

# 本文章已註冊DOI數位物件識別碼

## ▶ Parent-Child Resemblance in Psychological Characteristics

親子間心理品質之相關研究

doi:10.29811/PE.196912.0003

心理與教育, (3), 1969

Psychology and Education, (3), 1969

作者/Author：黃堅厚(Chien-Hou Hwang)

頁數/Page：29-37

出版日期/Publication Date：1969/12

引用本篇文獻時，請提供DOI資訊，並透過DOI永久網址取得最正確的書目資訊。

To cite this Article, please include the DOI name in your reference data.

請使用本篇文獻DOI永久網址進行連結:

To link to this Article:

<http://dx.doi.org/10.29811/PE.196912.0003>



*DOI Enhanced*

DOI是數位物件識別碼（Digital Object Identifier, DOI）的簡稱，是這篇文章在網路上的唯一識別碼，用於永久連結及引用該篇文章。

若想得知更多DOI使用資訊，

請參考 <http://doi.airiti.com>

For more information,

Please see: <http://doi.airiti.com>

請往下捲動至下一頁，開始閱讀本篇文獻

PLEASE SCROLL DOWN FOR ARTICLE



## PARENT-CHILD RESEMBLANCE IN PSYCHOLOGICAL CHARACTERISTICS

CHIEN-HOU HWANG

### INTRODUCTION

The parent-child resemblance in both physical and psychological characteristics has long been noticed. The expression "like father, like son" exists in almost every language. A great number of scientific investigations have been done to study the extent of resemblance between parents and children in various aspects. Among those researchers, Bayley (1959) made a longitudinal study on the parent-child similarities during the growth of children; Conard and Jones (1940) found positive correlations between the parent's and the child's IQ; Burks (1928) and Leahy (1935) compared parent-child resemblance in IQ of children living with their blood parents and of those living with foster Parents. Likewise personality identifications between parent and child have been investigated by many scholars though the conclusions are less consistent to one another.

The very fact of parent-child resemblance is of course known in this country as well. However, little systematic study has been done to verify this phenomenon and to have it compared with the findings in western countries. The main reason, as the present author feels, has mainly been the practical difficulties involved in conducting such a study. It is also probable that many scholars see no need to make such a study because parent-child resemblance has been a well accepted fact and the result of such a study can be surely predicted. The present author views this problem differently, however. Even though parent-child resemblance is a known fact in the West, we can never be sure whether the same will be true in this country until we have had actual findings to support that assumption. Besides, it is always necessary to develop our own data from our own subjects so that we will be able to know whether theories and hypothesis suggested by foreign scholars would apply to our people. Hence it has been the intention of this author for many years to do some research on this problem. The opportunity came when he was invited to participate in the Chinese Family Life Study in 1967.

The Chinese Family Life Study is a project conducted by a group of scholars at University of California, Berkeley. Professors W. Eberhard, G. Devos and K. Abbott were the key investigators. They made some study on Chinese families in San Francisco area and found the result interesting and encouraging. Thus they decided to extend the project to cover Chinese families in other parts of the world. Taipei was chosen as their second station.

The Berkeley Team came to Taipei in the fall, 1967. Several local scholars including the present author were invited to be consultants to the research project.

Matters related to the instruments and procedure for the study of Chinese families in Taipei were carefully planned. It was at this moment that the present author suggested to include Raven's Progressive Matrices Test and Rosenzweig's Picture Frustration Study in the battery for field study. This suggestion was accepted, and the two tests were then given to both parents and children in families selected for this study. The result is analysed in the following paragraphs to determine the relations between the scores of parents and those of their children.

### OBJECTIVES OF THE PRESENT STUDY

The purpose of the present study is to make correlative analysis of the scores of parents and children on the Progressive Matrices (PM) and the Picture-Frustration Study (PF) to test the following hypotheses:

- (1) there will be high parent-child resemblance on the PM score which is a reliable indicator of general intelligence;
- (2) there will be some parent-child resemblance on the PF score which indicate one's mode of aggression when frustrated, as a child often learns the manner of channeling his aggression through parent-identification.

### SUBJECTS OF THE PRESENT STUDY

The subjects of the present study were drawn from the 120 families randomly selected at Ku-ting District, Taipei City. In each of those families, both husband and wife were invited to participate in the research program and so was their adolescent child. In 52 families, a boy was included in the study, in 30, a girl was included in the program; while in still another 38 families, a boy and a girl participated in the program of study. Altogether, the size of the sample was 426. Their age and educational background are given in Table 1 and 2.

### THE TESTS USED IN THE PRESENT STUDY

The two tests used in the present study are Raven's Progressive Matrices (PM) and Rosenzweig's Picture-Frustration Study (PF). The PM test is a non-verbal test with five sets of questions. Each test problem consists of a design with one part missing, and the subject is to identify the missing part from six to eight given pieces. It is a test easy to administer, simple to make responses and interesting to work on it. Although Raven has stressed that the PM is not an intelligence test, he said also that when one got a high score on the test, it meant that he had superior intelligence and with a high mental capacity (1960). Many other scholars have found high correlations between the PM scores and that of other reliable intelligence tests including the Wechsler-Bellevue (Desai, 1955; Change, 1964; Hwang, 1964). As a matter of fact, the PM has been widely used in England and other European countries after World War II as an intelligence test. In a previous study, the present author found the PM applicable to Chinese subjects and the Chinese

norms are comparable to the normative data of English subjects reported by Raven (Hwang, 1964).

The PF test, on the other hand, is a semi-projective test with a booklet containing twenty-four cartoon-like drawings which represent incidents of everyday life. In each of the drawings, there are two main characters, one of them is saying something of frustrating significance to the other individual. The subject is to write down (or to say it orally) the verbal response that would be made by the second person involved. The answer will be scored "Extrapunitive", "Intrapunitive", or "Impunitive" according to the nature of the response. The present author has revised the test material for its application in China and has found it suitable for Chinese subjects (Hwang, 1968).

The reasons that the PM and the PF were chosen for the present research are: (1) Both PM and PF are easy to administer with no strict regulations of application. Both have no time limit and so they will not create any tension among the subjects. (2) The PM and the PF suit the interest of both adults and adolescents. No formal schooling is required for taking the tests. In other words, people of all walks including housewives will not be handicapped by age or education in taking these tests.

These tests were given to the subjects individually at their own houses by the interviews. Others tests that were included are TAT and CPI. In general the subjects showed keen interest in both the PM and the PF tests and they worked on them with a great deal of seriousness.

## THE RESULTS

### 1. The Score on the Progressive Matrices Test (PM)

The PM records of the 426 subjects from 120 families were scored and the means of each group of family members are shown in Table 3.

Table 3: Mean Scores of the subjects on the PM

Groups	Mean	S. D.
Fathers	41.88	12.05
Mothers	36.80	12.90
Boys	44.53	9.91
Girls	44.92	9.74

Since these are raw scores and can not be converted in I. Q., it is difficult to make direct comparison between the groups. However, the general trend that children got higher scores than their parents seems apparent and it is a unstandable phenomenon. First, there is the age factor which may have effects upon the test achievement of the parents. The fact that the norm of people over 40 is somewhat lower than that of the 20-year olds indicates that there is age difference in regard

to the performance on the PM. Secondly, most of the children were in school when they took the tests, they were more familiar with matters of testing and examination than their parent who left school some twenty years ago. However, the interviewers tried hard to make the subjects understand the task well and to put them at ease during testing, so that the effect of situational factor, if any, was kept to its minimum.

In table 4, the relationship between the PM scores of family members is shown. One will notice that the correlation between father and children is higher than that between mother and children while the correlation between siblings is the highest. We have no good explanation for the first part of the result which, however, is comparable to the findings of previous studies. The closer resemblance between siblings is also in good agreement with the genetical fact—all children receive genes from the mother, but the father does not. Again, this result is in congruence with that of researches in the past.

Table 4: Correlations of the PM scores of Family Members

Family Members	r
Father—son	0.52
Father—daughter	0.55
Mother—son	0.43
Mother—daughter	0.41
Brother—sister	0.68

## 2. The Scores on the Picture-Frustration Study (PF)

The PF records collected from the subjects were scored according to Rosenzweig's Manual. When the frequency of occurrence of each of those major categories are entered in the scoring form suggested by Resenzweig, we can easily see the percentage of the type of responses as well as the directions of aggressiveness of those subjects. Their means are shown in Table 5.

Table 5: Responses to Rosenzweig's PF Test (Mean)

Reaction	Father M	Mother M	Boy M	Girl M
E%	27.83	24.10	29.77	26.15
I%	35.40	36.11	33.68	34.81
M%	36.94	39.63	36.14	39.68
O-D%	17.66	15.61	18.23	19.74
E-D%	47.98	48.93	55.68	54.87
N-P%	34.80	35.94	26.05	25.64

An analysis of the variance and the significance of the difference between the family groups was done and the results are given in Tables 6 and 7 respectively.

Table 6: An Analysis of the Variance

Source	SS	df	MS	F	P
Members of Family (MF)	0.14	3	0.05	0.02	
Derections of Aggression (DA)	739.36	2	369.68	164.02	0.01
Types of Reaction (TR)	5,498.38	2	2,749.19	1,219.75	0.01
MF×DA	58.21	6	9.70	4.30	0.01
DA×TR	2,398.71	4	599.68	266.06	0.01
MF×TR	301.66	6	50.28	22.31	0.01
MF×DA×TR	9,818.09	4,356	2.25		
Total	18,912.59	4,391			

Table 7: The significance of Intergroup Difference

	E	I	M	O-D	E-D	N-P
Father—Son	-0.41	0.82	0.96	-0.45	-4.10***	5.34***
Mother—Son	-2.42*	-1.15	2.08*	-1.41	-4.64***	6.34***
Father—Girl	-0.68	-0.10	-1.46	-0.85	-5.18***	4.98***
Mother—Girl	-1.08	0.26	0.34	-2.51*	-4.02***	6.01***

\* Difference statistically significant at  $P < 0.05$  level.

\*\*\* Difference statistically significant at  $P < 0.001$  level.

## DISCUSSION

### 1. The Parent-child Resemblance in Intelligence

The findings of the present study have given support to the two hypotheses concerning the parent-child resemblance. The substantial correlations between the PM scores of parents and those of their children have reached the level of expectancy. One will find that the correlations found in the present study (see Table 4) are in good agreement with those reported in previous studies (as summarized in Table 8). In other words, the findings in Western countries in regard to parent-child similarities

Table 8: Parent-child correlations in intelligence reported by previous studies

Source	Correlations	r
Skodak & Skeels (1949)	Mother's IQ×Child's IQ	0.44
Burks (1928)	Mother's IQ×Child's IQ	0.46
	Father's IQ×Child's IQ	0.45
Leahy (1935)	Father's IQ×Child's IQ	0.51
	Mother's IQ×Child's IQ	0.51
Burt, C. (1958)	Siblings reared together	0.515
Honzik (1957)	Ratings of mother's intelligence×child's mental test score at 14, 15 years of age	0.59

in intelligence can be applied to Chinese subjects. The correlations found is about of the same size as that between parent and child for a physical characteristic, such as height.

This does not, however, add anything to the question concerning the relative influence of heredity and environment on intelligence. Hilgard (1867), after having reviewed all those important studies related to this problem, found it difficult to draw any conclusion. All he could say was that "there is some contribution to psychological characteristics from heredity, some from environment." Since the young people tested in this study have stayed with their parents all the time, it is safer to say that parental influence on their intelligence could be from both heredity and environment.

It may well be added that high correlation does not necessarily suggest the existence of genetic factors. In fact, the husband-wife correlation on the PM score is found to be extraordinarily high in the present study ( $r=0.67$ ). Outhit also found the same resemblance of married couples (1933). This probably shows that one tends to select a person similar to oneself for his life partner. Certainly, it has nothing to do with heredity.

## 2. The Parent-Child Resemblance in Aggressiveness

In analysing the PF scores of the subjects and the inter-group comparisons, more similarities than differences have been found. In regard to the manner of directing their aggression while being frustrated, there is no significant difference except that the sons showed a little more extrapunitive responses and less impunitive ones than their mothers ( $P<0.05$ ). In general, their direction of aggression falls in the same pattern of Chinese university students, but with even less extrapunitive responses than the latter. Apparently they were trying to show their broad-mindedness, magnanimity and tolerance which have been greatly emphasized in Chinese culture. Whether this corresponds to their overt behavior is not to be discussed here. What is to be pointed out is that there is close resemblance between parents and children in the manner of directing their aggressiveness.

Rosenzweig has classified the pattern of responses at frustration into three categories: Obstacle dominant, Ego-defensive, and Need-persistent. Among our subjects, parents tended to be more need-persistent than their children who, on the other hand, give more ego-defensive responses. In a frustrating situation, it is natural for one to defend oneself, to neutralize the guilty feelings that may come up from the conscience. However, as far as the practical problem is concerned, it seems more important to find another possible solution to meet the need at the moment. It takes a more mature personality to do so. Hence it is understandable that parents who are more mature than their children, give more need-persistent responses. When these data are put together with those of Chinese university students found in a previous study (Hwang, 1968), one will notice that the university students, with age falls between the parents and children groups, have E-D and N-P scores

just interposed those of the two groups (see Table 9). This may lead to the conclusion that the tendency to give E-D and N-P responses is, in a way, related to one's stage of development. If this interpretation is valid, then the parent-child difference in this aspect should be accepted as a temporary phenomenon in the process of personality development.

Table 9: Parent-Child Differences on E-D, N-P responses

	E-D%	N-P%		E-D%	N-P%
Fathers	47.98	34.80	Mothers	48.73	35.94
Univ. male students	52.5	32.88	Female students	51.60	33.60
Boys	55.68	26.05	Girls	54.87	25.64

Now, let us return to the parent-child resemblance in the way of directing their aggression. Since it is known that personality characteristics have the least influence of heredity and can be modified to a great extent by environment, it is logical to say that the manner in directing one's aggressiveness is largely learned. In a family situation, children learn mostly from their parents through the process of identification.

Students of personality often agree that identification is a very important process in the course of personality development. According to Hatherington and Frankes (1967): "Identification is based on a process whereby the child, through imitation, modeling, or introjection, acquires traits, characteristics and values similar to the parents." Similarly, Mussen and Dilter (1959) pointed out that "by identifying with parents...the child begins to acquire his parents' personality characteristics, behavior, values, motivations and attitudes. Two of the major consequences of the process of identification are the development of the superego, or conscience, and the acquisition of behavior and personality characteristics appropriate to his own sex (sex typing)."

Thus Blum reported intercorrelations among mothers, fathers, and children on measures of rigidity-flexibility (1959); Mussen and Dilter studied the masculinity of boys (1959); Mussen and Rugherford made study on sex-role identification of young children (1963). There is no need to mention all such studies of parent identification. When children learn other behavior patterns from parents, they will also identify with the latter in the manner of channeling their aggressiveness.

### SUMMARY

1. To study the parent-child resemblance intelligence and personality characteristics, parents and their adolescent child in 120 families randomly selected from Ku-ting Districts, Taipei, were invited to participate in the present study. Raven's Progressive Matrices Test and Rosenzweig's Picture Frustration Study were used as the instruments.



2. Substantial correlations are found between parents' and children's scores on the PM Test. The findings are in good agreement with those reported by other scholars. This may serve as an evidence of parent-child resemblance in intelligence.
3. It is also found that in those families, parents and their children show similar pattern of responses in channeling their aggressiveness at frustrational situations. The parent-child resemblance in this aspect is most likely learned through identification. But parents tended to be more need-persistent while their children show greater number of ego-defensive responses than the older generation.

### REFERENCES

- (1) BAYLEY, N. Some increasing parent-child similarities during the growth of children. *J. educ. Psychol.*, 1959, 45, 1-21.
- (2) BLUM, A. The relationship between rigidity-flexibility in children and their parents. *Child Development*, 1959, 30, 297-304.
- (3) BURKS, B. S. The relative influence of nature and nurture upon mental development: a comparative study of foster parent-child resemblance and true parent-child resemblance. 27th Year-book, Part I, *Nat. Soc. Stu. Educ.*, 1928.
- (4) BUTT, C. The inheritance of mental ability. *The Amer. Psychologist*, 1958, 13, 6.
- (5) CHANG, W. H. The revised Draw a Man Test and intelligence. *Psychological Testing*, 1964, 11, 60-78.
- (6) CONARD, H. S. and JONES, H. E. A Second study of familial resemblance in intelligence. 39th Yearbook, Part II, *Nat. Soc. Stu. Educ.* 1940.
- (7) DESAI, M. M. The relationship of the W-B Verbal scale and the Progressive Matrices Test. *J. consult. Psychol., Psychol.*, 1955, 19, 60.
- (8) HATHERINGTON, E. M. & FRANKIE, G. Effects of parental dominance, warmth, and conflict on imitation of children. *J. person. Soc. Psychol.*, 1967, 6, 119-125.
- (9) HILGARD, E. R. & ATKINSON, R. C. *Introduction to Psychology*. 4th ed., 1957.
- (10) HONZIK, M. P. Development studies of parent-child resemblance in intelligence. *Child Development*, 1957, 28, 215-228.
- (11) HWANG, CHIEN-HOU. The application of Raven's Progressive Matrices Test in Taiwan. *Psychological Testing*, 1964, 11, 20-23.
- (12) HWANG, CHIEN-HOU. Reactions of Chinese University students to Rosenzweig's Picture-Frustration Study. *Psychology and Education*, National Taiwan Normal University, 1968, 2, 37-48.
- (13) LEAHY, A. M. Nature-nurture and intelligence. *Genet. Psychol. Monogr.*, 1935, 17, 235-308.
- (14) MUSSEN, P. & DISTLER, L. Masculinity, identification and father-son relationship. *J. Abnorm. soc. Psychol.*, 1959, 59, 350-356.
- (15) MUSSEN, P. & RUTHERFORD, E. Parent-child relation and parental personality in relation to young children's sex-role preferences. *Child Development*, 1963, 34, 589-607.
- (16) OUTHIT, M. C. A study of the resemblance of parent-children in general intelligence. *Arch. Psychol.*, 1933, No. 149.
- (17) RAVEN, J. C. *Guide to the Standard Progressive Matrices, Sets A. B. C. D. and E.*, 1938, 1960.
- (18) SKODAK, M. and SKEELS, H. M. A final follow-up of one hundred adopted children. *J. genet. Psychol.*, 1949, 75, 3-19.



# 親子間心理品質之相關研究

黃 堅 厚

## 摘 要

親子間若干心理品質，均有相關情形，惟國人對此迄未作有系統之研究，以求證實。民國五十六年，美國加州大學國際研究所教授艾伯華氏 (W. Eberbard) 來華進行「中國家庭生活研究」，約請筆者作技術上之協助，筆者乃利用此項機會，建議在其研究中，加入「瑞文氏非文字推理測驗」及「逆境對話分析」測驗兩種，以其在一百二十戶家庭中，對父母子女測驗之結果，分析中國家庭中親子間心理品質之相關情形。

筆者曾就各被試在「瑞文氏非文字推理測驗」上分數研究，發現親子間之相關係數甚高 ( $r=0.52-0.55$ )，兄弟姊妹間之相關則尤高；與過去西方學者所報告之數值十分接近，足見在中國家庭中，親子間之心智能力有高度相似的傾向。

筆者再就被試對於挫折情境或逆境所作反應進行分析，發現父、母、子、女在受挫折時所表現攻擊行為之方向，彼此無顯著之差異，各組所表現之「責他反應」均較少，而「責己反應」「免責反應」則均較多，傾向均甚一致，惟若從反應內容分析，則父母對「需求之滿足」較為注意，而子女所表現之「自我防衛反應」，遠較父母為多。

