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SOME ISSUES IN THE METHODOLOGY OF ATTITUDE
RESEARCH

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*SOME ISSUES IN THE METHODOLOGY OF ATTITUDE
RESEARCH*

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PREFACE

KIERAN A. KENNEDY

Director, The Economic and Social Research Institute

Following the publication of the paper *Attitudes in the Republic of Ireland Relevant to the Northern Ireland Problem* (ESRI Paper No. 97), by E. E. Davis and R. Sinnott, the Executive Committee of the Institute proposed that a paper be devoted to the subject which would enable the authors to respond fully to criticisms of Paper No. 97, and would allow the methodological and scholarly issues that arise to be discussed in an appropriate academic forum. The present paper is the outcome.

Part I contains a general review of the issues by the authors of Paper No. 97, and their response to published criticisms; Part II is a critique of Paper No. 97 by four other members of the Institute's research staff; and Part III is a rejoinder by the authors of Paper No. 97 to the critique in Part II. In Appendix I, the Head of the Survey Unit deals with issues raised about the sampling method used in Paper No. 97. For some years past, it has been the practice of the Institute, on grounds of economy, not to publish questionnaires in full. This practice was followed in the case of ESRI Paper No. 97, though all of the questions involved in the analysis were published in the text of the paper. As there has been considerable interest in the questionnaire, however, it is reproduced in full in Appendix II.

In the present paper, as in the case of all ESRI papers, only the authors are necessarily committed to methods, analysis, interpretation, and findings. Papers in each of the Institute's series are subject to the relevant refereeing procedures described in my *Preface to Policy Research Series Paper No. 1*. The final responsibility for deciding whether, and in what

form, the papers are published rests solely with the Director. The established practice of the Institute, conforming to normal academic practice, is that no direct supervisory function is exercised by the Council, or by its Executive Committee, in relation to a project once it is admitted to the research programme. Accordingly, every Institute paper contains the following notice: "The paper has been accepted for publication by the Institute which is not responsible for either the content or the views expressed therein." This approach has been adopted as the best way of securing the academic freedom and integrity of research workers, with, it is hoped, a consequent growth of creative and rigorous research.

PART I

Attitudes Relevant to the Northern Ireland Problem:
Methodological and Interpretative Issues Relating to
Attitudes to the IRA and towards Northern Ireland
Protestants

E. E. Davis and R. Sinnott

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INTRODUCTION

There are two ways in which one can evaluate research results such as those presented in *Attitudes in the Republic of Ireland Relevant to the Northern Ireland Problem: Vol. 1 Descriptive Analysis and Some Comparisons with Attitudes in Northern Ireland and Great Britain* (ESRI Paper No. 97). The first is to examine the methodology and its application in the particular case. The second is to examine the results and their interpretation. The methodological issues are dealt with in Section I. The underlying concept of attitude and the criteria of attitude research are set forth and the extent to which the research meets these criteria is examined. Section II deals with the results and their interpretation. Two issues arise. Are the results described and interpreted in appropriate terms without exaggeration or distortion? How do the results as interpreted compare with other relevant evidence?

Criticisms of findings in ESRI Paper No. 97 which deal with attitudes to the IRA and attitude towards Northern Ireland Protestants fall into the foregoing broad categories. *Methodological* criticisms related firstly to the questions or items which were used. Critics argued that they were merely factual statements; that they used emotive language; that either singly or in combination they lacked balance; that they were vague and ambiguous; that interviewees were not asked directly about the attitudes reported; that graded response categories were used which were meaningless in the context of the items concerned; and that there was no provision for "don't know" responses. Secondly, there were methodological criticisms of the statistical analysis of the data relating to attitudes to the IRA and towards Northern Ireland Protestants. These criticisms relate mainly to the procedure of factor analysing only five variables, and to the interpretation of factor loadings. Both sets of methodological criticisms are

dealt with in Section I. In regard to the *interpretation* of the findings, critics suggested that the results were described in an extreme and unwarranted manner, and that the results conflict with other evidence. These criticisms are dealt with in Section II.

I METHOD

A The Concept of Attitude

In ESRI Paper No. 97 we distinguished between what we described as choice of solution, policy preferences and attitudes. This distinction is basic to the structure of the report.¹ The first element of this tripartite distinction — choice of solution — is defined as an outcome (a set of political institutions) which is regarded as both desirable and possible. This concept is discussed at length in Paper No. 97 (pp. 29-32 and Figure 1). Turning to the second element, policies are defined as “various steps (which) have been suggested which the British and Irish Governments might take in order to assist in bringing about a solution” (p. 63) and policy preferences are what people think should be done in the case of each proposed step or action.

In regard to the third element, the meaning of the concept of “attitude” seemed to us to be sufficiently clear in the context of the treatment of the attitudes in question (towards partition, the IRA and Northern Ireland Protestants) in Section IV. Since many of the criticisms of Section IV of Paper No. 97 would seem to be due to the fact that we did not spell out the meaning of this widely accepted and widely used concept, an elaboration of its meaning is necessary at this stage.

The word attitude, as used in social psychological theory and research, has two meanings: a broad meaning and a more precise and restricted meaning. We shall deal here with the

1. The distinction is outlined in the General Summary which precedes the Report, is re-stated in the Introduction (p. 21) and is further elaborated on in the Report in discussing preferences regarding government policy towards the IRA (p. 77). For a full account of the background to the research as a whole, see Davis and Sinnott 1976, 1978a, 1978b, 1978c, and Sinnott and Davis 1979.

term in the second sense² since this is the meaning of attitude as the term is used in the distinction between choices, preferences and attitudes, and since this meaning underpins the discussion in Section IV. Probably the most frequently quoted definition of attitude in this second sense is that of Allport: "An attitude is a mental and neural state of readiness, organised through experience, exerting a directive and dynamic influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935). Examination of more recent definitions shows that Allport's approach continues to be influential. For example, the following definitions have been put forward: "A personal disposition common to individuals, but possessed to different degrees, which impels them to react to objects, situations or propositions in ways that can be called favourable, or unfavourable" (Guilford 1954, pp. 456-457); "state of readiness, a tendency to act or react in a certain manner when confronted with certain stimuli" (Oppenheim 1966, p. 105); "the specific organization of feeling and beliefs according to which a person evaluates an object positively or negatively" (Katz, 1966, p. 150); "an organised predisposition to think, feel and behave toward a referent or cognitive object" (Kerlinger 1973, p. 495); "positive or negative dispositions which dispose a person to behave favourably (positively) or unfavourably (negatively) toward particular foci" (MacGréil 1977, p. 11); "a relatively enduring system of beliefs about, and associated feelings towards, an object or situation, which predisposes one to respond to it in some preferential manner" (Committee on Irish Language Attitudes Research, 1975, p. 21) and finally, and rather simply, "feelings about particular social objects" (Nunnally 1967, p. 515).

We do not propose to examine in detail these various

2. An example of the broad meaning of the term can be found in Sellitz *et al.*, where attitude is defined as including: "various aspects - for example, beliefs about the nature of an object, person, or group; evaluations of it; tendencies to behave towards it in a certain way; views about appropriate policy with respect to it. One may also include in his definition such other characteristics of an attitude as the salience of the object for the individual, the extent of differentiation in his view of the object, his time perspective with respect to it, etc. Having thus specified his definition of *attitude*, the investigator is in a position to formulate his research problem more clearly by deciding which aspect he wishes to focus on" (Sellitz, *et al.*, 1959, p. 146).

definitions nor to review the many other available definitions of attitude. The above definitions are presented in order to illustrate two central features of attitude in this second or restricted sense of the term. The first feature is that an attitude is essentially evaluative in that it ascribes positive or negative attributes to an object or involves an orientation towards an object which is positive or negative. Secondly, an attitude is not necessarily a reasoned response arrived at as a result of comprehensive reflection and consideration but may be primarily an affective response which is a matter of disposition or habit. In summary, when analysing attitudes in this sense, we are seeking to identify psychological states, dispositions, evaluative orientations, or feelings towards the object in question. This concept has important implications concerning the techniques used to study attitudes.

B Choice of Technique

Though many techniques are available to the survey researcher, two of the major alternatives for use with large samples are forced choice questions and agree-disagree attitude items. In the first of these two techniques there is one question per issue and the respondent is asked to choose one of a series of specified responses. In the case of the second technique, the attitude in question is usually measured by a combination of the responses to a number of individual attitude statements.³ Each of these two methods has its own validity, its own function and, most importantly, its own rules.

For the purpose of identifying *choices* between mutually exclusive categories, the forced choice question is the most appropriate method. The principal rules governing this method are that the questions should be unambiguous, that

3. Such combinations may be presented and analysed as summations or averages of response scores (the procedure which we have employed) or as sets of responses to individual items. Likert items have the advantage that they can be used in both ways. As Moser and Kalton point out "As the items composing a Likert scale are themselves rating scales they can often usefully be analysed individually" (Moser and Kalton 1976, p. 362).

they should not lead the response in one direction or another, that they avoid loaded or emotive terminology and that they should not presuppose information that the respondent does not have.

When the task is to identify and measure *attitudes*, forced choice questions have major limitations. Attitudes do not fit easily into either/or categories, they are essentially matters of degree and techniques for measuring attitudes should be capable of taking account of this characteristic. As Edwards (1957) in his text on *Techniques of Attitude Scale Construction* states:

It may be noted that in the definition of attitude given earlier we stressed the notion of *degree* of positive or negative affect associated with a psychological object. It is a disadvantage of both the method of direct questioning and the observation of behaviour that they do not conveniently lend themselves to an assessment of the degree of affect individuals may associate with a psychological object (p. 8).

The very precision of language required of a forced choice question is a disadvantage when one is seeking to measure something in which feelings and habit generally play a large role. Formal precision in language may fail to touch on or evoke the response (positive or negative) that more colloquial language could. A related problem is that the directness which is required of a forced choice question may inhibit a frank response on sensitive issues. We believe that attitude to the IRA in particular is a sensitive issue and that individuals may not be entirely frank in response to direct and explicit questions. Accordingly, an indirect approach to the issue is required. The authors of the classical attitude study *The Authoritarian Personality* addressed a similar problem in these words:

One might inquire why, if we wish to know the intensity of some ideological pattern — such as anti-Semitism — within the individual, we do not ask him directly after defining what we mean. The answer, in part is that the phenomenon to be measured is so complex that a single response would not go very far toward revealing the important differences among individuals. Moreover, anti-Semitism, ethnocentrism and political-economic reaction-

ism or radicalism are topics about which many people are not prepared to speak with complete frankness. Thus even at this surface ideological level it was necessary to employ a certain amount of indirectness (Adorno, Frenkel-Brunswik, Levinson and Sanford, 1950, p. 14f).

In the foregoing quotation Adorno *et al.* also make the argument for the assessment of complex attitudes by means of more than a single response. The problem with forced choice questions is that, in exercising choice, the respondent reacts specifically to only one of the options or statements offered to him. This precludes the possibility of combining responses to the whole range of options. This is not a limitation in studying choice from among known possibilities — as in the case of choice of solution or voting intention.⁴ But it would seriously inhibit the measurement of attitudes involving complex mental or emotional states.

Thus difficulties involved in the use of forced choice questions to study attitudes can be overcome to a significant extent by employing the alternative approach mentioned — using agree-disagree attitude items and combining the responses to a number of items in order to measure each attitude. We are not arguing that this method is the only valid approach to questionnaire construction nor that it suits all circumstances. We do claim, however, and the claim is widely accepted in the literature on survey research, that for the purpose of investigating attitudes in the sense defined, the use of attitude items and attitude scales is the most appropriate approach. This is particularly so when the objects of the attitudes include highly sensitive matters.

The crucial point in the present context is that the criteria of attitude measurement and, specifically, the criteria for the construction of attitude items or statements and attitude scales are quite different from those which apply to the design and wording of forced choice questions. We now out-

4. In that context, we used forced choice questions in ESRI Paper No. 97. Examples are the series of questions on choice of solution (pp. 29ff.) and the question on voting intention in a hypothetical referendum on the removal of Articles 2 and 3 from the Constitution (pp. 67-68). In the former case, respondents were shown a list of potential solutions. In the latter case, a card containing both articles was shown to the respondent as part of the question.

line these criteria and then discuss their application in the research reported in ESRI Paper No. 97.

C Criteria of Attitude Measurement

(i) Items should employ language and phrasing which is familiar and colloquial. One of the purposes of this criterion is to ensure that the terms used are understood by respondents. A further reason is that formality in language would be likely to inhibit rather than facilitate the expression of habitual responses. It might seem that this particular guideline would lead to some vagueness, and indeed it has been suggested that vagueness to the point of ambiguity is a fault of the items we have used. It should be emphasised that there must be no vagueness in the mind of the researcher as to the nature of the attitude he is studying. In this project, as in all attitude research, much preparatory work was devoted to clarifying the attitudinal concepts employed (see discussion under criterion (vi) and (vii) below). Equally we do not want statements which obviously contain more than one meaning.⁵ On the other hand, any attempt to excise all generalities from attitude items and to specify each term used would lead to a degree of formality and complexity in the items which would totally defeat their purpose. Oppenheim deals with the issue in the following terms:

Paradoxically, however, it does not always pay to make the statements too clear and unambiguous, or to ask the respondent to think very hard. Often, a statement that is, strictly speaking, almost meaningless, works very well because pilot work has shown that respondents cloak it, in their own way, with the meaning that our context requires . . . As to careful thought, of course we want respondents to be attentive, but we want them to think and express themselves as they do habitually; we don't want them to think out a new philosophy of life on the

5. If critics approach the interpretation of attitude items in a highly intellectualised way, seeking total exactitude, then of course ambiguities will be detected. Such criticisms are irrelevant in that, as the above quote from Oppenheim makes clear, the technique is specifically designed to avoid rumination in answering the survey questions.

spot or to start ruminative doubts with every item. This is one more reason for clothing the attitude statements in language that will be familiar to them. (Oppenheim, 1966, pp. 115-116).

(ii) Items should be evaluative and should include contentious and emotive words and phrases. While a rule of forced choice questions is that they should aim at neutrality, just the opposite rule applies to attitude items — they should ascribe positive or negative attributes to the object in question. Nunnally expresses the point succinctly: “There is no place for truly neutral statements in summative scales” (Nunnally 1967, p. 532). On this aspect of the construction of attitude items Oppenheim is even more specific:

Remembering that attitudes are emotional, we should try to avoid the stilted, rational approach in writing attitude statements and select from the tapes the more contentiously worded statements of opinion; we must not be afraid to use phrases relating to feelings and emotions, hopes and wishes, hates, fears, and happiness. (Oppenheim, 1966, p. 114).

(iii) Items, while contentious, should not be extreme. This and the following criterion are mentioned by Nunnally in the passage from which the above quotation is taken and both are really subsidiary aspects of the criterion of non-neutrality. Any attitude may be expressed in statements of varying degrees of extremity. Extreme expressions of an attitude will be endorsed only by those who hold the attitude concerned very strongly. Thus, very extreme statements of an attitude should be avoided as the responses to them are likely to misrepresent the varying degrees in which the attitude is held. An underlying postulate here, deriving from the overwhelming weight of experience in attitudinal research, is that attitudes are essentially a matter of degree.

(iv) There should be an even division between positive and negative items. Moser and Kalton (1976) suggest two reasons for variation between positive and negative items — it assists in maintaining respondents' attention and it minimises the

effect of response set (the tendency for individuals to assume a patterned or set way of responding) (Moser and Kalton, *op. cit.*, p. 362).

(v) Response categories for attitude items should allow for expression of the intensity of attitude. One way of achieving this is that respondents should be allowed to agree slightly, moderately, or strongly with each item, and so also with levels of disagreement.

(vi) Items must be relevant to the psychological object concerned. This entails that the researcher has a clear concept both of the attitude he wishes to measure and of the object towards which it is directed. This conceptual clarification is arrived at by means of a combination of *a priori* reasoning and extensive exploratory research. The exploratory research consists of open-ended interviews which should, where possible, be tape-recorded. Free-ranging interviews of this sort play a vital part, not only in clarifying the nature of the attitudes in which the researcher is interested, but also in providing raw material for construction of attitude statements. This source material insures against the use of excessively intellectual and unfamiliar words and phrases. In emphasising the importance of pilot interviewing, Oppenheim describes its essential purposes as:

(1) to explore the origins, complexities, and ramifications of the attitude areas in question in order to decide more precisely what it is we wish to measure; (2) to get vivid expressions of such attitudes from the respondent in a form that might make them suitable for use as statements in an attitude scale (Oppenheim 1966, p. 112).

(vii) In developing the measures of attitude for the final survey (i.e., appropriate combinations of items), an analysis of responses to a large number of potential attitude items should be taken into account. This pretest entails further interviewing, with a larger number of respondents, using a structured questionnaire similar in form to the one that will be used for the main survey. A sample of 200 to 300 respondents is appropriate for this pretest. Its purpose is twofold:

to assess potential items and groupings of items by the analysis of actual responses to them and to improve and refine the attitudinal concepts which guide the research. A convenient and standard statistical procedure which allows for this interplay between empirical analysis and conceptual development is factor analysis. On the basis of the relationship between items (as measured by their correlation coefficients) factor analysis attempts to identify groups of items which "go together". This facilitates the interpretation of particular items and enables the researcher to discard unsatisfactory items and select a sub-group of items to represent a particular concept. At the same time, since the clusters do not necessarily correspond to the expected grouping of items, factor analysis may suggest modifications of the original concepts. Use of factor analysis is not limited to the pre-test data. It can also be applied to the results of the main survey and it may, even at that stage, suggest significant modification of the concepts and measures. In recommending that factor analysis be used for the purpose outlined, Nunnally says:

Since it usually is necessary to combine scores on a number of variables to obtain valid measures of constructs, some method is required for determining the legitimacy of particular methods of combining variables. Important in determining this legitimacy are the patterns of correlations among variables. Factor analysis is nothing more than a set of mathematical aids to the examination of patterns of correlations, and for that purpose, it is indispensable (Nunnally 1967, p. 371).

Factor analysis does not provide definitive proof of the adequacy of measures of attitude. On the other hand, the fact that the relationship between attitudinal concepts and items has been empirically examined, and that in the course of this analysis both concepts and items have been modified, increases confidence in the measures. The issue of the adequacy of measures can be thought of in terms of validity. A measure is said to be valid if it measures what it purports to measure (see, for example, Kerlinger 1973, p. 457). Homogeneity, or the internal consistency of a group of items, is put forward by Nunnally as a necessary but not sufficient

condition for validity⁶ (Nunnally 1967, p. 92). Factor analysis, by identifying relatively homogeneous clusters of items, enables one to apply this condition to the selection of items.

An important outcome of this preparatory research and analysis is that each attitude can be represented in the final questionnaire by relatively few items. This is important because questionnaire space and interview time are scarce, many issues compete for attention and much social and demographic data have to be collected from respondents. It is always desirable to have as many items as possible but, as Oppenheim points out, the number of items is of secondary importance:

However, more important than the number of attitude statements used is the fact that they have been scaled: They have been selected and put together from a much larger number of attitude statements according to certain statistical procedures. Because of this, we must not judge the relatively small number of attitude statements in a finished scale at their face value: they are the outcome of a process of complicated sifting and, in addition, represent all the preliminary work and thought described in Chapter 5 (Oppenheim 1966, p. 120).

D Application of the Criteria

The foregoing criteria are widely accepted for the measurement of attitudes. The attitude items used in the research must be judged by these criteria. Thus, criticisms which centre on the use of contentious statements, emotive

6. Specifically, Nunnally is referring to "construct validity" which is the concept most relevant to attitude research. His sufficient condition is that "the supposed measures of a construct . . . behave as expected" (Nunnally 1967, p. 92). This statement is preceded by the caution that "A discussion of how one can, if ever, obtain sufficient evidence that a domain of observables relates to a construct requires an analysis of some of the deepest innards of scientific explanation." (ibid. p. 92). This accords with Nunnally's earlier statement that "Validity is a matter of degree rather than an all or none property and validation is an unending process" (ibid. p. 75). A similar point is made by Kerlinger who, having discussed an ideal approach to analysing validity concludes: "Though efforts to study validity must always be made, research should not be abandoned just because the full method is not feasible" (Kerlinger 1973, p. 466).

language, and indirect rather than direct questions are really beside the point in that such criticisms arise from the application of criteria which pertain to a different methodology, which is not appropriate for attitudinal measurement. The question then is whether we applied the above criteria correctly. We consider this in relation to each of the criteria.

(i) Items should employ language and phrasing which is familiar and colloquial

Examination of the items will show that the language is colloquial and familiar and therefore tends to be general rather than precise and specific. These characteristics are in accord with the criteria of attitude research outlined. That the statements are among those ordinarily made about the objects or groups in question is borne out by our preparatory and exploratory work prior to the main survey. As briefly outlined in Paper No. 97 (ESRI Paper No. 97, p. 22), approximately 60 wide-ranging interviews dealing with the problem in Northern Ireland were conducted by the authors and several research assistants in the Spring and Summer of 1976. The interviews were conducted with people living in very diverse areas including a Border village and urban areas in the East, Midlands and South of the country. Interviewees were encouraged to express their views at length and in their own terms. With few exceptions, the interviews were tape-recorded so that the detail of phrases and words used could be subsequently examined. Potential attitude items were drawn from this source material and also from 70 taped interviews carried out by RTE journalists (see ESRI Paper No. 97, p. 22) and from material collected from newspapers and political periodicals. The end product was a collection of some 500 potential attitude items. These items were then sifted and edited in the light of the criteria of attitude item construction and in the light of concepts of the attitudes we wished to measure.

(ii) Items should be evaluative and should include contentious and emotive words and phrases.

Some of the criticisms of the individual items used to measure these two attitudes have been that they refer to

matters of fact, indeed to matters of fact which are beyond dispute and which compel agreement. Although, as Moser and Kalton note, factual items are sometimes used as indirect measures of attitude (Moser and Kalton 1976, p. 357), if many of the items were factual, it would indeed lead one to question whether this criterion of attitude measurement — the measurement of evaluative orientation — was being met.

In evaluating this issue, it is helpful to examine the responses to the individual items which are presented in Appendix A Table A1.⁷ Examination of these responses indicates that, whatever about being factual statements, the items are not statements which are obvious or which compel a particular response. In each case significant proportions of people take positions contrary to what our critics claim to be facts. For instance, in the case of the item "The vast majority of Protestants in Northern Ireland are willing to reach an agreement acceptable to the Catholic community" 32 per cent *agree*. One could interpret this and other divergences in response as disagreement about facts, and conclude that one set of responses represents a wrong perception of facts. The alternative and, to our mind, more plausible interpretation takes into consideration that the items either state basic evaluations ("I support, etc.," "..... it is only right that, etc.,") or they ascribe or deny positive or negative characteristics to the object or group in question ("bunch of criminals and murderers", "patriots and idealists", "willing to reach an agreement acceptable to the Catholic community"). On this interpretation the responses indicate not that some respondents misjudge the facts and are wrong but that respondents differ in their attitudes, i.e., they have different evaluative orientations towards the object or group in question.

It has been argued that the IRA items used are factual statements because they can be seen as referring to the defensive role of the IRA at the beginning of the 1970s. However,

7. These data were not included in the original paper as we felt we had adequately summarised them. We recognise that in not presenting these data in ESRI Paper No. 97 we did not adequately take account of the needs of those readers who prefer to see the individual frequencies rather than average scores, or who would wish to compare our summary measures to the distributions on the original items.

the items themselves are general rather than specific, and the insertion of a specific historical reference is arbitrary. This is not to deny that respondents may be influenced in their response by their perception of the role of the IRA in the past. This does not affect the point that the items are overall evaluations of the IRA.

Thus the items relating to attitudes to the IRA and towards Northern Ireland Protestants are evaluative not factual. What is more, these evaluations are frequently stated in a contentious way using emotive words and phrases (e.g., "bunch of criminals and murderers"; "basically patriots and idealists"; "prepared to defend privileges at all costs"). Use of such expressions is entirely consistent with the requirements of attitude measurement.

(iii) *Items while contentious should not be extreme.*

This criterion is subordinate to the more basic criterion that items should be contentious. The underlying principle is that the degree of moderation-extremism of an attitude item is relative to the attitude concerned. Just as, in general, measuring instruments must be in proper proportion to what is being measured, so also with attitudinal measures. Using an item which is very extreme relative to a particular attitude would be analogous to using an oven thermometer to measure body temperature. Thus the issue of whether our items are too extreme must be judged in the context of the nature of the attitude in question and of the range of statements commonly made about the object of that attitude. Seen in this light, the IRA items which critics have suggested are extreme are, we believe, contentious but not unduly extreme. In our exploratory interviews we encountered other statements which we judged to be more extreme than those which we finally used.

(iv) *There should be an even division between positive and negative items.*

As indicated, the first reason for this rule is that it assists in maintaining respondents' attention. This argues for a balance of items in the questionnaire itself. Examination of Section V of the questionnaire used in the present study (see

Appendix II) will show that a reasonable variation between positive and negative items is maintained in that section, and that further variation is derived from the inclusion of items dealing with perceptions rather than evaluations.⁸

The second reason for the rule (that it minimises response set) is related more to the balance of items in each single measure of attitude. This criterion was borne in mind in the selection of items for the original four measures of attitude which are listed on p. 94 of ESRI Paper No. 97. The four attitudinal measures, together with the positive-negative balance of the related items (in brackets) were as follows: attitude to partition (3, 2), attitude to the IRA (3, 2), attitude to British involvement in Northern Ireland (1, 2) and attitude toward Northern Ireland Protestants (2, 2). As indicated in Section IV of Paper No. 97, analysis of the results of the main survey suggested a different grouping of the items from that originally expected. In our judgement, the revised clustering of items produced more satisfactory measures of attitude. A price was paid in the process of revision in that the original even balance of positive and negative items was to some extent lost. Thus, attitude to partition is measured by five anti-partition items and one pro-partition item, and attitude to IRA motives is measured by two positively phrased items. We feel, however, that the gain involved in revising the expected clustering of items outweighs the partial loss of an even division between negative and positive items (the distinction between two components of attitude to the IRA is fully discussed below). The Committee on Irish Language Attitudes

8. The issue of the sequence of items or questions is not specific to the attitude-scaling approach. We have been criticised for our decision to place questions on preferences regarding British withdrawal before questions concerning expectations of the consequences of such withdrawal. The reverse of this ordering (see pp. 18-19 of the Questionnaire in Appendix II) would, in our view, be likely to bias downwards the preference for British withdrawal because to endorse something which has been stated to have violent consequences is likely to be seen as a socially undesirable response. It is much less likely that the question concerning preferences would affect responses to the question concerning expected consequences. It was for this reason that we asked for preferences first and expectations of consequences second. Since there are strong *a priori* grounds for believing that our question ordering was the most appropriate one, the strategy of rotating the ordering of the questions would have risked wasting half the data on this issue.

Research encountered the same problem:

Ideally one should include an equal number of positive and negative items in any attitudinal scale. Unfortunately, although we had included a roughly equal number of positive and negative items in the interview schedule, these did not "yield" an equal number of positive and negative items on each factor (Report of the Committee on Irish Language Attitudes Research, 1975, p. 27).

Besides, in assessing the question of balance of items, it should be noted that response set is not now generally thought to be as big a problem as has sometimes been suggested. After a lengthy discussion of the issue, Nunnally summarises the position as follows:

The overwhelming weight of the evidence now points to the fact that the agreement tendency is of very little importance either as a measure of personality or as a source of systematic invalidity in measures of personality and sentiments. What little stylistic variance there is because of that tendency, if any, can be mostly eliminated by ensuring that an instrument is constructed so that there is a balance of items keyed "agree" and "disagree" with respect to the trait in question (Nunnally 1967, pp. 611-612).

While Nunnally endorses the criterion of even balance within each scale, it is evident that he accords it a low priority.

(v) *Response categories for attitude items should allow for expression of the intensity of attitude.*

As indicated in Paper No. 97 (p. 23), the format for response was as follows:

	DISAGREE			AGREE		
	strong	moderate	slight	slight	moderate	strong
(Attitude Statement)	<input type="checkbox"/>					

The origin and nature of the attitude statements and the procedure for responding to them was fully explained to respondents (see page 6 of the Questionnaire in Appendix II). Registration of intensity of attitude was described to respondents as follows:

As it is likely that you will have stronger views about some of these statements than about others, we have provided three degrees of agreement and three degrees of disagreement for each statement. Please place an "X" in the box which best described your opinion (Appendix II, p. 6).

The use of this procedure was then illustrated by means of a hypothetical example. We have seen that it is desirable that provision be made for expression of intensity of attitude. Our procedure meets this criterion. Given the full explanation provided for respondents, we have no reason to believe that the use of degrees of agreement or disagreement with any of the items caused problems for the respondents.

Use of the above response format also raises the issue of the non-provision of an explicit "don't know" category. The "don't know" problem was handled in the following way. If a respondent refused to respond to a particular item, that item was marked "R" in the margin and these refusals were treated as missing data and omitted from the analysis. The highest overall refusal rate for any of the combinations of items was 3.5 per cent (see Table 43, ESRI Paper No. 97, p. 99). Respondents who said "don't know" were first of all prompted to see if a negative or positive response could be elicited. In the absence of such a response, that item was marked with "X" in the space between the Agree and Disagree sets of boxes. The responses to each item were assigned a score from 1 to 7, with 1 indicating strong disagreement and 7 indicating strong agreement and with "don't know" responses being assigned a score of 4. This procedure involves a definite interpretation of "don't know" responses as neutral. Now, the largest percentage of "don't know" responses on any of the items included in the summated scales was 3.7 per cent (see Appendix A Table A1). This means that including or excluding the "don't know" responses as scores of 4 in the scales has little effect on the results. Furthermore, there is ample precedent in the literature for the use of the procedure employed in the present research. After a lengthy discussion of the issue, Nunnally recommends that a "don't know" category should not be provided in the scale, giving as an example a six-step scale virtually identical

to the one employed in the present research. He summarises the position thus:

Although the issue is not highly important, in most cases there is a slight advantage in having an even number of steps rather than an odd number, as was illustrated previously in the six-step scale ranging from "completely disagree" to "completely agree" (Nunnally 1967, p. 522).

(vi) *Items must be relevant to the psychological object concerned.*

Two issues arise in this regard — the designation of the object of the attitude and the concept of the attitude itself. On the first issue, it has been suggested that our items do not meet this criterion because (a) the term IRA could be understood as referring to what is now commonly called the "Old IRA" and that on this basis the term "Provisional IRA" should have been used, and (b) the term "Unionist" would be preferable to "Northern Ireland Protestant" as a designation of the object of our "attitude of political opposition".

(a) While it is true that the Provisional IRA has been the largest and most active paramilitary organisation on the republican or nationalist side, at no point has it been the only active organisation of this kind. The term IRA has the advantage of being general enough to include all republican paramilitary organisations while at the same time being colloquially used as a designation of the Provisional IRA. We do not believe that there is any significant probability that, in 1978, in the context of a series of questions and statements dealing with the contemporary situation in Northern Ireland, respondents would understand the term IRA to refer to the military wing of the independence movement in the period 1919-1921 or to the anti-treaty forces in the period 1922-1923.

(b) The term Northern Ireland Protestants was used in preference to such terms as unionist or loyalist because all of the exclusively political labels have shifted considerably in meaning in recent years and no longer have a clear referent. The aim of the research was not to ascertain attitudes to those who happen to support the present constitutional status of Northern Ireland (the data in Paper No. 97 relating

to Northern Ireland indicates that this includes a significant proportion of Northern Ireland Catholics). We were interested rather in ascertaining attitudes towards Northern Ireland Protestants, not as a religious group, but as what we saw as a recognisable group or community involved in a political conflict. The items refer to this group or community and proceed to make political statements about it. The point is clearly stated in Paper No. 97 in introducing the items and the measure — “What is involved here is not a measure of social prejudice in general but of political attitude (ESRI Paper No. 97, p. 100).

For these reasons we believe that the terms “IRA” and “Northern Ireland Protestants” are the most appropriate designations of the objects of the attitudes concerned and, accordingly, that our attitude items meet this aspect of the criterion.

Relevance to the psychological object also requires that the researcher have a clear concept of what it is he is seeking to measure. As indicated in outlining this criterion the open-ended exploratory interviewing conducted at the outset of the research (described in (i) above) is a vital stage in developing appropriate concepts and in ensuring a match between concepts and items. Conceptual development and refinement obviously occur after this stage, however, and the issue of the development of our concepts of attitudes to the IRA and towards Northern Ireland Protestants and of appropriate measures of them is taken up at length in Section E, below.

(vii) In developing the measures of attitude for the final survey, an analysis of responses to a large number of potential attitude items should be taken into account.

Just over one hundred potential attitude items were included in a pre-test study on a stratified sample of 256 respondents in December 1976 — January 1977.⁹ At this stage of the research, the concepts, the attitude items and the relationship between them inevitably required considerable clarification and refinement. Factor analysis was used as an

9. For a detailed discussion of the pre-test and of some of the factor-analytic results see Davis and Sinnott 1978a and 1978b.

aid in exploring and interpreting responses to this large number of attitude items. The results of this analysis were used in selecting items to measure particular attitudes in the main survey. The responses in the main survey itself were then taken into account in finalising the measures of attitude and this process suggested further significant modifications (see ESRI Paper No. 97, pp. 94-101). The process of development of the measures of attitudes to the IRA and of attitude towards Northern Ireland Protestants will now be discussed in greater detail.

E The Development of the Measures of Attitudes to the IRA and of Attitude towards Northern Ireland Protestants

(i) Attitudes to the IRA.

Throughout the preparatory stages of the research a single concept of attitude to the IRA was employed, i.e., pro versus anti IRA. From an initial set of fifteen items, seven were selected as representative of this attitude. The other items were excluded from the measure because they were factual, historical, included more than one distinct concept, or because they related to specific policy preferences in the area of security. Five of these seven items were used with some minor modification in the final study, the other two being included in a nationally representative survey dealing mainly with subjective social indicators in June 1977.¹⁰

With the benefit of hindsight we readily acknowledge that it would have been better had we included more items relating to attitude to the IRA. This is particularly so in view of our decision, taken during the analysis of the survey results, to split attitude to the IRA into two components: attitude to activities and attitude to motives. It should be borne in mind, however, that in addition to the five IRA attitude items reported on in Section IV, the survey included seven items measuring policy preferences relating to the IRA.

10. The distributions of responses to these two items ("The IRA are engaged in a just war against the British" and "The IRA are an obstacle to a just and lasting solution to the problem in Northern Ireland") accord with the distributions on the items used in the main survey in 1978.

(The responses to each of these seven policy preference items were fully described in Section III of Paper No. 97 (ESRI Paper No. 97, pp. 77-83)). While one could have devoted a whole research project to exploring attitudes to the IRA, our research project was concerned also with many other aspects of the Northern Ireland problem such as choice of solution, policy preferences, and attitudes to Irish identity.

Given the limited number of items measuring attitude to the IRA, the question may well be asked: would it not have been better to have adhered to the original intention of measuring overall attitude to the IRA with five items? Had we done so the distribution of respondents on "attitude to the IRA: pro versus anti" would have been as shown in Table 1. Focusing on the summary figures in Table 1, we would have concluded that 23 per cent of respondents were in some degree pro-IRA in their attitudes, 50 per cent in some degree anti IRA and 26 per cent neutral. We felt that this conclusion would not have been incorrect, but that it could be, and in our view should be, further refined. The possibility of such refinement is suggested in the first place by the range of the responses to each of the individual items (see Table 2). These range from a low overall pro IRA response of 20 per cent to the "methods" item ("the methods of the IRA are totally unacceptable") to a high overall pro IRA response of 52 per cent to the "patriots and idealists" item ("the IRA are basically patriots and idealists"). One interpretation of this range of responses is that the items are all expressing the same attitude with varying degrees of intensity. An alternative interpretation is that two different things are being measured. When one re-examines the five items in the light of this possibility, a plausible case can be made that Items 1 and 2 in Table 2 are measuring attitude to IRA activity, and Items 4 and 5 are measuring attitude to IRA motives. Placement of Item 3 is more problematic but it seems to us that the balance of argument is in favour of treating it as a measure of attitude to activities. Although this interpretation is not conclusively established by inspection of responses to the individual items and relies on the researcher's judgement, it is given support by a separate factor analysis of the five IRA items.

While factor analysis of five variables is uncommon, this does not in any way invalidate the procedure, though the results will be more tentative than would be the case with a larger number of items. The first question in this factor analysis is whether or not it is legitimate to extract more than one factor. Barlett provides a test of significance for assessing the legitimacy of extracting additional factors from a correlation matrix (see Lawley and Maxwell 1963, pp. 51-54). Application of the test indicates that it was quite in order to extract a second factor.¹¹

Table 1: *Attitude to the IRA: pro (versus) anti (based on five items taken together)*

<i>Attitude to IRA: pro (versus) anti</i>	<i>Percentage of respondents</i>	<i>Attitude to IRA: pro (versus) anti (reduced categories)</i>	<i>Percentage of respondents</i>
1 Strongly anti	9.0	Anti	50.3
2 Moderately anti	17.0		
3 Slightly anti	24.3		
4 Neutral	26.6	Neutral	26.6
5 Slightly pro	15.1		
6 Moderately pro	5.6		
7 Strongly pro	2.4	Pro	23.1
<i>Total Number</i>	<i>100.0 (1697)</i>	<i>Total Number</i>	<i>100.0 (1697)</i>

11. In this case the issue is whether the matrix contains more than one factor, so that one must test the null hypothesis that the remaining four latent roots are equal. Application of the test yields a value for the criterion of 126.52 which is distributed approximately as χ^2 with, in this case, 9 degrees of freedom. This gives a level of significance of .001. Application of the test to the three remaining latent roots indicates that one could extract a further factor. However, given the ratio of factors to variables which this would involve, a three-factor solution would not be satisfactory. One should note that the above test relates to the random sample ($N = 1758$) and the two extra samples ($N = 217$, $N = 236$) taken together. This is because in the original factor analysis we employed all the available cases. Our reason for doing so was that, since the structure of attitudes could be expected to be relatively stable across all subgroups of the population, the opportunity to work with the larger number of cases could and should be availed of. Because tests of significance require the assumption of random sampling, we carried out the Bartlett test on the results of the same factor analysis of the random sample data only. The results were as follows $\chi^2 = 119.25$, $df = 9$, $p \leq .001$.

Table 2: *Frequencies on five individual items relating to the IRA*

<i>Item</i>	<i>Response</i>	<i>Percentage of respondents</i>	<i>Reduced response categories</i>	<i>Percentage of respondents</i>
1 Were it not for the IRA the Northern problem would be even further from a solution	Disagree strongly	28.4	Disagree	59.3
	Disagree moderately	17.9		
	Disagree slightly	13.0	Don't know	3.4
	Don't know	3.4		
	Agree slightly	15.8		
	Agree moderately	11.4	Agree	35.4
	Agree strongly	8.2		
	Refusals	1.9	Refusals	1.9
		<i>Total Number</i>	100.0 1758	<i>Total Number</i>	100.0 1758
2 The methods of the IRA are totally unacceptable	Disagree strongly	5.6	Disagree	19.7
	Disagree moderately	6.0		
	Disagree slightly	8.1	Don't know	1.8
	Don't know	1.8		
	Agree slightly	14.8		
	Agree moderately	15.9	Agree	76.6
	Agree strongly	45.9		
	Refusals	1.8	Refusals	1.8
		<i>Total Number</i>	99.9* 1758	<i>Total Number</i>	99.9* 1758
3 The IRA are basically a bunch of criminals and murderers	Disagree strongly	13.2	Disagree	43.1
	Disagree moderately	12.5		
	Disagree slightly	17.4	Don't know	3.7
	Don't know	3.7		
	Agree slightly	16.8		
	Agree moderately	13.4	Agree	50.2
	Agree strongly	20.0		
	Refusals	3.1	Refusals	3.1
		<i>Total Number</i>	100.1* 1758	<i>Total Number</i>	100.1* 1758
4 Leaving aside the question of their methods I basically support the aims of the IRA	Disagree strongly	23.6	Disagree	46.1
	Disagree moderately	12.3		
	Disagree slightly	10.2	Don't know	2.0
	Don't know	2.0		
	Agree slightly	19.1		
	Agree moderately	16.7	Agree	49.2
	Agree strongly	13.4		
	Refusals	2.6	Refusals	2.6
		<i>Total Number</i>	99.9* 1758	<i>Total Number</i>	99.9* 1758
5 The IRA are basically patriots and idealists	Disagree strongly	16.4	Disagree	42.2
	Disagree moderately	11.7		
	Disagree slightly	14.1	Don't know	2.9
	Don't know	2.9		
	Agree slightly	24.3		
	Agree moderately	16.0	Agree	52.2
	Agree strongly	11.9		
	Refusals	2.7	Refusals	2.7
		<i>Total Number</i>	100.0 1758	<i>Total Number</i>	100.0 1758

*Deviation from total of 100 per cent is due to rounding error.

Having ascertained that a second factor would be statistically significant, the next issue is whether the two factors can be rotated to yield interpretable results. The loadings on two varimax rotated factors were presented in Appendix Table B.2 of Paper No. 97. These loadings suggest a clustering of the items into two groups corresponding to the groups suggested by the *a priori* reasoning outlined above (the loadings are reproduced here in Table 3).

Table 3: *Factor analysis of five items relating to the IRA (orthogonal and oblique rotations)*

(i) Loadings on two varimax (orthogonally) rotated factors		
	Factor 1	Factor 2
1 Were it not for the IRA the Northern problem would be even further from a solution	-0.60	0.37
2 The methods of the IRA are totally unacceptable.	0.88	0.01
3 The IRA are basically a bunch of criminals and murderers.	0.65	-0.41
4 Leaving aside the question of their methods, I basically support the aims of the IRA.	-0.32	0.71
5 The IRA are basically patriots and idealists.	-0.07	0.86
(ii) Loadings on two obliquely rotated factors, (direct oblim with Kaiser normalisation.)		
	Factor 1	Factor 2
1 Were it not for the IRA the Northern problem would be even further from a solution.	0.56	0.25
2 The methods of the IRA are totally unacceptable.	-0.94	0.20
3 The IRA are basically a bunch of criminals and murderers.	-0.62	-0.29
4 Leaving aside the question of their methods, I basically support the aims of the IRA.	0.20	0.68
5 The IRA are basically patriots and idealists.	-0.10	0.89
% Var	47.6	16.7
Cumulative percentage of variance = 64.3		

Thus, Items 1, 2, and 3 are the items which are most important on Factor 1. This group of items was interpreted in Paper No. 97 as referring "to aspects of IRA activities:

without their activities the problem would be worse (Item 1), the methods underlying their activities are totally unacceptable (Item 2) and their activities make them a bunch of criminals and murderers (Item 3)" (ESRI Paper No. 97, p. 97). Similarly Items 4 and 5 ("aims" and "patriots and idealists") are the most important items on Factor 2, and these were interpreted in Paper No. 97 as representing an attitude to IRA motives. This grouping of the items involves a decision to assign Item 3 to Factor 1 above despite the fact that it also has a loading on Factor 2 just above the higher of the two conventional cut-off points in factor analysis (.40). The decision is justified in our view by the substantially higher loading of the item on Factor 1 and by size of the gap between .41 and the next highest loading on Factor 2, i.e., .71. This interpretation of factor loadings is consistent with our use of factor analysis as an exploratory technique. The decision receives further support from the fact that the alternative factor analytic procedure of oblique rotation (which some might argue would be more appropriate in the circumstances) produces a more clearcut result with no overlap of loading between the items as we have grouped them (see part (ii) of Table 3).

As already emphasised (see pp. 11-12), factor analysis does not prove that our measures are valid; it provides a degree of evidence to back up a particular interpretation or judgement. In the case of the five IRA items, as with all attitudinal items, judgement plays a considerable role but we would argue that the judgement to use the evidence to discuss two dimensions of attitude to the IRA rather than one is justified on interpretative grounds, assists in clarifying the attitude concerned, and receives sufficient support from analysis of the data to sanction its use.

(ii) *Attitude towards Northern Ireland Protestants*

In the early stages of the research we considered two distinct attitudes in this area, the first being political confrontation versus compromise in general and the second being an attitude of acceptance or rejection of Northern Ireland Protestants. As the research proceeded, we adopted a concept which combined elements of both of these, viz., an attitude

of political compromise or opposition, conciliation or confrontation *vis-a-vis* Northern Ireland Protestants. Ultimately, we rejected the label confrontation versus conciliation as too extreme and chose instead the more general term anti versus pro.

As the text of ESRI Paper No. 97 indicates, two of the items relate to the perception of the political stance of Northern Ireland Protestants. The first of these ("The vast majority of Northern Ireland Protestants are willing to reach an agreement acceptable to the Catholic community") was discussed above (p. 14). We argue that the characteristic being attributed or denied is a desirable one ("willing to reach an agreement") and accordingly, that responses are indicative of an attitude. The second item is "The basic problem in Northern Ireland is that Protestants are prepared to defend their privileges at all costs". Central to this statement is the phrase "the basic problem in Northern Ireland is . . ." and agreement with the item indicates a perception of a high degree of Northern Ireland Protestant intransigence which in turn indicates an attitude of opposition. This interpretation of the responses as an attitude of political opposition is reinforced when one considers the other two items in the measure. Disagreement with the statement "Since they are the majority, it is only right that Protestants should have the last say in how Northern Ireland is to be governed" is a denial of what the majority community in Northern Ireland would regard as their basic political rights. Finally, the item "Northern Ireland Protestants have an outlook and approach to life that is not Irish" must be seen in the context of the prevailing rejection of partition. In this context agreement with the item seems to us to indicate quite fundamental political opposition.

These four items clustered together as the third factor of the three-factor solution (see Appendix A, Table A2 which presents both a three-factor and a four-factor solution) and this clustering was in accordance with our expectations in selecting these items for the final questionnaire. However, the cluster is not as homogeneous as the other clusters or combinations of items used, i.e., the items are not as closely related (the average correlation between the items is .19, see

Appendix A Table A3). While there is no consensus as to the minimum degree of homogeneity required of an attitudinal measure, it is arguable that our summary reference to the homogeneity of subsets of items being "empirically established by means of the factor analysis" (ESRI Paper No. 97, p. 96) oversimplifies the matter by not adverting to this variation in the degree of homogeneity attained. The point remains, however, that the four items relating to Northern Ireland Protestants clustered together as expected in the factor analysis. While it would be preferable if the average inter-item correlation were higher, all that the relatively low correlation suggests is that there is room for improvement of the attitudinal measure concerned and therefore a need for further research in this area. However, we are confident that we have succeeded in measuring this attitude adequately though not as well as we would have wished and our view is strengthened by the fact that MacGréil, using a different method and the stimulus "Unionist", arriving at findings quite similar to our own (MacGréil 1977, p. 248).¹²

12. MacGréil's findings are further discussed below (p. 37).

II INTERPRETATION

The issue of interpretation will be dealt with under two headings – interpretation of attitudes to the IRA and interpretation of attitudes towards Northern Ireland Protestants.

A Attitudes to the IRA

One could have summarised the results of this part of the research by reporting the distribution on the five IRA items individually. The outer limits of the distribution of attitudes to the IRA are established by the 20 per cent disagreement and 77 per cent agreement (each more or less strongly) with the item “the methods of the IRA are totally unacceptable” (Table 2). (The fact that overall favourable response to the IRA does not go below this 20 per cent figure on *any* of the five items is particularly important in view of the controversy concerning our conclusion, which we drew on the basis of responses to three items taken together, that 21 per cent are in some degree supportive in their attitude to IRA activities.) Responses favourable to the IRA range upwards from this 20 per cent to the 52 per cent agreeing (again more or less strongly) to the item “The IRA are basically patriots and idealists”. As to the items in between, overall, 35 per cent agree with the statement that “were it not for the IRA the problem would be even further from a solution”, while 59 per cent disagree; 43 per cent disagree with the statement that “the IRA are basically a bunch of criminals and murderers”, while 50 per cent agree; and 49 per cent agree with the statement “Leaving aside the question of their methods, I basically support the aims of the IRA”, while 46 per cent disagree with this statement.

Focusing on the issue of attitudes favourable to the IRA, one could have presented the above range of favourable

responses to these IRA attitude items (20 to 50 per cent) as indicating the proportion of people in some degree favourable in their attitudes to the IRA or one could have taken the further step of suggesting the possible interpretation that the lower end of the range represented an attitude to IRA *activities* and the upper end an attitude to IRA *motives*. In either event the conclusions would not, we believe, differ significantly from the conclusions which we drew from the average scores on the items. We now turn to those conclusions and their interpretation.

The nub of the distinction which we made regarding attitudes to the IRA is the difference between attitude to activities and attitude to motives. Both attitudes can be favourable or unfavourable. In order to describe the favourable-unfavourable continuum in regard to IRA activities, we used the term "support" versus "opposition". The first point to be emphasised in relation to this term is that the support we are discussing (and indeed the opposition) is graded or is a matter of degree. This is quite clear in both tables and text. Thus Table 43 of Paper No. 97 lists three degree of support and three degrees of opposition, plus a neutral category, and indicates that only 2.8 per cent have a "strongly supportive" attitude (ESRI Paper No. 97, p. 99). In the text it is emphasised that "13 per cent are slightly supportive as against eight per cent moderately to strongly supportive". The strongest statement in the text (the "stark fact" statement) is itself highly qualified — "the stark fact remains that 21 per cent of the population emerge as in some degree supportive in their attitude to IRA activities" (*ibid.*, p. 98).

The second point to note about the term support is that it does not imply any concrete activity. This usage is clearly included in the relevant dictionary definition of support which is "to strengthen the position of (a person or community) by one's assistance, countenance, or adherence; to uphold the rights, claims, authority or status of; to stand by, back up" (Oxford English Dictionary). More important is the fact that the text explicitly disavows any claim to be making inferences about activity:

It should also be emphasised that we have no evidence that an attitude of support for IRA activities, as we have

measured it, leads to any concrete actions, by way of monetary contributions or whatever, in support of the campaign of the IRA (ESRI Paper No. 97, p. 98).

Others might perhaps have preferred to have portrayed these shades of attitude to the IRA in a different way, referring perhaps to acquiescence, tolerance or sympathy *vis-à-vis* IRA activity where we speak of slightly supportive attitude and moderately supportive attitude. We would accept these terms as rough equivalents of our own. At the same time we believe that the terms we used are better because they read less into the data while at the same time expressing quite adequately the gradations of the attitudes concerned. It may be, however, that the term "attitude to IRA activities: support versus opposition" is so open to misunderstanding and misinterpretation that it channels attention away from what we would regard as the fundamental issue arising from our study of attitudes to the IRA, namely, the need for debate and discussion and for even greater efforts on the part of all who can influence public opinion, with a view to reversing the degree of favourable attitude to IRA activity that prevails among a significant minority of the population. If in fact the terms support and opposition, which we used, have diverted attention from that issue, we would willingly abandon them and replace them with some alternative set of terms to express the findings about favourable versus unfavourable attitude to IRA activity which, in the words of Paper No. 97 is the real issue:

..... it must be acknowledged that, on this evidence, opposition to IRA activities is not overwhelming and certainly does not match the strong opposition so often articulated by public figures (ESRI Paper No. 97, pp. 98-100).

The term used to describe the favourable-unfavourable continuum in relation to IRA motives was sympathy versus rejection. As ESRI Paper No. 97 explicitly states, this is a much less "hardline" attitude than the attitude of support for IRA activity (ESRI Paper No. 97, p. 100). One can, without contradiction or equivocation, sympathise with the motives of the IRA, while condemning their activities. In identifying and analysing an attitude of sympathy for IRA

motives, we made this point clear:

Though the two may often be positively related they can also run in contrary directions. Evidently some respondents condemn the activities of the IRA while sympathising with their aims and motives. Failure to bear this in mind in reflecting on the data would involve a serious misinterpretation of the figure of 42 per cent sympathy for IRA motives as support or sympathy for the IRA as such (ESRI Paper No. 97, p. 100).

The fact that a general desire for Irish unity is common to the major political parties in the Republic and the political and military wings of the IRA raises the question whether our measure of sympathy for the motives of the IRA is not the same as simple endorsement of the goal of reunification. We would agree that sympathy with the motives of the IRA certainly includes endorsement of the goal of reunification. There is, a vital difference, however, between expressing a favourable attitude towards reunification on its own and expressing that attitude by endorsing IRA aims and attributing patriotism and idealism to the IRA. The significance of our finding is, we believe, that a substantial proportion of people are prepared to express their approval in the latter form, despite the fact that political and opinion leaders aspiring to reunification have been at pains to point out the differences between their aspirations in relation to Irish unity and the objectives of the paramilitary organisations.

This measure raises the further issue of the degree of accuracy of the underlying perceptions of IRA motives and the implications of this accuracy for the interpretation of the attitude. It is quite possible that different perceptions of IRA motives underlie the attitude we are discussing. This, however, does not either invalidate or make irrelevant the findings. It is a consequence of the nature of attitudes that they are important whether based on accurate perception or not. In fact, attitudes may often determine perception. In the present case whether sympathy for or rejection of IRA motives is based on partial perception, selective perception, or misperception, in no way diminishes the fact that people hold such attitudes.

A general interpretative issue which arises in relation to these and the other two scales presented in Section IV of ESRI Paper No. 97 is the location and interpretation of the mid-point in the summated scale, i.e., that point at which scores change from being positive to negative. It is obvious what this point is for each of the individual items in that they are clearly presented as agree-disagree items with gradations on each side of the divide (see the response format above, p. 17), and any particular response can be readily categorised as positive or negative. In averaging these responses, however, a particular score may result from different combinations of responses. Thus, for example, a "neutral" score may arise from a series of neutral responses to each item (i.e., "don't know") or from certain combinations of positive and negative responses. In the case of self-cancelling responses, it is, in our view, preferable to categorise such a respondent as neutral than to categorise him or her as pro or anti on the basis of their response to a single item. If, on the other hand, an individual's combination of responses moves him towards one or other end of the 1 to 7 continuum, then it is reasonable to interpret that score as slightly positive or slightly negative. It is, of course, evident that the interpretations of summated scores as neutral, slight, moderate, etc., are approximations and this point was clearly signalled when the matter of labelling the intermediate values on a Likert scale was introduced in Paper No. 97. The relevant quotation is as follows:

This composite score ranges from 1 (strongly pro-partitionist) to 7 (strongly anti-partitionist) and we can attach the following approximate labels to the intermediate values on the scale:

PRO: 1 2 3 4 5 6 7 : ANTI
 strong moderate slight neutral slight moderate strong

(ESRI Paper No. 97, p. 96).

The approximate nature of the procedure was again adverted to in the discussion of the distribution of the first of the four attitudes concerned.

The results of a survey carried out in March 1978 have been adduced as evidence which disproves the findings relating to attitude to IRA activity presented in ESRI Paper No. 97. The survey was conducted for the BBC *Panorama* programme. The question on attitude to the IRA and the percentage responses elicited by the question were as follows:

People have different views about the aims and activities of the Provisional IRA. I would like you to look at this card, on which are listed some of the opinions which people have expressed to us. I would like you to read through the list and tell me which statement comes closest to your own opinion?

	<i>Percentage of Respondents</i>
(a) I have no time whatsoever for the Provisional IRA.	51
(b) I admire the idealism of the Provisional IRA but I think their use of violence is totally wrong.	32
(c) I approve of the Provisional IRA because the problems of Northern Ireland cannot be solved without violence.	2
(d) Don't know/no opinion.	15

For the following reasons we do not accept that the *Panorama* survey question is an adequate measure of attitude to the IRA.

- (1) The question is two-dimensional – it deals with admiration of idealism and general approval, including presumably approval of activities and methods – yet, being a forced choice question, it allows for only one response. In our study, we distinguished clearly, and measured separately, attitude to activities and attitude to motives.
- (2) The third statement in the *Panorama* survey question is two-tiered in the sense that, in agreeing to it, one is expressing two things – approval of the Provisional IRA

and acceptance of the statement that "the problems of Northern Ireland cannot be solved without violence" as the reason for approving. While two-tiered statements may sometimes be permissible in an attitude item, they are unacceptable in a forced choice question. This is particularly so when, as in this case, the second half of the two-tiered statement is very strongly worded — "because the problems of Northern Ireland cannot be solved without violence". The effect is to create a very considerable gap between the second statement ("I admire the idealism of the Provisional IRA but I think their use of violence is totally wrong") and the third statement ("I approve of the Provisional IRA because the problems of Northern Ireland cannot be solved without violence"). These two statements (in fact three or possibly four statements) could have been used as independent items in an agree-disagree attitude item format. Then the gaps between the statements might not have mattered. They were not so used. Instead, respondents were forced to choose one and only one. Given the extremity and two-tiered nature of the final statement, there is a considerable probability that a social desirability effect would have operated against choice of this statement and in favour of the more moderate second statement.

- (3) The response to this question in the *Panorama* survey contains an inordinately large number of "don't knows" — 15 per cent. While this 15 per cent includes those who genuinely do not have an attitude to the IRA, it undoubtedly also includes people who have an attitude which, because of the formulation of the question, they were unable or unwilling to express. One simply does not know how large this proportion is or what attitude they hold. Indeed, Kyle, in an article describing the results of the *Panorama* survey adverts to this problem of interpreting the large "don't know" figure (Kyle, 1979, p. 35). It is significant that not only our approach, which was specifically designed to keep the "Don't knows" to a minimum, but also MacGréil's question on attitude to the

use of violence in Northern Ireland (see below, p. 37), produced a far smaller unknown factor.

- (4) In the *Panorama* survey question there is no ordering within each dimension, thus there is no opportunity for a qualified response — degree of admiration of idealism or a degree of approval of activities or methods. Because there was no possibility of degrees of agreement or disagreement with the statements offered to respondents and because the third statement was very strongly worded, what the *Panorama* survey question has identified is 2 per cent unequivocal and unreserved approval of the Provisional IRA. This would appear to correspond to our 2.8 per cent attitude of strong support for IRA activities. The advantage of our method is that it enables one to identify and describe grades of attitude to the IRA which lie between unqualified choice of the statement “I admire the idealism of the Provisional IRA but I think their use of violence is totally wrong” and unqualified choice of the quite extreme statement “I approve of the Provisional IRA because the problems of Northern Ireland cannot be solved without violence”.

We conclude that our approach to the identification and measurement of attitudes to the IRA in our 1978 survey produces a more comprehensive and accurate result than that produced by the *Panorama* survey of the same year.

Recent local government election results showing electoral support for Provisional Sinn Fein have also been adduced as evidence which contradicts our findings. Since electoral choice, on the one hand, and attitude to terrorist activity, on the other, are governed by the distinct and non-competing criteria, there is simply no conflict between the two sets of figures. The two are entirely separate realms, a fact which emerges from the survey — the figure from our survey for potential electoral support for both Provisional Sinn Fein and the Irish Republican Socialist Party taken together is 0.7 per cent. The fact is that we were not discussing either local or national electoral support and we made no claim to be attempting to predict electoral support from evidence of degree of attitudinal support for IRA activities.

Our findings are corroborated by MacGréil's study of attitudes of the population of the greater Dublin area in 1973. This wide-ranging study included a series of attitude items relating to Northern Ireland. The items were introduced as follows — "Northern Ireland is a topic of interest and concern for many people. I would like to get your views on some aspects relating to the Northern Ireland problem" and one of the items was "Would you agree or disagree that violence, while regrettable, has been necessary for the achievement of non-Unionist rights in Northern Ireland". The responses to this item are presented in Table 4. While 62 per cent disagreed with the statement, 35 per cent agreed. MacGréil interprets the latter figure as follows:

The considerable minority (35.3%), however, who agreed with Item No. 10, is most significant in the light of the explicitly non-violent stand of major political, religious and labour leaders, and at the very time when serious death and destruction had been a daily occurrence in Northern Ireland. Such a minority position can be interpreted as a vote of no confidence in the efficacy of non-violence (on the part of the 35.3% who agreed with the statement) (MacGréil 1977, p. 379).

Table 4: *Attitude to use of violence for the achievement of non-Unionist rights in Northern Ireland. (Sample of population of greater Dublin area 1973, 2278 respondents)*

<i>Item</i>	<i>Response</i>	<i>Percentage of respondents</i>
Would you agree or disagree that the use of violence, while regrettable, has been necessary for the achievement of non-Unionist rights in Northern Ireland?	<i>Agree</i>	35.3
	<i>Don't know</i>	3.1
	<i>Disagree</i>	61.6
	<i>Total</i>	100
	<i>Number</i>	2278

Source: MacGréil 1977, p. 377.

Finally, while we have emphasised the difference between a policy preference and an attitude and that one cannot infer the latter from the former, it is worth noting that our findings in relation to attitude to the IRA are consistent with the findings regarding preferences for and against policies dealing with the IRA. These are presented in Section III of ESRI Paper No. 97 and can be summarised briefly as follows: A tougher line against the IRA (32 per cent opposed), direct British Government negotiations with the IRA (44 per cent in favour), extradition to Northern Ireland or Britain of people accused of politically motivated crimes (48 per cent opposed), post settlement amnesty for Provisional IRA (55 per cent in favour), political status for those convicted of politically motivated crimes (60 per cent in favour).

One final issue arises in relation to our interpretation of attitudes to the IRA. Some critics have suggested that the findings were already out of date when published. The criticism centres on the time lapse of thirteen months between completion of data collection and publication. We agree that attitudes may change over time though comparison of our findings with MacGréil's findings relating to 1973 suggest that mere passage of time is not a sufficient condition for extensive attitude change in regard to the IRA. Fluctuation in attitude is perhaps more likely under the impact of major events, and the public impact of certain events in August and September 1979¹³ would probably have led us to enter a *caveat* in this regard in Paper No. 97 but for the fact that it was already in press by then. However, the likely extent and, particularly, the durability of such attitude changes is a matter of debate. A conclusive answer to the question of whether lasting changes in attitude have occurred since our data were collected can only come from further research.

B Attitude towards Northern Ireland Protestants

The interpretation of the four individual items which constitute the measure of this attitude has been discussed above

13. The murders of Lord Mountbatten and members of his party at Mullaghmore and of 18 British soldiers at Warrenpoint on 27 August 1979 and the address by Pope John Paul II at Drogheda on 29 September 1979.

(p. 27). One can summarise the distribution of responses of these items as follows: 64 per cent disagree that "the vast majority of Protestants in Northern Ireland are willing to reach an agreement acceptable to the Catholic community", 78 per cent agree that "the basic problem in Northern Ireland is that the Protestants are prepared to defend their privileges at all costs"; 75 per cent disagree with the view that "since they are the majority, it is only right that Protestants in Northern Ireland should have the last say in how Northern Ireland is to be governed"; and 68 per cent agree that "Northern Ireland Protestants have an outlook and approach to life that is not Irish". (See Appendix A, Table A.1.) The attitudinal measure based on this data was introduced as follows: "What is involved here is not a measure of social prejudice in general but of political attitude . . ." and the measure was summarised with the statement:

Taken together, the items add up to a political orientation which is either pro or anti Northern Ireland Protestants. (ESRI Paper No. 97, p. 100).

In comments on Paper No. 97 the emphasis we placed on the political aspect of this attitude has been frequently ignored and the term "attitude to Northern Ireland Protestants: anti versus pro" has been invested by some critics with connotations of religious prejudice and hostility. Paper No. 97 neither states nor implies such meaning, in fact we explicitly ruled out such meaning in favour of a political interpretation of the attitude. This essential political aspect is evident in the label which is not "anti versus pro *Protestant*", as some of our critics mislabelled it, but "anti versus pro *Northern Ireland Protestant*". The former term is a religious designation, the latter is ethnic or political. The literal meaning of "anti" is "opposed to" and, as is evident in the quotation above, this term was given an explicit and unambiguous political interpretation when the concept was being introduced. The political nature of the attitude is abundantly clear in the discussion of the significance of the attitude. Having pointed out that the prevailing attitude towards Northern Ireland Protestants is one of opposition, we emphasised that the significance of this attitude lies in its political context, i.e., the widespread endorsement of a united Ireland solution. To

further emphasise the political nature of the attitude, we went on to say:

It is, of course, arguable that attitudes towards Northern Ireland Protestants would be fundamentally different in a united Ireland or in the situation of significant moves towards a united Ireland. The assumption underlying this argument is that anti-Northern Ireland Protestant attitudes are a product of the existing political situation and that if that situation were fundamentally different, i.e., if there were significant moves towards a united Ireland, then attitudes would be different and much more favourable to Northern Ireland Protestants. Running counter to this optimistic view is the argument that an attitude of opposition, while it may be a product of prevailing political structures, is an obstacle to significant political overtures towards Northern Ireland Protestants on the part of the Republic of Ireland, thus decreasing the prospect of reunification by consent. (ESRI Paper No. 97, p. 100).

The study by MacGréil already referred to provides the only comparable data on this particular attitude. MacGréil used the terms "Unionists" and "Nationalists (N.I.)" as designations of the majority and minority communities in Northern Ireland and included these terms among seventy stimuli employed in administering the classical technique of the Bogardus Social Distance Scale. We have indicated above our reasons for preferring the term "Northern Ireland Protestant" to "Unionist" to designate the majority community in Northern Ireland. The events which make such a change necessary occurred after MacGréil's research. We would therefore regard MacGréil's term "Unionist" and our term "Northern Ireland Protestant" as approximately equivalent.

MacGréil found that in terms of social distance, "Unionists" ranked eighth from the bottom of the list of seventy social groups presented to respondents (MacGréil 1977, p. 248). He points out that this ranking makes "Unionists" one of "Dublin's outgroups" and presents the data and his interpretation as follows:

"Unionists" have fared badly with a 3.063 M.S.D. (Mean Social Distance) score; 62.8% of the sample would not

welcome them into their family and 20.3% would deny citizenship to them or debar them from the Republic. The overall ranking (8th from the bottom of a sample of seventy) would classify them among Dublin's outgroups. When this is contrasted with the relatively favourable position of Protestants/Presbyterians (see Table No. 64 above), it shows that *the unfavourable attitude is mainly political*. (MacGréil 1977, p. 248, our emphasis).

It is to be expected that the majority of Dubliners would have different aims and objectives to Unionists, but this does not account for Unionists being categorised as an "outgroup", or for the fact that 63 per cent would not welcome them into their family and that 20 per cent would deny citizenship to them or debar them from the Republic. Our findings were that 28 per cent were slightly opposed, 29 per cent moderately opposed, and 18 per cent strongly opposed to Northern Ireland Protestants. We interpreted our data as indicating political opposition, while MacGréil commented that his data showed that the unfavourable attitude was "mainly political". In discussion of the development of this measure of attitude to Northern Ireland Protestants (p. 27 above), the need for further research in this area was referred to. It is particularly interesting to note, therefore, that the only other research which has been done produced results in line with our own findings.

CONCLUSION

The following conclusions emerge from this consideration of the findings relating to attitudes to the IRA and towards Northern Ireland Protestants presented in ESRI Paper No. 97. The findings were based on a methodology of attitude measurement which is widely accepted in the disciplines of social psychology and political science and which is appropriate for the subject matter of the research. This methodology was, in all essentials, correctly applied. It is perhaps unnecessary to point out that any methodology must be applied sensitively and that no methodology allows one to dispense with the judgement of the individual researcher. We believe that in all cases the judgements which we made are reasonable and receive sufficient support from the data to warrant their use.

The fundamental interpretative issue is, do the terms used to describe the findings regarding these attitudes convey the relevant meaning without overstatement or exaggeration? We acknowledge that other researchers might have seen fit to use terms different from the ones which we used. We believe, however, that the terms we used, in the qualified way in which we used them, are suitable for the purpose and that the use of different terms would not have materially altered the conclusions reached. As to the suggestion that our conclusions regarding attitudes to the IRA are contradicted by the results of the 1978 *Panorama* survey, we have shown why the *Panorama* question is quite inadequate and the results misleading. In fact, when one looks at previous published research in this area (MacGréil, 1977), our findings are substantiated.

It is our belief that a solution to the problem in Northern Ireland can only be approached through debate and discussion, which must take place both within and between the

communities concerned. In concluding Paper No. 97 we expressed the hope that it would "make some small contribution to the essential process of debate and discussion, not only within the Republic of Ireland, but also within each of the other three communities concerned and, ultimately, between all four" (ESRI Paper No. 97, p. 152). Now that we have dealt with the questions that arose in relation to the findings, we trust that this hope will be realised.

REFERENCES

- ADORNO, T. W., E. FRENKEL-BRUNSWIK, P. J. LEVINSON and R. N. SANFORD, 1950. *The Authoritarian Personality*. New York: Harper and Row.
- ALLPORT, G. W., 1935. "Attitudes". In C. Murchinson (ed.). *Handbook of Social Psychology*, 798-884. Worcester, Mass.: Clark University Press.
- COMMITTEE ON IRISH LANGUAGE ATTITUDES RESEARCH, 1975. *Report as submitted to the Minister of the Gaeltacht on Irish Language Attitudes Research*. Dublin: The Stationary Office.
- DAVIS, E. E. and R. SINNOTT, 1976. "The Relevance of Research on Attitudes in the Republic towards the Northern Ireland Problem". Paper presented to the Conflict Sub-Committee of the Committee for Social Science Research in Ireland.
- DAVIS, E. E. and R. SINNOTT, 1978a. *Attitudes in the Republic Relevant to the Irish Conflict Situation: A Research Approach*. Dublin: The Economic and Social Research Institute. (Seminar Paper).
- DAVIS, E. E. and R. SINNOTT, 1978b. *Policy Implications of Attitudes Related to the Irish Conflict*. Paper read to the 86th Annual Convention of the American Psychological Association, Toronto, Canada.
- DAVIS, E. E. and SINNOTT, R., 1978c. *The Role of Public Attitudes in Conflict Development and Resolution: The Case of Ireland*. Paper read to the Annual Meetings of the Society for the Study of Social Problems, San Francisco.
- DAVIS, E. E. and R. SINNOTT, 1979. *Attitudes in the Republic of Ireland Relevant to the Northern Ireland Problem: Vol. I - Descriptive Analysis and Some Comparisons with Attitudes in Northern Ireland and Great Britain*. Dublin: Economic and Social Research Institute, Paper No. 97.
- EDWARDS, A. L., 1957. *Techniques of Attitude Scale Construction*. New York: Appleton-Century-Crofts.
- GUILFORD, J. P., 1954. *Psychometric Methods*. (2nd ed.) New York: McGraw-Hill Book Company.
- KERLINGER, F. N., 1973. *Foundations of Behavioural Research*. (2nd ed.) London: Holt, Rinehart and Winston.
- KATZ, Daniel, 1966. "Attitude formation and Public Opinion". *Annals* 367, pp. 150-162.

- KYLE, K., 1979. "The Panorama Survey of Irish Opinion". *The Political Quarterly*, Vol. 50 No. 1. January – March, pp. 24-35.
- LAWLEY, D. N. and A. E. MAXWELL, 1963. *Factor Analysis as a Statistical Method*. London: Butterworths.
- MacGRÉIL, M., 1977. *Prejudice and Tolerance in Ireland*. Dublin: College of Industrial Relations.
- MOSE, C. A., and G. KALTON, 1976. *Survey Methods in Social Investigation* (3rd ed.), London: Heinemann Educational Books Ltd.
- NUNNALLY, J. C., 1967. *Psychometric Theory*, New York: McGraw-Hill.
- OPPENHEIM, A. N., 1966. *Questionnaire design and attitude measurement*. London: Heinemann Educational Books Ltd.
- SINNOTT, R. and E. E. DAVIS, 1979. The Role of Political Institutions in the Evolution and Maintenance of Ethnic Conflict. Paper presented at the IPSA Oxford Round Table on Ethnicity and Politics at St. Antony's College Oxford, 26-28 March.
- SELLTIZ, C., MARIE JAHODA, MORTON DEUTSCH and STUART W. COOK, 1959. *Research Methods in Social Relations*, 2nd edition, New York: Holt.

Table A1: *Frequencies on seventeen individual attitude items dealing with attitudes to the Northern Ireland problem. Items grouped according to factor analysis presented in Section IV of ESRI Paper No. 97.*

Item	Response	Percentage of respondents	Reduced response categories	Percentage of respondents
<i>1 Attitude to partition: (anti (versus) pro)</i>				
1 Reunification is essential for any solution to the problem in Northern Ireland	Disagree strongly	9.2	Disagree	29.5
	Disagree moderately	11.3		
	Disagree slightly	9.0	Don't know	0.8
	Don't know	0.8		
	Agree slightly	16.7		
	Agree moderately	21.0	Agree	68.5
	Agree strongly	30.8		
	Refusals	1.1	Refusals	1.1
	<i>Total Number</i>	99.9*	<i>Total Number</i>	99.9*
2 This is an island and it cannot be permanently partitioned	Disagree strongly	5.4	Disagree	21.2
	Disagree moderately	6.7		
	Disagree slightly	9.1	Don't know	1.0
	Don't know	1.0		
	Agree slightly	16.2		
	Agree moderately	20.5	Agree	76.5
	Agree strongly	39.8		
	Refusals	1.3	Refusals	1.3
	<i>Total Number</i>	100.0	<i>Total Number</i>	100.0
3 The presence of British troops in Northern Ireland amounts to foreign occupation of part of Ireland	Disagree strongly	6.5	Disagree	25.5
	Disagree moderately	9.6		
	Disagree slightly	9.4	Don't know	1.9
	Don't know	1.9		
	Agree slightly	19.3		
	Agree moderately	22.0	Agree	71.3
	Agree strongly	30.0		
	Refusals	1.3	Refusals	1.3
	<i>Total Number</i>	100.0	<i>Total Number</i>	100.0
4 There will never be peace in Northern Ireland until partition is ended	Disagree strongly	5.3	Disagree	24.8
	Disagree moderately	9.0		
	Disagree slightly	10.5	Don't know	1.5
	Don't know	1.5		
	Agree slightly	13.8		
	Agree moderately	21.0	Agree	72.3
	Agree strongly	37.5		
	Refusals	1.3	Refusals	1.3
	<i>Total Number</i>	99.9*	<i>Total Number</i>	99.9*
5 The sooner we get the idea that the North belongs to us out of our heads the better	Disagree strongly	35.0	Disagree	67.5
	Disagree moderately	17.4		
	Disagree slightly	15.1	Don't know	1.1
	Don't know	1.1		
	Agree slightly	12.1		
	Agree moderately	8.4	Agree	29.9
	Agree strongly	9.4		
	Refusals	1.5	Refusals	1.5
	<i>Total Number</i>	100.0	<i>Total Number</i>	100.0
6 The major cause of the problems in Northern Ireland is British interference in Irish affairs	Disagree strongly	5.5	Disagree	28.9
	Disagree moderately	10.6		
	Disagree slightly	12.8	Don't know	1.6
	Don't know	1.6		
	Agree slightly	20.0		
	Agree moderately	19.1	Agree	67.8
	Agree strongly	28.7		
	Refusals	1.8	Refusals	1.8
	<i>Total Number</i>	100.1*	<i>Total Number</i>	100.1*
		1758		1758

*Deviation from total of 100 per cent is due to rounding error.

Table A1: (Continued)

Item	Response	Percentage of respondents	Reduced response categories	Percentage of respondents
<i>11A. Attitude to IRA activities: support (versus) opposition.</i>				
7 Were it not for the IRA the Northern problem would be even further from a solution	Disagree strongly	28.4	Disagree	59.3
	Disagree moderately	13.9		
	Disagree slightly	13.0		
	Don't know	3.4	Don't know	3.4
	Agree slightly	15.8		
	Agree moderately	11.4	Agree	35.4
	Agree strongly	8.2		
	Refusals	1.9	Refusals	1.9
		<i>Total Number</i>	100.0	
		1758		1758
8 The methods of the IRA are totally unacceptable	Disagree strongly	5.6	Disagree	19.7
	Disagree moderately	6.0		
	Disagree slightly	8.1		
	Don't know	1.8	Don't know	1.8
	Agree slightly	14.8		
	Agree moderately	15.9	Agree	76.6
	Agree strongly	45.9		
	Refusals	1.8	Refusals	1.8
		<i>Total Number</i>	99.9*	
		1758		1758
9 The IRA are basically a bunch of criminals and murderers	Disagree strongly	13.2	Disagree	43.1
	Disagree moderately	12.5		
	Disagree slightly	17.4		
	Don't know	3.7	Don't know	3.7
	Agree slightly	16.8		
	Agree moderately	13.4	Agree	50.2
	Agree strongly	20.0		
	Refusals	3.1	Refusals	3.1
		<i>Total Number</i>	100.1*	
		1758		1758
<i>11B. Attitude to IRA Motives: sympathy (versus) rejection.</i>				
10 Leaving aside the question of their methods I basically support the aims of the IRA	Disagree strongly	23.6	Disagree	46.1
	Disagree moderately	12.3		
	Disagree slightly	10.2		
	Don't know	2.0	Don't know	2.0
	Agree slightly	19.1		
	Agree moderately	16.7	Agree	49.2
	Agree strongly	13.4		
	Refusals	2.6	Refusals	2.6
		<i>Total Number</i>	99.9*	
		1758		1758
11 The IRA are basically patriots and idealists	Disagree strongly	16.4	Disagree	42.2
	Disagree moderately	11.7		
	Disagree slightly	14.1		
	Don't know	2.9	Don't know	2.9
	Agree slightly	24.3		
	Agree moderately	16.0	Agree	52.2
	Agree strongly	11.9		
	Refusals	2.7	Refusals	2.7
		<i>Total Number</i>	100.0	
		1758		1758

* Deviation from total of 100 per cent is due to rounding error.

Table A1: (Continued)

Item	Response	Percentage of respondents	Reduced response categories	Percentage of respondents
11) <i>Attitude to Northern Ireland protestants: anti (versus) pro.</i>				
12 The vast majority of Protestants in Northern Ireland are willing to reach an agreement acceptable to the Catholic community	Disagree strongly	29.8	Disagree	64.1
	Disagree moderately	20.4		
	Disagree slightly	13.9	Don't know	2.2
	Don't know	2.2		
	Agree slightly	15.2		
	Agree moderately	10.9	Agree	32.5
	Agree strongly	6.4		
	Refusals	1.3	Refusals	1.3
<i>Total Number</i>	100.1*	<i>Total Number</i>			100.1*
		1758		1758
13 The basic problem in Northern Ireland is that Protestants are prepared to defend their privileges at all costs	Disagree strongly	4.3	Disagree	18.8
	Disagree moderately	6.5		
	Disagree slightly	8.0	Don't know	1.4
	Don't know	1.4		
	Agree slightly	19.2		
	Agree moderately	24.2	Agree	78.4
	Agree strongly	33.0		
	Refusals	1.4	Refusals	1.4
<i>Total Number</i>	100.0	<i>Total Number</i>			100.0
		1758		1758
14 Since they are the majority, it is only right that Protestants should have the last say in how Northern Ireland is to be governed	Disagree strongly	39.5	Disagree	75.0
	Disagree moderately	21.5		
	Disagree slightly	14.0	Don't know	3.1
	Don't know	1.1		
	Agree slightly	11.7		
	Agree moderately	6.4	Agree	22.3
	Agree strongly	4.2		
	Refusals	1.6	Refusals	1.6
<i>Total Number</i>	100.0	<i>Total Number</i>			100.0
		1758		1758
15 Northern Ireland Protestants have an outlook and an approach to life that is not Irish	Disagree strongly	5.3	Disagree	27.6
	Disagree moderately	9.3		
	Disagree slightly	13.0	Don't know	2.6
	Don't know	2.6		
	Agree slightly	20.0		
	Agree moderately	24.1	Agree	68.2
	Agree strongly	24.1		
	Refusals	1.7	Refusals	1.7
<i>Total Number</i>	100.1*	<i>Total Number</i>			100.1*
		1758		1758
Items not included in composite scores				
16 Were it not for the British, the situation in Northern Ireland would be worse than it is	Disagree strongly	19.9	Disagree	49.6
	Disagree moderately	16.4		
	Disagree slightly	13.3	Don't know	2.4
	Don't know	2.4		
	Agree slightly	20.8		
	Agree moderately	16.1	Agree	46.3
	Agree strongly	9.3		
	Refusals	1.7	Refusals	1.7
<i>Total Number</i>	100.0	<i>Total Number</i>			100.0
		1758		1758
17 The Northern Ireland problem will not be solved by ending partition	Disagree strongly	11.8	Disagree	39.5
	Disagree moderately	12.7		
	Disagree slightly	15.0	Don't know	1.8
	Don't know	1.8		
	Agree slightly	21.1		
	Agree moderately	18.7	Agree	56.8
	Agree strongly	17.0		
	Refusals	1.8	Refusals	1.8
<i>Total Number</i>	99.9*	<i>Total Number</i>			99.9*
		1758		1758

*Deviation from total of 100 per cent is due to rounding error.

Table A2: *Attitudes to the Northern Ireland problem: Factor analysis of 17 attitude items. Principal factoring without iteration (N = 2206)*
 (i) *Loadings on three varimax rotated factors*

	Factor 1	Factor 2	Factor 3
1 Reunification is an essential condition for any solution of the problem in Northern Ireland.	0.75	-0.18	-0.01
2 The vast majority of Protestants in Northern Ireland are willing to reach an agreement acceptable to the Catholic community.	0.06	0.06	0.72
3 Were it not for the IRA, the Northern problem would be even further from a solution.	0.29	-0.60	0.03
4 This is an island and it cannot be permanently partitioned.	0.74	-0.06	-0.05
5 The basic problem in Northern Ireland is that Protestants are prepared to defend their privileges at all costs.	0.39	0.13	-0.46
6 The presence of British Troops in Northern Ireland amounts to foreign occupation of part of Ireland.	0.61	-0.17	-0.36
7 There will never be peace in Northern Ireland until partition is ended.	0.77	-0.15	-0.05
8 The methods of the IRA are totally unacceptable.	0.09	0.72	0.03
9 Since they are the majority, it is only right that the Protestants should have the last say in how Northern Ireland is to be governed.	-0.01	0.12	0.59
10 The sooner we get the idea that the North belongs to us out of our heads the better.	-0.43	0.25	0.31
11 Northern Ireland Protestants have an outlook and an approach to life that is not Irish.	0.26	0.04	-0.50
12 The IRA are basically a bunch of criminals and murderers.	-0.05	0.77	0.12
13 The major cause of the problem in Northern Ireland is British interference in Irish affairs.	0.50	-0.24	-0.31
14 Leaving aside the question of their methods, I basically support the aims of the IRA.	0.29	-0.59	-0.27
15 Were it not for the British, the situation in Northern Ireland would be worse than it is.	-0.13	0.37	0.37
16 The IRA are basically patriots and idealists.	0.28	-0.51	0.02
17 The Northern Ireland problem will not be solved by ending partition.	-0.35	0.35	-0.01

Table A2 : (Continued)

(ii) Loadings on four varimax rotated factors

	Factor 1	Factor 2	Factor 3	Factor 4
1 Reunification is an essential condition for any solution of the problem in Northern Ireland.	.74	.17	.14	.01
2 The vast majority of Protestants in Northern Ireland are willing to reach an agreement acceptable to the Catholic community.	.11	-.04	-.45	.55
3 Were it not for the IRA, the Northern problem would be even further from a solution.	.25	.66	.12	.08
4 This is an island and it cannot be permanently partitioned.	.75	.02	.09	-.07
5 The basic problem in Northern Ireland is that Protestants are prepared to defend their privileges at all costs.	.23	-.02	.69	-.04
6 The presence of British Troops in Northern Ireland amounts to foreign occupation of part of Ireland.	.55	.18	.38	-.23
7 There will never be peace in Northern Ireland until partition is ended.	.74	.16	.20	.01
8 The methods of the IRA are totally unacceptable.	.07	-.73	.05	.10
9 Since they are the majority, it is only right that the Protestants should have the last say in how Northern Ireland is to be governed.	-.07	.03	-.07	.73
10 The sooner we get the idea that the North belongs to us out of our heads the better.	-.51	-.12	.01	.47
11 Northern Ireland Protestants have an outlook and an approach to life that is not Irish.	.08	.09	.71	-.06
12 The IRA are basically a bunch of criminals and murderers.	-.08	.73	.05	.25
13 The major cause of the problem in Northern Ireland is British interference in Irish affairs.	.43	.27	.38	-.16
14 Leaving aside the question of their methods, I basically support the aims of the IRA.	.29	.51	.16	-.27
15 Were it not for the British, the situation in Northern Ireland would be worse than it is.	-.18	-.26	-.02	.51
16 The IRA are basically patriotic and idealists.	.24	.57	.11	.07
17 The Northern Ireland problem will not be solved by ending partition.	-.47	-.23	.24	.24

Table A2: (Continued)

(iii) *The eigenvalues and their corresponding percentages of variance for 17 attitude items in the factor analysis.*

<i>Component number</i>	<i>Eigenvalue</i>	<i>Percentage of variance</i>	<i>Cumulative percentage of variance</i>
1	4.61	27.1	27.1
2	1.65	9.7	36.8
3	1.33	7.8	44.6
4	1.08	6.3	50.9
5	.94	5.5	56.4
6	.83	4.9	61.3
7	.78	4.6	65.9
8	.74	4.4	70.3
9	.68	4.0	74.3
10	.66	3.9	78.2
11	.61	3.6	81.8
12	.59	3.5	85.3
13	.54	3.2	88.5
14	.52	3.1	91.6
15	.50	2.9	94.5
16	.49	2.9	97.4
17	.44	2.6	100
	17	100	

Table A3: Correlation matrix of 17 attitude items dealing with attitudes to the Northern Ireland problem. (See preceding Table A2)(N = 2206)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1
2	-.08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
328	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
447	...	...	...	...	...	...	...	...	...	...	...	...	...	...
507	...	...	...	...	...	...	...	...	...	...	...	...	...
622	...	...	...	...	...	...	...	...	...	...	...	...
733	...	...	...	...	...	...	...	...	...	...	...
843	...	...	...	...	...	...	...	...	...	...
904	...	...	...	...	...	...	...	...	...
1011	...	...	...	...	...	...	...	...
1125	...	...	...	...	...	...	...
1215	...	...	...	...	...	...
1323	...	...	...	...	...
1436	...	...	...	...
1518	...	...	...
1620	...	...
1710	...

* P < .05 ** P < .01 *** P < .001

The numbering of the seventeen items corresponds to the numbering in the preceding Factor Analysis table (Table A2)

PART II

Critique of ESRI Paper No. 97

T. J. Baker, D. F. Hannan, D. B. Rottman and B. M. Walsh

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1 INTRODUCTION

In Part I of this publication, Davis and Sinnott answer criticisms of the methodology and results of their Paper, *Attitudes in the Republic of Ireland Relevant to the Northern Ireland Problem* (ESRI Paper No. 97). Our principal aim in Part II is to offer a reasoned critique of Paper No. 97 as it was published, although we also take account of the additional information and explanation provided by the authors in Part I. We thus hope that our critique provides in itself an independent and balanced assessment of Paper No. 97.

Our appraisal runs parallel for some way with the authors' exposition in Part I. To a large extent we share a common view of the aims of Paper 97 and of the appropriate methodology for realising these aims. Like the authors, we believe that a careful examination of this methodology and the manner in which it was applied can go a long way towards answering the key question of whether there is sufficient evidence to justify the more contentious findings of Paper No. 97. It is in our assessment of the extent to which they correctly followed the prescribed rules of attitudinal research that we part company with the authors, and are led to dispute the findings of Section IV of Paper No. 97.

2 GENERAL OVERVIEW OF PAPER NO. 97

The foundation of any social research which seeks to establish the opinions or attitudes of the population as a whole is the sample which is chosen to represent that population. If the sample is inadequate or biased then the results obtained cannot be accurately grossed up to obtain a valid indication of the views of the population. Suggestions have been made that the sample used in Paper No. 97 was deficient. As mentioned in the Preface, the issues concerning sampling are dealt with in Appendix I by the Head of the ESRI Survey Unit. We are confident that the sample was as good as could have been obtained, and that information derived from it can be taken, within the normal statistical confidence limits, as reflecting national responses.

Similarly, we have no criticisms to make of the actual administration of the survey questionnaire which was carried out by a professional and experienced field force. There is no reason to suppose that there is any significant bias in the responses due to interviewer effects.

Given that the sample and interviewing techniques were satisfactory, it follows that the data collected in the survey reflect with reasonable accuracy the answers of the national population in the summer of 1978. How valuable these data are therefore depends solely on the nature of the questions asked. The questionnaire was long, with over 200 questions, although the answers to many of these are due to be analysed in a subsequent study. The questions relevant to Paper No. 97 fall into three distinct groups.

The first group of questions need not detain us. Its purpose was simply to establish the basic demographic characteristics of each respondent, such as sex, age group, marital status and educational level. Such information is obviously necessary for

analytical purposes as well as to monitor the validity of the sample as a whole.

The second group of questions concerned opinions on alternative possible solutions to the Northern Ireland problem and preferences in relation to policy issues facing the Irish or British governments. The answers to these questions form the basis to Section III of Paper No. 97, in which the authors analyse the responses in considerable detail. Most of the questions concerning solutions were of a "forced choice" variety, in which the respondents had to make first, second and last choices between clearly defined alternatives presented to them. With regard to policy proposals most of the questions involved agreeing or disagreeing with well defined statements concerning possible policy initiatives.

On the whole, this group of questions appears to be well thought out and clearly presented. The analysis, in terms of relating answers to different questions to each other and to demographic factors, is comprehensive and illuminating. We may have drawn one or two slightly different inferences from the data, but this could be said of practically any research.

The third group of questions was designed to elicit underlying attitudes towards aspects of the Northern Ireland problem. These questions, and the analysis of the answers, occupy Section IV of Paper No. 97. Most of the criticism of Paper No. 97 has been focused on this Section, and particularly on its first eight pages (94-101). These pages form the core of the authors' attempt to measure attitudes concerning Northern Ireland, and we have grave misgivings about the validity of these measurements. The remainder of this critique is accordingly devoted to a detailed examination of the methodology applied to this short but vital portion of Paper No. 97.

3 THE AIMS AND PROCEDURES OF ATTITUDE RESEARCH

In Section IV the aim is to identify and analyse attitudes relevant to the Northern Ireland problem. Because some critics appear to have misunderstood what is meant by the word "attitude" in this context, it is necessary to be very clear as to the nature of attitude research before assessing how well the authors succeeded in their aims.

Attitude research is a well established branch of social psychology, sharing many techniques with the better-known field of personality measurement and possessing an extensive literature of its own. By no means all other social scientists are convinced of its practical utility in extending our understanding of society, but few would deny that it is a legitimate field of study.

In a broad psychological sense, attitudes are commonly described as containing three elements: the "cognitive", or rational awareness and understanding; the "affective", or emotional disposition or feeling; and the "behavioural", or manifest response in terms of observable actions. However the authorities in the field¹ are in general agreement that what attitude research attempts to measure are sets of basically emotional dispositions towards given target objects, issues, or groups of people. Many of the definitions quoted imply that attitude will influence behaviour, but none the less they make it clear that the term "attitude" refers to the underlying feeling towards the object and not to any pattern of behaviour in respect of it. Similarly, attitudes are clearly distinguished from beliefs, although again one can influence the other.² Finally attitudes are evaluative, in the sense that

¹ See Davis and Sinnotts' discussion in Part I (pp. 3-5) and in particular their quotations from Allport (1935) Guilford (1954) Oppenheim (1966) Katz (1966), Kerlinger (1973) and Nunnally (1970).

² Edwards (1957, pp. 10-12).

feelings towards the object can be positive or negative, but the evaluation is essentially on an emotional, rather than a rational, plane. In technical terms, attitude research looks for "affective" rather than "cognitive" responses.

This fundamental characteristic of attitude research is not set out clearly in the course of Paper No. 97. It is left to the reader to be sufficiently acquainted with the field to recognise that attitudes are related to feelings rather than to thought out positions. Nevertheless, Part I of this document shows that the authors do in fact accept the standard interpretation of the term. As they say, (p. 5), "In summary, when analysing attitudes in this sense we are seeking to identify psychological states, dispositions, evaluative orientations or feelings toward the object in question".

The main purpose of attitude research is to examine the association between particular attitudes and a number of other variables. These may be other attitudes, opinions on specific issues, or the socio-demographic characteristics of the respondent, such as age, sex, education, occupation and location. In order to make such comparisons, it is necessary to construct some sort of measure for the attitude concerned.

Because attitudes are on an emotional rather than a rational level, they cannot usually be ascertained through the posing of single, clear-cut questions. Rather they may be "tapped" by an array of questions, generally referred to as "attitudinal items". These may be presented in various ways, but one method frequently used, and that chosen for use in Section IV, is the "Likert" item. This consists of presenting a statement relevant to the attitude being studied, with which a respondent may express differing degrees of agreement or disagreement. Because the answers may be graded in intensity, the responses to an individual Likert item can be converted into a crude numerical scale. By adding a respondent's score on a number of these items together, a "summated scale" or index is obtained which, it is hoped, will represent a complex attitude more accurately than could the answer to any of the individual items on its own.

The success of any piece of attitude research depends almost entirely on the "validity" of the summated scales constructed. Validity simply means that the researcher has

indeed measured what he set out to measure. To be valid, a scale must be reliable, in the sense that it measures consistently, and it must also correspond closely to the concept that the researcher wishes to measure. By its nature, absolute validity can never be fully established, because confidence in the concepts used can never be complete, and perfect correspondence between an abstract concept and a concrete measure cannot be demonstrated. Nevertheless, the researcher can hope to produce scales possessing a high degree of validity. Procedures have been evolved, rules established and tests constructed which, if applied correctly, can greatly increase confidence that the scales are reasonably accurate measures of the attitude defined by the researcher.

Concepts can be developed and refined through a structured process of reading, pilot interviews, pretest and analysis before the main study is undertaken.³ By this stage the major concepts should be clear and unambiguous. No formal rules or tests can be applied to the conceptual framework of a research paper, but commonsense and logic can usually detect whether it avoids confusion and known fallacy.

The first step towards producing scales is the selection of attitudinal items for inclusion in the survey questionnaire. The stages of pilot interviews and pretest are valuable in suggesting and checking possible sets of questions in relation to each expected attitude. Fairly clear-cut rules have been laid down concerning the characteristics which should be possessed by attitudinal items. While these rules should be followed, the ultimate test of how well the items were selected lies in how good the scales derived from them are.

Although items are generally selected in the hope that each one will help tap a particular attitude, it is necessary to confirm that they do group together as expected. This is usually done through the application, at both pretest stage and in the main study, of factor analysis. This is a statistical technique for examining the correlations among a group of variables, in order to abstract a number of clusters of those variables which are closely related, and which can therefore

³ We follow, here and throughout, the authors' terminology for these stages, although it is more usual to refer to the initial unstructured interviews as pretesting, and the application of a draft questionnaire to a small sample as a pilot survey.

be interpreted as possessing some common meaning. As with any statistical technique there are established rules governing the use of factor analysis, and there are commonly accepted criteria for determining the number of clusters to extract and which items to include in each cluster.

When the responses to individual items are added together to provide summated scales for each cluster as a whole, it is possible to test the reliability of these scales. While a scale of low reliability is of little value for any purpose, the degree of reliability required depends very largely on the use to be made of the scales. If an attempt is to be made, as in Paper No. 97, to present the scales not ordinarily, but as absolute measures of the percentage of the population holding particular attitudes, then a very high level of reliability is needed, and other firm rules must also be obeyed.

Even if highly reliable scales have been constructed, the interpretation of the meaning of the scale is, in the last resort, a matter of personal judgement on the part of the researcher. His judgement, of course, is likely to be informed by his knowledge of previous research in the field, by his own experience in similar work and by his awareness of evidence from other, non-survey, sources. In certain cases it is possible to seek some confirmation that scales have been validly interpreted by obtaining logically concurrent results from other scales or series or by observing behaviour which has been accurately predicted by the scales. Nevertheless, full validity can never be assured, and the conclusions drawn from attitude research remain judgemental in the sense that statistical evidence can be cited as supporting, but not as demonstrating, the interpretations adopted by the writer.

It follows from this that results should be presented in a tone appropriate to the methodology. Where the results of reliable scales are being reported, the role of personal judgement in interpreting their meaning should be duly acknowledged and decisive statements implying full validity should be eschewed. Where the results of scales of doubtful reliability are concerned, the tone of reporting should be frankly speculative, especially if the scales relate to a new and unfamiliar field of study.

4 SECTION IV IN PRACTICE

Having briefly summarised the aims of the authors as we see them, and the basic elements of the methodology they have used, it is now possible to turn our attention to the actual content of Section IV of Paper No. 97. The principal task in this section will be to assess how far Section IV in practice conforms with the established guidelines of attitude research. This will be done under six headings: concepts, attitudinal items, application of factor analysis, construction and use of scales, interpretation and labelling, and presentation.

(a) Concepts

The authors went through the prescribed process of reading, pilot interviews pretest, analysis and main survey, with, presumably, intervals for thought between each. Despite this the concepts still appear to be confused and unclear. This lack of clarity concerning the concepts pervades the Section and probably underlies many of the other problems encountered.

The most serious example of lack of clarity, because it affects the identification of the stimulus presented to respondents as well as the interpretation placed on their replies concerns the use of the term "IRA". The term is not defined explicitly in Paper No. 97, but the tone of certain passages implies that the results are taken as applying to the Provisional IRA. This is clearest from the following (p. 100): "opposition to IRA activities is not overwhelming and certainly does not match the strong opposition so often articulated by public figures". Public figures in the Republic generally articulate opposition specifically to the Provisional IRA, and certainly not to the "old" IRA in its historical context.⁴

4. See below p. 65.

If it was intended to study attitudes to the Provisional IRA, then the terms "Provos", "Provisionals" or "Provisional IRA" would have been in keeping with Irish vernacular usage. Irish newspapers and RTE use these terms consistently in referring to the activities of the group concerned, and it is only in sections of the British popular press that the initials IRA are used without qualification to denote any and every form of militant Irish republicanism.

It should have become clear from the study phase preceding the first pilot interviews that the label "IRA" is inherently ambiguous because of the long and complicated history of Irish republicanism's militant wing, and that it is therefore unsuitable as a stimulus in attitudinal research in Ireland. The "IRA" could have been taken by many respondents as referring exclusively to the Provisionals, but it could have been taken by others as referring to the "old" IRA, which is now honoured at governmental level through the provision of state pensions and attendance at funerals and commemorative ceremonies. Some may even have associated the term with the Official IRA, which formed the illegal wing of the republican movement until the foundation of the Provisionals in 1969, and which remains in existence although militarily inactive.

The important point is that the emotional responses to these various potential interpretations are likely to be very different. The divergence in response to the "old" IRA and to the Provisionals can be seen in the speeches of almost any politician or other public figure. An extremely clear illustration of this divergence was provided recently by Dr Cathal Daly, Bishop of Ardagh and Clonmacnoise.⁵

The term "Irish Republican Army", with the noble name and record which it earned 60 years ago, can still evoke powerful emotional responses. It cannot be too emphatically asserted that those who usurp the name now have no right or title, historical or moral, to use it. Their present methods, their aims, their ideology, place them in a totally different category . . . The new IRA is a radically new phenomenon in Irish history — and it is a sinister one.

⁵ Quoted in *The Irish Times*, Jan. 2nd, 1980.

Failure to qualify the initials "IRA" in the questionnaire has led, in our view, to a situation where the emotional content of the stimulus presented to the respondents was not clear-cut. Consequently, the meaning of the responses is inherently ambiguous and clarity in interpretation is precluded.

A second major example of conceptual confusion concerns the attitude towards Northern Ireland Protestants. Here the target group is clearly enough defined, but the nature of the attitude is uncertain. The authors state that they are seeking a political attitude and not a measure of social or religious prejudice. However the meaning of the political attitude is not explained, and the extent to which it reflects a perception of difference rather than opposition cannot be ascertained.

Thirdly, the decision to drop the hypothesised attitude towards British involvement, and to regard this omission as a gain in understanding, indicates a confusion between the relative importance of logical models and mere statistical measurement. In any political analysis of the situation, Partition and the British presence must be two separate aspects of the problem, because the possibility exists of a British withdrawal resulting in a continuation of Partition between the Republic and an independent Northern Ireland. Simply to subsume British involvement under Partition, because of the statistical tests on the results obtained, involves ignoring the logical basis of the original hypothesis, and excessive pragmatism in rationalising results which do not support that hypothesis.

Finally, and pervasively, there is a lack of clarity over the basic concept of the research, the nature of attitudes as usually defined. This shows in the assertion that attitudes remain stable over time (p. 19). Given that attitudes are essentially affective, one would wish to see convincing evidence before accepting the assumption that they are unlikely to change significantly in response to events with a high emotional impact. The commonsense presumption would be that attitudes are reasonably stable in normal times, but that they are by no means immune from the shocks of current history. The implicit assumption that attitudes to Northern Ireland were impervious to the several dramatic events between the date of the survey and the date of going

to press seems incompatible with the concept of attitude adopted.

Similarly in their selection of attitudinal items and in their presentation of results the authors seem frequently to lose sight of the essentially affective or emotional character of an attitude and to veer uneasily towards ascertaining their respondents' thought-out positions or beliefs about issues. This will become clear from consideration of the items selected for the main survey questionnaire.

(b) *Attitudinal Items*

Drawing on the various authorities already cited, it is possible to summarise as follows the characteristics desirable in the Likert items selected to elicit each attitude.

- 1 They should be adequate in number to tap the expected attitude and to fulfil the remaining criteria.
- 2 They should be balanced between statements favourable and unfavourable to the subject.
- 3 They should incorporate strong, but not too extreme, expression of view, using vernacular language where possible.
- 4 They should be worded appropriately for the purpose of eliciting feelings. Factual statements capable of being interpreted factually, should be avoided.⁶
- 5 They should clearly identify the object concerning which attitudes are being tapped. Statements that may be interpreted in more than one way, or that are not relevant to the psychological object being measured, should be avoided.

In the light of these criteria, it is instructive to examine carefully the 17 attitudinal items on which the analysis was based, which for convenience are set out in Table 1.

6 As Edwards (1957 pp. 11, 12) says, "if a given statement is equally likely to be endorsed by those with favourable and unfavourable attitudes, then this statement will not be useful in differentiating between those with favourable and those with unfavourable attitudes. . .As a first step in developing an attitude scale, therefore, we eliminate from consideration all statements. . .that are factual or that might be interpreted as factual".

Table 1: Attitudinal items employed in Section IV

Item No.*	I	Items loading on to Partition Factor
1		Reunification is essential for any solution to the problem in Northern Ireland.
4		This is an island and it cannot be permanently partitioned.
6		The presence of British Troops in Northern Ireland amount to foreign occupation of part of Ireland.
7		There will never be peace in Northern Ireland until partition is ended.
10		The sooner we get the idea that the North belongs to us out of our heads the better.
13		The major cause of the problem in Northern Ireland is British interference in Irish affairs.
	IIA	<i>Items loading on to IRA Activities Factor</i>
3		Were it not for the IRA, the Northern problem would be even further from a solution.
8		The methods of the IRA are totally unacceptable.
12		The IRA are basically a bunch of criminals and murderers.
	IIB	<i>Items loading on to IRA Motives Factor</i>
14		Leaving aside the question of the methods, I basically support the aims of the IRA.
16		The IRA are basically patriots and idealists.
	III	<i>Items loading on to Northern Ireland Protestant Factor</i>
2		The vast majority of Protestants in Northern Ireland are willing to reach an agreement acceptable to the Catholic community.
5		The basic problem in Northern Ireland is that Protestants are prepared to defend their privileges at all costs.
9		Since they are the majority, it is only right that Protestants should have the last say in how Northern Ireland is to be governed.
11		Northern Ireland Protestants have an outlook and an approach to life that is not Irish.
		<i>Items omitted from the Scales</i>
15		Were it not for the British, the situation in Northern Ireland would be worse than it is.
17		The Northern Ireland problem will not be solved by ending partition.

*The numbering of items is that used in Paper No. 97, and corresponds with the order of items in the correlation matrix in Appendix A3 to Part I.

(i) With regard purely to number of items, 17 could perhaps be regarded as an adequate total for representing the four attitudes originally postulated. The items were selected following a pretest, and were chosen so that at least four items should be included in the scale for each expected factor. In the event, however, the items did not group together as expected, and consequently some of the attitudes identified by the authors are represented by an inadequate number of items. The attitudes regarding Partition and Northern Ireland Protestants may be adequately served by six and four items respectively, especially as these are more or less in line with the groupings established by pretest. The attitude relating to the IRA would also have been tapped by sufficient items had it not been split into two separate aspects. As it is, these are based on two and three items respectively, which is too few for confidence, especially as the existence of these two aspects had not been established at the pre-test stage.

(ii) Inspection of Table 1 shows that the balance between favourable and unfavourable expression of items is far from adequate. Of the six "Partition" items, five are anti-partition and only one pro-partition. Both of the "IRA Motives" items can be regarded as favourable. The "Northern Ireland Protestant" items are evenly divided, while the "IRA Activities" items are divided as evenly as is possible with only three items.

It could be, as the authors argue in Part I of this document that "acceptance response set" is not a major issue in a survey of this nature, and that consequently any bias imparted by unbalanced items is likely to be relatively minor. All the same the lack of balance must reduce confidence in the scales constructed from these items, and the failure of the authors to allude to the problem in Paper No. 97 exacerbates this concern. The fact that the lack of balance resulted from *post hoc* groupings of items replacing the expected grouping does nothing to restore confidence.

(iii) How far the terminology employed is too extreme is largely a matter of opinion, as there is no definite rule as to what constitutes an extreme statement. However, most

people would probably perceive "The methods of the IRA are totally unacceptable" and "The IRA are basically a bunch of criminals and murderers" as extreme expressions, as also they would "The basic problem in Northern Ireland is that Protestants are prepared to defend their privileges at all costs". The effect of extreme statements on the pattern of responses is not really known, but it seems unlikely that they do not impart some distortion.

(iv) It is with regard to the suitability of the wording of the items that we most take issue with the authors' selection. Remembering that the purpose of attitudinal items is to elicit felt responses rather than rationalised answers or beliefs, then far too high a proportion of the questions invite a thought-out reply. Opinions may legitimately differ on how far individual questions are likely to have evoked cognitive responses. It does, however, seem self-evident that such statements as "were it not for the IRA, the Northern problem would be even further from a solution", and "the vast majority of Protestants in Northern Ireland are willing to reach an agreement acceptable to the Catholic community" will have been interpreted by a significant proportion of respondents as calling for a rational assessment of the facts, regardless of their individual feelings towards the IRA or Northern Ireland Protestants. Although the two questions just quoted are the clearest examples of inappropriately "factual" items, many of the others could also have been treated as factual by some respondents. Certainly it is quite feasible to be implacably opposed to both the aims and methods of the IRA, however defined, and yet to concede that its members are basically patriots and idealists. Throughout history many extremely unpleasant movements have been motivated by idealism and patriotism, and even those most hostile to such movements have been willing to acknowledge the idealism from which they sprung.

The criticism that some items are too factual cannot be adequately answered by pointing out that many respondents' perception of facts may be coloured by their attitudes. Provided that any significant proportion of the sample answered questions in a factual manner which cut across their feelings

towards the subject, the resulting scales cannot be interpreted as measuring attitude. If one takes Edwards (1957) dictum that attitude items should directly and unambiguously measure people's feelings, very few of the items fully meet this criterion. At least half of the items appear to tap beliefs about "what is" rather than reflect preferences or feelings. It requires an unacceptable degree of inference to interpret responses to these questions as expressing affect.

(v) Finally, the items relating to the IRA are deficient in respect of defining clearly the object to which the attitude refers. Not only does the IRA itself remain undefined, as discussed earlier, but the concepts of "activities" and "motives" are never made clear to the respondents. This may well be because these are merely labels, attributed *post hoc* by the authors, rather than concepts which the survey was designed to investigate. Whatever its cause, the effect of this lack of clarity is obvious: neither the authors nor the reader can interpret with any confidence just what it is that is being measured. This is particularly damaging in the case of "activities", where a mildly positive attitude might mean a willingness to condone some degree of violence or might alternatively mean that the respondent is discriminating between violence and such non-violent activities as H-Block protests, rent-strikes or the operation of "black-taxis". There is simply no way of knowing.

(c) *Application of Factor Analysis*

So far we have attempted to express ourselves in relatively straightforward language, and have kept our use of technical terms to a minimum. This and the succeeding section, however, are inescapably technical in nature, and, although we shall continue to strive for general readability, the more widespread use of technical language cannot be avoided.

This is an important section, because the use of factor analysis is central to the portion of Paper No. 97 which we are examining. The results of their factor analysis are cited by the authors (p. 23) as "further confirming and, if necessary modifying, our initial hypotheses and interpretations." Similarly the grouping of items on to the scales used to measure

the hypothesised attitudes is dependent on the factor analysis carried out. Thus, if the factor analysis itself cannot be shown to have been correctly carried out, then the authors' interpretations must be suspect, and their measures will lack meaning.

Factor analysis is a technique for identifying separate clusters within a group of variables. More specifically, it is a method for studying and grouping the correlations or covariances between the variables. Certain common tendencies underlie the pattern of correlations and account for a proportion of the common variance among the items. These tendencies are referred to as components or factors. There are as many components as there are items in the group, but most of them are very weak and account for only a small proportion of the variance. However, there are usually a few strong factors present which account for a high proportion of the total variance, and it is these strong factors which are sought in factor analysis.

Some of the variance in each individual item is accounted for by one or more of the underlying factors. The greater the proportion of an item's variance which can be attributed to a particular factor, the more strongly that item is said to "load" on to that factor. However, the number of useful factors and the way the items load on to them is dependent on the structure of the basic correlation matrix. As Nunnally puts it, "factor analysis is nothing more than a set of mathematical aids to the examination of patterns of correlations" (*op. cit.* p. 371). Basically, it seeks clusters of variables such that the average level of inter-correlation between items within the cluster is high, while the correlations between any items contained in the cluster and items outside it are relatively slight. Nunnally sums up, "a test should 'hang together' in the sense that the items should correlate with one another. Otherwise, it makes little sense to add scores over them and speak of the total scores as measuring any attribute" (*op. cit.* p. 215). In other words, for a factor to form a useful basis for measurement, the items within it should be reasonably homogeneous, and clearly distinct from items outside.

There are no absolute rules for establishing how many factors should be extracted from a group of items, or what

the constituents of each factor should be.⁷ There are, however, basic guidelines in the use of the technique.

The most commonly used guideline is that originally suggested by Guttman and restated by Kaiser: all factors with eigenvalues greater than 1.0 are extracted.⁸ When the correlation matrix is used as the basis for factor analysis, the eigenvalue of a factor may be interpreted as the proportion of the variance among all the items that can be attributed to that factor: If, for example, one has five items in a factor analysis and the first factor has an eigenvalue of 2.4, then we know that the first factor is responsible for 48 per cent of the variance in the five items. Thus, the eigenvalue rule is a practical and sensible guideline, for any factor with an eigenvalue lower than one is of less use than would be a single item from the set. The size of the eigenvalue also has a clear effect on the interpretability of a factor: "The higher this figure is, the more substantial can be the claim that the items with significant loadings have some property in common" (Child, *op. cit.*, page 42). Other tests such as Bartlett's⁹ or Cattell's "scree-test",¹⁰ have been used as guidelines in the determination of the number of factors to be extracted. While different guidelines may suggest the extraction of different numbers of factors, normal research procedure dictates that whichever guideline or test is selected it should be used consistently throughout the exercise. At the very least any change of criterion should be explained and justified by the researcher.

Having decided how many factors to extract, a solution for that number of factors is specified. This gives the loading of items on to each of the factors included. It should be noted that these loadings will vary if a solution for a different number of factors is undertaken.

7 The difficulty of applying classical statistical tests of significance to factor analysis imposes some limitation on the inferences which can properly be drawn from it. This provides a further argument in favour of adopting a cautious manner in presenting such inferences.

8 Kaiser (1960 pp. 141-151). The degree of acceptance of that criterion can be seen in its advocacy in, among other, the following basic texts: Child (1970 pp. 43-44), Rummel (1970 pp. 362-364), Van de Geer (1971 p. 147), Tatsuoka (1971 p. 147), and Taylor (1977 p. 116).

9 See Part I, p. 23.

10 See below p. 75.

Once the loadings on to the appropriate number of factors have been obtained, the next stage is to distribute the individual items between the factors. One method is to include each item in every factor, weighting the item's score by the item's loading on to each factor. In this way factor scores can be calculated which make use of all the information contained in the factor loadings. A further advantage is that this method recognises that the distribution of answers to an item may be influenced by two or more underlying attitudes. For these reasons this is now the generally preferred method of utilising factor analysis in the construction of scales.

An alternative, much cruder, method is adopted in Paper No. 97. This is to assign each item exclusively to the single factor on to which it loads most heavily, providing that this loading is above some arbitrary cut-off point and that the loadings on to other factors are below this point. The common choice for the cut-off point is 0.30, but a loading of 0.40, which is generally followed in Paper No. 97, has occasionally been used.

The major drawback of this method is that it wastes much of the information available. In the first place, items with split loadings of 0.40 or above on two factors, or just failing to reach 0.40 on any factor, have generally to be discarded, even though their relationship with each of the factors is highly significant. In the second place, the assignment to single factors involves treating any loading of 0.40 or higher as if it were a loading of 1.0, and any loading of 0.39 or below as if it were a loading of 0. Those latter include many statistically significant loadings, which are lost through the use of this method.¹¹

Despite these drawbacks, the method has the benefit of simplicity and it remains quite widely used. Standard practice, of course, is for the selected cut-off point, whether it be 0.40,

¹¹ Approximate formulae for calculating sampling errors of factor loadings were developed by Holzinger and Harman (1941) and are widely used today (e.g., Oster 1979). These suggest that 0.40 is considerably higher than the level required for a loading to attain significance with a sample size of 2,000. Although still arbitrary, a lower cut-off point would thus have been preferable, but would have intensified the problem of split loadings which was serious enough even when the 0.40 level was used. If factor scores are used, split loadings cease to be a problem.

0.30 or any other level, to be specified by the researcher and to be used consistently throughout the exercise.

The pattern of correlations between the 17 attitude items was not shown in Paper No. 97. The authors have, however, made it available as Appendix Table A3 to Part I of this document. It provides the starting point for the factor analysis.

Following the pretest, the hypothesis on which the authors based their selection of items was that four separate factors should be identifiable from this matrix of correlations. These four factors should represent attitudes towards Partition, the IRA, Northern Ireland Protestants, and British Involvement. As Table 2 shows, there are indeed four factors with eigenvalues greater than 1.0, although the first of these factors is clearly much stronger than the other three.¹²

Table 2: *Eigenvalues and their corresponding percentages of variance: 17 attitudinal items*

<i>Component number</i>	<i>Eigenvalue</i>	<i>Percentage of variance</i>	<i>Cumulative percentage of variance</i>
1	4.61	27.1	27.1
2	1.65	9.7	36.8
3	1.33	7.8	44.6
4	1.08	6.3	50.9
5	.94	5.5	56.4
6	.83	4.9	61.3
7	.78	4.6	65.9
8	.74	4.4	70.3
9	.68	4.0	74.3
10	.66	3.9	78.2
11	.61	3.6	81.8
12	.59	3.5	85.3
13	.54	3.2	88.5
14	.52	3.1	91.6
15	.50	2.9	94.5
16	.49	2.9	97.4
17	.44	2.6	100
	17	100	

¹² Cattell's "scree test" gives somewhat indeterminate results. The slope resulting from plotting the proportion of variance explained by each factor declines to an approximately straight line after five factors, indicating that this is the solution to be sought. However, the test could just possibly be interpreted as allowing a 1, 3 or 4 factor solution instead. Bartlett's test indicates that five factors could be extracted.

Given this indication of the presence of four viable factors, and their hypothesis that there should be four specified factors present, the authors must have sought a four-factor solution in the next stage of their analysis. No results of this exercise are quoted in Paper No. 97, so we have ourselves undertaken it, using the correlation matrix and supporting information provided by the authors. The outcome is shown in Table 3. This indicates that at first sight the four-factor solution is moderately satisfactory, as would be expected from the eigenvalues shown in Table 2. All 17 items load on to factors at above the 0.40 cut-off point, although two of the items load at above this level on to two separate factors. "The vast majority of Protestants in Northern Ireland are willing to reach an agreement acceptable to the Catholic community" loads on to both Factor 3 and Factor 4, while "The sooner we get the idea that the North belongs to us out of our heads the better" loads on to both Factor 1 and Factor 4. Leaving these two items aside, there are clear-cut loadings of six items on to Factor 1, five items on to Factor 2, 2 items on to Factor 3, and two items on to Factor 4.

Table 3: *Factor analysis of 17 Likert items from Paper No. 97: Loadings on four factors (varimax rotation), principal factoring without iteration*

	Factors				Community*
	1	2	3	4	
1 Reunification is an essential condition for any solution of the problem in Northern Ireland	<u>.74</u>	.17	.14	.01	.59
2 The vast majority of Protestants in Northern Ireland are willing to reach an agreement acceptable to the Catholic community	.11	-.04	-.45	.55	.52
3 Were it not for the IRA, the Northern problem would be even further from a solution	.25	<u>.66</u>	.12	.08	.52
4 This is an island and it cannot be permanently partitioned	<u>.75</u>	.02	.09	-.07	.58
5 The basic problem in Northern Ireland is that Protestants are prepared to defend their privileges at all costs	.23	-.02	<u>.69</u>	-.04	.53

Table 3: (Continued)

	<i>Factors</i>				<i>Community*</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	
6 The presence of British Troops in Northern Ireland amounts to foreign occupation of part of Ireland	.55	.18	.38	-.23	.53
7 There will never be peace in Northern Ireland until partition is ended	.74	.16	.20	.01	.61
8 The methods of the IRA are totally unacceptable	.07	-.73	.05	.10	.55
9 Since they are the majority, it is only right that the Protestants should have the last say in how Northern Ireland is to be governed	-.07	.03	-.07	.73	.54
10 The sooner we get the idea that the North belongs to us out of our heads the better	-.51	-.12	.01	.47	.50
11 Northern Ireland Protestants have an outlook and an approach to life that is not Irish	.08	.09	.71	-.06	.52
12 The IRA are basically a bunch of criminals and murderers	-.08	-.73	.05	.25	.61
13 The major cause of the problem in Northern Ireland is British interference in Irish affairs	.43	.27	.38	-.16	.43
14 Leaving aside the question of their methods, I basically support the aims of the IRA	.29	.57	.16	-.27	.50
15 Were it not for the British, the situation in Northern Ireland would be worse than it is	-.18	-.26	-.02	.51	.36
16 The IRA are basically patriots and idealists	.24	.57	.11	.07	.40
17 The Northern Ireland problem will not be solved by ending partition	-.47	-.23	.24	.24	.39

*Communality is a measure of the common variance among the items, representing the correlation between the item concerned and the factors extracted from the original matrix.

From the point of view of interpretation or measurement the four-factor solution is less helpful. Factor 1 is fairly satisfactory, including four expected Partition items, and two postulated British items. One expected Partition item is subject to a split loading although its heaviest loading is on this factor. Factor 2 is even clearer, with the five expected IRA items loading unambiguously on to it. Factors 3 and 4 are awkward. With only two items clearly on each, they are not suitable as measurement scales, while the content of the items makes interpretation very difficult. Indeed, one possible interpretation, especially if the split loaded Item 2 is attributed to Factor 4, is that Factor 3 groups together items antipathetic to Northern Ireland Protestants, and Factor 4 items sympathetic to them and their British connection, which would indicate that "response set" may have been a problem after all.

What is clear is that these factors do not represent the hypothesised attitudes towards Northern Ireland Protestants and the British presence respectively. The authors at this stage were obviously in some difficulty, with which we can fully sympathise. In spite of the proper sequence of pilot and pre-test, the items selected had not clustered in the expected manner. This is by no means a rare occurrence in social scientific research, and the problems posed by such a situation have been faced by many research workers. The purest solution, which is in keeping with a strict hypothesis-testing approach to research, is simply to report the results and concede that parts of the hypothesis have failed to be borne out and must be abandoned at this stage. Attention can then be focused exclusively on the parts which have received confirmation, in this case Factors 1 and 2. Alternatively it is quite legitimate to argue that the results may indicate flaws in the original hypothesis and proceed, in an exploratory manner, to seek alternative hypotheses which would be compatible with the results.

What is not legitimate is to move on to an alternative three-factor solution, without reporting the four factor, and to announce to the reader that the factor analysis "produced not four but three factors" (p. 94). Nor is it acceptable to claim that this procedure, which involves abandoning the

hypothesis on which the items were selected, can "be seen as a substantive gain in terms both of our understanding of the attitudes in question and in terms of our confidence in the validity of our composite measures" (p. 94).

As we have seen, the eigenvalues provide no basis for adopting a three-factor solution. Even if a level of 1.0 is regarded as arbitrary, there are no obvious grounds for adopting, without explanation, a cut-off point somewhere between 1.08 and 1.33. The three-factor solution possesses no advantage in terms of the loading of the items. There are still two items, although a different two, with split loadings, and in this case they fail to reach 0.40 on any factor rather than reach it on two at once. Moreover, one of the items "lost" in the three-factor solution, "The Northern Ireland problem will not be solved by ending partition" is one of the most direct of the Partition items and one which loaded satisfactorily and unambiguously in the four-factor solution.

Nevertheless, the three-factor solution, like the four-factor, provides two clear factors, with six and five items respectively, and reasonably in line with the expected groupings of items. The third factor, however, is very weak, although it does contain the four expected Northern Ireland Protestant items. As Table 4 shows, the average inter-correlation among its items is only 0.19 and one correlation within it is as low as 0.09. This means that the two items concerned share less than one per cent of their variance. Moreover, the four items in the factor have correlations with several items from other factors which exceed those they have with one another. Thus, as a potential scale, the factor possesses neither homogeneity nor distinctness. In Nunnally's term, it does not "hang together". Any scale derived from it will lack clear meaning and as will be seen later, lack statistical reliability.

If Table 4 demonstrates that the third factor is too weak to use, it also shows that the first two factors do "hang together" reasonably well. In each case the pattern of correlations is relatively homogeneous and shows little overlap with items loading on to other factors. The authors, however, seek to establish that the IRA factor, which emerges quite clearly and unchanged from both the four and three-factor solutions, is in fact "two clearly different factors relating to

Table 4: Correlation between items within factors

<i>3 factor solution, coefficients of correlation, signs omitted</i>							<i>Number of correlations with items outside factor higher than lowest correlation within factor</i>
<i>I. Items loading on to partition factor</i>							
<i>Item *</i>	1	4	6	7	10	13	
1	—	.47	.41	.55	.32	.33	0
4		—	.41	.49	.34	.31	0
6			—	.43	.34	.46	1
7				—	.32	.37	0
10					—	.28	1
13						—	2
Average coefficient among partition items = .389							
<i>II. Items loading on to IRA Factor[†]</i>							
<i>Item *</i>		3	8	12	14	16	
3 IIA		—	.33	.37	.35	.29	0
8 (activities)			—	.42	.28	.20	1
12				—	.43	.34	0
14					—	.39	6
16 (motives)						—	4
Average coefficient among "activities" items (3, 8, 12) = .373							
Average coefficient among "motives" items (14, 16) = .39							
Average coefficient between "activities" and "motives" items = .315							
Average coefficient among all IRA items (3, 8, 12, 14, 16) = .340							
<i>III. Items loading on to Northern Ireland protestant factor</i>							
<i>Item *</i>	2	5	9	11			
2	—	.22	.24	.21			0
5		—	.09	.26			10
9			—	.12			9
11				—			7
Average coefficient among N.I. Protestant items = .190							

*Items numbered as in Appendix Table A2 Part I.

†Correlations within each IRA sub-factor are indicated by the dotted lines.

the IRA" (p. 94). The reason given in Paper No. 97 for dividing the factor is that "the different levels of support which these items relating to the IRA showed in the nationwide sample suggested that, although these five items clustered together in a global factor analysis, the attitude towards the

IRA which they measured might itself be multi-dimensional" (p. 94). This is amplified (p. 98) as: "If our identification and interpretation of a two dimensional attitude to the IRA is valid, then the two dimensions should have contrasting distributions in the population. This is in fact the case".

This claim is based on a statistical fallacy. The marginal distributions of two variables are irrelevant to the relationship between them. Correlation, on which factor analysis is based, measures whether responses to items tend to move together, not whether they are of similar magnitude. If most individuals who score two on one item score five on the other, while those who score three on the first score six on the second and so on, then the two items will be highly correlated, although their means and marginal distributions are quite different. The claim is also extraordinary because it is quite simply not the case that there is any clear-cut discontinuity in the marginal distribution of replies to the five IRA items. Appendix Table A1 to Part I shows that while there is a considerable spread in the percentage responses to the five individual items, the distributions cannot be sensibly divided into two contrasting groups on this basis.

The method chosen to subdivide the IRA factor was to carry out a second stage of factor analysis, seeking a two-factor solution for the five IRA items in isolation. This is a most unusual procedure. One should not, of course, condemn an approach just because it is novel, for innovation is necessary if methodology is not to stagnate. However, it is incumbent upon authors in such circumstances to justify their techniques. This the authors of Paper No. 97 do not attempt, and indeed it would be difficult for them to do so in this case.

In the first place five items are too few for the proper identification of two factors, especially in the absence of a relevant pretest. Taylor, (1977), for example, recommends that "in practice the number of variables be at least five times the number of factors". While minor deviations from this criterion may be disregarded, halving the recommended guidelines is not reasonable. It ensures that, at best, the new factors will contain three and two items respectively, which in turn means that the resulting scales are likely to be unbalanced and unreliable.

In the second place, the procedure adopted violates the logic of the method. The initial factor analysis provided a factor that is orthogonal to the other factors; that is, a cluster of items that were answered with a high degree of consistency and with maximum independence from all other clusters. To apply a further stage of factor analysis implies that these five consistent items can then be further broken into two groups which are independent of each other. For the assumption of independence to hold, it must be plausible for each of the four combinations between the two factors to be held by some people. In this instance, independence presupposes that some may be favourable to both the activities and motives of the IRA, some unfavourable to both, some in favour of motives but unfavourable to activities and some favourable to activities but unfavourable to motives. It is reasonable to expect a considerable number of respondents to hold each of the first three of these combinations of attitudes, but it is exceedingly implausible that the fourth cell would be populated. Yet unless it can be postulated that some people do accept IRA activities while rejecting IRA motives, then independence between the "attitudes" cannot be hypothesised.

Such a hypothesis was advanced in Paper No. 97. In Part I of the present document, the break among the IRA items is justified using an oblique rotation, which allows the two factors to be correlated. The result is what Nunnally advises us to expect: the loadings on the oblique factors are clearer than those from orthogonal rotation and the results of the two rotations are rather similar. (see Nunnally, *op. cit.*, pp. 325-327). This hardly overcomes the strength of the evidence that in fact only one factor is present for the IRA items, nor can it legitimise the novel "two stage" approach to factor analysis developed by Davis and Sinnott.

Leaving aside our objections to the very practice of performing a second-factor analysis on a five-item factor, it is clear that in this case the procedure does not result in the identification of two separate factors. The first factor emerges with an eigenvalue of 2.34, while the second factor has an eigenvalue of only 0.84. This is clear evidence that only one

viable factor is present in the five items. All five items load satisfactorily on to this single factor, as follows:

Item 3	0.683
Item 8	-0.642
Item 12	-0.761
Item 14	0.719
Item 16	0.634

There seems to be no basis here for distinguishing between the first three items and the remaining two.

In view of this evidence that only one factor exists, it is not surprising that in order to allocate their items between their two sub-factors the authors are obliged to abandon the general rule of thumb, which they have used in the first stage of their analysis, that items with a 0.40 loading or better are included in a factor. Item 12 ("criminals and murderers") loads 0.66 on to their first sub-factor and 0.41 on to their second. Rather than discard either the item or the approach, they arbitrarily, and without explanation in the text of Paper No. 97, raise the threshold for inclusion of an item from 0.40 to 0.60.

In any case, these factor loadings must be approached with considerable caution. There is some disagreement among the authorities concerning the correct treatment of the diagonal in a correlation matrix when factor analysis is to be applied. It is now widely accepted that communalities should be inserted on the diagonal (Tatsuoka *op. cit.* p. 145). Since these measure the common variance among the items, and exclude the variance which is unique to each item, it is argued that their use minimises error, both systematic and random, and permits greater confidence to be placed in the results of the factor analysis. On the other hand, Nunnally (*op. cit.* p. 355) prefers in general the use of unities, which represent each item's perfect correlation with itself.

However, on two points there is no disagreement. The researcher should make clear which method is being adopted. This is not done in Paper No. 97. Secondly, where very small numbers of items are involved, the use of unities artificially inflates the factor loadings (Nunnally *op. cit.* p. 369). Thus,

if an attempt is to be made to obtain two factors from a set of five items, then communalities, rather than the unities employed in Paper No. 97, should be used. The use of communalities in a two-factor solution for the five items concerned yields the following loadings.

<i>Item</i>	<i>Factor 1</i>	<i>Factor 2</i>
3 Were it not for the IRA, the Northern problem would be even further from a solution	.41	-.38
8 The methods of the IRA are totally unacceptable	-.18	.69
12 The IRA are basically a bunch of criminals and murderers	-.48	.48
14 Leaving aside the question of their methods, I basically support the aims of the IRA	.64	-.24
16 The IRA are basically patriots and idealists	.55	-.16

With two of the five items loading almost equally on to each factor it seems clear that, if communalities had been used, the two-factor solution could not have been adopted as the basis for sub-dividing the IRA items.

Against the manifold evidence that the IRA items form just one cohesive factor, the authors could argue that some statistical tests do indicate the presence of more than one factor, although as they rejected the findings of such tests when adopting a three-factor solution in their main analysis, they cannot legitimately rely on them in their secondary analysis. The clearest of such tests is probably that put forward by Bartlett.¹³ This indicates that there should be three, not two, sub-factors among the five items.¹⁴ However, Taylor (*op. cit.*) shows that such a solution is mathematically invalid when only five items are used. It might be noted that the danger of looking only at the factor loadings is well illustrated

¹³ Quoted in Kendall and Stuart, (1968) Volume 3, page 292.

¹⁴ This is also the result of the "scree test".

by the trivial three-factor solution, since it appears to yield results which are at least as interpretable as those of the two-factor solution adopted in Paper No. 97.

In assessing the use of factor analysis in Paper No. 97, it is as well to keep constantly in mind Nunnally's dictum: "One way to fool yourself with factor analysis is to ignore the correlations that are used to define a factor" (*op. cit.* p. 368). By paying too little attention to the underlying correlations, the authors would appear to have made the following major errors in their application of factor analysis.

- 1 To adopt a three-factor solution, where both the eigenvalues obtained and their own hypothesis suggest a four-factor solution should have been used.
- 2 To have accepted as meaningful a Northern Ireland Protestant factor lacking in homogeneity and which is so unstable that it disintegrates when a four-factor solution is applied.
- 3 To have forced through a sub-division of a clear IRA factor which the eigenvalues, the matrix of correlations and the single-factor loadings all show to be a single factor.
- 4 To have used methods which breach normal practice and infringe the rules of logic in effecting this sub-division.

Thus three of the four scales derived by the authors are based on misapplications of factor analysis. Even the fourth scale, that relating to attitudes to Partition, is imperfectly specified, in that the four-factor solution provides it with a slightly different content of items. If the four scales are to be justified, it must be on the grounds of evidence other than the factor analysis. No such external evidence is provided in Paper No. 97.

(d) *Construction and Use of Scales*

The principal purpose of the factor analysis is to group the 17 Likert items into a number of clusters. The responses to

each item within a cluster or factor are then combined together into a scale which is taken to measure the attitude hypothesised by the authors.

(i) Reliability

For such a summated scale to be taken seriously it must possess a reasonable level of reliability, meaning that the measurements obtained from the survey should be repeatable. Any scale will contain a certain amount of error, both random and systematic, but provided that the items in a scale are measuring a common phenomenon, and that the items are answered consistently, with errors from the various sources tending to cancel each other out, the scale will be sufficiently reliable to use in research.

The reliability of a scale can be tested, and Nunnally (*op. cit.* p. 194) recommends the use of the "coefficient alpha" test since ". . . in many ways this is the most meaningful measure of reliability". This test sets an upper limit on a scale's reliability, based on (a) the consistency among the items as expressed by their intercorrelations, and (b) the test length, or number of items in the scale. The alpha coefficient can range from zero to one, and is the estimated correlation between a scale as measured and the "true scores" that would have been obtained had it been possible to measure the attitude without error.

The alpha coefficients for the four scales used in Section IV are —

1	Attitude to Partition: Anti versus Pro	.793
2	IRA Activities: Support versus Opposition	.641
3	IRA Motives: Sympathy versus Rejection	.561
4	Northern Ireland Protestants: Anti versus Pro	.484

The level of reliability that is required in a scale is governed by the use to be made of the scale. Nunnally (p. 226) offers the following guideline:

In the early stages of research on predictor tests of hypothesised measures of a construct, one saves time and energy by working with instruments that have only modest reliabilities, for which purpose reliabilities of .60 or .50 will suffice . . . in many applied settings a rela-

bility of .80 is not nearly high enough. In basic research, the concern is with size of correlations and with the differences in means for different experimental treatments, for which purpose a reliability of .80 for the different measures involved is adequate.

As the use made of the scales in Paper No. 97 could be defined as either applied or basic, it is clear that the reliability coefficients of three of the scales (those relating to IRA activities, IRA motives, and Northern Ireland Protestants) must be considered inadequate. In view of the shortcomings in the application of factor analysis, there can be no surprise that the scales do not achieve adequate reliability. However, because an attempt is made to use the scales to measure precisely the average level of support and opposition to particular objects, the absence of adequate reliability in the scales takes on an added importance.

(ii) Neutral Point

Even the individual Likert items are essentially ordinal measures, in that the participant is asked to agree or disagree with a statement more or less strongly. The placing of numbers on responses, such as a score of one for strong disagreement or six for moderate agreement with an item, although standard practice in attitudinal research, is an arbitrary procedure. The score on an individual item can in no way be compared with precise measures, such as those of length, weight or temperature. Rather it is a somewhat crude numerical representation of an order of ranking and equal intervals between the points of the score cannot, strictly, be assumed.

A problem in the application and scoring of individual Likert items is the treatment of the neutral point, where answers change from being in some degree favourable to some degree unfavourable. The purist approach is to have six potential scores, with no point intervening between slightly favourable and slightly unfavourable. This appears to have been the authors' intention, as the Likert items presented to respondents contained no box for a "don't know" score. Nevertheless, in spite of encouragement from interviewers to select a definite response, a small proportion of respondents insisted on returning a "don't know" answer. These were

accommodated by inserting a "don't know" category in the reported scores, and according this a score of four on a scale ranging from one to seven.

This practice allows a small area of indetermination in the score of each individual Likert item. It can be argued that it also leads to some distortion of the scale, as the pattern of answers received is probably somewhat different to that which would have been obtained had the respondents been offered a "don't know" category in the first place. A technical consequence of the constricted "don't know" area in the centre of the scale is that it tends to lead to a bi-modal distribution of answers, with a dip at the middle of the scale. This in turn implies that the items will not possess a normal distribution of responses, yet the assumption of normal distribution is a standard requirement for drawing inferences from correlation analysis, including factor analysis.

Although there is no discussion of the matter in the course of Paper No. 97, it could well be, as the authors argue in Part I of this document, that the issue of the neutral point on individual Likert items is not of great importance, and does not significantly affect the results obtained.

It is when we turn from individual Likert items to the summated scales that the difficulties caused by the treatment of the neutral point become severe. On an individual item, the neutral point between favourable and unfavourable responses possesses psychological meaning, even if it does pose problems in measurement. When individual items are added together no such psychological neutral point can be postulated. On, say, a four-item summated scale an average score of four can be obtained by dozens of different combinations of scores on the component items, ranging from two "strongly agrees" combining with two "strongly disagrees", through many mixtures of agreement and disagreement, to four genuine "don't knows". To interpret all these possible combinations of agreement and disagreement as neutrality towards the stimulus is not justifiable. Rather, the scores towards the centre of a summated scale can only be interpreted as indeterminate.

Secondly, even if the answers to questions are consistent in the sense that they correlate highly, it cannot be assumed

that all items tap the attitude in question with equal intensity. Consequently a score of, say, two on one item does not necessarily imply the same degree of favourability towards the attitude as the same score on a different item. It follows, crucially, that the changeover points from positive to negative responses to different specific items may bear differing relationships to the change from a favourable to an unfavourable position on the attitude as a whole.

Oppenheim (*op. cit.* pp. 140-141) sums up this argument as follows:

With regard to the neutral point, we must agree that this is not necessarily the mid-point between the two extreme scale scores; moreover, scores in the middle region could be due to lukewarm response, lack of knowledge, or lack of attitude in the respondent (leading to many "uncertain" responses), or to the presence of both strongly positive and strongly negative responses, which would more or less balance each other.

Of course, scales containing items with a poor level of intercorrelation exhibit this problem in an acute form. They will suffer from a high proportion of inconsistent answers, while the relationship of each of a set of weakly linked items with the underlying attitude must be regarded as tenuous. Not only does the mathematical mid-point on such a scale lack any meaning, but the other points towards the centre of the scale are also likely to contain a large number of indeterminate sets of answers, so that they too cannot be interpreted with any degree of confidence. Only average scores, which are extremely high or low, approaching one or seven, can be interpreted without ambiguity, as such averages can only be obtained if the scores on all component items are similarly extreme. Obviously, unless a scale possesses adequate reliability it cannot sensibly be used as a measure at all.

Among scales which are reliable, the seriousness of the problem concerning the neutral point depends largely on the use to which the scale is to be put. Traditionally summated scales have been most widely used in personality research, where the nature of research requires ordinal measures. In attitude research, reliable summated scales are frequently used to compare the co-variance of two attitudes, or to

examine the relationship between certain socio-demographic variables and the strength with which an attitude is held. So long as applications of summated scales are limited to such ordinal uses the issue of the neutral point is not important, but in any attempt to interpret the scales as cardinal measures it becomes crucial.

A useful summary of the matter is given by Edwards (1957, p. 157)

. . . . nor is there any evidence that the "neutral" point on a summated-rating scale necessarily corresponds to the mid-point of the possible scores If in terms of research, our interest is in comparing the mean change in attitude scores as a result of introducing some experimental variable, such as a motion picture film, then the lack of knowledge of a zero point should cause no concern. Similarly, if our interest is in comparing the mean attitude scores of two or more groups, this can be done with summated rating scales Or if we wish to correlate scores on an attitude scale with scores on other scales or with other measures of interest, this can also be done without any reference to the zero point on the favourable-unfavourable continuum

But he also warns:

The absence of knowledge of such a point is a handicap only if our major interest is in being able to assign, on the basis of an attitude score, a single subject to the class of those favourable or unfavourable in attitude toward the psychological object under consideration.

If percentages pro- or anti- a particular group or phenomenon are to be quoted, then it is, of course, necessary to designate individuals as favourable or unfavourable in their attitude. Some method of defining the psychological neutral point therefore becomes essential. Techniques have been proposed whereby the information contained in the responses to individual items can be analysed to obtain a neutral point possessing a reasonable degree of psychological meaning.¹⁵ However, such techniques can only be properly applied if the scale is reliable in the first place.

¹⁵ Suchman (1950).

Alternatively, an attempt could be made to establish the neutral point through the use of criteria from outside the scale. This generally needs to be planned for when the Survey questionnaire is being designed. On a crude level some indication of the neutral point could be obtained through asking a direct question, not included in the scale itself, concerning the general attitude towards the stimulus. A more acceptable practice is to ascertain from each respondent the strength of his feeling about an item as well as his degree of agreement or disagreement. This provides sufficient information to allow the use of intensity techniques¹⁶ which reveal the area of neutrality concerning the attitude. Whatever the method adopted, the aim remains the same: to replace the mid-point of the scale with a psychological neutral point which has been established by means of a deliberate and clearly explicable procedure.

(iii) Assessment of Scales

It should be clear from the foregoing discussion that in order to present summated scales as measuring the percentage pro-, anti- and neutral in attitude towards an object such as Partition, two fundamental conditions must be met.

(a) The scales must themselves be reliable.

(b) The "neutral" point must be independently determined.

The four scales presented in Paper No. 97 in the form of percentage distributions meet neither of these conditions.

As we have already seen, three of the scales are insufficiently reliable for use in anything except, perhaps, preliminary exploratory hypothesis formation. The scale relating to Partition probably has sufficient reliability for use in an ordinal form, as in the latter part of Section IV, but not for the applied use of measuring the distribution of an attitude.

For none of the scales was any independent source sought for establishing a viable neutral point. There is a simple reliance, against the explicit advice of the authorities in the field, on the mathematical mid-point of the scales as an expression of neutrality of attitudes. Neither is there any warning to the reader that this procedure departs from accepted practice.

16 See Guttman and Suchman (1947).

The presentation of scales purporting to measure the precise distribution of attitudes on sensitive topics, when these scales meet neither of the fundamental conditions necessary for such measurement, is in our view a serious misuse of summated attitudinal scales.

(e) Interpretation and Labelling

In the two preceding sections we have expressed our reasons for believing the identification of the four factors presented in Section IV and the presentation of these in terms of absolute percentages of the population holding particular attitudes to have been mistaken. If, in fact, these attitudes have not been properly identified and measured, then their labelling and interpretation become matters of secondary importance.

Nevertheless, it is worth considering the issue in isolation, because we believe that the labels adopted in Paper No. 97 would have been unsuited to the findings of the Survey, even if the factor analysis and scale construction had been correctly undertaken. For the purposes of this section, therefore, we temporarily suspend our criticisms concerning analysis and accept the clusters of items selected by the authors as forming their four factors. Thus we can concentrate for the time being on how these factors are interpreted and labelled.

The interpretation of analysed survey data and the labels attached to particular factors are closely intertwined. Indeed, it would hardly be an exaggeration to regard the labels as a summary of the interpretation adopted. Labelling is thus a matter of judgement and not of technique.

To some extent labelling is bound to be arbitrary, but it ought generally to stay within the limits of common sense and the ordinary rules of language. Leaving to one side the major issue of whether attitudes should be labelled in a dichotomous manner, such as "Pro versus Anti" or "Support versus Opposition", when no neutral point in the scale has been established, we can consider the key words used in each of the labels adopted in Section IV.

There is no call to quarrel with the key word "anti" in relation to the attitude to partition. This appears to be an adequate and accurate reflection of the content of the items contributing to the factor. With regard to the IRA Motives

attitude, the principal query is whether this sub-factor exists as a separate entity. Assuming for the moment that it does, then "sympathy" is probably a reasonable label in relation to the content of the constituent items. It is the labelling of the other two attitudes which causes us concern.

From the items on which it is based, the attitude towards Northern Ireland Protestants would appear to be complex and somewhat diffuse. It involves a recognition of differences of outlook, approach to life and political aims together with a reluctance to accept that these Northern Ireland Protestant aims should determine the resolution of the Northern Ireland problem. Not surprisingly some of these items are correlated as closely with some of the Partition items as with each other. To label this attitude "anti" Northern Ireland Protestant is to simplify it unduly, to imply a coherence which the factor lacks, and to show a lack of awareness concerning the effect that labelling can have on the reader of Paper No. 97.

The labelling of the remaining IRA attitude is open to even stronger objections. The factor is based on three items, one of which concerns the effect of the existence of the IRA, one of which is ostensibly concerned with their motives, and only one of which mentions methods. To relate all three to IRA *activities* is thus an unjustified interpretation. To go further and describe the attitude as one of *support* is to adopt an interpretation which simply is not in accord with the normal usage of the English language. Support, in this context, means an actively positive state of mind, if not also implying concrete manifestations of agreement.¹⁷ There is nothing in the three items to warrant the use of the word.

If the criterion of support for a political group is a failure to find its "methods totally unacceptable" or to regard its members as "a bunch of criminals and murderers", then most of the adult population of Ireland simultaneously "support" Fianna Fail, Fine Gael, the Labour Party, and, for that matter, the Australian Country Party. On the same basis, many pressure groups, armed factions and illegal organisations around the world could claim widespread "support" in Ireland.

¹⁷ See the Oxford English Dictionary definition of "support" quoted in Part I (p. 30).

Obviously, the mere absence of outright condemnation should not be described as "support" and would be more accurately reflected in the use of more passive terminology such as "acquiescence in", "toleration of" or even "acceptance of". This is especially so when the authors themselves are at pains to point out (p. 98) that they "have no evidence that an attitude of support for IRA activities, as we have measured it, leads to any concrete actions, by way of monetary contributions or whatever, in support of the campaign of the IRA."

In passing, it should be noted that this denial of any link between attitude and action runs counter to most of the definitions of attitude quoted in Part I of this document. If attitudes are assumed not to influence behaviour, then much of the *raison d'être* of attitude research is removed.

Apart from the labelling of the factors, there are several less important points on which the authors' interpretation of their results appears unconvincing. The most serious of these is probably the discussion of the attitude towards IRA Motives. Here it is claimed (p. 100) that this cannot "be explained away as an alternative expression of the aspiration to reunification" on the grounds that one of the items referred to "aims (plural)" and that the other referred "to patriotic and idealistic characteristics." This evidence is inadequate for such a claim. Given that the majority of respondents themselves see reunification as highly desirable, it would not be unreasonable to assume that they would tend to perceive anybody else holding the same aspiration as being both patriotic and idealistic. Similarly the mere use of the plural in "aims" tells nothing about how these aims are actually perceived by respondents. Either the plural could be overlooked, or could be taken to encompass complementary goals such as British withdrawal. The only clear evidence concerning how the actual programme of the Provisional IRA is accepted comes in Section III, where only eight per cent of respondents selected the Provisional Sinn Fein policy of a four-province Federal United Ireland as their first choice solution. The real point at issue here is that if a deliberate choice was made to omit any reference to the actual aims of the IRA from the questionnaire, it is unwarranted to then make firm assertions concerning the meaning of responses in this area. A legitimate

case can be made in attitude research for leaving such questions vague, but the inevitable price is that uncertainty about the exact meaning of the results must be accepted.

(f) *Presentation*

Our criticisms of Section IV so far have concerned several aspects of conceptualisation, methodology and interpretation. Taken together, these would be enough to render the findings of this Section of Paper No. 97 invalid. The manner in which the Section is presented greatly exacerbates its shortcomings.

In the first place, it is common practice when presenting an analysis to allude to, if not to discuss fully, the methodological problems encountered, and to seek to justify the particular solutions adopted. As we have shown in this critique, there are several instances in Section IV where important issues have not been addressed. This makes it very difficult for even the informed reader to assess the strength of the evidence adduced.

More centrally, in discussing the desiderata of attitude research, we noted that validation of such work could never be absolute, and that the degree of validity achieved depends on the value of the concepts as much as on the consistency of the statistical results. Furthermore we concluded, in line with authorities in the field, that the presentation of this type of research should be in keeping with its interpretative and speculative nature.

In the discussion of methodology in Section II of Paper No. 97, it is stated, reasonably, that the process of pre-testing factors "greatly increases the confidence one may place in the validity of the measures one uses, since the judgement of validity is based not simply on *a priori* reasoning, but on empirical corroboration" (p. 23). Even at the beginning of Section IV itself there is a reference to a "gain in terms of our confidence in the validity of our composite measures" (p. 94). This too is an acceptable form for a statement of the general role of factor analysis in relation to validity.

However, as the section progresses this concern with the place of statistical evidence in corroborating *a priori* reasoning, and thus improving confidence in validity, gives way to much stronger expression. We find such statements as (p. 96)

“. . . the homogeneity of the subsets of items has been empirically established by means of the factor analysis”, (when in fact the correlation between some of the “homogeneous” items is as low as .09). Similarly the view that the attitude towards the IRA might possess more than one dimension (p. 97) “proved correct in that a separate factor analysis of the five items produced two distinct factors” (when, as we have shown, the evidence for the existence of these two separate factors is totally lacking).

These claims, which we regard as excessive, still relate to matters of technique, and in themselves are perhaps not very serious. It is when the authors turn from describing their methods to reporting their results that the tone of the section becomes even less cautious, and implies that the findings are fully validated. Examples of over-confident presentation can be found in the discussion of each of the attitudes. However, it is clearest and most serious in the pages devoted to Attitudes to the IRA (pp. 97-100). The three full paragraphs quoted below illustrate in context the dearth of either qualifying clauses or verbs expressing uncertainty, the consistent use of definite verbs including the simple “is”, and the frequent occurrence of strong adverbs.

The interpretation of the grouping of the items and thus of two dimensions identified is that the first three items all refer to aspects of IRA activities: without their activities the problem would be worse (Item 1), the methods underlying their activities are totally unacceptable (Item 2) and their activities make them a bunch of criminals and murderers (Item 3). Taken together the three items clearly represent *Support for versus Opposition to IRA Activities*.

The second set of IRA items relates to the motives of the IRA: support for their aims (Item 1) and attribution of patriotic and idealistic characteristics to them (Item 2). Taken together these two items represent an attitude to IRA motives – an attitude of *Sympathy with, versus Rejection of IRA Motives*. If our identification and interpretation of a two-dimensional attitude to the IRA is valid then the two dimensions should have contrasting distributions in the population. This is in fact the case.

The contrast is first apparent when we look at the average scores on each dimension — these are 3.24 in the case of support for activities and 3.86 in the case of sympathy for motives. Both means fall below the mid-point of four but the mean value of support for IRA *motives* is substantially closer to the mid or neutral point. The contrast between the distributions of the two dimensions of attitude to the IRA is also apparent in Table 43 where the percentage distributions are given on the basis of rounding the scores to integer values. There are contrasts at almost every level of the scale in Table 43. If we focus on the summary percentages, the picture emerges quite clearly. In the case of attitude to IRA *activities* (support *versus* opposition), 61 per cent are on the opposed side of the neutral point compared with 34 per cent on the rejection side of the neutral point in the case of attitude to IRA *motives*. Correspondingly, 21 per cent are on the support side of the neutral point in regard to attitude to activities compared with 42 per cent on the sympathy side of the neutral point in the case of attitude to motives.

The identification and measurement of these two distinct dimensions is of crucial importance in assessing attitudes to the IRA. Attitude to IRA activities is a clear and unambiguous measure. Given the nature of the attitude in question it is necessary to be particularly careful and precise in discussing its distribution. The majority of people (61 per cent) are opposed to IRA activities as we have measured this attitude. Overall opposition is also evident in the average score of 3.24 already noted. A further 19 per cent are neutral. In regard to the remaining 21 per cent support for IRA activities, it should first of all be noted that this includes 13 per cent who are slightly supportive as against eight per cent moderately to strongly supportive. This having been said, the stark fact remains that 21 per cent of the population emerge as in some degree supportive in their attitude to IRA activities. It should also be emphasised that we have no evidence that an attitude of support for IRA activities, as we have measured it, leads to any concrete actions, by way of

monetary contributions or whatever, in support of the campaign of the IRA. The context in which these figures for attitude to IRA activity (61 per cent opposition, 19 per cent neutrality and 21 support) should be interpreted is that these attitudes are part of the overall approach of people in the Republic to the Northern Ireland issue. As such it must be acknowledged that, on this evidence, opposition to IRA activities is not overwhelming and certainly does not match the strong opposition so often articulated by public figures.

If these paragraphs, like the rest of the section, do not imply an assumption of full validity for the scales, then it is difficult to conceive of a style of presentation that would. In other words, the findings in this section are presented as scientifically measured facts. Even if the statistical evidence were more reliable, the most that should be claimed is that the authors' interpretations, while inevitably speculative, are consistent with the statistical results. This is particularly so given the evolution of the scales being presented. Because the final composition of the scales was determined only after the responses were received, the hypotheses embodied in the scales must be regarded as being formed from the main survey data. It is therefore logically untenable to claim that these data corroborate or confirm the hypotheses.

While our main criticism of the presentation concerns the unduly dogmatic tone of the reporting, there is another point illustrated in the quotations above which should not go unremarked. This is the use throughout of the present tense, implying that a survey carried out in the Summer of 1978 represents views still held, in the same proportions, in the Autumn of 1979. Nowhere in the relevant sections is there any discussion as to whether events in the intervening period might have led to a significant change in attitudes.

Because of the innate characteristics of the methodology used, because the application of that methodology diverges at several points from accepted practice, and because of the time-lag between survey and report, the reader ought to be warned that the results set out in Section IV should be treated with caution. The complete failure to state, or even imply,

that such caution is necessary is not merely a question of using an inappropriate style. When such sensitive subject matter is involved, it could encourage the misuse of the findings by those who are unaware of the limitations inherent in the calculations.

5 SUMMARY

(a) The sample on which Paper No. 97 was based appears to have been well drawn, and the questionnaire properly administered. It follows that the answers to individual questions collected in the Survey can be taken as representative of the responses of the population as a whole.

(b) The eliciting of opinions concerning alternative solutions to the Northern Ireland problem and the policy options open to the Irish and British Governments was well conceived and competently executed. Section III of the Paper, in which these results are reported, is, in our opinion, a solid and useful contribution to knowledge.

(c) The methodology of attitude research is well established and an extensive literature lays down clear guidelines for its application. Section IV seeks to apply this methodology and it can therefore be judged largely on the extent to which it adheres to these guidelines and on how well the authors justify any major departure from them.

(d) In any social research, it is important that the concepts used be clear. In Section IV there appears to be considerable conceptual confusion. Among several instances where clarity is lacking, two stand out. Unnecessary ambiguity is caused by using the simple initials "IRA", with their complex historical associations, when the object of the research would appear to be attitudes to the Provisional IRA. More fundamentally there is uncertainty about the basic concept of the entire section, the nature of an attitude. This uncertainty is shown in various ways, but it is reflected most obviously in the wording of the questions chosen to tap the attitudes being studied.

(e) Attitudes are commonly defined in social psychology as emotional dispositions towards particular objects or stimuli. Questions designed to identify or measure attitudes should

therefore be concerned with the respondent's feelings towards the stimulus, not with his considered opinions, beliefs or behaviour. Of the 17 questions in Section IV, far too many are worded so as to invite beliefs or thought-out positions, and there is no evidence that the answers to these are correlated with basic emotions.

(f) In attitude research, several questions, or items, are usually taken together as representing and measuring an attitude. To select items which group well together for this purpose, factor analysis is normally applied at the "pretest" stage of a study. It is generally used again on the results of the main survey, to confirm that the items fall into the expected clusters. Like other statistical techniques, factor analysis should be applied according to well established rules. We have shown that these rules are breached in Section IV, with the result that the factor analysis of the main survey data contains at least four serious errors. The final grouping of items into three factors, one of which is then divided into two sub-factors, is quite unacceptable.

(g) Following factor analysis, the results of each cluster of items are combined to produce summated scales. These can be tested for reliability. Only the scale measuring Attitude to Partition shows a level of reliability which would justify its use in some form of further analysis. The other three scales presented are simply not reliable enough to be regarded as measuring any attitude consistently.

(h) Even where reliable scales have been obtained, the mid-point of the scale cannot legitimately be taken as the division between favourable and unfavourable attitudes towards the stimulus in question. This does not matter much if the scale is to be used ordinally for purposes of comparison. However, if the scale is to be presented as a cardinal measure, then it is essential to establish the psychological neutral point independently. This neutral point must be substituted for the mid-point of the scale before the percentages pro- or anti- a particular stimulus can be calculated. In Section IV, there is total reliance on the mid-points, and no attempt is made to establish independent neutral points for the scales. Thus the percentages quoted in relation to each attitude would be misleading, even if the scales themselves were reliable. In the

event, of course, the presentation as cardinal measures of scales with such low levels of reliability cannot be accepted.

(i) The interpretation of the scales, as embodied in the labelling adopted, involves a debatable use of the English language. The content of the items on which they are based does not, in our view, justify the use of the word "support" in relation to the activities of the IRA, nor of the word "anti-" in relation to Northern Ireland Protestants.

(j) The style of presentation in Section IV implies that the scales produced are fully validated. In view of the demonstrably low reliability of the scales, and of grave doubts whether the concepts used were sufficiently clear to be measurable, this assumption of validity is unjustifiable. The definite and over-confident tone used is therefore highly inappropriate, and serves to compound the methodological faults already summarised.

6 CONCLUSION

On the basis of a careful comparison of the methods used in Section IV with the standard practices of the methodology employed, we have indicated serious shortcomings in conceptualisation, selection of questions, application of factor analysis, construction and use of scales, interpretation and presentation. Each, on its own, would cast doubt on the findings of Section IV. Taken together, they completely invalidate the findings. In our view, the evidence adduced in Section IV does not justify the conclusions reached.

The issue is not that the figures presented are wrong, in the sense that a more rigorous analysis of the data would produce alternative, more accurate, percentages. It is rather that the scales presented in Section IV are inadequate measuring devices. Standard tests show them to be statistically unreliable, while their meaning in relation to the attitudes they are designed to represent is problematic. Quite simply, these scales cannot legitimately be used to determine the percentages of the population holding favourable or unfavourable attitudes towards Partition, IRA Activities, IRA Motives, or Northern Ireland Protestants.

Because the sample was satisfactory and the questions appropriately selected, we regard Section III of Paper No. 97 as a useful and instructive exercise. Even parts of Section IV, where the Partition scale is used ordinarily to compare the strength of the attitude with various socio-demographic features or with the holding of certain opinions, could have been a potentially valuable contribution to an understanding of Irish problems. It is unfortunate that the virtues of a large part of Paper No. 97 tend to be obscured by the deficiencies contained in the first eight pages of Section IV.

Note: The agreed format for this publication precludes our replying to the points raised in Part III. We should like to make clear that, having studied Part III, we stand by our major conclusions as set out in Part II.

REFERENCES

- ALLPORT, G. W., 1935. "Attitudes", in C. Murchinson (ed.) *Handbook of Social Psychology*, Worcester, Mass: Clark University Press.
- CHILD, D., 1970. *The Essentials of Factor Analysis*, London: Holt, Rinehart and Winston.
- EDWARDS, A. L., 1957. *Techniques of Attitude Scale Construction*, New York: Appleton-Century-Crofts.
- GUILFORD, J. P., 1954. *Psychometric Methods* (2nd edn.), New York: McGraw-Hill.
- GUTTMAN, L. and E. A. SUCHMAN, 1947. "Intensity and a Zero Point for Attitude Analysis", *American Sociological Review*, 12, pp. 57-67.
- HOLZINGER, K. and H. HARMAN, 1941. *Factor Analysis*, Chicago: University of Chicago Press.
- KAISER, H. F., 1960. "The Application of Electronic Computers to Factor Analysis", *Educational and Psychological Measurement*, 20, pp. 141-151.
- KATZ, D., 1966. "Attitude Formation and Public Opinion", *Annals* 367, pp. 150-162.
- KENDALL, M. and A. STUART, 1968. *The Advanced Theory of Statistics, Volume III Second Edition*, London: Charles Griffin.
- KERLINGER, F. N., 1973. *Foundations of Behavioural Research* (2nd ed.), London: Holt, Rinehart and Winston.
- NUNNALLY, J. C., 1970. *Introduction to Psychological Measurement*, New York: McGraw-Hill.
- OPPENHEIM, A. N., 1966. *Questionnaire Design and Attitude Measurement*, London: Heinemann Educational Books Ltd.
- OSTER, G., 1979. "A Factor Analytic Test of the Theory of the Dual Economy", *Review of Economics and Statistics* 61, pp. 33-39.
- RUMMEL, R. J., 1970. *Applied Factor Analysis*, Evanston: Northwestern University Press.
- SUCHMAN, E. A., 1950. "The Intensity Component in Attitude and Opinion Research". Chapter 7, in S. Stouffer, L. Guttman, E. Suchman, P. Lazerfeld, S. Star, and J. Clausen, *Studies in Social Psychology in World War II: Measurement and Prediction*, Princeton: Princeton University Press.
- TATSUOKA, M. M., 1971. *Multivariate Analysis: Techniques for Educational and Psychological Research*. New York: Wiley.
- TAYLOR, C. C., 1977. "Principal Component and Factor Analysis" Chapter 4 in C. A. Ó Muircheartaigh and C. Payne, (eds.), *Exploring Data Structures*, Chichester: Wiley.
- VAN DE GEER, J. P., 1971. *Introduction to Multivariate Analysis for the Social Sciences*, San Francisco: Freeman.

PART III

Rejoinder to the Critique in Part II

E. E. Davis and R. Sinnott

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I INTRODUCTION

We would like first of all to thank our four colleagues¹ for their joint critique of our paper. While we believe that the conclusions they have drawn are wrong, publication of their critique, nevertheless, is to be welcomed in that it provides the opportunity for a full examination of the basis of their publicly stated disagreement with our conclusions.

Before replying in detail, we note that the overall scope of the criticism in Part II is limited in two important respects. Firstly, criticism is directed only at Section IV of Paper No. 97, the findings of which have already excited so much controversy. Secondly, Baker *et al.* profess to share a common methodology with us. Although, as we shall show, they have misinterpreted this methodology in crucial respects, the fact remains that their criticism is related to the *application* of our methodology rather than its *nature*. Since this Rejoinder is concerned only with examining the critique in Part II, we do not discuss again the basis of that methodology, except in so far as is necessary to indicate the ways in which the methodology is wrongly interpreted by the authors of the critique. The reader who is interested in the wider questions of the methodology used in Paper No. 97 is referred to that paper itself and the amplification of various issues in Part I of this document.

The critique in Part II may be summarised as follows:

- 1 We are said to have been conceptually confused.
- 2 We are said to have failed to meet relevant methodological criteria; and
- 3 Even though (1) and (2) would, if true, render our findings valueless anyway, we are still adjudged to have interpreted, labelled and presented these (valueless) findings in an unacceptable manner.

1. For convenience we refer to them as Baker *et al.*

All of the detailed criticisms in Part II fall under one or other of these headings, and we shall deal with them accordingly in the following three sections. In Section V we present a summary which corresponds point by point with the summary by Baker *et al.* of their critique. Finally in Section VI we offer our overall conclusions on their critique.

II CONCEPTUAL ASPECTS

A The Concept of Attitude

Baker *et al.* attribute to us a concept of attitude which we do not use. They conceive of the object of attitude research as essentially emotional and they explicitly place rational evaluations and thought-out positions or replies outside the compass of such research.² This is to confuse attitude as such with just one of the possible bases on which attitudes are held. Two individuals, for example, may each have a similar unfavourable attitude to fox-hunting, and yet hold those attitudes on quite different bases. The one, a city dweller, may have an emotional revulsion to the practice; while the other, a tillage farmer, may have an unfavourable attitude because of potential damage to fences and crops. The two individuals have different bases for their attitude — one largely emotional, the other largely rational. In each case their response is, however, an attitude as we have defined and sought to measure this phenomenon.

Although we ourselves would not regard their concept as a useful one, Baker *et al.* are entitled to adopt their own concept for purposes of any research they may be undertaking. But they are not entitled to claim that the concept they

2. Thus, for example, they say that the evaluation involved in an attitude is "... essentially on an emotional, rather than a rational, plane" (p. 61); "...attitudes are on an emotional rather than a rational level . . ." (p. 61); "... the authors seem frequently to lose sight of the essentially affective or emotional character of an attitude and to veer uneasily towards ascertaining their respondents' thought out positions or beliefs about issues" (p. 67); "Questions designed to identify or measure attitudes should therefore be concerned with the respondents' feelings towards the stimulus, not with his considered opinions, beliefs or behaviour" (pp. 100-101); "Of the 17 questions in Section IV, far too many are worded so as to invite beliefs or thought-out positions, and there is no evidence that the answers to these are correlated with basic emotions" (p. 101).

propose, which limits the term attitude to the emotional rather than the rational level, is the same as that in general use in the relevant research literature.³ The reader who refers to the definitions given by various authorities in Part I can judge this for himself.

Still less are Baker *et al.* entitled to claim that their concept of attitude is the same as ours, given that we were at pains in Part I to amplify our position. Admittedly, in response to earlier critics who held that attitude research should only be concerned with reasoned evaluation, we did say (correctly) that "an attitude is not necessarily a reasoned response arrived at as a result of comprehensive reflection and consideration". But it would be an elementary logical fallacy to deduce from the statement "an attitude is not necessarily a reasoned response" that an attitude can *never* be a reasoned response. Evidently this is the mistaken inference that Baker *et al.* have drawn: otherwise they could not claim that we aimed to measure attitudes on an emotional rather than a rational level.

We have dwelt on this point, not to demonstrate a logical fallacy on the part of the authors of the critique, but because their confusion about the concept of attitude is at the root of many of their detailed criticisms of our approach. It underlies, for example, the allegation that there is a pervasive lack of clarity over the basic concept of the research, i.e., the nature of attitudes (Baker *et al.*, p. 66). The alleged lack of clarity arises solely from the simplistic view of Baker *et al.* that attitudes are to be equated with emotions.

The same mistaken concept of attitude is the basis of what they regard as their most serious criticism of our attitude items, namely, that too many of the items invite a "thought-out reply" or are likely to be interpreted by respondents as calling for a "rational assessment of the facts" (Baker *et al.*, p. 70). This criticism is valid only if one accepts the view of Baker *et al.* that the notion of attitude excludes rational responses. We have shown that this view is confused and

3. In making this claim, Baker *et al.* say, "In technical terms, attitude research looks for 'affective' rather than 'cognitive' responses" (Baker *et al.*, p. 61). This proposition is true only if the term affective is understood as including all forms of evaluative orientation (see, for example, Triandis, 1971, p. 8). But Baker *et al.* limit the term affective to evaluations which are essentially emotional.

contrary to the normal usage of the term, which includes forms of evaluation other than the purely emotional. Thus, the fact that some respondents may have given what they considered to be a rational, rather than an emotional, response to our items, does not in any way detract from the fact that agreement or disagreement with the items indicates how respondents evaluate the group or object in question which is what is relevant in terms of the accepted meaning of attitude (see discussion in Part I, pp. 3-5).

In developing this, their professed major criticism of our items, Baker *et al.*⁴ state "At least half of the items appear to tap beliefs about 'what is' rather than reflect preferences or feelings" (Baker *et al.*, p. 71f). This criticism appears to be based on the fact that many of the items are cast in the form "A is B" rather than in the form "I like A". This first form of statement is required in view of the need to measure attitudes indirectly (see Part I pp. 5-8). The attitudinal nature of the items, however, is determined not by their form but by their content. The content of the items is evaluative and the items therefore tap evaluative orientations (i.e., attitudes). The argument of Baker *et al.* represents a confusion between the form of a proposition and its meaning.

B The Concept "IRA"

The authors of the critique raise here what they regard as the "most serious example of lack of clarity" in the concepts employed in the research (p. 64). The lack of clarity arises, so they suggest, from our use of the term IRA, whereas they believe that "if it was intended to study attitudes to the Provisional IRA, then the terms 'Provos', 'Provisionals' or 'Provisional IRA' would have been in keeping with Irish vernacular usage" (Baker *et al.*, p. 64). We deliberately used the term IRA rather than Provisional IRA so as to include all republican paramilitary organisations active in relation to

4. Baker *et al.* also criticise the items used from the point of view of number, balance and extremity. These points have been fully dealt with in Part I of this document (pp. 13-16 and pp. 21-26). We deal with the fifth and final criticism of our items (that relating to the terms "IRA" and "IRA activities") in the next section.

the current troubles in Northern Ireland. The general usage was adhered to in our items and in our reporting of the results.⁵ As discussed in Part I (p. 19), the term IRA has the advantage of being general enough to include all republican paramilitary organisations while at the same time being frequently used as a designation of the main such organisation — the Provisional IRA.

There are two aspects to the issue raised by Baker *et al.* The *first* is the possibility that people may attribute what they see as positive characteristics of the Old IRA (i.e., the IRA of the period 1919-21) to the contemporary IRA. This possibility underlies the remarks of Dr Cathal Daly which Baker *et al.* quote. The bishop's evident concern is to warn people against attributing the "noble characteristics" of the IRA of sixty years ago to the new IRA. But if, in fact, people in responding to our attitude items do credit the contemporary IRA with some of the characteristics of the Old IRA, then, however mistaken they may be in this, it is still a component of their attitudes to the new IRA. Dr Daly counsels people against making this identification, but we, as research workers, are concerned to measure what *is*, rather than what *ought* to be. The fact that attitudes to the Old IRA may condition and influence attitudes to the contemporary IRA and its activities does not in any way imply that the use of the general term IRA to refer to the republican paramilitary organisations active in the current Northern Ireland conflict is inappropriate. Indeed, it is quite evident that Dr Daly himself does not draw any such inference. In a recently published expanded version of the address from which Baker *et al.* quote, Dr Daly consistently uses the term IRA when referring to the current republican campaign of violence (Daly 1980, *passim*).

The *second* issue is the objection of the authors of Part II that the term IRA could have been taken by some respondents as actually referring to the Old IRA (Baker *et al.*, p. 65).

5. Baker *et al.* claim to have had to rely on the "tone of certain passages" to ascertain that the results reported in ESRI Paper No. 97 were not intended to apply to the Old IRA (i.e., the IRA of 1919-21). We leave it to the reader of Paper No. 97 to decide for himself whether such subtle exegesis is in fact necessary.

The question here is whether people, when faced with our statements relating to the IRA in the context of a survey carried out in 1978 dealing with the current Northern Ireland situation, interpreted these statements as applying to the contemporary IRA, or whether they thought they were being asked about the Old IRA of the period 1919-21. The latter seems to us to be exceedingly implausible. In support of their argument (that the term IRA could have been understood as referring to the IRA of the period 1919-21), Baker *et al.* say "Irish newspapers and RTE use these terms (Provisional IRA, Provisionals, Provos) consistently in referring to the activities of the group concerned and it is only in sections of the British popular press that the initials IRA are used without qualification, to denote any and every form of militant Irish republicanism" (Baker *et al.*, p. 65). To establish the important point of Irish newspaper usage, we have analysed front page stories in the three Dublin-based national morning newspapers in the Republic of Ireland for a six-month period consisting of the three months before and the three months during which the fieldwork was carried out (i.e., April to September, 1978). The results were as follows: 22 of the 25 stories dealing with republican paramilitary activity can be identified as relating to the Provisional IRA. Fifteen of the 22 accompanying *headlines* refer to the IRA and only seven to the Provisional IRA, Provisionals or Provos; likewise 70 of the references in the actual *text* of these stories employ the term IRA compared to 64 references employing the term Provisional IRA or any of its derivatives.⁶ The use of the term IRA in a majority of cases in both headlines and text shows that the assertion by the authors of the critique concerning consistent Irish newspaper usage is without foundation; the terms IRA and Provisional IRA are used interchangeably. Further evidence that the use of the initials IRA is not confined to "sections of the British popular press" comes from the report *Violence in Ireland: A Report to the Churches*

6. Similar results emerge from an analysis of extracts from main news headlines during the period August 1972 to April 1973 which are presented by MacGréil (MacGréil 1977, Appendix B, pp. 573-593). Out of 31 entries referring to republican paramilitary organisations, 20 used the term IRA, 10 used the term Provisional IRA or Provos and 1 used the term Official IRA.

which was prepared under the auspices of the Irish Council of Churches/Roman Catholic Church Joint Group on Social Questions. The report uses the unqualified term "IRA" or the terms "Republican violence" or "violence by the Republican Movement" as an umbrella term and only uses qualified terms (Official IRA/Provisional IRA/Provisional wing of the IRA) when discussing specific aspects or activities of one or other organisation (*Violence in Ireland: A Report to the Churches*, pp. 21-55). This indicates both the need for a general term of reference and the acceptability of the term IRA for this purpose. Our research also required a general term and we employed the term IRA. We have shown that there is no substance to the allegation that use of this term involves conceptual confusion on our part and that the term IRA is widely employed in the sense in which we used it. We see no reason to believe that there is any danger that respondents misunderstood the meaning of the term.

The fifth criticism of our attitude items is that the items relating to the IRA do not define clearly the object to which the attitude refers (Baker *et al.*, p. 71). The arguments just presented and the supporting data show, we believe, that there is no lack of clarity in regard to the meaning of the term IRA in the context of discussion of the current Northern Ireland problem. The critics further complain that the terms "activities" and "motives" are not made clear. In both cases, of course, our attitude measures refer to activities and motives as these are perceived by respondents. We have already discussed the issue of perceptions of IRA motives in Part I (pp. 31-32). In regard to activities, the central and obvious feature of IRA activity is the campaign of violence to which the other activities, mentioned by Baker *et al.* — prison protests, rent strikes, operation of local transportation services, etc. — are mere adjuncts. It seems to us perverse to suggest that respondents, in replying to our activities items, had uppermost in their minds, the purely peripheral activity to the neglect of the central activity of the IRA. Certainly, examination of the items themselves gives no grounds for such an interpretation.

III METHODOLOGICAL CRITERIA AND PROCEDURES

A *Factor Analysis*

1 Guidelines governing the number of factors

Baker *et al.* acknowledge that there are no absolute rules but only guidelines for establishing the number of factors which should be extracted in any given factor analysis. Nevertheless, they take one of these guidelines (all factors with eigenvalues greater than 1.0 are extracted) and proceed to rely on it as if it were an absolute rule. The extent of their reliance on this criterion can be seen in the fact that its application is basic to two of the four allegations of "major errors" in our factor analysis (Baker *et al.*, p. 85). In contrast to the weight which the authors of the critique attach to the eigenvalue-one criterion, the literature on factor analysis refers to it and to the other criteria governing the choice of number of factors as mere rules of thumb. This tentative and approximate status of the eigenvalue-one criterion is in fact obscured by the statement of Baker *et al.* that "The degree of acceptance of that criterion can be seen in its advocacy in, among others, the following basic texts: Child (1970, pp. 43-44), Rummell, (1970, pp. 362-364), Van de Geer (1971, p. 147), Tatsouka (1971, p. 147) and Taylor (1977, p. 116)". The reader who has not time to consult all these texts should not infer, as Baker *et al.* imply, that their authors regard the eigenvalue-one test as pre-eminent. Far from it. Thus the first reference cited presents what the author describes as "two popular methods . . . simply to give the reader an idea of criteria in use" (Child 1970, p. 43). No pre-eminence is accorded by the author to the eigenvalue-one criterion over the other criteria offered despite the fact that his application of the two criteria to the same data shows different results. The second reference says "Given the effect that various

design decisions can have on the eigenvalues, it seems foolhardy to apply the eigenvalue-one criterion mechanically" (Rummell, 1970, pp. 363-364). The third reference is even more cautious about the eigenvalue-one criterion, saying:

Although we are not dealing with statistical matters, in this book, I can at least indicate a coarse rule of thumb. I do so with hesitation, because the rule is, in fact, very coarse, and should certainly not be applied as a final criterion (Van de Geer, 1971, p. 147).

The fourth reference introduces the question of the determination of the number of factors with the comment that it is a "big question, indeed, for which there is no general consensus on how to go about answering, let alone what constitutes the correct answer" (Tatsouka 1971, p. 146). Tatsouka goes on to point out that the eigenvalue-one criterion is not immune to criticism and, having presented the Bartlett test and the scree test as well, concludes "it should be mentioned that, in practice one usually employs a judicious combination of two or three such criteria (*ibid.*, p. 147). The fifth and final reference cited by Baker *et al.* adverts to the development of "many rules of thumb" and, in relation to the eigenvalue-one rule, states "The usefulness of this rule is severely limited because it ignores all sampling fluctuations in the data" (Taylor, 1977, p. 116). None of these quotations warrants the degree of reliance Baker *et al.* place on this particular criterion.

Not only is the eigenvalue-one criterion tentative rather than definitive but, in addition, different criteria frequently give different results.⁷ This is a further reason for not treating any of them as decisive, although the Bartlett test can probably be taken as providing an upper limit on the number of factors which one could extract. Given this situation, the researcher's judgement as to the *interpretability* or meaningfulness of identified factors assumes major importance. Rummell describes the application of the criterion of meaningfulness to the choice of number of factors as taking

7. In the case of our factor analysis of the seventeen items, the eigenvalue-one criterion suggests four factors and the Bartlett test suggests five. Cattell's "scree test" also suggests five but, as Baker *et al.* point out (footnote 12, p. 75), it could be interpreted as suggesting a one, three, four or five factor solution.

into account the interpretability of a factor, its consonance with other research findings, its loadings, and its proportional factor variance in deciding to accept or reject a factor. Rummell gives this criterion considerable priority relative to the various rules of thumb. He says:

For the investigator who has considerable practical experience and is substantively grounded in the data area, this may well be the wisest course. It appears foolish to allow an analytic decision criterion to over-ride a "research sense" of the data. If, however, one has not developed this competence, or if a domain has had little benefit of systematic analysis, the analytic decision criteria or rules of thumb discussed below will certainly be helpful. (Rummell, 1970, p. 35).

This quotation expresses an approach to factor analysis which is consonant with our use of it as an exploratory and interpretative aid. In the case of data of this sort, the "research sense" and competence to which Rummell refers must be grounded in familiarity with the literature on all aspects of the problem and in extensive pilot and pretest interviewing of the type undertaken for this project (see ESRI Paper No. 97, pp. 22-23 and Part I of this document, pp. 10-13 and 20-21). In our conclusion to Part I above we reminded the reader that "no methodology allows one to dispense with the judgement of the individual researcher" (p. 42). Still less does one of many available "rules-of-thumb" permit such dispensation.

In Paper No. 97 we described our hypothesised interpretation of the attitude items in terms of four dimensions of attitude to the Northern Ireland problem, viz., attitude to partition, attitude to the IRA, attitude to British involvement in Northern Ireland, and attitude to Northern Ireland Protestants. The factor analysis did not confirm this hypothesised configuration. In both the four-factor and three-factor solutions, two of the three British items are included in the partition factor (see Part I, Appendix A, Table A2). This suggested a modification of the original hypothesis, i.e., that attitude to British involvement, as represented by these two items, is not distinct from attitude to partition. As Paper No. 97 put it: ". . . the items are seen from a perspective of

attitudes towards partition and the salient element in each item is the reference to the unity of Ireland" (ESRI Paper No. 97, p. 96). The revised interpretation therefore suggests three factors – attitude to partition (incorporating attitude to British involvement), attitude to the IRA and attitude towards Northern Ireland Protestants. The three-factor solution corresponds to this configuration and thus has considerable advantages over the four-factor solution on the criterion of interpretability. Given this advantage in terms of interpretability, and given the merely approximate nature of the various rules of thumb for determining the number of factors, the extraction of three factors is quite legitimate and fully in accord with Rummell's recommended approach.

In an earlier section of the critique (that dealing with alleged conceptual confusions), Baker *et al.* criticise this aspect of our factor analysis as indicating "a confusion between the relative importance of logical models and mere statistical measurement" (Baker *et al.*, p. 66). Our view of science, and much of our argument in this paper, is that a balance must be struck between what is suggested on the basis of *a priori* reasoning and what is suggested by the data. In the case in point, *a priori* reasoning may suggest that, in the words of Baker *et al.*, "in any political analysis of the situation, partition and the British presence must be two separate aspects of the problem because the possibility exists of a British withdrawal resulting in a continuation of partition between the Republic and an independent Northern Ireland" (Baker *et al.*, p. 66). While this may be logical, the data do not confirm that it represents the approach of respondents to the issue. Rather a reasoned interpretation of the data suggests that British presence and partition are linked in people's minds.⁸ The value of factor analysis lies in its

8. Baker *et al.* also criticise the three-factor solution because it suggests that the term "The Northern Ireland problem will not be solved by ending partition" should not be included in the subset of items used to estimate the factor, whereas they view this item as "the most direct of the Partition items". Again the analysis of the data does not bear out their view, since the item in question does not emerge as one of the most direct of the Partition items in either the three- or the four-factor solution (it has a loading of 0.35 on two factors in the three-factor solution; in the four-factor solution it loads at 0.47 on the Partition factor whereas the other items dealing directly with Partition load at 0.74 and 0.75 (see Part I, Appendix A, Table A2).

capacity to uncover such linkages (or distinctions) and the evidence cannot be dismissed in the name of the "importance of logical models" or "confidence in the logical basis of the original hypothesis".

In their final assessment of our use of factor analysis, the authors of the critique allege that we made four "major errors" (Baker *et al.*, p. 85). Their *first* allegation of error is based on the reasoning analysed above. In their concluding assessment on page 85, they present two reasons why we should have chosen a four-factor solution and why our decision to adopt a three-factor solution is a major error. The reasons are that the eigenvalues and our own hypothesis suggest a four-factor solution. We summarise our view on the latter reason first. We spelled out in Paper No. 97 and we have re-described above the four hypothesised dimensions of attitude with which we approached the data. The whole point of the analysis is that four factors with these meanings were not confirmed by the factor analysis and that a three-factor solution was in accord with a meaningful reinterpretation of the original hypothesis. Given the importance of the criterion of meaningfulness and interpretability in factor analysis, revision of an hypothesised interpretation in the light of the results cannot conceivably be regarded as an error. The other reason advanced by Baker *et al.* is that the eigenvalues suggest a four-factor solution. In point of fact this statement is inaccurate: there are different legitimate procedures for interpreting the eigenvalues as a guide to the choice of number of factors, and these, as we have seen, give different results. More importantly, the criterion of meaningfulness suggests a three-factor solution. Thus what Baker *et al.* should have concluded is that the application of one particular approach (in fact a mere rule of thumb) suggests a four-factor solution. Had they said this, however, the weakness of their argument that we made a major error in our application of factor analysis would have been obvious.

The *second* allegation by Baker *et al.* of a major error is that we "accepted as meaningful a Northern Ireland Protestant factor lacking in homogeneity and which is so unstable that it disintegrates when a four-factor solution is applied" (Baker *et al.*, p. 85). The point about instability is in conflict with

their own earlier acknowledgement that "loadings will vary if a solution for a different number of factors is undertaken" (Baker *et al.*, p. 73). Given this dependence of rotated factor loadings on the number of factors extracted, it is necessary to compare the patterns of loadings in different solutions. In the present case this comparison suggests that the three-factor solution is to be preferred on the grounds of interpretability.

Turning to their statement about an alleged lack of homogeneity, it is important to be clear on what is at issue. There is no dispute as to the existence of a third factor — Baker *et al.* in fact argue for the existence of four factors. The question is whether the configuration of items in the third factor of the three-factor solution is more or less satisfactory than the configuration in the third and fourth factors of the four-factor solution. In rejecting the former, Baker *et al.* apparently rely on visual inspection of the correlation matrix⁹ (Baker *et al.*, pp. 78-79). The appropriate approach in our view is to compare the factor solutions and select that which is most interpretable or meaningful. On such a comparison the third factor of the three-factor solution is clearly more satisfactory and was accepted by us on these grounds (see Table A2, Part I).

Further evidence as to the acceptability of the third factor of the three-factor solution is derived from the multiple correlation of the subset of defining variables with the factor score. Nunnally suggests this criterion and specifies a level of correlation of 0.70, though he adds that a correlation of 0.50 could be regarded as "a very minimum" (Nunnally 1967, p. 360). The multiple correlation of the third factor with the four high loading variables is 0.87.¹⁰ Thus the third factor is 9. The scaling implications of the average correlations between the items is a distinct matter to which we return below (pp. 126-127).

10. The attitudes scores reported on in Section IV of ESRI Paper No. 97 are *composite scores* based on unweighted combinations of the high loading variables on each factor. Baker *et al.* criticise this procedure, describing it as "much cruder" than using factor scores (i.e., weighted combinations of all the variables on each factor). They do acknowledge, however, that our procedure is quite widely used. More important is the consideration that the correlations between the factor score and the subset of items which we used is, in the case of each attitude, very high. This indicates that our simpler and "cruder" method in fact provides very good estimates of the factor score. In the case of attitude towards Northern Ireland Protestants the multiple correlation is, as we have just seen, 0.87, in the case of attitude to partition it is 0.97, and for attitudes to IRA activities and motives it is 0.99 and 0.95, respectively.

acceptable on the basis of this last criterion which Nunnally introduces as "a conservative rule of thumb for accepting a factor as 'real'" (ibid., p. 357). The ultimate test of the reality of a factor is replication, and we have indicated in Part I the desirability of further investigation along these lines. What can be concluded on the present evidence is that there is no basis to the allegation by the authors of the critique that our acceptance of the Northern Ireland Protestant factor is an error, major or otherwise.

The *third* allegation by Baker *et al.* of a major error on our part is that we "forced through a subdivision of a clear IRA factor" (Baker *et al.*, p. 85). In seeking to substantiate this allegation they first of all cite the eigenvalue-one criterion. Thus, in relation to the factor analysis of the five IRA items, they say "The first factor emerges with an eigenvalue of 2.34, while the second factor has an eigenvalue of only 0.84. This is clear evidence that only one viable factor is present in the five items" (Baker *et al.*, pp. 82-83). In their final assessment of our factor analysis they claim that the eigenvalues "show" that the five-item group is a single factor (Baker *et al.*, p. 85). Enough has been said above about the status of the eigenvalue-one criterion as a "rule-of-thumb" to show that it is incapable of furnishing definitive evidence. In fact, the Bartlett test (discussed in Part I, p. 23) and Cattell's scree-test indicate the acceptability of extracting up to three factors.¹¹ A two-factor solution is *a fortiori* statistically acceptable and the interpretability of the resulting configuration of items supports the two-factor choice. In addition, Baker *et al.* say that the matrix of correlations shows the five-item cluster to be a single factor, but support this only with the vague assertion, again apparently based on visual inspection of the correlation matrix, that "the pattern of correlations is relatively homogeneous" (p. 79). In Part I (p. 11) we noted Nunnally's view that factor analysis is indispensable as an aid to the examination of patterns of correlations. Application of this aid, used in conjunction with an appropriate test of significance, indicates the assertion by Baker *et al.* that "the matrix of correlations . . . shows (the five items) to be a

11. Though a three-factor solution would be trivial; cf. the discussion of the issue of the ratio of variables to factors below (pp. 126-127).

single factor" is unfounded. Finally, Baker *et al.* say that the loadings of the five items on a one-factor solution show the five items to be a single factor. As we have already noted, however, they themselves point out that loadings vary as different numbers of factors are extracted and rotated. It is, therefore, necessary to compare the loadings produced by the different possible factor solutions in the light of the criterion of interpretability. This comparison supports the two-factor choice.

2 Other issues related to the subdivision of the IRA factor

The *fourth* allegation by Baker *et al.* of a major error in our use of factor analysis is that we "used methods which breach normal practice and infringe the rules of logic in effecting (the) subdivision (of the IRA factor)" (Baker *et al.*, p. 85). This contention subsumes a number of points, each of which we will deal with in turn.

(i) "*A claim based on a statistical fallacy*". The authors of Part II allege that our discussion of the possible implication of the different levels of support for the individual IRA items involves a claim based on a statistical fallacy (Baker *et al.*, p. 81). The statement which they quote

. . . the different levels of support which these items relating to the IRA showed in the nationwide representative sample suggested that, although these five items clustered together in a global factor analysis, the attitude towards the IRA which they measured might itself be multi-dimensional

simply spelled out our reason for undertaking a further factor analysis for the purpose of testing the interpretation that the items might contain two factors. As we have indicated in Part I (p. 22), there are other possible interpretations of the range of responses. This tentative argument for merely carrying out a factor analysis is transmuted by Baker *et al.* into "the reason given for dividing the factor" (Baker *et al.*, p. 80). Thus the alleged claim was never in fact made. *To decide to divide* the factor in the light of the differences between the distributions on the items might well be open

to the charge of being a statistical fallacy. This we did not do and did not claim to do. To decide, in the light of those differences, to carry out a further factor analysis in order to determine whether the factor should be divided involves no statistical fallacy and is merely an intelligent exploration of one possible interpretation suggested by the data. To support their erroneous interpretation of the above quotation, Baker *et al.* link it to a sentence which occurs four pages later and which they claim is an amplification of the basic statement. There is no basis in the text for regarding one as an amplification of the other. The statement on page 98 (ESRI, Paper No. 97) says: "If our identification and interpretation of a two-dimensional attitude to the IRA is valid, then the two dimensions should have contrasting distributions in the population. This is in fact the case". This statement involves no claim such as is suggested by Baker *et al.* It merely refers to the meaning or the interpretation of the attitude and says, in effect, that given an attitude to IRA activities and an attitude to IRA motives, one would expect more favourable responses to the latter than to the former. The ensuing discussion indicates that this is the case. The allegation of a "statistical fallacy" is based on a misinterpretation of what was actually said in ESRI Paper No. 97.

(ii) "*Too few items for the proper identification of two factors*". Baker *et al.* state categorically that five items are too few for the proper identification of two factors. They quote C. C. Taylor as recommending that "in practice the number of variables be at least five times the number of factors" (Baker *et al.*, p. 81). Taylor gives such a recommendation, but a recommendation is not an imperative. Obviously it is imperative to reject what Taylor calls trivial outcomes, the situation of an infinite number of possible solutions. Taylor provides a method for determining the minimum ratio of variables to factors necessary to avoid such a situation. This ratio is expressed in the following formula: $(p-q)^2 > p+q$ where p is the number of variables and q the number of factors (Taylor 1977, p. 113). Application of the formula to the present case shows that the condition is met (i.e., $(5-2)^2 > 5+2$). It is therefore legitimate to extract two

factors from five variables. And what about the recommended ratio? While Taylor recommends a ratio of 5:1, others suggest a ratio of 3:1 (e.g., Nunnally 1967, p. 357). Our ratio of items to factors is $2\frac{1}{2}$:1 or one item less than Nunnally's recommendation.

(iii) "*Violation of the logic of the method*". In seeking to substantiate this allegation, the authors of the critique argue that the assumption of independence between the two dimensions of attitude to the IRA is untenable. This in turn is based on the contention that the combination of an attitude of some degree of support for IRA activities and an attitude of some degree of rejection of their motives is "exceedingly implausible" (Baker *et al.*, p. 82). Baker *et al.* assert this view without further argument. When one examines the issue, it is apparent that such a combination is by no means implausible. Conservatively-minded republicans, for example, might entertain two views conducive to such a combination — that the IRA is tinged with socialism and/or aims to overthrow the institutions of the State as enshrined in the Constitution *and*, at the same time, that its activities are the only way a final British withdrawal from Ireland could be achieved. Such a person might well have a favourable attitude to IRA activities while rejecting its motives as he perceives them. The combination may or may not occur frequently; it is, however, by no means implausible, still less "exceedingly implausible".

It is also incorrect to say that complete independence was implied in Paper No. 97 by our use of orthogonal rotation. While it is true that orthogonal rotation implies an assumption of a greater degree of independence between factors than is implied by oblique rotation, it is also true that orthogonal rotation is frequently used in situations in which some researchers would argue that oblique rotation would be more appropriate. The issue is not, however, clearcut, as is evident from Nunnally's statement that "which is used boils down to a matter of taste" (Nunnally, 1967, p. 327), while Rummell says that the question need not be phrased in "an either-or manner" and that "the researcher can try both options, and, with oblique and orthogonal results at hand, he can then

commit himself to one of them" (Rummell, 1970, p. 388). In the light of this, and contrary to what Baker *et al.* suggest (p. 82), it is clear that use of orthogonal rotation in Paper No. 97 does not mean that a hypothesis of strict independence between the attitudes was being advanced. There is, therefore, no conflict between the use of orthogonal rotation in Paper No. 97 and the use of oblique rotation in Part I of the present document. In presenting the oblique rotation we are simply following Rummell's pragmatic advice of trying both options. The oblique rotation is more clearcut. In Part I we merely argue that this lends further support to our decision to split the factor.

(iv) *Interpretation of factor loadings.* In interpreting the factor loadings on the five IRA items, what we did was to take more information into account than can, in the nature of the case, be incorporated into a simple rule of thumb (e.g., include all items with a .40 loading or higher). The additional information is that the variable in question (Item 3 in Table 3, p. 25 in Part I) has a loading (.41) on the second factor which is barely above one of the conventional cut-off points (.40), that at the same time it has a much higher loading (.65) on the first factor and that there is a very large gap between the .41 loading on Item 3 on the second factor and the next highest loading on the same factor (i.e., the .71 loading of Item 4). This is a cautious interpretation of low factor loadings, that is, an interpretation which avoids attaching too much weight to such loadings. As we shall see in a moment, such caution is especially appropriate in the particular circumstances.

Baker *et al.* criticise our procedure of using unities rather than communalities¹² in the diagonal of the correlation matrix on the grounds that it tends to inflate factor loadings. They quote a statement from Nunnally concerning this inflationary effect (Nunnally, 1967, p. 369) and then conclude "Thus, if an attempt is to be made to obtain two factors from a set of five items, then communalities, rather

12. This is a technical issue on which Baker *et al.* say there is "some disagreement among the authorities". In fact, they understate the extent of the disagreement, which is very considerable.

than the unities employed in Paper No. 97 should be used" (Baker *et al.*, pp. 83-84). The inference actually drawn by Nunnally, however, is to interpret small loadings cautiously. The point is that our interpretation of the loadings exhibits such caution, in comparison to which strict adherence to the .40 cut-off point would be quite mechanical.

In summary, for the fourth time, the authors of the critique have alleged that a major error exists in our application of factor analysis. We have examined the reasons given for this conclusion and, for the fourth time, we must conclude that there is no basis for the allegation.

B Construction and Use of Scales

1 Reliability

In the opinion of Baker *et al.*, none of the four scales used in Section IV of Paper No. 97 are reliable (see "assessment of scales", p. 34). The standard index of reliability is coefficient alpha. Baker *et al.* evaluate these coefficients by reference to standards which they present by means of a quotation from Nunnally and they conclude "As the use of the scales in Paper 97 could be defined as either applied or basic, it is clear that reliability coefficients of three of the scales (those relating to IRA activities, IRA motives and Northern Ireland Protestants) must be considered inadequate" (Baker *et al.*, p. 87).

This conclusion is incorrect. Firstly, in the paragraph from which Baker *et al.* quote (Nunnally, 1970, p. 226) Nunnally relates the term *applied* to research undertaken for the purpose of making decisions about a specific individual — for example, in the area of educational selection and streaming. Because such research is to be the basis of decisions about a single individual affecting that individual's life, and because there is no scope for offsetting errors, extremely high levels of reliability are obviously needed and these require lengthy batteries of tests. Our research is not applied research in this sense, and indeed it is difficult to think of any survey research which would fall into this category. Nunnally's criterion of .80 being "not nearly high enough" is therefore irrelevant.

Secondly, as regards *basic* research, which is the relevant category for our work, Nunnally's statement as to the adequacy of reliabilities of .80 refers to an upper limit not a lower limit. This vitally important point does not emerge in the quotation presented by the authors of the critique because the quotation is highly selective. A paragraph and a half of Nunnally's text is omitted, with the quotation resumed in mid-sentence. one of the sentences omitted is crucial to understanding the standard which Nunnally is putting forward because in it he suggests that .80 is an *upper limit* of the reliability that need be sought in basic research, *not a lower limit* as Baker *et al.* imply.¹³

Guilford makes a distinction similar to that made by Nunnally between the level of reliability coefficient required for individual testing such as achievement examinations, clinical diagnosis and personnel classification and vocational guidance (what Guilford calls practical purposes) and the level required for research purposes (Guilford 1954, p. 388). Applying this distinction, he summarises the issue of the desirable levels of reliability as follows:

As to how high reliability coefficients should be, no hard and fast rules can be stated. For research purposes, one can tolerate much lower reliabilities than one can for practical purposes of diagnosis and prediction. We are frequently faced with the choice of making the best of what reliability we can get, even though it may be of the order of only .50, or of going without the use of the test at all (Guilford, 1954, pp. 388-389).

There is no basis in the remarks of Guilford or in the (full) remarks of Nunnally on this issue to justify the conclusions of Baker *et al.* in regard to the three attitude measures concerned that "it is clear that the reliability coefficients . . . must be considered inadequate" (p. 87), and that they are "simply not reliable enough to be regarded as measuring any attitude consistently" (p. 101). This is not to say that further research could not improve on this aspect of our attitude measures. Baker *et al.* would have been correct had they

13. The deleted sentence reads: "For basic research it can be argued that increasing reliabilities beyond 0.80 is often wasteful" (Nunnally 1970, p. 226).

confined themselves simply to saying that the reliability coefficients of three of those measures are, to use Nunnally's term, modest. In the case of the two measures of attitude to the IRA, the modest level of reliability (activities .64; motives .56) results from the decision to split the five items into groups of three and two items respectively. The reliability of the five-item cluster would have been .72. This illustrates the point that reliability is a function not only of the average inter-item correlation but also of the number of items. Thus, one can have scales with a relatively high intercorrelation between items and only modest reliabilities, if there are few items, and, equally one can have scales with very low inter-item correlations and high levels of reliability, if there are many items. We have already outlined our reasons for believing that the splitting of the five IRA items is both justified on empirical grounds and yields more satisfactory and informative measures. In our view this gain more than compensates for the small fall in the reliability coefficient. The reliability coefficient of our measure of attitude to Northern Ireland Protestants is .49. That there is some room for improvement in this aspect of the measure of attitude towards Northern Ireland Protestants has been noted in Part I above (pp. 27-28). We have indicated both the need for further research in this area and our belief that given previous research results consistent with our findings (Mac Gréil, 1977, p. 248), such further research would confirm our conclusions.

2 The Neutral Point

Baker *et al.* criticise our interpretation of the *mid-point* of the summated scale as the *neutral point* in relation to the attitude concerned. Our procedure involves assumptions of the kind that are fundamental to any attempt to quantify attitudinal or, indeed, any qualitative data. In attitude research, for example, even the application of an ordinal scale to the responses to a single item assumes that each degree of positive or negative response has roughly the same force for every respondent. Otherwise a common ranking could not be applied to the responses of different individuals and the scale could not be regarded as measuring anything consistently. Similarly, the assumption of equal intervals

underlies the use of product moment correlations, regression analysis and factor analysis. To some this assumption is quite unwarranted. Others take a different view. McKennell, for example, argues for a pragmatic approach to the issue and, referring to the convention that statistics appropriate for interval level measures are inadmissible with ordinal data, he says "This convention has so entered the folklore of contemporary social science that many seem unaware of its controversial status" (McKennell 1977, p. 218). Tufte says that "the distinction between interval and ordinal measurement is usually of little importance in data analysis. The wise assignment of numbers to ordered categories, coupled with the use of techniques that exploit the properties of numbers is generally preferable to working with ordered categories" (Tufte 1969, p. 642). Similarly, Labovitz, having carried out tests based on assigning interval scores to ordinal categories, argues for the interval assumption in practice and points out the advantages as follows:

Consequently, treating ordinal variables as if they are interval has these advantages: (1) the use of more powerful, sensitive, better developed and interpretable statistics with known sampling error, (2) the retention of more knowledge about the characteristics of the data, and (3) greater versatility in statistical manipulation, e.g., partial and multiple correlation and regression, analysis of variance and covariance, and most pictorial presentations (Labovitz, 1970, p. 523).

Assumptions such as these are a legitimate matter of debate. What is not legitimate, however, is to make an assumption at one moment and reject it at another. This is in fact what Baker *et al.* have done. The fact that they accept the assumption of equal intervals is evident in their endorsement of the use of factor analysis, and of the *alpha* coefficient as a measure of reliability. McKennell, for example, says "The alpha approach, stemming from psychological test theory, entails manipulations of the data which assume interval scale properties even at the item level" (McKennell, 1977, p. 218). In discussing the neutral point issue, however, Baker *et al.* say that the Likert items are

took full account of the difficulty of identifying an exact dividing point in the distribution and employed a neutral *area*, refraining in all cases from categorising those in that area as pro or anti.

The results which we obtained by adding the responses to the individual items in the above fashion can be compared to the range of responses on the individual items themselves. For example, basing our conclusion on summated scores, we reported that "21 per cent of the population emerge as in some degree supportive in their attitude to IRA activities" (ESRI Paper No. 97, p. 98). This compares to responses in some degree favourable to the IRA on the three individual items concerned of 20 per cent, 35 per cent and 43 per cent. As we have noted, the neutral point on the individual items is unmistakable. Thus, examination of this and the other sets of individual responses (see Part I, Appendix A, Table A1) leads to apportionment of the population into groups favourable and unfavourable to the particular attitude objects in question broadly in line with that arrived at as a result of the summation procedure and assumptions just outlined.

Baker *et al.* have referred to some methods for establishing a neutral point. The problem is that none of the methods can be regarded as satisfactory. One of the methods they mention, which they themselves acknowledge to be "crude", is to employ a direct question concerning general attitude to the stimulus. We have argued above (pp. 114-117) that responses to direct questions on sensitive topics are likely to be misleading. Use of such responses for the purpose suggested by the authors of the critique would then be likely to lead one to actually misplace the neutral point. They also propose the use of a technique suggested by Guttman and Suchman for identifying the neutral point of an attitude scale (Guttman and Suchman, 1947). The technique involves plotting the average intensity of an individual's response against his average content score and taking the minimum point of the plot as the point of indifference or neutrality. There are two problems with this proposal. Firstly, its use involves asking a separate intensity question after each content question, thereby doubling the number of questions relating to each attitude. The cost of such doubling in terms of

"essentially ordinal measures" and that "... equal intervals between the points of the score cannot, strictly, be assumed" (Baker *et al.*, p. 87). Either the assumption is made or it is not.

A further assumption which is required is that the items which are combined to measure a particular attitude are all of more or less equal weight and importance. Obviously one cannot prove that this is so, since, with qualitative items this must always be a matter of judgement. We have made this assumption in relation to each of the sets of items as a reasonable approximation and the reader can judge its reasonableness by examining the sets of items themselves.

In showing in detail what is involved in the process of adding together the responses to a number of items, we begin with the individual responses. Quite evidently, the neutral point can be unambiguously determined in the case of the individual items. Respondents were asked to agree or disagree in varying, but specific, degrees of strength with a particular statement. The neutral point, therefore, lies unambiguously between the AGREE side and the DISAGREE side of the responses, that is between "agree slightly" and "disagree slightly" on each individual item (see the response format Part I, p. 17 above). When the responses to a number of items are added together, some of the resulting scores will represent combinations of individual responses which are all either positive or negative toward the particular attitude object. In other cases the final score will be based on individual responses which are both positive and negative and the final overall score will be to some degree positive or negative, favourable or unfavourable, depending on the number and intensity of the positive and negative responses. Scoring such cases simply involves using all the available information to produce a *qualified* description of the overall response as slightly or moderately positive or negative or whatever the evaluative designation happens to be. It may be important to note that to speak of a neutral "point" is to risk introducing a misplaced notion of precision which would be entirely unwarranted. We were careful in ESRI Paper No. 97 not to designate those in the middle as pro or anti as might be implied in the idea of a unique neutral point. Instead we

questionnaire space would be very considerable. Secondly, the technique referred to by Baker *et al.* is applicable to only one particular scaling technique, i.e., cumulative scaling. The point is of some interest, however, because subsequent discussion in the literature has tentatively suggested that it may be possible to overcome these limitations (Suchman 1950, Green 1954, Guilford 1954, McKennell 1977). However, the fact that intensity is a component of the content score in Likert scaling poses a dilemma for those who would wish to extend the technique in this direction. On the one hand, the inclusion of intensity in the content score (as in the approach suggested by Guilford) creates a dependence between it and the measure of intensity.¹⁴ On the other hand, if, in an effort to get around this problem, the intensity component is removed from the content score (i.e., attempting to adapt the original Guttman-Suchman approach) then information essential to Likert scaling, essential specifically to the allocation of respondents with scores in the middle range, is lost. What remains is not in fact the same scale as that on which it was originally desired to identify a neutral point. In the light of all these difficulties we prefer to rely for allocation of respondents into positive, negative, and neutral categories on the assumptions employed in ESRI Paper No. 97 and described in detail above.

In drawing together their discussion of the issues of reliability and the neutral point, Baker *et al.* state what they regard as two necessary conditions for using summated scales to interpret the distribution of attitudes on any particular issue, and they conclude that our scales meet neither of these conditions (Baker *et al.*, p. 91). We have shown that their

14. Green adverts to the problem of dependence but seems to associate it exclusively with the single question as opposed to the double question approach. Accordingly he suggests that two separate questions be asked (Green 1954, p. 357). The problem would seem to be more radical than this however, in that, when the original question is in Likert format, it is a moot point whether a follow-up intensity question would in fact elicit a response which would yield an intensity score which would be significantly more independent than an intensity score derived from the single Likert item. On the basic issue of the impact of the dependence in question, it could of course be argued that the lack of independence is not such that the location of the minimum point is completely predetermined, i.e., that it must inevitably be at the numerical mid-point of the scale for all possible data sets.

conclusion that our scales do not meet the first condition (reliability) is based on a misinterpretation of what is an acceptable standard of reliability. Their second necessary condition is that "the 'neutral' point must be independently determined". To use the term independent determination in relation to the methods referred to by Baker *et al.* is, however, quite illegitimate. It may be noted in this context that Guttman and Suchman (1947) were careful to reject the possibility of dividing the population by use of "an external criterion" and indeed spoke of their method as "an approach to an internal definition of a zero point". The cautious presentation of Guttman and Suchman is entirely warranted in that they were outlining a method based on a theory which they did not specify in any statistical sense, and for which they did not even try to suggest statistical tests. But the caution of the progenitors of the method is transposed by Baker *et al.* into "independent determination" and the exaggeration is compounded by erecting this into a "necessary condition". Baker *et al.* go on to claim that the authorities in the field explicitly advise against reliance on the numerical mid-point of a scale as the attitudinal neutral point. What the authorities whom they quote (Edwards 1957 and Oppenheim 1966) have said is that the neutral point does not necessarily correspond to the numerical mid-point. We entirely agree and what we have done is to specify the conditions under which it seems reasonable to interpret the mid-point as the neutral point, i.e., as indicating an area of neutrality in the distribution. We regarded this, and still regard it, as an appropriately cautious approach to a complex problem. Thus on both counts, Baker *et al.* conclusion that our procedures involve "a serious misuse of summated scales" is unwarranted.

IV INTERPRETATION, LABELLING AND PRESENTATION

A Interpretation and Labelling

The matter of interpretation and labelling must be evaluated by reference to the original items. In criticising the use of "anti" in regard to attitude towards Northern Ireland Protestants, Baker *et al.* misconstrue the four items concerned, reducing them to "recognition of differences of outlook, approach to life and political aims together with a reluctance to accept that these Northern Ireland Protestant aims should determine the resolution of the Northern Ireland problem" (Baker *et al.*, p. 93). Attitude items, being brief and colloquial, are difficult to paraphrase but we would suggest the following as a minimal statement. Respondents whom we labelled strongly anti-Northern Ireland Protestants would have agreed strongly that Northern Ireland Protestants have an un-Irish outlook and approach to life, that they are unwilling to reach an agreement with the Catholic community, that their defence of their privileged position is a basic cause of the problem and that despite the fact that they are in the majority, they have no right to determine how Northern Ireland is to be governed.¹⁵ To interpret this as indicating an attitude of political opposition, is, in our view, a reasonable summary of the responses and the use of the label "anti", the literal meaning of which is "opposed to", is an acceptable designation of the attitude. Of course, if the label is separated from the text and read out of context, it is open to misinterpretation but this is true of any summary word or phrase.

15. The items and percentage response are presented in Part I, Appendix A, Table A1.

The content of two of the three items representing attitude to IRA activities is similarly misinterpreted. In Paper No. 97 and in Part I of this document, we have presented the argument in support of the interpretation that responses to these items reflect an attitude or evaluative orientation towards the IRA and that this evaluative orientation can be distinguished as an orientation towards IRA activities as opposed to IRA motives. In being asked to judge whether this is so or not, the reader is entitled to have his attention directed to the items themselves and not to what we believe are inaccurate summaries of them.

Baker *et al.* then say that the use of the term support to describe this attitude is not in accord with normal usage of the English language and they refer to the Oxford English Dictionary definition which we presented in Part I (p. 30) in support of this view. We leave it to the reader to judge whether this definition necessarily implies activity or what Baker *et al.* refer to as "concrete manifestations of agreement". That activity is not implied is quite obvious, given the explicit disavowal of an inference about activity in Paper No. 97 and given that the findings relate to an *attitude* of support.¹⁶ One can illustrate the latter point by reference to one of the central findings of the research carried out by the Committee on Irish Language Attitudes Research in 1975. This is that there is in Ireland widespread *attitudinal support* for the Irish language but that this is combined with a low commitment to the use of the language and with a variety of other negative attitudes. The summary of the results of that research provide an excellent example of the

16. Baker *et al.* claim that our statement about not having any evidence that the attitude we measured leads to concrete action is a "denial of any link between attitude and action" (Baker *et al.*, p. 94) adding that such a denial runs counter to most definitions of attitude and that it undermines the *raison d'être* of attitude research. The literature on attitude research and, indeed, common sense indicate that attitude is only one of the determinants of behaviour and that other factors (opportunity, moral, legal, or financial incentives or disincentives, group pressure, etc.) enter in to reinforce or negate the influence of attitude. In referring to the fact that we had no *evidence* that the attitude leads to concrete action, we were not denying the *possibility* of such a link: we were simply cautioning the reader against making any hasty inferences in the absence of specific evidence of such a link.

use of the term "support" in the context of attitudinal research which is fully in accord with our usage.

To summarise, for the national sample support for the language and language policy is very high when "Irish" is expressed in terms of ethnic identity, cultural value and in terms of the Gaeltacht. Support is rather negative on the dimension of "school Irish" and commitment to its use is low, while beliefs about the eventual fate of the language, and its position and utility in the modern world, are generally pessimistic. (Committee on Irish Language Attitudes Research, 1975, p. 298).

Baker *et al.* imply that our use of the items concerned to measure attitude of support for the IRA is absurd on the grounds that, if the same items were applied to Fianna Fáil, Fine Gael, the Labour Party or the Australian Country Party, they would show that "most of the adult population of Ireland simultaneously 'support' all four" (Baker *et al.*, p. 93). The real absurdity would of course be to attempt to measure attitudes of support for legitimate political parties by means of such items. No one has ever suggested that the methods of any of these groups are totally unacceptable or that their members are basically criminals and murderers. Even if common sense did not rule such items out in relation to these political parties, the normal preliminary research procedures for constructing attitude items would eliminate them. The items would contravene one of the most fundamental criteria of attitude measurement, namely, that items be relevant to the psychological object concerned. Thus the items would be totally unsuited to measuring attitudes of support for legitimate political parties. But that has no bearing on their suitability for measuring attitude of support for the activities of paramilitary organisations, avowedly engaged in violence.

Finally, under the heading of interpretation, Baker *et al.* take up the point that sympathy for IRA motives may be no more than an endorsement of the goal of reunification. In Paper No. 97 we summarised our reasons for believing that the attitude cannot be explained away as an alternative expression of the attitude to reunification. We elaborated on these reasons in Part I of this document where we emphasised

that the significance of the finding is that a substantial proportion of people are prepared to express their support for the goal of reunification by endorsing IRA aims and attributing patriotism and idealism to the IRA. In measuring attitudes to IRA aims, our concern is with aims as these are perceived by respondents, not with the aims as seen by someone else. Hence, any suggestion that we should have told respondents our own perception of the aims of the IRA would be a misconception of the purpose of such attitude measurement.

B *Presentation*

In the last section of their critique, Baker *et al.* present two phrases and a lengthy excerpt from Paper No. 97 which they say represent excessive claims and over-confident presentation. Since they concede that the first two examples, which relate to matters of technique, may not be very serious, they need not detain us except to point out that one of them has already been discussed by us in Part I (pp. 27-28) and the other would be notable only if Baker *et al.* had succeeded in showing that "the evidence for the existence of these two separate factors (IRA activities and IRA motives) is totally lacking" (Baker *et al.*, p. 96). They have failed to show this.

The main concern of the authors of the critique then is with the tone and style of the presentation of the results. They reproduce three paragraphs from Paper No. 97, in an attempt to illustrate a definiteness and a dearth of qualification, and they claim that this style of presentation implies that the scales possess full validity.

In the passage concerned (ESRI Paper No. 97, pp. 97-100) it is first of all made clear that the particular attitudinal measure is a matter of interpretation of a number of items. The passage begins with a statement of our interpretation of the items and this is adverted to again in the subsequent discussion ("If our identification and interpretation of a two-dimensional attitude to the IRA is valid . . ."). Caution is enjoined on the reader in the discussion of the distribution of the attitude and two important qualifications are noted — that we have no evidence that the attitude in question leads

to concrete actions and that it is held in varying degrees (i.e., slightly/moderately/strongly). In regard to the latter point, it is noted on the page preceding that from which Baker *et al.* quote that the labelling of degrees of an attitude and the presentation of such scales in percentage terms are approximate procedures. Finally, when the percentage results are being discussed in the paragraphs which Baker *et al.* quote, the dependence of the results on a particular mode of measurement is emphasised by the phrases "as we have measured this attitude" and "on this evidence".

We do not believe that these paragraphs represent over-confident presentation. It is quite clear, however, that they do not imply an assumption on our part that our scales possess full validity, especially since, in our explicit references to the issue of validity, we made no such claim and merely referred to increased or enhanced confidence in the validity of our measures.

Baker *et al.* final criticism of our presentation is the use throughout Paper No. 97, of the present tense. The period of data collection was clearly indicated in Paper No. 97 in the chapter describing the method, in the heading of Table 1 and again in the heading of Table 16 (the first table to introduce the additional Northern Ireland data). The use of the present tense in reporting survey data is so common as to be a convention. Thus the published reports of three previous major attitude surveys in Ireland, *Governing Without Consensus* (Rose, 1971), *Report of the Committee on Irish Language Attitudes Research* (1975), and *Prejudice and Tolerance in Ireland* (Mac Gréil, 1977) all use the present tense when reporting on data collected in 1968 in the case of Rose's research and in 1973 in the case of the Language Attitude study and Mac Gréil. Like us, these authors were following a well established convention and other examples of the use of this convention could readily be documented. Paper No. 97 was published within thirteen months of the completion of data collection, and our use there of the present tense possesses none of the exaggerated significance read into it by Baker *et al.*

V SUMMARY

For the reader's convenience we organise our Summary of this rejoinder to correspond point by point with the Summary of Baker *et al.* of their critique. In relation to points (d)-(j), we indicate pages of the Rejoinder in which the particular point is dealt with.

- (a) That the sample is well drawn and the questionnaire properly administered can in fact be taken for granted, although in the present controversy even the sampling method was challenged by some critics (see reply by B. J. Whelan in Appendix I of this document).
- (b) Though the stated aim of the critique is to provide "in itself an independent and balanced assessment of Paper 97" (Baker *et al.*, p. 57), only two brief paragraphs of the critique are devoted to Section III of Paper No. 97 which deals with choices of solutions and with policy preferences and which forms the largest part of our presentation of the results. While we are naturally pleased that the critics conclude that this section is "a solid and useful contribution to knowledge", the critique does not elaborate on the basis for this conclusion and we must refer the interested reader to Paper No. 97 itself.
- (c) We agree in principle with this statement concerning the methodology of attitude research. However, the authors of the critique have, in ways which will be summarised in a moment, misunderstood this methodology in important respects, and in other respects have been inappropriately selective in their presentation and application of the guidelines mentioned.

- (d) In their summary Baker *et al.* give two instances of an alleged "considerable conceptual confusion" in Section IV of Paper No. 97. The argument underlying the first of the two instances is based on a highly implausible supposition. The supposition is that respondents could have understood the term IRA used in research specifically and clearly related to the current Northern Ireland problem as referring to the Old IRA of 1919-21. Their first instance also relies on a demonstrably erroneous statement about consistent Irish newspaper use of the term Provisional(s) as opposed to the term IRA. The argument underlying their second instance (confusion in relation to nature of attitude) is incorrect because it is based on an equation of attitude with emotional response. This is the real confusion but it is theirs not ours (pp. 112-115 above).
- (e) As will be clear from the comment we have just made, we diverge from the authors of the critique on the issue of what is an attitude. For them attitudes are emotional *rather than* rational. We cannot agree and do not believe that attitudes are commonly defined in this way in social psychology. The premise is false, and the conclusion — that our questions (items) are inappropriately designed — is false (pp. 112-115 above).
- (f) In no case did our factor analysis breach mandatory rules. The well established rules to which Baker *et al.* refer are universally acknowledged to be mere rules-of-thumb. In regard to the issue of the number of factors, Baker *et al.* concentrate on only one of these rules-of-thumb. Other guidelines give different results and our decision was in accord with the vitally important guideline or criterion of interpretability. The sweeping conclusions drawn by Baker *et al.* — that the factor analysis contains at least four serious errors and that the final grouping of items is unacceptable — have no basis in either factor analytic theory or precedent (pp. 116-128 above).
- (g) The conclusion that three of our scales lack reliability is based on the application of a standard of reliability which

is an upper limit on what might be regarded as desirable, not a minimum, as Baker *et al.* imply. There is thus no basis for concluding that these lack reliability or do not measure anything consistently (pp. 129-131 above).

- (h) We have described in detail the assumptions underlying the summation procedure, our placement of the neutral point and our consequent apportionment of the population into groups which are favourable and unfavourable on each of the attitudes in question. Baker *et al.* reject our approach to the identification of the neutral point on summated attitude scales and claim that independent determination of the neutral point is essential. In their summary, they make an inferential leap from the fact that the neutral point was not determined in this way in ESRI Paper No. 97 to the conclusion that our placement of this point is misleading, in other words, that the percentages quoted in relation to each attitude are misleading. In fact the percentages we quoted are in accord with the distributions on the individual items, in relation to which there can obviously be no dispute concerning the neutral point. We have discussed above the various methods referred to by Baker *et al.* for determining the neutral point on summated scales and have concluded that they are either potentially misleading or in other ways unsatisfactory. Accordingly, we prefer to rely for placement of the neutral point on the assumptions employed in ESRI Paper No. 97 and described in detail above (see pp. 131-136).
- (i) Baker *et al.* state that our labelling involves a debatable use of the English language. In seeking to substantiate this view they misconstrue our items and then disregard the extensive elaboration and qualification of the labels in question in Paper No. 97 (pp. 136-140 above).
- (j) The assessment of tone of presentation in any paper is necessarily subjective. We do not believe that the presentation in Section IV of Paper No. 97 is over-confident. What is quite certain, however, is that at no point in the research is the assumption of full validation of our measures either stated or implied (pp. 140-141 above).

VI CONCLUSION

There are three reasons why the conclusions drawn in the critique are unfounded. (i) The critique is confused as to the meaning of attitude and as to the meaning of the term IRA (two confusions that are then imputed to us). (ii) The application of methodological criteria is selective. The authors of the critique present some methodological criteria as though they carried more weight than is, in fact, the case, and they exaggerate the standards implied by other criteria. An example of the latter re-appears in the conclusion in the statement "Standard tests show (the scales) to be statistically unreliable" – a statement that is demonstrably incorrect. (iii) In discussing our interpretation and presentation, the critique misconstrues our attitude items, ignores the qualifications made in the text, and exaggerates the implications of our style of presentation. These are the bases of the conclusions drawn by Baker *et al.*, which culminate in the statement that "Taken together they completely invalidate the findings". On the contrary, we have shown that none of our findings is in any way undermined and in our view the criticisms in Part II, taken individually or cumulatively, are either irrelevant or without merit.

In their conclusion the authors of the critique proceed further and rule out alternative ways of analysing the data. In Part I of this document we argued that an alternative and valid approach to data of this nature is to focus on the individual items, and that such an approach would lead to conclusions largely similar to those drawn in Paper No. 97.

Finally, Baker *et al.* lament the misfortune that "the virtues of a large part of Paper No. 97 tend to be obscured by the deficiencies contained in the first eight pages of Section IV". Given that any academic work containing over 160 pages is unlikely to be without blemish, some might feel that

we should rest content in the fact that our critics, after a searching examination of Paper No. 97, claim themselves to have identified flaws in only eight pages! But we believe that the critics have failed to provide evidence for the fatal deficiencies they claim to have identified in these eight pages, and, since the issue is important, both methodologically and practically, we have taken pains to establish the deficiencies of the critique. We hope that as a result, those with either a practical or a research interest in the Northern Ireland problem will be helped in evaluating Paper No. 97 for themselves.

REFERENCES

- CHILD, D., 1970. *The Essentials of Factor Analysis*, London: Holt, Rinehart and Winston.
- COMMITTEE ON IRISH LANGUAGE ATTITUDES RESEARCH, 1975. *Report of the Committee on Irish Language Attitudes Research*, Dublin.
- DALY, CATHAL, 1980. "Violence Destroys the Work of Justice", *The Furrow*, Vol. 31 (2), Feb., pp. 71-87.
- DAVIS, E. E. and R. SINNOTT, 1979. *Attitudes in the Republic of Ireland Relevant to the Northern Ireland Problem: Vol. I. Descriptive analysis and Some Comparisons with Attitudes in Northern Ireland and Great Britain*, Dublin: The Economic and Social Research Institute, Paper No. 97.
- EDWARDS, A. L., 1957. *Techniques of Attitude Scale Construction*, New York: Appleton-Century-Crofts.
- GREEN, B. S., 1954. "Attitude Measurement" in Gardner Lindzey (ed.), *Handbook of Social Psychology: Vol. 1, Theory and Method*, Reading: Addison-Wesley, pp. 335-369.
- GUILFORD, J. P., 1954. *Psychometric Methods* (2nd ed.). New York: McGraw-Hill.
- GUTTMAN, L. and E. A. SUCHMAN, 1947. "Intensity and a Zero Point for Attitude Analysis", *American Sociological Review*, 12, pp. 57-67.
- LABOVITZ, S., 1970. "The Assignment of Numbers to Rank Order Categories", *American Sociological Review*, 30, pp. 514-524.
- MAC GRÉIL, M., 1977. *Prejudice and Tolerance in Ireland*. Dublin: College of Industrial Relations.
- McKENNELL, A. C., 1977. "Attitude Scale Construction", in C. A. Ó Muircheartaigh and C. Payne (eds.), *Exploring Data Structures, The Analysis of Survey Data: Vol. 1*, Chichester: Wiley, Ch. 7.
- NUNNALLY, J. C., 1967. *Psychometric Theory*, New York: McGraw-Hill.
- NUNNALLY, J. C., 1970. *Introduction to Psychological Measurement*, New York: McGraw-Hill.
- OPPENHEIM, A. N., 1966. *Questionnaire Design and Attitude Measurement*, London: Heinemann Educational Books Ltd.
- ROSE, R., 1971. *Governing without consensus, An Irish Perspective*. London: Faber and Faber.
- RUMMELL, R. J., 1970. *Applied Factor Analysis*, Evanston: Northwestern University Press.

- SUCHMAN, E. A., 1950. "The Intensity Component in Attitude and Opinion Research", in S. A. Stouffer, L. Guttman, E. A. Suchman, P. F. Lazarfeld, S. A. Star and J. A. Clausen, *Measurement and Prediction*, Studies in Social Psychology in World War II, Vol. IV, Princeton, N.J.: Princeton University Press, Ch. 7, pp. 213-276.
- TATSOUKA, M. M., 1971. *Multivariate Analysis: Techniques for Educational and Psychological Research*, New York: Wiley.
- TAYLOR, C. C., 1977. "Principal Component and Factor Analysis", in C. A. Ó Muirheartaigh and C. Payne (eds.), *Exploring Data Structures, The Analysis of Survey Data: Vol. 1*, Chichester: Wiley, Ch. 4.
- TRIANDIS, H. C., 1971. *Attitudes and Attitudes Change*, New York: Wiley.
- TUFTE, E. R., 1969. "Improving Data Analysis in Political Science", *World Politics*, Vol. 21, July.
- VAN DE GEER, J. P., 1971. *Introduction to Multivariate Analysis for the Social Sciences*, San Francisco: Freeman.
- VIOLENCE IN IRELAND: A Report to the Churches., 1976. Report prepared under the auspices of the Irish Council of Churches/Roman Catholic Church Joint Group on Social Questions. Belfast and Dublin: Christian Journals Ltd. and Veritas Publications.

APPENDIX I

The Sample used in ESRI Paper No. 97

B. J. Whelan

Some of the comment on Paper No. 97 was critical of the sampling method used. These criticisms were of three main types: (a) statements that it is impossible to make inferences about the whole population from a sample of "only" 2,000 people; (b) complaints that the sample design, though possibly adequate, was incompletely described; (c) alleged biases in the sample obtained.

(a) *The Possibility of Statistical Inference*

Some commentators were clearly unfamiliar with the substantial literature in statistics and the social sciences which shows that one can draw valid inferences about large populations on the basis of relatively small random samples. Of course, such inferences can only be made within a certain margin of error. Provided the sample size is adequate, as it is in the present case, the magnitude of this margin can be reduced to an acceptable level. The use of statistical tests can then ensure that one's conclusions are "statistically significant", i.e., capable of generalisation to the population from which the sample was selected.

(b) *The Description of the Sample*

It is always a matter of judgement in reporting substantive research results as to how much technical detail should be presented. In the present instance, the authors of Paper No. 97 devote four pages (pp. 25-28) to describing their sampling procedures and refer also to an even fuller description of the RANSAM system in the January 1979 issue of *The Economic and Social Review*. They also present in Appendix A a comparison between the 1971 Census and their sample and comment briefly on any divergences between the two.

Some critics have demanded even more detail such as the number of clusters used and a listing of their locations. While it would obviously be a breach of confidentiality to state the

precise addresses included, we can say that 100 clusters of 25 names were selected on a random basis with geographical stratification. Each Dáil constituency in the country was represented in the sample in proportion to its size, so that at least one cluster was selected from each of the 42 constituencies. On average, about 18 interviews were obtained in each cluster.

(c) *Differences between the Sample and the Census*

The main criticisms advanced were of serious bias in (a) the distribution of respondents by urban/rural residence; and (b) the distribution by educational level. These criticisms are unfounded. Let us consider each in turn.

- (1) It was claimed that there was evidence of distortion in urban/rural distribution (assuming that in this latter regard the census definition of "urban/rural" had been adhered to). Paper 97 did not in fact, use the census definition. It is clearly stated on page 44 "For the purpose of comparing urban/non-urban background, urban was defined as major cities and towns with populations of 10,000 and over, non-urban as towns of 3,000-10,000 inhabitants, villages and open countryside". The 1971 Census shows that 40.2 per cent of the population lived in cities and towns of 10,000 or over. Some 42.4 per cent of the sample fall into this category. This small difference is well within the 95 per cent confidence interval even before taking account of the demographic changes which have occurred since 1971.
- (2) The criticism of the educational distribution also hinges on a comparison of the 1971 census with the sample. The comparison is invalid for two reasons: (i) In recent years there has been a substantial decline in the number of people leaving full-time education after completing primary level. Indeed, attention is drawn to this point on page 159 of Paper No. 97. The attached table shows that the percentage of those having primary education only has fallen from 62.7 per cent in 1971 to 51.1 per cent in 1978. Thus, the sample figure of 44.5 per cent must be compared with 51.1 per cent and not 62.7 per cent. (ii) The census question is framed in such a way that all those who omit or refuse to give details of their education

— an issue well known to be sensitive — are assumed to have primary level only. If allowance is made for this, the divergence between the sample and the census will be even smaller.

Furthermore, the minor discrepancies in these variables would only marginally affect the final results. To demonstrate this point, a complete re-weighting of the data was carried out with the educational distribution of the sample constrained to correspond exactly with the up-dated census figures. None of the resulting percentages deviated from those published by more than 1½ per cent.

Calculation of percentage of population over 18 having primary education only in 1978

Age in 1971	Number of persons of different ages in 1971 surviving to 1978 and number of them with primary only*			
	Males		Females	
	Total	Primary only	Total	Primary only
11-17	205.5	35.6	197.5	32.1
18-19	51.0	17.5	49.1	14.4
20-29	196.1	86.5	189.6	73.5
30-39	150.1	84.3	146.7	74.4
40-49	149.2	101.9	152.6	95.5
50-59	140.8	106.9	144.6	103.1
60-69	90.7	75.0	102.6	79.8
70-74	35.9	31.9	51.8	44.0
80	4.6	4.2	8.0	7.1
	1023.9	543.8	1042.5	523.9

Estimated Net Immigration 1971-1978 = 89.9 thousand

It is estimated on the basis of the 1971 census that about three-quarters of these immigrants will be over 18 by 1978 and that about one-third of these will have ceased education at primary level. Thus, the total population over 18 will have increased by 67.4 thousand and the number with primary level only by 22.5 thousand.

Hence, estimated population over 18 in 1978 is

$$1023.8 + 1042.4 + 67.4 = 2133.7$$

Numbers with "Primary Only" are

$$543.8 + 523.8 + 22.5 = 1090.2$$

Thus the estimated percentage with "Primary Only" is 51.1 per cent.

*Source: Irish Life Table No. 6, Irish Statistical Bulletin, March 1976; Census of Population Vols II and XII.

APPENDIX II

The Questionnaire used in ESRI Paper No. 97

I.D.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Interviewer No.	<input type="text"/>	<input type="text"/>		
Interview No.	<input type="text"/>	<input type="text"/>		
Constituency	<input type="text"/>	<input type="text"/>		
Sample Type	<input type="text"/>			
Card	1			

Col.
1, 2, 3, 4
5, 6,
7, 8,
9, 10,
11
12,
13 Blank

THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE

Attitudes Toward Social and Political Issues: Main Test

This is a survey of the attitudes of people in the Irish Republic towards a variety of social and political issues, including relations with Northern Ireland. Your name has been chosen at random to complete this questionnaire. It is important that we obtain your responses as your views will represent the views of many others who think like you, but whom we cannot interview. We are not interested in getting your name on the questionnaire, so your answers will be completely anonymous.

There are eight short sections in the questionnaire, and it is important that you complete each section. The questionnaire should take a little less than one hour to complete.

Thank you for your co-operation.

Interviewer _____

Date _____

E.S.R.I. July 1978

Survey on Attitudes Towards Social and Political Issues

Call History

1. Number of calls made _____

14

2. Final outcome of calls

Full interview obtained.....1 → GO TO Q.4

Partial interview obtained 2

No interview obtained 3

15

3. Type of Non-Response

Describe non response: _____ and code below _____	
Address non-existent.....	1
Address demolished/derelict.....	2
Named person unknown at address.....	3
Named person deceased.....	4
Named person had moved to another district.....	5
Named person was away (inc. ill in hospital) all survey period.....	6
Named person was too ill (at home) to interview, or unsuitable because of deafness, mental state, language difficulties etc.....	7
Named person refused to be interviewed.....	8
Other (Specify).....	9

16

IF RESPONDENT REFUSED

4. Please outline excuse given by respondent:

Please indicate how plausible the excuse outlined above seemed to you: -

Not at all plausible

Very plausible

: 1 : 2 : 3 : 4 : 5 :

17

4. Interviewer, please code length of time that the interview took below:

Minutes

--	--	--

18, 19, 20

21 Blank

SECTION 1: INTRODUCTION

1. I would like to begin with a few brief factual questions. First of all, how long have you lived in this area?

Col.

Length All my life.....1
of Since childhood.....2
Residence Most of adult life.....3
Part of adult life.....4
Arrived last two years.....5

72

2. IF IN LOUTH, MONAGHAN, LEITRIM, SLIGO, DONEGAL OR CAVAN, PLEASE ESTIMATE, WITHOUT ASKING, HOW MANY MILES FROM THE BORDER THIS AREA IS, AND CODE BELOW

Within two miles.....1
2 - 5 miles.....2
6 - 10 miles.....3
11 - 15 miles.....4
Over 15 miles.....5

23

3. Where did you live most of the time until you were sixteen?

IF IN THE REPUBLIC

Name of Country _____

24, 25

4. Locality: Dublin.....1
Cork.....2
Limerick.....2
Galway.....2
Waterford.....2
Other towns with population over 10,000.....3
Town over 3,000 up to 10,000.....4
Town over 500 up to 3,000.....5
Village or open country.....6

26

IF OUTSIDE THE REPUBLIC

Northern Ireland.....27
Scotland.....28
England/Wales.....29
Europe.....30
North America.....31
Elsewhere.....32

27, 28

- Locality: Major City.....1
Medium sized City.....2
Town.....3
Village or open country.....4

29

5. And where have you lived most of the time since you were sixteen?

IF IN THE REPUBLIC

Name of Country _____

30, 31

6. Locality: Dublin.....1
Cork.....2
Limerick.....2
Galway.....2
Waterford.....2
Other towns with population over 10,000.....3
Town over 3,000 up to 10,000.....4
Town over 500 up to 3,000.....5
Village or open country.....6

32

IF OUTSIDE THE REPUBLIC

Northern Ireland.....27
Scotland.....28
England/Wales.....29
Europe.....30
North America.....31
Elsewhere.....32

33, 34

		3.	Col
Locality:	Major City	1	
	Medium sized city	2	
	Town	3	
	Village or open country	4	
7.	Where did your father live most of the time when he was growing up?		
	<u>IF IN THE REPUBLIC</u>		
	Name of County		
8.	Locality:		
	Dublin	1	
	Cork	2	
	Limerick	2	
	Galway	2	
	Waterford	2	
	Other town with population over 10,000	3	
	Town over 3,000 up to 10,000	4	
	Town over 500 up to 3,000	5	
	Village or open country	6	
			35
			36, 37
	<u>IF OUTSIDE THE REPUBLIC</u>		
	Northern Ireland	27	
	Scotland	28	
	England/Wales	29	
	Europe	30	
	North America	31	
	Elsewhere	32	
			38
			39, 40
Locality:	Major City	1	
	Medium sized city	2	
	Town	3	
	Village or open country	4	
9.	And where did your mother live most of the time when she was growing up?		
	<u>IF IN THE REPUBLIC</u>		
	Name of County		
10.	Locality:		
	Dublin	1	
	Cork	2	
	Limerick	2	
	Galway	2	
	Waterford	2	
	Other town with population over 10,000	3	
	Town over 3,000 up to 10,000	4	
	Town over 500 up to 3,000	5	
	Village or open country	6	
			41
			42, 43
	<u>IF OUTSIDE THE REPUBLIC</u>		
	Northern Ireland	27	
	Scotland	28	
	England/Wales	29	
	Europe	30	
	North America	31	
	Elsewhere	32	
			44
			45, 46
Locality:	Major City	1	
	Medium sized city	2	
	Town	3	
	Village or open country	4	
			47

11. Have you ever lived for more than a year outside the Republic?

Yes	No
2	1

→ GO TO Q. 14

12. Northern Ireland 1
 Scotland 2
 England/Wales 3
 Europe 4
 North America 5
 Elsewhere 6

13. How many years in all have you lived outside the Republic?

1 - 2 years	2
3 - 5 years	3
6 - 10 years	4
11 - 15 years	5
15+ years	6

14. Have you ever travelled to Northern Ireland?

Yes	No
2	1

15. Once only 2
 A few occasions 3
 Many occasions 4
 Regularly 5

16. Are you a member of any sporting, cultural or political organization?

Yes	No
2	1

17. What sort of organization(s)? (Place a "1" in box opposite organization(s) mentioned)

17. GAA Club	<input type="checkbox"/>
18. Other Sports Club	<input type="checkbox"/>
19. Irish cultural association/society	<input type="checkbox"/>
20. Other cultural association/society	<input type="checkbox"/>
21. Political Party	<input type="checkbox"/>
22. Other Political	<input type="checkbox"/>
23. Religious or welfare society	<input type="checkbox"/>
24. Other	<input type="checkbox"/>

25. Most people think of themselves in terms of some national identity, for example, as American or French, or German, etc. In these terms, how do you usually think of yourself?

Irish	Other (specify)
2	1

IF IRISH ASK Qs. 26-28

IF OTHER ASK Q. 26 AND SKIP TO SECTION II

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

26. Looking at this card, could you tell me how important is it to you that you are Irish (or other identity, if indicated)? (CARD A)

Very important 1
 Fairly important 2
 Slightly important 3
 Equally important/unimportant ... 4
 Slightly unimportant 5
 Fairly unimportant 6
 Very unimportant 7

63

27. When you think of yourself as Irish, do you have in mind the Republic of Ireland or the Republic plus Northern Ireland?

Republic of Ireland 1
 Republic plus Northern Ireland ... 2

64

28. Again, looking at the Card, could you tell me how important it is to you that Irish refers to the _____ (the Republic of Ireland OR the Republic plus Northern Ireland (depending on answer to Q. 27)) (CARD A)

Very important 1
 Fairly important 2
 Slightly important 3
 Equally important/unimportant ... 4
 Slightly unimportant 5
 Fairly unimportant 6
 Very unimportant 7

65

SECTION IIINSTRUCTIONS

On the following pages you will find some statements which people have used at different times to express their feelings about a variety of social issues. Some people have agreed with these statements while others have disagreed. As far as we are concerned there are no right or wrong answers to these statements. The statements have been gathered from a wide variety of sources and do not necessarily express our opinions. We would like you to tell us how you feel about these statements by placing an "X" in the box which most closely resembles your opinion.

As it is likely that you will have stronger views about some of these statements than about others, we have provided three degrees of agreement and three degrees of disagreement for each statement. Please place an "X" in the box which best describes your opinion.

EXAMPLE

There should be free medical treatment for all.

DISAGREE			AGREE		
strong	moderate	slight	slight	moderate	strong

If you disagree strongly, you would place your "X" like this:

DISAGREE			AGREE		
strong	moderate	slight	slight	moderate	strong
X					

If you disagree slightly, you might place your "X" like this:

DISAGREE			AGREE		
strong	moderate	slight	slight	moderate	strong
		X			

If you agree strongly, you would put your "X" like this:

DISAGREE			AGREE		
strong	moderate	slight	slight	moderate	strong
					X

Please be sure to answer each statement. Feel free to express your opinions frankly. Your answers will be treated in the strictest confidence. Remember that the following are a collection of statements from different sources and do not necessarily express the opinions of the researchers. Please answer as quickly as possible without being careless, using your first impression without thinking very long about any one item.

39. The Catholic majority in a United Ireland would have the right to insist that the laws would be in accordance with their religious beliefs.

DISAGREE			AGREE		
strong	moderate	slight	slight	moderate	strong

34

40. The Irish language has an essential contribution to make to present day life.

DISAGREE			AGREE		
strong	moderate	slight	slight	moderate	strong

35

41. One's religious commitment gives life a certain purpose which it could not otherwise have.

DISAGREE			AGREE		
strong	moderate	slight	slight	moderate	strong

36

42. This is a question on the extent to which the Government should get involved in economic affairs. Some people think the Government should leave economic activity to private enterprise while other people think that the Government should nationalize all industries and run the economy by means of a detailed economic plan. Of course other people have opinions somewhere between these extremes. (Card B)

Suppose the people who believe that economic activity should be left to private enterprise are at one end of the scale, at point number one, and the people who think that the Government should nationalize all industries and run the economy themselves are at the other end, at point number 7, where would you place yourself on this scale?

Apart from general guidelines, Government should leave economic activity to private enterprise

Government should nationalize all industries and should run the economy by means of a detailed economic plan.



SECTION III

INSTRUCTIONS

Some groups of people are comparatively similar to each other in respect of their general outlook and approach to life. Other groups of people may be seen to be dissimilar, or different from each other. I have some cards here with the major groups of people in these islands and would like to ask you to compare the group at the top with the others on the various cards. (Card C)

If you look at the scale at the bottom of the card, "1" means that you think the groups are very similar, "7" means that you think the groups are very dissimilar.

FOR EACH GROUP ON EACH CARD

How similar or dissimilar in their general outlook and approach to life do you think are to (group at top) using the scale at the bottom of the card?

		<u>BRITISH PEOPLE (Card C)</u>							
		very similar						very dissimilar	
		1	2	3	4	5	6	7	
43.	Catholics in the Republic	1	2	3	4	5	6	7	29
44.	Protestants in Northern Ireland	1	2	3	4	5	6	7	29
45.	Protestants in the Republic	1	2	3	4	5	6	7	30
46.	Catholics in Northern Ireland	1	2	3	4	5	6	7	31
		<u>PROTESTANTS IN THE REPUBLIC (Card D)</u>							
		very similar						very dissimilar	
		1	2	3	4	5	6	7	
47.	Catholics in the Republic	1	2	3	4	5	6	7	32
48.	Protestants in Northern Ireland	1	2	3	4	5	6	7	33
49.	British People	1	2	3	4	5	6	7	34
50.	Catholics in Northern Ireland	1	2	3	4	5	6	7	35
		<u>CATHOLICS IN NORTHERN IRELAND (Card E)</u>							
		very similar						very dissimilar	
		1	2	3	4	5	6	7	
51.	Protestants in Northern Ireland	1	2	3	4	5	6	7	36
52.	Catholics in the Republic	1	2	3	4	5	6	7	37
53.	British People	1	2	3	4	5	6	7	38
54.	Protestants in the Republic	1	2	3	4	5	6	7	39
		<u>CATHOLICS IN THE REPUBLIC (Card F)</u>							
		very similar						very dissimilar	
		1	2	3	4	5	6	7	
55.	Protestants in Northern Ireland	1	2	3	4	5	6	7	40
56.	Catholics in Northern Ireland	1	2	3	4	5	6	7	41
57.	Protestants in the Republic	1	2	3	4	5	6	7	42
58.	British People	1	2	3	4	5	6	7	43
		<u>PROTESTANTS IN NORTHERN IRELAND (Card G)</u>							
		very similar						very dissimilar	
		1	2	3	4	5	6	7	
59.	Protestants in the Republic	1	2	3	4	5	6	7	44
60.	British People	1	2	3	4	5	6	7	45
61.	Catholics in Northern Ireland	1	2	3	4	5	6	7	46
62.	Catholics in the Republic	1	2	3	4	5	6	7	47

SECTION IV

Now I have a couple of forms which deal with broad outlooks relating to some of the problems which we are discussing. At the top of the following pages there is a heading, and below that there are pairs of adjectives with spaces between. The meaning of each space is written across the top. Let's take a hypothetical example of how this scale is used:

COMMUNISM

very quite slightly equally slightly quite very

Worthy: _____; _____; _____; _____; _____; _____; _____: Unworthy

Bad: _____; _____; _____; _____; _____; _____; _____: Good

In this example you would ask yourself to what extent is Communism worthy or unworthy; bad or good. For instance:

- (1) If you felt that Communism was very unworthy, then you would put the tick in the space right beside the word unworthy.
- (2) On the next line, if you thought that Communism was quite bad (but not very bad), you would place the tick just away from bad. You would continue on down the page in this way, judging on each line how closely the adjectives were related to Communism.

It may be difficult to see how the adjectives are suited (related) to some of the issues. If you are not sure of the meaning of the adjective at one side of the line, look at its opposite. Remember that adjectives can have different meanings; for example:

HARD can mean difficult, e.g. hard decision; HARD can mean solid, e.g. hard wall.

So if you have trouble with some of the adjectives, try to think of their various meanings.

It would be very unusual if you felt that every issue was closely related to every adjective. This is why we give you a choice of seven spaces to tick on each line. If you feel that the issue at the top of the page is equally related (or unrelated) to both of the adjectives on a line, then you should tick the middle space of that line. You should work as quickly as possible without being careless, using your first impression without thinking very long about any one item.

Never put more than one tick on any one line and do not forget any line. Treat each line separately, without looking back or thinking about your previous answers. Remember the information you give here is confidential, so please express yourself freely.

REPUBLICANISM

	Very	quite	slightly	equally	slightly	quite	very		
63.	Worthy	:	:	:	:	:	:	Unworthy	48
64.	Unimportant	:	:	:	:	:	:	Important	49
65.	Familiar	:	:	:	:	:	:	Unfamiliar	50
66.	Easy	:	:	:	:	:	:	Difficult	51
67.	Bad	:	:	:	:	:	:	Good	52
68.	Irrelevant	:	:	:	:	:	:	Relevant	53
69.	Well-known	:	:	:	:	:	:	Unknown	54
70.	Controversial	:	:	:	:	:	:	Non-controversial	55
71.	Wise	:	:	:	:	:	:	Foolish	56
72.	Significant	:	:	:	:	:	:	Insignificant	57
73.	Prominent	:	:	:	:	:	:	Inconspicuous	58
74.	Costly	:	:	:	:	:	:	Cheap	59

SOCIALISM

	Very	quite	slightly	equally	slightly	quite	very		
75.	Worthy	:	:	:	:	:	:	Unworthy	60
76.	Unimportant	:	:	:	:	:	:	Important	61
77.	Familiar	:	:	:	:	:	:	Unfamiliar	62
78.	Easy	:	:	:	:	:	:	Difficult	63
79.	Bad	:	:	:	:	:	:	Good	64
80.	Irrelevant	:	:	:	:	:	:	Relevant	65
81.	Well-known	:	:	:	:	:	:	Unknown	66
82.	Controversial	:	:	:	:	:	:	Non-controversial	67
83.	Wise	:	:	:	:	:	:	Foolish	68
84.	Significant	:	:	:	:	:	:	Insignificant	69
85.	Prominent	:	:	:	:	:	:	Inconspicuous	70
86.	Costly	:	:	:	:	:	:	Cheap	71
<p>87. Now in regard to Northern Ireland, people differ in how interested they are in the problem (Show Card H). If you look at this card which contains a scale ranging from very interested to very disinterested, where would you place yourself on the scale with respect to your interest in Northern Ireland;</p>									
	Interested	:	:	:	:	:	:	Disinterested	72

96.	There will never be peace in Northern Ireland until partition is ended.	DISAGREE strong moderate slight	AGREE slight moderate strong	22
97.	The methods of the IRA are totally unacceptable.	DISAGREE strong moderate slight	AGREE slight moderate strong	23
98.	Since they are the majority, it is only right that the Protestants should have the last say in how Northern Ireland is to be governed.	DISAGREE strong moderate slight	AGREE slight moderate strong	24
99.	If Ireland were ever united, the loyalist paramilitaries would be more of a problem than the IRA is today.	DISAGREE strong moderate slight	AGREE slight moderate strong	25
100.	The sooner we get the idea that the North belongs to us out of our heads the better.	DISAGREE strong moderate slight	AGREE slight moderate strong	26
101.	The Gardaí are often guilty of using brutal methods in questioning suspects.	DISAGREE strong moderate slight	AGREE slight moderate strong	27
102.	Northern Ireland Protestants have an outlook and an approach to life that is not Irish.	DISAGREE strong moderate slight	AGREE slight moderate strong	28
103.	If the EEC were to get more involved, then a solution to the Northern Ireland problem would be found.	DISAGREE strong moderate slight	AGREE slight moderate strong	29
104.	The IRA are basically a bunch of criminals and murderers.	DISAGREE strong moderate slight	AGREE slight moderate strong	30
105.	The major cause of the problem in Northern Ireland is British interference in Irish affairs.	DISAGREE strong moderate slight	AGREE slight moderate strong	31
106.	The actions of loyalist paramilitaries are a justified reaction to what has happened in Northern Ireland.	DISAGREE strong moderate slight	AGREE slight moderate strong	32
107.	Unionists object to a United Ireland because they fear that their standard of living would go down.	DISAGREE strong moderate slight	AGREE slight moderate strong	33

108. Leaving aside the question of their methods, I basically support the aims of the IRA.	DISAGREE			AGREE			34
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						
109. Were it not for the British, the situation in Northern Ireland would be worse than it is.	DISAGREE			AGREE			35
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						
110. I would be prepared to pay heavier taxes to run a United Ireland.	DISAGREE			AGREE			36
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						
111. Unionists object to a United Ireland because they fear that they would lose their British identity.	DISAGREE			AGREE			37
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						
112. The measures which the Government has introduced to deal with security problems are an unjustified limitation on individual freedom.	DISAGREE			AGREE			38
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						
113. There hasn't been as much discrimination against Catholics in Northern Ireland as is often said.	DISAGREE			AGREE			39
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						
114. People in the North are more businesslike and energetic than people in the South.	DISAGREE			AGREE			40
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						
115. If the U.N. were to get involved, then a solution to the Northern Ireland problem would be found.	DISAGREE			AGREE			41
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						
116. The IRA are basically patriots and idealists.	DISAGREE			AGREE			42
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						
117. Unionists object to a United Ireland because they fear the power of the Roman Catholic Church.	DISAGREE			AGREE			43
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						
118. The Northern Ireland problem will not be solved by ending partition.	DISAGREE			AGREE			44
	strong	moderate	slight	slight	moderate	strong	
	<input type="text"/>						

Card 4

SECTION VI

119. There has been a lot of talk about solutions to the present problem in Northern Ireland. Now I want you to leave aside what you would like to see in an ideal world and tell me which of the following is the most workable and acceptable to you as a solution. (Card 1)

Northern Ireland to remain part of the U.K., with a devolved government of its own 1 go to Q.120
 Northern Ireland to remain part of the U.K., with no parliament of its own, but governed directly from London 2 go to Q.121
 Northern Ireland and the Republic to unite, with one government 3 go to Q.122
 Northern Ireland and the Republic to unite in a federal system, that is with strong regional governments for Northern Ireland and the Republic as well as an overall central government 4 go to Q.123
 Northern Ireland to be independent, not linked to Britain or the Republic 5 go to Q.124
 Northern Ireland to be jointly controlled by the British government and the government of the Republic, with a devolved government of its own 6 to go Q.125

120. Should this devolved government be based on majority rule, or should there be power-sharing, that is, should the Catholic minority have the guaranteed right to be part of the Government ?

Control by the majority 1 Go to Q. 125
 Power-sharing 2

121. Should Northern Ireland be governed by Direct Rule with a Secretary of State, or should it be fully integrated and treated as any other part of England?

Direct Rule 1
 Full Integration 2 Go to Q. 126

122. Should this government be controlled by the majority, or should there be power-sharing, that is, should the Protestant minority have the guaranteed right to be part of the government?

Control by the majority 1
 Power-sharing 2 Go to Q. 126

123. In regard to the federal system, should there be two regional governments, one for Northern Ireland and one for the Republic, or should there be four regional governments, one for each of the old provinces?

Two regional governments ... 1
 Four regional governments ... 2 Go to Q. 126

Col.
 Dup. 1-11
 12
 13 Blank

14

15

16

17

18

124. Should the government of an independent Northern Ireland be controlled by the majority, or should there be power-sharing, that is, should the Catholic minority have the guaranteed right to be part of the government?

Control by the majority..... 1 Go to Q. 126.
 Power-sharing 2

19 -----

125. Should this devolved government be controlled by the majority, or should there be power-sharing, that is, should the Catholic minority have the guaranteed right to be part of the government?

Control by the majority..... 1 Go to Q. 126
 Power-sharing 2

20 -----

126. Various steps have been suggested which the British and Irish governments might take in order to assist in bringing about a solution. First of all, please indicate whether you agree or disagree with these steps that the Irish government might take?

	DISAGREE				AGREE			
126. The Irish government should stop talking about the goal of reunification.	strong	moderate	slight		slight	moderate	strong	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	21 -----

	DISAGREE				AGREE			
127. The Irish government is not doing its best to ensure that the IRA is unable to operate from the Republic's side of the Border.	strong	moderate	slight		slight	moderate	strong	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	22 -----

	DISAGREE				AGREE			
128. The Irish Government should put pressure on the British to withdraw from Northern Ireland.	strong	moderate	slight		slight	moderate	strong	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	23 -----

	DISAGREE				AGREE			
129. The Irish Government should take the steps necessary to make divorce legal in the Republic.	strong	moderate	slight		slight	moderate	strong	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24 -----

	DISAGREE				AGREE			
130. The Irish Government should take a tougher line with the IRA.	strong	moderate	slight		slight	moderate	strong	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25 -----

	DISAGREE				AGREE			
131. The Irish government should remove from the Constitution the claim to Northern Ireland.	strong	moderate	slight		slight	moderate	strong	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	26 -----

	DISAGREE				AGREE			
132. The Irish government should agree to extradition, that is, to agree to hand over to the authorities in Northern Ireland or Britain, people accused of politically motivated crimes there.	strong	moderate	slight		slight	moderate	strong	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	27 -----

- | | | | |
|---|--|--|----|
| 133. The Irish Government should insist that the British implement power-sharing in Northern Ireland. | DISAGREE
strong moderate slight | AGREE
slight moderate strong | 28 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 134. The Irish Government should continue to exclude those who speak for the IRA from Radio and Television. | DISAGREE
strong moderate slight | AGREE
slight moderate strong | 29 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 135. The Irish Government should promise to grant an amnesty, that is a pardon, to members of the Provisional IRA when a solution is reached. | DISAGREE
strong moderate slight | AGREE
slight moderate strong | 30 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 136. The Irish government should draft a new Constitution which would be more suited to our present needs. | DISAGREE
strong moderate slight | AGREE
slight moderate strong | 31 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |

And now, please indicate whether you agree or disagree with these steps which the British government might take.

- | | | | |
|--|--|--|----|
| 137. The British government should declare their intention to withdraw whether the majority in Northern Ireland agrees or not. | DISAGREE
strong moderate slight | AGREE
slight moderate strong | 32 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 138. The British government should remove the British army from the streets in Northern Ireland. | DISAGREE
strong moderate slight | AGREE
slight moderate strong | 33 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 139. The British Government should take a tougher line with the IRA. | DISAGREE
strong moderate slight | AGREE
slight moderate strong | 34 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 140. The British government should announce its intention to withdraw from Northern Ireland at a fixed date in the future. | DISAGREE
strong moderate slight | AGREE
slight moderate strong | 35 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 141. The British government should negotiate directly with the IRA. | DISAGREE
strong moderate slight | AGREE
slight moderate strong | 36 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 142. British withdrawal from Northern Ireland without the consent of the parties involved would lead to a negotiated settlement. | DISAGREE
strong moderate slight | AGREE
slight moderate strong | 37 |
| | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |

	DISAGREE			AGREE			
	strong	moderate	slight	slight	moderate	strong	
143. The British government should stop treating people convicted of crimes which they claim were politically motivated, as ordinary prisoners.	<input type="checkbox"/>	38					
144. The British government should take a tougher line with loyalist paramilitary groups.	<input type="checkbox"/>	39					
145. British withdrawal from Northern Ireland without the consent of the parties involved would lead to a great increase in violence.	<input type="checkbox"/>	40					

146. Now if you look at this list of solutions again, would you tell me what your second choice for a solution would be? (Card 1)

- Northern Ireland to remain part of the U.K., with a devolved government of its own 1 go to Q.147
- Northern Ireland to remain part of the U.K. with no parliament of its own, but governed directly from London 2 go to Q.148
- Northern Ireland and the Republic to unite, with one government 3 go to Q.149
- Northern Ireland and the Republic to unite in a federal system, that is with strong regional governments for Northern Ireland and the Republic as well as an overall central government 4 go to Q.150
- Northern Ireland to be independent, not linked to Britain or the Republic 5 go to Q.151
- Northern Ireland to be jointly controlled by the British government and the government of the Republic, with a devolved government of its own ... 6 go to Q.152

147. Should this devolved government be based on majority rule, or should there be power-sharing, that is, should the Catholic minority have the guaranteed right to be part of the Government?

- Control by the majority 1 Go to Q. 153
- Power-sharing 2

148. Should Northern Ireland be governed by Direct Rule with a Secretary of State, or should it be fully integrated and treated as any other part of England?

- Direct Rule 1 Go to Q. 153
- Full integration 2

149. Should this government be controlled by the majority, or should there be power-sharing, that is, should the Protestant minority have the guaranteed right to be part of the government?

- Control by the majority 1 Go to Q. 153
- Power-sharing 2

150. In regard to this federal system, should there be two regional governments, one for Northern Ireland and one for the Republic, or should there be four regional governments, one for each of the old provinces?

- Two regional governments 1
 - Four regional governments 2
- Go to Q. 153

45

151. Should the government of an independent Northern Ireland be controlled by the majority, or should there be power-sharing, that is, should the Catholic minority have the guaranteed right to be part of the government?

- Control by the majority 1
 - Power-sharing 2
- Go to Q. 153

46

152. Should this devolved government be controlled by the majority, or should there be power-sharing, that is, should the Catholic minority have the guaranteed right to be part of the government?

- Control by the majority 1
 - Power-sharing 2
- Go to Q. 153

47

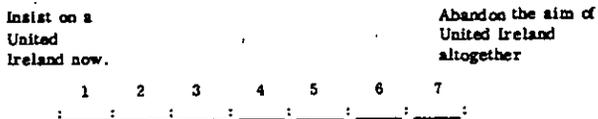
153. And finally would you tell me what you would least like to see as a solution to the problem? (Card 1)

- Northern Ireland to remain part of the U.K., with a devolved government of its own 1
- Northern Ireland to remain part of the U.K., with no parliament of its own, but governed directly from London 2
- Northern Ireland and the Republic to unite, with one government 3
- Northern Ireland and the Republic to unite in a federal system, that is with strong regional governments for Northern Ireland and the Republic as well as an overall central government 4
- Northern Ireland to be independent, not linked to Britain or the Republic 5
- Northern Ireland to be jointly controlled by the British government and the government of the Republic, with a devolved government of its own .. 6

48

154. With regard to the Northern Ireland problem some people think we should insist on a United Ireland to be implemented immediately while other people think that we should abandon the aim of a United Ireland altogether. Of course other people have opinions somewhere between these extremes (Card J).

Suppose the people who believe that we should insist on a United Ireland immediately are at one end of this scale, at point number one, and the people who think we should abandon the aim of a United Ireland altogether are at the other end, at point number 7.



(Interviewer Instruction: please write code number into box)

- | | | |
|--|--------------------------|----|
| 154. Where would you place yourself on this scale? | <input type="checkbox"/> | 49 |
| 155. Where would you place Fianna Fail? | <input type="checkbox"/> | 50 |
| 156. Where would you place Fine Gael? | <input type="checkbox"/> | 51 |
| 157. Where would you place the Labour Party? | <input type="checkbox"/> | 52 |

SECTION VII

158. Now as you probably know, our Constitution has articles which refer to the Northern situation. Here is a card with the articles concerned on it. (CARD K) (Interviewer: Allow respondent to read the card, then tell him/her that there is an explanation of it on the following card, CARD L.)

If a referendum were held on the proposal to remove these articles from the Constitution, how would you vote?

- To remove both 1
- To keep both on 2
- To remove Article 2 3
- To remove Article 3 4
- Don't know 5
- Other (specify) 6

53

158. Leaving your hopes to one side, do you think the Border will eventually disappear or not?

Yes	No
2	1
↓	

54

160. About how many years do you think it will take before the border disappears? (Interviewer read out categories.)

Within 2 years.....	1
3 - 5 years.....	2
6 - 10 years.....	3
11 - 15 years.....	4
16 - 25 years.....	5
26 - 50 years.....	6
Over 50 years.....	7

55

161. In regard to politics generally would you consider yourself as: (Card H)

very quite slightly equally slightly quite very
 interested : 1 2 3 4 5 6 7 Disinterested

56

162. In politics do you usually think of yourself as Fianna Fail, Fine Gael, Labour, or what?

- Fianna Fail.....01
- Fine Gael.....02
- Labour.....03
- Sinn Fein the Worker's Party/Official Sinn Fein.....04
- Provisional Sinn Fein.....05
- Irish Republican Socialist Party.....06
- Socialist Labour Party.....07
- Independent Fianna Fail.....08
- Communist Party of Ireland.....09
- Other (specify).....10
- Non partisan.....11
- Don't know.....12

57, 58

IF RESPONDENT DOES NOT NAME A PARTY, ASK Q. 163

163. Do you generally think of yourself as a little closer to one of the parties than to the others?

Yes	No
2	1
↓	

164.

Fianna Fail	01
Fine Gael	02
Labour	03
Sinn Fein the Worker's Party/Official Sinn Fein. .	04
Provisional Sinn Fein	05
Irish Republican Socialist Party	06
Socialist Labour Party	07
Independent Fianna Fail	08
Communist Party of Ireland	09
Other (specify)	10
Non partisan	11
Don't know	12

59

165. In terms of political parties how did your father think of himself in politics when you were growing up?

Fianna Fail	01
Fine Gael	02
Labour	03
Communist Party of Ireland	04
Sinn Fein (1927-1970)	05
Sinn Fein pre 1927	06
Cumann na Gaedhael	07
Clann na Poblachta	08
Clann na Talmhain	09
Centre party	10
Other (specify)	11
Non partisan	12
Don't know	13

60, 61

IF RESPONDENT DOES NOT NAME A PARTY, ASK Q. 166

166. Would your father have been a little closer to one of the parties than to the others when you were growing up?

Yes	No
2	1
↓	

167.

Fianna Fail	01
Fine Gael	02
Labour	03
Communist Party of Ireland	04
Sinn Fein (1927-1970)	05
Sinn Fein pre 1927	06
Cumann na Gaedhael	07
Clann na Poblachta	08
Clann na Talmhain	09
Centre party	10
Other (specify)	11
Non partisan	12
Don't know	13

62, 63

64

65, 66

168. And in terms of political parties how did your mother think of herself in politics when you were growing up?

- Fianna Fail 01
- Fine Gael 02
- Labour 03
- Communist Party of Ireland 04
- Sinn Fein (1927-1970) 05
- Sinn Fein pre 1927 06
- Cumann na Gaedheal 07
- Clann na Poblachta 08
- Clann na Talmhain 09
- Centre party 10
- Other (specify) 11
- Non partisan 12
- Don't know 13

67, 68

IF RESPONDENT DOES NOT NAME A PARTY. ASK Q. 169

169. Would your mother have been a little closer to one of the parties than to the others when you were growing up?

Yes	No
2	1

69

- 170.
- | | |
|----------------------------------|----|
| Fianna Fail | 01 |
| Fine Gael | 02 |
| Labour | 03 |
| Communist Party of Ireland | 04 |
| Sinn Fein (1927-1970) | 05 |
| Sinn Fein pre 1927 | 06 |
| Cumann na Gaedheal | 07 |
| Clann na Poblachta | 08 |
| Clann na Talmhain | 09 |
| Centre party | 10 |
| Other (specify) | 11 |
| Non partisan | 12 |
| Don't know | 13 |

70, 71

171. Did any of your family, (including members of your mother's or your father's family, take part in the Civil War of 1922/23):

- Yes..... 1
 - No 2
 - Don't know 3
- + GO TO SECTION VIII

72

172. On which side in the Civil War was this?

- Pro-treaty..... 1
- Anti-treaty..... 2
- Both 3
- Don't know 4

73

(Note: de Valera equals anti-treaty; Michael Collins equals pro-treaty; write in any other name.)

173. Was this/these person(s) involved on your mother's or your father's side of the family?

- Mother's side..... 1
- Father's side..... 2
- Both 3
- Don't know 4

74

174. Was this person/any of these persons, a member of your immediate family? (that is, parent, brother or sister).

Yes 1
 No 2
 Don't know 3

75

175. How much influence would you say this had on your political beliefs?
 (Interviewer, read out the scale).

a great deal of influence	some influence	a little influence	no influence at all
1	2	3	4

76

SECTION VIII

Card

5

In this section you will find some questions asking which newspapers you read and which radio and television programmes you listen to, and a few questions about religion, education etc.

176. How often do you read the Newspapers? Please tick appropriately here:

never	less than monthly	Once or twice a month	About once week	More than once weekly	Daily
1	2	3	4	5	6

Col.
Dup. 1-1113
13 blank

14

177. Which, if any, of the following newspapers do you read most regularly? (Interviewer: If respondent mentions two newspapers, ask which one does he/she read most regularly. If respondent still says two, ask him/her which one he/she prefers.)

177. Irish Newspapers	None	1
Morning	Cork Examiner	2
	Irish Independent	3
	Irish Press	4
	Irish Times	5
	Other (specify)	6

15

178. British Newspapers	None	01
Morning	Daily Express	02
	Daily Mail	03
	Daily Mirror	04
	Daily Telegraph	05
	Financial Times	06
	Guardian	07
	London Times	08
	Sun	09
	Other	10

16, 17

179. Irish Evening Newspapers	None	1
	Evening Echo	2
	Evening Herald	3
	Evening Press	4
	Other	5

18

180. Irish Sunday Newspapers	None	1
	Sunday Independent	2
	Sunday Press	3
	Sunday World	4

19

181. British Sunday Newspapers	None	1
	News of the World	2
	Observer	3
	Sunday Express	4
	Sunday Mirror	5
	Sunday People	6
	Sunday Telegraph	7
	Sunday Times	8
	Other	9

20

182. Weekly/fortnightly/Monthly newspapers or Political magazines	None	1
	Hibernia	2
	Magill	3
	Local/Provincial	4
	Religious	5
	Other	6

21

183. With regard to T. V., which Channel would you most regularly watch?

R. T. E. (By choice)	1
R. T. E. (By necessity)	2
B. B. C. 1	3
B. B. C. 2	4
U. T. V. / I. T. V. / H. T. V.	5
Don't know	6
Not applicable	7

22

184. How often do you watch any of the following types of TV programme?

	Never 1	Rarely 2	Occasionally 3	Quite Often 4	Very Often 5	
184. News						23
185. Current Affairs and political programmes						24
186. Irish Language programmes						25

187. With regard to Radio, which stations would you most regularly listen to?

Radio Eireann	1					
Radio Na Gaeltachta	2					
R. S. C.	3					
Radio Ulster	4					
Other (specify)	5					
Don't know	6					26
Not Applicable	7					

188. How often do you listen to any of the following types of Radio programme?

	Never 1	Rarely 2	Occasionally 3	Quite Often 4	Very Often 5	
188. News						27
189. Current Affairs and political programmes						28
190. Irish language programmes						29

191. When you talk to your friends, how often do you talk about politics?

Almost never	1					
Rarely	2					
Occasionally	3					
Fairly Often	4					
Very Often	5					30

192. Now would you tell me what religion do you belong to?

Catholic	1					
Church of Ireland	2					
Presbyterian	3					
Methodist	4					
Other Protestant	5					
Jewish	6					
Other religion (please specify)	7					
No religion	8					31
Non-practising	9					

193. If non-practising or no religion please state former religion:

Catholic	1					
Church of Ireland	2					
Presbyterian	3					
Methodist	4					
Other Protestant	5					
Jewish	6					
Other religion (please specify)	7					
No religion	8					32

194. How often, if ever, do you go to Mass or Services?

- Never 1
 Only rarely 2
 A few times a year 3
 Once a month 4
 Twice or three times a month 5
 Once a week 6
 More than once a week 7
 Daily 8

33

195. Are (were) both your mother and your father of the same religion as you?

Yes	No
2	1
	↓

34

196. What religion is your father? (Note: if deceased, please ask what Religion he was)

- Catholic 1
 Church of Ireland 2
 Presbyterian 3
 Methodist 4
 Other Protestant 5
 Jewish 6
 Other religion (specify) 7
 No religion 8
 Non-practising 9

35

If Father non-practising

197. Do you know what religion he was brought up in ?

- Catholic 1
 Church of Ireland 2
 Presbyterian 3
 Methodist 4
 Other Protestant 5
 Jewish 6
 No religion 7
 Other religion (specify) 8

36

198. And what religion is your mother? (Note: if deceased, please ask what religion she was).

- Catholic 1
 Church of Ireland 2
 Presbyterian 3
 Methodist 4
 Other Protestant 5
 Jewish 6
 Other religion (specify) 7
 No religion 8
 Non-practising 9

37

If mother non-practising

199. Do you know what religion she was brought up in ?

- Catholic 1
 Church of Ireland 2
 Presbyterian 3
 Methodist 4
 Other Protestant 5
 Jewish 6
 Other religion (specify) 7
 No religion 8

38

200. Now could you tell me what level had you reached when you finished your full-time education?

Primary - incomplete 1
 Primary - complete 2
 Technical/Vocational - incomplete 3
 Secondary - incomplete (before Intermediate Certificate) 4
 Intermediate Certificate/Group Certificate 5
 Leaving Certificate 6
 University or other third level institution - incomplete 7
 Still at University or other third level institution 8
 Graduate of University or other third level institution 9

39

201. Who ran the primary school you attended for most of your time in primary school? (Card M)

Lay run 1
 Christian Brothers 2
 Other teaching order of Brothers 3
 Diocesan priests or Teaching order of priests 4
 Teaching order of Sisters/Nuns 5
 Other (specify) 6
 Don't know 7

40

IF LAY RUN, ASK Q. 202

202. Was it a Protestant or a Catholic School?

Protestant 1
 Catholic 2
 Non-denominational 3
 Other (specify) 4
 Don't know 5

41

203. And who ran the secondary school you attended for most of your time in secondary school? (Card M)

Lay run 1
 Christian Brothers 2
 Other teaching order of Brothers 3
 Diocesan priests or Teaching order of priests 4
 Teaching order of Sisters/Nuns 5
 Other (specify) 6
 Don't know 7

42

IF LAY RUN, ASK Q. 204

204. Was it a Protestant, or a Catholic School?

Protestant 1
 Catholic 2
 Non-denominational 3
 Other (specify) 4
 Don't know 5

43

205. Sex:

Male 1
 Female 2

44

Now, just to finish up, I want to go over a few questions concerning your occupation etc.

206. Are you: Self-Employed 1
 Employed full-time 2
 Employed part-time 3
 Retired 4
 Full-time student 5
 Housewife not employed (outside home) 6
 Housewife and part-time employed 7
 Housewife and full-time employed 8
 Unemployed and actively seeking employment 9

45

207. Would you please describe briefly the exact nature of your occupation, using one or two sentences if necessary. (Note: If a student, please state your major field of study. If unemployed or retired, please describe your former occupation. If a housewife and employed outside the home, please state this and describe your occupation.)

46

208. Are you:

- Single 1* GO TO Q. 211
- Married 2
- Widow/Widower 3
- Separated or Divorced 4* GO TO Q. 211
- Deceased 5

47

209. Is/ or was your spouse:

- Self-Employed 1
- Employed full-time 2
- Employed part-time 3
- Retired 4
- Full-time student 5
- Housewife not employed (outside home) 6
- Housewife and part-time employed 7
- Housewife and full-time employed 8
- Unemployed and actively seeking employment 9

48

210. Please describe briefly the exact nature of your SPOUSE'S OCCUPATION, using one or two sentences if necessary. (Note: If a student, please state his/her major field of study. If unemployed or retired, or deceased please describe his/her occupation. If a housewife and employed outside the home, please state this and describe her occupation.)

49

211. Are you (or your spouse) the HEAD OF THE HOUSEHOLD?

No	Yes
1	2

50

212. Do you (or the head of the household) run your own business and/or farm?

Yes	No
2	1

51

213. BUSINESS. please state the usual number of employees of the business

- None 1
- 1 - 2 employees 2
- 3 - 4 3
- 5 - 6 4
- 7 - 10 5
- 11 - 20 6
- 21 - 50 7
- Over 50 8

52

214. FARM, please state the size of farm in statute acres.

- Under 5 acres.....1
- 5 - 14 2
- 15 - 29 3
- 30 - 49 4
- 50 - 100 5
- Over 100 6

53

215. FARM, please state the usual number of employees on the farm.

- None..... 1
- 1 - 2 2
- 3 - 4 3
- 5 or more 4

54

216. What is the normal net weekly or monthly income (take home pay) of the household unit? - i. e. net income of all household members, plus investment returns, if applicable. Please include also children's allowances and any pensions or social welfare benefits of any household member. (Card N)

55, 56

217. If unsure please estimate _____ (Card N)

57, 58

218. How many people are dependent on the household income stated above (include yourself)?

- 01..... 11
- 02..... 12
- 03..... 13
- 04..... 14
- 05..... 15
- 06..... 16
- 07..... 17
- 08..... 18
- 09..... 19 or more
- 10

59, 60

219. What is your own normal net weekly or monthly income? (i. e. take home pay plus investment returns, if any.) (Card N)

61, 62

220. What was your age last birthday? _____

63, 64

221. Finally could you describe the nature of your father's occupation?

65

222. And could you describe the nature of your mother's occupation?

66

223. Do/did either of your parents run (their own business and/or farm)?

Yes	No
2	1

↓

67

224. BUSINESS, please state the usual number of employees of the business

None..... 1
 1 - 2 employees..... 2
 3 - 4..... 3
 5 - 6..... 4
 7 - 10..... 5
 11 - 20..... 6
 21 - 50..... 7
 Over 50..... 8

68

225. FARM, please state the size of farm in statute acres

Under 5 acres..... 1
 5 - 14..... 2
 15 - 29..... 3
 30 - 49..... 4
 50 - 100..... 5
 Over 100..... 6

69

226. FARM, please state the usual number of employees on the farm.

None..... 1
 1 - 2..... 2
 3 - 4..... 3
 5 or more..... 4

70

IF RESPONDENT'S RELIGION IS CHURCH OF IRELAND, PRESBYTERIAN OR METHODIST ONLY, GO TO SECTION IX.

Thank you for your co-operation.

SECTION IXNote:

This section is applicable only to respondents who have indicated that their own religion or former religion is(was) Church of Ireland, Presbyterian or Methodist - NOT to be administered to "Other Protestant" or "Other Religion".

READ OUT:

As you have seen from the questionnaire, this study is primarily concerned with the conflict in Northern Ireland, and thus, involves relations between Catholics and Protestants. We are therefore interested in getting the views of Protestants in the Republic. As you undoubtedly know, the percentage of the population in the Republic who are Protestant is very low. The probability of picking up a significant number of Protestant respondents in our sample is therefore very small.

For this reason we are departing slightly from our usual procedure of random sampling, and would like to interview some Protestants in addition to those in the original sample. Rather than looking for someone with particular views on the topic, we want to make our choice of extra Protestant respondents as close as possible to a true cross-section of opinion. To achieve this we would like you to give us the names of the four Protestants known personally to you who live the shortest distance from here. This is not our customary procedure, but we hope you understand the reasons for it in the particular study. Just as is the case with your own answers to this questionnaire, the responses of the people whom you name will be kept strictly confidential, and the information used for statistical purposes only.

We would very much appreciate your cooperation in this matter.

Col.

FILL IN NAMES AND ADDRESSES BELOW:

1. Name _____

Address _____

2. Name _____

Address _____

3. Name _____

Address _____

4. Name _____

Address _____

IF RESPONDENT IS AN EXTRA PROTESTANT RESPONDENT, FILL

IN THE FOLLOWING

227. Interviewer No.

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71, 72

228. Interview No. of person
 from whom name and
 address obtained

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73, 74

TO BE COMPLETED BY THE INTERVIEWER WHEN THE INTERVIEW HAS TAKEN PLACE

A. If you deviated from the administrative procedure outlined previously, please give details.

B. What items/sections, if any, gave trouble? (Comment in detail please)

C. In your opinion, is there any reason why the respondent did not give valid information (concentration, rushed, tiredness, hunger, fear, etc.)

229. How cooperative was the respondent initially? (Mark with an "X")

very uncooperative 1 2 3 4 5 very cooperative

75

230. How, in your opinion did the respondent find the task (please tick, as appropriate)

Boring 1 2 3 4 5 Interesting

76

Difficult 1 2 3 4 5 Easy

77

231. How did you find the administration of the Interview? (please tick as appropriate)

Boring 1 2 3 4 5 Interesting

78

Difficult 1 2 3 4 5 Easy

79

232. Number of interruptions (Circle as appropriate)

- 1
- 2
- 3
- 4 or more

80