CHAPTER 2

DIFFERENTIATION, INTEGRATION AND FAMILY WELFARE

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Research Objectives

This paper attempts to explain theoretically derived dimensions which are abstractly formulated to apply not only to the family as a system but to larger social organizations. Here the focus is on a study of the family and the aim is to examine the unit itself as a basis for explaining differences in family welfare in a given community. It begins with the proposition that communities can differ and accounts for the fact that there are differences in levels of living or in welfare status of the residents. It therefore restricts itself to a study within the boundaries of one community—Madina, and attempts to follow the work of the Youngs (1968) and of Larkin, Owen and Rhodes (1970) in exploring the heuristic power of differentiation as a concept. Integration is a dimension which has been added to the research framework in order to help explain the relative contribution of husbands and wives to family welfare. Welfare is a state of "doing well"—a state of economic and social well-being that implies a family has the capacity to look after its members.

Theoretical Approach

The research approach has been guided by the idea that emergent properties of whole social units can be measured and reflect the dimensions of that unit. It also assumes that units such as the family and sub-units of the family can be *operationally distinguished and treated as a* "whole." This poses an initial problem in that the family has seldom been clearly defined and treated in research as a whole unit. There have been independent studies of kinship systems of role differentiation and role-conflict, socialization practices, divorce and so on; but these studies have not provided an organized conception of various facets of family functioning. Classifications such as "nuclear family" or "extended family" have also been questioned, particularly for use in describing the varied family-units in Ghana (Oppong, 1971; Vercruijsse-Dopheide and Boakye, 1973).

Young would argue that the nuclear and extended family types represent different system levels and that if we are to study family characteristics we must use *group level indicators* which are valid at the level of concern (Young, 1964:33). In his framework the concepts of differentiation, solidarity or integration are considered emergent properties of interaction or group-level phenomena which can apply equally well to family, community, regional or national levels. Each of the smaller systems can be regarded as contained in the next larger system just as the nuclear family can be envisaged as a small unit linked in a larger family network where exchange takes place. According to Young, this exchange is a part of the development process and can be

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conceived as unified, rather than as diverse processes in each sector of the system. The economic, social, cultural, religious and political sectors are viewed as intertwined and for purposes of analysis, subsumed by the use of the term differentiation.

Differentiation is defined by Young as the social unit's capacity to process a diversity of information types. It is an abstract concept, used in preference to such dichotomous terms as "modern"—"traditional" or "rural"—"urban." Young has assumed that .... "the phenomena of human society and culture may be constructed as structures of meaning and information" and " ..... any socially derived observable sound, behaviour, artifact may serve as symbols of these meaning structures" (Young, 1966:46). In other words, the phenomena to observe are of three types—words, actions and concrete objects. All of these are means of communicating group behaviour. They are "signs," "symbols" or "communication strategies." The acquisition of a new household tool, for example, can be taken as a "sign" of increased diversity for a particular household. Young is not alone in this idea. Levi-Strauss too has claimed that verbal communication is only one way in which a society explicates itself. Music, art, ritual, myth, religion, literature, house forms, kinship systems, cooking, dress, and the exchange of goods and services can all be considered languages by which society is elaborated and maintained. They are all products of activities which are basically similar, that is the human mind, and they are the data which communicate both the "live-in" and "thought-of" order in society—the visible and not so visible meaning (Levi-Strauss, 1967). Man speaks not only with words but through the medium of things, and it is therefore possible to use concrete objects, technology or ritual to help explain man's world (Klapp, 1959; Bossard and Boll, 1950).

Another assumption which belongs to the theory is that social systems generate their own data. At the level of the family—organization of living space, selection of furnishings, the patterns of interaction and work arrangements represent the group. This may not sound unusual but to collect this kind of data in order to construct structural measures which reflect internal dimensions of the family system is a new idea. The theory implies that the diversity of social symbols maintained by a family or any social unit indicates the level of its differentiation; that continued progress from a simple to a highly complex system is possible and takes place in a cumulative fashion.

The concept of solidarity has been used along with differentiation to explain the shift from one stage to another. It has been defined by Young as the tendency of a social unit to process all incoming and outgoing information according to an integrated format (Young, 1966:46). If there is a unity of purpose the system as a whole is more likely to be able to progress. At the level of the family the term solidarity could represent the more invisible structure or bond which brings diverse parts of the family into a whole. *Integration* could be considered a somewhat similar concept but perhaps less intense. It implies mutual interdependence or unification and some stability of the unit. Low levels of integration refer to irregular patterns of involvement of group members and few recurrent formalities which bring them together. It does not imply high levels of verbal communication or an effective relationship.

The Hypothesis, Sample and Research Setting

Differentiation and integration then, are the two major dimensions of the family unit to be explored in this research in an attempt to explain differences in family welfare. The major hypothesis is that conditions of family welfare can be more adequately predicted by measures of differentiation and integration taken together than by either of the measures alone.

The Unit of Analysis

The study to be described was concerned with the welfare of mothers and their offspring and whether or not their status could be predicted by examining the dimensions of the family sub-unit of which they were members. Mothers in Madina whose first born child was between the ages of 12 and 15 were therefore selected as the focus of the study and totalled 133 out of a possible 151 who were listed on house to house visits. There were 118 husbands included, 100 of whom resided with their wives. The term "family" for purposes of this study refers to the man, his wife and her off-spring. Indicators of family welfare were restricted to this nuclear sub-unit and not necessarily to other residents of the Madina households. These limitations were considered essential to the notion that a social unit be clearly indentified in the theoretical framework to be explored.

The fact that the study had its setting in Madina is of interest because the community is a relatively new semi-urban settlement. Madina had its beginnings in 1950 and is the home of a great mixture of people—Ewe and related Togo formed the single majority tribal group in 1966 followed by other Akans, Kwahus and Akwapims and Ga-Adangbe/Krobos. (Quarcoo, Addo and Peil, 1967) The distribution of tribal groups among the 133 respondents remained fairly similar at the time of the present study in March-April, 1971. A variety of religions, occupations and income levels were also represented, thus making it possible to make comparisons. The data for the study were collected by interviewing husbands and wives with the help of 5 social workers who lived in Madina during the time of the study.

Measurement

Several indicators of each of the major concepts—differentiation, integration and family welfare—were developed from the data. Although these were assumed from the outset to have different strengths as measures all of them will de described in this next section.

Guttman-type scale analysis was the technique used (Guttman, 1944) to allow related data to cumulate and form a linear dimension of structural complexity whenever this was possible. Attributes that did not fit a cumulative pattern were formed into indices or typologies, or left as simple counts, just as in previous studies cited (Young, 1965; Young and Young, 1968, and Larkin, 1968). Individual level characteristics will be described first, then the family level attributes.

Measures of Characteristics of Husbands and Wives: Education

The 133 female respondents and 118 husbands were ranked according to the level of education or training. Almost half the women in the sample were illiterate and 14.2 per cent were only a step higher, having had some semi-skilled type of training such as dressmaking or bread-baking in addition to some literacy training. About a third had either primary or middle school and four women had some secondary education. In contrast, 54.1 per cent of the men had education beyond middle school and three of those had university education.

Literacy

A series of questions about languages used, reading, writing and use of the media were the items indicating contacts with the outside which might not have shown up in the education indices. In a nine-item Guttman scale for males "listens to the radio at least once a week" remains

the first scale step as it was for Larkin (Larkin, Owen and Rhodes 1970: 305). 'Reads or writes a Ghanaian language' is the second step, followed by 'writes letters,' 'reads the bible,' 'read a book this year,' 'reads magazines at least once a week,' 'reads a second Ghanaian language,' and 'watches television.' The coefficient of scalability is 66 and is therefore acceptable (Menzel, 1953). The literacy scale for the females includes the following items after the baseline item 'speaks a Ghanaian language,' 'speaks a second Ghanaian language, 'listens to the radio at least once a week,' 'reads or writes more than one Ghanaian language,' 'read a book this year.' The coefficient of scalability was 78.

The scale steps indicate increasing articulation of the individual (in this case) with the larger social system; at each step more elaborated phenomena are incorporated. Those persons (or systems) who are at the top of the scale have all the items that are at lower steps and are more highly differentiated.

Occupation:

The occupational classifications for males and females (except for the commercial class for women) were similar to those used by Larkin and developed by Peil and Addo (1966). Of the women 9.8. per cent reported having no occupation other than homemaking; 3 per cent were farming or unskilled as compared to 5.9 per cent of the men; 43.6 per cent were in the food trade selling one product only, 12.0 per cent were traders in provisions; 9.8 per cent traders in cloth or clothing, but only 3.0 per cent were semi-professional workers as compared to 15.0 per cent of the men classified as semi-professional or professional.

Social Participation:

A six-step Guttman-type scale was used to rank the males and females according to the diversity of their involvements outside the family. In each scale: 'lived in a place other than birthplace before Madina' is the first step on the scale. Eleven females and one male were below this step, having moved directly from their birthplace. For the men, 'works outside Madina' was the next step, then 'belongs to a group,' 'holds an office for a group.' 'Helped with communal work in Madina' at the top of the scale, demanded a re-orientation of loyalties away from the sub-group to the larger more complex social system of the new settlement—a higher order phenomenon.

For the women 'belongs to a group' is the second step, followed by 'participates in a savings scheme,' 'has attended a meeting lately,' and 'has attended Mass Education classes at some time.' This top item included only nine out of 133 women and could indicate that a certain level of sophistication is needed before one participates in organized classes.

Tribal Prestige:

The tribes were grouped into four ranks according to prestige—the lower rank being given to the Northern and minority tribes, second to the Ga-Adangbe and Adangbe-Krobo, third to Ewe and related Togo's and fourth to Akan, Akim and Twi-Fante.

Religion:

About 10 per cent of the men and women were Moslem and 10 per cent traditional in their religion. The others were Christian. For the purposes of analysis the category Christian and non-Christian was used.

Number of Years in Madina:

The actual count of years spent in Madina served as the measure. The majority in the sample were recent arrivals—58.5 per cent of the men and 71.9 per cent of the women having lived in Madina for four years or less.

Urban Contact:

A rural birthplace was reported by 61.9 per cent of the men and 57.1 per cent of the women but most of them had lived in a town larger than 10,000 before coming to Madina. Almost half of them had lived in Accra. Contact with urban life was considered one of the influencing attributes.

Age:

Any difference in experiences due to age was used as a controlling attribute. However, 64 per cent of the women in the sample were in the middle age group (31 to 40 years) as compared to 38 per cent of the men, 50.8 per cent of whom were reported to be over the age 40.

Measures of Household Differentiation—Food Consumption:

A six-step scale of foods eaten with a coefficient of scalability .78 based on a 24-hour food recall was constructed from a pool of 18 reported food items. The base-line items were found to be tomatoes, onions, pepper with small amount of fish—common essentials in the soup or stew; followed by 'palm-oil; 'bread' beverages such as tea, cocoa, milo, coffee; 'milk' and 'margarine' as the top step. The addition of higher-order items indicate a contact beyond what is home provided. Fufu was the most common preparation of the staple (58.6 per cent), followed by banku (29.3 per cent) and kenkey (23.3 per cent).

Food Production:

Two dichotomous attributes, "household has a garden" or not and "keep small animals or poultry" or not were added to the analysis. Home gardens were reported by 59.4 per cent of the respondents, almost all of whom grew cassava or maize and vegetables like peppers and garden eggs. A few chickens were kept by 42.9 per cent, eleven had goats or sheep and one household kept rabbits.

Medical-Health Practice:

The families were ranked by their use of medical services. A six-step Guttman scale (coefficient of scalability = .66) begins with the item 'children have been vaccinated,' followed in order by the following items 'children have been taken to hospital or polyclinic when ill,' 'youngest baby delivered by trained medical staff,' 'baby delivered by a doctor or nursing sister,' 'woman has had vaccinations other than cholera,' 'woman has used a family planning service.'

Household Possessions:

An eight-step scale with a coefficient of scalability of .73 is made up of items which can be readily observed in the following order 'stools,' 'wooden chairs,' 'arm chairs with cushions,' 'radio,' 'sewing machine,' 'clock,' 'foam cushions on the chairs,' 'television set.' You will recall that those households at each step of the scale have the items at lower steps.

A scale pattern was taken as an over-all health indicator. It included the following six items in sequence 'children have had fever or malaria,' 'some of the children have been ill since Christmas,' 'some children have had measles,' 'a child under age one had died,' 'children have had worms,' 'a second child has died.' Those families at the top of the scale considered to have the poorest health status.

Placement of Children in Schools:

Two measures were derived: 1) the proportion of children aged 6-14 enrolled in school 'all.' 'some'; and the educational level of the first born child (ranked in comparison with others in the sample in the same age group). In 19 families (14.3 per cent) the first born child had never attended school.

Home Improvement:

Two questions 'Have any items been added to your properties during the past year?" and "have you made any improvements to your house and surroundings in the past two years?" formed the basis of developing a score which included additions of 'cloth' and 'small household utensils.' The rank order of 0 to 4 distinguished those families that added little or nothing from those that had undertaken major construction or additions to housing at rank 4.

Analysis:

Once all the measures were established and made to approach the normal distribution the Pearson product-moment coefficient of correlation provided all possible pairings and the process of factor analysis resolved them into a much smaller number and provided validation.[1] The individual level variables for the husbands and wives and the family-level variables were examined separately before a final set of 24 measures were subjected to a second factor analysis.

In the first factor analysis, education and illiteracy appeared to be the measures which had the most in common with each other and all the measures considered as indicating the differentiation level of the husbands and the wives. "Age" was not an attribute which correlated with the others. Neither did "number of years in Madina" or "uroan contact." These measures were therefore dropped from further analysis. Those that emerged as having some validity in term of the concepts are listed in Table I.

The second factor analysis considered all the validated measures taken together. The results are shown in the table and provide a separation into independent constructs and system levels at this stage.[2] The measures are considered interchangeable indicators of the concept in question. The empirical aim in the factor analysis was to reduce a large body of data so that maximum variance was extracted and the composition of the variance identified (Harmon: 15-18). One can note in the table that the woman is identified with the housing measures more than is the man; and that they each tend to operate in separate sub-systems (represented in factor 1 and factors 5). Note in factor 1 that household possessions are the "women's world"—"the collective meaning structure" that has come about through interaction in an environment with her husband. It may be impoverished or rich not only in an economic sense. To refer to the scales the items presented in any one of them may have seemed trivial but a large amount of information is embodied in each scale step and in the over-all patterning. One does not need a universe of items to form a cumulative pattern and to note that there is less choice for persons at lower steps.

Now to Examine the Factors:

In factor one it can be noted that the more highly differentiated females had lived in Madina a shorter period of time (—.18). They tended to be Christians (.46), to live in households of smaller size (—.23) and to share some tasks with their husbands (.229).

The second factor represents the household—a distinct and separate system level. Housing characteristics are more strongly represented here with a factor loading of .65 as compared to .43 in the first factor. It finds its place with those measures which are more representative of financial assets—property ownership and single family dwellings.

Factors 3 and 4 represent the integration dimensions. In factor 3 the husband's presence is noted in family type and in the spouses interaction—the two measures with highest factor loadings. In factor 4 family stability is the underlying concept as noted by the number of years that spouses have been together, but it is the husbands with lower levels of differentiation (note factor loadings of—.20 on education and—.31 on illiteracy) who have been with the same wife for a relatively longer period than others. They also tended to have households of larger size and to own property.

In factor 5 we find the strongest representation of differentiation for the males. Notice there is some association with the differentiation measure of the wives and with modern health practices in this factor.

Husband's authority is retained as a strong dimension in factor 6 with a factor loading of .75 with two validators, wife's source of cash, and shared tasks (negative loading of —.58).

Tribal prestige is the strong dimension in the last factor (based on the tribe of the husband). The differentiation measures for the husbands show a relationship here as do religious practices (.33).

As a next step in the analysis the strongest representative measures from each of the factors were selected for a multiple regression technique based on the ordinary least squares method for predicting family welfare. (Iwan and Tomek, 1971). The prediction equation for analysing the multivariate relationship was $Yn = B_1X_1 + B_2X_2 + B_3X_3 + \ldots . B_8X_8 + E$ with Yn = the dependent family welfare variables to be examined one at a time and Xn = the independent variables. The independent variables were: differentiation level of the wife (X_1) and of the husband (X_2), each represented by their level of education, family affluence (X_3) family stability (X_4) represented by the number of years spouses had been together; spouses interaction (X_5); husband's differentiation (X_8) represented by household possessions. Each of these were considered to represent separate facets of family functioning.

An initial hypothesis that family welfare is more highly associated with family level than with individual level characteristics was proposed in order to examine the contribution of husbands and wives in the context of their family (118 cases). Findings showed that relationships varied according to the welfare condition to be predicted. In the case of predicting schooling for the children and the number of children born the differentiation level of the wife showed a significant relationship at the .01 level and not that of the husband. In the case of number of children born it was the only significant factor when all factors were examined together.

In the case of predicting schooling for the children, family stability and household differentiation were additional variables which showed a significant relationship but not family affluence.

are essentially the woman's domain. When her resources in terms of cash, knowledge opportunity to make contacts are limited, those conditions over which she has some control cannot easily be changed. These are tentative interpretations based on the theory that the total information environment needs to be enlarged or the general level of structural differentiation of the sub-group changed so that the system as a whole can shift upwards (Young, 1968).

A theory needs a methodology if it is to be put to the test. Both have been explored in this research; variables added, removed, exchanged by the use of analytical tools which are not generally used in social research. We can claim a power to explain only as concepts and their measurements are exposed to further exploration.

Notes

1. Labovitz has argued that assigning numbers to ordinal data allows the use of powerful and well-developed statistical techniques with little error and more interpretable results. See Sanford Labovitz, "Some Observations on Measurement and Statistics," *Social Forces* vol. 46, no. 2, December 1967, pp. 151-160.
2. See Guilford, pp. 471 for an explanation of factorial validity. J. P. Guilford, "*Fundamental Statistics in Psychology and Education*" McGraw-Hill Publishers, New York, 1965.
3. Source: Fred T. Sai "Health and Nutritional Status of the Ghanaian People" mimeograph, Ministry of Health, Accra, 1969, p. 23.

Table I

Factor Pattern: Measures of Differentiation and Integration N = 118

(Varimax Rotated Solution) Factor Loadings

	1	2	3	4	5	6	7	*Communality*
Differentiation: Wives								
Education	**.87**	.09	−.05	−.06	.18	.05	.04	.80
Literacy	**.81**	.13	.02	−.08	.11	−.13	−.11	.73
Occupation	**.46**	−.14	.06	−.02	.17	−.19	.16	.32
Social Participation	.25	.02	.06	−.01	.23	−.05	.03	.12
Differentiation Husbands								
Education	.24	.09	.11	−.20	**.67**	.02	.23	.62
Literacy	.36	.03	−.06	−.31	**.59**	−.05	.27	.65
Occupation	.25	.26	−.03	−.08	.26	.08	.28	.29
Social Participation	.16	.11	.35	−.02	.35	.02	−.01	.28
Tribal Prestige	.08	.00	.09	−.03	.17	−.01	**.66**	.49
Years in Madina	−.18	.09	.33	−.16	−.05	.04	.20	.22
Differentiation Family								
Household Size	−.23	.37	.36	.37	.09	.07	.04	.47
Families per Dwelling	.03	**−.73**	.01	.17	.04	.06	.02	.56
Property Ownership	.06	**.53**	.18	.25	.22	.22	.01	.48
Housing Characteristics	**.43**	**.65**	.15	.09	.15	.05	.10	.67
Household Possessions	**.53**	.34	.32	.19	.28	−.04	.08	.62
Health Practices	.22	.37	.04	.10	.38	.06	−.31	.43
Religious Practices	**.46**	.03	.21	.14	.31	−.03	.33	.48
Integration								
Years Spouses Together	−.02	.13	.07	**.82**	−.06	.07	−.01	.71
Same Tribe	.01	−.08	.03	.44	−.11	−.01	−.04	.22
Family Type	.04	.26	.74	.20	.07	.01	.06	.66
Spouses Interaction	.16	−.13	**.58**	.07	.06	.09	.02	.39
Wife's Source of Cash	−.10	.19	.08	−.05	−.07	**.43**	.03	.24
Shared Tasks	.23	.12	.24	−.01	−.09	**−.58**	−.03	.47
Husband's Authority	.12	−.04	.33	.14	−.04	**.75**	−.05	.71
Per Cent of Variance in each Factor	38.6	20.8	11.2	10.6	8.5	6.1	4.2	

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