23 A Microfilm and Computer System for Analyzing Comparative Politics Literature

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This chapter describes a microfilm and computer system in current use on a comparative study of hundreds of political parties across the world. The methodology employed in the study should be applicable to other topics in comparative politics and perhaps to topics outside the social sciences and humanities. The first section describes the information system of the International Comparative Political Parties Project and the code categories used in indexing the parties literature for inclusion in the information system. The next section discusses indexing instructions and indexing reliability. The chapter concludes with a content analysis of material already indexed for the first nine countries under study.

THE INFORMATION SYSTEM OF THE ICPP PROJECT

The International Comparative Political Parties Project was established in 1967 to conduct a comprehensive study of the world's political parties.[1] Its objective is a comparative analysis of the organization and activities of about 250 political parties which existed between 1950 and 1962 in about 90 foreign countries.[2] Data for this analysis will be gathered not through costly field research but through a systematic search of published and unpublished writings about party politics in these countries.

[1] This project is supported by the National Science Foundation Grant GS-1418. Northwestern University's Research Committee generously supported one year's work pretesting the methodology before application was made to the National Science Foundation. Northwestern's Council for Intersocietal Studies graciously provided some data processing equipment to facilitate our research.

[2] Conceptually, we limit our definition of a political party to organizations that nominate candidates for public office and contest elections. Operationally, we have defined a political party as any sponsoring organization whose candidates won at least 5 percent of the seats of the lower house of a national legislature in two successive elections in the time period, 1950 to 1962.

The presumption underlying the ICPP Project is that countless man-years of research have produced valuable information about foreign political parties which is captured in the pages of books, articles, government documents, newspapers, and unpublished theses. We propose to access this information through the use of a variety of modern information retrieval techniques, to analyze the data that we assemble, and to make the retrieved information available for research by other scholars. For a detailed account of project objectives and methodology, see Janda (1968a).

The information files created during the course of the project should prove to be the most extensive and most thoroughly indexed files in existence for the parties and period under study.[3] We do not pretend that our files will be exhaustive of the literature on political parties in countries that have been popular targets for study, such as the "major European powers," since we must conform to a limit of 2500 pages per country in keeping with our financial resources. Our experience to date, however, suggests that this limit imposes problems of choice in very few countries; in most cases we can easily accommodate all of the literature on party politics in the country under study.[4]

We plan to handle the massive amount of textual material gathered for the project with the use of Eastman Kodak's MIRACODE system for storage and retrieval of information on 16 mm microfilm (see Janda, 1968a, 1968b). The basic components of the MIRACODE system are a special microfilm camera and microfilm reader. The microfilm camera records the original pages along with corresponding machine-readable index codes, which can be sensed by the microfilm reader to retrieve any page tagged with any combination of index codes. Upon retrieval, the page

[3] Whenever the English language literature appears sufficiently well-developed on party politics in a given country, we limit our files to this material. When coverage in English is not extensive, we seek out material in other languages—most notably French and Spanish, which are needed for parts of Africa and most of Latin America. For East European and Asian countries, heavy use is made of English translations prepared by the U.S. Joint Publications Research Service.

[4] Our experience during the first year of the project consists of researching nine countries each sampled at random from nine geographical regions of the world. We selected our countries at random to provide an unbiased estimate of problems involved in working with literature on political parties in 90 countries. For the countries that turned up in our sample—Bulgaria, Congo-Brazzaville, Denmark, Dominican Republic, Ecuador, Greece, Guinea, Iran, and North Korea—we were able to identify and process only 7621 pages on political parties, for an average of 837 per country, with a high of 1191 pages for Denmark. Although our research on these countries is not yet finished, we do not expect to disclose enough additional material to raise our average above 1000 pages of parties literature per country in our sample. Because we selected our countries at random, we expect much the same situation for most of the remaining 80 countries in the study.

is projected for display at the reader, and a hard copy can be printed if desired. Depending on the average number of codes per page, several hundred pages of material can be stored on one 100 foot film magazine and searched for specified combinations of code numbers in ten seconds.

Material is prepared for the MIRACODE system by indexing the topics discussed on each page with reference to a set of coding categories, similar to the practice followed at the Human Relations Area Files (Murdock et al., 1961). These code numbers are recorded on coding forms, which are then given to keypunchers who record all code numbers for a given page on one card. As the original pages are being microfilmed, the corresponding punchcards pass the "read" station of a modified IBM 026 keypunch connected to the MIRACODE camera. Code numbers read by the keypunch are transmitted to the camera where they are translated into a binary pattern of clear and opaque rectangles recorded on the film next to the page image. The page image and the codes are produced on the film in accordance with the diagram in Figure 1.

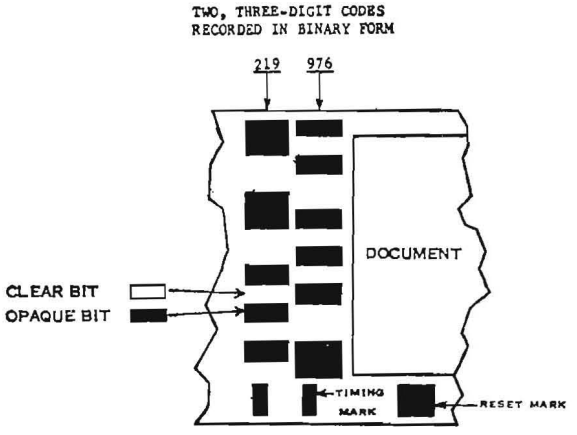
The binary codes on the film are sensed by an optical scanning device, which reads the codes flashing by the scanning head at the normal film transport speed of ten feet per second. The retrieval station has the capability of testing for logical relationships among as many as fifteen different three-digit codes as the film passes the optical scanner. A code is involved in a search by pressing down the appropriate keys on a bank of buttons at the MIRACODE keyboard. The keyboard is modular in design, allowing from one to a maximum of fifteen banks of keys to operate a retrieval station. Figure 2 shows a keyboard configuration involving six banks of keys, which permit testing for logical relationships among six three-digit codes. At present, the available logic for MIRACODE searches consists of "and," "not," "or," "greater than," "less than," and "equal to."

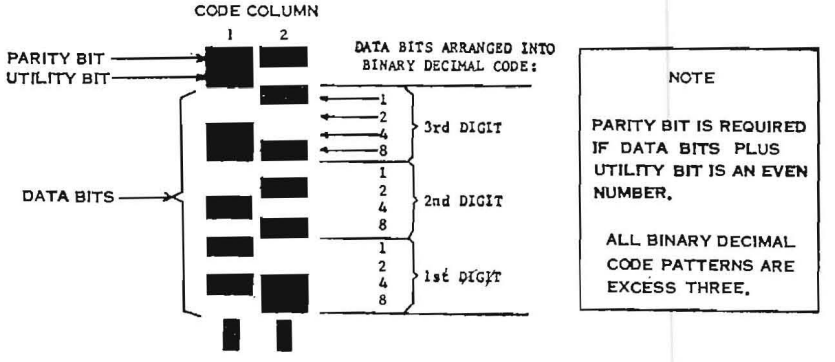
A search command is communicated to the reader by pressing the SEARCH button, which starts the film transport. When the machine senses the appropriate relationship among the numbers entered on the keyboard, the film immediately comes to a halt and backs up several frames to display the image retrieved by the search command. The operator has the opportunity to examine the page for its relevance to his request. If a hard copy is desired, a black-on-white photographic print can be made from the projected image in twenty-five seconds.

If the retrieved image does not satisfy the user, the search can be continued by pressing the search button again. The film will advance and stop to project the next image on the film that satisfies the search command.

While seated at the MIRACODE reader-retrieval station, the user can interact with his data files by changing his search command to affect

the character and amount of information retrieved. To increase the number of "hits," the user can relax the search command by turning off a small toggle switch associated with each bank of keys—thus removing code numbers from the search. To decrease the number of "hits" and make his search more selective, he can enter additional code numbers on remaining keys, depending on the number of keyboard banks in the system.





BINARY DECIMAL CODE FOR 1st COLUMN: 219

3rd DIGIT 8 + 4 − 3 = 9
2nd DIGIT 4 − 3 = 1
1st DIGIT 4 + 1 − 3 = 2
} = 219

BINARY DECIMAL CODE FOR 2nd COLUMN: 976

3rd DIGIT 8 + 1 − 3 = 6
2nd DIGIT + 2 − 3 = 7
1st DIGIT 8 + 4 − 3 = 9
} = 976

Figure 1 MIRACODE format for 16 mm film.

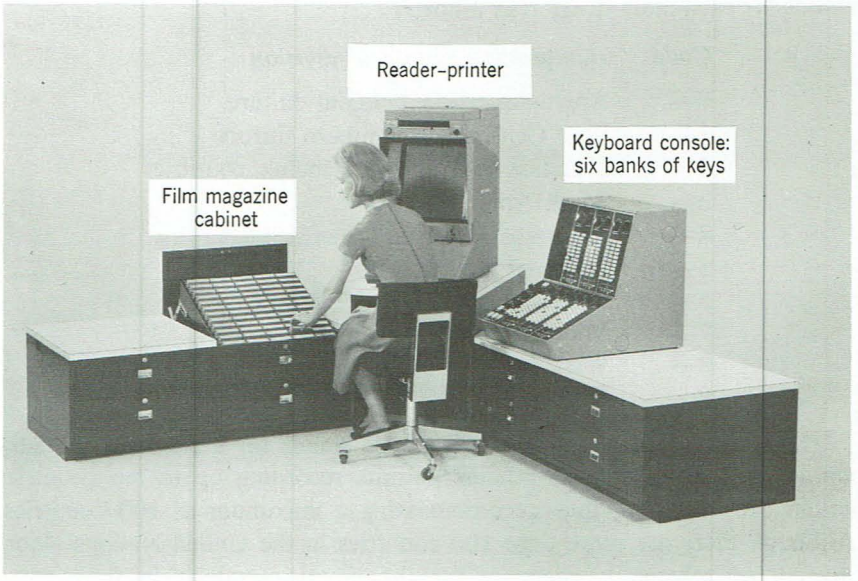


Figure 2 MIRACODE retrieval station: file cabinets, reader-printer, and keyboard console.

The user can determine in advance of retrieval how many "hits" he will get for any given command through the operation of a "response monitor," which reads the film and tallies the number of satisfied conditions without actually stopping to display the retrieved images. This tally is instantaneously displayed as the film is read.

Two different sets of numbers are used in indexing material for the MIRACODE system. One set, consisting of three-digit numbers from 000 to 999, is used exclusively as *identification codes* for specific parties. The other set, which uses only the first two digits of the codes from 000 to 990, is used to code *substantive information* about parties. The two sets of codes can be differentiated in the MIRACODE system by means of a "utility bit" recorded on the film with every column of code. The MIRACODE retrieval station can decipher the utility bit code during the searching process so that a given number can be interpreted properly as an identification or substantive code.

Identification Codes

The party-identification codes are organized on the basis of ten broad cultural-geographical categories. The first digit of the three-digit code

stands for each main division as follows:

Code	*Cultural-geographical division*
0—	Anglo-American political culture
1—	West Central and Southern Europe
2—	Scandinavia and the Benelux countries
3—	South America
4—	Central America and the Caribbean
5—	Asia and the Far East
6—	Eastern Europe
7—	Middle East and North Africa
8—	West Africa
9—	Central and East Africa

The second digit of the three-digit code stands for a particular country within each division. This scheme permits recording up to ten countries within each division, thus accommodating a maximum of 100 countries. Although there are more than 100 countries in the United Nations alone, the coding scheme is adequate for the ninety countries in the parties project. The third digit stands for a particular party within each country, providing for a maximum of ten parties within each country and 1000 parties overall. These ranges are quite adequate for the parties project, which includes only about 250 parties and not more than seven in any single country. Sample identification codes for Japanese political parties in the project are as follows:

541 Progressive (Kaishinto)
542 Left-Wing Socialist (Saha Shakaito)
543 Right-Wing Socialist (Uha Shakaito)
544 Liberal Democratic (Jiyu Minshuto)
545 Socialist (Shakaito, Social Democratic before 1955)
549 General and other parties

Party-identification codes are used to tag locations in texts where information about specific parties is presented. The substantive nature of the information is recorded by means of substantive codes.

Substantive Codes

On the basis of our pretest experience in coding literature on political parties, we decided to index only at the two-digit level of classification, which provides 100 coding categories for substantive information on political parties while retaining room for expansion of the code by activating the third digit.

The substantive codes have been organized in an attempt to answer several basic questions about political parties. Each of these questions encompasses up to ten coding categories. The first digit of the information codes stands for a given question.

Code	*Questions about political parties*
0—	What is a political party?—Definition, function, theory
1—	How do political parties begin?—The origin of parties
2—	What does a party do?—Party activities
3—	Who belongs to the party?—Party composition
4—	How is the party organized?—Party structure
5—	What does the party seek to accomplish?—Party goals
6—	Under what condition does the party operate?—Political environment
7—	Under what conditions does the party operate?—Social, economic, and geographical environment
8—	Are there any other parties in the country?—Party system

Each of the code divisions has been subdivided into a maximum of ten concept categories. The complete set of codes is presented in the *ICPP Codes and Indexing Manual* (available from the author). An outline of the codes is given in Figure 3.

ORGANIZATION OF MICROFILM FILES

After sufficient pages have been photographed and encoded on the film by the MIRACODE camera, the exposed reel of film is developed with conventional 16 mm processing. Because a reel may contain material on parties in different countries, the film must be edited and spliced together to form magazines with common information. This type of file organization facilitates research on party politics in given countries, which is the main way the files will be used. Because one 100-foot reel of film will accommodate about 1200 pages of coded material, most of our country files will probably fit on one magazine. If the literature indexed for any country exceeds 1200 pages, the material will be grouped on magazines in accordance with some basis of classification—perhaps having different reels for different parties in the country.

The ICPP film magazines are filed at the retrieval station and labeled according to the countries they cover. Each magazine carries a table of contents as the first frame on the film, which can be addressed by pressing the "image forward" button on the console. By including a detailed table

0— What is a political party—definition, functions, theory, method of studying
000 Definition of a political party
010 Typology of parties
020 Functions of political parties
030 Explicit propositions about parties
040 General theory about parties
050 Purpose of studying parties
060 Approaches to the study of parties
070 Methodology of studying parties

1— How does a political party begin—party origin
100 When was it formed
110 Who formed it and what was its base of electoral support
120 Why was it formed
130 How was it formed
140 Political history of party
150 Organizational history of party

2— What does a political party do—party activities
200 Selects candidates and party officials
210 Conducts election campaigns
220 Formulates party policy and builds party organization
230 Influences government policy
240 Propagandizes its goals and activities
250 Discipline—maintenance of group solidarity
260 Raises and disperses funds
270 Causes demonstrations, riots, assassinations, sabotage, etc.
280 Intercedes in government action on behalf of citizens (including members)
290 Social activities

3— Who belongs to the party—party membership
300 Party supporters
310 Party contributors
320 Party members
330 Party workers and activists
340 Party candidates
350 Party members in government posts
360 Party leaders and officials
370 Party factions
380 Organizational support
390 Independents

4— How is the party organized—party organization
400 Local party organization
410 Constituency party organization
420 Regional party organization
430 National party convention, conference or congress
440 National party committee
450 Legislative organization
460 Ancillary organizations
470 Functional/dysfunctional aspects of party structure
480 Articulation of party structure
490 Centralization of power

5— What does the party seek to accomplish—party goals
500 Gain control of the government
510 Engage in coalitions and constitute oppositions
520 Place members in government positions
530 Issue orientation
540 Ideological orientation
550 Subvert the government
560 Efficiency and effectiveness

6— Under what conditions does the party operate—political environment
600 National crises
610 Political issues of consensus or cleavage
620 Electoral system
630 Popular participation
640 Political norms and attitudes
650 Administrative bureaucracy
660 The executive
670 The legislature
680 Government structure and political history
690 Geographical allocation of authority

7— Under what conditions does the party operate—social, economic, geographic
700 Economic
710 Geographic
720 Social
730 Religious
740 Social norms and attitudes
750 Activities of the military
760 Activities of the students
770 Activities of the trade unions
780 Activities of voluntary associations and interest groups

8— Under what conditions does the party operate—party system
800 Number of parties
810 Election results
820 Stability of parties in system
830 Interparty competition
840 Interparty cooperation
850 Origin, support, and history of system
860 Status of party in party system
870 Typology of party systems
880 International party system

Figure 3 Outline of substantive information codes for the parties project.

of contents in the magazine, we eliminate the user's need for an external guide to the files. Indeed, the film itself contains virtually all the information necessary for effective use of the system, as can be seen by the example in Figure 4.

The table of contents indicates that a film magazine will be organized into three sections of material. Each of these sections—A, B, and C—will be discussed in turn.

Section A of each magazine copies a published bibliography on party politics in the country, authored by one of the research analysts on the ICPP staff. These bibliographies are intended to be the most comprehensive available on the parties in our study for the period 1950 to 1962. Each number in the series will follow a common format, commenting on the scholarly concern with party activities in the country, assessing the available literature in English and other languages, and dicussing the search strategy for locating relevant literature. The bibliography listings themselves will be prepared by a computer program, and each entry will be indexed by author and by the five most frequent coding categories. The essay portion of the bibliographies will conclude with the analyst's observations on the state of the parties literature, including substantive focus, quality of the writings, and scholarly needs.

Section B reproduces output from a computer program written to analyze the indexing process using the same punchcards employed as input to the MIRACODE camera. This program reads all of the codes used to index a given document and then produces the following data: the mean numbers of substantive and parties codes used per page, a frequency and percentage distribution of both substantive and parties codes for that document, a rank-ordering of both sets of codes according to frequency of use, and a frequency and percentage distribution of substantive codes by the nine major coding categories, 0 through 8.[5]

Section C contains the actual documents in the files, with the individual pages indexed for retrieval as described earlier in this chapter. By means of file organization and the inclusion of summary information about the material stored on the film, this basic capability for retrieving individual pages is supplemented by a macro-level retrieval capability which enables the user to identify and retrieve entire documents relevant to his interests. The user can identify these documents by consulting the bibliographic index (Section A) or the summary statistics on coding categories (Section B). By searching on the last three digits of the appropriate document numbers, the user can retrieve the first page of the document directly

[5] The computer program which produces this information is called SANUK, and was written in FORTRAN IV for the CDC 3400 by Dennis Goldenson. See the sample output from this program in Figure 5.

Film Magazine No. ICPP/429: DOMINICAN REPUBLIC

This magazine contains 1128 pages of literature indexed from 32 documents pertaining to political parties in the Dominican Republic; 69 percent of the pages are in English, the remainder are in Spanish (September, 1967).

TABLE OF CONTENTS, LISTED IN SEQUENCE WITHIN SECTIONS

Section A

Microfilm of Marcelino Miyares, "Bibliography of Party Politics in the Dominican Republic, 1950–1962," in Kenneth Janda (ed.), *ICPP Bibliography Series* (Evanston: International Comparative Political Parties Project, Northwestern University, 1967). This publication is a critical review of the state of literature on political parties in the Dominican Republic.

To learn the substantive coding categories used in indexing this literature and their frequency of usage, consult Table 1.

To locate specific documents of interest on the film, consult the computerized bibliography, which indexes all documents in two ways: by author and by the five most frequent substantive coding categories.

To obtain a statistical summary of the content indexed in any of the documents located in the bibliography, search on the last three digits of the document number, which will retrieve the corresponding computer output in Section B.

Section B

Output from the computer program summarizing the use of coding categories in indexing each document in the file. A summary distribution of codes is given for each document, providing a statistical profile of its content. The coding statistics for any document can be retrieved by searching on the last three digits of the document number, which is given with each bibliographic entry in Section A.

To retrieve the document corresponding to any statistical summary reported in Section B, search on the last three digits of the document number, which will advance the film to the first page of the document in Section C.

Section C

This section contains the actual documents with individual pages intended for retrieval. A suggested search strategy is as follows:

1. Identify the coding categories relevant to your inquiry by consulting Table 1 in Section A. (Be alert to alternative code categories.)
2. Note the frequency of usage for these categories to determine the number of pages that would be retrieved on a simple search.
3. If the number seems too large for retrieval, consider qualifying your search by adding another code number.
4. Turn on the response monitor and search for pages with both codes to determine the number jointly coded.
5. If the number of pages seems manageable, turn off the response monitor and retrieve the pages. Otherwise further qualify the search and count again.

Figure 4 Sample table of contents on ICPP film magazine.

from Section C. He can then advance the film manually, reading the material at his own pace.

INDEXING AND RELIABILITY

Indexing literature for the ICPP Project is the responsibility of a staff of research analysts, most of whom are graduate students employed full-time during the summers and part-time during the academic year. Usually, an analyst comes to his task with little knowledge of politics in the country which he has been assigned. But after reading hundreds of pages about party politics in his country, he becomes a well-informed observer of the political scene, capable of authoring a critical bibliography on parties in his country.[6]

In the interests of incorporating into the information files as much literature as possible with available funds, analysts are not expected to read material beforehand, and all code numbers are recorded during first reading. Because the page is the unit of retrieval in the MIRACODE system, the page serves as the indexing unit for the research analyst, who tags the text with one or more code numbers in order to index information that he decides is worth retrieving. The analyst makes his decision to index or not to index according to a "Rule of Usefulness," which states, "Any coded item of information should be defensible in terms of its usefulness after retrieval for at least one of three objectives: (1) describing parties for the purpose of operationalizing variables, (2) understanding the environment within which parties operate, and (3) inventorying explicit propositions about political parties." Additional rules and definitions to guide indexing are contained in the *ICPP Codes and Indexing Manual.*

After indexing a page (and before continuing to the next one), the analyst is instructed to review the codes while (a) checking for duplicate codes; (b) assessing the applicability of codes to the content in accordance with various rules in the *Indexing Manual,* especially the Rule of Usefulness; and (c) insuring that all useful information has been indexed. The impact of these instructions on the indexing process is systematically as-

[6] We have found that far more time is required to identify, locate, and obtain relevant literature for our project than to read, index, and process it for inclusion into our information retrieval system. Therefore, we established the *ICPP Bibliography Series* to make available the results of our wide-ranging search for information on political parties. The series will consist of about 90 numbers, each on party politics in a given country, and each number will be authored by the research analyst concentrating on that country. The first nine numbers in the series, covering the countries named in footnote 4, are in preparation and will be published by the International Comparative Political Parties Project.

sessed by having a second analyst re-index selected material without knowledge of the codes used by the first analyst. The results are assessed by calculating reliabilities between analysts for each document that has been re-indexed.

Our calculations of inter*indexer* reliabilities are analogous to the more familiar inter*coder* reliabilities reported for content analysis, but we use the different term to emphasize the important difference between "indexing" and "coding." Knowledge of intercoder reliabilities is important in content analysis because each coder is essentially *scoring* his material on some nominal or ordinal scales to produce variables for direct analysis in subsequent stages of the research. For example, once an answer to an open-ended interview question is coded a "3," the respondent's score on the variable is essentially fixed for analysis. To insure that variables are scaled accurately for research, it is esssential to obtain high levels of intercoder reliability, with 90 percent sometimes proposed as an "acceptable" level of agreement between coders.

In evaluating ICPP indexing reliabilities, one should understand that our codes serve a purpose that is different from codes in content analysis. In applying a code number to a given page, our analysts are *indexing* the text under that coding category rather than *scoring* the content on a given variable. Our coding categories support a method for retrieving information, which the user is expected to use in scaling his own variables. Hence, we use the term *indexing* the literature instead of *coding* it.

Because of different objectives between indexing and coding, it seems that a lower level of reliability would be "acceptable" for indexing than for coding. This seems true for three reasons: (1) disagreement between analysts sometimes occurs in the use of different but related codes for the same passage, which can be retrieved by using "see also" alternative codes; (2) disagreement between coders often occurs in indexing brief references or mentions, which are of marginal utility after retrieval; and (3) the researcher would not normally treat index codes as data for analysis, the way variable codes are treated in content analysis—although this will be done later in this chapter.

While agreement among indexers may not be as crucial in the research process as agreement among coders, it is still important to know how much agreement exists between two analysts asked to process the same material for inclusion in the files. The ICPP Project systematically evaluates indexing reliabilities by routine re-indexing of 10 percent of all the pages indexed for each country. Codes used by a second analyst for a given document are keypunched and read into the computer along with the punchcards carrying the first analyst's codes. After making a page-by-page comparison of the codes, the computer furnishes the following in-

formation: the mean number of substantive and party codes used per page by each indexer, the product-moment correlation between indexers for both substantive and party codes, and the familiar coefficient of reliability between indexers for both sets of codes. In addition, the program provides frequency distributions of substantive and party codes used by each indexer. A sample of computer output with this information is given in Figure 5, which reports results of re-indexing 21 pages from Kim Ch'ang-sun, "A Fifteen-Year History of North Korea," translated from the Korean by the U.S. Joint Publications Research Service.[7]

The re-indexing example in Figure 5 presents fairly typical reliabilities for the project to date. Interindexer agreement over the use of substantive codes, as represented in Figure 5 by a product-moment correlation of .78 and a coefficient of reliability of .52, is usually lower than that obtained in the use of parties codes, represented by a correlation of .91 and a coefficient of .56. Table 1 reports reliability data for 53 documents repre-

Table 1. *Mean interindexer reliabilities over 53 documents for first set of nine countries*

Codes	Parties	Substantive
Mean product-moment correlation	.73	.42
Mean coefficient of reliability	.74	.46

senting 924 pages of material re-indexed for the nine countries studied in the first phase of the project. We are now in the process of evaluating these results before processing parties literature for other countries.

The coefficient of reliability and the product-moment correlation are both calculated because they provide different information about the extent of agreement between indexers. The coefficient of reliability is calculated by the familiar formula, C.R. $= \Sigma 2M/N_1 + N_2$, where M is the number of codes on each page that "match" for each indexer, N_1 is the total number of codes used by the first indexer, and N_2 is the total number used by the second indexer. The product-moment correlation is calculated by treating the indexers as the variables, the frequency with which both

[7] The United States Joint Publications Research Service (JPRS) was established in 1957 to translate foreign language material into English for use by various agencies of the government. Approximately 1000 pages of foreign language material is translated daily by professionals under contract to JPRS. The *Monthly Catalog of U.S. Government Publications* lists many, but presumably not all, of the JPRS translations. Research and Microfilm Publications, Inc. in Washington, D.C., catalogs and indexes all current JPRS material.

DOCUMENT NO. = 560-025
THIS DOCUMENT HAS 21 PAGES.

--STATISTICAL SUMMARY--	PARTIES	SUBSTANTIVE
THE MEAN NUMRER OF CODES PER PAGE FOR INDEXER NO. 16 ARE--	1.90	2.62
THE MEAN NUMRER OF CODES PER PAGE FOR INDEXER NO. 10 ARE--	1.48	3.81
PRODUCT MOMENT CORRELATIONS OF CODING BETWEEN INDEXERS ARE--	0.916	0.780
COEFFICIENTS OF INTER-INDEXER RELIABILITY ARE--	0.563	0.519

FREQUENCY DISTRIBUTIONS

	SUBSTANTIVE					PARTIES			
	INDEXER NO. 16		INDEXER NO. 10			INDEXER NO. 16		INDEXER NO. 10	
CODE	FREQ.	PCT.	FREQ.	PCT.	CODE	FREQ.	PCT.	FREQ.	PCT.
10	0	0.0	1	1.3	521	1	2.5	2	6.5
100	3	5.5	5	6.3	559	2	5.0	0	0.0
110	0	0.0	1	1.3	561	21	52.5	18	58.1
120	0	0.0	2	2.5	569	0	0.0	4	12.9
130	1	1.8	3	3.8	609	1	2.5	0	0.0
140	13	23.6	11	13.8	619	1	2.5	0	0.0
150	0	0.0	5	6.3	629	1	2.5	0	0.0
210	0	0.0	1	1.3	639	1	2.5	0	0.0
220	0	0.0	2	2.5	649	1	2.5	0	0.0
240	5	9.1	0	0.0	659	1	2.5	0	0.0
250	6	10.9	5	6.3	669	2	5.0	0	0.0
320	4	7.3	6	7.5	671	4	10.0	7	22.6
330	0	0.0	1	1.3	679	4	10.0	0	0.0
360	5	9.1	6	7.5					
370	1	1.8	4	5.0					
380	0	0.0	2	2.5					
400	0	0.0	1	1.3					
430	0	0.0	1	1.3					
440	2	3.6	2	2.5					
460	0	0.0	1	1.3					
480	1	1.8	0	0.0					
490	3	5.5	3	3.8					
500	0	0.0	1	1.3					
530	0	0.0	2	2.5					
540	0	0.0	1	1.3					
560	0	0.0	2	2.5					
680	0	0.0	2	2.5					
840	0	0.0	1	1.3					
850	6	10.9	3	3.8					
880	5	9.1	5	6.3					

Figure 5 Results of re-indexing 21 pages from Kim Ch'ang-sun, *A Fifteen-Year History of North Korea.*

use a given code as values of the variables, and the coding categories used by both as the number of cases. The scatter diagram in Figure 6 illustrates how the data are treated in calculating the correlation coefficient.

We refer to the product-moment correlation as our "macroscopic" measure of indexing reliability, since it measures agreement in use of codes over the entire document without being sensitive to the joint occurrence of codes on the same pages. Because of characteristics of the product-moment formula, the high correlation of .91 calculated for the scatter diagram in Figure 6 results largely from both analysts' heavy use of code 14 (political history of the party), which indexer number 10 used eleven times and indexer number 16 used thirteen times. While we have no assurance that the indexers used these codes on the same pages (indeed, we know that on two pages they must not have), we know that they found a similar number of references to party history throughout the text. High values obtained for our macroscopic measure of indexing re-

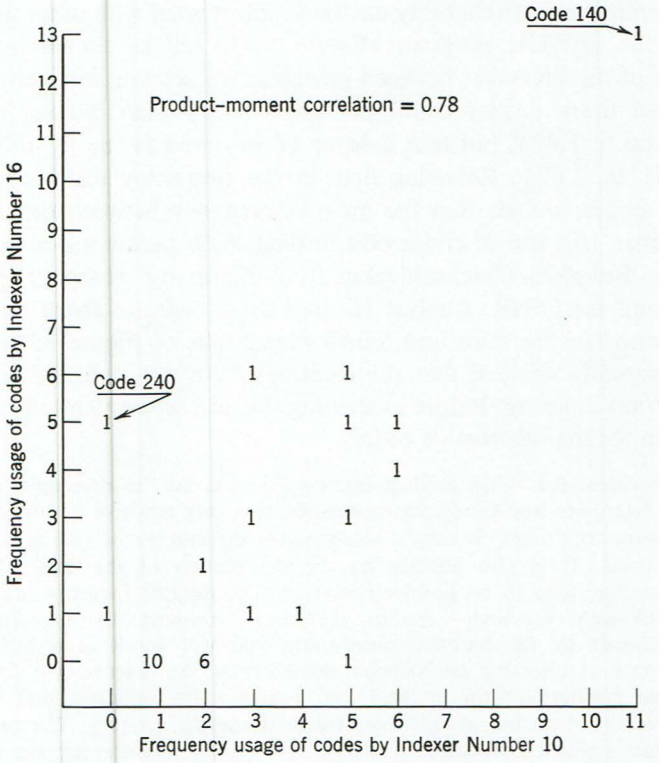


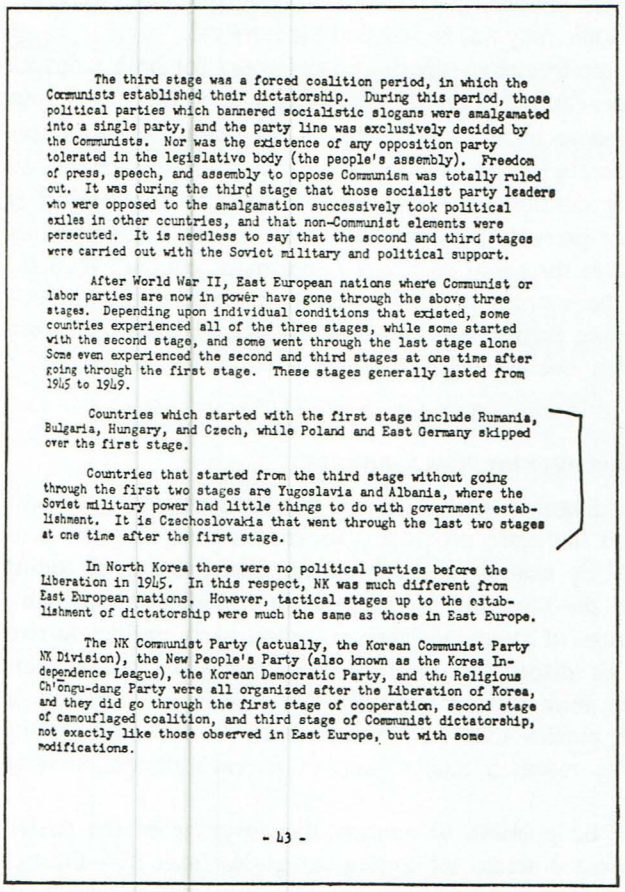
Figure 6 Joint distribution of 30 substantive codes assigned to Document 560-025 by Indexer Number 10 and Indexer Number 16.

liability indicate that two indexers agree in characterizing the document's focus, which is important to the researcher who wishes to retrieve entire documents on a given subject by reference to the bibliographic index in Section A of the film or the statistical summaries in Section B.

We refer to the coefficient of reliability as our "microscopic" measure of indexing reliability, since it is sensitive only to joint occurrences of codes on the same pages and ignores frequencies for the same codes over the entire document. Obviously, if the coefficient of reliability is 1.0, the product-moment correlation will also be 1.0—disregarding the trivial case when only one code is used and the variance and therefore the correlation coefficient are both 0. Once the coefficient of reliability drops below unity, however, the product-moment correlation can fluctuate widely—even taking on negative values if indexers systematically use different codes for the same theme.[8] It is even possible for the correlation to be unity while the reliability coefficient is 0.0, if the indexers use the same codes but on different pages.

Our two measures of reliability can be supplemented with other information from the SANUK program (Figure 5) to tell us something about the sources of disagreement between indexers. We see that indexer number 16 has used more parties codes per page (cpp) than indexer number 10 (1.90 cpp to 1.48), but that indexer 10 has used far more substantive codes (3.81 to 2.62). Referring first to the frequency distributions for the parties codes, we see that the main discrepancy between the analysts lies in number 16's use of codes 609 through 679, pertaining respectively to Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Rumania, and the USSR. Analyst 16 used these codes to index the countries mentioned in the third and fourth paragraphs of Figure 7; the other analyst apparently decided that the mentions were not sufficiently important to warrant indexing. Before evaluating this discrepancy, let us examine the situation for the substantive codes.

[8] Because it is calculated by the product-moment formula, our "macroscopic" measure of reliability has some well-known characteristics. It is very sensitive to disagreements when the number of "cases" is small, which means the number of coding categories for our purposes. It is also affected by the distribution of the data which, as coding frequencies, tend to be positively skewed. The data in Figure 6 are heavily skewed to the right for both variables (indexers), meaning that the correlation will be influenced by the outlying observation and will result in a high value. For the purpose of assessing interindexer reliability at the macroscopic level, this is a desirable attribute of the statistic, for a high value indicates that the two indexers agreed in their use of the most frequent coding category. The properties of the product-moment correlation make it a suitable measure for macroscopic reliability except when the number of pages coded is small (say less than 10), for this usually means that few codes will be used (low N) and those that are used will be used infrequently (low variance).



The third stage was a forced coalition period, in which the Communists established their dictatorship. During this period, those political parties which bannered socialistic slogans were amalgamated into a single party, and the party line was exclusively decided by the Communists. Nor was the existence of any opposition party tolerated in the legislative body (the people's assembly). Freedom of press, speech, and assembly to oppose Communism was totally ruled out. It was during the third stage that those socialist party leaders who were opposed to the amalgamation successively took political exiles in other countries, and that non-Communist elements were persecuted. It is needless to say that the second and third stages were carried out with the Soviet military and political support.

After World War II, East European nations where Communist or labor parties are now in power have gone through the above three stages. Depending upon individual conditions that existed, some countries experienced all of the three stages, while some started with the second stage, and some went through the last stage alone Some even experienced the second and third stages at one time after going through the first stage. These stages generally lasted from 1945 to 1949.

Countries which started with the first stage include Rumania, Bulgaria, Hungary, and Czech, while Poland and East Germany skipped over the first stage.

Countries that started from the third stage without going through the first two stages are Yugoslavia and Albania, where the Soviet military power had little things to do with government establishment. It is Czechoslovakia that went through the last two stages at one time after the first stage.

In North Korea there were no political parties before the Liberation in 1945. In this respect, NK was much different from East European nations. However, tactical stages up to the establishment of dictatorship were much the same as those in East Europe.

The NK Communist Party (actually, the Korean Communist Party NK Division), the New People's Party (also known as the Korea Independence League), the Korean Democratic Party, and the Religious Ch'ongu-dang Party were all organized after the Liberation of Korea, and they did go through the first stage of cooperation, second stage of camouflaged coalition, and third stage of Communist dictatorship, not exactly like those observed in East Europe, but with some modifications.

- 43 -

Analyst number 16 indexed country references in these paragraphs, while analyst number 10 did not.

Figure 7 Page from Kim Ch'ang-sun, *A Fifteen-Year History of North Korea* (translated by U.S. Joint Publications Research Service), which produced low inter-indexer reliability.

Analyst 10 tended to employ about 50 percent more substantive codes per page than analyst 16. This suggests either that analyst 10's threshold for deciding what constitutes useful information for retrieval is lower than analyst 16's or that analyst 16 is missing information through oversight. Although either factor would lower reliability by the same amount, "threshold" differences are less important to the retrieval system than "oversight" errors. If the user can be assured that analysts are likely to agree in indexing discussions of "substantial" length or importance, he may tolerate disagreements between analysts over decisions to index or not to index brief mentions and passing references—such as the country references

in Figure 7. However, he is unlikely to be satisfied knowing that important discussions of a given topic may not be indexed for retrieval.

An examination of the frequency distribution of codes for both indexers given by the computer output (Figure 5) cannot establish the reason for the disagreement between the indexers, but it can point out differences in the use of codes, thereby serving as a basis for discussion and resolution in interindexer coding conferences.[9] Our experience thus far, and it is only impressionistic at present, indicates that most of the disagreements between indexers involve threshold decisions rather than genuine oversight. We intend to study the sources of disagreement in indexing as we seek to improve our indexing instructions, procedures, and reliabilities before we undertake to index our next group of forty countries in the ICCP project.

Analysis of Parties Literature for Nine Countries

In addition to providing a capability for information retrieval, systematic indexing of the parties literature provides a means for analyzing the content of that literature. By examining the frequency distributions of coding categories assigned to the literature for each country studied, we are able to evaluate the coverage of available information on party politics in that country, confirming or disproving impressionistic ideas about the state of the literature. We may further evaluate the *quality,* as opposed to the *coverage,* of the parties literature by reference to the data quality control codes that the research analyst applies to each document after it is indexed.

Although it would be possible to analyze the coverage of the parties literature for each country across all coding categories from 00—through 88—we will limit our comparison to percentage distributions across the nine major substantive categories (0—through 8—) prompted by the basic questions about parties listed earlier. Table 2 contains these major categories and their usage for each country, expressed as a percentage of the total codes used for that country.

One of the first things to be noted from Table 2 is the range in amount of material indexed, from 425 pages (Congo-Brazzaville) to 1,191 pages (Denmark). This reflects the obvious fact that the amount of schol-

[9] The frequency distribution of codes for both indexers provides essentially the same information as a cross-tabulation of codes by indexers, which is the method of presentation used by Funkhouser in evaluating the adequacy of the codes against the performance of coders. See G. Ray Funkhouser, "A Method of Analysing Coding Reliabilities: The Random-Systematic Error Coefficient." Stanford University, mimeograph, undated.

Table 2. *Percentage distribution of substantive codes used in indexing literature on party politics in nine countries*

Code Description	Bulgaria	Congo-Brazzaville	Denmark	Dominican Republic	Ecuador	Greece	Guinea	Iran	North Korea
0— Definition/theory	0	2	6	0	1	4	0	0	0
1— Origin of party	3	6	6	6	4	4	3	3	12
2— Party activities	18	8	6	18	11	4	12	10	20
3— Party composition	17	32	15	31	16	20	14	16	22
4— Party structure	13	2	6	1	6	1	18	5	15
5— Party goals	19	7	7	9	14	12	13	12	10
6— Political environment	9	18	22	15	20	38	14	27	8
7— Social environment	13	10	13	13	16	7	16	16	3
8— Party system	9	17	19	7	12	22	10	12	11
	100 %								
Total pages indexed	1,183	425	1,191	1,128	936	509	699	901	649
Mean number of codes per page	2.69	2.37	2.19	1.77	1.96	2.55	2.06	1.99	2.17
Number of documents	104	25	78	32	54	45	34	67	31
Mean number of pages per document	11	17	15	35	17	11	21	13	21

arly attention given to political parties varies widely across countries. However, this variation does not always occur as expected. For example, we expected to find more material on party politics in Greece than in Bulgaria, while the results were diametrically opposite.

Newsome (1967), our analyst for Bulgaria, attributes the large number of pages she indexed to "the incorporation of small pieces of widely scattered source material" rather than the existence of a smaller number of more substantial writings. The data in Table 2 supports her explanation by indicating almost thirty additional documents (104) processed for Bulgaria compared to its nearest competitor, Denmark (78). For Greece, on the other hand, Antunes (1967) attributes the relative paucity of literature to the fact that, with the exception of the Communist party, "political parties *per se* have not been an object of scholarly investigation." Moreover, he contends, "While ancient Greece has been the object of a great deal of attention, scholars have evidenced little interest in contemporary Greek politics."

Antunes' evaluation of the parties literature in Greece is also supported by the distribution of coding categories. No other country has so little material indexed on party activities and party structure—the two major coding categories that embrace our "hardest" information about political parties. Only 5 percent of the codes used to index Greek literature dealt with one or the other of these two major coding categories, compared to 8 percent of the codes for Iran, the country with the next most "underdeveloped" parties literature in our sample of nine.

Using the same two categories to judge the specificity of information about political parties, one would have to rate North Korea, Bulgaria, and Guinea—in that order—as the countries with the most relevant literature on party organization and activities. For both North Korea and Bulgaria, this high rating undoubtedly results from large amounts of material translated from party documents, which tend to discuss organization and activities in great detail. Guinea seems to be the only country on our list which obtains a high rating on these categories by virtue of the scholarly literature written on political parties. In evaluating the Guinean literature, Skogan (1967) ascribes this literature in part to Western scholars' interest in Guinea "as an example of an at least theoretically nontotalitarian single-party state engaged in a thorough-going reconstruction of the social system."

Other information about the coverage of the literature is offered by the distribution of usage for code category 3—, "party composition." Both Congo-Brazzaville and the Dominican Republic score high on this category, which accounts for almost one-third of the total codes used for each. The relatively high usage of this major coding category for both

countries is due to an especially heavy reliance on code category 36—, which stands for party leaders and officials—suggesting that the literature deals largely with political personalities. In the case of the Dominican Republic, as Miyares (1967) points out, "the literature focuses on the person of R. L. Trujillo," while Lauffer (1967) describes the focus of literature for Congo-Brazzaville as centering more broadly "around individuals as Youlou, Opangault, Massemba-Debat, and other prominent poitical figures."

It should be remembered that the coverage "profile" depicted by our coding categories reflects political life in the period we are studying (1950 to 1962) and does not necessarily portray the situation today. In discussing the literature that he indexed for Ecuador, Johnson (1967) remarks, "The period of the early 1950's, because of the then unique event of Galo Plaza's successful completion of his term as president of the republic, and the period from 1962 to 1965, because of the return of the coup d'etat (or *golpe de gobierno*) as an instrument of political selection with the return of the military as an active political force, are the periods of recent Ecuadorian political history receiving the greatest amount of attention from American scholars." As a result of our focus on the period from 1950 to 1962, the Ecuadorian material in the ICPP files will reflect the earlier period of stability rather than the more recent instability.

It is at least as important to evaluate the quality of the parties literature for given countries as its coverage. Immediately after indexing each document, our research analysts score it on the basis of 22 "data quality" variables, such as "place of publication," "original language of source," "position of author," "sources of data," "scope of study," "field research," and subjective judgments of the document's "quality," "ideological orientation," and "objectivity." A complete listing of the data quality control codes is contained in the Appendix to this chapter.

Each of the numbers in the *ICPP Bibliography Series* contains a table which reports the overall usage of these data quality codes in rating the documents on 17 of the 22 variables in the set. Figure 8 is a reproduction of this table for the 31 documents indexed for North Korea. Discussing this table, Schwestka (1967) observes:

> Almost half of the documents were published either in North Korea or in that area of the world; almost half were translated from Korean; and more than half of the authors were either North Koreans or South Koreans. The distribution of authors' positions is deceptive, however, for it was impossible to determine the position of many North Korean authors. Consequently, authorship seems weighted toward academia rather than government/party officials.

One of our guides for assessing the "scholarly" nature of the material

DATA QUALITY CODES	MOST FREQUENT:	(N)	2nd MOST FREQUENT:	(N)	3rd MOST FREQUENT:	(N)	4th MOST FREQUENT:	(N)
Document Type	Journal article	13	Government documents	9	Book	5	Newspaper feature or magazine item	2
Place of publication	United States	17	In country studied	12	In area of world where country exists	2		
Original language of source	English	17	Language of country studied	14				
Position of author	Academic	16	Government official	2	Journalist	1	Not applicable/no information	12
National background	From country studied	10	United States	9	From area of world where country exists	4	Not applicable/no information	8
Language resources	Cites native language sources	12	Document itself translated	9	Uses native interviews to collect data	5	No information	2
Date of data	Post-World War II	16	1955–1959	9	Prior to World War II	2	1960–1964	2
Data source types	Government publication	10	Secondary sources	6	Election returns or ecological data	6	Sample survey	
Quantitative analysis	Raw data on percents reported in text	26	No quantification	5				
Theoretical treatment	No explicit propositions	29	One or more explicit propositions	2				
Traditional scholarship	No footnotes	15	Between 1 and 2 per page	6	More than 3 per page	5	Less than 1 per page	3
Nature of sources cited	Primary—party and government documents	14	Primary—personal records	1	Secondary—books, journal articles	1	Not applicable/no information	15
Scope of study	Case study of single country	16	Case study of single party	10	Comparison of government systems	5		
Field research	Author resident native of country	14	No evidence of work in country	10	Author nonresident native of country	4	Evidence of work in geographic area	1
Overall judgment of quality	High	24	Medium	6	Low	1		
Author's ideology	Leftist	13	Not classifiable on left-right scale	11	Rightist	5	Centrist	2
Author's objectivity	Values detectable	15	No reason to doubt objectivity	14	Objective/"scientific" analysis	2		

Figure 8 Data quality codes for 31 documents for North Korea.

that we index is the proportion of codes in category 0—, "Definitions, functions and theories" of political parties. Denmark, with only 6 percent of its index entries in this category, scores the highest of all nine countries on this category. Nevertheless, Billingsley (1967) reports in her data qualits analysis for the 78 documents indexed on Denmark that "most documents are news features, only half of them are written by academics, the material is seldom footnoted, is generally considered (subjectively) to be of medium quality, and the data sources (when revealed) do not involve quantification."

The other analysts' assessments of the parties literature for their countries are much the same as Billingsley's: most of the literature is rated "nonscholarly" in character. Although this may result partly from uniqueness in our sample of nine countries, none of which have been common objects of study by political scientists, it is likely that much the same situation will be found for most of the other countries we study. Our search for material on party politics produces a great deal of nonscholarly material in the form of party documents, newspaper accounts, and government reports. Although lacking in theoretical character, this material contains basic information necessary for scoring parties on such variables as nature of party membership, ideological orientation, centralization of power, leadership selection, and cohesiveness—important variables for making cross-national comparisons.

When diverse sources disagree in statements about a party, we will seek to determine the basis of the disagreement by using our data quality codes as suggested by Naroll in *Data Quality Control* (1962). We will analyze the source of variance in coding a party on a given variable from information in the file. This analysis will be done automatically with a computer program which treats the data quality control codes as the independent variables and the codes for the party as the dependent variable. The program will try to identify the existence of systematic differences among data quality variables which account for variance in the dependent variable as we have coded it from information in the files.

For example, the MIRACODE system may retrieve a total of 25 documents discussing membership requirements in party X. Ten of these 25 documents may report that membership in the party does *not* require the payment of dues, while 15 other documents may state that payment of dues *is* a membership requirement. Through an analysis of variance in our coding of this variable, we may discover the discrepancy to be explained by a data quality variable, for example, "position of author"—with academics reporting no dues requirement and former party officials revealing that members are indeed required to pay dues to stay in good standing.

This example is only intended to illustrate the general procedure that will be employed in using our data quality codes for "quality control" of the information we generate. Although problems inherent in "library research" are not unique to the ICPP project, the scope of our activities is such that we must develop systematic procedures for evaluating the information that resides in and emerges from our files. Fortunately, the very technology that enables us to index and retrieve information from massive amounts of literature can also be utilized in a microfilm and computer system for analyzing that literature.

APPENDIX: DATA QUALITY CONTROL CODES

Columns	Variable
1–18	SENIOR AUTHOR'S LAST NAME AND INITIALS
19–20	YEAR OF ORIGINAL PUBLICATION
21–23	COUNTRY CODE
24–26	DOCUMENT CODE
27–29	INDEXER CODE
30	TYPE OF DOCUMENT
	0 not otherwise classified
	1 reference source—Facts-On-File, Keesings Archives, etc.
	2 newspaper or magazine item—popular periodical
	3 newspaper or magazine feature story—popular periodical
	4 party document—constitution, platform
	5 government documents—reports, statistical abstracts
	6 journal article
	7 article or chapter in book (used for reprints of journal article)
	8 thesis, monograph
	9 book
31–32	PERIODICAL CODE—specific for each country
33	PLACE OF PUBLICATION
	blank don't know (missing data)
	0 not otherwise classified (use also when not applicable)
	1 United States (except if 2 is applicable)
	2 in colonizing country (U.S., Britain, France, Germany, Spain, Portugal, Netherlands)
	3 in area of world where country exists—i.e.., Latin America, Africa, Europe, Asia
	4 in country studied

Columns	Variable
34	ORIGINAL LANGUAGE OF SOURCE
	0 not otherwise classified
	1 English
	2 French
	3 Spanish
	4 German
	5 language of country studied (if two apply, favor using this code)
35	AUTHORSHIP
	0 no author named
	1 one author
	2 two authors
	3 three or more authors
	4 corporate author (e.g., Bulgarian National Committee)
36	POSITION OF FIRST-NAMED AUTHOR (favor higher code if two apply)
	blank no information (missing data)
	0 not otherwise classified
	1 journalist
	2 government official in country studied
	3 ex-government official
	4 party official in country studied
	5 ex-party official
	6 academic
37	PRESUMED NATIONAL BACKGROUND—judged from last name and source of publication
	blank not applicable—no author given
	0 no judgment made/not otherwise classified
	1 United States (except if 2 is applicable)
	2 from colonizing country—U.S., Britain, France, Germany, Spain, Portugal, Netherlands
	3 from area of world where country exists—e.g., Latin America, Africa, Europe (use if in doubt of 4)
	4 from country studied
38	EVIDENCE OF USE OF LANGUAGE RESOURCES
	blank not applicable (use for general theory, not country studied)
	0 no information
	1 coder infers author has no ability in native language
	2 cites translated materials, worked with interpreter

Columns	Variable
38	EVIDENCE OF USE OF LANGUAGE RESOURCES (*Continued*)
	3 cites native language sources, uses native language phrases in text (excluding the native names of political parties)
	4 uses native interviewers to collect survey information
	5 document itself translated from native language or written in native language or written by native in English
39	DATE OF MAJOR PORTION OF DATA (code later period if other choice cannot be made)
	blank not applicable (use for general theory)
	0 not otherwise classified
	1 prior to World War II (1939 or earlier)
	2 1940–1944
	3 1945–1949
	4 1950–1954
	5 1955–1959
	6 1960–1964
	7 1965–present
	8 post-World War II (give preference to above categories)
40	NOT USED
41–49	CODE FOR DATA SOURCES (entered in columns 41–49, ranked by importance)
	blank not applicable (use for speeches, election reports, etc.)
	0 no data sources revealed
	1 not otherwise classified
	2 secondary sources—newspapers, books, journals, broadcasts
	3 government publications or party documents
	4 election returns or ecological data
	5 roll call votes
	6 sample survey of individuals
	7 interviews with party officials or leaders
	8 personal experience as participant observer
50	NUMBER OF DATA SOURCES USED
51	NOT USED
52	QUANTITATIVE ANALYSIS SCORE
	0 no quantification involved
	1 raw data or percents reported in text but not in tables
	2 one raw data or percentage table reported
	3 two or more raw data or percentage tables reported
	4 bivariate measures of association reported

Columns	Variable
52	QUANTITATIVE ANALYSIS SCORE (*Continued*)
	5 multivariate statistics reported
53	THEORETICAL TREATMENT SCORE
	0 no explicit propositions advanced or tested
	1 general theory that discusses "relevant" variables, but does not state relationships among them
	2 one or more explicit propositions advanced but not statistically tested
	3 one or more explicit propositions advanced and statistically tested
	4 enumeration of three or more propositions with common concepts into a body of theory
	5 incorporation of three or more propositions with common concepts into a body of theory
54	TRADITIONAL SCHOLARSHIP SCORE
	blank not applicable (speeches, election returns)
	0 no footnotes cited or attribution of sources
	1 less than 1 footnote per page
	2 between 1 and 2 footnotes per page
	3 between 2 and 3 footnotes per page
	4 more than 3 footnotes per page
55	NATURE OF SOURCES CITED IN FOOTNOTES (enter the highest when appropriate)
	blank not applicable—no footnotes
	0 not classified
	1 tertiary sources—encyclopedias, references only
	2 secondary sources—newspapers and magazines
	3 secondary sources—books, journal articles
	4 primary sources—party and government document
	5 primary sources—personal records, memoirs, interviews, data from unpublished sources
56	CITATION OF DUVERGER (enter highest applicable)
	blank not applicable—no footnotes in text
	0 footnotes, but none to Duverger
	1 one footnote to Duverger
	2 two or more footnotes to Duverger
	3 mentions Duverger in the text
	4 tests out Duverger's propositions or theory, modeled after Duverger's analysis, uses Duverger's concepts or "branch" and "caucus" parties, "majority bent" parties, etc.

Columns	Variable
57	SCOPE OF STUDY (use for whole document whether all is coded or not)
	0 not otherwise classified
	1 conceptual or theoretical, without emphasis on data and evidence
	2 survey of parties or politics in given area, e.g., Latin America
	3 compartive analysis of governmental systems
	4 comparative analysis of political parties
	5 study of a single country
	6 study of a single event
	7 news event
58–60	FOCUS OF STUDY—MOST FREQUENT SUBSTANTIVE CODING CATEGORY USED
61–63	NUMBER OF TIMES MOST FREQUENT SUBSTANTIVE CODING CATEGORY USED
64–66	FOCUS OF STUDY—SECOND MOST FREQUENT SUBSTANTIVE CODING CATEGORY USED
67–69	NUMBER OF TIMES SECOND MOST FREQUENT SUBSTANTIVE CODING CATEGORY USED
70	FIELD RESEARCH
	blank not applicable or no information
	0 evidence of no work in country studied
	1 evidence of work in geographical area
	2 spent less than one year in country
	3 spent more than one year in country, or two trips of any length or author writing in country
	4 author a nonresident native of country
	5 author a resident of country
71	CODER'S SUBJECTIVE JUDGMENT OF QUALITY OF SOURCE
	1 low
	2 medium—code unless evidence points to low or high
	3 high
72	CODER'S SUBJECTIVE JUDGMENT OF IDEOLOGICAL ORIENTATION OF AUTHOR
	0 not classifiable on left-right demension
	1 leftist
	2 centrist—code unless evidence points to low or high
	3 rightist

Columns	Variable
73	CODER'S SUBJECTIVE JUDGMENT OF AUTHOR'S OBJECTIVITY
	1 antiseptically objective—e.g., "scientific" analysis, mainly tabular presentation of data
	2 no reason to doubt objectivity
	3 values detectable
	4 emotional language
74–76	NUMBER OF PAGES CODED
77–80	CODING TIME IN MINUTES