every effort on my part failed to improve the quality of response.

*Technical Language*

Intensive preparation brings growing familiarity with the technical language deployed by the laureates. In the early phase of most interviews, the laureates tried to avoid the use of language I might not understand. When given cues that they would be understood—particularly by my using such terms—they relaxed and their vocabulary more closely approximated their usual one.

Two types of "technical" language were used: terms and phrases employed in their scientific work and the scientific argot used to describe colleagues, fields, and the experience of doing research. The latter idiom includes the familiar terms "operator," "hot" and "quiet" fields, scientific "taste," and so forth. The scientific language as well as the trade vernacular was used to convey the sense that the laureate was not talking to a total alien. It was not intended to convey expertness on the part of the interviewer and did not seem to be perceived as such an attempt. Since incorrect or awkward use of technical language disrupts interviews, it was used with discretion.

*Types of Questions*

Two techniques were used to give continuity to the interviews: questions were preceded by bridging remarks, such as "You said earlier that . . . ," and links between apparently discontinuous parts of the interview were clarified; these frequently took the form of comparative questions, for example "How does . . . differ from . . . ?" It is not always possible to provide continuity. On these occasions, this too was signaled, for example, by "I'd like to return to . . ." or "Now I would like to move to another problem. . . ." This

top elite were thoroughly aware of discontinuities in the conversation and it seemed sensible to let them know that the interviewer was also aware of abrupt shifts rather than to hope that they would not be noticed.

Specific questions based on prior preparation elicited detailed replies. These questions served several purposes. First, it was sometimes the case that the laureate had written on a pertinent subject in an instructive fashion but that further detail was needed. Second, observations made during the course of preparation formed the basis for another sort of question:

*Interviewer:* I wanted to ask you, did you take any of your people with you to Cornell? I notice there's an overlap of publication dates with Jones and Smith.

*Laureate:* . . . I believe when a man moves he should transfer, in a small way, a part of his environment. You teach through the environment you've created.

Thorough knowledge of respondents' careers enables one to ask questions that elicit replies useful for sociological analysis and tends to diminish the number of rambling responses which have no definite location in time and place.

Another technique used to call forth detailed replies involved phrasing questions or comments in rather extreme form. These usually elicited their qualified elaborations. The laureates tend to be unwilling to settle for only approximate versions of what they wish to convey. Sometimes this involved rephrasing what they had said: "So one might say that . . ." The risks involved in using this technique are great; it sometimes interferes with the respondent's sense that he is being understood.[25] Even when it was used in its blandest form, the laureates occasionally expressed irritation and countered with, "I've already explained that . . . ."

This technique is, of course, quite different from situations in which the interviewer simply misunderstands or makes a mistake, such as confusing an accelerator with a chain reactor. Errors of the latter kind seemed to have little effect on the interview; nonspecialists are not expected to have full command of, for them, exotic and specialized knowledge. In fact, a great deal of credit is given for even a small degree of scientific literacy but small prices are paid for lack of it.

Even with so self-confident a group as Nobel laureates, the interviewer is occasionally obliged to provide social support. Several

[25] Dexter comments on the potential costs of using the contentious interview technique prescribed by S. F. Nadel for inquiring about secret or forbidden topics. *Op. cit.*, p. 25.

types of occasions called for it. Sometimes a laureate was not sure that he should continue with a particular observation. When it was desirable, questions or comments signaled continuation.

*Interviewer:* I'm interested [that] you've reflected on this.
*Laureate:* I haven't reflected on this for the interview but—this is off the cuff—I've always been conscious of these things. . . . It's very easy . . . somebody shows an interest and seems to understand you and then you get to talking too darned much—which I think I have.
*Interviewer:* Not at all.

Some questions were perceived as threatening, especially those which seemed to require the laureates to disclose details of conflicts between co-workers or which focused on distressing events in their careers. It was possible in some cases to reassure the laureate that he was not being asked to reveal confidential information about particular people or events:

*Laureate:* It's not necessary to talk specifically about it.
*Interviewer:* Oh no. I'm much more interested in the types of occasions that make for conflict and what happens rather than in the people involved.

There were other occasions, however, when the laureates made it clear that they would not answer a particular question:

*Interviewer:* You said that Dr. S. was not the easiest man in the world to work with. What exactly do you mean?
*Laureate:* I don't know that I'd like to talk about that.

Further pursuit would have been unwise. So far as possible, the transition to new lines of questioning was casual and matter of fact. Some sensitive areas for particular laureates were anticipated and questioning on these was put off until the end of the interview. As it turned out, my fears that these might result in termination of the interview were unfounded. On the whole, the laureates have learned to evade, without much embarrassment, questions they do not wish to answer.

The phrasing of questions also seemed important. The laureates responded with unusual precision to the wording of questions. For this reason, it is difficult to use the routine procedure of beginning with a general question and moving successively to more specific issues. Laureates frequently asked for definitions of terms or supplied complex variations on the meaning of particular wordings. At times, this served to clarify matters that the investigator should have clarified for herself. For example, when asked if the Nobel Foundation had honored their most "important" work, several of them differentiated between work having the greatest immediate impact on their field, work giving them the most understanding of

the problems that interested them, and work that turned out to be most challenging for them. Not only was it illuminating to discover that there might be little overlap between these types but the conceptual clarity that many of the laureates bring to describing experience turned out to be helpful in improving the interview guide.

*Images of the Interviewer*

Spontaneous comments by the laureates indicate that they saw the interviewer as playing three distinct roles. I was seen, by some, as an expert in my own field; by others, as a combination layman-expert in their fields; finally, many perceived me as a part of the communications system that links the laureates. For some, seeing me as a social scientist meant that I was also an outsider, someone who could not have had direct experience with doing science. As the interviews proceeded and I gave some indication of knowing something about their work, it became clear that some of them assumed I had a competence in their fields. One asked, "But you seem to know a lot about what I did in physics. You have been studying it?" They assumed that I had read the relevant materials and was familiar with the names of other scientists and with their work. These assumptions were demonstrated over and over by mentions of names and research without qualifying or descriptive remarks.

All the laureates had been told that the interviewer had seen or would eventually be seeing their fellow Prize-winners. Although the laureates are not in regular contact, many of course know one another and often asked if I had seen some special friends. Some even asked, as a physicist did, in response to a question: "Did X tell you that?"

Protecting the anonymity of the respondents was made difficult because they knew the other individuals involved in the investigation and were understandably curious about what others had said:

*Laureate:* Have you talked with Y yet?
*Interviewer:* Yes.
*Laureate:* . . . Interesting. There's a problem there, isn't there?
*Interviewer:* Well—
*Laureate:* Yes. Okay. Much more interesting than my problems.

Others saw me as a direct link to other laureates. After describing a particularly complicated episode, one added:

*Laureate:* Don't tell Z about that when you talk to him. I'm not sure I ever told him about it. I don't want to take the chance of you telling him.
*Interviewer:* I wouldn't think of it.

Most laureates understood immediately that I was not free to report what others had said and also expected that what they said would be treated confidentially.

In interviews as in other social situations, people develop a set of images of one another and these are used as guides to behavior. Yet interviews are also atypical social relations, for the respondent is asked to give far more information about himself and has access to fewer explicit cues from the interviewer than would usually be the case. In spite of this, the laureates obviously made attempts to locate me socially, to evaluate my performance by devising tests, and to develop a sense of my personal qualities.

### DIFFERENCES IN INTERVIEWING TOP ELITES AND OTHERS

It is prosaic but true that most respondents, and ultra-elites in particular, appreciate being treated as individuals. Standardized interviewing is less effective than procedures designed with the competence of top elites in mind. Nobel laureates in science were, in general, anxious to discuss their work. By contrast, they were frequently irked by requests for opinions on subjects which one described as ranging "from air pollution to population control," subjects they do not feel particularly able to handle or in which they have little interest. Ordinary respondents are more likely to discuss issues about which they have little information.[26] The laureates' responses indicated extraordinarily detailed perceptions of questions. Many were acutely aware of what they had said previously and clarified the relations between disparate sets of ideas expressed at different times in the interview. Their replies contained almost endless qualifications and explicit references to constraining conditions. As a group, they were uncomfortable with loose generalizations. Once they decided that they did not wish to answer particular questions, standard techniques of eliciting further information were not useful. On the other hand, they were sensitive to behavioral cues of appreciation and support and would usually elaborate with little prodding.

In all cases, the difference in rank between the laureate and the interviewer impressed itself on the situation. This is not to say that rank differences were treated invidiously, although greater difficulties probably would have arisen had the interviewer held equivalent low rank in their sciences rather than in a wholly unrelated

[26] Herbert H. Hyman and Paul B. Sheatsley observe that Americans are willing to express opinions "on . . . every conceivable issue" whether in possession of relevant information or not. "The Current Status of American Public Opinion," *National Council for Social Studies Yearbook 1950*, Vol. 21, pp. 11-34.

field. However, the frequency of evaluative statements by the laureates indicated that they saw themselves as judges and saw me as the object of judgment. Nevertheless, some did ask for evaluations of their performance as interviewees. One queried: "How much of this do you want?" and another: "Are you interested in knowing something about the background of my co-workers?" This type of response seemed to be directed, not so much at pleasing the interviewer as to get some measure of their effectiveness in the interview task with the intent of changing their performance if that seemed appropriate. The laureates, in this sense, differed from other respondents who characteristically develop an acquiescence set. The Prize-winners were not much interested in impressing the interviewer or gaining her good opinion. Interviewers must expect to be subjected to frequent and critical evaluation by top elites and must be prepared for it. In return, members of the top elite are motivated to succeed in the role of interviewee as in other roles and are likely to perform at high levels of competence.