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Alafghani, Abdullah Sultan (1990) The Saudi house in the past, present and future (a study of changes). PhD thesis.

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**THE SAUDI HOUSE IN THE PAST,
PRESENT AND FUTURE
(A STUDY OF CHANGES.)**

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***THIS DISSERTATION IS SUBMITTED IN FULFILMENT OF THE DEGREE OF
DOCTOR OF PHILOSOPHY IN ARCHITECTURE
AND URBAN DESIGN.***

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VOL 2

OCTOBER 1990

PART IV

THE PERCEPTION OF THE PEOPLE

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IV PERCEPTION OF THE PEOPLE

People are the most important function in any community. Cities without people are dead cities and people without the built environment are lost. The response of the people towards their surrounding environment is related to their awareness and ability to understand and different advantages and disadvantages of all items in their environment.

This part of the study is about people's perception, people's response, people's attitude and people's requests. The study recommended two types of participation from the people. The first is to respond by completing the main questionnaire, the second one is to respond by direct interview.

Chapter 16 is to describe the two trips to Saudi Arabia which had been completed during the study period. Also the description of the main survey (questionnaire) and the interviews is part of this chapter. Chapter 17 is to illustrate the different findings of the Main Survey (questionnaire). Chapter 18 is to illustrate the different findings of the interviews and to highlight the different observations during the field work.

CHAPTER 16

FIELD WORKS AND SURVEYS

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16. FIELD WORKS AND SURVEYS

It is very important for studies about the developing countries to conduct part of the study in the fields of these countries. For the case of Saudi Arabia and for studies about its built environment it is more than important to visit the country and observe the different factors which affect this environment.

Since the objectives of this study have been clearly defined and the study structure make it necessary to conduct part of the study in Saudi Arabia¹. Two major trips were accomplished by the researcher. The first one was as a pilot study and the other one was the main field trip. During the Field Trip, a survey (questionnaire) and interviews was the major work of the researcher.

16.1 THE PILOT STUDY

This pilot study was conducted during the period of March-April 1989. At that time the study structure and methodology were formulated. The purposes of this pilot study were as follows:

- Preparation for the main field trip.
- Testing of the survey (questionnaire).
- Collection of data.

16.1.1 Preparation for the Main Field Trip

Umm Al-Qura University (Makkah) is the sponsor agency of funding this study². The University is considered one of the Governmental agencies. The procedure in the country is to use official channels to conduct field studies. It would be unwise just to go without official papers and seek information, conduct a survey or even to photograph any site or building.

The most important papers to be obtained were the official letters from the Umm AlQura University to identify the researcher and the purpose of the study detailed with a request to assist him with the necessary information and data. These letters were written by the Vice President for Academic Affairs and Scientific Research, Dr. Muhammad Assadullah³. The letters were directed to the Vice Ministers of different Ministries and Vice presidents of different agencies. The following is the list of these Ministries and Agencies:

- Ministry of Public Works and Housing (Riyadh).
- Ministry of Planning (Riyadh).
- Ministry of Municipal and Rural Affairs (Riyadh).
- Ministry of Finance and National Economy (Riyadh).
- Ministry of Interior (Riyadh).
- Ministry of Information (Riyadh).
- Ministry of Agriculture and Water (Riyadh).
- Ministry of Foreign Affairs (Riyadh).
- Ministry of Defence (Jeddah).
- Makkah Municipality (Makkah).
- Jeddah Municipality (Jeddah).
- Riyadh Municipality (Riyadh).
- Taif Municipality (Taif).
- King Abdulaziz City for Science and Technology (Riyadh).
- The Saudi Consultation House (Riyadh).
- The Real Estate Development Fund (Riyadh).
- The Arabian Institute for Cities Development (Riyadh).
- Zuhair Faiz Consultant Office (Jeddah).
- Centre for Planning and Architectural Studies (Cairo).

The letters were prepared for the coming field trip. Some of these letters were used during the period of the pilot study. For example, the letter to the Ministry of Interior was for the purpose of getting permission to do the photography. In fact the permission was given and was ready for use. The letter for the Ministry of Foreign Affairs was for the purpose of getting the approval of the Ministry to include its housing project in the study, it had been approved. The letter purpose for King Abdulaziz City for Science and Technology was for getting the approval of the organisation to include its housing project in the study, it had been approved.

16.1.2 Pre-Testing of the Survey (Questionnaires)

A draft of the survey (questionnaire) was prepared and had been taken to Saudi Arabia for the purpose of testing it. The survey (20 copies) was distributed in Makkah and the purpose was to get feed back about the questionnaire in the form of comments highlighting difficulties of the structure, of the questions. The test was very helpful in finalising the form of the Questionnaire. The idea of preparing the questionnaire in the form of booklets was as a result of this test. Some of the questions were changed from the form of asking opinions to the form of multiple choice. Some other questions were changed to the form of Yes/No questions. It also indicated the need for additional questions and the elimination of others.

16.1.3 Collection of Data and Information

During this pilot study the researcher started on the procedure of collecting the related data and information from the different agencies and libraries⁴.

Part of the official letters were used to request such information and data which includes (reports, maps, official statistics, and governmental documents). The arrangement was to put the request to the different agencies and to collect whatever information was available at that time and to visit these agencies at the beginning of the Field Trip to collect the rest of the information. For example, Ministry of Planning for the different Five-Year Development Plans, at the time of the pilot study not all the plans were available.

During this pilot study, the researcher visited Cairo for the purpose of collecting Arabic references from its libraries which are known for their valuable Arabic references. Also, during that visit to Cairo the researcher had the chance to visit the

architect Hassan Fathy and discuss with him the objective of the study.

16.2 THE FIELD TRIP

The Field Trip was conducted during the period of June-September 1989. The pilot study was to prepare for the field trip. At the beginning of this field trip every thing was ready, the official papers were completed, the survey (questionnaire) was finalised and interviews and guidelines were arranged⁵.

The purposes of this Field Trip were as follows:-

- Conducting the Main Survey (Questionnaire).
- Conducting different interviews.
- Photography of different cities.
- Collection of Data and Information.

16.2.1 Conducting the Main Survey (Questionnaires)

The questionnaires were rearranged after the Pilot Study in the final form, then the translation of the questionnaire to Arabic was completed. The final production of the questionnaire in the form of booklets also was completed in Glasgow, (see Appendix A-1, A-2). About 1200 booklets were prepared and shipped to Saudi Arabia.

The distribution of these questionnaires in the three cities of Makkah, Jeddah and Riyadh was the important part of the field trip⁶.

16.2.2 Conducting Different Interviews

Direct interviews with people are important to this study to formulate their needs and to understand their ability to absorb

new ideas relating to the built environment. Face to face interviews and discussions were conducted during the field trip. Also, the interviews were organised to highlight certain questions regarding design elements for future development. These questions were presented in concept sheet which enabled the discussion to be concentrated on the design issues. It was impossible to put these questions in the Main Survey because of its requirements of explanations (See Chapter 18).

Also many interviews were conducted with official personnel of many different Governmental and private agencies for the purpose of questioning some points relating to the work of agencies or future planning and ideas⁷.

16.2.3 Photographing in Different Cities

It was mentioned before that photographing permission was obtained from the Ministry of Interior. During this field trip an effort was made to complete the photography of all relative sites and houses in the different parts of the Kingdom. The following is the list of the different photographs which were presented at the end of the field trip:

Makkah traditional urban structure.

Makkah contemporary urban structure.

Jeddah traditional urban structure.

Jeddah contemporary urban structure.

Riyadh traditional urban structure.

Riyadh contemporary urban structure.

Ministry of Foreign Affairs Staff Housing Project.

King Abdulaziz City for Science and Technology Housing Project.

16.2.4 Collection of Data and Information

The collection of different data and information started from the previous pilot study period and continued during the field trip.

The letters which had been prepared during the pilot study were used during this period for the purpose of data collection.

At the end of the Field Trip most of the required data and information were gathered to be used and examined for the purpose of this study.

The following is summary of the important data and information which have been gathered at the end of the field trip:

- Ministry of Public Works and Housing.
Reports about the public housing projects in Saudi Arabia.
- Ministry of Planning.
The Governmental documents of the Five-Year Developments Plans and the other reports relating to the Development Plans.
- Ministry of Municipal and Rural Affairs.
The different Governmental documents relating to the planning of some cities in the Kingdom. Also, the different documents relating to building regulations.
- Ministry of Finance and National Economy.
The statistical documents which were published by the Central Department of Statistics which is part of the Ministry of Finance.
- Ministry of Information.
Some of the published reports and books regarding the Saudi Cities.
- Ministry of Agriculture and Water.
Climatical data through the climatical Atlas of Saudi Arabia which was prepared by the Ministry of Agriculture.
- Ministry of Foreign Affairs.
Some of the reports relating to the housing projects.
- Ministry of Defence.
Climatical Data which had been prepared by the Meteorology & Environmental Protection Administration which is under the Ministry of Defence.
- Makkah Municipality.
The different Governmental documents relating to the planning of Makkah (reports and maps).
- Jeddah Municipality.
The different Governmental documents relating to the planning of Jeddah (reports and maps).
- Riyadh Municipality.
The different Governmental documents relating to the planning of Riyadh (reports and maps).
- Taif Municipality.
Governmental documents relating to building regulations (reports).
- King Abdulaziz City for Science & Technology.
Some of the reports of the housing project.

- The Saudi Consultation House.
Some of the reports relating to the housing projects.
- The Real Estate Development Fund (REDF).
The different Governmental reports and papers relating to the works of the (REDF) over the previous year.
- The Arabian Institute for Cities Development.
The different studies and publication relating to the subject of the research.
- Zuhair Faiz Consultant Office.
The different requirements of plans and drawing for the Saudi cities regulations.
- Centre for Planning and Architectural Studies.
The different studies and publication relating to the subject of research.

All of this data and information besides the other data and information in the form of books, reports, maps, slides from other offices, libraries and private sources in Saudi Arabia and in the United Kingdom. The Saudi Arabian Educational offices both in London and Washington were very helpful through their libraries and information offices.

16.3 MAIN SURVEYS (QUESTIONNAIRES)

Survey research and data analysis are essential elements in social science research. It is important to understand what and how people think with regard to the built environment which is surrounding them. Questionnaires are useful and efficient data gathering method⁸. It permits us to study public opinion as well as attitudes, it can also be used to obtain factual information⁹. The information is essential to the study before the recommendation stage is finalised.

16.3.1 Aim of the Survey

In urban planning the acquisition of data of an adequate quality which can be transformed into relevant information is of vital importance¹⁰. The questionnaire survey was used to obtain information which will satisfy the purpose of the study. The aim of the survey could be summarised in the following:

- Assess the existing situation of houses in Saudi Arabia. (Houses and its services, houses and families situation, houses and privacy conditions and houses and different design ideas).
- Assess the existing situation of neighbourhoods in Saudi Arabia. (District facilities, neighbours relations and district image).
- Assess the existing situation of cities in Saudi Arabia. (Cities between today and yesterday and city preservation).
- Assess the transportation used in the built environment. (Type of transportation to different places and distances).
- Assess the socio-economic situation of the people. (Nationality, age, education, occupation and income groups).
- Assess the people needs with regards to the built environment.

16.3.2 Survey (Questionnaire) Structure:

There is little purpose in asking people questions for which they do not have an answer, or for which they cannot readily formulate an honest complete answer¹¹. It was very important to consider the right way of producing the final form of the questionnaire¹². In detail the final form of the questionnaire is presented in Appendix A.

The questionnaire structure reflects the aims, it was divided into five parts, each part was to present questions relating to one objective. The main five parts of the questionnaire were as follows:

Part 1 HOUSE

This part was to assess the existing situation of houses and it was divided into 3 sections:

Section A - House and Services (Questions Q1 - Q30).

The questions were designed to establish knowledge of the existing situation of houses regarding different services.

Section B - House and Family (Questions Q31 - Q40).

The questions were designed to define the family situation and its relations within the house.

Section C - House and Privacy (Questions Q41 - Q54).

The questions were to evaluate privacy degree at different section of the house.

Part 2 DISTRICT

This part was to assess the existing situation of the District, (Questions Q55 - Q70). The questions were designed to establish the type of facilities which exist in districts and the degree of the relationship between neighbours.

Part 3 CITIES

This part was to assess the existing situation of cities, (Questions Q71 - Q77). The questions were designed to formulate the people image about their cities and their expectation of future developments.

Part 4 TRANSPORTATION

This part was to assess the people attitude towards transportation in their community (Questions Q78 - Q94). the questions were designed to formulate the mode of transportation to different locations and the average distance.

Part 5 PERSONAL INFORMATION

This part was to assess the socio-economic situation of the people (Questions Q95 - Q105). The questions were designed to establish knowledge about the people regarding their (nationality, family, status, age, education, occupations and income).

The questionnaire started with an opening letter from the researcher to identify himself and the purpose of the questionnaire, also to describe the answering system. At the end of the questionnaire there was a full page which was left empty for the people to write their comments and observations.

The questionnaire was prepared in english, at the final stage before the field trip, it was translated into Arabic, typed, printed and produced in the form of a booklet¹³. It was ready for distribution.

16.3.3 Distribution and Gathering

Surveys usually require large sample sizes of sufficiently varied

characteristics that adequately reflect the variation that might exist in the total population¹⁴. Using multiple information gathering methods allows the weakness of one method in particular to be compensated for by the strength of another¹⁵.

Based on the objective of the study it was decided that the main survey (questionnaire) would be distributed in five different groups. Those five groups were the three cities of Makkah, Jeddah and Riyadh, the two housing projects of the Ministry of Foreign Affairs and King Abdulaziz City for Science and Technology as the fourth group and the fifth group which was the Saudi Students in Britain. So, the five groups are: Makkah, Jeddah, Riyadh, Projects, Saudi Students.

The three cities represent the cities in which recent changes have reshaped the urban structure. In these cities, traditional houses, flats and villas are found. These cities illustrate the traditional environment and the contemporary environment.

The projects represent the contemporary urban structure in which some of the traditional concepts have been reused.

The Saudi Students group represent those who spent part of their life in western environments and simulate those who might have one day the position of decision making authority in Saudi Arabia.

The distribution of the survey (questionnaire) in the three cities of Makkah, Jeddah and Riyadh was through many different ways. Random distribution of these questionnaires took place by the help of many schools, Governmental offices. Also some direct hand to hand distribution took place. The projects part was distributed randomly through the housing administration of the two projects. The Saudi Students in Britain part was distributed randomly through the different Saudi Students Clubs in the different cities of Britain.

Of those 1200 questionnaires which were distributed, 928 (77.3%) were gathered and was ready to be analysed.

It could be stated that the author did his best in terms of distributing the questionnaire in order to reach the different segments of the society with the intention that this will reflect the whole society. However, with the time and resources available it was impossible to be sure that the sample was truly random.

From the point of the author, it could be stated that the satisfaction about the distribution of the questionnaire was considered adequate because the question regarding income distribution showed that this covered a fair spectrum of the society, the only bias detectable was a larger number of middle income than the expected national average but as these are the main builders of the environment this bias could be accepted.

If such a survey was to be carried out with the full backing of the Government resources it should be designed to cover a full spectrum of society both in terms of income and location. Such a survey would best be carried out as part of the national survey due next year (1992).

16.3.4 Data Preparation and Computer Analysis

During the preparation of the main survey, the analysis of the data was in mind. Early investigation of the procedure of the analysis showed that the SPSSX system would be the best system to analyse huge data¹⁶. A course regarding SPSSX system was attended by the researcher to understand the different facilities which the system provides for analysing huge data.

A coding sheet was prepared to transform the answers of all the questions to numbers which afterward was entered into the system at the main computer centre of University of Glasgow. Each survey contained 106 numbers, so, a total of 98368 figures were entered into the system.

Frequencies, cross tabulations and selection of special cases plus statistical features such as means and Chai-square were the main targets of the analysis¹⁷.

The final production of the analysis were as follows:

- Result of the total responses (frequencies).
- Result of the total responses with reference to type of accommodation (cross tabulation).
- Results of the total response with reference to group classification (cross tabulation).
- Results of specific response to different cases.

Footnotes: Chapter 16

1. For more detail see Chapter 1.
2. Umm Al Qura University is one of the seven Universities in Saudi Arabia. It is considered one of the oldest Universities in the country. The researcher is one of its academic staff.
3. Usually the Dean of the College of Engineering and Islamic Architecture writes these letters, but the requisite was made to the Vice President of the University to write the letters to the higher authorities in the different agencies. The letters were very helpful for collecting data.
4. This pilot study was very important in terms of defining the different agencies and the relating materials which could be obtained. It answered the question of where to find information.
5. The Field Trip had to be approved by the sponsor (Umm Al-Qura University).
6. For more details about the main survey (questionnaire) see Chapter 17.
7. For more details about the interviews see Chapter 18.
8. FRIEDMANN, A. Zimning, C. and Zube, E. Environmental Design Evaluation, Pienum Press, New York, 1978, p207.
9. HERBERT, F.W. and Bruce, D.B. Survey Research and Data Analysis. W.H. Freeman and Company, San Francisco, 1977, p16.
10. BARCKEN, I. Urban Planning Methods: Research and Policy Analysis, Methuen, London and New York, 1981, p.83.
11. ROSE, A.M. Theory and Method in the Social Sciences, University of Minnesota Press, Minneanspolis, 1954, p.294.
12. For questionnaire design, see the following:
 - a) KIDDLER, Louise H. Research Methods in Social Relation. Holt-Saunder, 1981, Chapter 4 and 8.
 - b) RILEY, Matilda White, Sociological Research II, Exercise and Manual. Harcourt Brace and World Inc., New York, 1963, section one.
 - c) PANTEN, Mildred, Surveys, Polls and Samples: Practical Procedures. Harper Brothers, Publisher, New York, 1950, Chapter VI, XL, XIII.

- d) PAYNE, Stanley L, The Art of Asking Questions. Princeton University Press, Princeton, New Jersey, 1973.
- e) MOSER, C.A. and Kalron, G. Survey Method in Social Investigation. Heinemann Educational Books Limited, London, 1972, Chapter 13.
- f) OPPENHEIM, A.N. Questionnaire Design and Attitude, Measurement, Heinemann, London, 1960.

13. See the booklet of the survey.

14. ROSS, F.H. and Freeman, H.E. Evaluation: A Systematic Approach. Sage Publication, Beverley Hills, 1980, p.120

15. Op. cit 8 page 196.

16. For more information about SPSSX system see the following:

- a) NORUSISS, Marija, J. The SPSS Guide to Data Analysis, SPSS INC, 444 North Machican Avenue, Chicago, 1986.
- b) SPSS INC. SPSS-X User's Guide, 3rd Edition, SPSS Inc. Chicago, 1988.

17. For more information about the different statistical procedure see the following:

- a) ROBSON, Colin, Experiment, Design and Statistics in Psychology, Penguin Books, 1983, pp94-117.
- b) CASWELL, Fred, Success in Statistics, John Murray, London, 1982 pp252-258.

CHAPTER 17

DETAILED FINDINGS OF THE MAIN SURVEY (QUESTIONNAIRES)

- 17.1 HOUSES AND SURVEYS
 - 17.1.1 BUILDING FUNCTION
 - 17.1.2 NUMBER OF STREETS AND ELEVATIONS
 - 17.1.3 NUMBER OF ENTRANCES
 - 17.1.4 NUMBER OF STORIES AND ELEVATOR SERVICES
 - 17.1.5 ELECTRICAL, WATER, SEWERAGE, TELEPHONE AND GAS SERVICES
 - 17.1.6 LIGHTING DURING THE DAY TIME IN THE HOUSE
 - 17.1.7 VENTILATION IN THE HOUSE
 - 17.1.8 THE USE OF MECHANICAL AND ELECTRICAL DEVICES
 - 17.1.9 TRADITIONAL AND WESTERN TOILETS
 - 17.1.10 PREVIOUS ACCOMMODATION AND REASON FOR MOVING
- 17.2 HOUSES AND FAMILIES
 - 17.2.1 OWNING AND RENTING SITUATION
 - 17.2.2 PERIOD OF LIVING
 - 17.2.3 NUMBER OF FAMILIES AND THEIR RELATIONSHIPS
 - 17.2.4 SERVANTS AND DRIVERS AND THEIR LIVING QUARTERS
- 17.3 HOUSES AND PRIVACY
 - 17.3.1 TERRACE CONDITIONS AND ITS USE
 - 17.3.2 WINDOWS PRIVACY SITUATION
 - 17.3.3 YARDS PRIVACY SITUATION
 - 17.3.4 FAMILY PRIVACY
 - 17.3.5 BALCONIES SITUATION
 - 17.3.6 OUTSIDE YARD SITUATION AND INSIDE YARD ALTERNATIVE
 - 17.3.7 SATISFYING OF HOUSE AND PREFERENCE OF MOVING
- 17.4 DISTRICT SITUATION
 - 17.4.1 DISTRICT CLASSIFICATION
 - 17.4.2 FACILITIES AVAILABILITY
 - 17.4.3 NEIGHBOURS RELATIONSHIP AND ITS CHANGING
 - 17.4.4 DISTRICT FOR SPECIAL GROUPS
 - 17.4.5 SATISFYING OF DISTRICT AND PREFERENCE OF MOVING
- 17.5 CITY IMAGE
 - 17.5.1 SITUATION OF CITY NOW AND BEFORE
 - 17.5.2 SUBDIVISIONS IMAGE IN THE CITY
 - 17.5.3 HIGHRISE ACCEPTANCE IN THE CITY
 - 17.5.4 TRADITIONAL BUILDINGS IN THE CITY
- 17.6 TRANSPORTATION
 - 17.6.1 CARS AND PARKING
 - 17.6.2 USE OF BUSES
 - 17.6.3 TRANSPORTATION TO MOSQUE AND DISTANCE
 - 17.6.4 TRANSPORTATION TO SUGNE AND DISTANCE
 - 17.6.5 TRANSPORTATION TO SCHOOLS AND DISTANCE
 - 17.6.6 TRANSPORTATION TO WORKS AND DISTANCE
 - 17.6.7 TRANSPORTATION TO RECREATION AND DISTANCE
 - 17.6.8 WALKING DISTANCE AND CAR PARKING
- 17.7 PERSONAL INFORMATION
 - 17.7.1 NATIONALITY
 - 17.7.2 FAMILIES STATUS AND MEMBERS
 - 17.7.3 AGE GROUPS
 - 17.7.4 EDUCATION
 - 17.7.5 OCCUPATION
 - 17.7.6 INCOME AND INCOME GROUPS
 - 17.7.7 PREFERENCE OF MOVING TO VILLA

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The survey results could be seen as a clear picture of the built environment in Saudi Arabia. The whole range of questions gave those questioned the ability to understand the different items which shape the urban structure and gave the research the different facts about the built environment.

This chapter consists of sections which in detail illustrate the finding of each question in the survey. The following system is being used to make it easy for the reader to refer to much detailed information and to compare results in the different graphs:

Questions are identified by Q No. For example Q53 defines the question No. 53.

All the questions are found in Appendix A.

The total results tables are in Appendix B.

The type of accommodation results tables are in Appendix C.

The group classification results tables are in Appendix D.

The graphs of the total results are in Appendix E as Fig 1.

The graphs of the type of accommodation results are in Appendix E as Fig 2.

The graphs of the group classification results are in Appendix E as Fig 3.

Special investigation results tables are in Appendix F.

The graphs of the special investigation results are in Appendix G.

The following Code system is used to refer to different tables and graphs to support the illustration of the detailed findings:

Appendix	+	No. of table	For example:
Letter	or	No. of graph	

- B Q 53 refers to total results table of question No. 53 which is found in Appendix B.
- E Fig 1 Q 53 refer to the graph of the total results of question No. 53 which is found in Appendix E.
- C Q 53 refer to type of accommodation results table of question No. 53 which is found in Appendix C.
- E Fig 2 Q 53 refers to the graph of the type of accommodation result of question No. 53 which is found in Appendix E.
- D Q 53 refers to the group classification results table of question No. 53 which is found i Appendix D.
- E Fig 3 Q 53 refers to the graph of the group classification results of question No. 53 which is found in A Appendix E.
- F S 23 refers to the special investigation results table of case No. 23 which is found in Appendix F.
- G Fig S 23 refers to the graph of the special investigation result of case No. 23 which is found in Appendix G.

The detailed findings of the different questions and categories of the survey (questionnaires) follow the following sequences:
Total results.

Type of accommodation results.

Group Classification results.

Special investigation results.

Conclusion of the findings.

The analysis of the questionnaire gave a rough idea about the distribution of accommodation type in Saudi Arabia. The results are presented in (B Q1, E Fig Q1).

- Traditional houses represent 12.2% of the total residential area.
- Flats represent 43.1% of the total residential area.
- Villas represent 44.7% of the total residential area.

17.1 HOUSES AND SERVICES

This section is to illustrate the different findings regarding Questions Q1-Q30. The main purpose of these questions was to establish the situation of Saudi houses with reference to different services and its conditions.

17.1.1 Building Function

* Building Function (Q2).

This was to investigate the main function of the buildings if it was for housing only or housing and commercial.

= Total response (B Q2 & E Fig 1 Q2)

This result of the total response indicates that 90% of the houses were for housing purposes and only 10% of the houses were for housing and commercial purposes.

= Accommodation type response (C Q2 & E Fig 2 Q2)

Differences amongst the type of accommodation with regard to the building function are significant ($\chi^2_c = 34,947 > \chi^2_T = 5.99$). This also indicated that the variables are not independent¹.

The villa represents the lowest (4.1%) in the housing and commercial function, while the flats represent the highest (16.5%) in the same function.

= Group classification response (D Q2, E Fig 3 Q2).

Differences amongst the different groups (cities) with regard to the building function are significant ($\chi^2_c = 16.412 > \chi^2_T = 9.49$). This also indicated that the variables are not independent².

Makkah represents the heighest (13.9%) in the housing and commercial function, while Riyadh represents the lowest (7.8%) in the same function.

= Special investigation (F S1 & G Fig S1).

The houses which function for housing and commercial were to be investigated. The result shows that 71.0% of them were of flat type. Riyadh represents the highest city in which 83.3% of its housing and commercial were flat type.

0 To conclude it could be stated that 10% of the existing neighbourhoods are mixed use of housing and commercial. (This 10% result could be used to assign mixed use (housing and commercial) in future neighbourhood design).

17.1.2 Number of Streets and Elevations

* Number of Streets (Q3) and Number of Elevations (Q4)

This was to investigate the number of streets and the number of elevations and the relation between them.

= Total response. (B Q3, B Q4 and E Fig 1 Q3 and E Fig 1 Q4). The results show that 48.5% of the buildings were on one street only, while 42.8% of the houses have four elevations.

= Accommodation type response. (C Q3, C Q4 and E Fig 2 Q3 and E Fig 2 Q4).

Differences amongst the type of accommodation with regards to the adjacent streets are significant ($\chi^2_C = 17.016 > \chi^2_T = 12.6$). This also indicates that the variables are not independent.

Differences amongst the type of accommodation with regard to the number of elevations are significant ($\chi^2_C = 128.332 > \chi^2_T = 12.6$). This also indicated that the two variables are not independent.

The villa was the highest (52.8%) with one street only, and the traditional houses was the highest (8%) with four streets.

The villa was the lowest (6.0%) with one elevation, while traditional was the highest (25.7%) with one elevation. On the other side the villa was the maximum (60%) with four elevations, where traditional was the lowest (12.4%).

= Group classification response (D Q3, D Q4 and E Fig 3 Q3 and E Fig 3 Q4).

Differences amongst the different groups (cities) with regards to the adjacent street are insignificant ($\chi^2_C = 9.393 < \chi^2_T = 21.0$). This also indicates that the two variables are independent.

Differences amongst the different groups (cities) with regards to the number of elevations are insignificant ($\chi^2_C = 13.177 < \chi^2_T = 21.0$). This also indicates that the variables are independent.

Jeddah was the highest (51.8%) with one street only and Riyadh was the highest (45.7%) with four elevations.

= Special investigation (F S2, F S3, F S4, G Fig S2, G Fig S3, G Fig S4).

The distribution of the houses which have position on four streets (F S2), were mostly flats (44%) in which Riyadh represents the highest (71.4%) of them.

The distribution of houses which have four-elevations (F S3), were mostly villas (62.7%) in which Riyadh represents the highest (72.6%) of them.

The cross tabulation of houses with reference to No. of streets vs. No. of elevation (F S4) shows that the houses on one street have the highest (51.6%) of 4 elevations.

0 To conclude, it could be stated that new villas have more elevations than the number of streets. (This could be related to the setback requirements which are applied on new constructions).

17.1.3 Number of Entrances

* No. of entrances (Q5).

This was to investigate the number of entrances to houses.

= Total response (B Q5 and E Fig 1 Q5).

The result of the total response indicates that 42.9% of the houses had one entrance, and 40.8% of them have two entrances.

= Accommodation type response (C Q5 and E Fig 2 Q5).

Differences amongst the type of accommodation with regard to the number of entrances are significant ($\chi^2_C = 193.76 > \chi^2_T = 12.6$). It also indicates that the variables are not independent. The villa type represent the highest (56.9%) with two entrances while the traditional houses represent the highest (50.4%) with one entrance.

= Group classification response (D Q5 and E Fig 3 Q5).

Differences amongst the different groups (cities) with regard to the number of entrances are significant ($\chi^2_C = 85.23 > \chi^2_T$). It also indicates that the variables are not independent.

Jeddah represented the highest (60.9%) with one entrance houses.

0 To conclude, it could be stated that two entrances are common in new design. (This could be related to the use of the two entrances for social function by assigning one entrance for males and the other for female use).

17.1.4 Number of Stories and Elevation Service

* Number of stories (Q6) and elevator services (Q7) and need of elevator (Q8).

These were to investigate the number of house stories and the elevator service requirement.

= Total response, (B Q6, B Q7, B Q8 and E Fig 1 Q6, E Fig 1 Q7, E Fig 1 Q8).

The result of the total response regarding the number of stories shows that two stories are the highest (48.7%). Only 10.7% of the total houses had elevator services and 23.4% of the responder felt that their houses need elevator service.

= Accommodation type response (C Q6, C Q7, C Q8 and E Fig 2 Q6, E Fig 2 Q7, E Fig 2 Q8).

Differences amongst the type of accommodation with regard to the number of stories are significant ($\chi^2_C = 264.46 > \chi^2_T = 15.5$). This also indicates that the variables are not independent. The villa represent the highest (73.3%) which have two stories but, the traditional type indicate that the two stories (31.0%) and three stories (29.2%) are the majority of the houses (37.0%) of the flats were three stories. 21.3% of the flats buildings have elevator services. 74.2% of those who felt that their houses need elevator service were in flat buildings.

= Group classification response (D Q6, D Q7, D Q8 and E Fig 3 Q6, E Fig 3 Q7, E Fig 3 Q8).

Difference amongst the different groups (cities) with regard to the number of stories are significant ($\chi^2_C = 109.04 > \chi^2_T = 26.3$). This also indicates that the variables are not independent.

Riyadh represents the highest (60.8%) of two stories houses. Among those of five stories, Makkah represents the highest (9.9%). Jeddah is the highest in the lack of elevator services (91.6%). Makkah represents the highest in the need of elevator service (37.0%).

= Special investigation (F S5, F S6 and G Fig S5, G Fig S6).

The distribution of houses according to the No. of stories vs. the presence of elevator services (F S5) shows that 40.4% of the four stories houses have elevators, 69.8% of the five stories houses have elevators services.

The distribution of houses according to the No. of stories vs. the need of elevator services (F S6) shows that the buildings of 4-stories (73.4%) of them feel that they need elevator service.

- 0 To conclude, it could be stated that a lot of the existing buildings needed elevator services. (For future design, satisfactory housing can be 1-3 floors. Buildings with floors over three must have elevators).

17.1.5 Electrical, Water, Sewerage, Telephone and Gas Services

- * Electrical supply (Q9), water supply (Q10), sewerage connection (Q11), telephone service (Q12) and gas supply (Q13).

These were to investigate the existing situation about services situation to houses.

- = Total response (B Q9, B Q10, B Q11, B Q12, B Q13, and E Fig 1 Q9, E Fig 1 Q10, E Fig 1 Q11, E Fig 1 Q12, E Fig 1 Q13).
The results of the total response indicate the following:
 - All the houses were supplied with electrical services.
 - 11.5% of the total houses were not connected with public water.
 - 34.4% of the total houses were not connected to the sewerage network.
 - 17.2% of the total houses do not have telephone service.
 - All the houses were not connected to the gas network.
- = Accommodation type response (C Q9, C Q10, C Q11, C Q12, C Q13 and E Fig 2 Q9, E Fig 2 Q10, E Fig 2 Q11, E Fig 2 Q12, E Fig 2 Q13).
 - Electricity was supplied to all types of accommodation.
 - The villa type represents the highest (14.5%) in the lack of water supply.
 - The villa type represents the highest (40.7%) in the lack of sewerage connection.
 - Traditional houses represent the highest (32.7%) in the lack of telephone services.
 - Gas was not supplied to all types of accommodation.
- = Group classification response (D Q9, D Q10, D Q11, D Q12, D Q13 and E Fig 3 Q9, E Fig 3 Q10, E Fig 3 Q11, E Fig 3 Q12, E Fig 3 Q13).
 - Electricity was supplied in all cities.
 - Makkah represents the highest city (28.6%) in the lack of water supply.

- Jeddah represents the highest city (44.5%) in the lack of sewerage connections.
- Also Jeddah represents the highest city (36.1%) in the lack of telephone service.
- Gas was not supplied in all cities.
- The project results show that electrical, water, sewerage and telephone were connected to all housing units in them.

0 To conclude, it could be stated that the existing situation represents a lack of services. People complained about the lack of services in some of the areas especially traditional and the villa type areas. Jeddah is the city that most lacks services. (Future subdivisions should not be permitted to be sold to people before the completion of services).

17.1.6 Lighting During the Daytime in the House

- * Lighting during the day time in the Living room (Q14), Men room (Q15), Women room (Q16), kitchen (Q17) and Bedroom (Q18).

These were to investigate the source of lighting inside the different parts of the house during the day time (natural or artificial).

- = Total response (B Q14 B Q15, B Q16, B Q 17, B Q 18 and E Fig 1 Q14, E Fig 1 Q15, E Fig 1 Q16, E Fig 1 Q17, E Fig 1 Q18). The results of the total response indicate the following:
 - 36% of the total houses have artificial lighting in their living rooms.
 - 34% of the total houses have artificial lighting in their mens room.
 - 35% of the total houses have artificial lighting in their women room.
 - 40% of the total houses have artificial lighting in their kitchens.
 - 38% of the total houses have artificial lighting in their bedrooms.
- = Accommodation type response. (C Q14, C Q15, C Q16, C Q17, C Q18) and E Fig 2 Q14, E Fig 2 Q15, E Fig 2 Q16, E Fig 2 Q17, E Fig 2 Q18).
 - Differences amongst the type of accommodation with regard to lighting in livingrooms are insignificant ($x^2_C = 4.300 < x^2_T = 5.99$). This also indicates that the variables are independent.

- Differences amongst the type of accommodation with regard to lighting in men rooms are insignificant ($\chi^2_C = 3.510 < \chi^2_T = 5.99$). This also indicates that the variables are independent.
 - Differences amongst the type of accommodation with regard to lighting in women rooms are significant ($\chi^2_C = 10.591 > \chi^2_T = 5.99$). This also indicates that the variables are not independent.
 - Differences amongst the type of accommodation with regard to lighting in the kitchen are significant ($\chi^2_C = 10.684 > \chi^2_T = 5.99$). This also indicates that the variables are not independent.
 - Differences amongst the type of accommodation with regard to lighting in bedrooms are significant ($\chi^2_C = 8.626 > \chi^2_T = 5.99$). This also indicates that the variables are not independent.
 - The flat type represent the highest (39.5%) in the artificial lighting for living room, the traditional type represent the highest (42.5%) in the artificial lighting for Men rooms; Flats represent the highest (41.3%) in the artificial lighting for women rooms, Traditional type represent the highest (47.1%) in the artificial lighting for kitchen and flats type represent the highest (43.3%) in the artificial lighting for bedrooms.
- = Group classification response (D Q14, D Q15, D Q16, D Q17, D Q18 and E Fig 3 Q14, E Fig 3 Q15, E Fig 3 Q16, E Fig 3 Q17, E Fig 3 Q18).
- Makkah represent the highest (39.6%) in the artificial lighting for living rooms, the highest (37.0%) in the artificial lighting for men rooms, the highest (39.9%) in the artificial lighting for women rooms, the highest (42.1%) in the artificial lighting for kitchens, and the highest (40.7%) in the artificial lighting for bedrooms.
 - In the projects (37.0%) of the living rooms were artificial lighting.

0 To conclude, it could be seen that artificial lighting is necessary for betweed 35-45% in the existing environment in which the designs of the house ignore the full use of natural lighting during the daytime.

(There are some other causes for that result which could be the position of air conditioning in the windows which led to closing windows, and the closing of curtains for privacy requirements and decoration all the time).

17.1.7 Ventilation in the House

- * Ventilation source in the living rooms (Q19), Men rooms (Q20), women room (Q21), kitchen (Q22) and bedroom (Q23).

These were to investigate the source of ventilation in the different parts of the house (natural or artificial).

= Total response (B Q19, B Q20, B Q21, B Q22, B Q23 and E Fig 1 Q19, E Fig 1 Q20, E Fig 1 Q21, E Fig 1 Q22, E Fig 1 Q23).

- 55.1% of the total houses have artificial ventilation in their living room.
- 53.9% of the total houses have artificial ventilation in their men room.
- 54.3% of the total houses have artificial ventilation in their women room.
- 49.7% of the total houses have artificial ventilation in their kitchen.
- 55.6% of the total houses have artificial ventilation in their bedrooms.

= Accommodation type response. (C Q19, C Q20, C Q21, C Q22, C Q23 and E Fig 2 Q19, E Fig 2 Q20, E Fig 2 Q21, E Fig 2 Q22, E Fig 2 Q23).

- Differences amongst the type of accommodation with regard to ventilation in livingrooms are insignificant ($\chi^2_C = 4.996 < \chi^2_T = 5.99$). This also indicates that the variables are independent.
- Differences amongst the type of accommodation with regard to the ventilation in men rooms are insignificant ($\chi^2_C = 1.650 < \chi^2_T = 5.99$). This also indicates that the variables are independent.
- Differences amongst the type of accommodation with regard to ventilation in women rooms are insignificant ($\chi^2_C = 5.161 < \chi^2_T = 5.99$). This also indicates that the variables are independent.
- Differences amongst the type of accommodation with regard to ventilation in the kitchen are insignificant ($\chi^2_C = 0.830684 < \chi^2_T = 5.99$). This also indicates that the variables are independent.
- Differences amongst the type of accommodation with regard to ventilation in bedrooms are significant ($\chi^2_C = 7.252 > \chi^2_T = 5.99$). This also indicates that the variables are not independent.
- The flats represent the highest (59.3%) in the artificial ventilation for living room, the highest (56.3%) in the artificial ventilation for Men rooms, the highest (58.5%) in the artificial ventilation for women rooms, the villa represents the highest (51.3%) in the artificial ventilation for kitchen, and the flats represent the highest (60.5%) in the artificial ventilation for bedrooms.

= Group classification response (D Q19, D Q20, D Q21, D Q22, D Q23 and E Fig 3 Q19, E Fig 3 Q20, E Fig 3 Q21, E Fig 3 Q22, E Fig 3 Q23).

- Jeddah represents the highest (59.5%) in artificial ventilation for living rooms, the highest (59.5%) in artificial ventilation for men rooms, the highest (59.5%) in artificial ventilation for women rooms, the highest (52.3%) in the artificial ventilation for kitchens, and the highest (60.3%) in artificial ventilation for bedrooms.
- In the projects (59.00%) of the living rooms were artificial ventilation.

0 To conclude, it could be seen that artificial ventilation is one of the characteristics of the existing built environment. 50-60% use it. (This indicates also the ignorance of the design in using natural ventilation).

17.1.8 The Use of Mechanical Electrical Devices

- * The use of Air Conditioning (Q24), the use of Heaters (Q25) and the use of Water Heaters (Q26).

These were to investigate the use of different (mechanical-electrical devices inside the houses.

= Total response. (B Q24, B Q25, B Q26 and E Fig 1 Q24, E Fig 1 Q25, E Fig 1 Q26).

The results of the total response indicate the following:

- 99% of the houses use air conditioning.
- 34.4% of the houses use heaters.
- 88.4% of the houses use water heaters.

= Accommodation type response. (C Q24, C Q25, C Q26 and E Fig 2 Q24, E Fig 2 Q25, E Fig 2 Q26).

The traditional type represent the highest (5.3%) for not using air conditioning and the highest (88.5%) for not using heaters and the highest (40.7%) for not using water heaters. The villa type represent the highest (99.8%) in using air conditioning the highest (47.7%) in using heaters and the highest (95.7%) in using water heater.

= Group classification response (D Q24, D Q25, D Q26 and E Fig 3 Q24, E Fig 3 Q25, E Fig 3 Q26).

- Differences amongst the different groups (cities) with regard to the use of air conditioning are insignificant ($\chi^2_C = 1.780 < \chi^2_T = 9.49$) and the variables are independent.

- Differences amongst the different groups (cities) with regard to the use of heaters are significant ($\chi^2_C = 329.019 > \chi^2_T = 9.49$) and the variables are not independent.
- Differences amongst the different groups (cities) with regard to the use of water heaters are significant ($\chi^2_C = 48.946 > \chi^2_T = 9.49$) and the variables are not independent.
- Riyadh represent the highest (65.5%) in using heaters and the highest (97.8%) in using water heaters.
- The project use air conditioning and water heaters in all of its houses.

0 To conclude, it could be stated that air conditioning is one of the characteristics of the existing built environment. Almost all houses use it. Even the traditional houses use air conditioning to improve the comfort of living in them. (This could be related to the change in the microclimatic of the urban areas as a result of many causes such as vehicles, asphaltting and the ignorance of the compactness concept and most importantly the peoples expectation of improved comfort).

17.1.9 Traditional and Western Toilets

- * Traditional toilets (Q27) and western toilets (Q28).

These were to investigate the number of traditional and western toilets in the houses.

- = Total response. (B Q27, B Q28 and E Fig 1 Q27, E Fig 1 Q28).
 - The results of the total responses indicate that 26.3% of the houses do not have traditional toilets. Those houses which have traditional toilets 49.3% of them have one traditional toilet.
 - The results also shows that 89.2% of the houses have western toilets. 37.7% of those have at least one western toilet.
- = Accommodation type response. (C Q27, C Q28 and E Fig 2 Q27, E Fig 2 Q28).
 - Difference amongst the type of accommodation with regard to no. of traditional toilets are significant ($\chi^2_C = 159.771 > \chi^2_T = 26.3$) and the variables are not independent.
 - Difference amongst the type of accommodation with regard to no. of western toilets are significant ($\chi^2_C = 170.302 > \chi^2_T = 43.8$) and the variables are not independent.

- The flats represent the highest (76.3%) which have one traditional toilet and the highest (56.1%) which have one western toilet.
 - The traditional type represent the highest (38.0%) which have two traditional toilets.
- = Group classification response. (D Q27, D Q28 and E Fig 3 Q27, E Fig 3 Q28).
- Jeddah represents the highest (71.7%) which have one traditional toilet while Makkah represents the highest (30.6%) which have two traditional toilets.
 - Makkah represents the highest (52.2%) which have one western toilet while Jeddah represent the highest (38.9%) which have two western toilets.
- = Special investigation (F S7 and G Fig S7).
The distribution of houses according to the No. of traditional toilets vs. western toilets shows that the maximum distribution of houses fall in the category which state that in a house there are two toilets, one traditional and one western.

0 To conclude, it could be observed that western toilets occur more than traditional toilets, even with the disadvantage of it in terms of water consumption and its cost.
(This could be related to the requirement of the REDF and to different advertisements for the western toilets).

17.1.10 Previous Accommodation and Reason for Moving

- * The previous accommodation (Q29) and the reason for moving (Q30).

This was to investigate the type of accommodation which people used to live in the past before moving to the present accommodation and to investigate the reason for moving.

- = Total response. (B Q29, B Q30 and E Fig 1 Q29, E Fig 1 Q30).
- The result of total response shows that the traditional houses used to be the highest (41.1%) type of accommodation in which people used to live in before moving to their present accommodation. The flat complexes come in the second stage (37.7%) in the previous accommodation for people.
 - Regarding the reason for moving the results indicate that 19.1% felt that their previous accommodation was very

old, 19.1% felt that it was because of the poor facilities in the previous accommodation, and only 9.2% moved because of the district. 52.6% felt that they have other reasons for moving.

= Accommodation type response. (C Q29, C Q30 and E Fig 2 Q29, E Fig 2 Q30).

- Differences amongst the type of accommodation with regard to the previous accommodation are significant ($\chi^2_C = 172.507 > \chi^2_T = 17.3$) and the variables are not independent.
- Differences amongst the type of accommodation with regard to the reason for moving are significant ($\chi^2_C = 26.572 > \chi^2_T = 17.3$) and the variables are not independent.
- For those who live in villas now 36.3% of them used to be in traditional houses and 31.9% of them used to be in flats. Regarding the reason for moving to the villas, 57.7% of them have their own reasons not necessarily because of the previous accommodation.

= Group classification response (D Q29, D Q30 and E Fig 3 Q29, E Fig 3 Q30).

50% of the people of Makkah used to live in traditional houses, while 40.5% of the people of Jeddah used to live in traditional houses and 34.4% of the people of Riyadh used to live in traditional houses. Riyadh represents the highest (57.1%) of those who feel that they have their own reasons to move to their present accommodation.

= Special investigation (F S8, G Fig S8).

The distribution of houses regarding the previous accommodation vs. reason for moving shows that most of the people (41.0%) used to live in traditional houses. 33.5% of them felt it was very old, 20.7% of them felt it had poor facilities, 11.6% felt that the old district was bad and 34.1% have other reasons for moving.

0 To conclude, it could be stated that the traditional houses used to be the only accommodation for most of the people who live presently in contemporary houses. They moved from it for many reasons. 40% of them felt that it lacked services and they considered them old. Almost half of the people have their own personal reasons to move.

(This could be related to the modernisation image which is attached to the contemporary environment).

17.2 HOUSES AND FAMILIES

This section is to illustrate the different findings regarding Questions Q31-Q40, the main purpose of these questions was to establish the situation of house interior and its direct relation with families.

17.2.1 Owning and Renting Situation

* Owner Rent (Q31), Ways of Owning (Q32) and Amount of Rent (Q33).

These were to investigate the owning and renting situation, the way of owning and the amount of rent.

= Total response. (B Q31, B Q32, B Q33 and E Fig 1 Q31, E Fig 1 Q32, E Fig 1 Q33).

- The result of the total response indicate that the majority of Saudi people (53.1%) rent houses.
- For those who own their houses the majority (57.5%) of them owned their houses through the Real Estate Development Fund.
- For those who rent, the rent varies from <10000 SR to >30000 SR. The majority (39.4%) of the rent value falls between 10000-15000 SR.

= Accommodation type response. (C Q31, C Q32, C Q33 and E Fig 2 Q31, E Fig 2 Q32, E Fig 2 Q33).

- Differences amongst the type of accommodation with regard to (own or rent) relation are significant ($x^2_C = 147.821 > x^2_T = 5.99$) and the variables are not independent.
- Differences amongst the type of accommodation with regard to the way of owning are significant ($x^2_C = 78.993 > x^2_T = 12.6$) and the variables are not independent.
- Differences amongst the type of accommodation with regard to amount of rent are significant ($x^2_C = 83.731 > x^2_T = 17.3$) and the variables are not independent.
- Flats represent the highest (76.0%) in rent and (63.9%) of the villas were owned by the people who live in them.
- 72.8% of the villas were built with the REDF loans.
- Most of the traditional houses (84.6%) which were rented were under 10000 SR rent.

= Group classification response. (D Q31, D Q32, D Q33 and E Fig 3 Q31, E Fig 3 Q32, E Fig 2 Q33).

- Jeddah represents the highest city (62.4%) in terms of the rent. Riyadh represents the highest city (63.6%) in getting the benefit of the REDF.

- The differences amongst the different groups (cities) with regard to amount of rent are insignificant ($\chi^2_C = 30.704 < \chi^2_T = 31.4$) and the variables are independent.
- The project rent fall below 15000 SR.

= Special investigation. (F S10, F S11, F S12, F S13 and G Fig S10, G Fig S11, G Fig S12, G Fig S13).

- The distribution of houses according to (own or rent) vs. reason of moving (S10) shows that 25.6% of those who own their houses were very old.
- The distribution of houses according to the way of owning vs. the previous accommodation type (S11) shows that 56.4% of those who live in traditional houses benefited from the REDF to construct new houses.
- The distribution of houses which are under owning category (S12), shows that the villas in Riyadh represent the highest (70%) type of houses which were owned.
- The distribution of houses which were constructed by REDF (S13), shows that villas represent the most, especially of Riyadh 80.6% of them.

0 To conclude, it could be stated that half of the people rent their houses. Rents are considered to be high. For those who own their houses, the REDF was an important factor. (This indicates that the REDF needs to expand its work and the rent needs to be controlled).

17.2.2 Period of Living

* Period of Living (Q34).

This was to investigate the history of the present environment.

= Total response. (B Q34 and E Fig 1 Q34).

The result of the total response shows that 85.3% of the people lived in their existing houses for a period of less than 10 years.

= Accommodation type response. (C Q34 and E Fig 2 Q34).

- Differences amongst the type of accommodation with regard to the period of living are significant ($\chi^2_C = 164.034 > \chi^2_T = 21.0$) and the variables are not independent.
- The flats represent the highest (69.8%) in the type with less than 5 year periods of living and 87.2% of the villas were for a period of less than 10 years. Even those who live in the traditional houses, 54.8% of them

were there for periods less than 10 years. Traditional houses represent the highest (6.2%) in which period of living exceed 30 years.

= Group classification response. (D Q34 and E Fig 3 Q34).

Riyadh represents the highest (66.4%) in which period of living fall under 5 years, while Makkah represents the highest (2.6%) in which period of living exceed 30 years.

= Special investigation. (F S9 and G Fig S9).

- The distribution of houses according to period of living vs. previous accommodation shows that most of those who fall in the five years period used to live in flats before (73.4%).

0 To conclude, it could be stated that the last ten years was the period for constructing houses.

(This could be related to the establishment of the REDF and the availability of Funds for construction).

17.2.3 Number of Families and Their Relationships

* No. of families (Q35) and the relation among families (Q36).

These were to investigate the number of families which live at the same building and if they are related together.

= Total response. (B Q35, B Q36 and E Fig 1 Q35, E Fig 1 Q36). The result of the total response indicates that 74.8% of the total houses have more than one family and 65.9% of the cases show that there is a relation between them.

= Accommodation type response. (C Q35, C Q36 and E Fig 3 Q35, E Fig 2 Q36).

- Differences amongst the type of accommodation with regard to the number of families are significant ($\chi^2_C = 265.068 > \chi^2_T = 15.5$) and the variables are not independent.
- The flats represent the highest (57.7%) in which there was no relation among families in the building.

= Group classification response. (D Q35 and E Fig 3 Q36).

- Jeddah represents the highest (35.9%) in which there are more than four families in the same building, and the highest (50.5%) in which there is no relation between families in the same building.

= special investigation. (F S14a-c and G Fig S14a-c)

- Those houses which had related families, 58.5% of them are villas, 30.5% of them in Makkah. Most of the houses (69.0%) with two families are related.

0 To conclude, it could be stated that related families still would like to live near each other.

(This could be related to the values and traditions which people still carry with them).

17.2.4 Servants and Drivers and Their Place of Living

- * No. of servants (Q37), and their place of living (Q38), and no. of drivers (Q39) and their place of living (Q40).

These were to investigate the new elements in the Saudi Society (servants and drivers) and their place of living if it is inside or outside the house.

= Total response. (B Q37, B Q38, B Q39, B Q40 and E Fig 1 Q37, E Fig 1 Q38, E Fig 1 Q39, E Fig 1 Q40).

- The result of the total response indicates that 52.7% of the families have servants and only 16.7% of the families have drivers.
- Of those servants, 94.3% of them live inside houses and of those drivers 54.2% of them live inside the house.

= Accommodation type response. (C Q37, C Q38, C Q39, C Q40 and E Fig 2 Q37, E Fig 2 Q38, E Fig 2 Q39, E Fig 2 Q40).

- Differences amongst the type of accommodation with regard to the number of servants are insignificant ($x^2_C = 11.9 < x^2_T = 12.6$) and the variables are independent. Also the same case for drivers.
- Flats represent the highest (89.6%) in which at least there is one servant. The villa type represent the highest (16.4%) in which there are two servants.
- 69.7% of the drivers belong to villa types.

= Group classification response. (D Q37, D Q38, D Q39, D Q40 and E Fig 3 Q37, E Fig 3 Q38, E Fig 3 Q39, E Fig 3 Q40).

- Jeddah represents the highest (95.5%) in which there are at least one or two servants. Riyadh represent the highest (96.3%) of servants living inside houses.

0 To conclude, it could be stated that servants have become part of the family in Saudi Arabia and most of them live inside the houses.

(This situation might cause problems, since the female servant is not related to the family and the present situation does not assist the presence of the servant. For future design, the presence of the servant needs to be considered in the house).

17.3 HOUSES AND PRIVACY

This section is to illustrate the different findings regarding Questions Q41-Q54, the main purpose of these questions was to investigate family privacy situation and the satisfying of the people within.

17.3.1 Terrace Condition and Its Use

- * The height of the terrace wall (Q41), the use of the terrace (Q42), the way of using the terrace (Q43) and the reason of not using the terrace (Q44).

These were to investigate the function of the terrace in the existing Saudi family life.

- = Total response. (B Q41, B Q42, B Q43, B Q44 and E Fig 1 Q41, E Fig 1 Q42, E Fig 1 Q43, E Fig 1 Q44).

The result of the total response indicates the following:

- 37.0% of the houses have a low-wall terrace.
- 53.9% of the people do not use their terraces.
- 43.3% of those who use terraces, they use it for drying clothes.
- 37.2% of those who do not use terraces feel the weather is the main reason and 27.8% feel that the privacy invasion is the main reason.

- = Accommodation type response. (C Q41, C Q42, C Q43, C Q44 and E Fig 2 Q41, E Fig 2 Q42, E Fig 2 Q43, E Fig 2 Q44).

- Differences amongst the type of accommodation with regard to the terrace wall height, the use of the terrace, the way of using terraces and the reason of not using the terrace are significant. The variables are not independent.
- Flat type represent the highest (42.5%) in the low wall terrace and 32.3% of the villa have low wall terrace only.

- Traditional houses represent the highest (61.1%) in using terraces, while flat represent the lowest (36.3%) and it is almost half (51.6%) of the villa resident use terraces.
 - The villa type represent the lowest (7.9%) in using the terrace for sleeping.
 - The traditional houses represent the highest (36.4%) in which privacy was the main reason for not using terraces, while the villa represents the highest (41.0%) in which weather was the main reason.
- = Group classification response. (D Q41, D Q42, D Q43, D Q44 and E Fig 3 Q41, E Fig 3 Q42, E Fig 3 Q43, E Fig 3 Q44).
- Makkah represents the highest (72.5%) in high wall terrace, while Jeddah represents the lowest (55.5%).
 - Makkah represents the highest (54.2%) in using the terrace, while Riyadh represents the lowest (40.5%).
 - Riyadh represents the highest (16.0%) in using the terrace for sleeping Jeddah represents the highest (46.1%) in using the terrace for drying clothes, Makkah represents the highest (34.6%) in using the terrace for gathering and Jeddah represent the highest (21.1%) in using the terrace for children playing.
 - Makkah represent the highest (34.4%) in which privacy was the main reason for not using the terrace while Riyadh represent the highest (41.3%) in which weather was the main reason for not using the terrace.

Special investigation. (F S16, F S17, F S17^z and G Fig S16, G Fig S17, G Fig S17^z).

- The distribution of houses according to terrace wall height vs. terrace use (S16) shows that the people who live in houses with high wall terraces, 59.5% of them use it, while the people who live in houses with low wall terraces, 76.7% of them do not use it.
- The distribution of houses according to terrace wall height vs. the reason of not using the terrace (S17) shows that 71.0% of those who feel the privacy invasion is the main reason for not using terraces are in houses with low all terraces.

0 To conclude, it could be stated that the height of the terrace wall plays a major role in using the terrace. The existing situation does not preserve the terrace as a functional space. (This could be related to the present municipality requirement which does not allow the construction of high wall for terraces. Future design should consider the protection of terraces from outside factors).

17.3.2 Windows Privacy Situation

- * Windows protection (Q45) and curtains for privacy (Q46).

These were to investigate the situation of windows and their protection of family privacy.

- = Total response. (B Q45, B Q46 and E Fig 1 Q45, E Fig 1 Q46). The result of the total response indicates that 49.2% of the people feel that their windows were overlooked by their neighbours. 69.5% of the people indicated that they put curtains over windows for privacy protection.
- = Accommodation type response. (C Q45, C Q46 and E Fig 2 Q45, E Fig 2 Q46).
 - Differences amongst the type of accommodation with regard to windows overlooked are significant ($x^2_C = 10.929 > x^2_T = 5.99$) and the variables are not independent.
 - Differences amongst the type of accommodation with regard to putting curtains for privacy protection are significant ($x^2_C = 17.284 > x^2_T = 5.99$) and the variables are not independent.
 - Flats represent the highest (53.0%) in the overlooked windows, villas comes after (49.4%) of its windows are overlooked, while 35.4% of the traditional windows are overlooked.
 - 71.3% of the villas residents put curtains on their windows for privacy protection, also 72.5% of the flats while only 52.2% of the traditional residents do the same.
- = Group classification response. (D Q45, D Q46 and E Fig 3 Q45, E Fig 3 Q46).
 - Jeddah represents the highest (55.8%) in which windows are overlooked, and the highest (77.7%) in which people put curtains to protect privacy.

- 0 To conclude, people feel that their privacy is not protected with the existing windows. A lot of them use curtains to protect it.

(This could be related to windows located in front of each other as a result of the setback requirements and the type of windows - plain glass).

17.3.3 Yards Privacy Situation

- * House yard overlooked (Q47) and neighbour yard overlooked (Q48).

These were to investigate the situation of the yards and its privacy protection.

- = Total response. (B Q47, B Q48 and E Fig 1 Q47, E Fig 1 Q48). The result of the total response indicates that 54.3% of the people feel that their yards are overlooked by neighbours. 56.4% feel that they could overlook their neighbours yards.
- = Accommodation type response. (C Q47, C Q48 and E Fig 2 Q47, E Fig 2 Q48).
 - Differences amongst the type of accommodation with regard to house yards overlooked are significant ($\chi^2_C = 44.953 > \chi^2_T = 5.99$) and the variables are not independent.
 - Differences amongst the type of accommodation with regard to neighbours yards overlooked are significant ($\chi^2_C = 24.260 > \chi^2_T = 5.99$) and the variables are not independent.
 - The villa represents the highest (63.5%) in which people live in it feel that their yards are overlooked by neighbours. Also, the villa represents the highest (63.5%) in which people live in it feel that they could overlook the yards of their neighbours.
- = Group classification response. (D Q47, D Q48 and E Fig 3 Q47, E Fig 3 Q48).
 - Differences amongst the type groups (cities) with regard to house yards overlooked are insignificant ($\chi^2_C = 7.174 < \chi^2_T = 9.49$) and the variables are independent.
 - Jeddah represent the highest (56.2%) in which people feel that their house yards are overlooked by their neighbours. While Makkah represent the highest (60.1%) in which people feel that they could overlook their neighbours yards.

0 To conclude it could be stated that the privacy of people in their yards is not protected in the existing built environment.

(This could be related to the fact that most yards are to the outside and the arrangements of openings in the different adjacent buildings which allow people to invade other people's privacy).

17.3.4 Family Privacy

- * Family privacy (Q49)

This was to examine the family privacy protection under the present situation.

= Total response. (B Q49 and E Fig 1. Q49).

The result of total response indicates that 11.2% of the people feel that their family privacy is not protected under the present situation.

= Accommodation type response. (C Q49 and E Fig 2. Q49).

- Differences amongst the type of accommodation with regard to family privacy are insignificant ($\chi^2_C = 5.438 < \chi^2_T = 5.99$) and the variables are independent.
- 16.8% of those who live in traditional houses feel that their family privacy is not protected compared to 11.6% in the villa type.

= Group classification response. (D Q49 and E Fig 3. Q49).

- Differences amongst the different groups (cities) with regard to family privacy are insignificant ($\chi^2_C = 5.539 < \chi^2_T = 9.49$) and the variables are independent.
- Riyadh represent the highest (13.9%) in which people felt that their family privacy was not protected.

0 To conclude, the family privacy in general could be seen protected under the existing situation.

(This protection was to be accomplished by people adding extra elements on the exterior).

17.3.5 Balconies Situation

* Balconies situation (Q50)

This was to investigate the balconies function and its use.

= Total response. (B Q50 and E Fig 1. Q50).

The result of the total response indicates that 67.8% of the people agree that the balconies are useless for the Saudi built environment.

= Accommodation type response. (C Q50 and E Fig 2. Q50).

- Differences amongst the type of accommodation with regard to the agreement about balconies are insignificant ($\chi^2_C = 5.438 < \chi^2_T = 5.99$) and the variables are independent.
- People who live in villas represent the highest (70.7%) in which they agree that balconies are useless.

= Group classification response. (D Q50 and E Fig 3. Q50).

- Differences amongst the different groups (cities) with regard to the agreement about balconies are insignificant ($\chi^2_C = 7.833 < \chi^2_T = 9.49$) and the variables are independent. People who live in Makkah represent the highest (70.3%) in which they agree that balconies are useless.

0 To conclude, it could be stated that 70% of the people feel that they cannot use their balconies for social activities. (This could be related to the privacy issue and the fact that balconies is a western style space which cannot be used by the family).

17.3.6 Outside Yard Situation and Inside Yard Alternative

- * Outside yard are useless (Q51) and inside yard alternatives (Q52).

These were to investigate the people agreement about the outside yard uselessness and the people agreement about inside yard alternative for future designs.

- = Total response. (B Q51, B Q52 and E Fig 1 Q51, E Fig 1 Q52). The result of the total response indicates that 56.3% of the people agree that the outside yards are useless. 84.3% of the people agree that the alternative inside yard would function much better for the Saudi families.
- = Accommodation type response. (C Q51, C Q52 and E Fig 2 Q51, E Fig 2 Q52).
 - Differences amongst the type of accommodation with regard to the agreement on the uselessness of the outside yard are significant ($\chi^2_C = 20.887 > \chi^2_T = 5.99$) and the variables are not independent.
 - Differences amongst the type of accommodation with regard to the agreement on the designing of alternative inside yard are insignificant ($\chi^2_C = 2.580 < \chi^2_T = 5.99$) and the variables are independent.
 - Flats represent the highest (63.4%) in which people agree that the outside yards are useless, while villas represent the highest (52.0%) in disagreeing about the statement.
 - 83.2% of those who live in villas agree about the alternative inside yard.
- = Group classification response. (D Q51, D Q52 and E Fig 3 Q51, E Fig 3 Q52).

- Riyadh represents the highest (50.7%) in which the people do not agree that the outside yards are useless. While the people of Makkah represent the highest (65.2%) in which the people agree about the statement.
- 79.9% of Riyadh residents agree about the alternative inside yard.

0 To conclude, the judgements on the outside yards in terms of its use are open ended. There are people who feel they could use the outside yard for different functions but at the same time feel that their families could not maintain their privacy in it, the alternative inside yard would be a good concept to recommend for future design.

17.3.7 Satisfying of House and Preference for Moving

- * Satisfying of house (Q53) and preference of moving (Q54).

These were to investigate people satisfying about their houses and the people preference if they have the chance to move.

= Total response. (B Q53, B Q54 and E Fig 1 Q53, E Fig 1 Q54).

- The result of the total response shows that 25.6% of the people feel that the existing houses do not meet their requirements.
- 61.6% of the people prefer to move to villas if they have the chance to move while only 2.7% would like to move to traditional houses.

= Accommodation type response. (C Q53, C Q54 and E Fig 2 Q53, E Fig 2 Q54).

- Differences amongst the type of accommodation with regard to satisfying of house are significant ($\chi^2_C = 17.484 > \chi^2_T = 5.99$) and the variables are not independent.
- Differences amongst the type of accommodation with regard to preference of moving are significant ($\chi^2_C = 127.649 > \chi^2_T = 15.5$) and the variables are not independent.
- The flats represent the highest (31.3%) in which people are not satisfied with their accommodation and the highest (74.3%) in which the preference of moving is to move to villas.

= Group classification response. (D Q53, D Q54 and E Fig 3 Q53, E Fig 3 Q54).

- Riyadh represents the highest (63.4%) in which people prefer to move to villas, while Jeddah represents the highest (3.3%) in which people prefer to move to traditional houses.

- Regarding those who live in the project 21.8% of them are not satisfied with it.

0 To conclude, it could be stated that a lot of people are satisfied with their houses. A significant number of people would like to move to villas as their future accommodation.

17.4 DISTRICT SITUATION

This section is to illustrate the different findings regarding Question Q55-Q70, the main purpose of these questions was to investigate the district situation and the people thinking towards their districts.

17.4.1 District Classification

* District classification (Q55).

This was to establish the peoples thinking about their district if they consider it traditional or contemporary.

= Total response. (B Q55 and E Fig 1 Q55).

The result of the total response indicates that only 27.3% of the people feel that their districts are traditional.

= Type of Accommodation response. (C Q55 and E Fig 2 Q55).

- Differences amongst the type of accommodation with regard to district classification are significant ($\chi^2_C = 336.067 > \chi^2_T = 5.99$) and the variables are not independent.
- Only 8.9% of those who live in villas classified their districts as traditional.

= Group classification response. (D Q55 and E Fig 3 Q55).

- Makkah represents the highest (32.1%) in which people classified their districts as traditional districts.

0 To conclude, it could be noticed that the contemporary district characterise the built environment.

17.4.2 Facilities Availability

- * The availability of different facilities in the neighbourhood,

Mosque (Q56), shops (Q57), clinic (Q58), Police office (Q59), Fire station (Q60), Post office (Q61), elementary schools (Q62), intermediate schools (Q63), secondary schools (Q64) and open spaces (Q65).

These were to investigate the availability of the different facilities in the neighbourhoods.

- = Total response. (B Q56 - B Q65 and E Fig 1 Q56 - E Fig 1 Q65).
The result of the total response shows the following:
 - Mosques were available in 97.4% of the neighbourhoods.
 - Shops were available in 76.7% of the neighbourhoods.
 - Clinics were available in 81.4% of the neighbourhoods.
 - Police offices were available in 43.6% of the neighbourhoods.
 - Fire stations were available in 44.3% of the neighbourhoods.
 - Post offices were available in 41.9% of the neighbourhoods.
 - Elementary schools were available in 86.4% of the neighbourhoods.
 - Intermediate schools were available in 68.5% of the neighbourhoods.
 - Secondary schools were available in 51.1% of the neighbourhoods.
 - Open spaces were available in 51.5% of the neighbourhoods.
- = Type of accommodation response. (C Q56 - C Q65 and E Fig 2 Q56 - E Fig 2 Q65).
 - Differences amongst the different type of accommodation with regard to the availability of Mosques, shops, clinics, fire stations and elementary schools are insignificant and the variables are independent.
 - Differences amongst the different type of accommodation with regard to the availability of Police offices, Post offices, intermediate schools, secondary schools and open spaces are significant and the variables are not independent.
- = Group classification response. (D Q56 - D Q65 and E Fig 3 Q56 - E Fig 3 Q65).
 - Differences amongst the different groups (cities) with regard to the availability of Mosques, clinics, police station, elementary schools and intermediate schools are insignificant and the variables are independent.
 - Differences amongst the different groups (cities) with regard to the availability of suques (shops, fire stations, post offices, secondary schools and open spaces are significant and the variables are not independent.

0 To conclude, it could be stated that not all neighbourhoods have sufficient facilities.

(This could be related to the ability of different governmental agencies in providing the different facilities).

17.4.3 Neighbours Relationship and Its Changing

* Neighbours relationship (Q66) and change of relation (Q67)

These were to investigate the condition of the relationship among neighbours and how it changes.

= Total response. (B Q66, B Q67 and E Fig 1 Q66, E Fig 1 Q67). The result of the total response indicates that 42.1% of the people have a good relation with their neighbours. Only 8.6% of the people have no relation with neighbours. 64.2% of the people feel that their relations with neighbours is changing for the better, only 2.3% feel it change for the worse.

= Accommodation type response. (C Q66, C Q67 and E Fig 2 Q66, E Fig 2 Q67).

- Differences amongst the different type of accommodation with regard to neighbours relations are significant ($\chi^2_C = 15.051 > \chi^2_T = 12.6$) and the variables are not independent.
- Differences amongst the different type of accommodation with regard to change of relations are insignificant ($\chi^2_C = 1.921 < \chi^2_T = 9.49$) and the variables are independent.
- Traditional houses represent the highest (35.4%) in which people have very good relations with their neighbours. Flats represent the highest (26.0%) in which people have normal relations with their neighbours.
- Villa types represent the highest (2.4%) in which relations between neighbours is changing for the worse.

= Group classification response. (D Q66, D Q67 and E Fig 3 Q66, E Fig 3 Q67).

- Makkah represents the highest (37.0%) in which people have very good relations with their neighbours, while Jeddah represents the highest (12.8%) in which people have no relations with their neighbours.
- Also Makkah represents the highest (72.2%) in which people feel that their relations with neighbours is changing for the better.

= Special investigations. (F S19, G Fig S19).

The distribution of response according to type of relationship vs. the change of relations indicates that (84.0%) of the

people who have very good relations that their relation even changing for better compare to 3.8% whose relation is changing for the worse.

0 To conclude, it could be stated that the peoples relationships are maintained well.

(This could be related to the traditions and the Islamic teaching which people try to obey).

17.4.4 District For Special Groups

* District for special groups (Q68).

This was to investigate the people thinking towards their district if they feel it can accommodate certain groups of people, for example, low income groups or high income groups.

= Total response. (B Q68 and E Fig 1 Q68).

The result of the total response indicates that 53.1% of the people feel that their districts are for certain groups and not a mixed group.

= Accommodation type response. (C Q68 and E Fig 2 Q68).

- Differences amongst the different type of accommodation with regard to the situation of the district are significant ($\chi^2_C = 9.323 > \chi^2_T = 5.99$) and the variables are not independent.
- The traditional represent the highest (63.7%) in which people feel that the district is for certain groups (low income) which villa represent the highest (51.6%) in which people think that this district is for a mixed group.

= Group classification response. (D Q68 and E Fig 3 Q68).

- Differences amongst the different groups (cities) with regard to the situation of the district for special groups are insignificant ($\chi^2_C = 2.625 < \chi^2_T = 9.49$) and the variables are independent.
- Jeddah represents the highest (56.2%) in which people feel that their districts are for certain groups while Riyadh represents the highest (49.6%) in which people feel that their districts are for a mixed group.

0 To conclude, it could be stated that half of the people considered their districts were organised to accommodate certain groups of the society to the exclusion of others.

(This could be related to the fact that the people who live in traditional houses seem to be among the low income groups, while the contemporary districts seem to accommodate the high income people who could afford to buy lands and construct villas).

17.4.5 Satisfying of District and Preference for Moving

- * Satisfying of district (Q69) and preference of moving regarding district (Q70).

These were to investigate the peoples thinking toward their districts and their preference of moving if they have the chance to move to other districts.

- = Total response. (B Q69, B Q70 and E Fig 1 Q69, E Fig 1 Q70). The result of the total response indicates that 23.9% are not satisfied with their present districts. Only 4.2% of the people would like to move to traditional districts.
- = Accommodation type response. (C Q69, C Q70 and E Fig 2 Q69, E Fig 2 Q70).
 - Differences amongst the different type of accommodation with regard of district satisfying are insignificant ($\chi^2_C = 4.250 < \chi^2_T = 5.99$) and the variables are independent.
 - Traditional houses represent the highest (31.0%) in which people are not satisfying about their district. While villa represent the highest (78.3%) in which people are satisfied about their district.
 - 54.9% of the people who live in traditional districts would like to move to contemporary districts.
- = Group classification response. (D Q69, D Q70 and E Fig 3 Q69, E Fig 3 Q70).
 - Jeddah represents the highest (77.7%) in which people are satisfied with their districts.
 - Riyadh represents the highest (5.6%) in which people would like to move to traditional districts.
 - 87.2% of those who live in the projects are satisfied with their districts and 66.7% would not like to move to any other district.

- 0 To conclude, it could be stated that traditional districts are not the preferred district.

(This could be related to the fact that most of the traditional districts are deteriorating).

Also, it could be stated that the majority of those who live in the two projects prefer not to move.

(This could be related to the quality of houses and also to the arrangement of houses by which privacy is protected).

17.5 CITY IMAGE

This section is to illustrate the different findings regarding Question Q72 - Q77, the main purpose of these questions are to establish the people's thinking towards the image of their cities.

17.5.1 Situation of City Now and Before

- * The city is not as before (Q72) and the city was better before (Q73).

These were to investigate the thinking of people towards their cities if they feel that the existing cities do not represent the past, and if the general appearance of the cities in the past was better than at present.

- = Total response. (B Q72, B Q73 and E Fig 1 Q72, E Fig 1 Q73). The result of the total response indicates that 93.6% of the people feel that their cities are not the same cities as before, they feel that there are a lot of changes which shape the new cities. Only 21.6% of the people feel that the cities were better than now.
- = Accommodation type response. (C Q72, C Q73 and E Fig 2 Q72, E Fig 2 Q73).
 - Villa represent the highest (94.9%) in which people think that their cities are not the same as before and the highest (80.0%) in which people do not think that cities were better than now.
- = Group classification response. (D Q72, D Q73 and E Fig 3 Q72, E Fig 3 Q73).
 - Differences amongst the different groups (cities) with regard to agreement of the city situation if it is not as before are significant ($x^2_C = 14.035 > x^2_T = 9.49$) and the variables are not independent.
 - Differences amongst the different groups (cities) with regard to agreement of the city situation if it is better than now are insignificant ($x^2_C = 5.417 < x^2_T = 9.49$)

and the variables are independent.

- Riyadh represents the highest (95.7%) in which people think that their city is not the same city as before, while Jeddah represents the highest (81.0%) in which people think that their city is better now than before.

0 To conclude, it could be stated that present cities in Saudi Arabia do not reflect the image of traditional cities of the past. People consider the present conditions are better than before.

17.5.2 Subdivision Image in Cities

- * New Subdivision and traditional concept (Q74).

This was to investigate the peoples thinking (agreement) regarding the statement which says that (New subdivision in cities does not consider the traditional way of neighbourhood design).

- = Total response. (B Q74 and E Fig 1 Q74).

The result of the total response indicate that 76.2% of the people agree that new subdivision do not consider the traditional way of neighbourhood design).

- = Accommodation type response. (C Q74 and E Fig 2 Q74).

- Villa represents the highest (79.0%) in which people agree that the new subdivision does not consider the traditional way of neighbourhood design.

- = Group classification response. (D Q74 and E Fig 3 Q74).

- Differences amongst the different groups (cities) with regard to agreement about the designing of subdivision and the ignorance of the traditional concept are significant ($\chi^2_C = 10.371 > \chi^2_T = 9.49$) and the variables are not independent.
- Makkah represents the highest (76.2%) in which people agree about the statement.

0 To conclude, it could be stated that three quarters of the people can define what was a traditional district, and they feel that it is ignored in the new subdivision design.

17.5.3 High-rise Acceptance in the City

- * High rise (building with four stories and more) not to be built in cities (Q75).

This was to investigate the people thinking (agreement) about the statement which suggests that (high rise buildings should not be built in cities any more).

- = Total response. (B Q75 and E Fig 1 Q75).
The result of the total response indicates that 87.9% of the people agree that high rise buildings should not be built any more.
- = Accommodation type response. (C Q75 and E Fig 2 Q75).
 - Villa represents the highest (90.8%) in which people agree that high rises should not be built any more.
- = Group classification response. (D Q75 and E Fig 3 Q75).
 - Differences amongst the different groups (cities) with regard to the agreement about not building high rise any more are significant ($\chi^2_C = 14.238 > \chi^2_T = 9.49$) and the variables are not independent.
 - Riyadh represents the highest (91.8%) in which people agree not to build any high rises, while Makkah represents the highest (17.6%) in which people disagree about the statement.

- 0 To conclude, it could be stated that high rise buildings as presently built are rejected.

(This could be related to the experience of people with high-rise buildings without elevators services).

17.5.4 Traditional Buildings in The City

- * New buildings reflect traditional concepts (Q76) and old buildings not to be demolished (Q77).

These were to investigate the people thinking (agreement) regarding the statements which suggest that new buildings should reflect traditional concepts and old buildings should not be demolished.

- = Total response. (B Q76, B Q77 and E Fig 1 Q76, E Fig 1 Q77).
The result of the total response indicates that 79.4% of the

people agree that new buildings should reflect traditional concepts.

80.2% of the people agree that old buildings should not be demolished.

= Accommodation type response. (C Q76, C Q77 and E Fig 2 Q76, E Fig 2 Q77).

- Differences amongst the different type of accommodation with regard to agreement about the statement that suggest that new buildings should reflect traditional concepts are significant ($x^2_C = 6.567 > x^2_T = 5.99$) and the variables are not independent.
- Differences amongst the different type of accommodation with regard to agreement about the statement that old buildings should not be demolished are insignificant ($x^2_C = 2.355 < x^2_T = 5.99$) and the variables are independent.
- Traditional type represent the highest (88.5%) in which people agree that new buildings should reflect traditional concepts, while 78.6% of the villa residents agree about it.
- Traditional type represent the highest (85.0%) in which people agree that old buildings should not be demolished while 80.5% of the villa residents agree about it.

= Group classification response. (D Q76, D Q77 and E Fig 3 Q76, E Fig 3 Q77).

- Differences amongst the different groups (cities) with regard to the agreement about reflecting traditional concepts on new buildings are insignificant ($x^2_C = 0.609 < x^2_T = 9.49$) and the variables are independent.
- Differences amongst the different groups (cities) with regard to the agreement about preserving old buildings are significant ($x^2_C = 24.829 > x^2_T = 9.49$) and the variables are not independent.
- Riyadh represents the highest (81.0%) in which people agree about reflecting traditional concepts on new buildings.
- Jeddah represents the highest (89.8%) in which people agree to preserve old buildings.

0 To conclude, it could be stated that people feel the new buildings do not reflect the traditional way of designing houses in Saudi Arabia. Also the preservation of old buildings is a concern of the people.

17.6 TRANSPORTATION

This section is to illustrate the different findings regarding

Question Q78 - Q94, the main purpose of these questions was to establish the relation between transportation means and the built environment.

17.6.1 Cars and Parking

* Number of cars (Q78) and parking area (Q79).

These were to investigate the number of cars for each building and its parking area.

= Total response. (B Q78, B Q79 and E Fig 1 Q78, E Fig 1 Q79). The result of the total response indicates that 20.8% of the houses have only one car, while 29.3% have more than four cars.

66.7% of the cars are parked beside houses on the streets.

= Accommodation type response. (C Q78, C Q79 and E Fig 2 Q78, E Fig 2 Q79).

- Differences amongst the different type of accommodation with regard to the number of cars are significant ($x^2_C = 212.838 > x^2_T = 15.5$) and the variables are not independent.
- Differences amongst the different type of accommodation with regard to the parking area are significant ($x^2_C = 125.457 > x^2_T = 18.3$) and the variables are not independent.
- The traditional represent the highest (37.9%) in which buildings have only one car, villa represent the highest (28.5%) in which buildings have two cars while flats represent the highest (52.5%) in which buildings have more than three cars.
- Villas represent the highest (23.9%) in which cars are parked in garages inside houses, flats represent the highest (73.1%) in which cars are parked beside houses on the streets, while traditional houses represent the highest (22.1%) in which cars are parked far from houses.

= Group classification response. (D Q78, D Q79 and E Fig 3 Q78, E Fig 3 Q79).

- Differences amongst the different groups (cities) with regard to the number of cars are significant ($x^2_C = 73.448 > x^2_T = 26.3$) and the variables are not independent.
- Differences amongst the different groups (cities) with regard to parking areas are significant ($x^2_C = 139.564 > x^2_T = 31.4$) and the variables are not independent.
- Riyadh represent the highest (26.5%) in which houses have only one car, while Jeddah represent the highest (41.4%) in which houses have more than four cars.

- Riyadh represent the highest (18.7%) in which cars are parked in garages inside houses, while Jeddah represent the highest (70.7%) in which cars are parked beside houses on streets.

= Special investigation. (F S32 and G Fig S32).

The distribution of responses according to the no. of cars vs. place of parking shows that parking beside houses on the street is the main parking areas for all houses with any number of cars.

0 To conclude, it could be stated that all houses in the present built environment attached to the vehicular services. The average number of cars for each building is three cars. Most of the people park their cars on the streets beside their houses.

(Cars seem to affect the built environment, cars overcrowding the streets seeking parking spaces. Most of the structures in the country did not consider parking spaces. Parking on the streets is a problem by itself).

17.6.2 Use of Buses

- * Use of buses (Q80), reason for not using buses (Q81) and improvement of the bus system (Q82).

These were to investigate the situation of the public transportation system (buses) and how the people feel about it.

= Total response. (B Q80, B Q81, B Q82 and E Fig 1 Q80, E Fig 1 Q81, E Fig 1 Q82).

The result of the total response indicates that 92.2% of the people do not use the buses.

26.0% of those who do not use buses, the reason was because they own private cars.

91.3% of the people are not satisfied with the existing public system and they feel it needs improvement.

= Accommodation type response. (C Q80, C Q81, C Q82 and E Fig 2 Q80, E Fig 2 Q81, E Fig 2 Q82).

- Differences amongst the different type of accommodation with regard to the use of buses are significant ($\chi^2_C = 69.521 > \chi^2_T = 5.99$) and the variables are not independent.

- Differences amongst the different type of accommodation with regard to the reason for not using buses are significant ($x^2_C = 42.572 > x^2_T = 21.0$) and the variables are not independent.
 - Differences amongst the different type of accommodation with regard to improvement of the bus system are insignificant ($x^2_C = 1.975 < x^2_T = 5.99$) and the variables are independent.
 - Traditional represent the highest (26.5%) in which people are using buses while villa represent the lowest (2.9%).
 - The villa represents the highest (27.6%) in which people do not use buses because they own private cars.
 - Traditional represent the highest (94.6%) in which people feel that the public transportation system needs improvement.
- = Group classification response. (D Q80, D Q81, D Q82 and E Fig 3 Q80, E Fig 3 Q81, E Fig 3 Q82).
- Differences amongst the different groups (cities) with regard to using buses are significant ($x^2_C = 17.018 > x^2_T = 9.49$) and the variables are not independent.
 - Differences amongst the different groups (cities) with regard to the reasons for not using the buses are significant ($x^2_C = 39.475 > x^2_T = 36.4$) and the variables are not independent.
 - Differences amongst the different groups (cities) with regard to the improvement of the bus system are significant ($x^2_C = 15.890 > x^2_T = 9.49$) and the variables are not independent.
 - Jeddah represents the highest (11.7%) in which people use buses.
 - Riyadh represent the highest (30.3%) in which people do not use buses because of owning private cars.
 - Makkah represent the highest (94.9%) in which people feel that the bus system needs to be improved.

0 To conclude, it could be stated that people do not depend on buses for their movement, but on their personal cars.
(This could be related to many different causes. The bus system does not attract people to use it, bus routes do not cover the whole city, and it takes a long time to wait for a bus).

17.6.3 Transportation to Mosque and Distance

- * Type of transportation to Mosque (Q83) and distance to Mosque (Q84).

These were to investigate how people reach their Mosques (walking, bus or by car) and to establish the approximate distance between Mosques and houses.

- = Total response. (B Q83, B Q84 and E Fig 1 Q83, E Fig 1 Q84).
The result of the total response shows that 81.6% of the people walk to the Mosques for prayer and 18.3% use their cars to reach the Mosques.
The approximate average distance between Mosques and houses falls in the third category which is (100-200 meters).
 - = Accommodation type response. (C Q83, C Q84 and E Fig 2 Q83, E Fig 2 Q84).
 - Differences amongst the different type of accommodation with regard to transportation type to the Mosque are significant ($\chi^2_C = 13.922 > \chi^2_T = 9.49$) and the variables are not independent.
 - Traditional represent the highest (93.8%) in which people walk to Mosques, while 79.1% of the villa type residents walk.
 - = Group classification response. (D Q83, D Q84 and E Fig 3 Q83, E Fig 3 Q84).
 - Differences amongst the different groups (cities) with regard to transportation to Mosque are insignificant ($\chi^2_C = 12.295 < \chi^2_T = 15.5$) and the variables are independent.
 - Riyadh represents the highest (84.3%) in which people walk to Mosques, while 76.1% of Jeddah residents walk.
 - = Special investigation. (F S20, F S26, F S28 and G Fig S20, G Fig S26, G Fig S28).
 - The distribution of people response according to type of transportation to Mosques vs. distances shows that walking exceeds the use of cars for the distance up to 500 meters, and for distances above 500 the use of cars is clear.
 - (S26) the approximate average distance which people drive to Mosque is between (500-1000 meters).
 - (S28) the approximate average distance which people walk to Mosque is between (100-200 meters).
- 0 To conclude, it could be stated that the Mosque's locations vary between the traditional and contemporary districts. The majority (93%) in the traditional districts walk to Mosques while (80%) of those in the contemporary walk to Mosques.
(For future design the average distance of walking to Mosque 200 meters needs to be considered. The Mosque is important

for the society and walking to it encourages other activities).

17.6.4 Transportation to Suqes and Distance

- * Type of transportation to Suqes (Q85) and distance to Suqes (Q86).

These were to investigate how do people reach their suqes (walking, by bus or by car) and to establish the approximate distance between Suqes and houses.

- = Total response. (B Q85, B Q86 and E Fig 1 Q85, E Fig 1 Q86).
The result of the total response shows that 74.1% of the people use cars to reach the suqes, while only 25.5% walk.
 - The approximate distance between suqes and houses fall in the fifth category which is (500-1000 meters).
- = Accommodation type response. (C Q85, C Q86 and E Fig 2 Q85, E Fig 2 Q86).
 - Differences amongst the different type of accommodation with regard to transportation type to suqes are significant ($x^2_C = 65.332 > x^2_T = 9.49$) and the variables are not independent.
 - Traditional represent the highest (53.2%) in which people walk to suqes, while only 16.3% of the villa type residents walk.
- = Group classification response. (D Q85, D Q86 and E Fig 3 Q85, E Fig 3 Q86).
 - Differences amongst the different groups (cities) with regard to transportation to suqes are insignificant ($x^2_C = 12.995 < x^2_T = 15.15$) and the variables are independent.
 - Makkah represents the highest (30.8%) in which people walk to suqes, while Riyadh represent the lowest (18.9%). 80.6% of Riyadh residents use their cars to reach the suqes.
- = Special investigations. (F S21, F S25, F S27 and G Fig S21, G Fig S25, G Fig S27).
 - (S21) The distribution of people response according to type of transportation to suqe vs. distances shown that walking exceeds the use of cars for the distances up to 200 meters, and for distances above 200 meters the use of cars is clear.
 - (S25) the approximate average distance which people drive to suqe is between (500-1000 meters).
 - (S27) the approximate average distance which people walk to suqe is between (100-200 meters).

0 To conclude, it could be stated that the suqe's location varies between the traditional and contemporary districts. Half of those who live in traditional districts walk to the suqe, while only a fifth of those who live in the contemporary district walk to suqe.

(For future design the average distance of walking to suqe 200 meters needs to be considered. The suqe could be related to the Mosque).

17.6.5 Transportation to Schools and Distance

* Type of transportation to schools (Q87) and distance to schools (Q88).

These were to investigate how people reach their childrens schools (walking, by bus or by car) and to establish the approximate distance between schools and houses.

= Total response. (B Q87, B Q88 and E Fig 1 Q87, E Fig 1 Q88). The result of the total response shows that 75.8% of the people use cars to reach their child's school, 22.4% walk and only 1.8% use buses.

- The approximate distance between schools and houses fall in the sixth category which is (1-5 kilometres).

= Accommodation type response. (C Q87, C Q88 and E Fig 2 Q87, E Fig 2 Q88).

- Differences amongst the different type of accommodation with regard to transportation type to schools are significant ($\chi^2_C = 28.736 > \chi^2_T = 9.49$) and the variables are not independent.

- Traditional represent the highest (40.6%) in which people walk to reach schools while only 16.0% of the villa type residents walk.

= Group classification response. (D Q87, D Q88 and E Fig 3 Q87, E Fig 3 Q88).

- Differences amongst the different groups (cities) with regard to transportation to schools are insignificant ($\chi^2_C = 11.657 < \chi^2_T = 15.5$) and the variables are independent.

- Makkah represents the highest (23.3%) in which people walk to reach schools, while Jeddah represent the highest (78.7%) in which people use their car to reach schools.

= Special investigation. (F S22 and G Fig S22).

- The distribution of people responses according to type of

transportation to suqe vs. distance shows that walking exceeds the use of cars for distances up to 200 meters, and for distances above 200 meters the use of cars is clear.

0 To conclude, it could be stated that present schools lie at distances where people have to use cars to reach them in the present conditions. 200 m would appear to be the maximum walking distance.

(At present buses only used to transfer female students, other services need to be expanded to include male students).

17.6.6 Transportation to Work and Distance

* Type of transportation to work places (Q89) and distances to work places (Q90).

These were to investigate how people reach their place of work (walking, by bus or by car) and to establish the approximate distance between work and house.

= Total response. (B Q89, B Q90 and E Fig 1 Q89, E Fig 1 Q90). The result of the total response shows that 92.9% of the people use cars to reach their work, 5.0% walk and only 2.1% use the buses.

- The approximate distance between works and houses fall in the seventh category which is (5-10 kilometres).

= Accommodation type response. (C Q89, C Q90 and E Fig 2 Q89, E Fig 2 Q90).

- Differences amongst the different type of accommodation with regard to transportation type to works are significant ($\chi^2_C = 145.66 > \chi^2_T = 9.49$) and the variables are independent.

- Villa represent the highest (98.8%) in which people use cars to reach their place of work, while traditional represent the lowest (66.0%).

- Traditional represent the highest (13.2%) in which people use buses to reach their place of work.

= Group classification response. (D Q89, D Q90 and E Fig 3 Q89, E Fig 3 Q90).

- Differences amongst the different groups (cities) with regard to transportation to works are significant ($\chi^2_C = 20.301 > \chi^2_T = 15.5$) and the variables are not independent.

- Makkah represents the highest (7.2%) in which people walk to reach works, while Riyadh represent the highest

(95.1%) in which people use cars to reach their place of work and Jeddah represent the highest (4.9%) in which people use buses to reach their place of work.

= Special investigations. (F S23 and G Fig S23).

- The distribution of people response according to type of transportation to works vs. distances shown that walking exceeds the use of cars for distances up to 100 meters, and for distances above 100 meters the use of cars is clear.

0 To conclude, it could be stated that people use their cars to reach their place of work in present conditions when the work is over 100-200 meters.

17.6.7 Transportation to Recreational and Distance

- * Type of transportation to recreational area (Q91) and distance to recreational areas (Q92).

These were to investigate how people reach recreational areas (walking, by bus or by car) and to establish the approximate distance between recreational areas and houses.

= Total response. (B Q91, B Q92 and E Fig 1 Q91, E Fig 1 Q92). The result of the total response shows that 91.9% of the people use cars to reach the recreational areas, 7.4% walk and only 0.7% use the bus.

- The approximate distance between recreational areas and houses falls in the sixth category which is (1-5 kilometres).

= Accommodation type response. (C Q91, C Q92 and E Fig 2 Q91, E Fig 2 Q92).

- Differences amongst the different type of accommodation with regard to transportation type to recreational areas are significant ($x^2_C = 24.34 > x^2_T = 9.49$) and the variables are not independent.
- Traditional represent the highest (17.8%) in which people walk to recreational areas, while villas represent the highest (94.1%) in which people use their cars.

= Group classification response. (D Q91, D Q92 and E Fig 3 Q91, E Fig 3 Q92).

- Differences amongst the different groups (cities) with regard to transportation to recreational areas are insignificant ($x^2_C = 5.308 < x^2_T = 15.15$) and the variables are independent.

- Makkah represents the highest (93.4%) in which people use cars to reach the recreational areas.
- = Special investigation. (F S24 and G Fig S24).
This distribution of people response according to type of transportation to recreational areas vs. distances shows that walking exceeds the use of cars up to 200 meters, and for distances above 200 meters the use of cars is clear.
- 0 To conclude, it could be stated that people use their cars to reach recreational areas in the present conditions when they have to travel more than 200 meters.

17.6.8 Walking Distance and Car Parking

- * Distances to walk without difficulty (Q93) and car away from house (Q94).

These were to investigate the approximate distance which people agree to walk without difficulty and to investigate the people thinking (agreement) about parking cars away from house.

- = Total response. (B Q93, B Q94 and E Fig 1 Q93, E Fig 1 Q94).
The result of the total response indicates that 34.1% of the people feel that they could walk without difficulty for distances above 800 meters.
 - The approximate average distance as a result of the total response falls in the fifth category which is (400-500 meters).
 - 65.7% of the people did not agree to park their cars away from houses.
- = Accommodation type response. (C Q93, C Q94 and E Fig 2 Q93, E Fig 2 Q94).
 - Differences amongst the different type of accommodation with regard to walking distance are significant ($\chi^2_C = 32.628 > \chi^2_T = 26.3$) and the variables are not independent.
 - Differences amongst the different type of accommodation with regard to the agreement about parking cars away from houses are significant ($\chi^2_C = 24.823 > \chi^2_T = 5.99$) and the variables are not independent.
 - The villa represents the highest (72.8%) in which people disagree about parking cars away from houses, while traditional represent the highest (51.3%) in which people agree to park cars away from houses.

- = Group classification response. (D Q93, D Q94 and E Fig 3 Q93, E Fig 3 Q94).
 - Differences amongst the different groups (cities) with regard to walking distance are significant ($x^2_C = 53.758 > x^2_T = 42.6$) and the variables are not independent.
 - Differences amongst the different groups (cities) with regard to parking cars away from houses are insignificant ($x^2_C = 7.269 < x^2_T = 9.49$) and the variables are independent.
 - Riyadh represents the highest (69.8%) in which people disagree to park their cars away from houses.
- = Special investigation. (F S29 - F S31 and G Fig S29 - G Fig S31).
 - (S29) the people who walk to Mosque agree to walk without difficulty an average distance between (500-600 meters).
 - (S30) the people who agree to park their cars away from houses agreed to walk an average distance between (500-600 meters).
 - (S31) the distribution of people responses according to distance of walking without difficult vs. agreement on parking cars indicate that 40.4% of those who agreed to walk for distance above 800 meters agreed at the same time to park their cars away from houses, while 72.2% of those who agreed to walk for distance less than 100 meter do not agree to park their cars away from houses.

0 A third of the people are prepared to walk (although it may be less in villa areas) up to 600 meters although other evidence (Mosque, suqes etc.) would suggest 100-200 meters as a maximum. Two thirds of the people insist on having their cars in or beside their houses.

(This indicates that even the people are prepared to walk for long distances but they prefer to park their cars beside or near their houses because of many factors. Security issues and the intensive heat could be the major factors).

17.7 PERSONAL INFORMATION

This section is to illustrate the different findings regarding Questions Q95 - Q105, the main purpose of these questions was to establish an image about the people personal situation in the different areas of the built environment.

17.7.1 Nationality

- * Nationality (Saudi or Non Saudi) (Q95) and Arab or Non Arab (Q96).

These were to investigate the nationality of the people who answered the survey and their Arabic originality.

= Total response. (B Q95, B Q96 and E Fig 1 Q95, E Fig 1 Q96). The result of the total response indicates that 90.4% of the people are Saudis.

- 98.5% of the people are Arabic originality.

= Accommodation type response. (C Q95, C Q96 and E Fig 2 Q95, E Fig 2 Q96).

- Differences amongst the different type of accommodation with regard to the nationality are significant ($\chi^2_C = 64.543 > \chi^2_T = 5.99$) and the variables are not independent.
- Traditional represent the highest (23.9%) in which non-Saudi live, while only 1.7% of the villa residents are non-Saudis. 13.8% of those in the flats residents are non-Saudi.

= Group classification response. (D Q95, D Q96 and E Fig 3 Q95, E Fig 3 Q96).

- Differences amongst the different groups (cities) with regard to the nationality are significant ($\chi^2_C = 32.472 > \chi^2_T = 9.49$) and the variables are not independent.
- Jeddah represent the highest (16.4%) in which its residents are non-Saudis, while Makkah represent the lowest (5.1%).

0 To conclude, it could be stated that Non-Saudis represent 9.6% of the Saudi Society.

17.7.2 Families Status and Members

- * Married or single (Q97) and number of males in family (Q98) and number of females in family (Q99) and total members of family (Q100).

These were to investigate the family status and its present size and the average Saudi family.

= Total response. (B Q97, B Q98, B Q99, B Q100 and E Fig 1 Q97, E Fig 1 Q98, E Fig 1 Q99, E Fig 1 Q100).

The result of the total response indicates that 81.6% of the people who respond to the survey were married.

- The average number of male members in the Saudi family is two.
- The average number of female members in the Saudi family is two.
- The average number of family members is five.

= Accommodation type response. (C Q97, C Q98, C Q99, B Q100 and E Fig 2 Q97, E Fig 2 Q98, E Fig 2 Q99, E Fig 2 Q100).

- Differences amongst the different type of accommodation with regard to family status, number of males in family, number of females in family and Number of family members are significant and the variables are not independent.
- Traditional represent the highest (34.5%) in which they were single.

= Group classification response. (D Q97, D Q98, D Q99, D Q100 and E Fig 3 Q97, E Fig 3 Q98, E Fig 3 Q99, E Fig 3 Q100).

- Differences amongst the different groups (cities) with regard to family status are insignificant, while with regard to number of males in family, number of females in family and number of family members are significant and the variables are not independent.

0 To conclude, the Saudi family is a wide ranging family starting from one person up to more than 9 members. The average Saudi family is 5 members. 20% of the people are unmarried.

(This indicates that attention is needed to accommodate singles in the neighbourhoods).

17.7.3 Age Groups

* Age groups (Q101).

This was to investigate the age group of the people who answered the survey.

= Total response. (B Q101 and E Fig 1 Q101).

The result of the total response indicates that the approximate average age group of Saudi people falls between (30-40 years). This age group of (20-30) represents the highest in which people age fall.

= Accommodation type response. (C Q101 and E Fig 2 Q101).

- Differences amongst the different type of accommodation with regard to age groups are significant ($\chi^2_C = 28.961 > \chi^2_T = 18.3$) and the variables are not independent.

- Flats represent the highest (44.0%) in which people of age group (20-30 years) live.
- = Group classification response. (D Q101 and E Fig 3 Q101).
 - Differences amongst the different groups (cities) with regard to age groups are significant ($\chi^2_C = 61.033 > \chi^2_T = 30.1$) and the variables are not independent.
 - Riyadh represent the highest (53.9%) in which people of age group (20-30 years) live.
- 0 To conclude, Saudi Society average age represent a young generation with an age group of 30-40 years.

17.7.4 Education

* Education status (Q102).

This was to investigate the education status of the people who answered the survey.

- = Total response. (B Q102 and E Fig 1 Q102).
The result of the total response indicates that University education represents the highest (40.8%) of people, education character. Only 1.1% of the people do not read or write.
- = Accommodation type response. (C Q102 and E Fig 2 Q102).
 - Differences amongst the different type of accommodation with regard to education status are significant ($\chi^2_C = 156.931 > \chi^2_T = 23.7$) and the variables are not independent.
 - Villa represent the highest (44.8%) in which University educated people live.
 - Traditional represent the highest (15.9%) in which people who live there can only just read and write.
- = Group classification response. (D Q102 and E Fig 3 Q102).
 - Differences amongst the different groups (cities) with regard to education statues are significant ($\chi^2_C = 324.87 > \chi^2_T = 41.3$) and the variables are not independent.
 - Riyadh represent the highest (52.2%) in which people with University education live.

- 0 To conclude, it could be stated that the Saudi Society is an educated society with different levels of education.

17.7.5 Occupations

* Occupation status (Q103).

This was to investigate the type of work which characterise the society.

= Total response. (B Q103 and E Fig 1 Q103).

The result of the total response indicates that civil working through governmental offices represent the highest (72.3%) type of work.

= Accommodation type response. (C Q103 and E Fig 2 Q103).

- Differences amongst the different type of accommodation with regard to type of occupations are significant ($x^2_C = 100.604 > x^2_T = 21.0$) and the variables are not independent.

- Traditional represent the highest (13.3%) in which workers live.

= Group classification response. (D Q103 and E Fig 3 Q103).

- Differences amongst the different groups (cities) with regard to type of occupations are significant ($x^2_C = 138.987 > x^2_T = 36.4$) and the variables are not independent.

- Jeddah represent the highest (6.6%) in which workers live and Riyadh represent the highest (78.4%) in which civil officials live.

0 To conclude, it could be stated that different occupations characterising the Saudi Society. Traditional houses are now left for workers, while most of the civil officials live in contemporary houses.

18.7.6 Income and Income Groups

* Income amount (Q104) and income groups (Q105).

These were to investigate the different income amount status of the people who answered the survey and to investigate the people thinking about their position among the different income groups (low, medium, high).

= Total response. (B Q104, B Q105 and E Fig 1 Q104, E Fig 1 Q105).

The result of the total response indicates that the average income amount is between 6000-7000 Saudi Riyals. The people

could be characterised by medium income group.

= Accommodation type response. (C Q104, C Q105 and E Fig 2 Q104, E Fig 2 Q105).

- Differences amongst the different type of accommodation with regard to the income amount are significant ($\chi^2_C = 86.304 > \chi^2_T = 26.3$) and the variables are not independent.
- Traditional represent the highest (33.0%) in which people with an income of 3000 SR/month or less live, while the villa represent the highest (27.2%) in which people with an income of 9000 SR/month or more live.
- Traditional represent the highest (58.9%) in which people consider themselves as a low income group, while villa represent the highest (2.7%) in which people consider themselves as high income group.

= Group classification response. (D Q104, D Q105 and E Fig 3 Q104, E Fig 3 Q105).

- Differences amongst the different groups (cities) with regard to income amount are significant ($\chi^2_C = 67.080 > \chi^2_T = 43.8$) and the variables are not independent.

= Special investigation. (F S33, G Fig S33).

- The distribution of people responses according to income amount vs. income group shows that most of the people with income of 4000 SR/month consider themselves as low income group.

0 To conclude, it could be stated that the majority of the people consider themselves as medium income groups. Traditional houses is characterised with low income people.

17.7.7 Preference of Moving to Villa

This section is to illustrate some detail findings about the thinking of people who prefer a villa. (F S34 - F S36, F S37a - F S37f and G Fig S34 - G Fig S36, G Fig S37a - G Fig S37f).

- (S34) The distribution of responses according to preference of moving vs. income groups shows that the majority (67.3%) of those who would like to move to villa are medium income.
- (S35) The distribution of responses according to preference of moving vs. previous accommodation shows that the majority of people who would like to move to villa were in traditional (35.7%) and flats (37.2%).

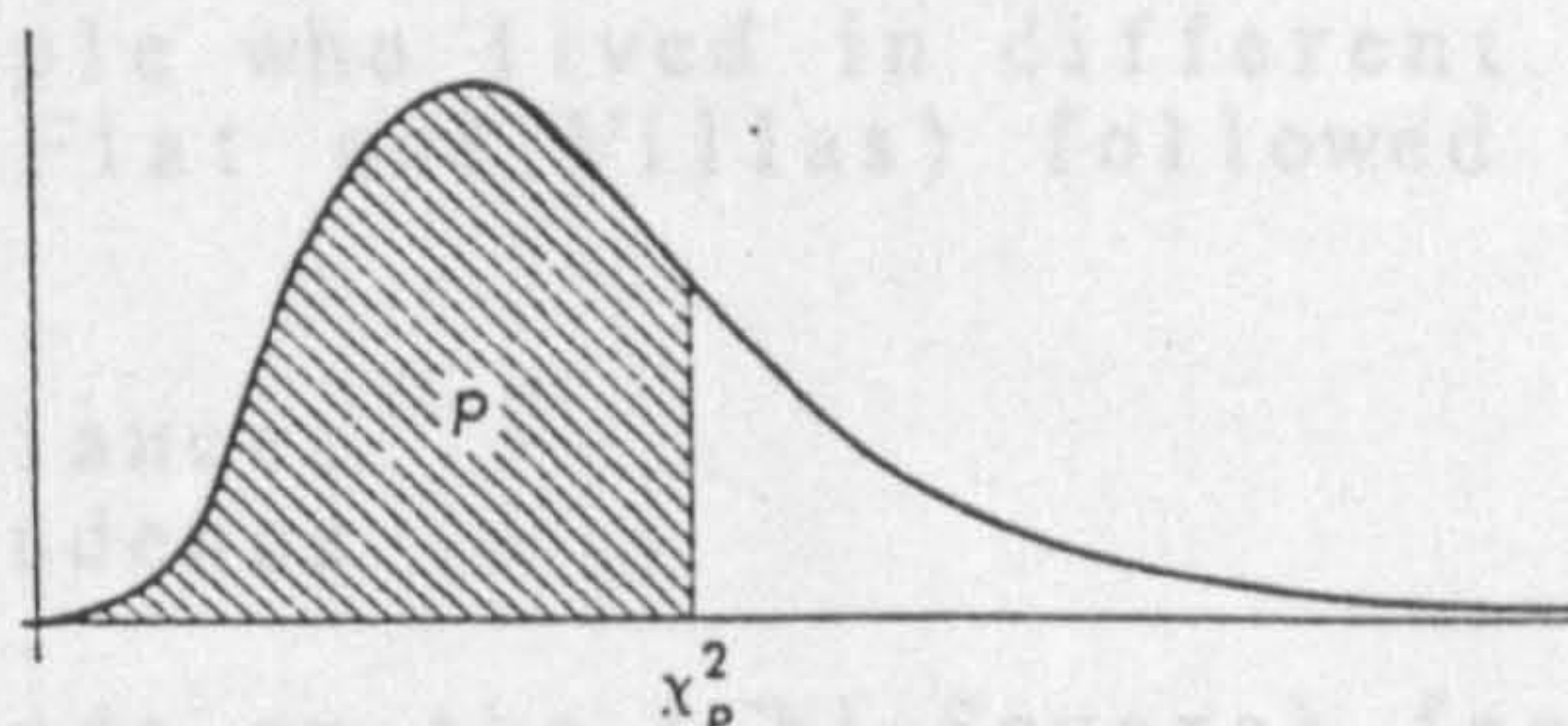
- (S36) The distribution of responses according to preference of moving vs. previous accommodation shows that the majority of the people who would like to move to contemporary districts were in traditional houses (districts) (37.9%) and flats (34.9%).

The following are the responses of those who would like to move to villa only:

- (S37a) 66.8% of them agreed that balconies were useless.
- (S37b) 56.8% of them agreed that outside courtyards were useless.
- (S37c) 85.9% of them agreed that alternative inside yards are better.
- (37d) 64.2% of them are not satisfied with their existing accommodation.
- (37e) The majority of them (51.5%) live in flats.
- (37f) The majority of them (31.9%) live in Jeddah.

Table 17-1 PERCENTILES OF THE CHI-SQUARE DISTRIBUTION

Source: Lindgren, 1976² p.575.



Degrees of freedom	$\chi^2_{.005}$	$\chi^2_{.01}$	$\chi^2_{.025}$	$\chi^2_{.05}$	$\chi^2_{.10}$	$\chi^2_{.20}$	$\chi^2_{.30}$	$\chi^2_{.40}$	$\chi^2_{.50}$	$\chi^2_{.60}$	$\chi^2_{.70}$	$\chi^2_{.80}$	$\chi^2_{.90}$	$\chi^2_{.95}$	$\chi^2_{.975}$	$\chi^2_{.99}$	$\chi^2_{.995}$
1	.000	.000	.001	.004	.016	.064	.148	.455	1.07	1.64	2.71	3.84	5.02	6.63	7.88		
2	.010	.020	.051	.103	.211	.446	.713	1.39	2.41	3.22	4.61	5.99	7.38	9.21	10.6		
3	.072	.115	.216	.352	.584	1.00	1.42	2.37	3.66	4.64	6.25	7.81	9.35	11.3	12.8		
4	.207	.297	.484	.711	1.06	1.65	2.20	3.36	4.88	5.99	7.78	9.49	11.1	13.3	14.9		
5	.412	.554	.831	1.15	1.61	2.34	3.00	4.35	6.06	7.29	9.24	11.1	12.8	15.1	16.7		
6	.676	.872	1.24	1.64	2.20	3.07	3.83	5.35	7.23	8.56	10.6	12.6	14.4	16.8	18.5		
7	.989	1.24	1.69	2.17	2.83	3.82	4.67	6.35	8.38	9.80	12.0	14.1	16.0	18.5	20.3		
8	1.34	1.65	2.18	2.73	3.49	4.59	5.53	7.34	9.52	11.0	13.4	15.5	17.5	20.1	22.0		
9	1.73	2.09	2.70	3.33	4.17	5.38	6.39	8.34	10.7	12.2	14.7	16.9	19.0	21.7	23.6		
10	2.16	2.56	3.25	3.94	4.87	6.18	7.27	9.34	11.8	13.4	16.0	18.3	20.5	23.2	25.2		
11	2.60	3.05	3.82	4.57	5.58	6.99	8.15	10.3	12.9	14.6	17.3	19.7	21.9	24.7	26.8		
12	3.07	3.57	4.40	5.23	6.30	7.81	9.03	11.3	14.0	15.8	18.5	21.0	23.3	26.2	28.3		
13	3.57	4.11	5.01	5.89	7.04	8.63	9.93	12.3	15.1	17.0	19.8	22.4	24.7	27.7	29.8		
14	4.07	4.66	5.63	6.57	7.79	9.47	10.8	13.3	16.2	18.2	21.1	23.7	26.1	29.1	31.3		
15	4.60	5.23	6.26	7.26	8.55	10.3	11.7	14.3	17.3	19.3	22.3	25.0	27.5	30.6	32.8		
16	5.14	5.81	6.91	7.96	9.31	11.2	12.6	15.3	18.4	20.5	23.5	26.3	28.8	32.0	34.3		
17	5.70	6.41	7.56	8.67	10.1	12.0	13.5	16.3	19.5	21.6	24.8	27.6	30.2	33.4	35.7		
18	6.26	7.01	8.23	9.39	10.9	12.9	14.4	17.3	20.6	22.8	26.0	28.9	31.5	34.8	37.2		
19	6.83	7.63	8.91	10.1	11.7	13.7	15.4	18.3	21.7	23.9	27.2	30.1	32.9	36.2	38.6		
20	7.43	8.26	9.59	10.9	12.4	14.6	16.3	19.3	22.8	25.0	28.4	31.4	34.2	37.6	40.0		
21	8.03	8.90	10.3	11.6	13.2	15.4	17.2	20.3	23.9	26.2	29.6	32.7	35.5	38.9	41.4		
22	8.64	9.54	11.0	12.3	14.0	16.3	18.1	21.3	24.9	27.3	30.8	33.9	36.8	40.3	42.8		
23	9.26	10.2	11.7	13.1	14.8	17.2	19.0	22.3	26.0	28.4	32.0	35.2	38.1	41.6	44.2		
24	9.89	10.9	12.4	13.8	15.7	18.1	19.9	23.3	27.1	29.6	33.2	36.4	39.4	43.0	45.6		
25	10.5	11.5	13.1	14.6	16.5	18.9	20.9	24.3	28.2	30.7	34.4	37.7	40.6	44.3	46.9		
26	11.2	12.2	13.8	15.4	17.3	19.8	21.8	25.3	29.2	31.8	35.6	38.9	41.9	45.6	48.3		
27	11.8	12.9	14.6	16.2	18.1	20.7	22.7	26.3	30.3	32.9	36.7	40.1	43.2	47.0	49.6		
28	12.5	13.6	15.3	16.9	18.9	21.6	23.6	27.3	31.4	34.0	37.9	41.3	44.5	48.3	51.0		
29	13.1	14.3	16.0	17.7	19.8	22.5	24.6	28.3	32.5	35.1	39.1	42.6	45.7	49.6	52.3		
30	13.8	15.0	16.8	18.5	20.6	23.4	25.5	29.3	33.5	36.2	40.3	43.8	47.0	50.9	53.7		
40	20.7	22.1	24.4	26.5	29.0	32.3	34.9	39.3	44.2	47.3	51.8	55.8	59.3	63.7	66.8		
50	28.0	29.7	32.3	34.8	37.7	41.3	44.3	49.3	54.7	58.2	63.2	67.5	71.4	76.2	79.5		
60	35.5	37.5	40.5	43.2	46.5	50.6	53.8	59.3	65.2	69.0	74.4	79.1	83.3	88.4	92.0		

Note: For degrees of freedom $k > 30$, use $\chi^2_p = \frac{1}{2}(z_p + \sqrt{2k-1})^2$, where z_p is the corresponding percentile of the standard normal distribution.

This table is adapted from Table VIII of *Biometrika Tables for Statisticians*, Vol. 1, 1954, by E. S. Pearson and H. O. Hartley, originally prepared by Catherine M. Thompson, with the kind permission of the editor of *Biometrika*.

Footnotes: Chapter 17

1. The Analysis system which was used to compare the different responses of the people who lived in different accommodation types (Traditional, Flat and Villas) followed the following two tests:

- a. Tests about variances.
- b. Tests of independence.

These two tests depends on the (Chi-Square) factors.

X^2_c = Chi-Square calculated by the SPSSX system.

X^2_T = Chi-Square found in (table 17-1) at 95% level of confidence.

For the first test:

- If ($X^2_c > X^2_T$) it indicates that the Differences among the responses of the people who lived in different types accommodation are significant.
- If ($X^2_c < X^2_T$) it indicates that Differences among the responses of the people who lived in different types of accommodation are not significant.

For the second test:

- If ($X^2_c > X^2_T$) it indicates that the variables are not independent.
- If ($X^2_c < X^2_T$) it indicates that the variables are independent.

(For more information about these tests see the following:

- a. FREUND, John and Walpole, Ronald. Mathematical Statistics, Prentice-Hall International, Inc., London, 1980 p.p. (406-413).
 - b. ABU SALEH, M.S. and Awad, A.M. Introduction to Statistics, A Wiley Arabook, London 1983, p.p. (176-182).
2. The previous methods were also used to compare the different responses of people who lived in different cities (Groups).
3. LINDGREN, Bernard W. Statistical Theory. Mackmillan Publishing Co., New York, 1976.

CHAPTER 18

FINDING OF INTERVIEWS AND OBSERVATIONS

18.1 INTERVIEWS FINDINGS

- 18.1.1 SETBACK REQUIREMENTS
- 18.1.2 VILLA LAYOUT
- 18.1.3 INSIDE YARD ALTERNATIVE
- 18.1.4 OPENING PROTECTION
- 18.1.5 CUL-DE-SAC CONCEPT
- 18.1.6 USE OF INSULATION MATERIALS
- 18.1.7 LANDS SIZES
- 18.1.8 WALKING DISTANCES

18.2 PEOPLE COMMENTS

- 18.2.1 COMMENT ABOUT THE RESEARCHER
- 18.2.2 COMMENTS ABOUT THE QUESTIONNAIRE
- 18.2.3 COMMENTS ABOUT THE BUILT ENVIRONMENT

18.3 OBSERVATIONS

- 18.3.1 ACADEMIC OBSERVATIONS
- 18.3.2 GENERAL OBSERVATIONS

18 FINDING OF INTERVIEWS AND OBSERVATIONS

"Opening Questions" as defined by Nachmis as "the sum total of a person's indication, prejudice, ideas, facts, fears and conversations about a specific topic"¹. The interviews were for the purpose of discussing the ideas of designing with traditional concepts. During the interviews the intention of the researcher was to get information, ideas and attitudes toward the different ideas.

18.1 INTERVIEWS FINDINGS

This section is to present the different findings regarding the main elements of discussion with regard to the interviews. (Table 18-1, Fig 18-1)

18.1.1 Setback Requirements

Regarding the setback requirements:

= 60/65 (92%) feel that the setback requirements by the municipalities generated open space surrounding the outside structure. These open spaces stand as corridors between houses with a wall dividing it into a more narrow corridor. The accumulation of dust and unused items were encouraged by such spaces. Also they feel that these spaces become as heat zones in which air conditioning units throw their hot air. This spaces gave the right to people to set openings on all elevations without the consideration of which side or the affects which they have on other people privacy. They feel that these requirements have broken the solid relations between neighbours because it gave the sense of separate walls.

= 5/65 (8%) feel otherwise, they feel that the spaces which were generated for the setback requirements could be used for

certain purposes. They feel it is good to be away from neighbours walls and their noises. The separation for them made the roofs of their houses much more secure.

18.1.2 Villa Layout

Regarding the layout of the villa structure and the outyard:

= 58/65 (89%) feel that the present layout of the villa structure with the outyard does not allow family to use these yards properly since they were overlooked by neighbours openings. Also, they feel that this layout does not reflect our traditional designs.

= 7/65 (11%) feel that they are satisfied with the present layout and they could use the yards for many purposes, especially male gatherings at night and children playing. They feel that families (female) have enough spaces inside and they do not have to use the outyards. They feel that the present layout gives individual identity and highlights it much more than before.

18.1.3 Inside Yard Alternative

Regarding the alternative inside yards concepts:

= 57/65 (88%) feel that this idea could work to achieve their needs. They expressed their expectations of the inside yards to provide protected spaces for their families. At the same time, they emphasised that opening to the outside from the inside yards are desirable.

= 8/65 (12%) feel that this idea is out of date and the concept will lead to the reduction of built areas which was important to them. Also, they feel no one could use such spaces because of the weather.

18.1.4 Opening Protection

Regarding the protection of windows by Maishrabiya:

- = 52/65 (80%) of the people feel it is a good idea to be practised. It would be very pleasant for the family to enjoy observing what is outside without difficulty. Also, it will add much life to the outside facades of buildings.
- = 13/65 (20%) of the people feel that this idea is out of date. It is not acceptable to put such huge decoration elements when those do not work as the original ones in terms of ventilation due to air conditioning. Also, it is too expensive to construct.

18.1.5 Cul-de-sac Concept

Regarding the introduction of the Cul-de-Sac idea in subdivision designs:

- = 47/65 (72%) of the people feel that the implementation of these ideas would satisfy their needs. They feel it would preserve the common semi-private space for groups of houses. It will maintain the relationship of the neighbours and secure a good space for children playing. Their request to open the dead end at least by pedestrian route also, to provide a small roundabout for cars.
- = 18/65 (28%) of the people feel that this idea is out of date. The cul-de-sac produced a lot of bad environment in which garbage is accumulated and noise is generated. Also they feel it limits the identity of the people to only small portions of the society.

18.1.6 Insulation Materials

Regarding the use of insulation material for houses:

= 15/65 (23%) of the people express their knowledge about it, and even part of them used it during the construction of their houses. Most of it are the sheets of Polestrin. They feel that it is expensive and local materials should be developed to produce economical insulation.

= 50/65 (77%) of the people did not have any ideas about insulation materials and that they did not use it for the construction of their houses.

18.1.7 Lands Sizes

Regarding the size of lands which they would like to purchase for their future houses:

For square shape lands the sizes came as follows²:

100 x 100	(1)	case
50 x 50	(2)	cases
40 x 40	(2)	cases
30 x 30	(24)	cases
25 x 25	(14)	cases
22 x 22	(1)	case
20 x 20	(3)	cases
15 x 15	(1)	case
9 x 9	(1)	case

and a lot of rectangular lands shapes also. (Table 18-1)

18.1.8 Walking Distances

Regarding the different distances which people could walk without difficulty between the parking space of their cars and their houses, Mosques and suques were as follows:

Distance to house:

- The results show a variety of distances starting from 0.5 meters to 1000 meters. The average distance was 110 meters.

Distance to Mosque:

- The results show a variety of distances starting from 5 meters to 1000 meters. the average distance was 211 meters.

Distance to Suques:

- The result shows a variety of distances starting from 5 metres to 1000 meters. The average distance was 324 meters.

18.2 PEOPLES COMMENTS

the people were very generous with their comments and notes. It was a chance for them to express their feelings towards a variety of things. The comments which were collected could be classified into the following³:

- comments about the researcher.
- comments about the questionnaire.
- comments about the built environment.

18.2.1 Comments About the Researcher

About 62 notes were about the researcher. People expressed their gratitude for the researcher for the efforts which he put on the research, they expressed their hoping, prayers for the success on completion of the study. They noted that this was the first time for them to see such comprehensive study. Also the

organisation of the survey, they felt that the researcher encouraged many ideas for their future buildings.

18.2.2 Comments About the Questionnaire

About 39 notes were about the questionnaire only. Some of them expressed their feeling that more questions must be added to the questionnaire, others felt that the questionnaire was longer than what they expected and questions should be cancelled. Some of the notes were about the form of the booklet, they felt it was a good idea to be presented in such form.

18.2.3 Comments About the Built Environment

About 79 notes were about the built environments. The following are some examples of the comments:

- Lack of services (water, sewerage and telephones) in the new built area.
- Limited facilities (schools, clinics) in the new subdivision.
- Traditional buildings and their deteriorating conditions.
- The prices of lands and construction are very high.
- The owners of the flat complexes do not put much attention on the maintenance of the buildings.
- The height of buildings vary from one storey to 10 in one district.
- The size of lands are not big enough for people needs.
- Parking spaces are problems for people.
- Postal services are not sufficient.
- Safety consideration are not observed in the buildings.
- The hot weather does not encourage walking.

18.3 OBSERVATIONS

This section is a summary of the researcher observations regarding the previous works in Saudi Arabia. The researcher observations could be classified into two categories. Academic and general observations.

18.3.1 Academic Observations

These are the observations regarding the research environment in Saudi Arabia. During the two trips to Saudi Arabia for the purpose of the studies the researcher observed some difficulties to conduct the survey in a proper way, the following are some of the observations.

- Collecting data is too difficult in Saudi Arabia, most of the agencies (governmental or private) do not assist in providing data. The researcher had to go through a lengthy routine to get reports. Most of the time the simple excuse is that the information you are requesting is secret, not for publication. The idea of research is not acceptable yet.
- Photography was also a problem, the researcher had to be careful with what he was photographing. Some of the people refuse the idea of photographing their houses. It was not easy to photograph in public spaces.
- Peoples response to the questionnaire was very good. Even the interviews reflected the hospitality of the people and their willingness to discuss new ideas.

18.3.2 General Observations

These are the general observations which the researcher observed during this work in Saudi Arabia regarding the general conditions of the built environment. The following are some of these observations:

- The traditional houses are deteriorating except for the city of Jeddah in which the Municipality did a good job of preserving the old quarter.
- It is too costly to live in traditional quarters today because of maintenance costs.
- The housing market is not a stable market. For example the prices of lands vary from one place to another, also the rent values.

- Flats are rented empty, not even carpet or appliances. Air conditioning units also have to be supplied by the renter.
- For new married couples, it requires about 50-80 thousand Saudi Riyals to furnish their flats.
- Villa repetitive designs are found in every part of the country without consideration of the needs of each area.
- The Garbage collection system is not good enough, people do not like to keep the barrel of garbage in front of their own houses.
- Children prefer to play football on the streets rather than open spaces.
- There is no formal contracts between clients and contractors.
- There is no guarantee of the quality of construction for a period of a year at least.
- People built their own bumps to reduce the speed of traffic in the streets.
- Municipality use the sewer water for irrigation.
- Electricity breakdown because of the vast use of air-conditioning at certain times.
- The labour market is mostly non-Saudi.

It was surprising that the Saudi students answers were in line with the other groups answers. The intention of including them was to assess the views of those who had lived for long periods in western society about the changes in the built environment (it could be stated that their results are not significantly different to those of other respondents).

Table 18-1

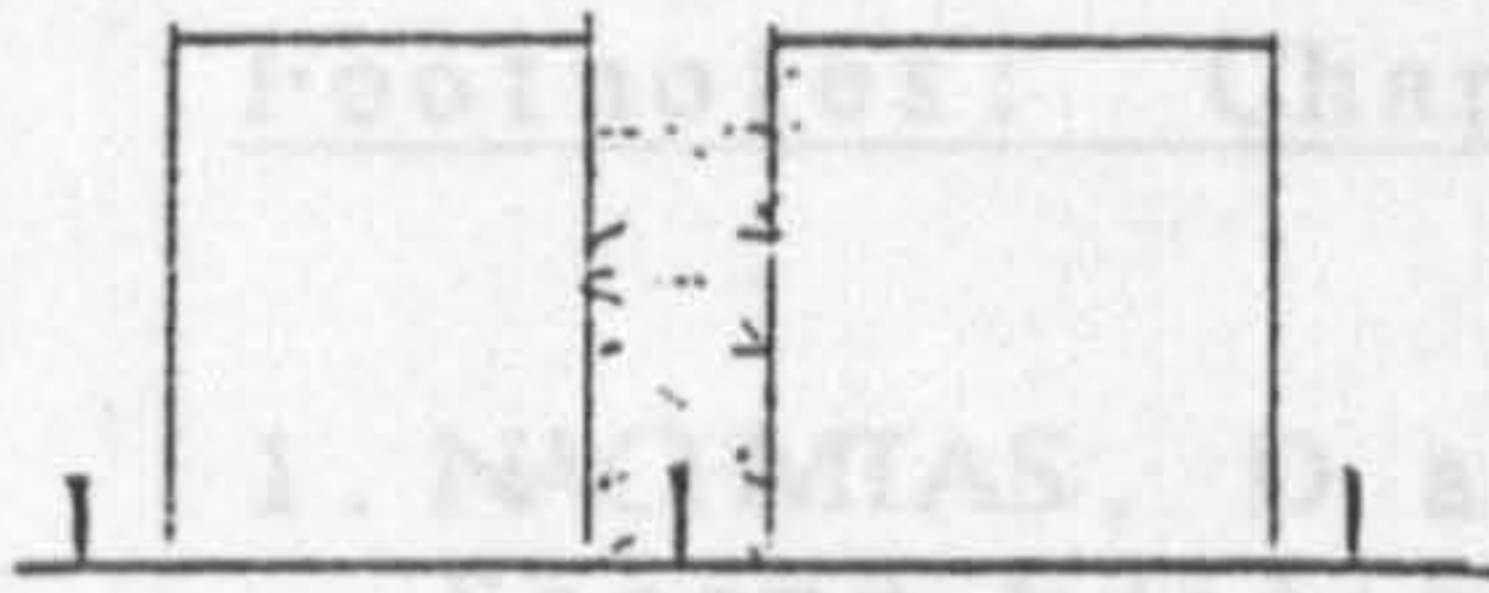
SUMMARY RESULTS OF THE INTERVIEWS

Source:

Author (A.S. Alafghani).

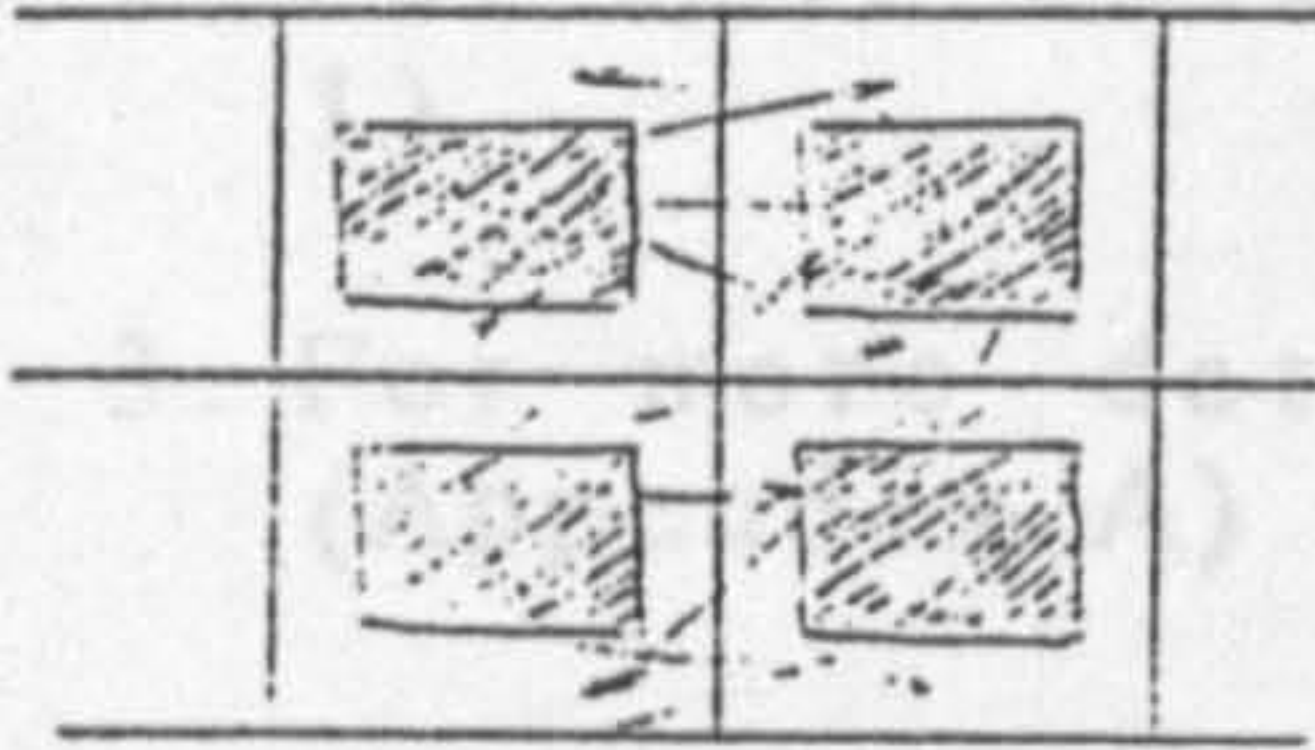
	1	2	3	4-1	4-2	5	6	7	8-1	8-2	8-3	Comments
	Sub Building Number	Value Building Floor	Aluminum Window Type	Figure 1	Figure 2	Material Function	Material Location	Calculation Purpose	Building Type Low-Cost House	Case - Weight	Case - Score	
1	1	1	1	2000	-	1	2	1	50	150	50	1
2	1	1	1	2000	-	1	2	1	150	200	20	
3	1	1	1	2000	2007	2	2	1	5	50	20	
4	1	1	1	2000	-	1	2	1	30	150	100	1
5	1	1	1	-	2000	2	2	1	15	150	200	
6	2	2	2	-	2000	1	2	1	300	200	500	
7	1	2	1	-	2000	2	2	1	5	200	200	
8	1	1	1	-	2000	1	2	1	5	15	5	
9	1	1	1	2000	-	2	2	1	20	200	500	
10	1	1	1	2000	2000	1	2	2	10	100	100	1
11	1	1	2	2000	-	1	2	1	10	10	100	
12	1	1	1	2000	-	1	2	2	100	100	100	1
13	1	1	1	2000	2000	2	2	1	50	20	10	
14	1	1	1	2000	2000	1	2	1	50	100	150	1
15	1	1	1	2000	-	1	2	1	100	100	50	
16	1	1	1	2000	-	2	2	2	100	500	500	
17	1	1	1	2000	-	1	2	1	30	10	10	
18	1	1	1	2000	-	1	1	1	5	12	10	
19	1	1	1	-	2000	1	2	1	5	200	100	
20	1	1	1	2000	2000	1	2	1	50	200	150	
21	1	1	1	2000	2000	1	2	2	10	50	10	
22	1	1	1	-	2000	1	2	1	100	300	1200	
23	1	1	1	2000	-	1	2	2	100	100	20	
24	1	1	1	-	2000	2	1	1	50	150	200	
25	1	1	1	2000	-	1	2	2	50	300	100	
26	1	1	1	2000	-	1	2	2	200	200	400	
27	1	1	1	-	2000	1	2	2	10	10	100	
28	1	1	1	2000	-	1	2	1	10	500	10	
29	1	1	1	2000	-	1	2	1	100	100	250	
30	1	2	1	2000	2000	2	2	2	100	200	100	
31	1	1	1	2000	2000	1	2	1	100	200	200	1
32	1	1	1	2000	-	1	2	1	15	15	20	
33	1	1	1	2000	-	1	2	2	5	15	3	
34	2	1	2	2000	-	1	2	2	15	15	15	
35	1	1	1	2000	2000	1	2	2	10	10	10	
36	2	2	2	2000	2000	1	2	2	10	2	5	
37	1	1	2	2000	-	1	1	2	3	100	50	
38	2	2	1	2000	2000	1	2	1	20	100	20	1
39	1	1	1	2000	-	2	1	1	100	100	5	
40	1	1	1	-	2000	2	2	1	50	15	15	
41	1	1	1	2000	-	1	2	1	2	5	5	1
42	1	1	1	2000	2000	1	1	1	20	100	500	
43	1	1	1	2000	2000	1	2	1	50	200	200	1
44	1	1	1	-	2000	1	1	1	10	100	200	
45	1	1	1	-	2000	1	2	1	1	15	20	1
46	2	2	1	2000	2000	1	1	1	50	500	500	
47	1	1	1	-	2000	2	2	2	50	100	100	1
48	1	1	1	2000	2000	1	2	2	100	1000	1000	
49	1	1	1	2000	2000	2	2	1	10	20	20	
50	1	1	1	2000	2000	1	2	1	20	100	50	
51	1	1	1	2000	2000	1	2	2	100	500	100	
52	1	1	2	2000	2000	1	2	2	10	200	200	
53	1	1	2	2000	2000	1	1	1	500	200	10	
54	1	1	1	2000	2000	2	1	1	5	100	20	
55	1	1	1	2000	-	1	2	2	10	500	500	
56	1	1	1	2000	2000	1	1	1	25	150	40	1
57	1	1	1	2000	2000	1	2	1	50	200	300	
58	1	1	1	-	2000	1	2	1	20	50	50	
59	1	1	1	2000	2000	1	2	1	100	200	300	
60	1	1	1	-	2000	1	1	1	100	100	100	1
61	1	1	1	2000	2000	1	1	1	100	200	500	1
62	1	1	1	2000	2000	1	1	1	10	30	20	
63	1	2	1	2000	2000	1	2	1	50	200	150	
64	1	1	1	2000	-	1	1	1	100	300	200	
65	1	1	1	2000	-	1	1	1	20	100	200	

[ملحق إلكتروني خاص ببيت المنزل السعودي]



١٢- هل تزامن بأن إحداهما الجانبية بين اللباني السكنية - الأكثر من الحج
بين الجيران - حسب أن الزاوية والنقطة تكون تقابل لبعضها البعض وتؤدي
إلى كسوف دهرية الآخرين؟

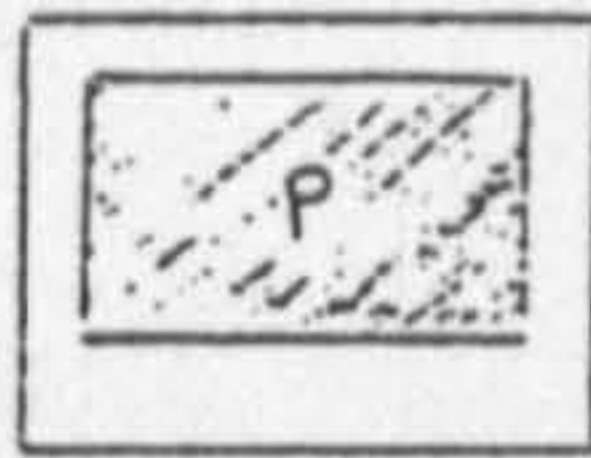
☒ آراءه ☐ لا آراءه



١٣- هل تزامن بأن نظام تصميم المكان (الفلل) في المخططات الحديثة يؤدي إلى
كسوف المساحات الخارجية (الضوايح)، وهذا يؤدي إلى كسوف
العائلات (البنات) عند استعمال الناء الخارجي حيث أنه كسوف؟

☒ آراءه ☐ لا آراءه

الرشح الحالي



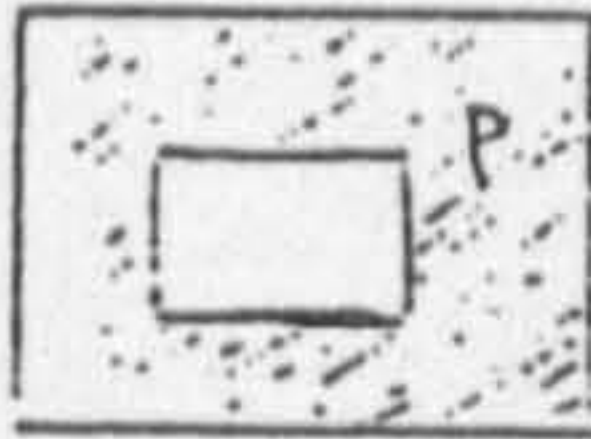
١٤- هل تزامن بأنه لو روعي في تصميم المكان أن يضم الناء (الرشح) إلى الداخل
بمنطقة الخارج بناءً بهذه الطريقة تزامن فيها دهرية العائلة وأيضا تؤدي
إلى تحسين مناخ جيد خاص بالمبنى؟

المادة ٢ (إضافة للبيان) - أرى به ..

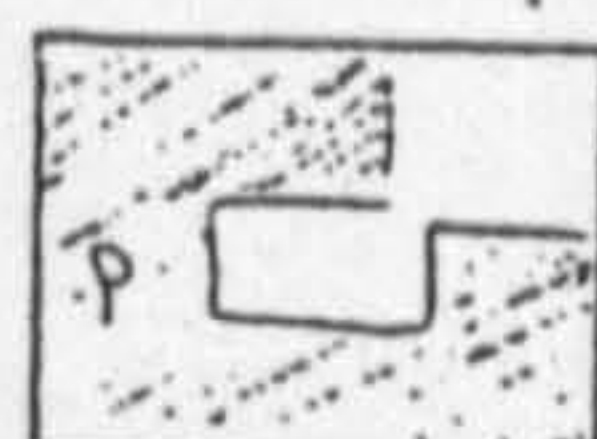
☒ آراءه

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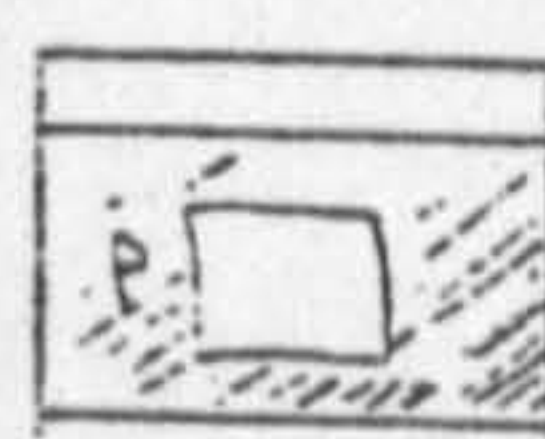
البدلي



البدلي



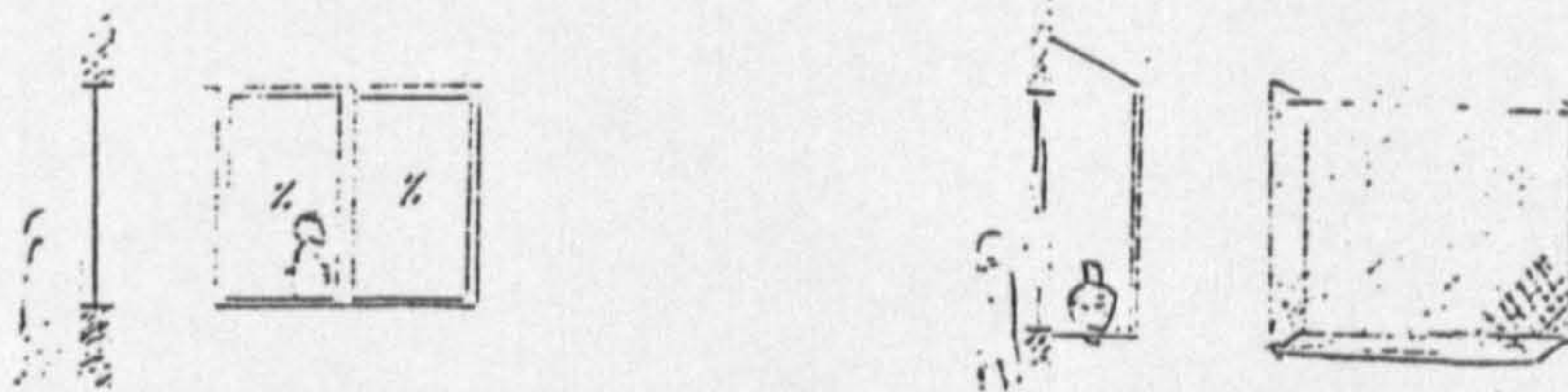
البدلي



١٥- ما هي أحفر تلك أرض تروى أن تقريبا وتبين يلزم - كذا -
نعم المخطط المخطط مع ...

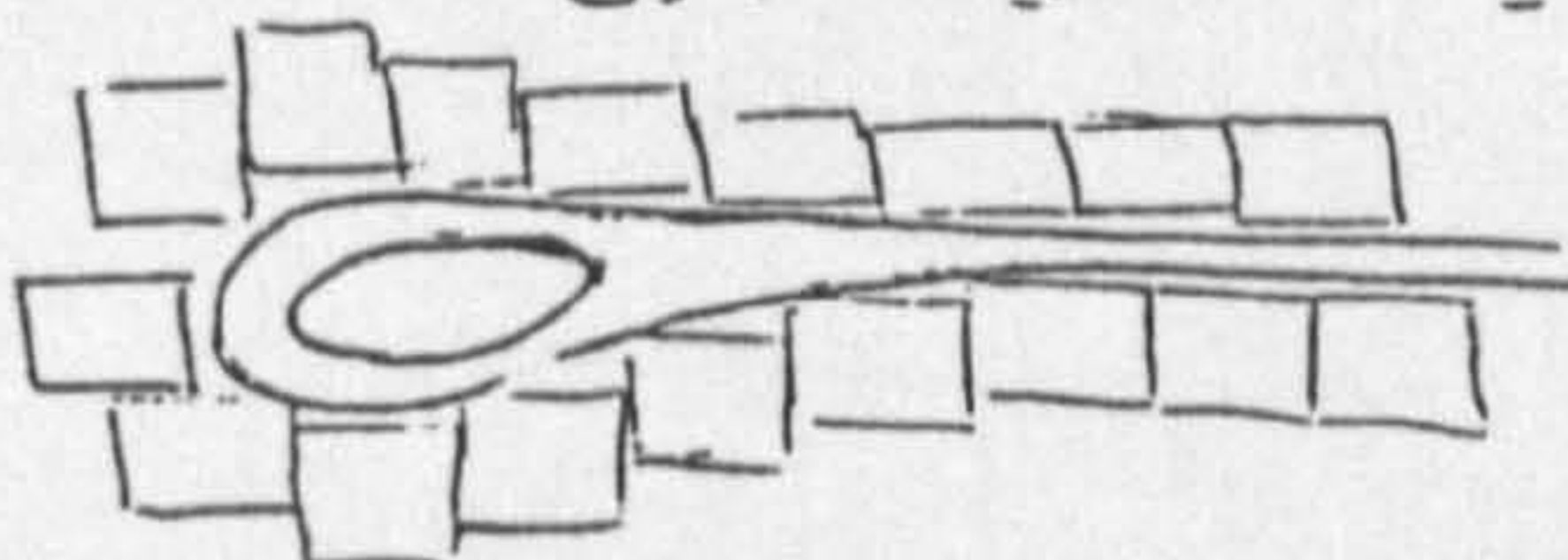


١٦- هل تزامن بأن القاعات الخارجية (الزائد) تكون ذات عاليت أدنى لارتفاع
المرسنة .. وأنه بهذه الطريقة تزامن تزامن تزامن - مناجاة - اجتماعيا؟



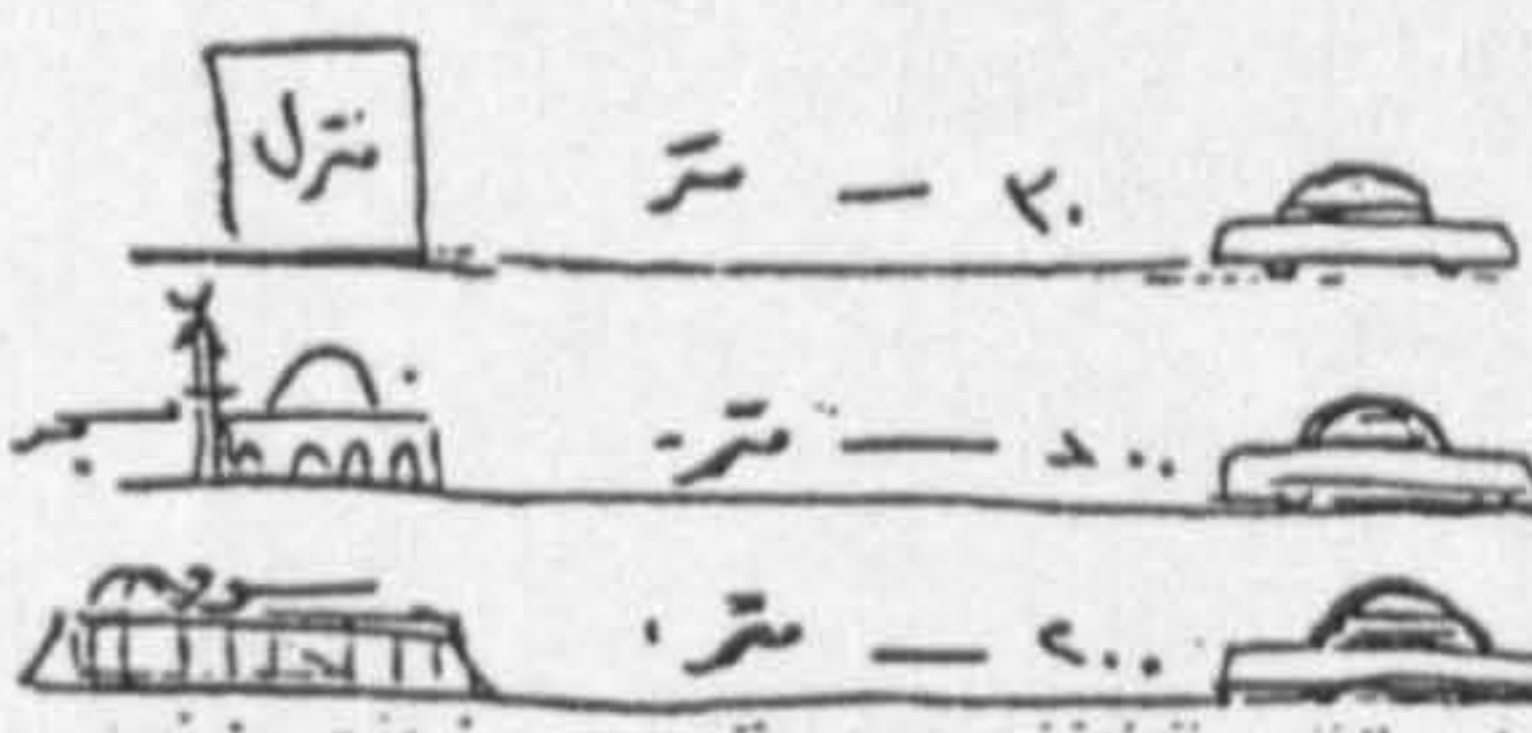
١٧- هل تتفق للمواد القاعات للزراعة في البناء .. (هل المبنى الذي سكن فيه الذين) تحتوي مواد بناء على مواد عازلة؟ ..
نعم - ما هي :
☒ آراءه ☐ لا آراءه

١٨- هل تزامن بأن استخدام فكرة القاعات الحديثة (الحارة الغير مضاءة) في المخططات الحديثة بناء على
تقنية أماكن مريحة للسكن فيها .. وهذه القاعات لا تتعرض للآفات الخارجية .. وتكون
بنات مخطط خاصة لبناء المنطقة لها .. وتعتبر المنطقة
الغنية منه خاصة للسكن فيها .. وتساو على تحسين مناخ
جيد في ظلل وتبريد جيدة ..



☒ آراءه ☐ لا آراءه

١٩- منع المسارات (المطلة) .. والتي توضع مدار مسطح أن تميل إلى الأماكن التالية
للزاد - المسج - المسج ..
ولذلك المساحة يجب أن تكون أدنى ما يمكن أن تميل بدون تعجب ..



أخي الكريم - إذا كان لديك أي توجيهات بخصوص مخطط المنزل السعودي يرجى توجيهها في الملف بجوهر الشكر.

Fig 18-1

INTERVIEWS SHEET

(An arabic guideline sheet for interviews).

Source:

Author (A.S.Alafghani).

Footnotes: Chapter 18

1. NACHMIAS, D and C. Research Methods in the Social Sciences, Second Edition. St. Martins Press, New York, 1981, p211.
2. For more detail, see the original interview sheets. (Fig 18-1)
3. For more detail, see the original Questionnaire Booklets. (Appendix A)

PART V

RECOMMENDATIONS & CONCLUSIONS

CHAPTER 19: RECOMMENDATIONS

CHAPTER 20: CONCLUSIONS

CHAPTER 19

RECOMMENDATIONS

19.1 GENERAL PHILOSOPHY OF RECOMMENDATIONS

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- 19.1.2 PEOPLE
- 19.1.3 IDENTITY
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19.4 FUTURE STUDIES RECOMMENDATION

This chapter is to present the recommendations which are based on the findings of the different previous investigations. The purpose of these recommendations is to improve the quality of living and to accommodate the peoples needs in accordance with the socio-culture environment of Saudi Arabia.

19.1 GENERAL PHILOSOPHY OF RECOMMENDATIONS

This section is to illustrate the general philosophy of the recommendations regarding the built environment in Saudi Arabia and how development needs to be controlled. All of these requirements and elements were produced as a direct or indirect result of the study investigations, questionnaire findings, interview findings or observations. To support the illustration of the requirements, references to the different findings will be noted. The general philosophy will be as a check list for the designer to consider in reaching the final case for Saudi Arabia. The following is the list of the elements which formulate the general philosophy:

1. Rules of Islam
2. People
3. Identity
4. Privacy
5. Activities
6. Economy
7. Lots
8. Accessibility
9. Services
10. Facilities
11. Environment
12. Decision Makers

These elements are identified as the following:

1. ISLAMIC RULES. To design a neighbourhood which will observe the guidelines of Islam legislation with its basic goals of establishing the healthy family and the balanced society.
2. PEOPLE. To accommodate the different groups of people and to provide a physical-structure and environment which satisfies their needs, observes their safety and to reach a harmonious society, both socially and financially.
3. IDENTITY. To design a neighbourhood which strengthens the identity of the people to their land, homes, neighbourhood and to themselves.
4. PRIVACY. To protect the privacy of everyone living in the neighbourhood and to establish the respect of other peoples privacy by strengthening visual and acoustical means that ensure family privacy.
5. ACTIVITIES. To encourage general acceptable activities to take place in the neighbourhood by considering the requirements of such activities.
6. ECONOMY. To develop a scheme which is economical and minimises the capital which will be needed to transform the image of the neighbourhood to the real world by avoiding the wasting of economic resources, as well as of efforts and time.
7. LOTS. To design different lots according to the peoples needs.
8. ACCESSIBILITY. To design the road system and the paths to minimise depends on cars and encourage walking where feasible with the maximum safety and pleasure.
9. SERVICES. To provide all the necessary services to every house and to any other areas in the neighbourhood.
10. FACILITIES. To provide the necessary facilities which will support living in the neighbourhood.
11. ENVIRONMENT. To design a neighbourhood which is providing different forms and techniques to accommodate the environment needs.
12. DECISION MAKERS. To design a neighbourhood which will be easy for the decision makers to approve.

19.1.1 Rules of Islam

The designer of neighbourhood in any Islamic community (such as the Saudi community) has to absorb the rules of Islam to produce a design which will allow the people to practice Islam and its teaching in neighbourhoods that encourage such practice. The following are the points to be concerned with: (Shariah and traditions).

A. Shariah (Quran, Sunna, Ijmma, Qiyas)¹...

According to the investigation of (Chapter 3 [Islam and the built environment]), the designer has to consider the requirements of the Islamic teaching regarding the built environment (family, hospitality, direction, economy and general requirements).

*This could be achieved through university education in the architectural schools in the Kingdom², also the publication of these requirements in the form of a booklet which could be distributed to outside designers.

B. Traditions...

According to the investigation of (Part II [The traditional houses]), the findings of the questionnaire (17.1.3 [Number of entrances], 17.4.3 [Neighbours relationship and its changes]), interview findings and observations, the designer has to consider these traditions of the people and work hard in preserving them.

*This could be achieved through investigations of the main traditions of each area and the requirements of these traditions in terms of space and organisation and the actual consideration of these requirements during the design process.

19.1.2 People

The designer has to consider the different groups of people who will live in the neighbourhood. The purpose of the neighbourhood is to accommodate people, to provide the physical-structure which will facilitate their needs, and to produce the environment in

which comfort and relaxation is enjoyed. The following are the different groups to concern with: (Sex, Age, Family Size, Income, Occupation, Health Situation, Responsibility and Nationality).

A. Sex (male, female).

According to the finding of the questionnaire (17.7.2 [Family status and members]), the designer has to consider the women needs inside the house and in the area surrounding the house.

*This could be achieved by designating certain parts of the house for unrelated male guests which do not conflict with the activities of the females in their area. For the area surrounding the house it could be achieved by considering the design of the neighbourhoods as cluster of houses which share one semi private space (baraha).

B. Age (Child, Youth, Old).

According to the finding of (17.7.3 [Age group]), the designer has to consider the different needs of the different age groups.

*This could be achieved by providing a safe place for the children to play and run with other children outside the house under the supervision of the parents (mother) and by providing yards inside the house to protect the family while playing with children. The old want to watch and talk with neighbours and friends. The semi-private space (Baraha) would be the concept to be recommended³.

C. Family Size (single, small, medium, large families).

According to the finding of (17.7.2 [Family status and members], 17.2.3 [Number of families and their relationship]), the family size could be as small as one person or as large as 20 persons. The designer has to consider accommodating them according to their needs.

*This could be achieved by considering designing spaces in the

neighbourhood (open spaces) for families only. Also allowing the construction of different house sizes to accommodate the different family sizes.

D. Income (low, medium, high).

According to the findings of the questionnaire (17.7.6 [Income and income groups]), the designer has to consider the accommodation of different income groups to live in one district.

*This could be achieved by considering the size of lands and its prices so that it would be handy to all people to purchase according to their income and saving.

E. Occupation (different type).

According to the investigation of (chapter 14 [The role of the other projects]) and the finding of the questionnaire (17.7.5 [Occupation]), the designer has to consider the accommodation of different people with different occupations to live in one district.

*This could be achieved by considering different sizes of houses which provide different spaces according to the needs of the people with different occupations.

F. Education (none, low, medium, high).

According to the finding of the questionnaire (17.7.4 [Education]), the designer has to consider the different needs of the different groups of people with different education levels.

*This could be achieved by providing the different means in the neighbourhood to accommodate the non educated (who do not read or write). For example the use of signs and colours to direct the people who can not read.

G. Health Situation (normal, handicap).

According to investigation of (chapter 15 [The Contemporary built environment]), the finding of questionnaire (17.1.4 [Number of

stories and elevator services]) and observation throughout the different cities of Saudi Arabia, the designer has to consider the different needs of the handicap people with the same degree of attention of the normal people.

*This could be achieved by providing certain elements in the neighbourhood and in the house. Special parking areas should be designated for handicap to be located at as near a point as possible to different facilities. The pedestrian pavements should be constructed to facilitate the use of wheelchairs. Toilets in the public facilities should be installed with the requirements of handicap people. Elevators should be provided in the public buildings and residential buildings which serve the handicapped⁴.

H. Responsibility (low, normal, high).

According to the investigation of (chapter 15 [The contemporary built environment]), interviews with people and observation, the designer of the neighbourhood has to consider the attitude of the people and their responsibility degree towards the surroundings.

*This could be achieved by the good selection of materials for public places (such as seats in the parks) and proposing penalties to be enforced on those who will be caught causing damage to public items.

I. Nationality (Saudi, Non-Saudi, Arab, Non-Arab).

According to the finding of the questionnaire (17.7.1 [Nationality]), the designer has to consider the needs of those people who are present in Saudi Arabia.

*This could be achieved by providing certain elements in the neighbourhood regarding directions which require the use of different colours or languages. Also certain spaces and elements could be considered in the design of the houses according to the needs of the people with different nationalities.

19.1.3 Identity

The designer has to consider the preservation of presenting the identity of the people. Identification is part of the human, any person needs identification to satisfy himself and to distinguish himself among other people. The following are the points to concern ourselves with: (Physical, Sense and Organisation).

A. Physical Identity (forms, contents, landmarks).

According to the investigation of (part II [The traditional houses]), the investigation of (chapter 13 [The role of the Ministry of Public Works and Housing] and chapter 15 [The contemporary built environment]), and the findings of the questionnaire (17.1.10 [Previous accommodation and reasons for moving], 17.3.7 [Satisfying of house and preference of moving], 17.4.1 [District classification], 17.4.5 [Satisfying of district and preference of moving] and 17.5 [City image]), the designer has to consider the image which will be produced at the end of the construction period. The image which people will attach their identity to.

*This could be achieved by considering different forms of buildings, the way they stand in relation to other buildings (a person would like to feel different from the other). Also the consideration of the contents of the neighbourhoods (facilities, public spaces, etc.). The consideration of different landmarks (minarets, fountain, roundabout). The house as a unit needs to have a lot of consideration during the design process to produce individual houses which will not be a repetition of other houses.

B. Sense (direction, vision).

According to the investigation of (Part II [The traditional houses]), the designer has to consider the different elements which support the sense of direction in the community and the general vision through the neighbourhood.

*This could be achieved by considering using different elements to assist the people to direct themselves in the different parts

of the neighbourhood (colours, signs, languages). Also by considering the final finishing which will contribute to the comfort of the vision (colours, texture).

C. Organisation (closed, open).

According to the investigation of (chapter 14 [The role of other projects]), the designer has to consider the type of organisation of the neighbourhood. This organisation relates to peoples identification with their neighbourhood.

*This could be achieved by considering the recommendation of administrative organisation which will consider taking care of the whole neighbourhood as a unit. It could be under direct Municipal supervision or under private organisation or preferably under the residents organisation. Also by encouraging groups to work together for the best of the neighbourhood (e.g. the neighbourhood watch).

19.1.4 Privacy

The designer should consider the privacy of the inhabitants in their houses and in the open spaces of the neighbourhood. The following are the elements to concern ourselves with: (Privacy requirements and Degree and Position of Privacy).

A. Privacy requirements (person, family, neighbours and friends, public).

According to the investigation of (Part II [The traditional houses]), the finding of the questionnaire (17.3 [Houses and privacy], 17.1.2 [Number of streets and elevations]) and the findings of the interviews (18.1.1 [Setback requirements], 18.1.2 [Villa layout], 18.1.3 [Inside yard alternative], 18.1.4 [Opening protection], 18.1.5 [Cul-de-sac concept]), the designer has to consider the privacy requirements of each individual, families from outside invasion.

*This could be achieved by considering the concept of separating the family quarter from the Male guests quarter in a way that

each section could perform well at the same time. The consideration of alternative inside yards so that the family could enjoy using it without outside interference. The consideration of protecting the windows with wooden screens which protect the family privacy and at the same time allow them to enjoy the outside surroundings. Also the consideration of prohibiting openings to be placed on the sides, towards the neighbours.

B. Degree and position of privacy (private, semi-private, semi-public public).

According to (the previous finding of a [Privacy requirements]), the designer has to consider the different means to protect the privacy at different locations inside and outside the house.

*This could be achieved by considering the design of a neighbourhood which will retrieve the traditional hierarchy of spaces starting from the house itself by providing its own internal courtyards (private space). The houses should be grouped in a way to produce an outside space (semi-private areas) which will be shared by certain groups of people who live in that area. The cul-de-sac system could be used as a concept to handle more houses in semi-public area.

19.1.5 Activities

The designer has to consider the different activities which will be generated by the people in the neighbourhood and their houses. The following are the elements to be concerned with: (Time and Place and Classification).

A. Time (frequencies, duration).

According to interviews and observations the designer has to consider the different activities of the people according to their time (e.g. children playing in the afternoon, people gathering at night).

*This could be achieved by considering the different items which will support the activities, e.g. tents could be installed in open spaces where children play.

B. Place (indoor, outdoor, size).

According to the finding of the questionnaire (17.1.1 [Building function], 17.3.1 [Terrace condition and its use] and 17.2.4. [Servants and drivers and their living quarters]), the designer has to consider the different places where activities take place.

*This could be achieved by carefully studying the size of spaces required for each activity and the way to protect that place, e.g. children playing need an open area with a reasonable space in which children could play and run at the same time the location of the space outside the house requires special attention in which parents could observe their children. Also the designating of special spaces which is attached with the main services area such as kitchens to be connected to the servants place.

C. Classification (religious, cultural, recreational, commercial, etc.)

According to the finding of the questionnaire (17.1.1 [Building function] and 17.4.2 [Facilities availability]), the designer has to consider the different needs of the different activities in the neighbourhood and in the houses.

*This could be achieved by considering the different requirements of spaces and locations to accommodate the different activities in the neighbourhood. For example the commercial activities should be conducted in a way that do not disturb the peace of the residential area. The commercial activities need to be concentrated in some major routes which are leading to other major activities such as religious activities (Mosques). 10% of the total neighbourhood could be assigned to commercial activities.

19.1.6 Economy

The designer has to consider the economy situation of the design in terms of real money. One cannot separate economy from the design process. The following are the elements to concern ourselves with: (Use of Cost and market).

A. Use (personal, investment).

According to the investigation of (chapter 12 [The role of the REDF], chapter 13 [The role of Ministry of Public Works and Housing] and chapter 14 [The Role of the other projects]), and the findings of the questionnaire (17.2.1 [Owning and renting situation] and 17.7.6 [Income and income group]), the designer has to consider the ability of the different clients in complying with the different specifications and its costs. A house could be built for the owner use or for investment (renting).

*This could be achieved by direct discussion with the different clients to absorb their wishes and to use alternative specifications when necessary to produce the same functional project but with different levels of finishing.

B. Cost (layout, material, labour, construction, management).

According to the investigation of (chapter 12 [The role of the REDF] and the findings of the questionnaire (17.1.8 [The use of mechanical and electrical devices], 17.1.9 [Traditional and western toilets], 17.2.1 [Owning and renting situation] and 17.7.6 [Income and income group]) and the finding of the interviews (18.1.6 [Use of insulation materials])), the designer has to consider the ability of the people to pay for construction of houses.

*This could be achieved by considering simple layouts of houses, alternative local materials. Also the use of local materials will produce jobs for local labours.

C. Market (advertising, selling, buying, renting, giving).

According to the investigation of (chapter 12 [The role of the REDF] and chapter 13 [The role of Ministry of Public works and

Housing]), the findings of the questionnaire (17.3.7 [Satisfying of house and preference of moving]) and observation, the designer has to consider the present situation of housing with regard to the market needs.

*This could be achieved by considering different items which will attract people to live in such a neighbourhood or a house, such as subsidising initial commercial facilities (shops etc.,) so that these facilities start to work as soon as the people come to live in the district. The subsidies could be removed after viability has been achieved.

19.1.7 Lots

The designer has to consider the accommodation of different people groups. The lots of land represents the body of the urban form. Each lot stands with its limits to represent something. The following are the items to be concerned with: (Size and shape and type).

A. Size and Shape (small, medium, large, regular, irregular).

According to interviews findings (18.1.7 [Lands sizes], the designer has to consider the planning of all the above sizes and shapes in the neighbourhood.

*This could be achieved by considering the design of a neighbourhood which follows the concepts of traditional neighbourhoods in providing varieties in lands, sizes and the mix arrangements among the neighbourhood.

B. Type (flat, villa, palace, etc.)

According to the finding of the questionnaire regarding the different type of accommodation, the designer has to consider the different lots required for each type.

*This could be achieved by considering varieties of lots which will accommodate the different type of houses with careful

sitting and locations in the neighbourhood by assigning the major roads to accommodate the flat buildings.

19.1.8 Accessibility

The designer has to put more attention to the accessibility system in the neighbourhoods. Accessibility to houses and different areas is an essential element in the design. the following are the items to be concerned with: (Pedestrian and vehicular and safety).

A. Pedestrian (walking, resting).

According to the findings of the questionnaire (17.6 [Transportation]) and the interviews findings (18.1.8 [Walking distances]), the designer has to consider encouraging walking within the neighbourhood.

*This could be achieved by considering pedestrian routes to be designed as a network which covers the entire neighbourhood. The pedestrian routes should be separated from the vehicular routes as far as possible. Shades should be provided throughout the routes (trees, wooden shading devices, small tents) to provide places for resting if necessary.

B. Vehicular (Road sizes, vehicular sizes, traffic capacity, parking, buses).

According to the finding of A, the designer has to consider the presence of the different vehicular use in the neighbourhood in a way that it does not conflict with encouraging walking.

*This could be achieved by considering the design of the (cul-de-sac) streets in which only the cars of the residents of that area will be allowed to park. Parking areas should be designated in an area far from the main area of public gathering. The width of streets should not be very wide. The buses waiting area should be designed in a way to protect the people who are waiting from the harsh environment by providing shading devices.

C. Safety (direction, noise, pollution, accidents).

According to the investigation of (chapter 15 [The contemporary built environment and the findings of A, the designer has to consider the safety of the people regarding the different problems associated with the circulation system.

*This could be achieved by considering the separation of pedestrian routes from vehicular ones in discrete housing areas, the installation of walking signals and signs for different facilities (schools), and considering the design of roads is irregular (non-straight lines) to reduce speed of cars. The cul-de-sac roads will reduce the amount of noise in the neighbourhood by slowing traffic and reducing the amount of through traffic.

19.1.9 Services

The services have to be provided in the neighbourhood before people move in. Services are the blood of the neighbourhood, without it the physical structure is dead. The following are the items to be considered: (Classification and Supplier).

A. Classification (electricity, water, sewerage, telephone, gas, elevators, post and fax).

According to the investigation of (chapter 15 [The Contemporary built environment] and the finding of the questionnaire (17.1.4 [Number of stories and elevator services], 17.1.5 [Electrical, water, sewerage, telephone, gas services] and 17.2.2 [Period of living[]], the designer has to consider the necessity of each services to the buildings.

*This could be achieved by considering the different connections and fitting required to each of them. Electricity, water, sewerage are considered the most important services which houses have to have to be supplied with before living in them. Also the elevator service to be specified to the building with four storeys or more.

B. Supplier (private, public).

According to the investigation of (chapter 14 [The role of the other projects] and chapter 15 [The Contemporary built environment]), the designer has to consider the different alternative ways to supply such services.

*This could be achieved by studying the possibility of designing small water treatment for certain neighbourhoods. Standby electrical stations to be installed for different facilities in the neighbourhood. Private companies could be involved in providing such facilities.

19.1.10 Facilities

The designer has to consider the different facilities which support normal living in neighbourhoods. Facilities are the bones of the neighbourhood. The following are the items to be concerned with: (Classification and Organisation).

A. Classification (Mosques, suque, clinic, police, fire station, schools).

According to the finding of the questionnaire (17.4.2 [Facilities availability]), the designer has to consider the different facilities which support the neighbourhood.

*This could be achieved by designating certain areas for the different facilities. The mosque has to be the focal point of the neighbourhood. The suque could be designed in a mall concept which could be covered, the shops could be located on the main road to the mosque. Also different areas should be designated to the other facilities from the early stage of design.

B. Organisation (private, public).

According to the investigation of (chapter 14 [The role of other projects]) and observation, the designer has to consider the way in which the different facilities would be organised.

*This could be achieved by designating certain facilities for the private sector such as clinics, shops, and the other could be under the responsibility of the governments different agencies. Also the Mosque and shops to be constructed at the early stage.

19.1.11 Environment

The designer has to consider the different means to deal with the environment surrounding the area to be designed. The following are the items to be concerned with: (Land, Climate and Health).

A. Land (Geological setting, topography, natural elements).

According to the investigation of (chapter 2 [Saudi Arabia] and chapter 15 [The contemporary built environment]), the designer has to consider the nature of the site with regard to the above elements.

*This could be achieved by considering the best foundation system according to the geological setting of the site. The use of the natural topography of the site by getting advantages of the situation in producing different levels houses. Also the use of existing natural element (such as trees) to be saved and used in the original design.

B. Climate (temperature, solar radiation, humidity, rain, wind)

According to the investigation of (chapter 2 [Saudi Arabia]) and the findings of the questionnaire (17.1.6 [Lighting during the day time in houses] and 17.1.8 [Ventilation in the houses]), the designer has to consider the different means by which the harsh climate of the country could be overcome.

*This could be achieved by considering the following:

- Cross ventilation as the basic system for designing houses⁵.
- The stack effect, allow air to flow by the simple concept that hot air is lighter than cold.

- Central courtyards to provide a ventilation shaft which will help in the air circulation⁶.
- The use of water fountain (without wasting much water)⁷.
- The use of insulation materials for the outside walls and the roofs, (local materials such as mud and the palm tree leaf and double roofing concept could be used).
- The use of wood as part of the building materials.
- Providing shading devices throughout the pedestrian routes in the neighbourhood.
- Considering the design of houses as a cluster which are grouped around an open area which is not that wide.
- Planting trees which do not consume a lot of water.

C. Health (disease, noise, pollution).

According to the finding of the questionnaire (17.1.10 [Previous accommodation and reason for moving]), finding of the interviews and observation, the designer has to consider preserving the general health of the environment in the neighbourhood.

*This could be achieved by considering good services especially sewerage network connection so that the main source of disease is controlled in the neighbourhood. The controls of vehicular traffic by the cul-de-sac road system will reduce the noise source and the pollution degree in the neighbourhood. Reducing dependence on air conditioning units will also reduce the noise.

19.1.12 Decision Makers

The designer has to consider the system of decision making in Saudi Arabia and understand it. Those who make decisions in the country have a lot of effect on types of design. The following are the items to concern us: (Government, Organisation and Personal).

A. Government (offices, regulations).

According to the investigation of (chapter 10 [The role of

Ministry of Planning], Chapter 11 [The role of Ministry of Municipal and Rural Affairs]) and observation, the designer has to consider the different governmental offices and regulations during the design process.

*This could be achieved by the designer identifying all the regulations which are presently valid in the country. Also by establishing the link with different Governmental offices. The presentation of the different causes and functions of the design scheme will help in changing the governmental decisions.

B. Organisation (contractor, suppliers).

According to the investigation of (chapter 15 [The contemporary built environment]) and observation, the designer has to consider these organisations roles in the decision making structure.

*To achieve this the designer has to produce a sufficient specification which will enable the contractors to decide on the best way to organise the construction and the supplier of materials to check about their ability to get the necessary materials.

C. Personal (owner).

According to findings of the interviews, the designer has to consider the decision of the owner. The owner could be a person or a group of persons.

*This could be achieved by considering the different wishes and images of the owner. Also direct consultation with the owner could help in finalising the decision.

19.2 DESIGN RECOMMENDATION

This part is concerned with the design recommendation, they are based on the finding in the work so far. Since the study is concerned with the development of the house and its surroundings, the following are the design criteria recommended for a subdivision and house design.

19.2.1 Subdivision Design Recommendations

The following are the recommended criteria in subdivision design by which the preservation of people values, accommodation of their needs and the encouragement of social integration could be achieved.

== Lot Sizes

==Vehicular Routes (Streets)

- *Cul-de-sac

- *Road Length

- *Car parks.

==Pedestrian Routes (Pathes)

- *Networks

- *Baraha

- *Houses on pedestrian routes.

==Facilities

- *Mosque

- *Commercial

== Lot Sizes

It is recommended that the subdivision design considers different plot sizes to be available in the neighbourhood.

- The smallest plot size is 100 Square meters.
- The average plot size is 400 square meters.
- The larger plot size starts from 625, 900 square meters and so on.

- The plot could be rectangular or any other shape. Rectangular plots should not exceed 2:1 ratio. (Fig 19-1 to 19-8)

[This will give the chance to different income groups to live in the same area].

==Vehicular Routes (Streets)

It is recommended that the subdivision design consider the following for the vehicular routes.

* Cul-de-sac

- The cul-de-sac should be the character of about 2/3 of this residential streets⁸. (Fig 19-1, 19-2, 19-3, 19-4 and 19-8).
- It must be a two-way route.
- A small turning circle should be placed at the end of the cul-de-sac.
- The end of the cul-de-sac should not be closed for pedestrian movements.
- The cul-de-sac should not accommodate more than 40 houses⁹.
- The cul-de-sac length should not exceed 250 meters.

[This will give the chance for the people on this cul-de-sac to live in a more comfortable area since the traffic will be limited mainly to their own cars. The sense of security will be enforced and this will encourage people to be familiar with their neighbours].

*Street length

- Streets should not be straight for more than 200 meters.
- The width of the vehicular road plus pavements should not be more than 8 meters.

[This will reduce the dusty wind problems in the community. Also it will help in reducing the speed of vehicals in the neighbourhood. The narrow streets provide more shade for the pedestrian. The short street lengths reduce the sense of anonymity felt by the community in new environment and creates variety in the street shape].

*Car parks

- It is recommended that cars should not be parked on the streets (sides of streets). (Fig 19-1).
- Specific areas should be designated for parking cars.
- The parking should be in small numbers and preferably be visible from some houses.

[This will assist in reducing the width of the streets and give an element of security to the parking].

=Pedestrian Routes (Paths)

It is recommended that the subdivision design considers the following for pedestrian routes.

- Network
- The pedestrian routes should form a network that connects the different parts of the subdivision. (Fig 19-1).
- The pedestrian routes should direct movement easily toward the Mosque.
- The pedestrian routes are only for peoples use, but it should be wide enough for emergency and services vehicles to be driven when needed (2.5 meters at least).

[This will give shaded paths which will encourage the people not to use their cars locally].

*Baraha (open spaces)

- It is recommended that Barahas (open spaces) be introduced when designing the pedestrian routes. (Fig 19-1, 19-2).
- The Baraha is to be the rest area.
- Each Baraha could be surrounded by a number of houses.
- The open spaces are only for pedestrian movement; cars are not allowed in these areas.
- The smallest Baraha is 10 x 10 meters to function well for different activities.
- The maximum Baraha (open space) is 25 x 25 meters, for which shading will be required.
- The Baraha (open space) is needed to be equipped with seats, water fountains and vegetation to make it pleasant and cool.

[This will give the chance for the people to share the open space, especially those who are facing the space. It will allow them to sit, and the children to play in the safe place].

*Houses on pedestrian routes

- It is recommended to consider designing plots of land which have no direct access to the main vehicular routes.
- The pedestrian routes should serve these plots.
- The car parks will serve the people who will live in these plots.
- The maximum distance between the car park and the plot must not exceed 100 meters.
- Garbage collection areas should be designated at the entrance of the pedestrian routes on the main streets. (Fig 19-1).

[This will encourage the people to purchase plots on the pedestrian routes only].

==Facilities

It is recommended that the subdivision design considers the following for the facilities needed:

*Mosque

- It is recommended that the Mosque be the focal point of the subdivision. (Fig 19-1).
- The Mosque needs to support a neighbourhood of 300 houses.
- The Mosque needs to accommodate up to 500 persons.

[This will provide the necessary religious facility for the people living in the subdivision].

*Commercial (shops)

- It is recommended that shops need to be provided in the subdivision.
- It is recommended that shops be located on the main routes to Mosque. (Fig 19-1).

[This will provide the incentive for the people to walk and get out of their houses for the purpose of praying in the Mosque and shopping from the small shops on the way to the Mosque. This will encourage the social interaction among the neighbours through their meetings every day on the way to the Mosque].

19.2.2 House Design Recommendations

The following are the recommended criteria in house design by which the preservation of personal privacy could be maintained.

= Layout

- * Quarters
- * Inside yards
- * Built area

= Outside walls

- * Openings
- * Adjacent walls

= Terrace

= Building height

= Layout

It is recommended that the house design considers the following for the layout of the house:

*Quarters

- The house should contain family and male guest quarters.
- For those who intend to have servants (female) to work inside their houses, servant quarters is recommended to be added.
- Each of these quarters should work for its designated people at the same time and not to conflict with the functions and the privacy of others. (Fig 19-9 to 19-15).

[This will allow the family to use its area during the presence of male guests. The servant could work in her quarter without the interaction with the male presence at home].

*Inside yards

- It is recommended that the house design considers the use of the internal yards concept. (Fig 19-9 to 19-15 & Appendix H).
- It could be closed or partially open.

[These inside yards will provide a space for the family to practice some of daily life activities without the privacy invasion of an outsider. Children could play in this yard with the supervision of the mother, also they are more likely to support vegetation and improve the cooling of the house].

*Built area

- There should be no restrictions on the "Built Area". The owner could build on 100% of the land if he could provide the necessary lighting and ventilation for all sections of the house.
- There should be no requirements for setbacks.

[This will give the owner the choice of designing his house in the way that suits his needs and desires. It will assist the use of the inside yards].

= Outside walls

It is recommended that the house design considers the following for the outside walls.

*Openings

- It is recommended that openings on the outside walls be reduced to the minimum.
- No openings should be allowed to be open on the neighbours sides if they invade the privacy of the neighbours.
- Openings to public spaces should be protected by visual devices (Mashrabiya). (Fig 19-16).
- Openings must function for light and ventilation.

[This will allow the different parts of the house to be light and ventilated naturally. Also it will protect the neighbours privacy].

*Adjacent walls

- Adjacent walls should be strong enough to stand alone when the other house is demolished.
- The wall should be fire resistant for a minimum of 1 hour.
- The wall at the terrace should be high enough for security reasons (3 meters).
- The wall should control noise transmission. The wall must resist (50 DB, i.e. 300 mm masonry).

[This will enable house design to follow the traditional adjacent design].

= Terrace

- It is recommended that the terrace walls be higher than eye level (2 meters at least) where it is possible to look over a neighbour property.
- Part of the terrace could be covered to provide shade.

[This will allow the family to use its terrace often and even enjoy the cool nights by sleeping there].

= Building Height

- It is recommended that building in the neighbourhood do not exceed three stories.
- Not all houses will be three stories.
- The houses which exceed one storey need to observe the recommendations for openings (see above).

[This will overcome the need for elevators and it will provide the necessary floor area for small plots to accommodate larger families].

It should be noted that these basic criterias do not prescribe a particular building form or subdivision form. They are only defining the right of the owner, neighbours and the community. They are to observe the following three aspects:

a. Health

The subdivision and houses must preserve the health of occupants and society in general.

b. Safety

The new buildings must not represent a safety hazard either with structure or equipment, whether to its occupants or society.

c. Nuisance

The new building must not cause any nuisance to others particularly by noise, smell or invasion of privacy.

In addition to these three aspects it is recommend that new buildings should not rely totally on mechanical services. They must still be inhabitable under condition of electricity failure.

19.3 GENERAL RECOMMENDATIONS FOR ADMINISTRATIVE IMPROVEMENTS

According to the investigation of the study and the different findings there are some agencies which could be linked directly to the development of the built environment. These agencies are the following;

- Ministry of Planning.
- Ministry of Municipal and Rural Affairs.
- Real Estate Development Fund.
- Ministry of Public Works and Housing.
- Private Sector.
- Burocratic Efficiency

19.3.1 Ministry of Planning

The Ministry of Planning is the governmental agency which prepared the Five-Year Development Plans¹⁰, The following are recommendations regarding the improvement of its role in the built environment development.

1. The development Plans need to encourage development in the country on the basis of utilising local resources and local needs.

[This could be achieved by highlighting the local resources in its plans. The different local materials (building materials) and traditional techniques to be used as alternatives for the different projects in the Kingdom].

2. The Ministry of Planning needs to evaluate the present situation of other Ministries in accordance to the guidelines of the previous Five-Years Development Plans.

[This could be achieved by presenting the different problems and difficulties associated with the implementation of the previous plans. Reports could be published about these problems as the achievement reports were published].

19.3.2. The Ministry of Municipal and Rural Affairs

The Ministry is the governmental agency which has the authority to implement the different building regulations and to control the built environment through its different Municipalities all over the country¹¹. The following are recommendations regarding the improvement of its role in the built environment development.

1. Existing building regulations need to be revised (changed).
[This could be achieved by considering different studies by the Ministry itself or by considering outside studies about the existing built environment (for example this study, which recommends changes on subdivisionn and house regulations) see 19.2].

2. The Ministry needs to consider traditional design concepts to be implemented in future designs.
[This could be achieved by opening the door to alternative designs to be accepted].

3. The Ministry needs to have an informing role regarding the type of designs and advantages and disadvantages of them.
[This could be achieved by presenting existing problems which could be noticed in the built environment in an existing hall at each Municipality or by a leaflet to be distributed to the people with the building permission documents].

19.3.3 Real Estate Development Fund

The (REDF) is the governmental agency which provides the fund for constructing houses¹². The following are recommendations for improving its role in the built environment development.

1. The REDF needs to have a high role in the design of the houses, for the sake of improvement.

[This could be achieved by regulating the distribution of that fund. Funds will not be given to construct houses with designs of which do not meet the basic criteria of Health, Safety and Premises. Health: basic services (water supply, sewage, electricity) to be available in the subdivision before constructing the house. Safety: adequate structure and foundation to be considered in the design. Premises: these covered under 19.2]

2. The REDF need to encourage low-cost houses.

[This could be achieved by abolishing the requirements of expensive materials (marble, three pieces toilets)].

3. The REDF need to assist the most low-income group.

[This could be achieved by lending money for purchasing lands beside loans for construction (those who prove that their income is less than certain amounts)].

4. The REDF needs to encourage saving in construction spending. [This could be achieved by highlighting to the public that the 300,000 SR is the maximum which people may borrow. They should not be encouraged to borrow more than they can pay back. The actual amount they have borrowed should be certified].

19.3.4. Ministry of Public Works and Housing

This Ministry is the governmental agency which is responsible for constructing public housing in the country¹³. The following are recommendations for improving its role:

1. The Ministry need to encourage alternative designs in its projects.

[This could be achieved by designing housing with the traditional concepts such as courtyards, and by encouraging research into new types¹⁴].

2. The Ministry need to supply houses to the public.

[This could be achieved by distributing the existing housing units to the public. The flats projects could be assigned to the people on a rent basis, while the villa projects could be assigned to the people on a lease or purchase basis].

3. The Ministry need to be involved in the subdivision development.

[This could be achieved by considering the development of government owned lands by the Ministry. These lands could be designed and connected with services and to be sold or distributed under the Ministry administration].

19.3.5 Private Sector

The private sector in Saudi Arabia is involved in the development of the built environment. The following are recommendations to improve its role:

1. The private sector need to finance housing.

[This could be achieved by establishing financial institutions whose function is lending money to the public for the purpose of buying or constructing houses].

2. The private sector need to invest in subdivision development.

[This could be achieved by considering the development of new subdivision on the basis of providing full services by the private sector. Sewerage, water and electricity to be connected in the subdivision before selling them to the public. Also, the private sector could invest in the maintenance of subdivision after people are living there (a maintenance contract)].

3. The private sector need to invest in building material development.

[This could be achieved by considering the investment in local industries. The local building materials such as mud, stone and local building techniques such as Mashrabiya are needed. These materials could be produced in commercial quantities with acceptable prices if the investors make an effort in developing these industries. The government could also encourage this development by subsidising such industries].

9.3.6 Burocratic Efficiency

This study has made recommendations for controls of the houses stock. This is always a danger in such a process of increasing unnecessary the Burocratic procedures introduced before construction can start. This is not the intension. In fact, it is recommended that as far as is politically possible, all procedures are made as easy as possible. In this respect, a local office that could deal with all aspects of development - land distribution - finance - building control, etc., would be an ideal solution.

19.4 FUTURE STUDIES RECOMMENDATIONS

At the end of this study, the researcher would like to recommend future studies which are related to the development of the built environment:

The First Study:

(Architectural and Urban Study).

At the beginning of 1990, the Ministry of Municipal and Rural Affairs with approval by the Council of Ministries, set new boundaries for the Saudi Cities. Its main objective is to prohibit the urban development beyond certain limits of the cities. As a result of this regulation there will be a time when high density development will be the characteristic of the Saudi Cities. On this basis the researcher recommends a future study about the development of high-density urban houses¹⁵.

The Second Study:

(Building-Science Study).

With the existing situation of most building material which are used in the contemporary built environment being imported, the researcher recommends a future study for developing local material to seek the possibility of producing local building product in commercial quantities. This could be in two areas of study.

- a. An example of traditional materials and the evolution in today world (for example - mud blocks).
- b. The formulating of new modern industrial products (for example - Mashhrabiah by machines instead of hands)

The Third Study:

(Economical Study)

With the existing situation of the REDF as the only financial institute which provides funds for housing construction and with

its limits in the present, the researcher recommends a future study about alternative financial institutions. These alternatives could be investigated on the circumstance of the open market of Saudi Arabia and the ability of the private sector to subsidise housing.

Fig 19-1 Subdivision Layout (1)

Main Elements of Fig 19-1

- The arrangement of different lot size
- The introduction of the Baraha (open spaces).
- The use of cul-de-sac routes for traffic.
- The consideration of pedestrian network to cover the whole subdivision.
- The mosque is the focal point of the scheme.
- The main routes to the Mosque are for mixed use (housing and commercial).
- Cars do not reach all houses.

- The size of this subdivision is 660 m x 525 m.
- Total area of 346,500 square meters which is approximately 0.347 square kilometers.
- The total approximate built area = 274,341.
- The ratio of built area to total area = 0.79%.
- The total approximate length of the network of roads = 4.7 kilometers.

- (The difficulties with this plan seem to be the services connections).

Design Assumptions (for this particular scheme).

1. Each household is allowed 1 public car parking space, households with more than 1 car have to provide parking on their own lands.
2. No dwelling is allowed to be more than 3 floors high except for the commercial area which is allowed to 4 floors high.
3. Each plot is for one family dwelling only. Such a family may be nuclear or extended.

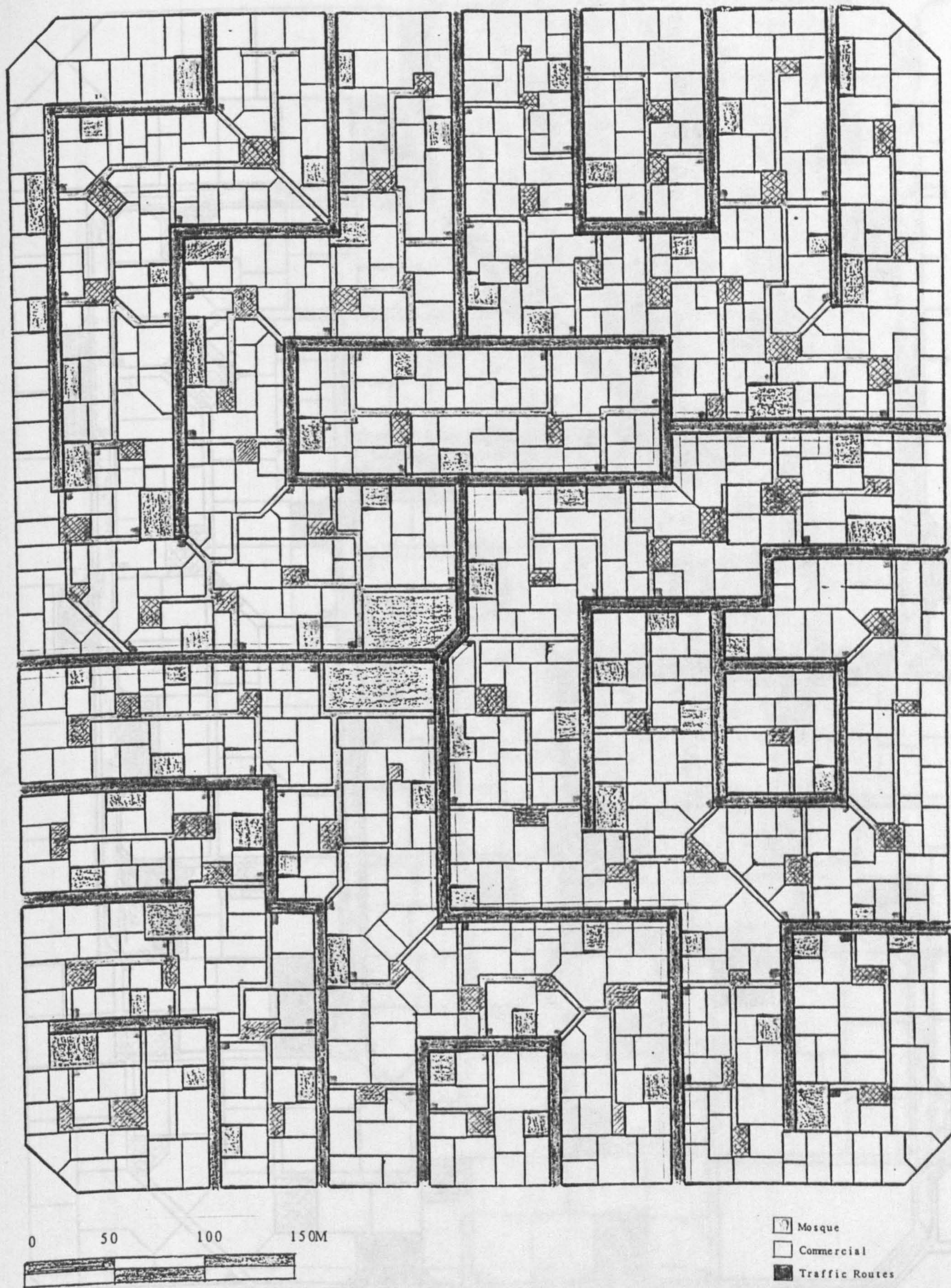


Fig 19-1 SUBDIVISION LAYOUT (1)
(Appliation of recommended concepts of
neighbourhood design).

Source: Author (A.S. Alafghani).

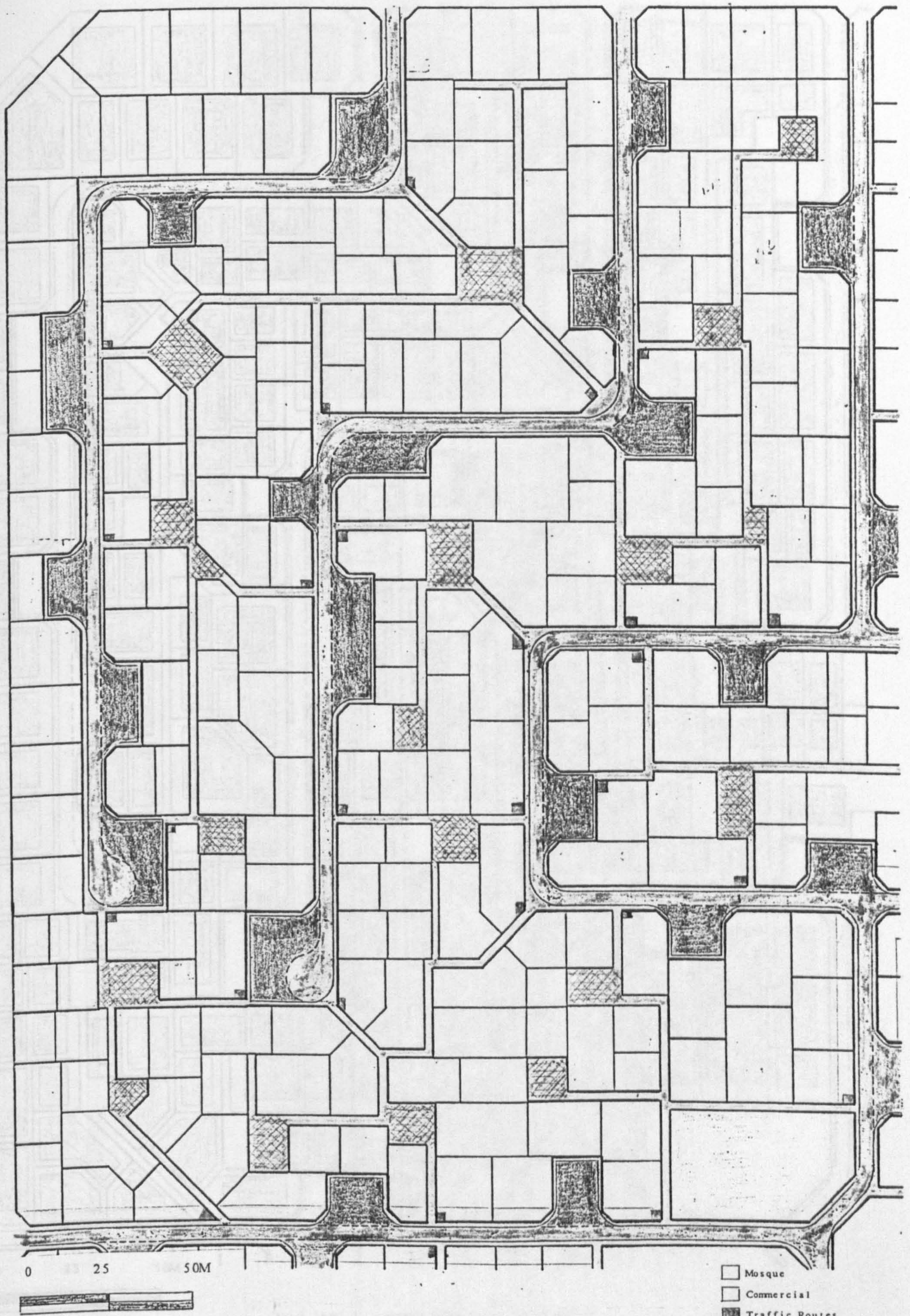


Fig 19-2 SUBDIVISION LAYOUT (2)
(An enlargement of partial of fig 19-1).

Source: Author (A.S. Alafghani).

- Mosque
- Commercial
- Traffic Routes
- Pedestrian Routes
- Car Parking Space
- Barahah (open space)
- Garbage Collection

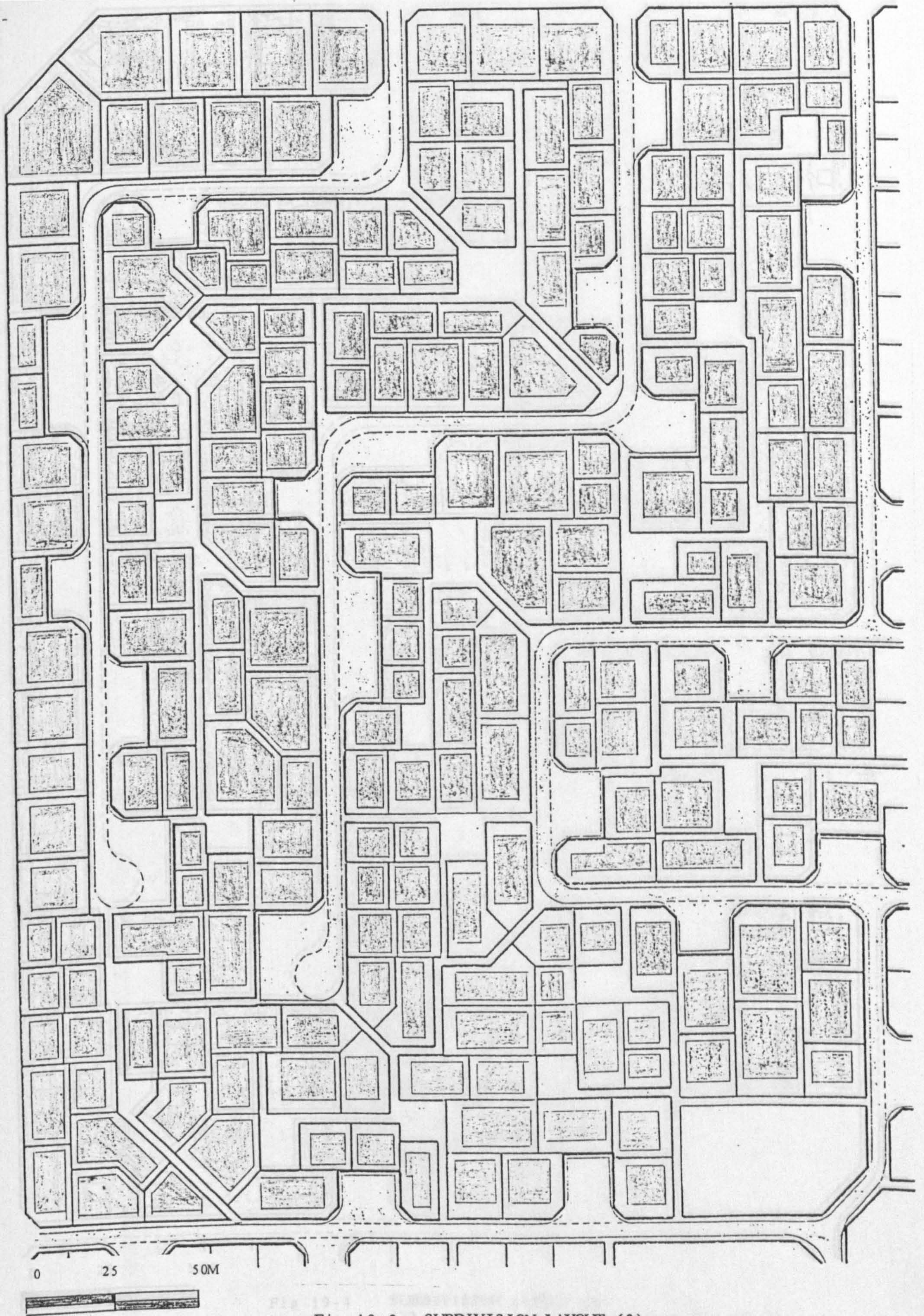


Fig 19-3 SUBDIVISION LAYOUT (3)
(The concept of villas on Fig 19-2).

Source: Author (A.S. Alafghani).

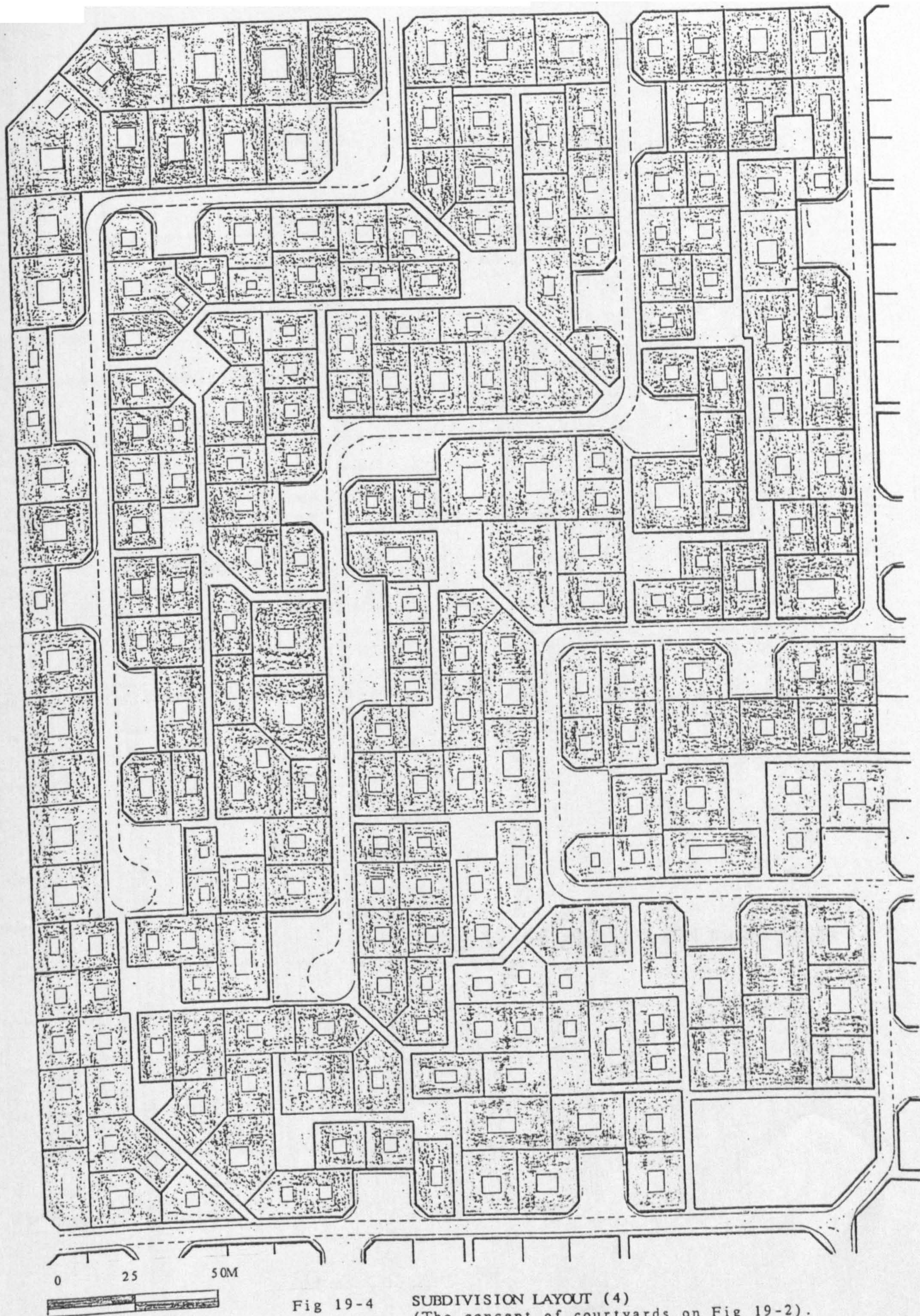


Fig 19-4 SUBDIVISION LAYOUT (4)
(The concept of courtyards on Fig 19-2).
Source: Author (A.S. Alafghani).

Fig 19-5 Subdivision Layout (5)

Main Elements of Fig 19-5

- The arrangement of equal plot sizes.
- The main consideration is for traffic.
- No pedestrian routes.
- No focal points except for a roundabout.
- The size of this subdivision is 550 m x 450 m.
Total area of 247,500 square meters which approximately = 0.248 square kilometers.
- The total approximate built area = 200,000 square meters which is approximately = 0.2 square kilometers.
- The ratio of built area to total area = 0.81.
- The total approximate length of the network of roads = 4.4 kilometers.

(The service connection is considered to be easier in this scheme).

Design Assumptions (for this particular scheme).

- All cars are provided on the streets.
- No building allowed over 2 floors high.
- Each site is for one family dwelling only. The family may be nuclear or extended.

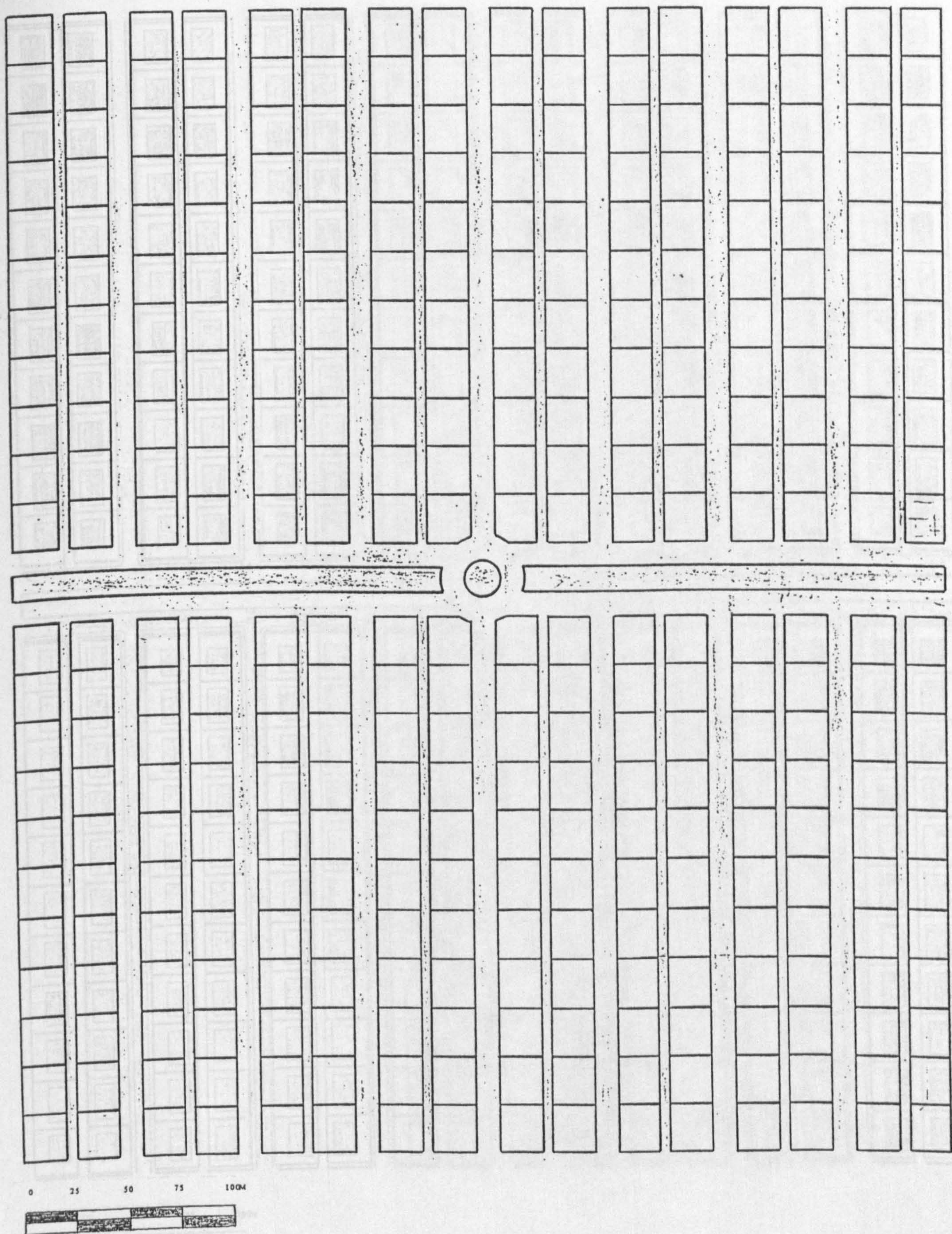


Fig 19-5 SUBDIVISION LAYOUT (5)
(The contemporary grid concept).

Source: Author (A.S. Alafghani).

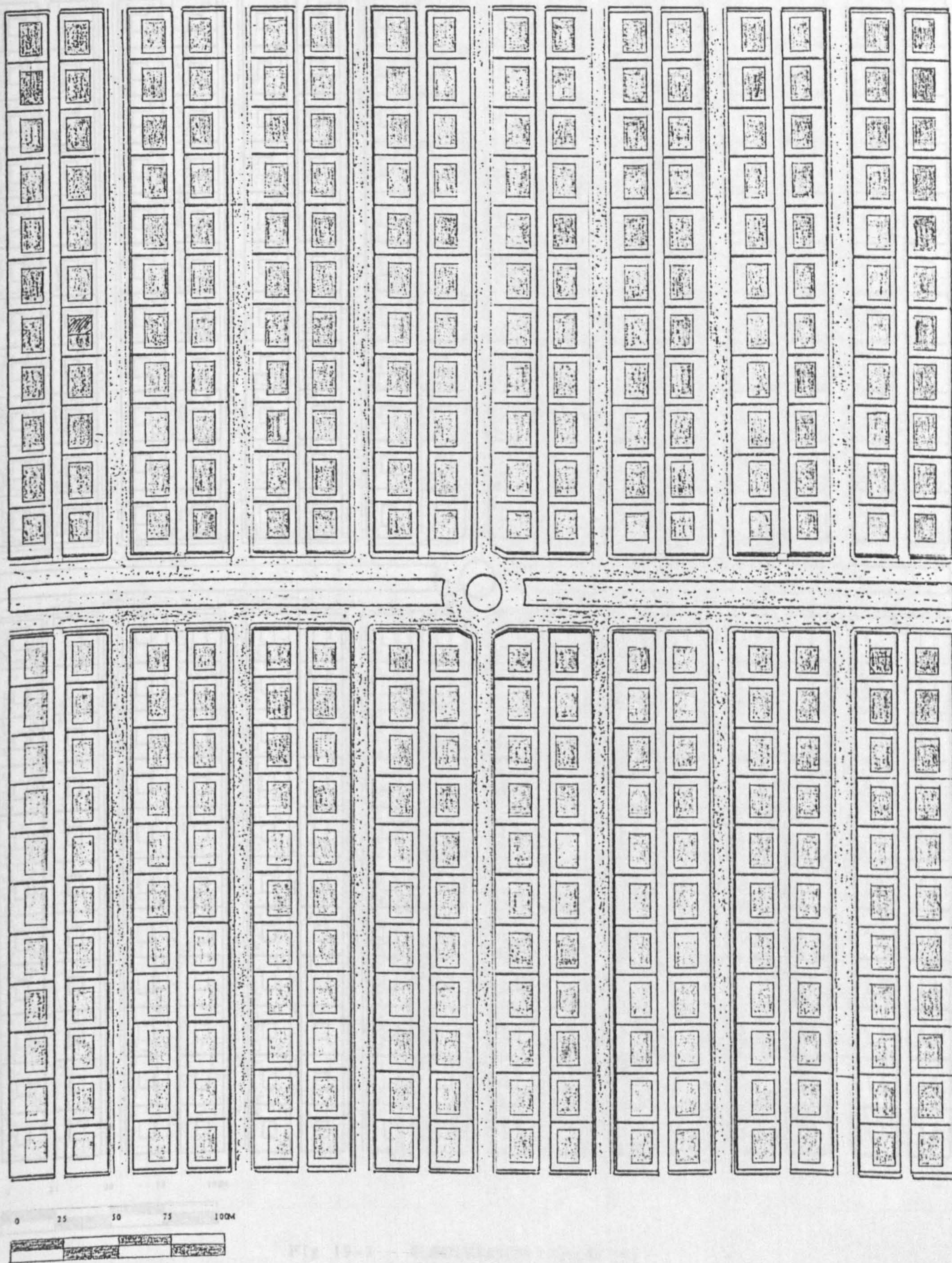


Fig 19-6 SUBDIVISION LAYOUT (6)
(The concept of villas on Fig 19-5).

Source: Author (A.S. Alafghani).

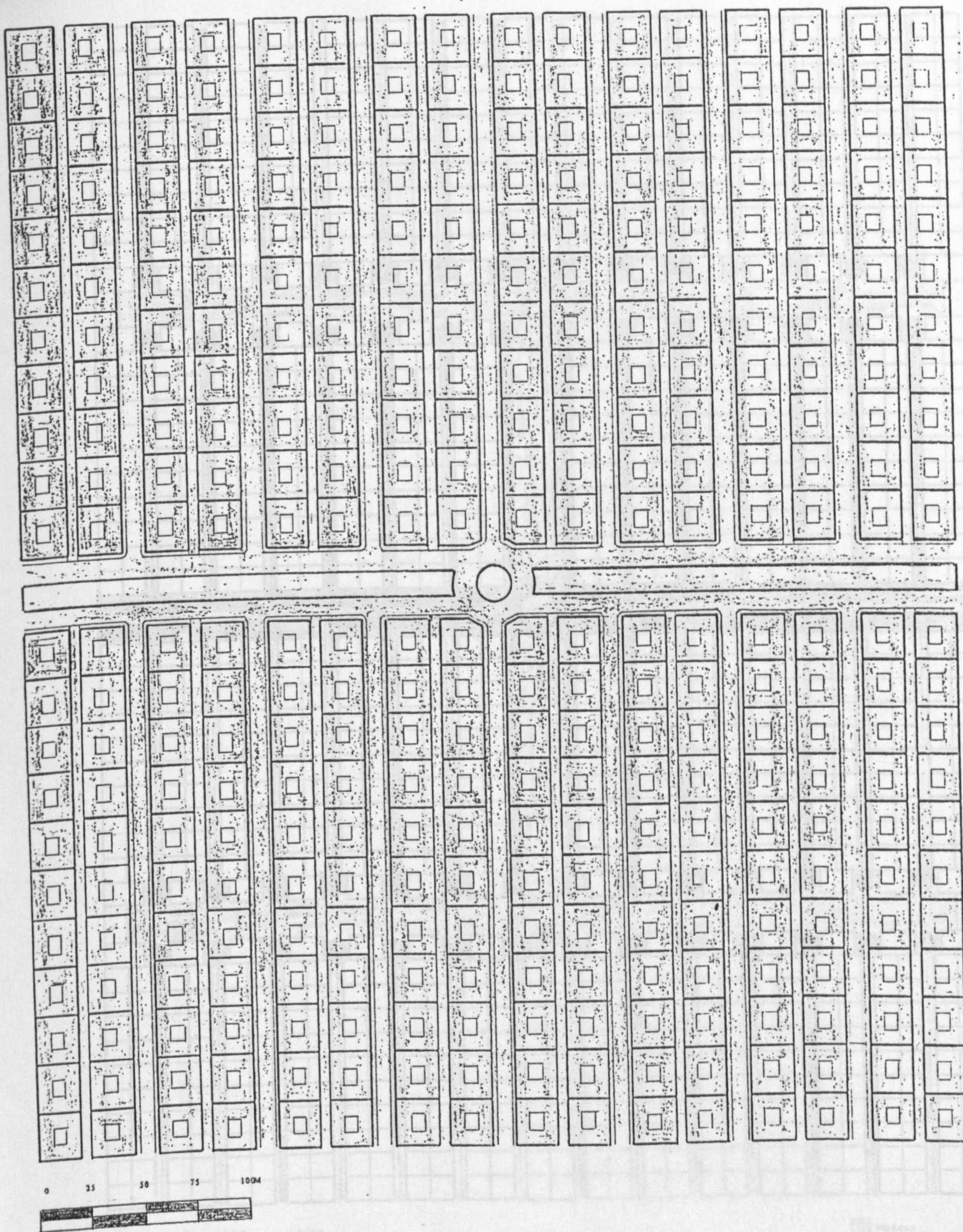


Fig 19-7 SUBDIVISION LAYOUT (7)
(The concept of courtyard on Fig 19-5).

Source: Author (A.S. Alafghani).

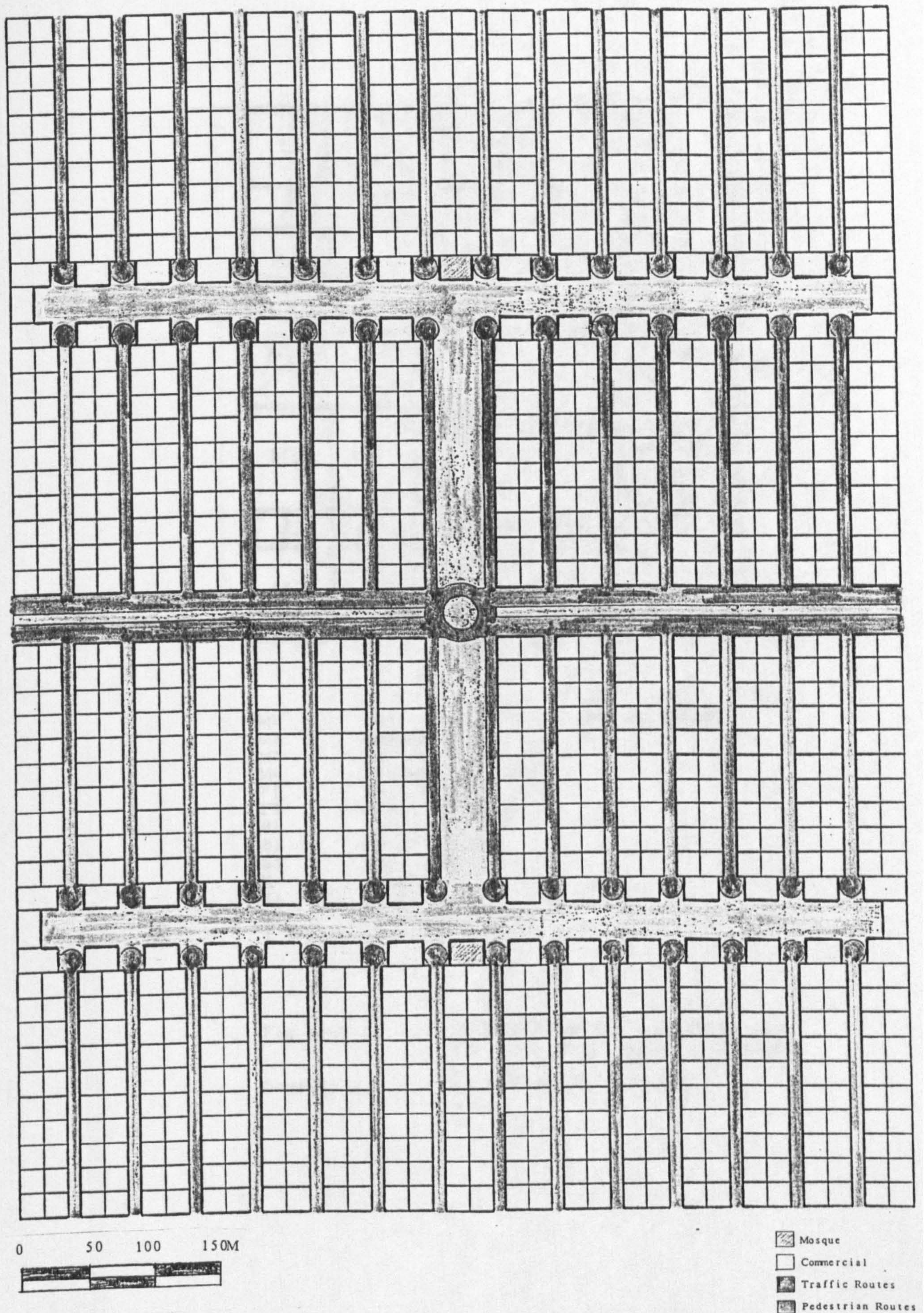
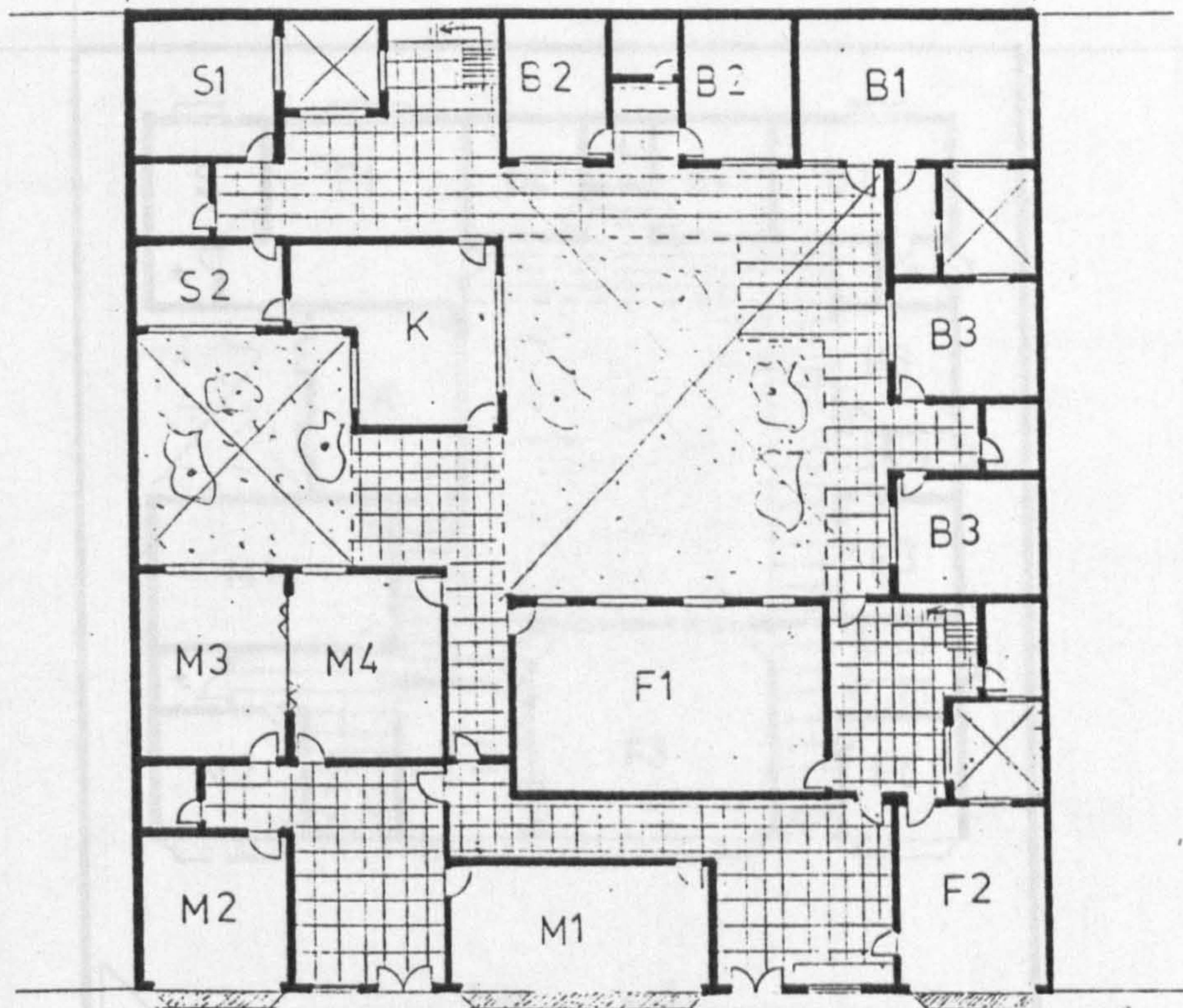


Fig 19-8 SUBDIVISION LAYOUT (8)
(New scheme for developing grid system with the introduction of cul-de-sac).

Source: Author (A.S. Alafghani).



- | | |
|----|-------------------|
| M1 | Majlis (male) |
| M2 | Majlis (male) |
| M3 | Office (male) |
| M4 | Diningroom (male) |
| F1 | Main living room |
| F2 | Majlis (female) |
| B1 | Master Bedroom |
| B2 | Girls Bedroom |
| B3 | Boys Bedroom |
| K | Kitchen |
| S1 | Servant Room |
| S2 | Service Area |
| t | Toilets |

1 2 4 6 10 m

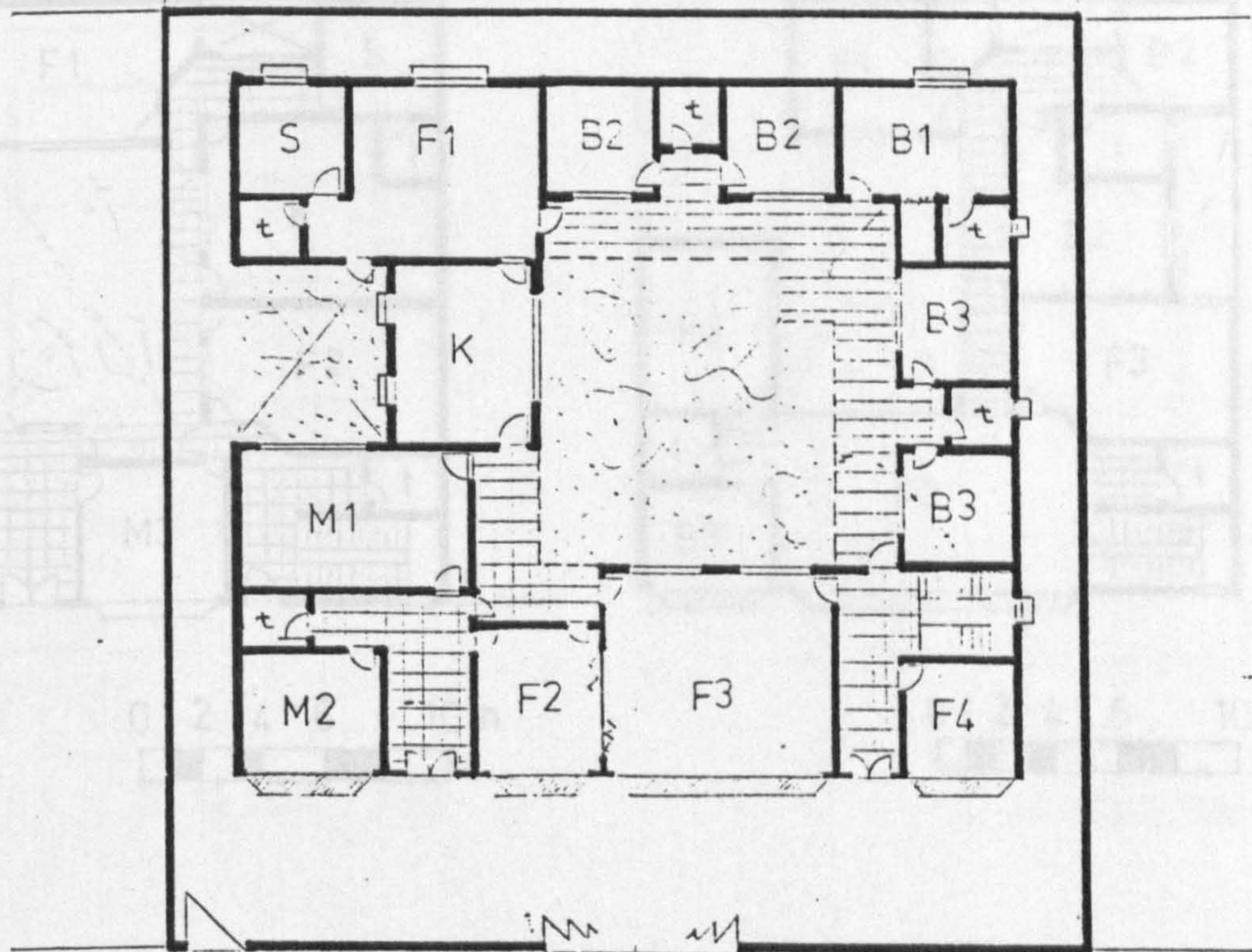
Fig 19-9

SPATIAL ARRANGEMENT OF HOUSE (1)
(30 x 30, not setback, courtyard).

Source:

Author (A.S. Alafghani).

Ground Floor



1 2 4 6 10m

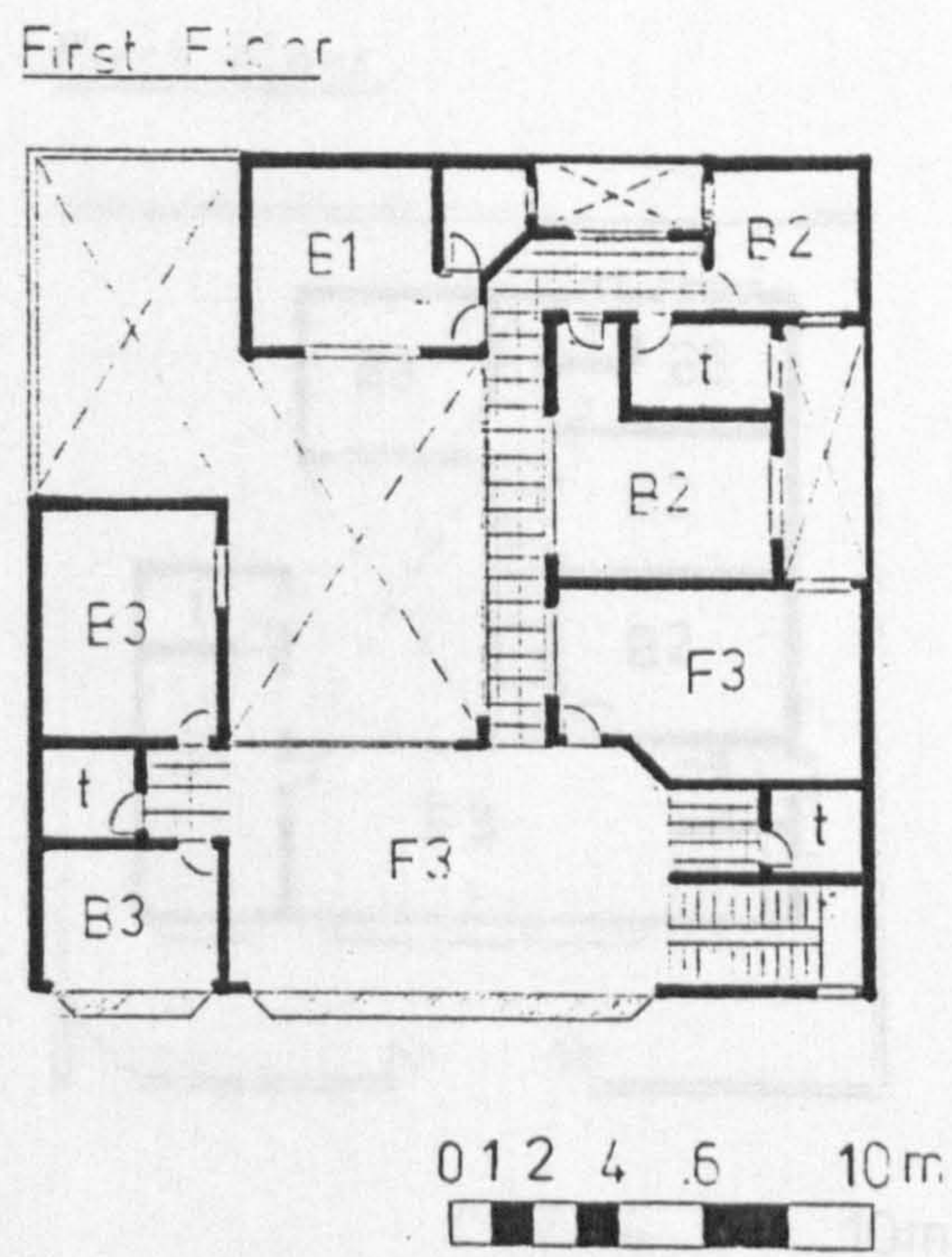
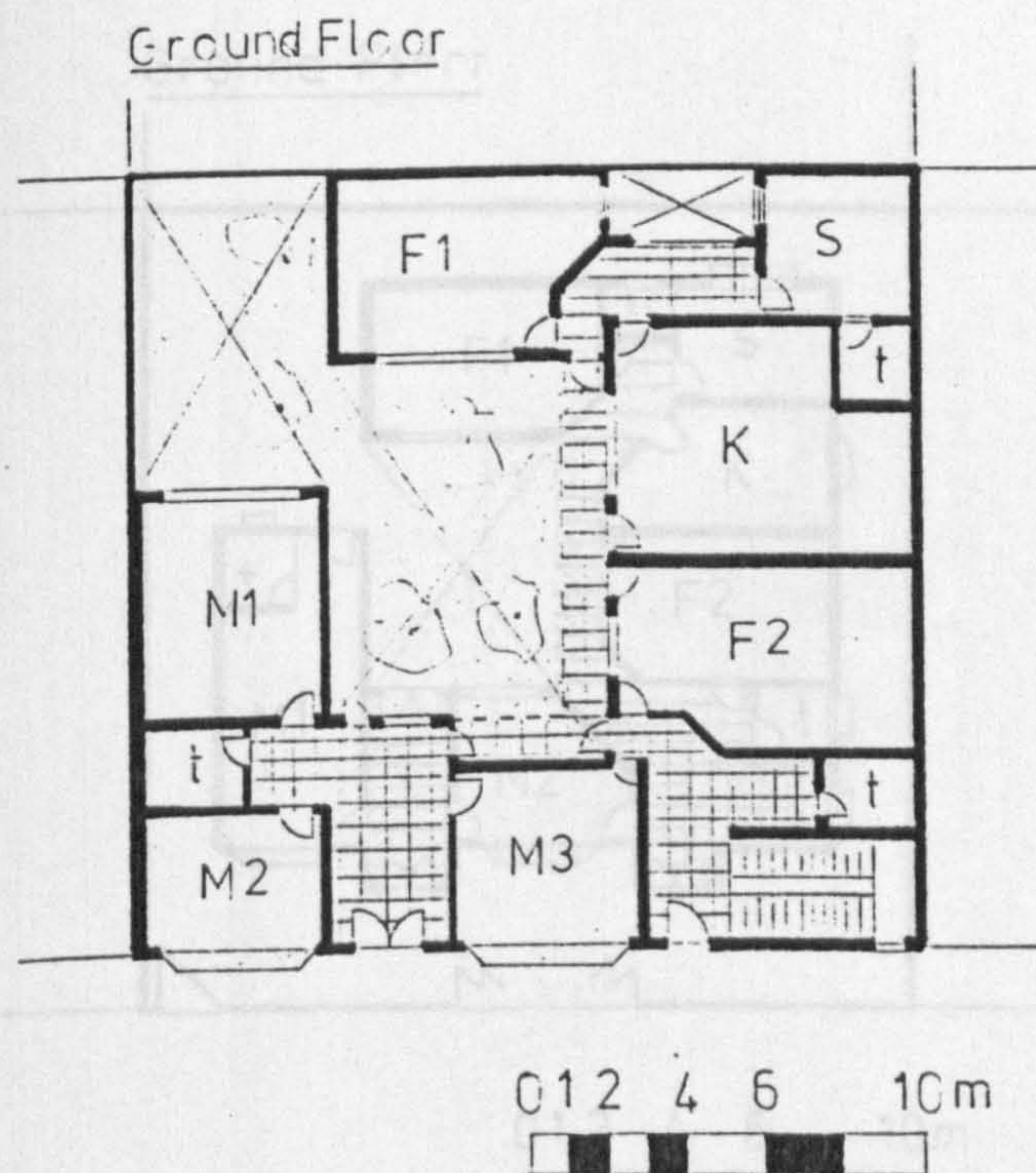
M1	Majlis (male)
M2	Office (male)
F1	Multi-purpose area
F2	Dining-room
F3	Majlis (female)
F4	Studying room
B1	Master Bedroom
B2	Girls Bedroom
B3	Boys Bedroom
K	Kitchen
S	Service Room
t	Toilet

Fig 19-10

SPATIAL ARRANGEMENT OF HOUSE (2)
(30 x 30, setbacks, courtyards).

Source:

Author (A.S. Alafghani).



M1	Majlis (male)
M2	Office (male)
M3	Dining-room
F1	Living-room
F2	Majlis (female)
B1	Master Bedroom
B2	Girls Bedroom
B3	Boys Bedroom
K	Kitchen
S	Servants Room
t	Toilet

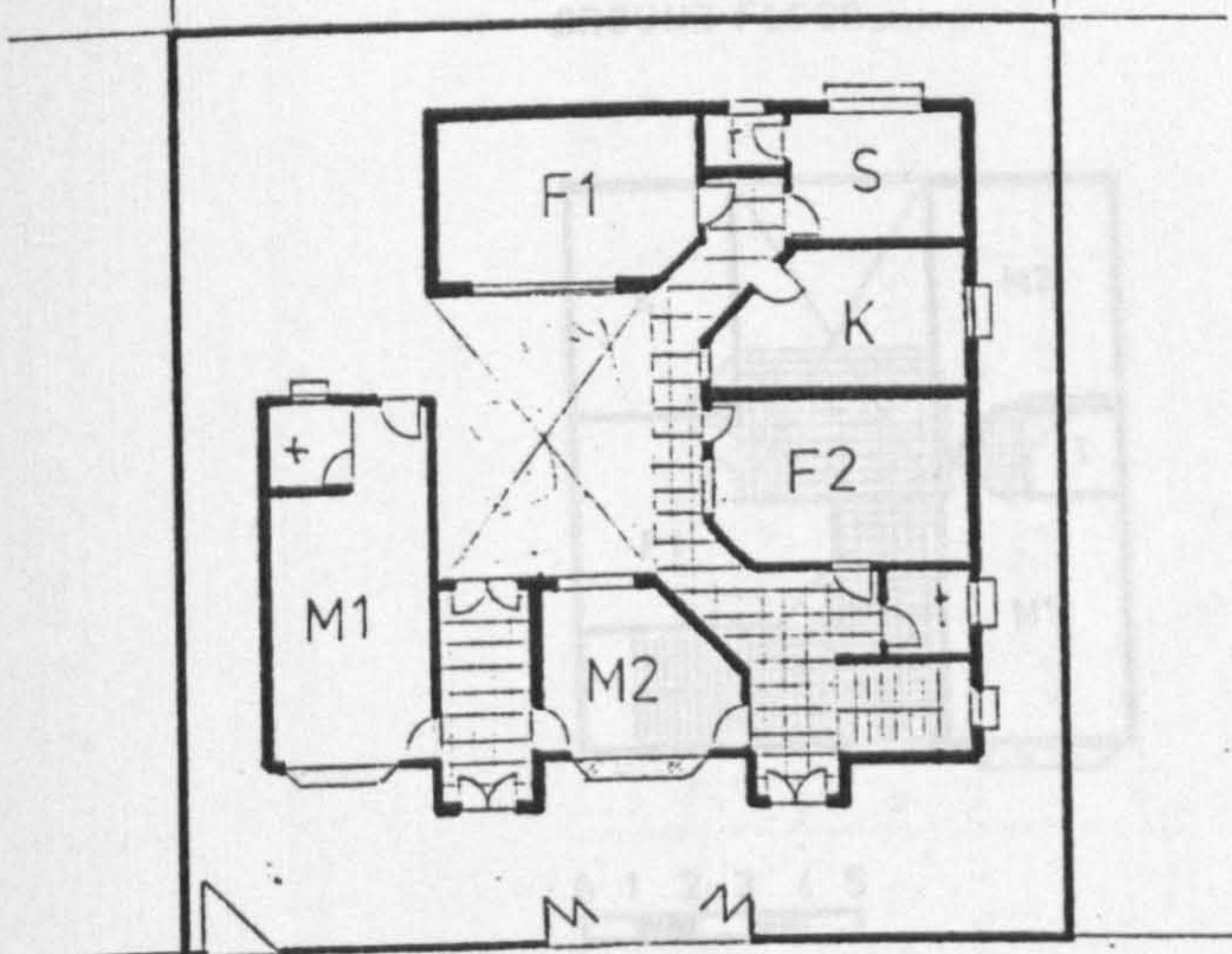
Fig 19-11

SPATIAL ARRANGEMENT OF HOUSE (3)
(20 x 20, no setbacks, courtyards).

Source:

Author (A.S.Alafghani).

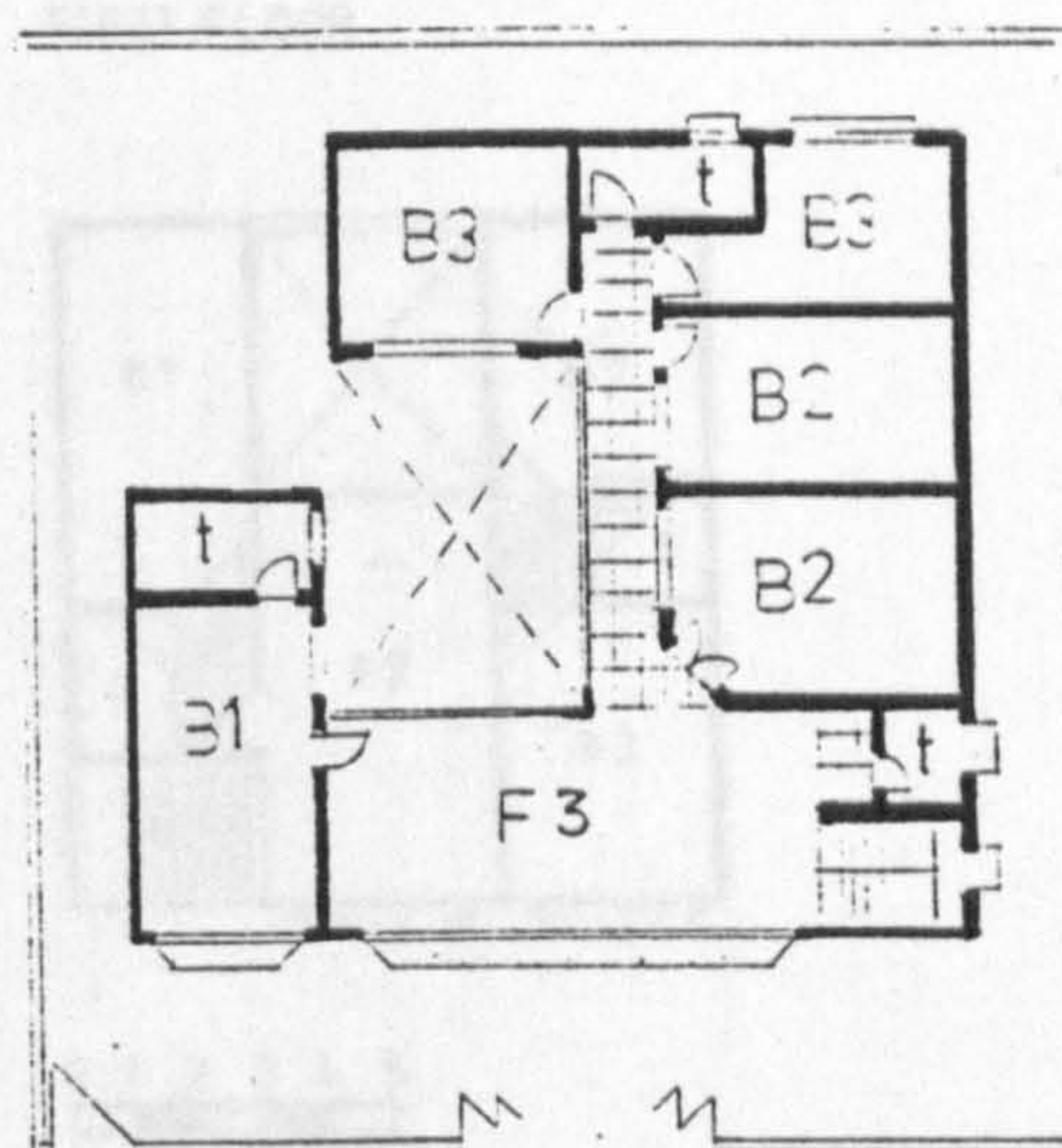
Ground Floor



0 1 2 4 6 10m



First Floor



0 1 2 4 6 10m



M1	Majlis (male)
M2	Dining-room
F1	Living-room
F2	Majlis (female)
F3	Multi-purpose area
B1	Master Bedroom
B2	Girls Bedroom
B3	Boys Bedroom
K	Kitchen
S	Servants Room
t	Toilet

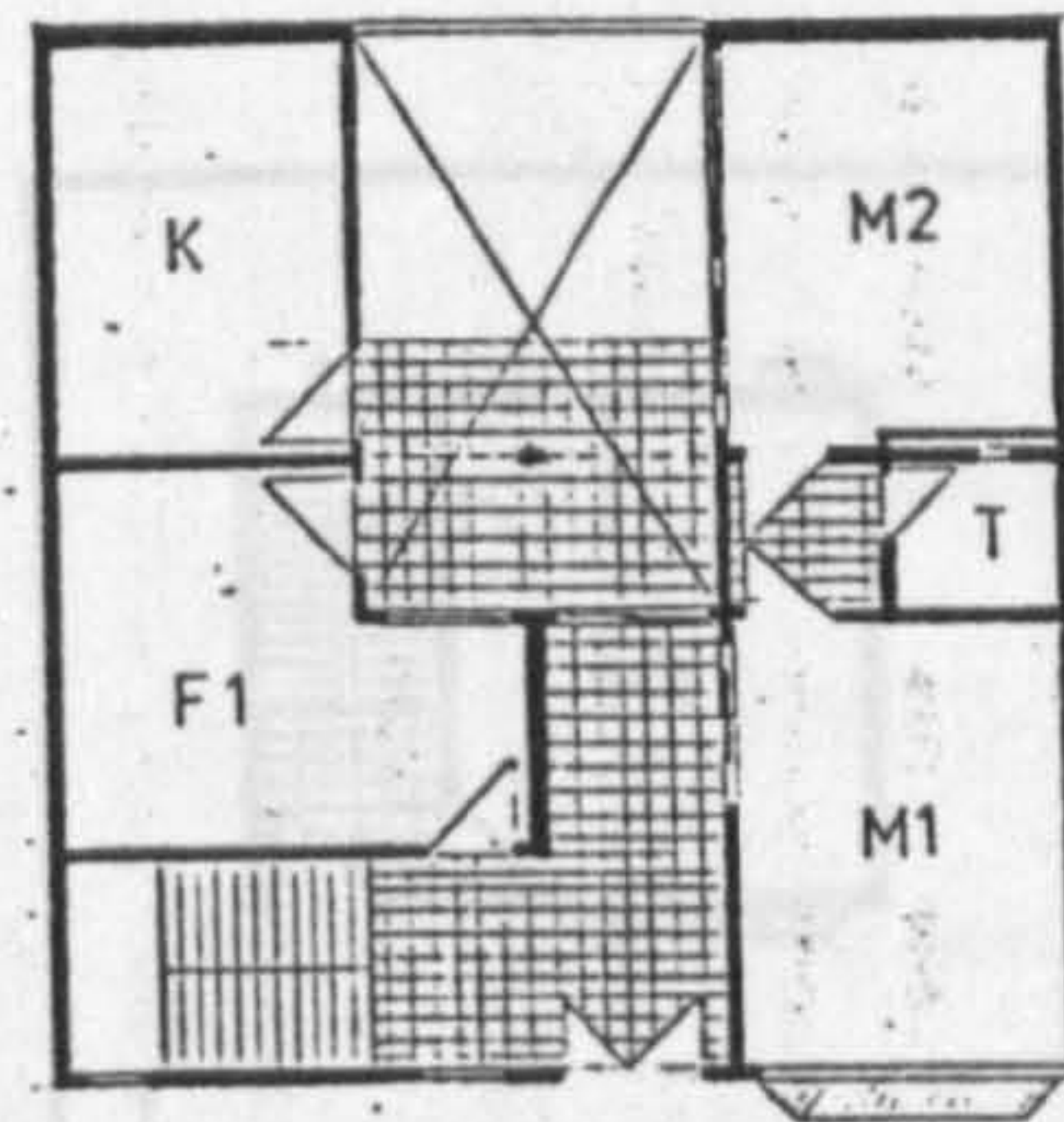
Fig 19-12

SPATIAL ARRANGEMENT OF HOUSE (4)
(20 x 20, with setbacks, courtyards).

Source:

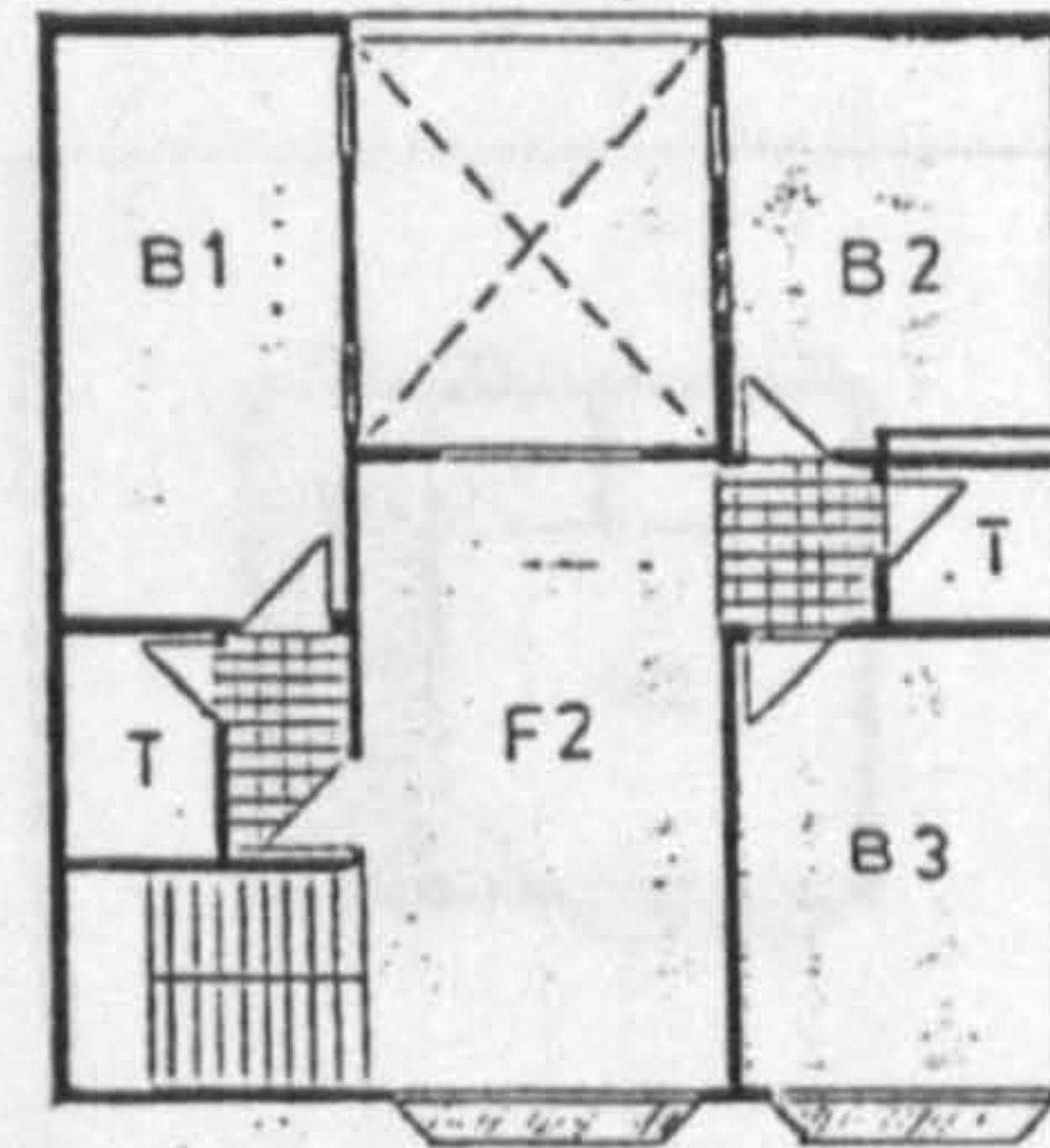
Author (A.S. Alafghani).

GROUND FLOOR



0 1 2 3 4 5

FIRST FLOOR

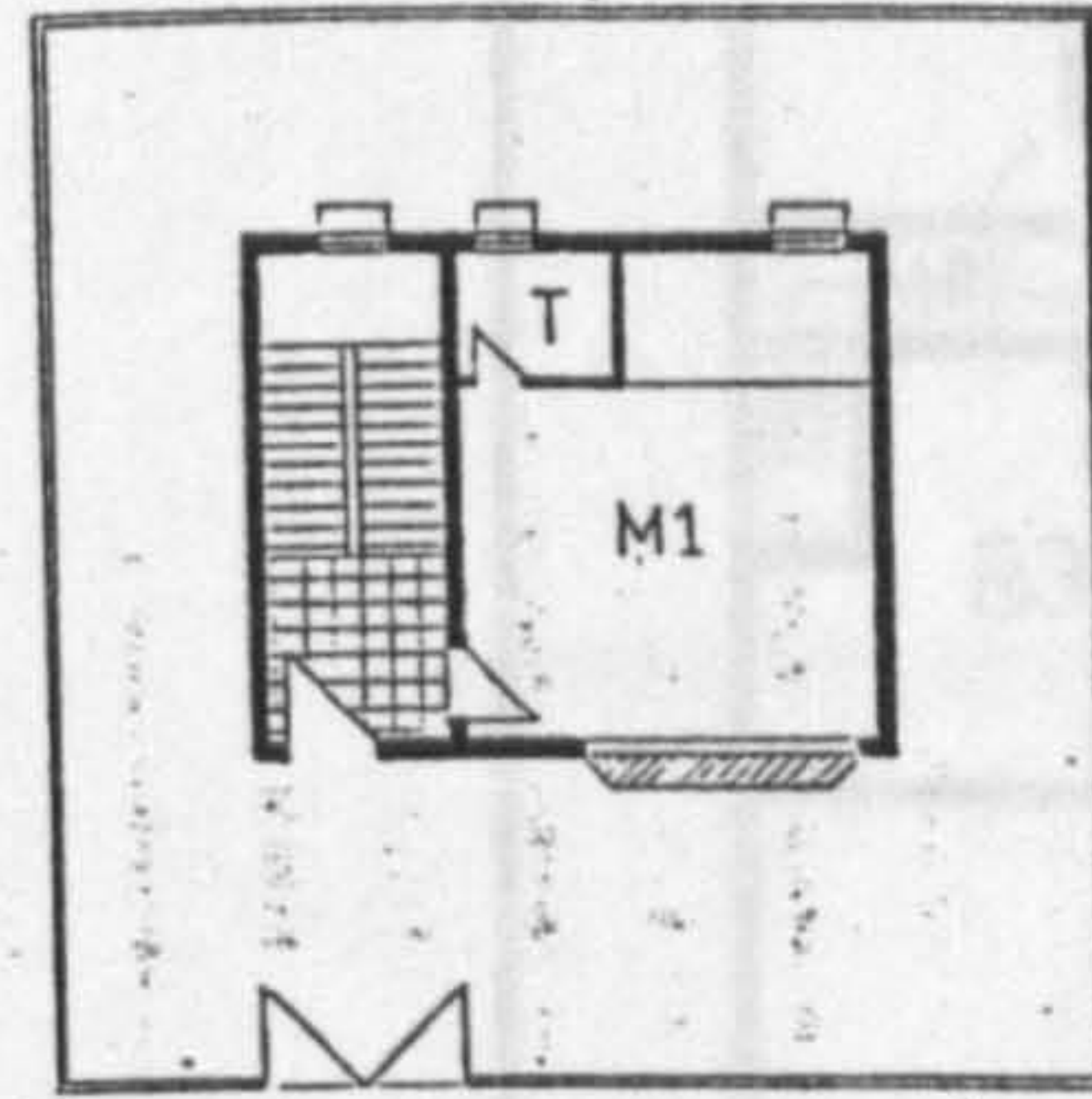


0 1 2 3 4 5

- M1 Majlis (male)
- M2 Office
- F1 Living Room
- F2 Multiple Function Room
- B1 Master Bedroom
- B2 Girls Bedroom
- B3 Boys Bedroom
- K Kitchen
- T Toilet

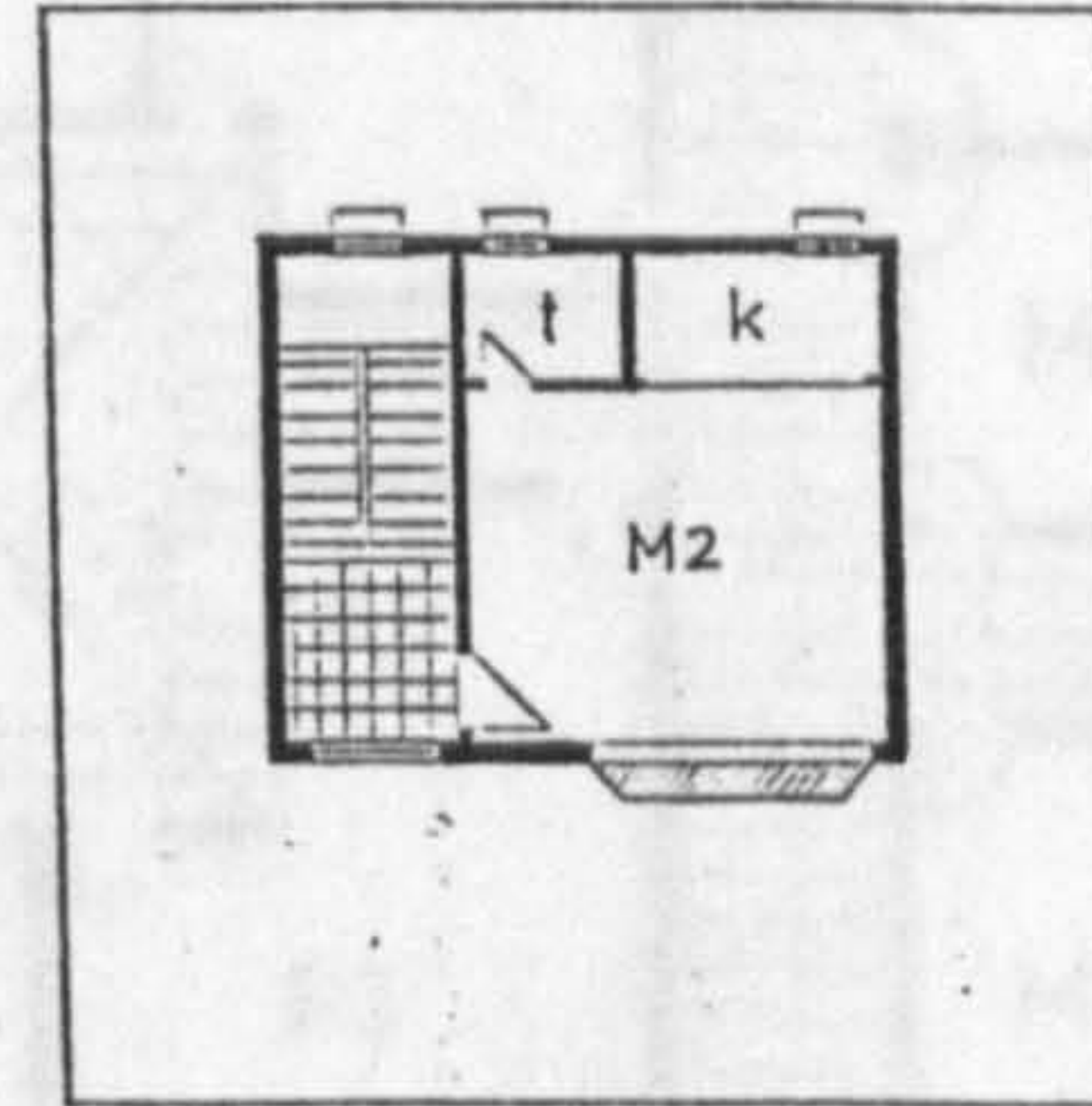
Fig 19-13 SPATIAL ARRANGEMENT OF HOUSE (5)
(10 x 10 with no setback, courtyard).
Source; Author (A.S. Alafghani).

GROUND FLOOR



0 1 2 3 4 5M

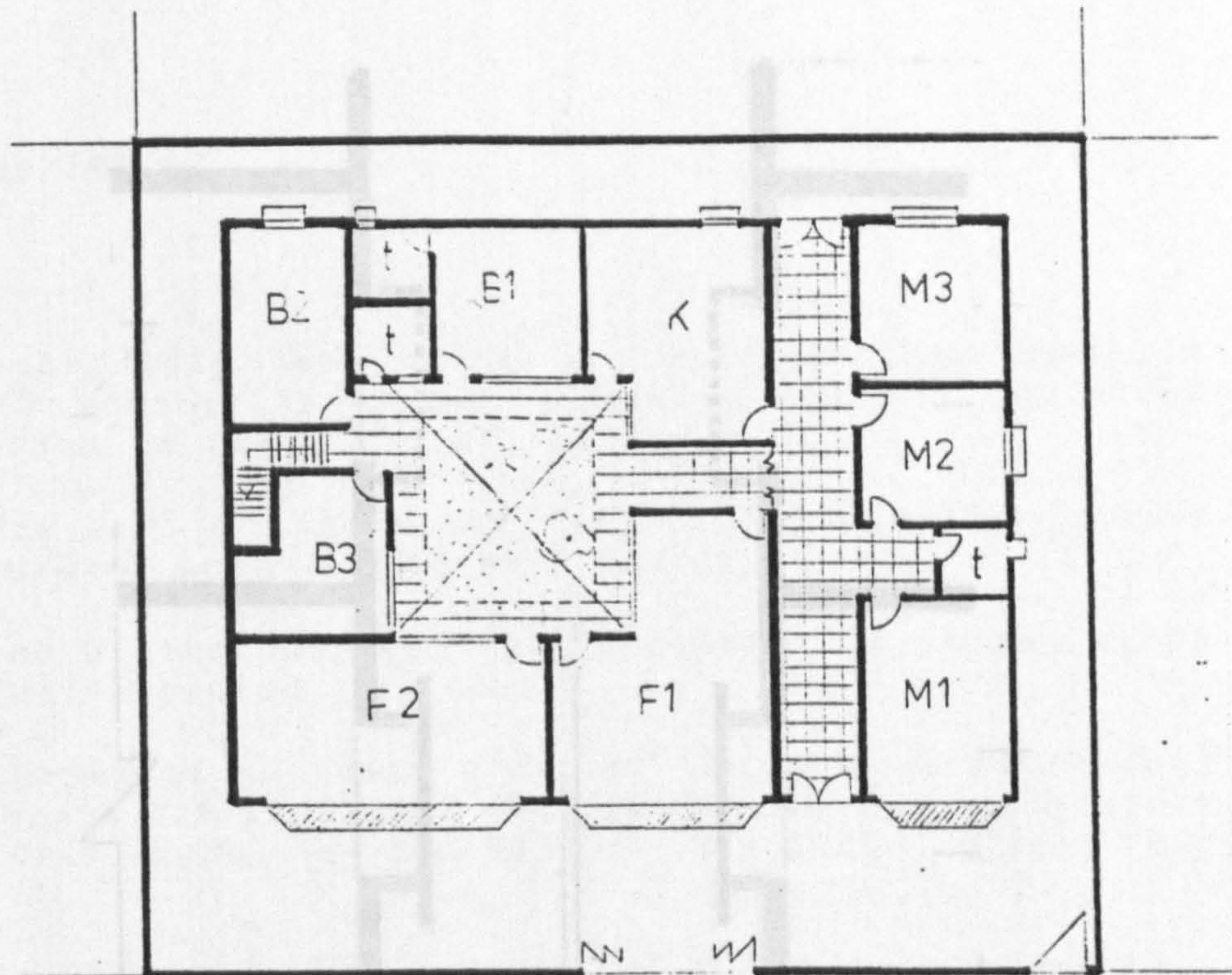
FIRST FLOOR



0 1 2 3 4 5M

M1 Majlis (male)
M2 Multiple Area
K Kitchen
T Toilet

Fig 19-14 SPATIAL ARRANGEMENT OF HOUSE (6)
(10 x 10 with setback).
Source: Author (A.S. Alafghani).



M1	Majlis (male)
M2	Dining-room
M3	Office
F1	Living-room
F2	Majlis (female)
B1	Master Bedroom
B2	Girls Bedroom
B3	Boys Bedroom
K	Kitchen
t	Toilet

0 1 2 4 6 10 m

Fig 19-13

SPATIAL ARRANGEMENT OF HOUSE (5)
(Rectangle lands, 30 x 25, setback, courtyard).

Source:

Author (A.S. Alafghani).

Fig 19-14

WINDOW PROTECTION DEVICES
(The different concepts to protect openings)

Source:

Author (A.S. Alafghani).

Footnotes: Chapter 19

1. See Chapter 3.

2. In Saudi Arabia only the Faculty of Architecture in Umm AlQura University is teaching the subject of Architecture in the field of design.

3. The teenagers require the same facilities as the adults outside the neighbourhood such as a library, a club, a sports ground, etc.

4. The situation of the building and its surroundings needs to be carefully studied.

5. This is recommended in the case of buildings in the coastal areas where cool damp sea breezes are available. This is the case in the Western coasts (cities such as Jeddah, Dammam, etc.).

6. This is recommended in the case of buildings in the hot-dry climate in the Eastern part of Saudi Arabia (cities such as Riyadh, etc.).

7. Water as in 6.

8. From the results of the study it was found that about 2/3 of the respondents agreed with the concept. But the study was not so detailed as to provide the people with a modern approach to the problem of window protection. It was therefore decided to conduct a further study and known cul-de-sac and non-grid through the city of Riyadh to see if a satisfactory solution could be found.

It was therefore decided to conduct a further study and known cul-de-sac and non-grid through the city of Riyadh to see if a satisfactory solution could be found.

It must be noted that the criteria for the study is prescribed and the criteria for the study is prescribed. The Raddurn system is a system of window protection devices.

9. In the traditions of the Raddurn system, the windows are counted up to 40 and their relative positions are determined. Chapter 31.

Fig 19-14

WINDOW PROTECTION DEVICES
(The different concepts to protect openings).

Source:

Author (A.S. Alafghani).

10. See Chapter 10.

11. See Chapter 11.

Footnotes: Chapter 19

1. See Chapter 3.
2. In Saudi Arabia only the Islamic Architecture Department in Umm AlQura University in Makkah is dealing with the education of Architecture in the light of Islam.
3. The teenagers require their own facilities, usually outside the neighbourhood such as football fields.
4. The situation of the handicap in the present situation needs to be carefully studied.
5. This is recommended in those areas of the country where cool damp sea breezes are available such as the Eastern and Western coasts (cities such as Jeddah, Jizan, Yanbu, Qatif and Dammam).
6. This is recommended in those areas of the country where hot-dry climate is the character such as the Central Region (cities such as Riyadh, Qasim and Makkah).
7. Water as in 6.
8. From the result of the 18.1.1 page 456, it could be seen that about 2/3 of the replies were in favour of the cul-de-sac concept. But it had to be recognised that the questionnaire was not so detailed as to be able to assess the reaction of the people to many different layout possibilities (some of the modern approaches e.g. Radburn layout would not have a meaning to the people of Saudi Arabia).

It was therefore decided to mention that the historical and known cul-de-sac which can be taken to cover other types of non-grid through road layouts. Although this is not totally satisfactory, the nature of a postal survey precludes a deeper analysis.

It must be noted that it was not intended that the cul-de-sac is prescribed as the only solution, any method that satisfies the criteria mentioned in 19.2.1 page 485 would be acceptable. The Radburn system being an example.

9. In the traditions of Islam, the neighbours of a Mosque are counted up to 40 houses. Muslims are advised to strengthen their relation with their neighbours in that context (see Chapter 3).
10. See Chapter 10.
11. See Chapter 11.

12. See Chapter 12.

13. See Chapter 13.

14. The new regulations of the city boundaries will require higher density types in future. At the moment only western style flats are available. See 19.4 future study.

15. It is noted that the historical study of Makkah, Jeddah shows many high-density concepts. This housing stock could well form the starting point of this study.

CHAPTER 20

CONCLUSION

Summary:

Saudi Arabia is a nation based on values traditions and hard people. The values were drawn from the Islamic religious of the country, the traditions were drawn from the Arabic origin of the people, and the hard people were generated as a result of the hard topography and climate of the area.

The teaching of Islam presented certain values which were recommended for the best of the people. Islamic requirements are to preserve the rights of all people and the respect of others to be maintained.

Traditions presented different activities which people practice during the normal daily life. The vast country even allowed traditions to vary from one place to another but all of it was within the values of Islam.

People presented their ability to use their thinking, hands and local resources to develop their environment in a way that it preserved their values and traditions and at the same time accommodated their needs in terms of protection from the rough surroundings.

The traditional houses could be seen as the most valuable remaining product of all the above. The people who spent their life in the Arabian Peninsula managed to produce models of houses which highlighted the best way to contain all the requirements of the values, traditions and the valuable resources. The traditional urban form of the community shows a sensitive response to the needs of the people and the environment. In the different parts of Saudi Arabia such as Riyadh, Jeddah and Makkah, the concepts of neighbourhood design were repeated in all cases, the integration of the physical structure and the social life of the people was the character of these urban forms. It

was not only the neighbourhood which encouraged this integration but also the peoples behaviour and circumstances shaped that relation. People are the source of the relation and the neighbourhood only provided the means by which people could preserve and strengthen that relation.

Compactness gave the sense of adjacency and the reduction of surface areas to the direct sun, the pedestrian routes gave the possibility of meeting other people and shade for the pedestrian, the open spaces which were surrounded by limited houses gave the meeting area and the breathing space for the neighbourhood and the shade and the barriers from the dusty wind and the cul-de-sac which gave the security to the people in terms of the semi-public area and the reduction of noise from outside sources.

Riyadh houses provided the concept of using the inside yards which work perfectly for both the climatic and the social needs of the family, also the concept of the insulated house by using the local materials is perfectly presented. Jeddah houses provided the concept of the facades protection. It allowed for the sea breeze to ventilate through its openings and at the same time allowed the family to enjoy the outside environment. Asir houses provided the concept of the material in different techniques to protect the whole structure from outside environment. Also the other houses provided simple concepts which shows the degree of awareness of the people to their surroundings and resources.

At that time life was very straight forward, people had to worry about their water and their work and learned to be hard workers to accomplish their simple dreams of raising a good family and to be good persons who are respected by others. The family as a unit used to be a large family which was characterised by caring and sharing. The extended family used to live in the same

house and used to expand it according to their needs. The family structure showed the respect of each member to the other and different duties were among them.

Suddenly, changes started to emerge as a result of the discovery of the hidden wealth (the oil). The normal life started to be distracted to a new way of life. New jobs emerged, this led to the break up of the large family structure since people had to move frequently to another place to seek jobs and opportunities outside the family range. The needs to accommodate the new employees in new areas highlighted the need to develop new accommodation areas for them. The government started with new schemes to attract more people to new jobs area by designing and constructing new neighbourhoods, like the Malaz district in Riyadh, which was totally on the grid concept and the villa houses characterised the residential areas.

These changes continued to take the fast route until the urban growth of the Saudi urban centres became a major problem.

The increase in population as a result of the new industry which attracts people from every place to settle in the urban areas. The government took on its shoulders the responsibility of controlling the development of the urban centres through different means.

The development plans were the means to provide the general guide lines to control the urban development by setting the goals for each five years and the different ways of accomplishing them and the proper budget for them. The Ministry of Municipal and Rural Affairs controlled the shape of the built environment through its different regulations. The REDF provided the fund which allowed the people to construct their dream houses. The Ministry of Housing enforced new models by constructing the different housing projects in the form of high-rise buildings and villas. The

many other projects all over the Kingdom also provided the models which represent the modern life of Saudi Arabia.

As a result of these controlling procedures by the government, the individuals who can afford to build their houses have to follow certain procedures and regulations which focus on the production of the villa type houses. The general subdivision design reflected the western type design, the grid system.

The final product of this change is the present contemporary built environment which is a totally different community characterised by the ignorance of the traditional concepts and the completed dependence on imported materials. The failure of preserving the social life and the climatic needs of the area are witnesses of the side effects of this ignorance.

The people who live in the present built environment have their own personal views regarding their environment. Most of those people used to live in traditional houses and moved to their present accommodation during the change process which took place in the last fifteen years. The people expressed their disagreement to the present situation through different means. Balconies had been transformed to storage, curtains were placed all the time over windows to protect the privacy of the people inside their houses, high fences were constructed to protect the privacy of the outside yards, the extensive use of air-conditions was the only response to deal with the hot weather since the construction of the present houses did not provide the necessary elements to deal with such weather, and the excessive use of cars in the built environment to deal with the long wide road which do not encourage walking.

At the same time this environment lead to the emergence of careless people who thought that money could buy everything, even comfort. The reality was that it enforced ignorance in the

peoples behaviour. The waste of resources is encouraged by the physical environment such as the waste of energy in using electrical devices in the cooling system and lighting and the major use of cars to move from one area to another because of the lack of elements to encourage walking and the waste of water as a result of the massive needs to clean the units and to water the open areas and garden.

The peoples perception by the witness of the questionnaire and interviews used during the investigation of this study helped in assessing the different views of the people towards their built environment and directed the recommendation stage.

Through the different stages of this study, the belief was formulated that the built environment development is the accumulation of many various factors which effect and even shape the present built environment. Starting from the people image to different agencies and ending by the regulations all of these working together to produce a disturbed environment.

With the present situation of the built environment a lot of attention has to be given to future designs. This could be achieved by careful evaluation of the present regulations and proposing new regulations or at least the approval of alternative to those who would like to use them. The focus of the regulations should be concern with the social integration and the respect of other people rights. This was highlighted through the different recommendations which specify certain elements which could achieve such goals. The subdivision designs could be directed by the different concepts of the traditional neighbourhood in which people could enjoy their living and at the same time feel the sense of neighbourhood. The house design also could be directed by the different concepts of traditional houses in which people could live while preserving their privacy.

It is the belief of the researcher that this could be accomplished by highlighting the problems and focusing on the alternatives. It would be yet another change in the environment, but this time a considered change. The environment of the present time indicates that changes for the better is acceptable by the majority of people who retrieve the good values of Islam and the Arabian traditions. The situation which is surrounding Saudi Arabia requires the country to develop the means to manage its sources and save its energy which is wasted by the present situation.

Appraisal

The useful conclusion resulting from this work is covered under the Design Recommendations (see section 19.2).

But the initial hypothesis has to be re-examined. It can now be seen as partially correct. The building regulations in their present form are not helping the building of an environment that is suitable for the Saudi life style and climate. These are the setback requirements - which should simply be disregarded and the zoning requirement which is at the moment too elementary. Housing areas require mosque, commercial buildings including repair workshops, sports and hobby facilities and education and leisure facilities. There seems to be no evidence for excluding these from housing areas, in fact, it would appear that they improve the quality of life if included.

Where the initial hypothesis fails is that the problems of the newly built habitat are the result of many factors other than the building regulations. These embrace at the administrative level, the method of distributing finance, the checking to see if the existing controls are complied with, at the communication level the lack of understandable and useful advice for the

building citizen, the lack of understanding of the citizen requirements - particularly on the part of the Ministry of Housing - the lack of advice to those responsible for the layout of housing.

To allow individual variety, no building envelope or plot ratio is used, but for any development area, public parking will be defined, the maximum height of development will be defined and the maximum occupancy.

The carrying out of the survey and especially the interviews was the main method of learning about the additional factors. It is believed that the finding of this work represent advice toward valid changes in the housing to be built in Saudi Arabia that do spring from the peoples desires of today and the immediate future.

At the end, some observations on the value of the process that the researcher has experienced could be stated:

- The section on the traditional houses could be improved by examining in detail how these houses could be simply adopted to modern usage and the reactions of people living in them in that respect.
- The survey proved very interesting in its results but also in the people attitude to it. The high response level shows that the Saudi people are interested and intelligent about their built environment and that more work of this nature would be appropriate, provided the people can see some results for their efforts.
- The recommendations expose the value of the previous chapters with hindsight one can see many areas where improvements could be made to gain more precise results. In relation to this, a book (leaflet) needs to be published for the people to help them understand how they can commission better houses and to understand the different aspect of houses.

I hope this study will contribute to the development of the Kingdom of Saudi Arabia in the Urban and Housing sections.

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APPENDICES

- A. QUESTIONNAIRE
- B. TABLE OF TOTAL FREQUENCIES
- C. TABLE OF CROSS TABULATION WITH REGARD TO
TYPE OF ACCOMMODATION
- D. TABLE OF CROSS TABULATION WITH REGARD TO
GROUP CLASSIFICATION
- E. GRAPHS OF ALL RESULTS
- F. TABLE OF SPECIAL INVESTIGATION
- G. GRAPHS OF THE SPECIAL INVESTIGATION RESULTS
- H. HOUSE DESIGN CONCEPTS

APPENDIX A

- A-1 THE QUESTIONNAIRE (ARABIC)
- A-2 THE QUESTIONNAIRE (ENGLISH)

استبيان

لبحث

(المنزل السعودي في الماضي والحاضر والمستقبل)
(دراسة تغير التصاميم)

مقدم من
المبتعث لتحضير درجة الدكتوراه
في جامعة جلاسجو ببريطانيا

للمهندس

محمد لطيف اللفاني

ماجستير عمارة

قسم العمارة الإسلامية - جامعة أم القرى

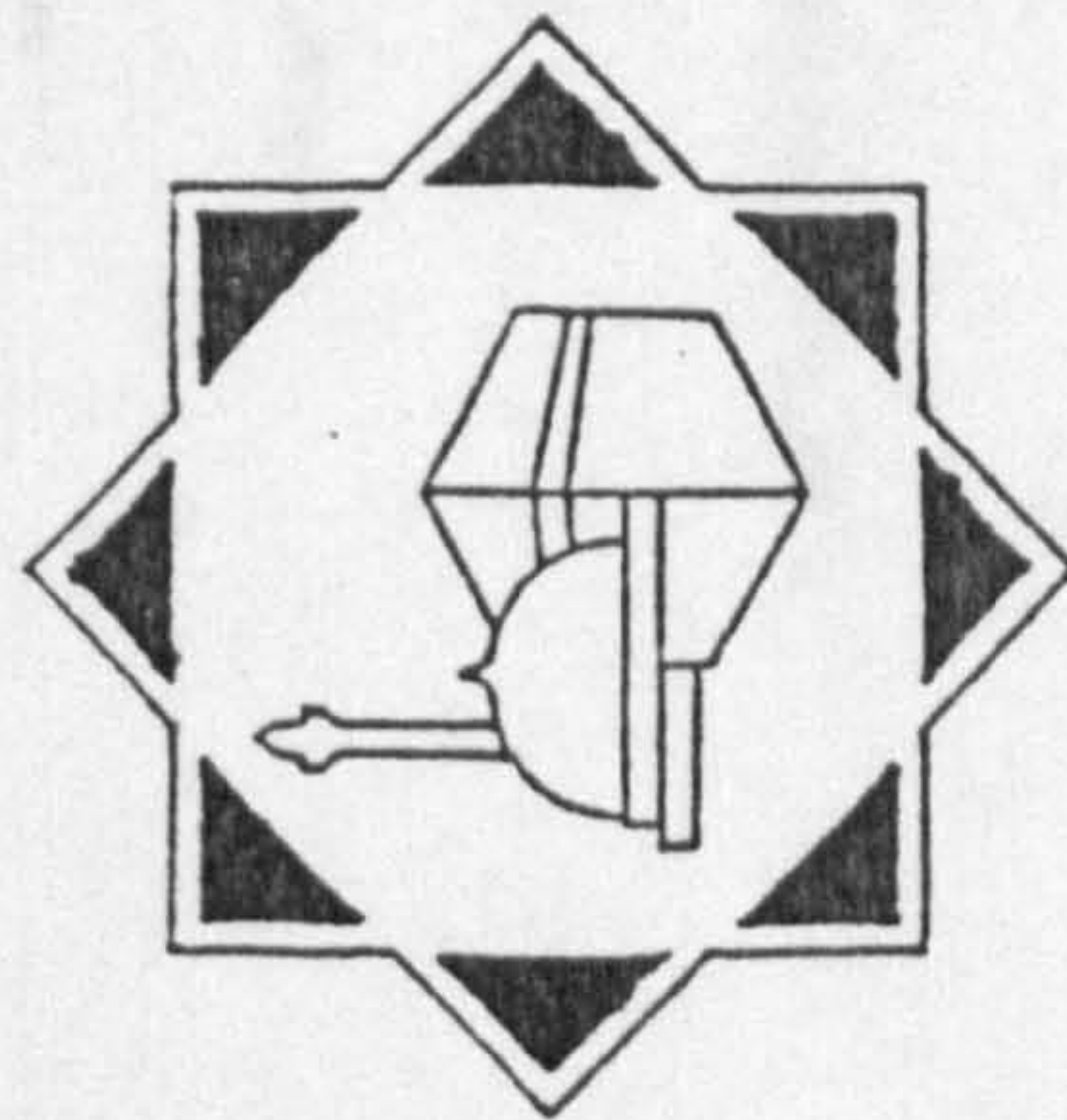
هندسة معمارية
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تصميم حضري
مكة المكرمة - من ٥٦٤٤
تليفون ٥٥٧٣٣٢٢
مذيعة ٥٣٦٣٦٠١
منزل " ٥٣٦٦٣٠٧

بسم الله الرحمن الرحيم

الحمد لله الذي جعلنا من عباده الصالحين ،
الذين هم خير ما خلق الله ، ورحمته الواسعة ،

استجاب لنا دعائهم ، ووفى لهم ما وعده ،
وأنجز ما وعده ، ووفى ما وعده ،

الحمد لله الذي جعلنا من عباده الصالحين ،
الذين هم خير ما خلق الله ، ورحمته الواسعة ،



أولاً - السكن

الغرفة الأولى من السكن والخدمة

١ - ما خرج للمبنى الذي يسكن به

() من المبنى

() من المبنى

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() من المبنى

أولاً - السكن

الفقرة الأولى : السكن والخدمات .

١ - ما نوع المبنى الذي تسكن فيه ؟

١ - ١ () منزل تقليدي

٢ - ١ () جزء من منزل تقليدي

٣ - ١ () شقة في عمارة سكنية

٤ - ١ () شقة في فيلا

٥ - ١ () فيلا خاصة

٦ - ١ () غيرها ... حدد ...

٢ - ما الفرض الأساسي من المبنى ؟

١ - ٢ () سكني فقط

٢ - ٢ () سكني وتجاري

٣ - كم عدد الشوارع الملاصقة لأرضية المبنى ؟

١ - ٣ () ١ ()

٢ - ٣ () ٢ ()

٣ - ٣ () ٣ ()

٤ - ٣ () ٤ ()

٥ - ٣ () أكثر من أربعة

٤ - كم عدد واجهات المبنى والتي بها فتحات نوافذ خارجية ؟

١ - ٤ () ١ ()

٢ - ٤ () ٢ ()

٣ - ٤ () ٣ ()

٤ - ٤ () ٤ ()

بسم الله الرحمن الرحيم

أخي الكريم المتجاوب مع الاستبيان ،

السلام عليكم ورحمة الله وبركاته ... وبعد ،

يسعدني أن أتقدم بالشكر الجزيل ، ووالر الامتنان لقبولك الاجابة على هذا الاستبيان ، والذي هو جزء من دراستي وبحشي لمرحلة الدكتوراه في مجال الهندسة المعمارية .

إن هذه الدراسة تهدف إلى معرفة واقع المنزل السعودي ، والمتغيرات التي طرأت عليه من الناحية التصميمية ، ودراسة المنازل التقليدية الموجودة ، والمنازل الحديثة ، ولخص مدى صلاحية كل منها ، ومن ثم التوصل لما هو أفضل في المستقبل في مجال السكن والاسكان في المملكة العربية السعودية .

إن مجاوبكم بصدق وعدم التكلف في الاجابة له مردوده الايجابي على هذه الدراسة ، وكذلك مشاركة المائلة الموقرة (الزوجة والاولاد) في مناقشة الاسئلة والاجابة عليها له المردود الأفضل . وبإذن الله تعالى ستعرض نتائج هذه الدراسة على الجهات ذات الاختصاص للاستفادة منها .

أخي الكريم ، قبل أن تبدأ الاجابة أود أن ألفت نظركم إلى النقاط التالية ،

١ - هذا الاستبيان لا يتطلب ذكر اسمك أو عنوانك .

٢ - كل الاسئلة في هذا الاستبيان ملحقه بأجوبة اختيارية ، وما عليك سوى اختيار أحدها .

وذلك بوضع علامة الصح بين القوسين () أمام الجواب الذي تختاره .

٣ - الأرقام الموجودة في يسار الأجوبة خاصة بتحليل نتائج الاستبيان فلا تهتم لها .

ولي الختام أكرر شكري لتجاوبك وتعاونك معي ، وتقبل لائق تحياتي .

المهندس / عبد الله سلطان الأفغاني

١٠ - هل الاضياء أثناء النهار طبيعية أم صناعية (كهربائية) في الأماكن التالية ؟

- ١ - غرفة المعيشة () طبيعية () صناعية ١-١٠
٢ - مجلس الرجال () طبيعية () صناعية ٢-١٠
٢ - مجلس النساء () طبيعية () صناعية ٢-١٠
٤ - المطبخ () طبيعية () صناعية ٤-١٠
٥ - غرفة النوم () طبيعية () صناعية ٥-١٠

١١ - هل التهوية (مرور وتغير الهواء) طبيعية أو صناعية في الأماكن التالية ؟

- ١ - غرفة المعيشة () طبيعية () صناعية ١-١١
٢ - مجلس الرجال () طبيعية () صناعية ٢-١١
٢ - مجلس النساء () طبيعية () صناعية ٢-١١
٤ - المطبخ () طبيعية () صناعية ٤-١١
٥ - غرفة النوم () طبيعية () صناعية ٥-١١

١٢ - هل تستخدم الأجهزة التالية في المبنى ؟

- ١ - مكيفات للتبريد () تستخدم () لا تستخدم ١-١٢
٢ - سخانات للتدفئة () تستخدم () لا تستخدم ٢-١٢
٣ - سخانات ماء () تستخدم () لا تستخدم ٣-١٢

١٣ - ما نوع دورات المياه الموجودة ؟ وما عدد كل منها ؟

- ١ - حمام عربي العدد () ١-١٣
٢ - حمام المرحلي العدد () ٢-١٣

٥ - كم عدد المداخل الخارجية لهذا المبنى ؟

- ١ () ١-٥
٢ () ٢-٥
٣ () ٣-٥
() أكثر من ثلاث ٤-٥

٦ - كم عدد الطوابق في هذا المبنى ؟

- ١ () ١-٦
٢ () ٢-٦
٣ () ٣-٦
٤ () ٤-٦
() أكثر من أربعة ٥-٦

٧ - هل يوجد مصعد في هذا المبنى ؟

- () نعم ١-٧
() لا ٢-٧

٨ - إذا كان لا يوجد مصعد ، فهل تشمر بأن المبنى بحاجة إلى مصعد ؟

- () نعم ١-٨
() لا ٢-٨

٩ - هل الخدمات التالية متوفرة بالمبنى ؟

- () نعم () لا ١-٩ الكهرباء
() نعم () لا ٢-٩ الماء
() نعم () لا ٣-٩ المجاري
() نعم () لا ٤-٩ التلفون
() نعم () لا ٥-٩ الناز

١٨ - منذ كم عام وأنت تعيش في هذا السكن ؟

- ١ - ١٨ () منذ أقل من ٥ سنوات .
 ٢ - ١٨ () ما بين ٥ - ١٠ سنوات .
 ٣ - ١٨ () ما بين ١٠ - ١٥ سنة .
 ٤ - ١٨ () ما بين ١٥ - ٢٠ سنة .
 ٥ - ١٨ () ما بين ٢٠ - ٢٥ سنة .
 ٦ - ١٨ () ما بين ٢٥ - ٣٠ سنة .
 ٧ - ١٨ () أكثر من ٣٠ سنة .

١٩ - كم عائلة تسكن في هذا المبنى ؟

- ١ - ١٩ () ١
 ٢ - ١٩ () ٢
 ٣ - ١٩ () ٣
 ٤ - ١٩ () ٤
 ٥ - ١٩ () أكثر من ٤

٢٠ - هل تربط هذه الموائل صلة قرابة ؟

- ١ - ٢٠ () نعم
 ٢ - ٢٠ () لا

٢١ - إذا كان لديك خدم أو سائقون ، فكم عددهم ؟ وأين يسكنون ؟

- خادمة ، العدد () يعيش داخل المنزل () يعيش خارج المنزل ()
 سائق ، العدد () يعيش داخل المنزل () يعيش خارج المنزل ()

الفقرة الثالثة : السكن وخصوصية العائلة :

٢٢ - إذا كان لسطح المنزل سترة ، فهل هي ،

- () سترة عالية فوق مستوى النظر ؟
 () سترة منخفضة تحت مستوى النظر ؟
 ١ - ٢١
 ٢ - ٢١

١٤ - ما هو نوع السكن الذي كنت تعيش فيه قبل هذا السكن ؟

- ١ - ١٤ () منزل تقليدي
 ٢ - ١٤ () جزء من منزل تقليدي
 ٣ - ١٤ () شقة في عمارة سكنية
 ٤ - ١٤ () شقة في فيلا
 ٥ - ١٤ () فيلا خاصة
 ٦ - ١٤ () غيرها ... حدد ...

١٥ - لماذا انتقلت إلى هذا المنزل الحالي ؟

- ١ - ١٥ () السكن السابق كان قديما جدا
 ٢ - ١٥ () السكن السابق لا توجد فيه خدمات جيدة
 ٣ - ١٥ () المحي الذي كنا نساكن فيه سيئ للغاية
 ٤ - ١٥ () آخر ... وضع ...

الفقرة الثانية : السكن وصلته بالعائلة :

١٦ - إذا كنت تملك هذا السكن ، فكيف استطلعت امتلاكه أو بناءه ؟

- ١ - ١٦ () عن طريق التوفير الشخصي
 ٢ - ١٦ () عن طريق المساعدة العائلية
 ٣ - ١٦ () عن طريق قرض من صندوق التنمية العقارية
 ٤ - ١٦ () آخر ... وضع ...

١٧ - إذا كنت مستأجرا هذا السكن ، فكم تدفع للإيجار سنويا ؟

- ١ - ١٧ () أقل من ١٠٠٠٠ ريال .
 ٢ - ١٧ () ما بين ١٠٠٠٠ - ١٥٠٠٠ ريال .
 ٣ - ١٧ () ما بين ١٥٠٠٠ - ٢٠٠٠٠ ريال .
 ٤ - ١٧ () ما بين ٢٠٠٠٠ - ٢٥٠٠٠ ريال .
 ٥ - ١٧ () ما بين ٢٥٠٠٠ - ٣٠٠٠٠ ريال .
 ٦ - ١٧ () أكثر من ٣٠٠٠٠ ريال .

٢٩ - هل يمكنك كشف فناء جيرانك ؟

- ١ - ٢٩ () نعم .
٢ - ٢٩ () لا .

٣٠ - هل تشمر بأن خصوصية عائلتك محالط عليها في هذا البيت ؟

- ١ - ٣٠ () نعم .
٢ - ٣٠ () لا .

٣١ - إذا كان في المبنى بلكونات ، فهل توافق بأن هذه البلكونات لا تؤدي الغرض الذي تم انشاؤها من أجله من الناحية الاجتماعية ، وأن بناءها لا يوافق احتياجاتنا ؟

- ١ - ٣١ () اوافق
٢ - ٣١ () لا اوافق

٣٢ - هل توافق بأن الفناء الخارجي حول المبنى في تصميم القفل ليس له فائدة للعائلة لأنه مكشوف من قبل الجيران ؟

- ١ - ٣٢ () اوافق
٢ - ٣٢ () لا اوافق

٣٣ - هل توافق بأن الأرواش إذا صممت في المنازل بحيث تكون محفوفة إلى الداخل فإنها تؤدي غرضها للعائلة أفضل من وضعها إلى الخارج حيث أن العائلة لا يمكن أن تستخدمها ؟

- ١ - ٣٣ () اوافق
٢ - ٣٣ () لا اوافق

٣٤ - هل تشمر بأن هذا المبنى يفي باحتياجاتك احتياجات عائلتك ؟

- ١ - ٣٤ () نعم .
٢ - ٣٤ () لا .

٣٥ - إذا كان لديك الخيار للانتقال إلى سكن آخر ، فماذا تفضل ؟

- ١ - ٣٥ () أفضل عدم الانتقال .
٢ - ٣٥ () أفضل الانتقال إلى بيت تقليدي .
٣ - ٣٥ () أفضل الانتقال إلى عمارة سكنية .
٤ - ٣٥ () أفضل الانتقال إلى شقة في فيلا .
٥ - ٣٥ () أفضل الانتقال إلى فيلا خاصة .

٢٢ - هل تستعمل السطح أنت وعائلتك ؟

- ١ - ٢٢ () نعم .
٢ - ٢٢ () لا .

٢٤ - إذا كان الجواب بنعم ، فلأي غرض تستعمله ؟

- ١ - ٢٤ () للنوم ليلا
٢ - ٢٤ () لتجفيف الملابس
٣ - ٢٤ () للاحتفال والاجتماعات
٤ - ٢٤ () للعب الأطفال
٥ - ٢٤ () آخر وضح ..

٢٥ - إذا كان الجواب بلا ، فهل سبب عدم الاستعمال هو ؟

- ١ - ٢٥ () السطح مكشوف من الجيران
٢ - ٢٥ () استعمال السطح أصبح غير مقبول في المجتمع
٣ - ٢٥ () الجير لا يساعد على استعمال السطح
٤ - ٢٥ () آخر وضح ...

٢٦ - هل تشمر بأن نوافذ منزلك يمكن كشفها والاطلاع عليها من قبل الجيران ؟

- ١ - ٢٦ () نعم .
٢ - ٢٦ () لا .

٢٧ - هل تضع الستائر على النوافذ من أجل حماية الغرف من الكشف ؟

- ١ - ٢٧ () نعم .
٢ - ٢٧ () لا .

٢٨ - هل يمكن لجيرانك كشف فناء منزلك ؟

- ١ - ٢٨ () نعم .
٢ - ٢٨ () لا .

٤٠ - هل تشمر بأن هذا الحي مصمم ليحوي فئة معينة من أصحاب ذوي دخل معين ؟

- ١ - ٤٠ () نعم .
٢ - ٤٠ () لا .

٤١ - هل تشمر بأن هذا الحي ينفي باحتياجك واحتياج عائلتك ؟

- ١ - ٤١ () نعم .
٢ - ٤١ () لا .

٤٢ - لو كان لديك خيار لي الانتقال إلى حي آخر . لماذا تفضل ؟

- ١ - ٤٢ () لا افضل الانتقال .
٢ - ٤٢ () افضل الانتقال إلى حي تقليدي .
٣ - ٤٢ () افضل الانتقال إلى حي حديث .

ثالثاً : المدينة :

٤٣ - ما هي المدينة التي تعيش فيها الآن ؟

- ١ - ٤٣ () مكة المكرمة
٢ - ٤٣ () الرياض
٣ - ٤٣ () جدة
٤ - ٤٣ () غيرها حدد

٤٤ - هل توافق بأن هذه المدينة ليست هي المدينة التي كانت قبل عدة سنوات ؟

- ١ - ٤٤ () نعم .
٢ - ٤٤ () لا .

٤٥ - هل توافق بأن المظهر العام لهذه المدينة كان أفضل قبل عدة سنوات ؟

- ١ - ٤٥ () نعم .
٢ - ٤٥ () لا .

ثانياً : الحي السكني

٣٦ - كيف تصنف الحي الذي تعيش فيه ؟

- ١ - ٣٦ () حي تقليدي .
٢ - ٣٦ () حي حديث .

٣٧ - ما هي الخدمات المتوفرة في هذا الحي ؟

- ١ - ٣٧ () المسجد () متوفر () غير متوفر
٢ - ٣٧ () سوق () متوفر () غير متوفر
٣ - ٣٧ () مستوصف () متوفر () غير متوفر
٤ - ٣٧ () مركز شرطة () متوفر () غير متوفر
٥ - ٣٧ () مركز دفاع مدني () متوفر () غير متوفر
٦ - ٣٧ () مكتب بريد () متوفر () غير متوفر
٧ - ٣٧ () مدارس ابتدائية () متوفر () غير متوفر
٨ - ٣٧ () مدارس متوسطة () متوفر () غير متوفر
٩ - ٣٧ () مدارس ثانوية () متوفر () غير متوفر
١٠ - ٣٧ () أماكن مفتوحة () متوفر () غير متوفر

٣٨ - كيف تصنف علاقتك بجيرانك ؟

- ١ - ٣٨ () علاقة قوية جداً .
٢ - ٣٨ () علاقة جيدة .
٣ - ٣٨ () علاقة رسمية .
٤ - ٣٨ () لا علاقة .

٣٩ - كيف تتغير علاقتك مع جيرانك ؟

- ١ - ٣٩ () للأحسن .
٢ - ٣٩ () للأسوأ .
٣ - ٣٩ () لا تتغير .

٥١ - أين توقف سيارتك ؟

- ١ - ٥١ () في جراج خاص في نفس المنزل .
 ٢ - ٥١ () في جراج خاص خارج المنزل .
 ٣ - ٥١ () في التناء الامامي .
 ٤ - ٥١ () بجانب المنزل .
 ٥ - ٥١ () بعيدا عن المنزل .
 ٦ - ٥١ () غيرها وضع

٥٢ - هل تستخدم الباص ؟

- ١ - ٥٢ () نعم .
 ٢ - ٥٢ () لا .

٥٣ - إذا كنت لا تستخدمه ، فهل يرجع ذلك إلى الأسباب التالية ؟

- ١ - ٥٣ () الباص غير ملائم لتنقلي .
 ٢ - ٥٣ () الباص مزدحم .
 ٣ - ٥٣ () الباص لا يصل إلى الأماكن التي أريدها .
 ٤ - ٥٣ () الباص يستهلك وقتا طويلا لانتظاره .
 ٥ - ٥٣ () الباص مكلف .
 ٦ - ٥٣ () غيرها وضع

٥٤ - هل توافق بأن نظام النقل الجماعي يحتاج إلى تطوير أكثر مما هو عليه الآن ؟

- ١ - ٥٤ () اوافق .
 ٢ - ٥٤ () لا اوافق .

٤٦ - هل توافق بأن المخططات الجديدة لا تأخذ بالاعتبار النمط التقليدي لتخطيط الأحياء ؟

- ١ - ٤٦ () نعم .
 ٢ - ٤٦ () لا .

٤٧ - هل توافق بأن المباني العالية يجب أن لا يسمح في بنائها في المناطق السكنية ؟

- ١ - ٤٧ () نعم .
 ٢ - ٤٧ () لا .

٤٨ - هل توافق بأن المباني الحديثة التي تبنى في هذه المدينة يجب أن تعكس طابع العمارة

التقليدي ؟

- ١ - ٤٨ () نعم .
 ٢ - ٤٨ () لا .

٤٩ - هل توافق بأن المباني التقليدية يجب المحافظة عليها ، ويجب أن لا تهدم ؟

- ١ - ٤٩ () نعم .
 ٢ - ٤٩ () لا .

رابعاً : المواصفات :

٥٠ - كم عدد السيارات التي في هذا المبنى ؟

- ١ - ٥٠ () ١ .
 ٢ - ٥٠ () ٢ .
 ٣ - ٥٠ () ٣ .
 ٤ - ٥٠ () ٤ .
 ٥ - ٥٠ () أكثر من ٤ .

٥٩ - إذا كنت غير سعودي ، فهل أنت عربي ؟

- ١ - ٥٩ () نعم .
٢ - ٥٩ () لا .

٦٠ - ما هي حالتك الاجتماعية ؟

- ١ - ٦٠ () أعزب .
٢ - ٦٠ () متزوج .
٣ - ٦٠ عدد أفراد العائلة () ذكور () إناث () .

٦١ - ما هو عمرك ؟

- ١ - ٦١ () أقل من ٢٠ عام .
٢ - ٦١ () بين ٢٠ - ٢٩ عام .
٣ - ٦١ () بين ٢٠ - ٢٩ عام .
٤ - ٦١ () بين ٤٠ - ٤٩ عام .
٥ - ٦١ () بين ٥٠ - ٥٩ عام .
٦ - ٦١ () بين ٦٠ - ٦٩ عام .
٧ - ٦١ () أكثر من ٦٠ .

٦٢ - ما هي درجة تعليمك ؟

- ١ - ٦٢ () لا اقرأ ولا أكتب .
٢ - ٦٢ () اقرأ وأكتب .
٣ - ٦٢ () تعليم ابتدائي .
٤ - ٦٢ () تعليم متوسط .
٥ - ٦٢ () تعليم ثانوي .
٦ - ٦٢ () تعليم جامعي .
٧ - ٦٢ () تعليم عالي .
٨ - ٦٢ () غير ما ... وضع

٥٥ - ما هي نوعية المواصلات التي تستعملها للوصول للأماكن التالية ؟

- ١ - المسجد () مشي () باص () سيارة () المسافة بالأمطار تقريبا
٢ - السوق () مشي () باص () سيارة () المسافة بالأمطار تقريبا
٣ - المدارس () مشي () باص () سيارة () المسافة بالأمطار تقريبا
٤ - العمل () مشي () باص () سيارة () المسافة بالأمطار تقريبا
٥ - أماكن الترفيه () مشي () باص () سيارة () المسافة بالأمطار تقريبا

٥٦ - ما هي المسافة التي يمكنك أن تمشيها بدون تفجير دائما ؟

- ١ - ٥٦ () ١٠٠ متر .
٢ - ٥٦ () ما بين ١٠٠ - ٢٠٠ متر .
٣ - ٥٦ () ما بين ٢٠٠ - ٣٠٠ متر .
٤ - ٥٦ () ما بين ٣٠٠ - ٤٠٠ متر .
٥ - ٥٦ () ما بين ٤٠٠ - ٥٠٠ متر .
٦ - ٥٦ () ما بين ٥٠٠ - ٦٠٠ متر .
٧ - ٥٦ () ما بين ٦٠٠ - ٧٠٠ متر .
٨ - ٥٦ () ما بين ٧٠٠ - ٨٠٠ متر .
٩ - ٥٦ () ما بين ٨٠٠ - ٩٠٠ متر .
١٠ - ٥٦ () ما بين ٩٠٠ - ١٠٠٠ متر .
١١ - ٥٦ () أكثر من ١ كم .

٥٧ - لو فضل عدم إيقاف سيارتك بالقرب من المنزل ، فهل توافق على إيقافها بعيدا عن المنزل ؟

- ١ - ٥٧ () نعم اوافق .
٢ - ٥٧ () لا اوافق .

خامسا : ملء مات شخصية

٥٨ - ما هي جنسيتك ؟

- ١ - ٥٨ () سعودي .
٢ - ٥٨ () غير سعودي .

الملاحظات والإضافات

- ١٤ -

٦٢ - ما هو عمالك الحالي ؟

- ١-٦٢ () تاجر .
٢-٦٢ () عامل .
٣-٦٢ () طالب .
٤-٦٢ () صاحب حرفة .
٥-٦٢ () موظف مدني .
٦-٦٢ () موظف عسكري .
٧-٦٢ () غير ما وضع

٦٤ - ما هو دخلك الشهري ؟

- ١-٦٤ () أقل من ٣.٠٠٠ ريال سعودي .
٢-٦٤ () ما بين ٣.٠٠٠ - ٤.٠٠٠ ريال سعودي .
٣-٦٤ () ما بين ٤.٠٠٠ - ٥.٠٠٠ ريال سعودي .
٤-٦٤ () ما بين ٥.٠٠٠ - ٦.٠٠٠ ريال سعودي .
٥-٦٤ () ما بين ٦.٠٠٠ - ٧.٠٠٠ ريال سعودي .
٦-٦٤ () ما بين ٧.٠٠٠ - ٨.٠٠٠ ريال سعودي .
٧-٦٤ () ما بين ٨.٠٠٠ - ٩.٠٠٠ ريال سعودي .
٨-٦٤ () ما بين ٩.٠٠٠ - ١٠.٠٠٠ ريال سعودي .
٩-٦٤ () أكثر من ١٠.٠٠٠ ريال سعودي .

٦٥ - أين تضع نفسك بالنسبة لمجموعات الدخل ؟

- ١-٦٥ () دخل محدود .
٢-٦٥ () دخل متوسط .
٣-٦٥ () دخل عالي .

أخي الكريم ، إذا كان لديك أي ملاحظات أو اضافات أخرى ترى أنها ستساعدني في بحثي ، أرجو التكرم بكتابتها في الصفحة المقابلة مع جزييل الشكر .

SECTION ONE: THE HOUSE

Part A Building of Services

Q1 What is the type of accommodation you live in?

- () Traditional house. 1
 () Part of traditional house. 2
 () Flat in flats complex. 3
 () Flat in villa. 4
 () Villa. 5

Q2 What is the main function of this building?

- () Housing only. 1
 () Housing and Commercial. 2

Q3 How many streets are adjacent to the lands of this building?

- () One street. 1
 () Two streets. 2
 () Three streets. 3
 () Four or more streets. 4

Q4 How many elevations are there for this Building?
 (Elevations which contain windows)

- () One elevation. 1
 () Two elevations. 2
 () Three elevations. 3
 () Four or more elevations. 4

Q5 How many entrances are there for this Building?

- () One entrance. 1
 () Two entrances. 2
 () Three entrances. 3
 () Four or more entrances. 4

Q6 How many floors are there in this Building?

- () One storey. 1
 () Two stories. 2
 () Three stories. 3
 () Four stories. 4
 () Five or more stories. 5

Q7 Is there an elevation in this Building?

- () Yes. 1
 () No. 2

Q8 If there is no elevation in this Building, do you think it needs one?

- () Yes. 1
 () No. 2

Q9 Is the Building connected to a public network of electricity?

- () Yes. 1
 () No. 2

Q10 Is the Building connected to a public network of water?

- () Yes. 1
 () No. 2

Q11 Is the Building connected to a public network of sewerage?

- () Yes. 1
 () No. 2

Q12 Is the Building connected to a public network of telephones?

- () Yes. 1
 () No. 2

Q13 Is the Building connected to a public network of gas?

- () Yes. 1
 () No. 2

Q14 What is the source of lighting during the day-time in the living room?

- () Natural. 1
 () Artificial. 2

Q15	What is the source of lighting during the day-time in the men room?	1 2
	() Natural.	
	() Artificial.	
Q16	What is the source of lighting during the day-time in the woman room?	1 2
	() Natural.	
	() Artificial.	
Q17	What is the source of lighting during the day-time in the kitchen?	1 2
	() Natural.	
	() Artificial.	
Q18	What is the source of lighting during the day-time in the bedrooms?	1 2
	() Natural.	
	() Artificial.	
Q19	What is the source of ventilation in the living-room?	1 2
	() Natural.	
	() Artificial.	
Q20	What is the source of ventilation in the men-room?	1 2
	() Natural.	
	() Artificial.	
Q21	What is the source of ventilation in the women-room?	1 2
	() Natural.	
	() Artificial.	
Q22	What is the source of ventilation in the kitchen?	1 2
	() Natural.	
	() Artificial.	

Q23	What is the source of ventilation in the bedroom?	1 2
	() Natural.	
	() Artificial.	
Q24	Do you use air conditioning in your accommodation?	1 2
	() Yes.	
	() No.	
Q25	Do you use heaters in your accommodation?	1 2
	() Yes.	
	() No.	
Q26	Do you use water-heaters in your accommodation?	1 2
	() Yes.	
	() No.	
Q27	What is the number of traditional toilets in this accommodation?	
	() Write the number.	
Q28	What is the number of western toilets in this accommodation?	
	() Write the number.	
Q29	What is the type of your previous accommodation?	
	() Traditional house.	
	() Part of a traditional house.	
	() Flat in flat complex.	
	() Flat in a villa.	
	() Villa.	
	() Other - state.....	
Q30	What was your reason for moving to this house?	
	() The previous accommodation was very old.	1
	() The previous accommodation lacked facilities.	2
	() The previous neighbourhood was disturbing (bad).	3
	() Other - state.....	4
	

<u>Part B</u>		The House and Family	
Q31 Do you own or rent this accommodation?			
<input type="checkbox"/> Own.		1	
<input type="checkbox"/> Rent.		2	
Q32 If you own this accommodation, how did you manage to own and build it?			
<input type="checkbox"/> Through personal saving.		1	
<input type="checkbox"/> Through family assistance.		2	
<input type="checkbox"/> Through the Real Estate Developing Fund.		3	
<input type="checkbox"/> Others - state.....		4	
.....			
Q33 If you rent this accommodation, how much do you pay for rent per year?			
<input type="checkbox"/> Less than 10,000 Saudi Riyals (S.R.)		1	
<input type="checkbox"/> Between 10,000 - 15,000 S.R.		2	
<input type="checkbox"/> Between 15,000 - 20,000 S.R.		3	
<input type="checkbox"/> Between 20,000 - 25,000 S.R.		4	
<input type="checkbox"/> Between 25,000 - 30,000 S.R.		5	
<input type="checkbox"/> More than 30,000 S.R.		6	
Q34 How long have you been living in this house?			
<input type="checkbox"/> Less than 5 years.		1	
<input type="checkbox"/> Between 5 - 10 years.		2	
<input type="checkbox"/> Between 10 - 15 years.		3	
<input type="checkbox"/> Between 15 - 20 years.		4	
<input type="checkbox"/> Between 20 - 25 years.		5	
<input type="checkbox"/> Between 25 - 30 years.		6	
<input type="checkbox"/> More than 30 years.		7	
Q35 How many families are living in the Building?			
<input type="checkbox"/> 1 Family.		1	
<input type="checkbox"/> 2 Families.		2	
<input type="checkbox"/> 3 Families.		3	
<input type="checkbox"/> 4 Families.		4	
<input type="checkbox"/> 5 or more families.		5	

Q36 Are these families related to the same extended family?	
<input type="checkbox"/> Yes.	1
<input type="checkbox"/> No.	2
Q37 What is the number of servants in your accommodation?	
<input type="checkbox"/> Write the number.	
Q38 Where do the servants live?	
<input type="checkbox"/> Inside the house.	1
<input type="checkbox"/> Outside the house.	2
Q39 What is the number of drivers in your accommodation?	
<input type="checkbox"/> Write the number.	
Q40 Where do the drivers live?	
<input type="checkbox"/> Inside the house.	1
<input type="checkbox"/> Outside the house.	2
<u>Part C</u>	
The House and Privacy	
Q41 What is the height of the wall of the terrace?	
<input type="checkbox"/> High wall above eye sight.	1
<input type="checkbox"/> Low wall below eye sight.	2
Q42 Do you and your family use the terrace?	
<input type="checkbox"/> Yes.	1
<input type="checkbox"/> No.	2

Q43	If you do not use the terrace, what is the reason?	
	() The terrace is overlooked by neighbours (privacy).	1
	() The society does not accept the use of a terrace.	2
	() The weather does not help in using it.	3
	() Others - State.....	4
	
Q45	Do you feel that your windows are overlooked by your neighbours?	
	() Yes.	1
	() No.	2
Q46	Do you put curtains over windows for privacy reasons?	
	() Yes.	1
	() No.	2
Q47	Do your neighbours overlook your yards and garden?	
	() Yes.	1
	() No.	2
Q48	Do you overlook your neighbours yards and gardens?	
	() Yes.	1
	() No.	2
Q49	Do you feel that the privacy of your family is well protected in this accommodation?	
	() Yes.	1
	() No.	2
Q50	If this Building has balconies, do you agree that they do not function well for social activities and they should not be built?	
	() Agree.	1
	() Disagree.	2

Q51	Do you agree that the open space around the Building is the villa design is useless for the family?	
	() Agree.	1
	() Disagree.	2
Q52	Do you agree that the yards would function better for the family if they had been designed to the inside instead of outside?	
	() Agree.	1
	() Disagree.	2
Q53	Do you feel that this house meets you and your family requirements?	
	() Yes.	1
	() No.	2
Q54	If you have a choice to more to other accommodation, what is your preference?	
	() Not to move.	1
	() Move to traditional house.	2
	() Move to flat in flats complex.	3
	() Move to flat in villa.	4
	() Move to villa.	5

SECTION TWO: THE DISTRICT

Q55	How do you classify the neighbourhood which you live in?	
	() Traditional neighbourhood.	1
	() Contemporary neighbourhood.	2
Q56	Does your neighbourhood have a Mosque?	
	() Yes.	1
	() No.	2
Q57	Does your neighbourhood have shops?	
	() Yes.	1
	() No.	2

Q58 Does your neighbourhood have a clinic?	() Yes. () No.	1 2
Q59 Does your neighbourhood have a police office?		
Q60 Does your neighbourhood have a fire station?	() Yes. () No.	1 2
Q61 Does your neighbourhood have a post office?	() Yes. () No.	1 2
Q62 Does your neighbourhood have elementary schools?	() Yes. () No.	1 2
Q63 Does your neighbourhood have intermediate schools?	() Yes. () No.	1 2
Q64 Does your neighbourhood have secondary schools?	() Yes. () No.	1 2
Q65 Does your neighbourhood have open spaces?	() Yes. () No.	1 2
Q66 How would you describe the nature of your relationship with your neighbours?	() Very strong relations. () Good relations. () Normal relations. () No relation at all.	1 2 3 4

Q67 How is your relations with your neighbours changing?	() For the better. () For the worse. () No change.	1 2 3
Q68 Do you feel that this neighbourhood was designed to accommodate a certain class of person?	() Yes. () No.	1 2
Q69 Do you feel that this neighbourhood meets you and your family needs?	() Yes. () No.	1 2
Q70 If you have a choice to move to another district, what is your preference?	() Not to move. () Move to traditional neighbourhood. () Move to contemporary neighbourhood.	1 2 3
SECTION THREE: THE CITY		
Q71 Which group are you in?	() City of Makkal. () City of Jeddah. () City of Riyadh. () The Two Projects. () Saudi Students in the U.K.	1 2 3 4 5
Q72 Do you agree that your city is not the same city that it was several years ago?	() Agree. () Disagree.	1 2
Q73 Do you agree that the general appearance of this city was better several years ago?	() Agree. () Disagree.	1 2

Q74	Do you agree that new subdivisions in the city does not consider the traditional way of neighbourhood design?	<div><div><div></div></div><div><div></div></div></div> <div><div>Agree.</div><div>Disagree.</div></div>	<div>1</div> <div>2</div>
Q75	Do you agree that highrise buildings should not be built in the city?	<div><div><div></div></div><div><div></div></div></div> <div><div>Agree.</div><div>Disagree.</div></div>	<div>1</div> <div>2</div>
Q76	Do you agree that new buildings in the city should reflect the traditional architecture?	<div><div><div></div></div><div><div></div></div></div> <div><div>Agree.</div><div>Disagree.</div></div>	<div>1</div> <div>2</div>
Q77	Do you agree that traditional (old) buildings in the city should not be demolished?	<div><div><div></div></div><div><div></div></div></div> <div><div>Agree.</div><div>Disagree.</div></div>	<div>1</div> <div>2</div>

SECTION FOUR: TRANSPORTATION			

Q78	How many cars are there for this building, which you live in?	<div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div> <div><div>One car.</div><div>Two cars.</div><div>Three cars.</div><div>Four cars.</div><div>Five or more cars.</div></div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div>
Q79	Where do you park your car?	<div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div> <div><div>In special garage inside the house.</div><div>In special garage outside the house.</div><div>In the front yard.</div><div>Beside the house.</div><div>Away from the house.</div><div>Others - State.....</div></div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div></div>
		6

Q80	Do you use the bus?	<div><div><div></div></div><div><div></div></div></div> <div><div>Yes.</div><div>No.</div></div>	<div>1</div> <div>2</div>
Q81	If you do not use the Bus, what is the reason?	<div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div> <div><div>The bus is inconvenient for me.</div><div>The bus is crowded.</div><div>The bus does not reach my destination.</div><div>The bus takes too much time.</div><div>The bus is expensive.</div><div>I have my own car.</div><div>Others - State.....</div></div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div>
Q82	Do you agree that the Public Transportation System needs improvement?	<div><div><div></div></div><div><div></div></div></div> <div><div>Yes.</div><div>No.</div></div>	<div>1</div> <div>2</div>
Q83	What type of transportation do you use to reach the Mosque?	<div><div><div></div></div><div><div></div></div><div><div></div></div></div> <div><div>Walking.</div><div>Bus.</div><div>Car.</div></div>	<div>1</div> <div>2</div> <div>3</div>
Q84	What is the approximate distance to the Mosque?	<div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div> <div><div>0 - 50 meters.</div><div>50 - 100 meters.</div><div>100 - 200 meters.</div><div>200 - 500 meters.</div><div>500 - 1,000 meters.</div><div>1 - 5 kilometres.</div><div>5 - 10 kilometres.</div><div>10 - 30 kilometres.</div><div>More than 30 kilometres.</div></div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>8</div> <div>9</div>
Q85	What type of transportation do you use to reach the Shops?	<div><div><div></div></div><div><div></div></div><div><div></div></div></div> <div><div>Walking.</div><div>Bus.</div><div>Car.</div></div>	<div>1</div> <div>2</div> <div>3</div>

Q86	What is the approximate distance to the Shops?	1 () 0 - 50 meters. () 50 - 100 meters. () 100 - 200 meters. () 200 - 500 meters. () 500 - 1,000 meters. () 1 - 5 kilometres. () 5 - 10 kilometres. () 10 - 30 kilometres. () More than 30 kilometres.
Q87	What type of transportation do you use to reach Schools?	1 () Walking. () Bus. () Car.
Q88	What is the approximate distance to the Schools?	1 () 0 - 50 meters. () 50 - 100 meters. () 100 - 200 meters. () 200 - 500 meters. () 500 - 1,000 meters. () 1 - 5 kilometres. () 5 - 10 kilometres. () 10 - 30 kilometres. () More than 30 kilometres.
Q89	What type of transportation do you use to reach Work?	1 () Walking. () Bus. () Car.
Q90	What is the approximate distance to Work?	1 () 0 - 50 meters. () 50 - 100 meters. () 100 - 200 meters. () 200 - 500 meters. () 500 - 1,000 meters. () 1 - 5 kilometres. () 5 - 10 kilometres. () 10 - 30 kilometres. () More than 30 kilometres.

Q91	What is the type of transportation you use to reach the Recreation Area?	1 () Walking. () Bus. () Car.
Q92	What is the approximate distance to the Recreation Area?	1 () 0 - 50 meters. () 50 - 100 meters. () 100 - 200 meters. () 200 - 500 meters. () 500 - 1,000 meters. () 1 - 5 kilometres. () 5 - 10 kilometres. () 10 - 30 kilometres. () More than 30 kilometres.
Q93	What is the approximate distance that you could walk frequently without any difficulty?	1 () Less than 100 meters. () 100 - 200 meters. () 200 - 300 meters. () 300 - 400 meters. () 400 - 500 meters. () 500 - 600 meters. () 600 - 700 meters. () 700 - 800 meters. () More than 800 meters.
Q94	If it is recommended not to park your car beside the house, do you agree to park it away from the house?	1 () Yes. () No.
=====		
SECTION FIVE: PERSONAL INFORMATION		
=====		
Q95	What is your nationality?	1 () Saudi. () Non Saudi.

Q96 If you are non-Saudi, are you Arabic or non-Arabic?

- | | 1 | 2 |
|-----------------|---|---|
| () Arabic. | | |
| () Non-Arabic. | | |

Q97 What is your marital status?

- | | |
|-------------------------|---|
| () Single. | 1 |
| () Married. | 2 |
| () Others - State..... | 3 |
| | |

Q98 What is the number of male members in the family?

- () Write the number.

Q99 What is the number of female members in the family?

- () Write the number.

Q100 What is the number of the total members in the family?

- () Write the number.

Q101 What is your age?

- () Less than 20 years.
() 20 - 30 years.
() 30 - 40 years.
() 40 - 50 years.
() 50 - 60 years.
() More than 60 years.

Q102 What is your education?

- | | | |
|-----|--------------------------|---|
| () | Does not read and write. | 1 |
| () | Just read and write. | 2 |
| () | Elementary education. | 3 |
| () | Intermediate education. | 4 |
| () | Secondary education. | 5 |
| () | University education. | 6 |
| () | Post graduate education. | 7 |
| () | Others - State..... | 8 |
| () | | |

Q103 What is your occupation?

- | | | |
|-----|---------------------|---|
| () | Commercial. | 1 |
| () | Worker. | 2 |
| () | Student. | 3 |
| () | Professional work. | 4 |
| () | Civil work. | 5 |
| () | Military. | 6 |
| () | Others - State..... | 7 |
| () | | 7 |

Q104 What is your monthly income?

- | () | Less than 3000 S.R. | 1 |
|-----|----------------------|---|
| () | 300 - 4000 S.R. | 2 |
| () | 4000 - 5000 S.R. | 3 |
| () | 5000 - 6000 S.R. | 4 |
| () | 7000 - 8000 S.R. | 5 |
| () | 8000 - 9000 S.R. | 6 |
| () | 9000 - 10000 S.R. | 7 |
| () | More than 10000 S.R. | 8 |

Q105 How do you classify your self according to the income groups?

- () Low income group. 1
() Medium income group. 2
() High income group. 3

Q106 Dear Sir/Madam,

If you have any comments or remarks on any additional information which you think will help in my research, please write it below.

Thanks.

APPENDIX B

TABLES OF TOTAL FREQUENCIES

Q1 - Q106

02 BUILDING FUNCTION

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
HOUSING	1	835	90.0	90.0	90.0
H AND COMMERC	2	93	10.0	10.0	100.0
TOTAL		928	100.0	100.0	

MEAN	1.100	STD DEV	.300	MINIMUM	1.000
MAXIMUM	2.000				

VALID CASES 928 MISSING CASES 0

03 ADJACENT STREETS

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	1	450	45.5	45.5	45.5
	2	343	37.0	37.0	82.5
	3	99	10.7	10.7	93.1
	4	36	3.9	3.9	100.0
TOTAL		928	100.0	100.0	

MEAN	1.679	STD DEV	.811	MINIMUM	1.000
MAXIMUM	4.000				

VALID CASES 928 MISSING CASES 0

04 NUM. OF ELEVATIONS

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	1	99	10.7	10.7	10.7
	2	238	25.6	25.6	36.3
	3	194	20.9	20.9	57.2
	4	397	42.8	42.8	100.0
TOTAL		928	100.0	100.0	

MEAN	2.953	STD DEV	1.054	MINIMUM	1.000
MAXIMUM	4.000				

VALID CASES 928 MISSING CASES 0

05 NUM. OF ENTRANCES

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	1	395	42.9	42.9	42.9
	2	379	40.8	40.8	83.7
	3	125	13.5	13.5	97.2
	4	26	2.8	2.8	100.0
TOTAL		928	100.0	100.0	

MEAN	1.762	STD DEV	.757	MINIMUM	1.000
MAXIMUM	4.000				

VALID CASES 928 MISSING CASES 0

01 TYPE OF ACCOMMODATION

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
TRADH	1.00	113	12.2	12.2	12.2
FLAT	2.00	400	43.1	43.1	55.3
VILLA	3.00	415	44.7	44.7	100.0
TOTAL		928	100.0	100.0	

MEAN	2.325	STD DEV	.681	MINIMUM	1.000
MAXIMUM	3.000				

VALID CASES 928 MISSING CASES 0

071 GROUP CLASSIFICATION

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
MAKKAH	1.00	273	29.4	29.4	29.4
JEDDAH	2.00	274	29.5	29.5	58.9
RIYADH	3.00	232	25.0	25.0	83.9
PROJECT	4.00	78	8.4	8.4	92.3
SSUD	5.00	71	7.7	7.7	100.0
TOTAL		928	100.0	100.0	

MEAN	2.353	STD DEV	1.202	MINIMUM	1.000
MAXIMUM	5.000				

VALID CASES 928 MISSING CASES 0

86 NUM. OF STORIES

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	1	73	7.9	7.9	7.9
	2	452	48.7	48.7	56.6
	3	241	26.0	26.0	82.5
	4	109	11.7	11.7	94.3
	5	53	5.7	5.7	100.0
	TOTAL	928	100.0	100.0	
MEAN	2.537				1.000
MAXIMUM	5.000			MINIMUM	

VALID CASES 928 MISSING CASES 0

87 ELEVATOR SERVICE

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	99	10.7	10.7	10.7
NO	2	829	89.3	89.3	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.373				1.000
MAXIMUM	2.000			MINIMUM	

VALID CASES 928 MISSING CASES 0

88 NEED OF ELEVATOR

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	217	23.4	23.4	23.4
NO	2	711	76.6	76.6	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.766				1.000
MAXIMUM	2.000			MINIMUM	

VALID CASES 928 MISSING CASES 0

89 ELECTRICAL SUPPLY

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	928	100.0	100.0	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.000				1.000
MAXIMUM	1.000			MINIMUM	
VALID CASES 928 MISSING CASES 0					

910 WATER SUPPLY

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	821	88.5	88.5	88.5
NO	2	107	11.5	11.5	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.115				1.000
MAXIMUM	2.000			MINIMUM	

VALID CASES 928 MISSING CASES 0

911 SEWAGE CONNECTION

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	609	65.6	65.6	65.6
NO	2	319	34.4	34.4	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.344				1.000
MAXIMUM	2.000			MINIMUM	

VALID CASES 928 MISSING CASES 0

912 TELEPHONE SERVICE

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	759	81.8	81.8	81.8
NO	2	169	18.2	18.2	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.152				1.000
MAXIMUM	2.000			MINIMUM	

VALID CASES 928 MISSING CASES 0

913 GAS SUPPLY

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NO	2	928	100.0	100.0	100.0
	TOTAL	928	100.0	100.0	
MEAN	2.000				2.000
MAXIMUM	2.000			MINIMUM	
VALID CASES 928 MISSING CASES 0					

Q14 LIGHTING IN LIVING R

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NATURAL	1	594	64.0	64.0	64.0
ARTIFICIAL	2	334	36.0	36.0	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.360				1.000
MAXIMUM	2.000				

VALID CASES 928 MISSING CASES 0

Q15 LIGHTING IN MEN R

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NATURAL	1	604	65.1	65.1	65.1
ARTIFICIAL	2	324	34.9	34.9	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.349				1.000
MAXIMUM	2.000				

VALID CASES 928 MISSING CASES 0

Q16 LIGHTING IN WOMEN R

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NATURAL	1	523	63.4	64.1	64.1
ARTIFICIAL	2	329	35.3	35.9	100.0
	0	11	1.2	MISSING	
	TOTAL	923	100.0	100.0	
MEAN	1.359				1.000
MAXIMUM	2.000				

VALID CASES 917 MISSING CASES 11

Q17 LIGHTING IN KITCHEN

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NATURAL	1	547	58.9	59.5	59.5
ARTIFICIAL	2	372	40.1	40.5	100.0
	0	9	1.0	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.405				1.000
MAXIMUM	2.000				

VALID CASES 919 MISSING CASES 9

Q18 LIGHTING IN BED R

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NATURAL	1	567	61.1	61.8	61.8
ARTIFICIAL	2	350	37.7	38.2	100.0
	0	11	1.2	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.382				1.000
MAXIMUM	2.000				

VALID CASES 917 MISSING CASES 11

Q19 VENT IN LIVING R

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NATURAL	1	417	44.9	44.9	44.9
ARTIFICIAL	2	511	55.1	55.1	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.551				1.000
MAXIMUM	2.000				

VALID CASES 928 MISSING CASES 0

Q20 VENT IN MEN R

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NATURAL	1	428	46.1	46.1	46.1
ARTIFICIAL	2	500	53.9	53.9	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.529				1.000
MAXIMUM	2.000				

VALID CASES 928 MISSING CASES 0

Q21 VENT IN WOMEN R

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NATURAL	1	419	45.2	45.7	45.7
ARTIFICIAL	2	497	53.6	54.3	100.0
	0	12	1.3	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.543				1.000
MAXIMUM	2.000				

VALID CASES 916 MISSING CASES 12

Q22 VENT IN KITCHEN									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT			
NATURAL		1	462	49.8	50.3	50.3			
ARTIFICIAL		2	436	49.1	49.7	100.0			
		0	10	1.1	MISSING				
TOTAL			928	100.0	100.0				
MEAN	1.497	STD DEV	.500	MINIMUM		1.000			
MAXIMUM	2.000								
VALID CASES		918	MISSING CASES		10				

Q23 VENT IN BED R									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT			
NATURAL		1	407	43.9	44.4	44.4			
ARTIFICIAL		2	509	54.8	55.6	100.0			
		0	12	1.3	MISSING				
TOTAL			928	100.0	100.0				
MEAN	1.556	STD DEV	.497	MINIMUM		1.000			
MAXIMUM	2.000								
VALID CASES		916	MISSING CASES		12				

Q24 AIRCONDITIONING									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT			
YES		1	919	99.0	99.0	99.0			
NO		2	9	1.0	1.0	100.0			
TOTAL			928	100.0	100.0				
MEAN	1.010	STD DEV	.098	MINIMUM		1.000			
MAXIMUM	2.000								
VALID CASES		929	MISSING CASES		0				

Q25 HEATERS									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT			
YES		1	319	34.4	34.4	34.4			
NO		2	609	65.6	65.6	100.0			
TOTAL			928	100.0	100.0				
MEAN	1.656	STD DEV	.475	MINIMUM		1.000			
MAXIMUM	2.000								
VALID CASES		925	MISSING CASES		0				

Q26 WATER HEATERS						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
YES	1	820	88.4	88.4	88.4	
NO	2	108	11.6	11.6	100.0	
	TOTAL	928	100.0	100.0		
MEAN	1.116	STD DEV	.321	MINIMUM	1.000	
MAXIMUM	2.000					
VALID CASES		923	MISSING CASES		0	

Q27 TRADITIONAL TOILETS						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
	1	337	36.3	49.3	49.3	
	2	188	20.3	27.5	76.8	
	3	65	7.0	9.5	86.3	
	4	51	5.5	7.5	93.7	
	5	20	2.2	2.9	96.6	
	6	12	1.3	1.8	98.4	
	7	5	.5	.7	99.1	
	8	5	.5	.7	99.9	
	9	1	.1	.1	100.0	
	0	244	26.3	MISSING		
	TOTAL	928	100.0	100.0		
MEAN	2.000	STD DEV	1.397	MINIMUM	1.000	
MAXIMUM	9.000					
VALID CASES		634	MISSING CASES		244	

Q28 WESTERN TOILETS						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
	1	314	33.8	37.7	37.7	
	2	267	28.8	32.1	69.7	
	3	93	10.0	11.2	80.9	
	4	75	8.1	9.0	89.9	
	5	38	4.1	4.6	94.5	
	6	20	2.2	2.4	96.9	
	7	10	1.1	1.2	98.1	
	8	8	.9	1.0	99.0	
	9	8	.9	1.0	100.0	
	0	95	10.2	MISSING		
	TOTAL	928	100.0	100.0		
MEAN	2.333	STD DEV	1.629	MINIMUM	1.000	
MAXIMUM	9.000					
VALID CASES		533	MISSING CASES		95	

Q33 AMOUNT OF RENT

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
<10000SR	1	143	15.4	29.0	29.0
10000-15000SR	2	194	20.9	39.4	68.4
15000-20000SR	3	112	12.1	22.7	91.1
20000-25000SR	4	19	2.0	3.9	94.9
25000-30000SR	5	10	1.1	2.0	97.0
>30000SR	6	15	1.6	3.0	100.0
	0	435	44.9	MISSING	
TOTAL		928	100.0	100.0	
MEAN	2.197				1.000
MAXIMUM	6.000				
VALID CASES	493	MISSING CASES	435		

Q34 PERIOD OF LIVING

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
<5Y	1	555	59.8	59.8	59.8
5-10Y	2	237	25.3	25.3	85.3
10-15Y	3	69	7.4	7.4	92.8
15-20Y	4	25	2.7	2.7	95.5
20-25Y	5	20	2.2	2.2	97.6
25-30Y	6	8	.9	.9	98.5
>30Y	7	14	1.5	1.5	100.0
TOTAL		928	100.0	100.0	
MEAN	1.705				1.000
MAXIMUM	7.000				
VALID CASES	928	MISSING CASES	0		

Q35 NUM. OF FAMILIES

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
1	1	325	35.0	35.0	35.0
2	2	171	18.4	18.5	53.7
3	3	99	10.7	10.7	64.5
4	4	107	11.5	11.6	76.1
5	5	221	23.8	23.9	100.0
0	0	5	.5	MISSING	
TOTAL		928	100.0	100.0	
MEAN	2.705				1.000
MAXIMUM	5.000				
VALID CASES	923	MISSING CASES	5		

Q36 RELATIONSHIP

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	404	45.1	45.9	45.9
NO	2	313	33.7	34.1	100.0
	0	11	1.2	MISSING	
TOTAL		928	100.0	100.0	
MEAN	1.341				1.000
MAXIMUM	2.000				
VALID CASES	917	MISSING CASES	11		

Q29 PREVIOUS ACCOMM

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
TRASH	1	334	36.0	36.4	36.4
P TRASH	2	43	4.6	4.7	41.1
FLAT CM	3	346	37.3	37.7	78.8
FLAT V	4	44	5.0	5.0	83.8
VIL	5	124	13.4	13.5	97.3
OTH	6	25	2.7	2.7	100.0
	0	10	1.1	MISSING	
TOTAL		928	100.0	100.0	
MEAN	2.627				1.000
MAXIMUM	6.000				
VALID CASES	918	MISSING CASES	10		

Q30 REASON OF MOVING

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
VERY OLD	1	172	18.5	19.1	19.1
POOR FACILITIES	2	172	18.5	19.1	38.2
BAD DISTRICT	3	83	9.0	9.2	47.4
OTHER	4	474	51.1	52.6	100.0
	0	27	2.9	MISSING	
TOTAL		928	100.0	100.0	
MEAN	2.953				1.000
MAXIMUM	4.000				
VALID CASES	901	MISSING CASES	27		

Q31 OWN OR RENT

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
OWN	1	435	46.9	46.9	46.9
RENT	2	493	53.1	53.1	100.0
TOTAL		928	100.0	100.0	
MEAN	1.531				1.000
MAXIMUM	2.000				
VALID CASES	923	MISSING CASES	0		

Q32 WAY OF OWNING

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
PERSONAL SAV	1	102	11.0	23.4	23.4
FAMILY ASSIST	2	39	4.2	9.0	32.4
REFD	3	250	26.9	57.5	89.9
OTHER	4	44	4.7	10.1	100.0
	0	493	53.1	MISSING	
TOTAL		928	100.0	100.0	
MEAN	2.543				1.000
MAXIMUM	4.000				
VALID CASES	435	MISSING CASES	493		

837	NUM. OF SERVANTS		-----						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT				
	1	405	43.6	82.8	82.8				
	2	62	6.7	12.7	95.5				
	3	17	1.8	3.5	99.0				
	4	5	.5	1.0	100.0				
	0	439	47.3	MISSING					
TOTAL		928	100.0	100.0					
MEAN	1.227	STD DEV	.554	MINIMUM	1.000				
MAXIMUM	4.000								
VALID CASES	439	MISSING CASES	439						

838	S PLACE OF LIVING		-----						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT				
INSIDE M	1	460	49.6	94.3	94.3				
OUTSIDE M	2	23	3.0	5.7	100.0				
	0	440	47.4	MISSING					
TOTAL		928	100.0	100.0					
MEAN	1.057	STD DEV	.233	MINIMUM	1.000				
MAXIMUM	2.000								
VALID CASES	438	MISSING CASES	440						

839	NUM. OF DRIVERS		-----						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT				
	1	137	14.8	88.4	88.4				
	2	17	1.8	11.0	99.4				
	3	1	.1	.6	100.0				
	0	773	83.3	MISSING					
TOTAL		928	100.0	100.0					
MEAN	1.123	STD DEV	.348	MINIMUM	1.000				
MAXIMUM	3.000								
VALID CASES	155	MISSING CASES	773						

840	D PLACE OF LIVING		-----						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT				
INSIDE M	1	34	9.1	54.2	54.2				
OUTSIDE M	2	71	7.7	45.8	100.0				
	0	773	83.3	MISSING					
TOTAL		928	100.0	100.0					
MEAN	1.458	STD DEV	.500	MINIMUM	1.000				
MAXIMUM	2.000								
VALID CASES	155	MISSING CASES	773						

341	TERRACE WALL		-----						
VALUE LABEL			VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT		
HIGH WALL			1	585	63.0	63.0	63.0		
LOW WALL			2	343	37.0	37.0	100.0		
TOTAL				928	100.0	100.0			
MEAN			1.370	STD DEV	.493	MINIMUM	1.000		
MAXIMUM			2.000						
VALID CASES			928	MISSING CASES	0				

842	TERRACE USE		-----						
VALUE LABEL			VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT		
YES			1	428	46.1	46.1	46.1		
NO			2	500	53.9	53.9	100.0		
TOTAL				928	100.0	100.0			
MEAN			1.539	STD DEV	.499	MINIMUM	1.000		
MAXIMUM			2.000						
VALID CASES			928	MISSING CASES	0				

843	WAY OF USING TERRACE		-----						
VALUE LABEL			VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT		
SLEEP			1	35	4.1	8.8	8.8		
DRYCL			2	197	20.2	43.3	52.1		
GATHER			3	115	12.7	27.3	79.4		
CH PLAY			4	77	8.3	17.8	97.2		
OTH			5	12	1.3	2.8	100.0		
0				496	53.4	MISSING			
TOTAL				928	100.0	100.0			
MEAN			2.625	STD DEV	.967	MINIMUM	1.000		
MAXIMUM			5.000						
VALID CASES			432	MISSING CASES	496				

844	REASON OF UNUSED TERRACE		-----						
VALUE LABEL			VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT		
PRIVACY			1	133	14.9	27.8	27.8		
SOCIETY			2	45	4.8	9.1	36.8		
WEATHER			3	185	19.9	37.2	74.0		
OTHER			4	129	13.9	26.0	100.0		
0				431	46.4	MISSING			
TOTAL				928	100.0	100.0			
MEAN			2.614	STD DEV	1.166	MINIMUM	1.000		
MAXIMUM			4.000						
VALID CASES			497	MISSING CASES	431				

845 WINDOWS OVERLOOKED

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	457	49.2	49.2	49.2
NO	2	471	50.8	50.8	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.503	STD DEV	.500	MINIMUM	1.000
MAXIMUM	2.000				

VALID CASES 928 MISSING CASES 0

846 CURTAINS FOR PRIVACY

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	645	69.5	69.5	69.5
NO	2	283	30.5	30.5	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.205	STD DEV	.401	MINIMUM	1.000
MAXIMUM	2.000				

VALID CASES 928 MISSING CASES 0

847 HOUSE YARD OVERLOOKED

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	496	53.4	54.3	54.3
NO	2	417	44.9	45.7	100.0
	0	15	1.6	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.457	STD DEV	.498	MINIMUM	1.000
MAXIMUM	2.000				

VALID CASES 913 MISSING CASES 15

848 NEIGHBOUR YARD OVERLOOKED

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	517	53.7	56.4	56.4
NO	2	400	43.1	43.6	100.0
	0	11	1.2	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.436	STD DEV	.496	MINIMUM	1.000
MAXIMUM	2.000				

VALID CASES 917 MISSING CASES 11

849 FAMILY PRIVACY

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	819	88.3	88.8	88.8
NO	2	103	11.1	11.2	100.0
	0	6	.6	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.112	STD DEV	.315	MINIMUM	1.000
MAXIMUM	2.000				

VALID CASES 922 MISSING CASES 6

850 GALLERIES ARE USELESS

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	587	63.3	67.8	67.8
NO	2	279	30.1	32.2	100.0
	0	62	6.7	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.322	STD DEV	.463	MINIMUM	1.000
MAXIMUM	2.000				

VALID CASES 866 MISSING CASES 62

851 OUTSIDE YARDS ARE USELESS

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	515	55.5	56.3	56.3
NO	2	399	43.0	43.7	100.0
	0	14	1.5	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.437	STD DEV	.496	MINIMUM	1.000
MAXIMUM	2.000				

VALID CASES 914 MISSING CASES 14

852 INSIDE YARD ALTERNATIVE

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	783	84.4	85.3	85.3
NO	2	135	14.5	14.7	100.0
	0	10	1.1	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.147	STD DEV	.354	MINIMUM	1.000
MAXIMUM	2.000				

VALID CASES 913 MISSING CASES 10

Q53 SATISFYING OF HOUSE

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	690	74.4	74.4	74.4
NO	2	238	25.6	25.6	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.255				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	0		

Q54 PREFERENCE OF MOVING

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NO MOVE	1	299	32.2	32.2	32.2
TRASH	2	25	2.7	2.7	34.9
FLAT CM	3	32	3.4	3.4	38.4
FLAT V	4	31	3.3	3.3	41.7
VILLA	5	541	58.3	58.3	100.0
	TOTAL	928	100.0	100.0	
MEAN	3.523				1.000
MAXIMUM	5.000				
VALID CASES	928	MISSING CASES	0		

Q55 DISTRICT CLASSIFICATION

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
TRADITIONAL D	1	252	27.2	27.2	27.2
CONTEMPR D	2	671	72.3	72.3	100.0
	0				
	TOTAL	928	100.0	100.0	
MEAN	1.227				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	5		

Q56 MOSQUE

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
AVAILABLE	1	904	97.4	97.4	97.4
NOT AVAIL	2	24	2.6	2.6	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.026				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	0		

Q57 SUPE OR SHOPPING AREA

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
AVAILABLE	1	712	76.7	76.7	76.7
NOT AVAIL	2	216	23.3	23.3	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.233				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	0		

Q58 CLINIC

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
AVAILABLE	1	755	81.4	81.4	81.4
NOT AVAIL	2	173	18.6	18.6	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.136				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	0		

----- POLICE STATION -----									
059									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	PERCENT	VALID	CUM		
AVAILABLE		1	405	43.6	43.6	43.6	43.6		
NOT AVAIL		2	523	56.4	56.4	56.4	100.0		
TOTAL			928	100.0	100.0				
MEAN		1.564	STD DEV	.496	MINIMUM	1.000			
MAXIMUM		2.000							
VALID CASES		928	MISSING CASES	0					
----- FIRE STATION -----									
060									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	PERCENT	VALID	CUM		
AVAILABLE		1	611	64.3	64.3	64.3	64.3		
NOT AVAIL		2	517	55.7	55.7	55.7	100.0		
TOTAL			928	100.0	100.0				
MEAN		1.557	STD DEV	.497	MINIMUM	1.000			
MAXIMUM		2.000							
VALID CASES		928	MISSING CASES	0					
----- POST OFFICE -----									
061									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	PERCENT	VALID	CUM		
AVAILABLE		1	389	41.9	41.9	41.9	41.9		
NOT AVAIL		2	539	58.1	58.1	58.1	100.0		
TOTAL			928	100.0	100.0				
MEAN		1.531	STD DEV	.496	MINIMUM	1.000			
MAXIMUM		2.000							
VALID CASES		928	MISSING CASES	0					
----- ELEMENTARY SCHOOL -----									
062									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	PERCENT	VALID	CUM		
AVAILABLE		1	802	86.4	86.4	86.4	86.4		
NOT AVAIL		2	126	13.6	13.6	13.6	100.0		
TOTAL			928	100.0	100.0				
MEAN		1.136	STD DEV	.343	MINIMUM	1.000			
MAXIMUM		2.000							
VALID CASES		928	MISSING CASES	0					
----- INTERMEDIAT SCHOOL -----									
063									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	PERCENT	VALID	CUM		
AVAILABLE		1	634	68.3	68.3	68.3	68.3		
NOT AVAIL		2	292	31.5	31.5	31.5	100.0		
TOTAL			928	100.0	100.0				
MEAN		1.315	STD DEV	.465	MINIMUM	1.000			
MAXIMUM		2.000							
VALID CASES		928	MISSING CASES	0					

064 SECONDARY SCHOOL									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	PERCENT	VALID	CUM		
AVAILABLE		1	474	51.1	51.1	51.1	51.1		
NOT AVAIL		2	454	48.9	48.9	48.9	100.0		
TOTAL			928	100.0	100.0				
MEAN		1.489	STD DEV	.500	MINIMUM	1.000			
MAXIMUM		2.000							
VALID CASES		928	MISSING CASES	0					
065 OPEN AREAS									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	PERCENT	VALID	CUM		
AVAILABLE		1	478	51.5	51.5	51.5	51.5		
NOT AVAIL		2	450	48.5	48.5	48.5	100.0		
TOTAL			928	100.0	100.0				
MEAN		1.435	STD DEV	.500	MINIMUM	1.000			
MAXIMUM		2.000							
VALID CASES		928	MISSING CASES	0					
066 NEIGHBOURS RELATIONSHIP									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	PERCENT	VALID	CUM		
V GOOD		1	233	25.0	25.0	25.0	25.0		
GOOD		2	371	42.1	42.1	42.1	67.3		
NORMAL		3	219	23.6	23.6	23.6	91.4		
NO RELATION		4	80	8.6	8.6	8.6	100.0		
TOTAL			928	100.0	100.0				
MEAN		2.152	STD DEV	.903	MINIMUM	1.000			
MAXIMUM		4.000							
VALID CASES		928	MISSING CASES	0					
067 CHANGE OF RELATION									
VALUE LABEL		VALUE	FREQUENCY	PERCENT	PERCENT	VALID	CUM		
FOR BETTER		1	596	64.2	64.2	64.2	64.2		
FOR WORSE		2	21	2.3	2.3	2.3	66.5		
NO CHANGE		3	311	33.5	33.5	33.5	100.0		
TOTAL			928	100.0	100.0				
MEAN		1.673	STD DEV	.940	MINIMUM	1.000			
MAXIMUM		3.000							
VALID CASES		928	MISSING CASES	0					

968 DIST FOR SPECIAL GROUP

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	493	53.1	53.1	53.1
NO	2	435	46.9	46.9	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.469				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	0		

969 SATISFYING OF DISTRICT

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	706	76.1	76.1	76.1
NO	2	222	23.9	23.9	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.239				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	0		

970 REFERENCE OF MOVING R D

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
EXISTING ONE	1	447	48.2	48.2	48.2
TRADITIONAL D	2	39	4.2	4.2	52.4
CONTEMP D	3	442	47.6	47.6	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.095				1.000
MAXIMUM	3.000				
VALID CASES	928	MISSING CASES	0		

972 CITY IS NOT AS BEFORE

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	869	93.6	93.6	93.6
NO	2	59	6.4	6.4	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.064				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	0		

973 CITY WAS BETTER

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	200	21.6	21.6	21.6
NO	2	728	78.4	78.4	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.734				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	0		

974 NEW SUBDIVISION X OLD CONCEPT

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	703	75.8	75.8	75.8
NO	2	220	23.7	23.7	100.0
	0	5	.5	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.238				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	5		

975 HIGHRISE BUILDING

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	816	87.9	87.9	87.9
NO	2	112	12.1	12.1	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.121				1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	0		

076 NEW BUILDING REF TROTTIONS

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	737	79.4	79.4	79.4
NO	2	191	20.6	20.6	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.206				
MAXIMUM	2.000				
VALID CASES	924				
	MISSING CASES	0			

077 M SCHOLISM OLD BUILD

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	744	80.2	80.2	80.2
NO	2	184	19.8	19.8	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.193				
MAXIMUM	2.000				
VALID CASES	923				
	MISSING CASES	0			

078 NUM OF CARS

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	1	139	20.4	20.4	20.4
	2	181	19.5	20.0	40.8
	3	152	16.4	16.8	57.6
	4	119	12.8	13.1	70.7
	5	266	28.7	29.3	100.0
	0	21	2.3	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	3.101				
MAXIMUM	5.000				
VALID CASES	907				
	MISSING CASES	21			

079 PARKING AREA

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
GAG IN	1	131	14.1	14.4	14.4
GAG ON	2	32	3.4	3.5	18.0
FRONT Y	3	82	8.8	9.0	27.0
BESIDE M	4	405	43.2	44.7	71.7
PAR IN	5	49	5.3	5.4	77.1
OTH	6	8	.9	MISSING	
	0	21	2.3	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	3.477				
MAXIMUM	6.000				
VALID CASES	907				
	MISSING CASES	21			

080 THE USE OF BUSES

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	72	7.8	7.8	7.8
NO	2	856	92.2	92.2	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.922				
MAXIMUM	2.000				
VALID CASES	928				
	MISSING CASES	0			

391 REASON FOR NOT USING BUSES

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
INCONV	1	170	18.3	18.3	18.3
CROWD	2	15	1.6	1.6	20.2
DISTNT	3	143	17.6	17.8	37.9
TIME	4	172	18.5	18.7	56.6
EXPENS	5	5	.5	.5	57.2
PV CAR	6	239	25.8	26.0	83.2
OTH	7	154	16.6	16.8	100.0
	0	10	1.1	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	4.264				
MAXIMUM	7.000				
VALID CASES	913				
	MISSING CASES	10			

Q52 IMPROVMENT OF BUS SYSTEM

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	847	91.3	91.3	91.3
NO	2	81	8.7	8.7	100.0
	TOTAL	928	100.0	100.0	
MEAN	1.037	STD DEV	.282	MINIMUM	1.000
MAXIMUM	2.000				
VALID CASES	928	MISSING CASES	0		

Q53 TRANS TO MOSQUE

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
WALKING	1	749	80.7	81.6	81.6
BUS	2	1	.1	.1	81.7
CAR	3	168	18.1	18.3	100.0
	0	10	1.1	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	1.367	STD DEV	.776	MINIMUM	1.000
MAXIMUM	3.000				
VALID CASES	918	MISSING CASES	10		

Q54 DISTANCE TO MOSQUE

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
0-50M	1	128	13.8	23.0	23.0
50-100M	2	89	9.4	16.4	40.0
100-200M	3	127	13.7	23.4	63.4
200-500M	4	126	13.4	23.2	86.6
500-1000M	5	44	4.7	8.1	94.7
1-5K	6	28	3.0	5.2	99.8
5-10K	7	1	.1	.2	100.0
	0	393	41.3	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	2.721	STD DEV	1.468	MINIMUM	1.000
MAXIMUM	7.000				
VALID CASES	543	MISSING CASES	385		

Q55 TRANS TO SUBUR

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
WALKING	1	230	24.8	25.3	25.3
BUS	2	4	.4	.4	25.9
CAR	3	669	72.1	74.1	100.0
	0	25	2.7	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	2.486	STD DEV	.872	MINIMUM	1.000
MAXIMUM	3.000				
VALID CASES	903	MISSING CASES	25		

Q56 DISTANCE TO SUBUR

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
0-50M	1	33	3.6	6.2	6.2
50-100M	2	28	3.0	5.2	11.4
100-200M	3	47	5.1	8.8	20.1
200-500M	4	96	10.3	17.9	38.1
500-1000M	5	96	10.3	17.9	56.0
1-5K	6	192	20.7	35.8	81.8
5-10K	7	28	3.0	5.2	97.0
10-30K	8	15	1.6	2.8	99.8
>30K	9	1	.1	.2	100.0
	0	392	42.2	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	4.797	STD DEV	1.673	MINIMUM	1.000
MAXIMUM	9.000				
VALID CASES	536	MISSING CASES	392		

Q57 TRANS TO SCHOOLS

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
WALKING	1	183	19.7	22.6	22.6
BUS	2	15	1.6	1.8	24.2
CAR	3	619	66.7	75.8	100.0
	0	111	12.0	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	2.536	STD DEV	.835	MINIMUM	1.000
MAXIMUM	3.000				
VALID CASES	317	MISSING CASES	111		

Q58 DISTANCE TO SCHOOLS

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
0-50M	1	22	2.4	4.7	4.7
50-100M	2	22	2.4	4.7	9.3
100-200M	3	22	2.4	4.7	14.0
200-500M	4	73	7.9	15.3	29.4
500-1000M	5	77	8.3	16.3	45.8
1-5K	6	125	13.6	27.1	82.8
5-10K	7	48	5.2	10.2	93.0
10-30K	8	29	3.1	6.1	99.2
>30K	9	4	.4	.8	100.0
	0	456	49.1	MISSING	
	TOTAL	928	100.0	100.0	
MEAN	5.213	STD DEV	1.712	MINIMUM	1.000
MAXIMUM	9.000				
VALID CASES	472	MISSING CASES	456		

892 DISTANCE TO RECREATION						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
0-50M	1	13	1.4	3.0	3.0	
50-100M	2	10	1.1	2.3	5.4	
100-200M	3	11	1.2	2.6	7.9	
200-300M	4	15	1.6	3.5	11.4	
300-1000M	5	38	4.1	8.9	20.3	
1-5K	6	129	13.9	30.1	50.3	
5-10K	7	100	10.8	25.3	73.7	
10-30K	8	87	9.4	20.3	93.9	
>30K	9	26	2.8	6.1	100.0	
	0	499	53.8	MISSING		
TOTAL		928	100.0	100.0		
MEAN	6.360	STD DEV	1.752	MINIMUM		1.0000
MAXIMUM	9.000					

VALID CASES	629	MISSING CASES	499						
				893 DISTANCE TO WALK					
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT				
<100M	1	103	11.6	11.7	11.7				
100-200M	2	92	9.9	10.0	21.7				
200-300M	3	85	9.2	9.2	30.9				
300-400M	4	68	7.3	7.4	38.3				
400-500M	5	138	16.9	15.0	53.3				
500-600M	6	71	7.7	7.7	61.0				
600-700M	7	21	2.3	2.3	63.3				
700-300M	8	24	2.6	2.6	65.9				
>500M	9	314	35.8	36.1	100.0				
	0	7	.8	MISSING					
TOTAL		928	100.0	100.0					
MEAN	5.537	STD DEV	2.966	MINIMUM	1.000				
MAXIMUM	9.000								

VALID CASES		923		MISSING CASES		7	

894 CAR A WAY FROM HOUSE							

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT		
YES	1	318	34.3	34.3	34.3		
NO	2	610	65.7	65.7	100.0		
	TOTAL	928	100.0	100.0			

MEAN	1.657	STD DEV	.475	MINIMUM	1.000		
MAXIMUM	2.000						

VALID CASES	923	MISSING CASES		0			

899 TRANS TO WORK					
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
WALKING	1	45	4.5	5.0	5.0
BUS	2	19	2.0	2.1	7.1
CAR	3	833	89.8	92.9	100.0
	0	31	3.3	MISSING	
	TOTAL	923	100.0	100.0	
MEAN	2.978	STD DEV	.455	MINIMUM	1.000
MAXIMUM	3.000				
VALID CASES	597	MISSING CASES	31		

890 DISTANCE TO WORK					
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
0-50M	1	10	1.1	1.8	1.8
50-100M	2	4	.4	.7	2.4
100-200M	3	8	.9	1.5	4.0
200-300M	4	15	1.6	2.8	6.8
300-1000M	5	24	2.6	4.4	11.2
1-5K	6	203	21.9	37.2	48.4
5-10K	7	102	11.0	18.7	67.2
10-30K	8	151	16.3	27.7	94.9
>30K	9	28	3.0	5.1	100.0
	0	.383	41.3	MISSING	
TOTAL		923	100.0	100.0	
MEAN	6.631	STD DEV	1.492	MINIMUM	1.000
MAXIMUM	9.000				
VALID CASES	545	MISSING CASES	333		

891 TRANS TO RECREATION					
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
WALKING	1	64	6.9	7.4	7.4
BUS	2	4	.6	.7	8.1
CAR	3	791	85.2	91.9	100.0
	0	67	7.2	MISSING	
TOTAL		928	100.0	100.0	
MEAN	2.244	STD DEV	.530	MINIMUM	1.000
MAXIMUM	3.000				
VALID CASES	861	MISSING CASES	67		

075	NATIONALITY					
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
SAUDI	1	839	90.4	90.4	90.4	
NON SAUDI	2	89	9.6	9.6	100.0	
	TOTAL	928	100.0	100.0		
MEAN	1.076					1.000
MAXIMUM	2.000					
VALID CASES	928	MISSING CASES		0		

076	ARAB OR NON-ARAB					
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
ARAB	1	914	98.5	98.5	98.5	
NON ARAB	2	14	1.5	1.5	100.0	
	TOTAL	928	100.0	100.0		
MEAN	1.015					1.000
MAXIMUM	2.000					
VALID CASES	928	MISSING CASES		0		

077	MARRIED OR SINGLE					
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
SINGLE	1	171	18.4	18.4	18.4	
MARRIED	2	757	81.6	81.6	100.0	
	TOTAL	928	100.0	100.0		
MEAN	1.216					1.000
MAXIMUM	2.000					
VALID CASES	928	MISSING CASES		0		

078	NUM OF DALES IN FAMILY					
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
	1	221	23.8	30.6	30.6	
	2	225	24.2	31.1	61.7	
	3	123	13.3	17.0	78.7	
	4	74	8.0	10.2	88.9	
	5	38	4.1	5.3	94.2	
	6	24	2.6	3.3	97.5	
	7	9	.4	1.1	98.6	
	8	4	.4	.6	99.2	
	9	6	.6	.8	100.0	
	0	203	22.1	MISSING		
	TOTAL	928	100.0	100.0		
MEAN	2.506					1.000
MAXIMUM	9.000					
VALID CASES	723	MISSING CASES		205		

0102 EDUCATION

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
NO BU	1	10	1.1	1.1	1.1
READ WR	2	25	2.7	2.7	3.8
ELEMEN ED	3	30	3.2	3.2	7.0
INTERMD ED	4	89	9.6	9.6	16.6
SECOND ED	5	249	26.8	26.8	43.4
UNIV ED	6	379	40.8	40.8	84.3
HIGH ED	7	125	13.5	13.5	97.7
OTH	8	21	2.3	2.3	100.0
TOTAL		923	100.0	100.0	
MEAN	5.461				
MAXIMUM	8.000				

VALID CASES 923 MISSING CASES 0

0103 TYPE OF WORK

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
COMMERC	1	25	2.7	2.7	2.7
WORKER	2	25	2.7	2.7	5.4
STUDENT	3	72	7.8	7.8	13.1
CRAFTM	4	15	1.6	1.6	14.8
CIVIL OFF	5	671	72.3	72.3	87.1
MILITR OFF	6	49	5.3	5.3	92.5
OTH	7	71	7.7	7.7	100.0
TOTAL		923	100.0	100.0	
MEAN	6.846				
MAXIMUM	7.000				

VALID CASES 923 MISSING CASES 0

0104 INCOME AMOUNT

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
<3000R	1	113	12.2	12.2	12.2
3000-4000R	2	93	10.0	10.2	22.6
4000-5000R	3	92	9.9	10.1	32.6
5000-6000R	4	111	12.0	12.2	44.8
6000-7000R	5	120	12.9	13.1	57.9
7000-8000R	6	106	11.2	11.4	69.3
8000-9000R	7	98	10.6	10.7	80.1
9000-10000R	8	75	8.2	8.3	88.4
>10000R	9	106	11.4	11.6	100.0
	0	13	1.4	MISSING	
TOTAL		923	100.0	100.0	
MEAN	4.919				
MAXIMUM	9.000				

VALID CASES 913 MISSING CASES 13

0105 INCOME GROUP

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
LOW INCOME	1	305	32.9	33.0	33.0
MEDIUM INCOME	2	601	64.8	65.1	98.2
HIGH INCOME	3	17	1.8	1.8	100.0
	0	5	.5	MISSING	
TOTAL		928	100.0	100.0	
MEAN	1.433				
MAXIMUM	3.000				

VALID CASES 923 MISSING CASES 5

0106 COMMENTS ADDED

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
COMMENTS ADDED	1	137	16.9	100.0	100.0
	0	771	83.1	MISSING	
TOTAL		928	100.0	100.0	
MEAN	1.000				
MAXIMUM	1.000				

VALID CASES 137 MISSING CASES 771

APPENDIX C

TABLE OF CROSS TABULATION OF Q1 - Q106

by

TYPE OF ACCOMMODATION

		NEWQ1				ROW TOTAL	
COUNT ROW PCT COL PCT		TRADH	FLAT	VILLA			
NEWQ71		1.001	2.001	3.001			
MAKKAH	1.00	46	130	97		273	
		16.8	47.6	35.5		29.4	
		40.7	32.9	23.4			
JEDDAH	2.00	45	146	83		274	
		16.4	53.3	30.3		29.5	
		39.8	36.5	20.0			
RIYADH	3.00	14	92	126		232	
		6.0	39.7	54.3		25.0	
		12.4	23.0	30.4			
PROJECT	4.00	1	15	62		78	
		1.3	19.2	79.5		8.4	
		.9	3.8	14.9			
SSTUD	5.00	7	17	47		71	
		9.9	23.9	66.2		7.7	
		6.2	4.3	11.3			
COLUMN TOTAL		113	400	415		928	
		12.2	43.1	44.7		100.0	

CHI-SQUARE

D.F.

SIGNIFICANCE

MIN E.F.

CELLS WITH E.F. < 5

100.02572

3

0.0000

3.645

NONE

NUMBER OF MISSING OBSERVATIONS =

0

COUNT ROW PCT COL PCT	NEIGH				ROW TOTAL
	TRASH	FLAT	VILLA		
1	53	178	219		450
	11.8	39.6	48.7		48.5
	46.9	44.5	52.8		
2	34	156	153		343
	9.9	45.3	44.6		37.0
	30.1	39.0	36.9		
3	17	50	32		99
	17.2	50.3	32.3		10.7
	15.0	12.5	7.7		
4	9	16	11		36
	25.0	44.4	30.6		3.9
	8.0	4.0	2.7		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 8.7 MIN E.F. CELLS WITH E.F. < 5
18.01577 6 0.0062 4.384 1 OF 12 (8.3X)
NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	NEIGH				ROW TOTAL
	TRASH	FLAT	VILLA		
1	29	45	25		99
	29.3	45.3	25.3		10.7
	25.7	11.3	6.0		
2	48	121	69		238
	20.2	50.8	29.0		25.6
	42.5	30.3	16.6		
3	22	100	72		194
	11.3	51.5	37.1		20.9
	19.3	25.0	17.3		
4	14	134	249		397
	3.5	33.8	62.7		42.8
	12.4	33.5	60.0		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 8.7 MIN E.F. CELLS WITH E.F. < 5
128.33137 6 0.0000 12.055
NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	NEIGH				ROW TOTAL
	TRASH	FLAT	VILLA		
1	81				81
	100.0				8.7
	71.7				
2	32				32
	100.0				3.4
	28.3				
3		400			400
		100.0			43.1
		100.0			
4			83		83
			100.0		9.5
			21.2		
5			327		327
			100.0		35.2
			78.8		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 8.7 MIN E.F. CELLS WITH E.F. < 5
1855.99928 8 0.0000 3.897 1 OF 15 (6.7X)
NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	NEIGH				ROW TOTAL
	TRASH	FLAT	VILLA		
1	103	316	398		835
	12.3	40.0	47.7		98.0
	91.2	83.5	95.9		
2	10	66	17		93
	10.8	71.0	18.3		10.0
	8.9	16.5	4.1		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 8.7 MIN E.F. CELLS WITH E.F. < 5
34.94743 2 0.0000 11.324
NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRADH	FLAT	VILLA		
1	57	243	78		378
	16.3	66.1	19.6		42.9
	50.4	65.8	18.8		
2	33	110	234		379
	8.7	29.0	62.3		40.8
	29.2	27.5	56.9		
3	19	22	84		125
	5.2	5.6	20.2		13.5
	16.8	5.5	20.2		
4	4	3	17		24
	1.1	0.8	4.1		2.8
	3.5	1.3	4.1		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 9.D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
193.76623 6 0.0000 3.166 1 OF 12 (8.33)
NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRADH	FLAT	VILLA		
1	22	12	39		73
	30.1	16.4	53.4		7.9
	19.5	3.0	9.4		
2	35	113	304		452
	7.7	25.0	67.3		48.7
	31.0	28.3	73.3		
3	33	148	60		241
	13.7	61.4	24.9		26.0
	29.2	37.0	14.5		
4	16	83	10		109
	14.7	76.1	9.2		11.7
	14.2	20.8	2.4		
5	7	44	2		53
	13.2	33.0	3.8		5.7
	6.2	11.0	.5		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 9.D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
264.46339 8 0.0000 6.454
NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRADH	FLAT	VILLA		
1	5	85	9		99
	5.1	85.9	9.1		10.7
	4.4	21.3	2.2		
2	103	315	406		829
	13.0	38.0	49.0		89.3
	95.6	78.8	97.8		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 9.D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
83.07931 2 0.0000 12.055
NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRADH	FLAT	VILLA		
1	26	161	30		217
	12.0	74.2	13.8		23.4
	23.0	40.3	7.2		
2	87	239	385		711
	12.2	33.6	54.1		76.6
	77.0	59.8	92.8		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 9.D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
123.97523 2 0.0000 26.423
NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRADH	FLAT	VILLA		
1	113	400	415		928
	12.2	43.1	44.7		100.0
	100.0	100.0	100.0		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

*** STATISTICS CANNOT BE COMPUTED WHEN THE NUMBER OF NON-EMPTY ROWS OR COLUMNS IS 1
NUMBER OF MISSING OBSERVATIONS = 0

010 WATER SUPPLY
BY NEW01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW01									
COUNT	TRASH	FLAT	VILLA	ROW TOTAL					
ROW PCT	COL PCT	1.00	2.00	3.00					
1	103	363	335	801					
YES	12.5	45.2	43.2	88.5					
	91.2	90.8	85.5						
2	10	37	60	107					
NO	9.3	36.6	36.1	11.5					
	8.8	9.3	16.5						
COLUMN TOTAL	113	400	415	928					
	12.2	43.1	44.7	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
6.32131 2 0.0426 13.029 NONE

NUMBER OF MISSING OBSERVATIONS = 0

011 SEWAGE CONNECTION
BY NEW01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW01									
COUNT	TRASH	FLAT	VILLA	ROW TOTAL					
ROW PCT	COL PCT	1.00	2.00	3.00					
1	87	276	246	609					
YES	14.3	45.3	40.4	65.6					
	77.0	69.0	59.3						
2	26	124	169	319					
NO	8.2	39.9	53.0	34.4					
	23.0	31.0	40.7						
COLUMN TOTAL	113	400	415	928					
	12.2	43.1	44.7	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
15.90603 2 0.0004 38.846 NONE

NUMBER OF MISSING OBSERVATIONS = 0

012 TELEPHONE SERVICE
BY NEW01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW01									
COUNT	TRASH	FLAT	VILLA	ROW TOTAL					
ROW PCT	COL PCT	1.00	2.00	3.00					
1	76	323	360	759					
YES	10.0	42.6	47.4	81.8					
	67.3	80.8	86.7						
2	37	77	55	169					
NO	21.9	45.6	32.3	18.2					
	32.7	19.3	13.3						
COLUMN TOTAL	113	400	415	928					
	12.2	43.1	44.7	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
23.16098 2 0.0000 20.579 NONE

NUMBER OF MISSING OBSERVATIONS = 0

013 GAS SUPPLY
BY NEW01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW01									
COUNT	TRASH	FLAT	VILLA	ROW TOTAL					
ROW PCT	COL PCT	1.00	2.00	3.00					
2	113	400	415	928					
NO	12.2	43.1	44.7	100.0					
	100.0	100.0	100.0						
COLUMN TOTAL	113	400	415	928					
	12.2	43.1	44.7	100.0					

*** STATISTICS CANNOT BE COMPUTED WHEN THE NUMBER OF NON-EMPTY ROWS OR COLUMNS IS 0
NUMBER OF MISSING OBSERVATIONS = 0

014 LIGHTING IN LIVING R
BY NEW01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW01									
COUNT	TRASH	FLAT	VILLA	ROW TOTAL					
ROW PCT	COL PCT	1.00	2.00	3.00					
1	72	242	280	594					
NATURAL	12.1	40.7	47.1	64.0					
	63.7	60.5	67.5						
2	41	158	135	334					
ARTIFICIAL	12.3	47.3	40.4	36.0					
	36.3	39.5	32.5						
COLUMN TOTAL	113	400	415	928					
	12.2	43.1	44.7	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
4.29976 2 0.1165 40.670 NONE

NUMBER OF MISSING OBSERVATIONS = 0

015 LIGHTING IN BED R
BY NEW01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW01									
COUNT	TRASH	FLAT	VILLA	ROW TOTAL					
ROW PCT	COL PCT	1.00	2.00	3.00					
1	65	201	278	604					
NATURAL	10.8	43.2	46.0	65.1					
	57.5	65.3	67.0						
2	48	139	137	324					
ARTIFICIAL	14.8	42.9	42.3	34.9					
	42.5	34.8	33.0						
COLUMN TOTAL	113	400	415	928					
	12.2	43.1	44.7	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
3.51037 2 0.1729 39.453 NONE

NUMBER OF MISSING OBSERVATIONS = 0

016 LIGHTING IN KITCHEN
BY NEU01 TYPE OF ACCOMMODATION

CROSS TABULATION OF

PAGE 1 OF 1

		NEU01				ROW TOTAL	
COUNT		TRASH	FLAT	VILLA			
ROW PCT	COL PCT	1.001	2.001	3.001			
016	1	64	235	289	588	38.1	
		10.9	40.0	49.1			
	NATURAL		62.7	58.8	69.6	329	35.9
	ARTIFICIAL		38	165	126		
	2	11.4	50.2	38.3	917	100.0	
		37.3	41.3	30.4			
COLUMN		102	400	415			
TOTAL		11.1	43.6	45.3			

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5

10.59141 2 0.0050 36.595 NONE

NUMBER OF MISSING OBSERVATIONS = 11

017 LIGHTING IN KITCHEN
BY NEU01 TYPE OF ACCOMMODATION

CROSS TABULATION OF

PAGE 1 OF 1

		NEU01				ROW TOTAL			
COUNT	TRASH	FLAT	VILLA						
ROW PCT	COL PCT	1.001	2.001	3.001					
017	1	55	221	271	547	59.5			
		10.1	40.4	49.5					
		NATURAL		52.9	55.3	65.3	322	40.5	
				49	179	144			
ARTIFICIAL	2	13.2	43.1	38.7	919	100.0			
		47.1	44.8	34.7					
		COLUMN TOTAL		104	400		415		
		TOTAL		11.3	43.5		45.2		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5

10.43637 2 0.0048 42.098 NONE

NUMBER OF MISSING OBSERVATIONS = 9

018 LIGHTING IN BED R
BY NEU01 TYPE OF ACCOMMODATION

CROSS TABULATION OF

PAGE 1 OF 1

		NEU01				ROW TOTAL
COUNT	TRASH	FLAT	VILLA			
ROW PCT	COL PCT	1.001	2.001	3.001		
018	1	43	227	277	567	61.8
		11.1	40.0	48.9		
		61.8	56.8	66.7		
NATURAL	2	39	173	138	350	38.2
		11.1	49.4	39.4		
		38.2	43.3	33.3		
ARTIFICIAL	3	102	400	415	917	100.0
		11.1	43.6	45.3		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5

3.62556 2 0.0134 36.931 NONE

NUMBER OF MISSING OBSERVATIONS = 11

019 VENT IN LIVING R
BY NEU01 TYPE OF ACCOMMODATION

CROSS TABULATION OF

PAGE 1 OF 1

		NEU01				ROW TOTAL	
		TRASH	FLAT	VILLA			
COUNT	ROW PCT	1.001	2.001	3.001			
COL PCT	COL PCT						
019	1	55	163	199	417		
		13.2	39.1	47.7	44.9		
	NATURAL		48.7	40.8	48.0	511	55.1
	ARTIFICIAL	2	55	237	216	928	100.0
11.4			46.4	42.3			
		51.3	59.3	52.0			
COLUMN TOTAL		113	400	415			
TOTAL		12.2	43.1	44.7			

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5

4.99574 2 0.0823 50.777 NONE

NUMBER OF MISSING OBSERVATIONS = 0

020 VENT IN MEN R
BY NEU01 TYPE OF ACCOMMODATION

CROSS TABULATION OF

PAGE 1 OF 1

		NEU01				ROW TOTAL		
COUNT	TRASH	FLAT	VILLA					
ROW PCT	COL PCT	1.001	2.001	3.001				
020	1	53	175	200	428	46.1		
		12.4	40.9	48.7				
		NATURAL		46.9	43.8	48.2	500	53.9
				60	225	215		
	2	12.0	45.0	43.0	928	100.0		
		53.1	50.3	51.8				
		COLUMN TOTAL		113	400		415	
		TOTAL		12.2	43.1		44.7	

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5

1.64952 2 0.4383 52.116 NONE

NUMBER OF MISSING OBSERVATIONS = 0

021 VENT IN WOMEN R
BY NEU01 TYPE OF ACCOMMODATION

CROSS TABULATION OF

PAGE 1 OF 1

		NEU01				ROW TOTAL			
COUNT	TRASH	FLAT	VILLA						
ROW PCT	COL PCT	1.001	2.001	3.001					
COL PCT	1.001	2.001	3.001						
021	1	50	166	203	419	45.7			
		11.9	39.6	48.4					
		NATURAL		49.5	41.5	48.9	497	54.3	
				51	234	212			
ARTIFICIAL	2	10.3	47.1	42.7	916	100.0			
		50.5	58.5	51.1					
		COLUMN		101	400		415		
		TOTAL		11.0	43.7		45.3		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5

5.14058 2 0.0758 46.200 NONE

NUMBER OF MISSING OBSERVATIONS = 12

----- C R O S T A B U L A T I O N O F -----
022 VENT IN KITCHEN
BY MEU01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

NEWS1						
COUNT	TRASH	FLAT	VILLA	ROW		
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL	
022	1	53	207	202	462	
		11.5	46.8	43.7	50.3	
		51.5	51.8	48.7		
NATURAL	2	50	193	213	456	
		11.0	42.3	46.7	49.7	
		48.5	48.3	51.3		
ARTIFICIAL	3	50	193	213	456	
		11.0	42.3	46.7	49.7	
		48.5	48.3	51.3		
COLUMN		103	400	415	918	
TOTAL		11.2	43.6	45.2	100.0	

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

0.32977 2 0.6604 51.163 NONE

NUMBER OF MISSING OBSERVATIONS = 10

----- C R O S T A B U L A T I O N O F -----
023 VENT IN BED R
BY MEU01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEU01							
COUNT	TRASH	FLAT	VILLA	ROW			
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL		
023	1	51	158	198	407		
		12.5	38.8	48.6	44.4		
		50.5	39.5	47.7			
NATURAL	2	50	262	217	509		
		9.8	47.5	42.4	53.6		
		49.5	60.5	52.3			
ARTIFICIAL	COLUMN	101	400	415	916		
		TOTAL	11.0	43.7	45.3	100.0	

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

7.25161 2 0.0266 44.877 NONE

NUMBER OF MISSING OBSERVATIONS = 12

----- C R O S T A B U L A T I O N O F -----
024 AIRCONDITIONG
BY MEU01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEU01						
COUNT	TRASH	FLAT	VILLA	ROW		
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL	
024	1	107	398	414	919	
		11.6	43.3	45.0	99.0	
		94.7	99.5	99.8		
YES	2	6	2	1	9	
		66.7	22.2	11.1	1.0	
		5.3	.5	.2		
NO	COLUMN		113	400	415	928
	TOTAL		12.2	43.1	44.7	100.0

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

25.37523 2 0.0000 1.096 3 OF 6 (50.0%)

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S T A B U L A T I O N O F -----
025 WEATERS
BY MEU01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEU01						
COUNT	TRASH	FLAT	VILLA	ROW		
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL	
025	1	13	108	198	319	
		4.1	33.9	62.1	34.4	
		11.5	27.0	47.7		
YES	2	100	292	217	609	
		16.4	47.9	35.6	65.6	
		88.5	73.0	52.3		
NO	COLUMN		113	400	415	928
	TOTAL		12.2	43.1	44.7	100.0

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

69.56275 2 0.0000 38.866 NONE

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S T A B U L A T I O N O F -----
026 WATER WEATERS
BY MEU01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEU01						
COUNT		TRASH	FLAT	VILLA	ROW	
...	ROW PCT				TOTAL	
COL PCT		1.001	2.001	3.001		
026	1	67	356	397	820	
		8.2	43.4	48.4	88.4	
		59.3	89.0	95.7		
NO	2	46	44	18	108	
		42.4	40.7	16.7	11.6	
		40.7	11.0	4.3		
COLUMN		113	400	415	928	
TOTAL		12.2	43.1	44.7	100.0	

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

114.52717 2 0.0000 13.151 NONE

NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	MEM01				ROW TOTAL
	TRASH	FLAT	VILLA		
	1.001	2.001	3.001		
1	29 3.6	219 45.0	49 26.4		337 49.3
2	41 21.8	48 25.3	99 32.7		188 27.5
3	33.0 13.9	16.7 2.1	36.3 15.2		65 9.5
4	15 17.6	6 17.6	44 46.7		65 9.5
5	33.3 3.7	25.0 1.8	41.7 1.7		12 1.8
6	4 33.3	3 25.0	5 41.7		12 1.8
7	2 40.0	1 20.0	2 40.0		5 .7
8	40.0 1.9		60.0 1.0		5 .7
9			100.0 .3		1 .1
COLUMN TOTAL	103 15.8	287 42.0	289 42.3		679 100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.P. CELLS WITH E.P. < 5
159.77153 16 0.0000 0.158 11 OF 27 (40.72)
NUMBER OF MISSING OBSERVATIONS = 244

COUNT ROW PCT COL PCT	MEM01				ROW TOTAL
	TRASH	FLAT	VILLA		
	1.001	2.001	3.001		
1	27 8.6	212 67.5	75 23.9		314 37.7
2	11 4.1	121 45.3	135 50.6		267 32.1
3	5 1.6	32 12.0	56 33.4		93 11.2
4	5.3 7.8	12.0 2.4	82.7 15.3		73 9.0
5	2 3.3		36 94.7		38 4.6
6	5.0 2.0	10.0 .5	85.0 4.2		20 2.4
7		10.0 .3	90.0 2.2		10 1.2
8			100.0 2.0		8 1.0
9	12.5 2.0	12.5 .3	75.0 1.5		8 1.0
COLUMN TOTAL	51 6.1	378 45.4	404 48.3		833 100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.P. CELLS WITH E.P. < 5
134.09408 16 0.0000 0.498 12 OF 27 (44.52)
NUMBER OF MISSING OBSERVATIONS = 95

829 PREVIOUS ACCOMM BY MEM01 TYPE OF ACCOMMODATION C R O S T A B U L A T I O N O F PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEM01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	60	123	146	334	
	18.0	38.3	43.7	36.4	
	54.6	32.2	35.3		
2	24	15	4	43	
	55.8	34.9	9.3	4.7	
	22.6	3.8	1.0		
3	13	199	132	346	
	4.3	57.5	38.2	37.7	
	14.2	50.0	31.8		
4	2	14	30	46	
	4.3	30.4	65.2	5.0	
	1.9	3.5	7.2		
5	1	36	87	124	
	.3	29.0	70.2	15.5	
	.9	9.0	31.0		
6	4	6	15	25	
	16.0	24.0	40.0	2.7	
	3.8	1.5	3.8		
COLUMN TOTAL	106	398	414	918	
	11.5	43.4	45.1	100.0	

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

132.50696 10 0.0000 2.887 2 OF 18 (11.12)

NUMBER OF MISSING OBSERVATIONS = 10

830 REASON OF MOVING BY MEM01 TYPE OF ACCOMMODATION C R O S T A B U L A T I O N O F PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEM01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	31	71	78	172	
	13.0	41.3	40.7	19.1	
	32.6	18.0	17.0		
2	16	95	41	172	
	9.3	35.2	35.3	19.1	
	16.8	24.1	14.8		
3	4	36	43	83	
	4.8	43.4	51.8	9.2	
	4.2	9.1	10.5		
4	44	193	237	474	
	9.3	40.7	50.0	52.6	
	46.3	48.9	57.7		
COLUMN TOTAL	95	395	411	901	
	10.5	43.8	45.6	100.0	

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

26.57158 0 0.0000 0.721 NONE

NUMBER OF MISSING OBSERVATIONS = 27

831 OWN OR RENT BY MEM01 TYPE OF ACCOMMODATION C R O S T A B U L A T I O N O F PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEM01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	74	96	285	435	
	17.0	22.1	60.9	46.9	
	65.5	24.0	63.9		
2	39	304	150	493	
	7.9	61.7	30.4	33.1	
	34.5	76.0	36.1		
COLUMN TOTAL	113	400	415	928	
	12.2	43.1	44.7	100.0	

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

147.32056 2 0.0000 52.949 NONE

NUMBER OF MISSING OBSERVATIONS = 0

832 WAY OF OWNING BY MEM01 TYPE OF ACCOMMODATION C R O S T A B U L A T I O N O F PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEM01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	40	16	46	102	
	39.2	15.7	45.1	23.4	
	54.1	16.7	17.4		
2	13	9	17	39	
	33.3	23.1	43.6	9.0	
	17.6	9.4	6.4		
3	10	58	182	250	
	4.0	23.2	72.8	57.5	
	13.5	60.4	48.7		
4	11	13	20	44	
	25.0	29.5	45.5	10.1	
	14.9	13.5	7.5		
COLUMN TOTAL	74	94	265	435	
	17.0	22.1	60.9	100.0	

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

73.99367 6 0.0000 6.636 NONE

NUMBER OF MISSING OBSERVATIONS = 493

COUNT ROW PCT COL PCT	NEW01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	35	79	31	143	143
2	23.1	55.2	21.7	29.0	29.0
3	84.8	26.0	20.7	194	194
4	1.5	70.6	27.8	39.4	39.4
5	7.7	45.1	36.0	112	112
6	2	69	41	22.7	22.7
7	1.8	61.4	34.6	19	19
8	5.1	22.7	27.3	3.9	3.9
9		11	8	10	10
10		57.9	42.1	2.0	2.0
11		3.4	5.3	13	13
12		5	3	3.0	3.0
13		50.0	50.0	493	493
14		1.4	3.3	100.0	100.0
15		2.4	1.0	7.3	7.3
16		6.7	20.0	73.3	73.3
17		2.4	1.0	7.3	7.3
18		39	304	150	493
19		7.9	61.7	30.4	100.0

CHI-SQUARE 0.7
SIGNIFICANCE
CELLS WITH E.F. < 5
83.73053 10 0.0000 0.791 5 OF 18 (27.82)

NUMBER OF MISSING OBSERVATIONS = 435

COUNT ROW PCT COL PCT	NEW01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	37	279	239	555	555
2	6.7	50.3	43.1	59.8	59.8
3	32.7	49.8	57.4	237	237
4	25	89	123	237	237
5	10.5	37.6	51.9	25.3	25.3
6	22.1	22.3	29.6	69	69
7	14	20	35	7.4	7.4
8	20.3	29.0	50.7	25	25
9	12.4	5.0	8.4	2.7	2.7
10	10	5	10	20	20
11	40.8	20.0	40.0	2.2	2.2
12	8.8	1.3	2.4	8	8
13	14	4	2	14	14
14	70.0	20.0	10.0	1.5	1.5
15	12.4	1.0	.5	1.2	1.2
16	6	1	1	14	14
17	75.0	12.5	12.5	1.5	1.5
18	5.3	.3	.2	1.2	1.2
19	7	2	5	14	14
20	50.0	16.3	35.7	1.5	1.5
21	6.2	.5	1.2	1.2	1.2
22				928	928
23				44.7	100.0
24				415	100.0

CHI-SQUARE 0.7
SIGNIFICANCE
CELLS WITH E.F. < 5
144.03379 12 0.0000 0.974 6 OF 21 (28.42)

NUMBER OF MISSING OBSERVATIONS = 0

COUNT		NEW01				ROW
ROW PCT	COL PCT	TRASH	FLAT	VILLA	TOTAL	
1		39	51	235	325	35.2
		12.0	15.7	72.3		
		36.8	12.9	56.6		
2		21	37	93	171	18.5
		12.3	33.3	54.4		
		18.8	14.4	22.4		
3		13	46	40	99	10.7
		13.1	46.5	40.4		
		11.6	11.6	9.6		
4		14	69	24	107	11.4
		13.1	64.5	22.4		
		12.5	17.4	5.3		
5		25	173	23	221	23.9
		11.3	78.3	10.4		
		22.3	43.7	5.5		
COLUMN		112	396	415	923	100.0
TOTAL		12.1	42.9	45.0		

----- C R O S S T A B U L A T I O N O F -----
Q37 NUM. OF SERVANTS
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEV01						
COUNT	TRADH	FLAT	VILLA	ROW		
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL	
1	30	144	229	403		
	7.4	36.0	56.5	82.8		
	88.2	89.6	78.4			
2	2	12	48	62		
	3.2	19.4	77.4	12.7		
	5.9	7.4	16.4			
3	2	4	11	17		
	11.8	23.5	64.7	3.5		
	5.9	2.5	3.8			
4	1	1	4	5		
	20.0	80.0	1.4	1.0		
COLUMN	34	143	292	469		
TOTAL	7.0	33.3	59.7	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

11.91256 6 0.0439 0.348 5 OF 12 (41.7%)

NUMBER OF MISSING OBSERVATIONS = 439

----- C R O S S T A B U L A T I O N O F -----
Q38 S PLACE OF LIVING
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEV01						
COUNT	TRADH	FLAT	VILLA	ROW		
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL	
1	32	155	273	460		
	7.0	33.7	59.3	94.3		
	97.0	95.1	93.5			
2	1	8	19	28		
	3.4	28.6	67.9	5.7		
	3.0	4.9	6.5			
COLUMN	33	163	292	488		
TOTAL	6.8	33.4	59.8	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

0.97412 2 0.6164 1.893 1 OF 6 (16.7%)

NUMBER OF MISSING OBSERVATIONS = 440

----- C R O S S T A B U L A T I O N O F -----
Q39 NUM. OF DRIVERS
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEV01						
COUNT	TRADH	FLAT	VILLA	ROW		
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL	
1	10	35	92	137		
	7.3	25.5	67.2	88.4		
	100.0	94.6	85.2			
2		2	15	17		
		11.8	88.2	11.0		
		5.4	13.9			
3			100.0	.6		
				.9		
COLUMN	10	37	108	155		
TOTAL	6.5	23.9	69.7	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

3.85513 4 0.4260 0.065 5 OF 9 (55.6%)

NUMBER OF MISSING OBSERVATIONS = 773

----- C R O S S T A B U L A T I O N O F -----
Q40 PLACE OF LIVING
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEV01						
COUNT	TRADH	FLAT	VILLA	ROW		
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL	
1	4	20	40	84		
	4.8	23.8	71.4	54.2		
	36.4	55.6	55.6			
2	7	16	48	71		
	9.9	22.5	67.6	45.8		
	63.6	44.4	44.4			
COLUMN	11	36	108	155		
TOTAL	7.1	23.2	69.7	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

1.51630 2 0.4685 5.039 NONE

NUMBER OF MISSING OBSERVATIONS = 773

----- C R O S S T A B U L A T I O N O F -----
841 TERRACE WALL
BY MEV01 TYPE OF ACCOMMODATION
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	74	230	201		585
	12.6	39.3	48.0		63.0
	65.5	57.5	67.7		
2	39	170	134		343
	11.4	49.4	39.1		37.0
	34.5	42.5	32.3		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F.
9.44516 2 0.0089 41.766
NUMBER OF MISSING OBSERVATIONS = 0
CELLS WITH E.F.<5
NONE

----- C R O S S T A B U L A T I O N O F -----
842 TERRACE USE
BY MEV01 TYPE OF ACCOMMODATION
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	69	145	214		428
	16.1	33.9	50.0		46.1
	61.1	36.3	51.6		
2	64	255	201		500
	8.8	51.0	40.2		53.9
	38.9	63.8	48.4		
COLUMN TOTAL	133	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F.
30.78732 2 0.0000 52.114
NUMBER OF MISSING OBSERVATIONS = 0
CELLS WITH E.F.<5
NONE

----- C R O S S T A B U L A T I O N O F -----
843 WAY OF USING TERRACE
BY MEV01 TYPE OF ACCOMMODATION
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	14	7	17		38
	34.8	18.4	45.7		8.8
	19.7	6.8	7.9		
2	46	47	94		187
	24.6	25.1	50.3		43.3
	64.8	32.2	43.7		
3	6	55	57		118
	3.1	46.6	48.3		27.3
	8.5	37.7	26.5		
4	2	34	41		77
	2.6	44.2	33.2		17.8
	2.8	23.3	19.1		
5	3	3	4		12
	25.0	25.0	50.0		2.8
	4.2	2.1	2.8		
COLUMN TOTAL	71	146	215		432
	16.4	33.8	49.8		100.0

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F.
51.67192 8 0.0000 1.972
NUMBER OF MISSING OBSERVATIONS = 496
CELLS WITH E.F.<5
2 OF 15 (13.33)

----- C R O S S T A B U L A T I O N O F -----
844 REASON OF UNUSED TERRACE
BY MEV01 TYPE OF ACCOMMODATION
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	16	67	55		138
	11.6	48.6	39.9		27.8
	36.4	26.5	27.5		
2	4	24	17		45
	3.9	53.3	37.8		9.1
	9.1	9.5	8.5		
3	4	99	82		185
	2.2	53.5	44.3		37.2
	9.1	39.1	41.0		
4	20	43	46		129
	15.5	48.8	35.7		28.0
	45.5	24.9	23.0		
COLUMN TOTAL	44	353	200		497
	8.9	50.9	40.2		100.0

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F.
19.04215 6 0.0041 3.984
NUMBER OF MISSING OBSERVATIONS = 431
CELLS WITH E.F.<5
1 OF 12 (8.33)

----- C R O S S T A B U L A T I O N O F -----
845 WINDOWS OVERLOOKED
BY MEV01 TYPE OF ACCOMMODATION
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	40	212	205		457
	8.8	46.4	44.9		49.2
	35.4	53.0	49.4		
2	73	188	210		471
	15.5	39.9	46.4		50.8
	64.4	47.0	50.6		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F.
10.92870 2 0.0042 55.648
NUMBER OF MISSING OBSERVATIONS = 0
CELLS WITH E.F.<5
NONE

----- C R O S S T A B U L A T I O N O F -----
846 CURTAINS FOR PRIVACY
BY MEV01 TYPE OF ACCOMMODATION
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	59	290	294		643
	9.1	45.0	45.9		69.5
	52.2	72.5	61.3		
2	34	110	119		283
	19.1	38.9	42.0		30.5
	47.8	27.5	28.7		
COLUMN TOTAL	113	400	415		928
	12.2	43.1	44.7		100.0

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F.
13.20379 2 0.0001 34.460
NUMBER OF MISSING OBSERVATIONS = 0
CELLS WITH E.F.<5
NONE

847 HOUSE YARD OVERLOOKED
BY MEU01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEU01					
COUNT	ROW PCT	TRASH	FLAT	VILLA	ROW TOTAL
COL PCT		1.001	2.001	3.001	
647	1	32	201	263	496
	YES	6.5	40.5	53.0	54.3
		23.6	51.9	63.5	
NO	2	80	186	191	417
		19.2	44.6	34.2	45.7
		71.6	48.1	34.5	
COLUMN TOTAL		112	387	414	913
		12.3	42.4	45.3	100.0

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

44.93319 2 0.0000 51.156 NONE

NUMBER OF MISSING OBSERVATIONS = 15

848 NEIGHBOUR YARD OVERLOOKED
BY MEU01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEU01					
	COUNT	TRASH	FLAT	VILLA	ROW TOTAL
	ROW PCT				
	COL PCT	1.001	2.001	3.001	
YES	1	43	211	263	517
		8.3	40.8	50.9	56.4
		38.4	54.0	63.5	
NO	2	69	180	151	400
		17.3	45.0	37.8	43.6
		61.6	46.0	36.5	
	COLUMN TOTAL	112	391	414	917
		12.2	42.6	45.1	100.0

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

24.25996 2 0.0000 48.855 NONE

NUMBER OF MISSING OBSERVATIONS = 11

849 FAMILY PRIVACY
BY MEU01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEU01					
COUNT	ROW PCT	TRASH	FLAT	VILLA	ROW TOTAL
COL PCT		1.001	2.001	3.001	
1		94	360	345	819
YES		11.5	44.0	44.6	88.8
		83.2	90.9	88.4	
2		19	36	48	103
NO		18.4	35.0	46.6	11.2
		14.8	9.1	11.6	
COLUMN TOTAL		113	396	413	922
		12.3	43.0	44.8	100.0

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

5.43769 2 0.0460 12.626 NONE

NUMBER OF MISSING OBSERVATIONS = 6

850 BALCONIES ARE USELESS
BY MEU01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEU01						
COUNT	TRASH	FLAT	VILLA	ROW TOTAL		
ROW PCT	COL PCT	1.001	2.001	3.001		
1	73	253	261	587		
YES	12.4	43.1	44.5	67.8		
	46.4	65.4	70.7			
2	37	134	108	279		
NO	13.3	48.0	38.7	32.2		
	33.6	36.6	29.3			
COLUMN	110	387	369	866		
TOTAL	12.7	44.7	42.6	100.0		

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

2.59854 2 0.2727 35.439 NONE

NUMBER OF MISSING OBSERVATIONS = 62

851 OUTSIDE YARDS ARE USELESS
BY MEU01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEU01					
COUNT	TRASH	FLAT	VILLA	ROW TOTAL	
ROW PCT	COL PCT	1.001	2.001	3.001	
1	70	248	197	515	
YES	13.6	48.2	38.3	56.3	
	61.9	63.4	48.0		
2	43	143	213	399	
NO	10.8	35.8	53.4	43.7	
	38.1	36.6	52.0		
COLUMN TOTAL	113	391	410	914	
	12.4	42.8	44.9	100.0	

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

20.83693 2 0.0000 49.329 NONE

NUMBER OF MISSING OBSERVATIONS = 14

852 INSIDE YARD ALTERNATIVE
BY MEU01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEU01						
COUNT	ROW PCT	TRASH	FLAT	VILLA	ROW TOTAL	
COL PCT		1.001	2.001	3.001		
1	98	343	362	783		
YES	12.5	43.8	43.7	83.3		
	86.7	87.1	83.2			
2	15	51	49	135		
NO	11.1	37.8	51.1	14.7		
	13.3	12.9	16.8			
COLUMN TOTAL	113	394	411	918		
	12.3	42.9	44.8	100.0		

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

2.58046 2 0.2752 16.618 NONE

NUMBER OF MISSING OBSERVATIONS = 10

----- C R O S T A B U L A T I O N O F -----
Q53 SATISFYING OF HOUSE
BY NEU01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

NEU01					
COUNT	TRASH	FLAT	VILLA	NOV	
ROW PCT				TOTAL	
COL PCT	1.000	2.000	3.000		
Q53	1	78	275	337	490
		11.3	39.9	48.8	74.4
		69.0	68.8	81.2	
NO	2	35	125	78	238
		14.7	52.5	32.8	25.6
		31.0	31.3	18.8	
COLUMN					928
TOTAL					100.0

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

13.48360 2 0.0001 28.981 NONE

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S T A B U L A T I O N O F -----
Q54 PREFERENCE OF MOVING
BY NEU01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

NEU01					
COUNT	TRASH	FLAT	VILLA	ROW TOTAL	
ROW PCT					
COL PCT	1.00	2.00	3.00		
Q54	1	45	78	178	299
		14.4	26.1	59.5	32.2
		38.1	19.5	42.9	
NO MOVE					
TRASH	2	7	10	8	25
		28.0	40.0	32.0	2.7
		4.2	2.5	1.9	
FLAT CN	3	16	15	1	32
		50.0	46.9	3.1	3.4
		14.2	3.8	2	
FLAT V	4	5	24	2	31
		14.1	72.4	6.5	3.3
		4.4	6.0	2.5	
VILLA	5	42	273	226	541
		7.8	50.5	41.8	59.3
		37.2	68.3	54.5	
COLUMN TOTAL	113	400	415	928	
TOTAL	12.2	43.1	44.7	100.0	

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

127.64834 8 0.0000 3.044 3 OF 15 (20.02)

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S T A B U L A T I O N O F -----
Q55 DISTRICT CLASSIFICATION
BY NEU01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

NEU01					
COUNT	TRASH	FLAT	VILLA	ROW	
ROW PCT				TOTAL	
COL PCT					
Q55	1.001	2.001	3.001		

	1	108	107	37	252
	TRADITIONAL D	42.9	42.5	16.7	27.3
CONTEMPR D	95.6	27.1	8.9		

	2	5	288	378	671
		7	42.9	56.3	72.7
COLUMN	4.4	72.9	91.1		

TOTAL	113	395	415	923	
	13.2	42.8	45.0	100.0	

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

336.06737 2 0.0000 30.852 NONE

NUMBER OF MISSING OBSERVATIONS = 5

----- C R O S T A B U L A T I O N O F -----
Q56 MOSQUE
BY NEU01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

		NEU01				ROW TOTAL
COUNT	ROW PCT	TRASH	FLAT	VILLA		
COL PCT		1.00	2.00	3.00		
Q56	1	112	334	408		904
		12.4	42.5	45.1		97.4
		99.1	96.0	98.3		
AVAILABLE						
NOT AVAIL	2	1	14	7		24
		4.2	66.7	29.2		2.6
		9	4.0	1.7		
COLUMN		113	400	415		928
TOTAL		12.2	43.1	44.7		100.0

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

5.80442 2 0.0549 2.922 1 OF 6 (16.72)

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S T A B U L A T I O N O F -----
Q57 SURE OR SHOPPING AREA
BY NEU01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

	COUNT ROW PCT COL PCT	NEU01			ROW TOTAL
		TRASH	FLAT	VILLA	
Q57		1.000	2.000	3.000	
AVAILABLE	1	94	307	313	712
		13.2	43.1	43.7	76.7
		83.2	76.8	74.9	
NOT AVAILABLE	2	19	93	104	216
		8.8	43.1	48.1	23.3
		16.8	23.3	25.1	
COLUMN		113	400	415	928
TOTAL		12.2	43.1	44.7	100.0

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

3.38207 2 0.1843 24.302 NONE

NUMBER OF MISSING OBSERVATIONS = 0

Q58 CLINIC
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEV01									
COUNT	ROW PCT	TRASH	FLAT	VILLA	ROW				
COL PCT					TOTAL	1.001	2.001	3.001	
AVAILABLE	1	95	318	342	755				
		12.6	42.1	45.3	81.4				
NOT AVAIL	2	18	92	73	173				
		10.4	47.4	42.2	18.6				
COLUMN					928				
TOTAL					100.0	43.1	44.7	44.7	

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
1.76135 2 0.4145 21.046 NONE

NUMBER OF MISSING OBSERVATIONS = 0

Q59 POLICE STATION
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEV01									
COUNT	ROW PCT	TRASH	FLAT	VILLA	ROW				
COL PCT					TOTAL	1.001	2.001	3.001	
AVAILABLE	1	70	167	168	405				
		17.3	41.2	41.3	43.6				
NOT AVAIL	2	43	233	247	523				
		8.2	46.6	47.2	54.4				
COLUMN					928				
TOTAL					100.0	43.1	44.7	44.7	

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
17.66113 2 0.0001 49.316 NONE

NUMBER OF MISSING OBSERVATIONS = 0

Q60 FIRE STATION
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEV01									
COUNT	ROW PCT	TRASH	FLAT	VILLA	ROW				
COL PCT					TOTAL	1.001	2.001	3.001	
AVAILABLE	1	57	182	172	411				
		13.9	42.3	41.8	44.3				
NOT AVAIL	2	54	218	243	517				
		10.8	42.2	47.0	55.7				
COLUMN					928				
TOTAL					100.0	43.1	44.7	44.7	

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
3.33155 2 0.1890 50.046 NONE

NUMBER OF MISSING OBSERVATIONS = 0

Q61 POST OFFICE
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEV01									
COUNT	ROW PCT	TRASH	FLAT	VILLA	ROW				
COL PCT					TOTAL	1.001	2.001	3.001	
AVAILABLE	1	44	158	167	369				
		14.5	40.6	42.9	41.9				
NOT AVAIL	2	49	262	268	539				
		9.1	44.9	46.0	58.1				
COLUMN					928				
TOTAL					100.0	43.1	44.7	44.7	

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
11.49544 2 0.0032 47.367 NONE

NUMBER OF MISSING OBSERVATIONS = 0

Q62 ELEMENTARY SCHOOL
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEV01									
COUNT	ROW PCT	TRASH	FLAT	VILLA	ROW				
COL PCT					TOTAL	1.001	2.001	3.001	
AVAILABLE	1	106	343	355	802				
		13.0	42.8	44.3	86.4				
NOT AVAIL	2	9	57	60	126				
		7.1	45.2	47.6	13.4				
COLUMN					928				
TOTAL					100.0	43.1	44.7	44.7	

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
3.46217 2 0.1771 15.343 NONE

NUMBER OF MISSING OBSERVATIONS = 0

Q63 INTERMEDIATE SCHOOL
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

MEV01									
COUNT	ROW PCT	TRASH	FLAT	VILLA	ROW				
COL PCT					TOTAL	1.001	2.001	3.001	
AVAILABLE	1	91	261	284	436				
		14.3	41.0	44.7	68.5				
NOT AVAIL	2	22	139	131	292				
		7.5	47.6	44.9	31.5				
COLUMN					928				
TOTAL					100.0	43.1	44.7	44.7	

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
9.54419 2 0.0085 35.556 NONE

NUMBER OF MISSING OBSERVATIONS = 0

864 SECONDARY SCHOOL
 BY NEU01 TYPE OF ACCOMMODATION
 C R O S S T A B U L A T I O N O F
 PAGE 1 OF 1

		NEU01				
COUNT	ROW PCT	TRADM	FLAT	VILLA	ROW TOTAL	
COL PCT		1.001	2.001	3.001		
1	70	194	210	474		
AVAILABLE	14.8	40.9	44.3	51.1		
	41.9	48.5	50.6			
2	43	204	205	454		
NOT AVAIL	9.5	45.4	45.2	48.9		
	38.1	51.5	49.4			
COLUMN TOTAL	113	400	415	928		
	12.2	43.1	44.7	100.0		

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
 6.4432 2 0.0399 55.282 NONE

NUMBER OF MISSING OBSERVATIONS = 0

865 OPEN AREAS
 BY NEU01 TYPE OF ACCOMMODATION
 C R O S S T A B U L A T I O N O F
 PAGE 1 OF 1

NEU01					
COUNT	ROW PCT	TRADM	FLAY	VILLA	ROW TOTAL
COL PCT		1.001	2.001	3.001	
665	1	54	185	239	478
	AVAILABLE	11.5	38.7	50.0	51.5
		47.8	46.3	57.6	
NOT AVAIL	2	59	215	174	450
		13.1	47.8	39.1	48.5
		52.2	53.8	42.4	
COLUMN TOTAL		113	400	415	928
		12.2	43.1	44.7	100.0

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
 11.20045 2 0.0037 54.795 NONE

NUMBER OF MISSING OBSERVATIONS = 0

866 NEIGHBOURS RELATIONSHIP
 BY NEU01 TYPE OF ACCOMMODATION
 C R O S S T A B U L A T I O N O F
 PAGE 1 OF 1

NEUR01					
	COUNT	TRADM	FLAT	VILLA	ROW TOTAL
	COL PCT	1.001	2.001	3.001	
866	1	40	91	107	238
	V GOOD	16.8	38.2	45.0	25.6
		35.4	22.8	25.8	
6000	2	37	145	189	391
	GOOD	9.5	42.2	48.3	42.1
		32.7	41.3	45.5	
NORMAL	3	23	104	92	219
		10.5	47.5	42.0	23.8
		20.4	26.0	22.2	
NO RELATION	4	13	40	27	80
		16.3	50.0	33.8	8.6
		11.5	10.0	6.5	
...	COLUMN TOTAL	113	400	415	928
		12.2	43.1	44.7	100.0

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
 15.05169 6 0.0199 9.741 NONE

NUMBER OF MISSING OBSERVATIONS = 0

867 CHANGE OF RELATION
 BY NEU01 TYPE OF ACCOMMODATION
 C R O S S T A B U L A T I O N O F
 PAGE 1 OF 1

NEU01					
COUNT	ROW PCT	TRADM	FLAT	VILLA	ROW TOTAL
COL PCT		1.001	2.001	3.001	
1	68	234	274	596	
FOR BETTER	11.4	42.6	46.0	64.2	
	40.2	43.5	44.0		
2	2	9	10	21	
FOR WORSE	9.5	42.9	42.4	2.3	
	1.8	2.3	2.4		
3	43	137	131	311	
NO CHANGE	13.8	44.1	42.1	33.5	
	38.1	34.3	31.4		
COLUMN TOTAL	113	400	415	928	
	12.2	43.1	44.7	100.0	

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
 1.92050 4 0.7504 2.557

NUMBER OF MISSING OBSERVATIONS = 0

		MEV01				
COUNT	1	TRASH	FLAT	VILLA	ROW	
ROW PCT					TOTAL	
COL PCT		1.001	2.001	3.001		
863	1	72	220	201	493	
		14.6	44.6	40.8	53.1	
		43.7	55.0	48.4		
YES	2	41	180	214	435	
		9.4	41.4	49.2	66.9	
		36.3	45.0	51.6		
NO	COLUMN	113	400	415	928	
		12.2	43.1	44.7	100.0	
		TOTAL				

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
9.32307 2 0.0093 52.969 NONE

NUMBER OF MISSING OBSERVATIONS = 0

	COUNT ROW PCT COL PCT	NEWST			ROW TOTAL
		TRASH	FLAT	VILLA	
869	1	78	303	325	706
YES		11.0	42.9	46.0	76.1
		69.0	75.8	78.3	
NO	2	35	97	90	222
		15.8	43.7	40.5	23.9
		31.0	24.3	21.7	
	COLUMN	113	400	415	928
	TOTAL	12.2	43.1	44.7	100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
4.25022 2 0.1194 27.032 NONE

NUMBER OF MISSING OBSERVATIONS = 0

	COUNT ROW PCT COL PCT	MEV01			ROW TOTAL
		TRASH	FLAT	VILLA	
870		1.000	2.000	1.000	
EXISTING ONE	1	48	131	248	427
		10.7	33.8	55.5	48.2
		42.5	37.8	59.8	
TRADITIONAL B	2	3	24	12	39
		7.7	61.5	30.8	4.2
		2.7	6.0	2.9	
CONTEMP B	3	42	225	159	426
		14.0	50.9	35.1	47.6
		56.9	56.3	37.3	
COLUMN		113	400	415	928
	TOTAL	12.2	43.1	44.7	100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
63.45403 4 0.0000 4.749 1 OF 9 (11.12)

NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA		
071	1.001	2.001	3.001		
HAKKAM	1	46	130	97	273
		16.3	47.6	35.5	29.4
		40.7	32.5	23.4	
JEDDAH	2	45	146	83	274
		16.4	53.3	30.3	29.5
		39.8	36.3	20.0	
RIYADH	3	14	92	126	232
		6.0	39.7	54.3	25.0
		12.4	23.0	30.4	
MFAPROJ	4		2	42	44
			4.5	95.5	4.7
			.5	10.1	
KASTPOJ	5	1	13	20	34
		2.9	38.2	58.8	3.7
		.9	3.3	4.8	
SEMAK	6	4	3	3	10
		40.0	30.0	30.0	1.1
		3.5	.8	.7	
SJJED	7		6	6	12
			50.0	50.0	1.5
			1.5	1.4	
SSRID	8		5	22	27
			18.5	81.5	2.9
			1.3	5.3	
SSOTM	9	3	3	16	22
		13.6	13.6	72.7	2.4
		2.7	.8	3.9	
COLUMN TOTAL		113	400	415	928
		12.2	43.1	44.7	100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
129.75507 16 0.0000 1.218 7 OF 27 (25.93)

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
072 CITY IS NOT AS BEFORE
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEV01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL				
072									
YES	1	103	372	394	869				
		11.9	42.3	43.3	97.6				
		91.2	93.0	94.9					
NO	2	10	28	21	59				
		16.9	47.5	35.6	64.6				
		8.8	7.0	5.1					
COLUMN		113	400	415	928				
TOTAL		12.2	43.1	44.7	100.0				

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
2.62916 2 0.2636 7.184 NONE

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
073 CITY WAS BETTER
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEV01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL				
073									
YES	1	26	91	83	200				
		13.0	45.3	41.5	100.0				
		23.0	22.8	20.0					
NO	2	87	309	332	728				
		12.0	42.4	45.4	100.0				
		77.0	77.3	80.0					
COLUMN		113	400	415	928				
TOTAL		12.2	43.1	44.7	100.0				

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
1.07265 2 0.5849 24.353 NONE

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
074 NEW SUBDIVISION IS OLD CONCEPT
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEV01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL				
074									
YES	1	88	287	328	703				
		12.3	40.8	46.7	100.0				
		77.9	72.7	79.0					
NO	2	25	108	87	220				
		11.4	49.1	39.5	100.0				
		22.1	27.3	21.0					
COLUMN		113	395	415	923				
TOTAL		12.2	42.8	45.0	100.0				

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
4.74239 2 0.0934 24.934 NONE

NUMBER OF MISSING OBSERVATIONS = 5

----- C R O S S T A B U L A T I O N O F -----
075 HIGHRISE BUILDING
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEV01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL				
075									
YES	1	94	343	377	814				
		11.3	42.3	46.2	100.0				
		83.2	86.3	90.8					
NO	2	19	53	38	112				
		17.0	49.1	33.9	100.0				
		16.8	13.8	9.2					
COLUMN		113	400	415	928				
TOTAL		12.2	43.1	44.7	100.0				

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
6.77953 2 0.0397 13.638 NONE

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
076 NEW BUILDING REF TRADITIONS
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEV01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL				
076									
YES	1	100	311	326	737				
		13.6	42.2	44.2	100.0				
		88.5	77.8	78.6					
NO	2	13	89	89	191				
		6.8	46.6	46.6	100.0				
		11.3	22.3	21.4					
COLUMN		113	400	415	928				
TOTAL		12.2	43.1	44.7	100.0				

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
6.56636 2 0.0375 23.258 NONE

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
077 DEMOLISH OLD BUILD
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

MEV01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001	TOTAL				
077									
YES	1	96	314	334	744				
		12.9	42.2	44.9	100.0				
		85.0	78.5	80.5					
NO	2	17	86	81	184				
		9.2	46.7	44.0	100.0				
		15.0	21.5	19.5					
COLUMN		113	400	415	928				
TOTAL		12.2	43.1	44.7	100.0				

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
2.35528 2 0.3080 22.405 NONE

NUMBER OF MISSING OBSERVATIONS = 0

NEW01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001					
1	30	30	12	72					
41.7	41.7	16.7	7.8						
26.5	7.5	2.9							
2	83	370	403	354					
9.7	43.2	47.1	92.2						
73.5	92.5	97.1							
COLUMN	113	400	415	928					
TOTAL	12.2	43.1	46.7	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

69.52103 2 0.0000 8.767 NONE

NUMBER OF MISSING OBSERVATIONS = 0

NEW01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001					
1	22	67	81	170					
12.9	39.4	47.6	18.5						
20.0	17.0	19.6							
2	3	3	10	15					
1.6	33.3	64.7	1.6						
1.3	2.4								
3	18	77	68	163					
11.0	47.2	41.7	17.8						
16.4	19.5	16.5							
4	12	78	82	172					
7.0	45.3	47.7	18.7						
10.9	19.7	19.9							
5	4	4	1	5					
2.0	80.0	20.0	.5						
1.0	.2								
6	19	106	114	239					
7.9	44.4	47.7	26.0						
17.3	26.8	27.6							
7	39	58	37	154					
25.3	37.7	37.0	16.8						
35.5	16.7	13.8							
COLUMN	110	395	415	918					
TOTAL	12.0	43.0	45.0	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

42.57221 12 0.0000 0.599 4 OF 21 (19.02)

NUMBER OF MISSING OBSERVATIONS = 10

NEW01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001					
1	36	40	113	189					
19.0	21.2	59.8	20.8						
37.9	10.1	27.3							
2	20	43	118	181					
11.0	23.8	45.2	20.0						
21.1	10.8	28.5							
3	19	51	82	152					
12.5	33.6	33.9	16.8						
20.0	12.8	19.8							
4	12	55	52	119					
10.1	46.2	43.7	13.1						
12.6	13.8	12.6							
5	8	209	49	266					
3.0	78.6	18.4	29.3						
3.4	52.5	11.8							
COLUMN	95	398	414	907					
TOTAL	10.5	43.9	45.6	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

212.83821 8 0.0000 12.464 NONE

NUMBER OF MISSING OBSERVATIONS = 21

NEW01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001					
1	2	30	99	131					
1.5	22.9	75.6	14.4						
2.1	7.5	23.9							
2	3	13	16	32					
9.4	40.4	50.0	3.5						
3.2	3.3	3.9							
3	3	35	44	82					
3.7	42.7	53.7	9.0						
3.2	8.8	10.4							
4	65	291	249	605					
10.7	43.1	41.2	66.7						
48.4	73.1	60.1							
5	21	23	5	49					
42.9	46.9	10.2	5.4						
22.1	5.8	1.2							
6	1	6	1	8					
12.5	75.0	12.5	.9						
1.1	1.5	.2							
COLUMN	95	398	414	907					
TOTAL	10.5	43.9	45.6	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

125.45403 10 0.0000 0.838 4 OF 18 (22.22)

NUMBER OF MISSING OBSERVATIONS = 21

----- C R O S S T A B U L A T I O N O F -----
Q82 IMPROVEMENT OF BUS SYSTEM
BY MEM01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

		MEM01				
COUNT		TRASH	FLAT	VILLA	ROW TOTAL	
ROW PCT						
COL PCT		1.001	2.001	3.001		
Q82						
YES	1	107	362	378	847	
		12.6	42.7	44.4	91.3	
		94.7	90.3	91.1		
NO	2	6	38	37	81	
		7.4	46.9	43.7	87	
		5.3	9.3	8.9		
COLUMN TOTAL		113	400	415	928	
		12.2	43.1	44.7	100.0	

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
1.97495 2 0.3725 9.863 NONE

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q83 TRANS TO MOSQUE
BY MEM01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

		MEM01				
COUNT		TRASH	FLAT	VILLA	ROW TOTAL	
ROW PCT						
COL PCT		1.001	2.001	3.001		
Q83						
WALKING	1	103	318	326	749	
		14.0	43.5	43.5	81.6	
		93.8	80.7	79.1		
BUS	2			100.0	1	
				.2	.1	
CAR	3	7	74	83	168	
		4.2	45.2	50.6	18.3	
		6.3	19.3	20.6		
COLUMN TOTAL		112	394	412	918	
		12.2	42.9	44.9	100.0	

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
13.92220 4 0.0075 0.122 3 OF 9 (33.33)

NUMBER OF MISSING OBSERVATIONS = 10

----- C R O S S T A B U L A T I O N O F -----
Q84 DISTANCE TO MOSQUE
BY MEM01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

		MEM01				
COUNT		TRASH	FLAT	VILLA	ROW TOTAL	
ROW PCT						
COL PCT		1.001	2.001	3.001		
Q84						
0-50M	1	22	51	53	128	
		17.2	39.8	43.0	23.6	
		47.8	22.2	20.6		
50-100M	2	8	38	43	89	
		9.0	42.7	48.3	16.4	
		17.4	18.5	16.1		
100-200M	3	8	54	65	127	
		6.3	42.5	51.2	23.4	
		17.4	23.3	24.3		
200-300M	4	7	48	71	126	
		5.6	38.1	34.3	23.2	
		15.2	20.9	26.6		
300-1000M	5	1	24	19	44	
		2.3	54.5	43.2	8.1	
		2.2	10.4	7.1		
1-5K	6		15	13	28	
			33.6	46.4	5.2	
			6.3	4.9		
5-10K	7			1	1	
				100.0	.2	
				.4		
COLUMN TOTAL		46	230	267	543	
		8.5	42.4	49.2	100.0	

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

24.79231 12 0.0158 0.085 5 OF 21 (23.81)

NUMBER OF MISSING OBSERVATIONS = 385

COUNT ROW PCT COL PCT	NEUR1				ROW TOTAL
	TRASH	FLAT	VILLA		
835 WALKING	1	59	106	65	230
		25.7	46.1	28.3	25.5
		53.2	27.2	16.2	
835 BUS	2	1	2	1	4
		25.0	50.0	25.0	.4
		.9	.5	.2	
835 CAR	3	51	282	336	669
		7.4	42.2	50.2	74.1
		45.9	72.3	83.6	
COLUMN TOTAL					903
TOTAL					100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

65.33240 4 0.0000 0.492 3 OF 9 (33.333)

NUMBER OF MISSING OBSERVATIONS = 25

COUNT ROW PCT COL PCT	NEUR1				ROW TOTAL
	TRASH	FLAT	VILLA		
836 0-50M	1	3	19	11	33
		9.1	57.6	33.3	6.2
		5.9	8.5	4.2	
836 50-100M	2	5	14	9	28
		17.9	50.0	32.1	5.2
		9.8	6.3	3.4	
836 100-200M	3	4	18	25	47
		8.5	38.3	53.2	8.8
		7.8	8.0	9.8	
836 200-500M	4	10	42	46	96
		10.4	43.8	45.8	17.9
		19.6	18.8	16.9	
836 500-1000M	5	16	31	51	96
		14.6	32.3	53.1	17.9
		27.5	13.8	19.5	
836 1-5K	6	12	85	95	192
		6.3	44.3	49.5	35.8
		23.5	37.9	36.4	
836 5-10K	7	2	10	16	28
		7.1	35.7	57.1	5.2
		3.9	4.5	6.1	
836 10-30K	8	1	4	10	15
		6.7	26.7	66.7	2.8
		2.0	1.8	3.8	
836 >30K	9		1		1
			100.0		.2
			.4		
COLUMN TOTAL					536
TOTAL					100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

20.03110 .16 0.2188 0.895 8 OF 27 (29.63)

NUMBER OF MISSING OBSERVATIONS = 392

COUNT ROW PCT COL PCT	NEUR1				ROW TOTAL
	TRASH	FLAT	VILLA		
837 WALKING	1	39	83	61	183
		21.3	45.4	33.3	22.4
		40.6	26.5	16.0	
837 BUS	2	2	5	8	15
		13.3	33.3	53.3	1.8
		2.1	1.5	2.1	
837 CAR	3	55	251	313	619
		8.9	40.5	50.6	75.8
		57.3	74.0	81.9	
COLUMN TOTAL					817
TOTAL					100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

23.73626 4 0.0000 1.763 1 OF 9 (11.111)

NUMBER OF MISSING OBSERVATIONS = 111

COUNT ROW PCT COL PCT	NEUR1				ROW TOTAL
	TRASH	FLAT	VILLA		
838 0-50M	1	3	9	10	22
		13.4	40.9	45.5	4.7
		6.1	4.7	4.5	
838 50-100M	2	3	8	11	22
		13.4	36.4	50.0	4.7
		6.1	4.2	4.7	
838 100-200M	3	2	13	7	22
		9.1	59.1	31.8	4.7
		4.1	6.8	3.0	
838 200-500M	4	8	22	43	73
		11.0	30.1	58.9	15.5
		16.5	11.6	18.5	
838 500-1000M	5	9	32	36	77
		11.7	41.6	46.8	16.3
		18.4	14.8	15.5	
838 1-5K	6	19	73	83	175
		10.9	41.7	47.4	37.1
		38.8	38.4	35.6	
838 5-10K	7	2	23	23	48
		4.2	47.9	47.9	10.2
		4.1	12.1	9.9	
838 10-30K	8	3	8	18	29
		10.3	27.4	62.1	6.1
		6.1	4.2	7.7	
838 >30K	9		2	2	4
			50.0	50.0	.8
			1.1	.9	
COLUMN TOTAL					472
TOTAL					100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

12.33596 16 0.6854 0.415 8 OF 27 (29.63)

NUMBER OF MISSING OBSERVATIONS = 456

----- C R O S S T A B U L A T I O N O F -----
Q89 TRANS TO WORK
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA		
Q89 WALKING	1	22	19	4	45
		48.9	42.2	8.9	5.0
		20.8	4.9	1.0	
BUS	2	14	4	1	19
		73.7	21.1	5.3	2.1
		13.2	1.0	.2	
CAR	3	70	362	401	833
		8.4	43.5	48.1	92.9
		66.0	94.0	98.8	
COLUMN					897
TOTAL					100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
145.66031 4 0.0000 2.245 1 OF 9 (11.182)
NUMBER OF MISSING OBSERVATIONS = 31

----- C R O S S T A B U L A T I O N O F -----
Q90 DISTANCE TO WORK
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA		
Q90 0-50M	1	10.0	7	2	10
		2.2	2.9	.8	1.8
		25.0	10.0	25.0	.7
50-100M	2	37.5	25.0	37.5	100
		6.5	.8	1.2	8
		6.7	33.3	40.0	2.6
100-200M	3	25.0	10.0	25.0	60
		2.2	.8	1.2	4
		25.0	10.0	25.0	.7
200-500M	4	10.0	7	2	10
		2.2	2.9	.8	1.8
		25.0	10.0	25.0	.7
500-1000M	5	10.0	7	2	10
		2.2	2.9	.8	1.8
		25.0	10.0	25.0	.7
1-5K	6	10.0	7	2	10
		2.2	2.9	.8	1.8
		25.0	10.0	25.0	.7
5-10K	7	10.0	7	2	10
		2.2	2.9	.8	1.8
		25.0	10.0	25.0	.7
10-30K	8	10.0	7	2	10
		2.2	2.9	.8	1.8
		25.0	10.0	25.0	.7
>30K	9	10.0	7	2	10
		2.2	2.9	.8	1.8
		25.0	10.0	25.0	.7
COLUMN					245
TOTAL					100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
42.43225 16 0.0003 0.338 12 OF 27 (44.433)
NUMBER OF MISSING OBSERVATIONS = 383

----- C R O S S T A B U L A T I O N O F -----
Q91 TRANS TO RECREATION
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA		
Q91 WALKING	1	18	23	23	64
		23.1	35.9	35.9	7.4
		17.8	6.3	5.9	
BUS	2	2	4		6
		33.3	66.7		.7
		2.0	1.1		
CAR	3	81	340	370	791
		10.2	43.0	46.8	91.9
		80.2	92.6	94.1	
COLUMN					861
TOTAL					100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
24.33959 4 0.0001 0.704 3 OF 9 (33.32)
NUMBER OF MISSING OBSERVATIONS = 67

----- C R O S S T A B U L A T I O N O F -----
Q92 DISTANCE TO RECREATION
BY MEV01 TYPE OF ACCOMMODATION
----- PAGE 1 OF 1 -----

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA		
Q92 0-50M	1		7	4	13
			53.8	46.2	3.0
			3.7	3.0	
50-100M	2	10.0	20.0	70.0	10
		2.4	1.0	3.6	2.3
100-200M	3	1	3	7	11
		9.1	27.3	63.6	2.6
		2.4	1.6	3.6	
200-500M	4		6	11	13
			24.7	75.3	3.3
			2.1	5.6	
500-1000M	5	3	17	18	38
		7.9	44.7	67.4	8.9
		7.3	8.9	9.1	
1-5K	6	10	53	66	129
		7.8	41.1	51.2	30.1
		24.4	27.7	33.3	
5-10K	7	14	50	36	100
		14.0	50.0	36.0	23.3
		36.1	26.2	18.3	
10-30K	8	10	43	34	87
		11.5	49.4	39.1	20.3
		24.4	22.5	17.3	
>30K	9	2	12	12	26
		7.7	46.2	46.2	6.1
		4.9	6.3	6.1	
COLUMN					429
TOTAL					100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
18.93609 16 0.2720 0.956 9 OF 27 (33.32)
NUMBER OF MISSING OBSERVATIONS = 499

Q93 DISTANCE TO WALK
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	10	38	60		108
2	9.3	35.2	55.6		11.7
3	8.8	9.6	14.6		
4	8	51	33		92
5	8.7	55.4	35.9		10.0
6	7.1	12.9	8.0		
7	8	31	46		85
8	9.4	36.5	54.1		9.2
9	7.1	7.8	11.2		
10	9	34	23		48
11	13.2	52.9	33.8		7.4
12	8.0	9.1	5.6		
13	14	63	34		138
14	10.1	49.3	40.6		15.0
15	12.4	17.2	13.6		
16	8	24	39		71
17	11.3	33.8	54.9		7.7
18	7.1	6.1	9.5		
19	1	12	8		21
20	4.8	57.1	38.1		2.3
21	.9	3.0	1.9		
22		12	12		24
23		50.0	50.0		2.6
24		3.0	2.9		
25	55	124	135		314
26	17.5	39.5	43.0		34.3
27	48.7	31.5	32.8		
28	113	396	612		921
29	12.3	43.0	44.7		100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
36.62770 16 0.0024 2.577 2 OF 27 (7.432)

NUMBER OF MISSING OBSERVATIONS = 7

Q94 CAR A WAY FROM HOUSE
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	58	147	113		318
2	18.2	46.2	35.5		34.3
3	51.3	36.3	27.2		
4	55	253	302		610
5	9.0	41.5	49.5		65.7
6	48.7	63.3	72.8		
7	113	400	415		928
8	12.2	43.1	44.7		100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
24.82271 2 0.0000 30.722 NONE

NUMBER OF MISSING OBSERVATIONS = 0

Q95 NATIONALITY
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	86	345	408		839
2	10.3	41.1	48.6		90.4
3	74.1	84.3	98.3		
4	27	55	7		89
5	30.3	61.8	7.9		9.6
6	23.9	13.8	1.7		
7	113	400	415		928
8	12.2	43.1	44.7		100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
64.54277 2 0.0000 10.837 NONE

NUMBER OF MISSING OBSERVATIONS = 0

Q96 ARAB OR NON-ARAB
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	108	392	416		914
2	11.8	42.9	45.3		98.5
3	95.6	98.0	99.8		
4	35.7	57.1	7.1		14
5	2.4	2.0	.2		1.5
6	113	400	415		928
7	12.2	43.1	44.7		100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
11.40551 2 0.0030 1.705 1 OF 6 (16.723)

NUMBER OF MISSING OBSERVATIONS = 0

Q97 MARRIED OR SINGLE
BY MEV01 TYPE OF ACCOMMODATION
CROSS TABULATION OF
PAGE 1 OF 1

COUNT ROW PCT COL PCT	MEV01				ROW TOTAL
	TRASH	FLAT	VILLA	3.001	
1	39	63	69		171
2	22.8	36.8	40.4		18.4
3	34.5	15.8	10.6		
4	74	337	346		757
5	9.9	44.5	45.7		81.6
6	65.5	84.3	83.4		
7	113	400	415		928
8	12.2	43.1	44.7		100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
22.25539 2 0.0000 20.822 NONE

NUMBER OF MISSING OBSERVATIONS = 0

CROSS TABULATION OF
BY NEUR1 NUM OF MALES IN FAMILY
TYPE OF ACCOMMODATION
PAGE 1 OF 1

COUNT		NEUR1				ROW PCT	TOTAL
ROW PCT	COL PCT	TRASH	FLAT	VILLA	3.001		
1	11	106	104	104	221	221	221
2	5.0	48.0	47.1	30.6	125	125	125
3	15.1	34.1	30.7	31.1	123	123	123
4	20	109	94	225	31.1	31.1	31.1
5	8.9	48.4	42.7	31.1	123	123	123
6	27.4	35.0	28.3	17.0	74	74	74
7	15	52	56	10.2	38	38	38
8	12.2	42.3	43.5	16.5	10.2	10.2	10.2
9	20.5	16.7	16.5	74	38	38	38
10	13	19	42	10.2	74	74	74
11	17.6	25.7	56.8	10.2	38	38	38
12	17.8	6.1	12.4	38	5.3	5.3	5.3
13	5	15	18	24	3.3	3.3	3.3
14	13.2	39.5	47.4	5.3	24	24	24
15	6.8	4.8	5.3	3.3	8	8	8
16	29.2	20.8	50.0	1.1	1.1	1.1	1.1
17	9.6	1.6	3.5	1.1	1.1	1.1	1.1
18	2	1	5	4	4	4	4
19	25.0	12.5	42.5	4	4	4	4
20	2.7	.3	1.5	4	4	4	4
21		1	3	4	4	4	4
22		25.0	75.0	4	4	4	4
23		.3	.9	4	4	4	4
24		3	3	4	4	4	4
25		50.0	50.0	4	4	4	4
26		1.0	.9	4	4	4	4
27				4	4	4	4
28				4	4	4	4
29				4	4	4	4
30				4	4	4	4
31				4	4	4	4
32				4	4	4	4
33				4	4	4	4
34				4	4	4	4
35				4	4	4	4
36				4	4	4	4
37				4	4	4	4
38				4	4	4	4
39				4	4	4	4
40				4	4	4	4
41				4	4	4	4
42				4	4	4	4
43				4	4	4	4
44				4	4	4	4
45				4	4	4	4
46				4	4	4	4
47				4	4	4	4
48				4	4	4	4
49				4	4	4	4
50				4	4	4	4
51				4	4	4	4
52				4	4	4	4
53				4	4	4	4
54				4	4	4	4
55				4	4	4	4
56				4	4	4	4
57				4	4	4	4
58				4	4	4	4
59				4	4	4	4
60				4	4	4	4
61				4	4	4	4
62				4	4	4	4
63				4	4	4	4
64				4	4	4	4
65				4	4	4	4
66				4	4	4	4
67				4	4	4	4
68				4	4	4	4
69				4	4	4	4
70				4	4	4	4
71				4	4	4	4
72				4	4	4	4
73				4	4	4	4
74				4	4	4	4
75				4	4	4	4
76				4	4	4	4
77				4	4	4	4
78				4	4	4	4
79				4	4	4	4
80				4	4	4	4
81				4	4	4	4
82				4	4	4	4
83				4	4	4	4
84				4	4	4	4
85				4	4	4	4
86				4	4	4	4
87				4	4	4	4
88				4	4	4	4
89				4	4	4	4
90				4	4	4	4
91				4	4	4	4
92				4	4	4	4
93				4	4	4	4
94				4	4	4	4
95				4	4	4	4
96				4	4	4	4
97				4	4	4	4
98				4	4	4	4
99				4	4	4	4
100				4	4	4	4

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.P. CELLS WITH E.P. < 5
38.99641 16 0.0011 0.404 11 OF 27 (40.72)
NUMBER OF MISSING OBSERVATIONS = 205

CROSS TABULATION OF
BY NEUR1 NUM OF FEMALES IN FAMILY
TYPE OF ACCOMMODATION
PAGE 1 OF 1

COUNT		NEUR1				ROW PCT	TOTAL
ROW PCT	COL PCT	TRASH	FLAT	VILLA	3.001		
1	13	91	76	180	24.9	24.9	24.9
2	7.2	50.6	42.2	22.4	22.4	22.4	22.4
3	18.1	29.3	22.4	22.4	22.4	22.4	22.4
4	11	107	108	224	31.3	31.3	31.3
5	4.9	47.3	47.8	31.3	152	152	152
6	15.3	34.4	31.9	21.1	21.1	21.1	21.1
7	20	41	71	82	11.4	11.4	11.4
8	13.2	40.1	44.7	21.1	44	44	44
9	27.6	19.6	20.9	6.1	13	13	13
10	13	29	40	44	6.1	6.1	6.1
11	15.9	35.4	48.8	11.4	44	44	44
12	18.1	9.3	11.8	13	1.8	1.8	1.8
13	8	13	21	44	6.1	6.1	6.1
14	18.2	34.1	47.7	13	1.8	1.8	1.8
15	11.1	4.8	6.2	13	1.8	1.8	1.8
16	3	2	8	13	1.8	1.8	1.8
17	23.1	15.4	61.5	1.8	1.8	1.8	1.8
18	4.2	.6	2.4	1.8	1.8	1.8	1.8
19	2	5	7	14	1.9	1.9	1.9
20	14.3	35.7	50.0	1.9	1.9	1.9	1.9
21	2.8	1.6	2.1	1.9	1.9	1.9	1.9
22				1.9	1.9	1.9	1.9
23				1.9	1.9	1.9	1.9
24				1.9	1.9	1.9	1.9
25				1.9	1.9	1.9	1.9
26				1.9	1.9	1.9	1.9
27				1.9	1.9	1.9	1.9
28				1.9	1.9	1.9	1.9
29				1.9	1.9	1.9	1.9
30				1.9	1.9	1.9	1.9
31				1.9	1.9	1.9	1.9
32				1.9	1.9	1.9	1.9
33				1.9	1.9	1.9	1.9
34				1.9	1.9	1.9	1.9
35				1.9	1.9	1.9	1.9
36				1.9	1.9	1.9	1.9
37				1.9	1.9	1.9	1.9
38				1.9	1.9	1.9	1.9
39				1.9	1.9	1.9	1.9
40				1.9	1.9	1.9	1.9
41				1.9	1.9	1.9	1.9
42				1.9	1.9	1.9	1.9
43				1.9	1.9	1.9	1.9
44				1.9	1.9	1.9	1.9
45				1.9	1.9	1.9	1.9
46				1.9	1.9	1.9	1.9
47				1.9	1.9	1.9	1.9
48				1.9	1.9	1.9	1.9
49				1.9	1.9	1.9	1.9
50				1.9	1.9	1.9	1.9
51				1.9	1.9	1.9	1.9
52				1.9	1.9	1.9	1.9
53				1.9	1.9	1.9	1.9
54				1.9	1.9	1.9	1.9
55				1.9	1.9	1.9	1.9
56				1.9	1.9	1.9	1.9
57				1.9	1.9	1.9	1.9
58				1.9	1.9	1.9	1.9
59				1.9	1.9	1.9	1.9
60				1.9	1.9	1.9	1.9
61				1.9	1.9	1.9	1.9
62				1.9	1.9	1.9	1.9
63				1.9	1.9	1.9	1.9
64				1.9	1.9	1.9	1.9
65				1.9	1.9	1.9	1.9
66				1.9	1.9	1.9	1.9
67				1.9	1.9	1.9	1.9
68				1.9	1.9	1.9	1.9
69				1.9	1.9	1.9	1.9
70				1.9	1.9	1.9	1.9
71				1.9	1.9	1.9	1.9
72				1.9	1.9	1.9	1.9
73				1.9	1.9	1.9	1.9
74				1.9	1.9	1.9	1.9
75				1.9	1.9	1.9	1.9
76				1.9	1.9	1.9	1.9
77				1.9	1.9	1.9	1.9
78				1.9	1.9	1.9	1.9
79				1.9	1.9	1.9	1.9
80				1.9	1.9	1.9	1.9
81				1.9	1.9	1.9	1.9
82				1.9	1.9	1.9	1.9
83				1.9	1.9	1.9	1.9
84				1.9	1.9	1.9	1.9
85				1.9	1.9	1.9	1.9
86				1.9	1.9	1.9	1.9
87				1.9	1.9	1.9	1.9
88				1.9	1.9	1.9	1.9
89				1.9	1.9	1.9	1.9
90				1.9	1.9	1.9	1.9
91				1.9	1.9	1.9	1.9
92				1.9	1.9	1.9	1.9
93				1.9	1.9	1.9	1.9
94				1.9	1.9	1.9	1.9
95				1.9	1.9	1.9	1.9
96				1.9	1.9	1.9	1.9
97				1.9	1.9	1.9	1.9
98				1.9	1.9	1.9	1.9
99				1.9	1.9	1.9	1.9
100				1.9	1.9	1.9	1.9

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.P. CELLS WITH E.P. < 5
39.19931 16 0.0010 0.399 9 OF 27 (33.32)
NUMBER OF MISSING OBSERVATIONS = 206

MEM01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001					
1	1	100.0			1				1
		1.4							.1
2	3	3.8	41	35	79				
		4.1	51.9	44.3	10.9				
3	4	3.1	13.1	10.3					
		5.5	66	61	131				
4	13	9.2	21.2	17.9	18.0				
		17.8	46.8	44.0	141				
5	16	13.0	44.7	42.3	19.4				
		21.9	55	52	123				
6	6	2.2	45.8	39	16.9				
		8.2	12.2	11.4	83				
7	6	10.3	32.8	33	11.4				
		8.2	6.1	9.7	58				
8	5	18.5	37.0	12	8.0				
		6.8	3.2	3.5	27				
9	19	22.9	20.5	47	3.7				
		28.0	5.4	13.8	83				
COLUMN	73	312	341	726					
TOTAL	10.1	43.0	47.0	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
54.89309 16 0.0000 0.101 4 OF 27 (14.82)
NUMBER OF MISSING OBSERVATIONS = 202

MEM01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001					
1	5	7	11	23					
	20.0	36.0	44.0	2.7					
	4.4	2.3	2.7						
2	45	176	170	391					
	11.3	45.0	43.5	42.1					
	39.8	44.0	41.0						
3	35	163	169	369					
	9.3	44.7	45.8	39.8					
	31.0	41.3	40.7						
4	13	35	50	98					
	13.3	35.7	51.0	10.6					
	11.3	8.8	12.0						
5	11	14	12	37					
	29.7	37.8	32.4	4.0					
	9.7	5.3	2.9						
6	4	1	3	8					
	50.0	12.5	37.5	.9					
	3.5	.3	.7						
COLUMN	113	400	413	928					
TOTAL	12.2	43.1	44.7	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
28.96130 10 0.0013 0.974 5 OF 18 (27.82)
NUMBER OF MISSING OBSERVATIONS = 0

MEM01									
COUNT	TRASH	FLAT	VILLA	ROW					
ROW PCT	COL PCT	1.001	2.001	3.001					
1	3		2	10					
	80.0		20.0	1.1					
	7.1		.5						
2	18	3	4	25					
	72.0	12.0	16.0	2.7					
	15.9	.8	1.0						
3	4	17	7	30					
	20.0	56.7	23.3	3.2					
	5.3	6.3	1.7						
4	13	61	35	89					
	14.6	46.1	39.3	9.6					
	11.3	10.3	8.4						
5	31	118	100	249					
	12.4	47.4	40.2	26.8					
	27.4	29.5	24.1						
6	26	167	186	379					
	6.9	44.1	49.1	40.8					
	23.0	41.8	44.8						
7	10	43	72	125					
	8.0	34.4	57.6	13.5					
	8.3	10.8	17.3						
8	1	11	9	21					
	4.8	52.4	42.9	2.3					
	.9	2.8	2.2						
COLUMN	113	400	413	928					
TOTAL	12.2	43.1	44.7	100.0					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
156.93100 14 0.0000 1.218 6 OF 24 (25.02)
NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	NEU01				ROW TOTAL
	TRASH	FLAT	VILLA	TOTAL	
1	36	50	27	113	113
2	31.9	44.2	23.9	100.0	100.0
3	33.0	12.7	6.6	52.3	52.3
4	13	48	32	93	93
5	14.0	51.4	34.4	100.0	100.0
6	11.9	12.2	7.8	31.9	31.9
7	7	39	46	92	92
8	7.4	42.4	50.0	100.0	100.0
9	6.4	9.9	11.2	27.5	27.5
10	10	36	45	91	91
11	9.0	50.5	40.5	100.0	100.0
12	9.2	14.2	11.0	34.4	34.4
13	15	47	58	120	120
14	12.5	39.2	48.3	100.0	100.0
15	13.8	11.9	14.2	39.9	39.9
16	11	49	44	104	104
17	10.6	47.1	42.3	100.0	100.0
18	10.1	12.4	10.5	33.0	33.0
19	8	47	43	98	98
20	8.2	48.0	43.9	100.0	100.0
21	7.3	11.9	10.5	29.7	29.7
22	3	27	46	76	76
23	3.9	35.5	60.5	100.0	100.0
24	2.8	6.8	11.2	20.8	20.8
25	6	32	68	106	106
26	5.7	30.2	64.2	100.0	100.0
27	5.5	8.1	16.6	29.2	29.2
28	109	395	409	913	913
29	11.9	43.3	44.8	100.0	100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

86.30401 16 0.0000 9.073 NONE

NUMBER OF MISSING OBSERVATIONS = 15

COUNT ROW PCT COL PCT	NEU01				ROW TOTAL
	TRASH	FLAT	VILLA	TOTAL	
1	46	146	93	305	305
2	21.4	47.9	30.5	100.0	100.0
3	58.9	36.4	22.6	117.9	117.9
4	45	248	308	601	601
5	7.5	41.3	51.2	100.0	100.0
6	40.2	62.2	74.8	177.2	177.2
7	1	5	11	17	17
8	5.9	29.4	64.7	99.0	99.0
9	1.3	2.7	2.7	6.7	6.7
10	112	399	412	923	923
11	12.1	43.2	44.6	100.0	100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

57.84706 4 0.0000 2.063 1 OF 9 (11.12)

NUMBER OF MISSING OBSERVATIONS = 5

COUNT ROW PCT COL PCT	NEU01				ROW TOTAL
	TRASH	FLAT	VILLA	TOTAL	
1	3	12	10	25	25
2	12.0	48.0	40.0	100.0	100.0
3	2.7	3.0	2.4	8.1	8.1
4	15	9	1	25	25
5	40.0	36.0	4.0	80.0	80.0
6	13.3	2.3	2	17.6	17.6
7	15	24	33	72	72
8	20.8	33.3	45.8	100.0	100.0
9	13.3	6.0	8.0	27.3	27.3
10	8	4	1	13	13
11	53.3	40.0	6.7	100.0	100.0
12	7.1	1.5	2	10.6	10.6
13	56	304	309	669	669
14	8.3	45.4	46.1	100.0	100.0
15	49.6	74.3	74.3	198.2	198.2
16	7	17	25	49	49
17	14.3	34.7	51.0	100.0	100.0
18	6.2	4.3	6.0	16.5	16.5
19	9	26	34	69	69
20	12.7	36.6	50.7	100.0	100.0
21	8.0	6.5	8.7	23.2	23.2
22	113	400	415	928	928
23	12.2	43.1	44.7	100.0	100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

100.60369 12 0.0000 1.827 3 OF 21 (14.38)

NUMBER OF MISSING OBSERVATIONS = 0

NEWQ1					
COUNT	TRADH	FLAT	VILLA	ROW	
ROW PCT				TOTAL	
COL PCT					

	1.001	2.001	3.001		

Q106	1	9	68	80	
COMMENTS ADDED	5.7	43.3	51.0	157	
	100.0	100.0	100.0	100.0	

COLUMN	9	68	80	157	
TOTAL	5.7	43.3	51.0	100.0	

*** STATISTICS CANNOT BE COMPUTED WHEN THE NUMBER OF NON-EMPTY ROWS OR COLUMNS IS ONE ***
NUMBER OF MISSING OBSERVATIONS = 771

APPENDIX D

TABLE OF CROSS TABULATION OF Q1 - Q106

by

GROUP CLASSIFICATION

NEWQ71									
COUNT		MAKKAH		JEDDAH		RIYADH		PROJECT	
ROW PCT	COL PCT	1.00		2.00		3.00		4.00	
NEWQ1		1.00		2.00		3.00		4.00	
TRADH	1.00	46	45	14	1	7	113		
		40.7	39.8	12.4	.9	6.2	12.2		
		16.8	16.4	6.0	1.3	9.9			
FLAT	2.00	130	146	92	15	17	400		
		32.5	36.5	23.0	3.8	4.3	43.1		
		47.6	53.3	39.7	19.2	23.9			
VILLA	3.00	97	83	126	62	47	415		
		23.4	20.0	30.4	14.9	11.3	44.7		
		35.5	30.3	54.3	79.5	66.2			
COLUMN TOTAL		273	274	232	78	71	928		
		29.4	29.5	25.0	8.4	7.7	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

100.02592 3 0.0000 8.645 NONE

NUMBER OF MISSING OBSERVATIONS = 0

MEV071										
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	STUD	ROW	TOTAL		
COL PCT										
1	34	27	22	11	5	99	10.7			
2	34.3	27.3	22.2	11.1	5.1	10.7				
3	12.5	9.9	9.5	14.1	7.0					
4	48	73	58	26	13	238	25.6			
5	28.4	30.7	24.4	10.9	5.3					
6	24.9	26.6	25.0	33.3	18.3					
7	61	58	46	16	13	194	20.9			
8	31.4	29.9	23.7	8.2	6.7					
9	22.3	21.2	19.8	20.5	18.3					
10	110	116	106	23	40	397	42.8			
11	27.7	29.2	26.7	6.3	10.1					
12	40.3	42.3	45.7	32.1	56.3					
COLUMN TOTAL	273	274	232	78	71	928	100.0			
TOTAL	29.4	29.5	25.0	8.4	7.7					

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
13.17727 12 0.3563 7.574 NONE
NUMBER OF MISSING OBSERVATIONS = 0

MEV071										
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	STUD	ROW	TOTAL		
COL PCT										
1	120	147	78	14	19	398	42.9			
2	30.2	42.0	19.6	3.5	4.8					
3	44.0	40.9	33.6	17.9	26.8					
4	115	80	94	51	37	379	40.8			
5	30.3	21.1	25.3	13.5	9.8					
6	42.1	29.2	41.4	65.4	52.1					
7	30	23	48	12	12	125	13.5			
8	24.0	13.4	38.4	9.6	9.6					
9	11.0	8.4	20.7	15.4	16.9					
10	8	4	10	1	3	26	2.8			
11	30.8	15.4	38.5	3.8	11.5					
12	2.9	1.5	4.3	1.3	4.2					
COLUMN TOTAL	273	274	232	78	71	928	100.0			
TOTAL	29.4	29.5	25.0	8.4	7.7					

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
85.22917 12 0.0000 1.989 2 OF 20 (10.0%)
NUMBER OF MISSING OBSERVATIONS = 0

MEV071										
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	STUD	ROW	TOTAL		
COL PCT										
1	235	241	214	77	68	835	90.0			
2	28.1	28.9	25.6	9.2	8.1					
3	86.1	88.0	92.2	98.7	95.8					
4	38	33	18	1	3	93	10.0			
5	40.9	35.5	19.4	1.3	4.2					
6	13.9	12.0	7.8	1.3	3.2					
COLUMN TOTAL	273	274	232	78	71	928	100.0			
TOTAL	29.4	29.5	25.0	8.4	7.7					

CHI-SQUARE 16.41213 4 0.0025 7.115 NONE
NUMBER OF MISSING OBSERVATIONS = 0

MEV071										
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	STUD	ROW	TOTAL		
COL PCT										
1	129	142	105	41	33	450	48.5			
2	29.7	31.6	23.3	9.1	7.3					
3	47.3	51.8	45.3	52.6	46.5					
4	99	95	94	29	24	343	37.0			
5	28.9	27.7	27.4	8.5	7.6					
6	36.3	34.7	40.5	37.2	36.6					
7	35	26	26	7	7	99	10.7			
8	35.4	24.2	26.3	7.1	7.1					
9	12.8	8.0	11.2	9.0	9.9					
10	10	13	7	1	5	36	3.9			
11	27.8	36.1	19.4	2.8	13.9					
12	3.7	4.7	3.0	1.3	7.0					
COLUMN TOTAL	273	274	232	78	71	928	100.0			
TOTAL	29.4	29.5	25.0	8.4	7.7					

CHI-SQUARE 9.39333 12 0.6690 2.754 2 OF 20 (10.0%)
NUMBER OF MISSING OBSERVATIONS = 0

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BY NEW71 GROUP CLASSIFICATION
PAGE 1 OF 1

NEW71										
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSUD	ROW	TOTAL		
COL PCT		1.001	2.001	3.001	4.001	5.001				
1	25	25	25	15		8	73			
	34.2	34.2	20.5			11.0	7.9			
	9.2	9.1	4.5			11.3				
2	92	114	161		42	43	452			
	20.4	25.2	31.2		13.7	9.5	48.7			
	33.7	41.6	60.8		79.5	60.6				
3	81	100	34		13	13	241			
	33.6	41.5	14.1		5.4	5.4	26.0			
	29.7	36.5	14.7		16.7	18.3				
4	48	23	31		3	4	109			
	44.0	21.1	28.4		2.8	3.7	11.7			
	17.6	8.4	13.4		3.8	5.4				
5	27	12	11			3	53			
	50.9	22.6	20.8			5.7	5.7			
	9.9	4.4	4.7			4.2				
COLUMN	273	274	232	78	71	928				
TOTAL	29.4	29.5	25.0	8.4	7.7	100.0				

CHI-SQUARE 9-F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
107.0466 16 0.0000 4.055 2 OF 25 (8.0%)
NUMBER OF MISSING OBSERVATIONS = 0

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BY NEW71 GROUP CLASSIFICATION
PAGE 1 OF 1

NEW71										
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSUD	ROW	TOTAL		
COL PCT		1.001	2.001	3.001	4.001	5.001				
1	37	23	35			4	99			
	37.4	23.2	35.4			4.0	10.7			
	13.6	8.4	15.1			5.6				
2	236	251	197		78	67	829			
	23.5	30.3	23.8		9.4	8.1	89.3			
	86.4	91.6	84.9		100.0	94.4				
COLUMN	273	274	232	78	71	928				
TOTAL	29.4	29.5	25.0	8.4	7.7	100.0				

CHI-SQUARE 9-F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
19.82538 4 0.0003 7.574 NONE
NUMBER OF MISSING OBSERVATIONS = 0

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BY NEW71 GROUP CLASSIFICATION
PAGE 1 OF 1

NEW71										
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSUD	ROW	TOTAL		
COL PCT		1.001	2.001	3.001	4.001	5.001				
1	101	56	49			5	217			
	46.5	25.8	22.6		2.8	2.3	23.4			
	37.0	20.4	21.1		7.7	7.0				
2	172	218	183		72	64	711			
	24.2	30.7	25.7		10.1	9.3	74.6			
	63.0	79.6	78.9		92.3	93.0				
COLUMN	273	274	232	78	71	928				
TOTAL	29.4	29.5	25.0	8.4	7.7	100.0				

CHI-SQUARE 9-F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
51.52961 4 0.0000 16.602 NONE
NUMBER OF MISSING OBSERVATIONS = 0

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BY NEW71 GROUP CLASSIFICATION
PAGE 1 OF 1

NEW71										
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSUD	ROW	TOTAL		
COL PCT		1.001	2.001	3.001	4.001	5.001				
1	273	274	232		78	71	928			
	29.4	29.5	25.0		8.4	7.7	100.0			
	100.0	100.0	100.0		100.0	100.0				
COLUMN	273	274	232	78	71	928				
TOTAL	29.4	29.5	25.0	8.4	7.7	100.0				

... STATISTICS CANNOT BE COMPUTED WHEN THE NUMBER OF NON-EMPTY ROWS OR COLUMNS IS ONE
NUMBER OF MISSING OBSERVATIONS = 0

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BY NEW71 GROUP CLASSIFICATION
PAGE 1 OF 1

NEW71										
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSUD	ROW	TOTAL		
COL PCT		1.001	2.001	3.001	4.001	5.001				
1	195	256	226		78	66	821			
	23.5	31.2	27.5		9.5	8.0	88.5			
	71.4	93.4	97.4		100.0	93.0				
2	78	18	6			5	107			
	72.9	16.8	5.4			4.7	11.5			
	23.6	6.6	2.6			7.0				
COLUMN	273	274	232	78	71	928				
TOTAL	29.4	29.5	25.0	8.4	7.7	100.0				

CHI-SQUARE 9-F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
114.09191 4 0.0000 8.186 NONE
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q11 SEWAGE CONNECTION
BY MEV071 GROUP CLASSIFICATION
PAGE 1 OF 1

MEV071											
COUNT		HAKKAN		JEDDAH		RIYADH		PROJECT		STUD	
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001					
Q11	1	181	152	157	73	44					
		29.7	25.0	25.8	12.0	7.4					
		66.3	55.5	67.7	93.6	44.8					
YES	2	92	122	75	5	25					
		28.8	38.2	23.5	1.6	7.8					
		33.7	44.5	32.3	6.4	35.2					
NO	COLUMN	273	276	232	78	71					
	TOTAL	29.4	29.5	25.0	8.4	7.7					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
40.04277 4 0.0000 24.406 NONE
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q12 TELEPHONE SERVICE
BY MEV071 GROUP CLASSIFICATION
PAGE 1 OF 1

MEV071											
COUNT		HAKKAN		JEDDAH		RIYADH		PROJECT		TOTAL	
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001					
Q12	YES	244	175	199	78	43					
		32.1	23.1	26.2	10.3	8.3					
		89.4	63.9	85.8	100.0	88.7					
	NO	29	99	33	8	169					
		17.2	58.4	19.5	4.7	18.2					
		10.6	36.1	14.2	11.3	11.3					
COLUMN TOTAL		273	274	232	78	71					
		29.4	29.5	25.0	8.4	7.7					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
91.77136 4 0.0000 12.930 NONE
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q13 GAS SUPPLY
BY MEV071 GROUP CLASSIFICATION
PAGE 1 OF 1

NEW071											
COUNT		HAKKAN		JEDDAH		RIYADH		PROJECT		TOTAL	
ROW	PCT	COL	PCT	1.001	2.001	3.001	4.001	5.001			
Q13	NO	2		273	274	232	78	71			
				29.4	29.5	25.0	8.4	7.7			
				100.0	100.0	100.0	100.0	100.0			
COLUMN				273	274	232	78	71			
TOTAL				29.4	29.5	25.0	8.4	7.7			

*** STATISTICS CANNOT BE COMPUTED WHEN THE NUMBER OF NON-EMPTY ROWS OR COLUMNS IS 0
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q14 LIGHTING IN LIVING R
BY MEV071 GROUP CLASSIFICATION
PAGE 1 OF 1

MEV071											
COUNT		HAKKAN		JEDDAH		RIYADH		PROJECT		STUD	
ROW PCT	COL PCT	1.001		2.001		3.001		4.001		5.001	
Q14	NATURAL	1		165	170	154	49	56		394	
				27.8	28.6	25.9	8.2	9.4		64.0	
				60.4	62.0	66.4	62.8	78.9			
	ARTIFICIAL	2		108	104	78	29	15		334	
				32.3	31.1	23.4	8.7	4.5		36.0	
				39.6	38.0	33.6	37.2	21.1			
COLUMN TOTAL				273	274	232	78	71	928		
				29.4	29.5	25.0	8.4	7.7	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
9.39215 4 0.0520 25.554 NONE
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q15 LIGHTING IN MEN R
BY MEV071 GROUP CLASSIFICATION
PAGE 1 OF 1

MEV071											
COUNT		HAKKAN		JEDDAH		RIYADH		PROJECT		STUD	
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001					
015	NATURAL	1	172	174	157	47	54				
			28.5	28.8	26.0	7.8	8.9				
			63.0	63.5	67.7	60.3	74.1				
	ARTIFICIAL	2	101	100	75	31	17				
			31.2	30.9	23.1	9.6	5.2				
			37.0	36.5	32.3	39.7	23.9				
COLUMN TOTAL			273	274	232	78	71				
			29.4	29.5	25.0	8.4	7.7				

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
6.08463 4 0.1942 24.789 NONE
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q16 LIGHTING IN WOMEN R
BY MEV071 GROUP CLASSIFICATION
PAGE 1 OF 1

NEW071											
COUNT		HAKKAN		JEDDAH		RIYADH		PROJECT		TOTAL	
ROW PCT	COL PCT	1.001		2.001		3.001		4.001		5.001	
Q16	NATURAL	1	164	171	150	47	56	588			
			27.9	29.1	25.5	8.0	9.5	64.1			
			60.1	65.0	64.7	60.3	78.9				
	ARTIFICIAL	2	109	92	82	31	15	329			
			33.1	28.0	24.9	9.4	4.6	35.9			
			39.9	35.0	35.3	39.7	21.1				
COLUMN			273	243	232	78	71	917			
TOTAL			29.8	28.7	25.3	8.5	7.7	100.0			

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
9.28804 4 0.0543 25.473 NONE
NUMBER OF MISSING OBSERVATIONS = 11

017 LIGHTING IN KITCHEN
BY NEW71 GROUP CLASSIFICATION

PAGE 1 OF 1

CROSS TABULATION OF									
NEW71									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	SSTUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
017									
NATURAL	1	158	161	135	39	54	547		
		28.9	29.4	24.7	7.1	9.9	59.5		
		57.9	60.8	58.2	50.0	76.1			
ARTIFICIAL	2	115	104	97	39	17	372		
		30.9	28.0	24.1	10.5	4.6	40.5		
		42.1	39.2	41.8	50.0	23.9			
COLUMN		273	265	232	78	71	919		
TOTAL		29.7	28.8	25.2	8.5	7.7	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
11.6580 4 0.0203 28.740 NONE
NUMBER OF MISSING OBSERVATIONS = 9

018 LIGHTING IN BED R
BY NEW71 GROUP CLASSIFICATION

PAGE 1 OF 1

CROSS TABULATION OF									
NEW71									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	SSTUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
018									
NATURAL	1	162	143	139	50	53	547		
		28.6	28.7	24.5	8.6	9.3	61.8		
		59.3	62.0	59.9	44.1	74.6			
ARTIFICIAL	2	111	100	93	28	18	350		
		31.7	28.6	26.6	8.0	5.1	38.2		
		40.7	38.0	40.1	35.9	25.4			
COLUMN		273	243	232	78	71	917		
TOTAL		29.3	26.7	25.3	8.5	7.7	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
6.19376 4 0.1851 27.099 NONE
NUMBER OF MISSING OBSERVATIONS = 11

019 VENT IN LIVING R
BY NEW71 GROUP CLASSIFICATION

PAGE 1 OF 1

CROSS TABULATION OF									
NEW71									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	SSTUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
019									
NATURAL	1	132	111	98	32	44	417		
		31.7	24.6	23.5	7.7	10.4	46.9		
		48.4	40.5	42.2	41.0	62.0			
ARTIFICIAL	2	141	163	136	66	27	511		
		27.6	31.9	26.2	9.0	5.3	55.1		
		51.6	59.5	57.8	59.0	38.0			
COLUMN		273	274	232	78	71	928		
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
12.94603 4 0.0115 31.904 NONE
NUMBER OF MISSING OBSERVATIONS = 0

020 VENT IN ROOM R
BY NEW71 GROUP CLASSIFICATION

PAGE 1 OF 1

CROSS TABULATION OF									
NEW71									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	SSTUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
020									
NATURAL	1	130	111	106	35	46	428		
		30.4	25.9	24.8	8.2	10.7	46.1		
		47.6	40.5	45.7	44.9	64.8			
ARTIFICIAL	2	143	163	124	43	23	500		
		28.6	32.6	23.2	8.6	5.0	53.9		
		52.4	59.5	54.3	55.1	35.2			
COLUMN		273	274	232	78	71	928		
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
13.74028 4 0.0082 32.746 NONE
NUMBER OF MISSING OBSERVATIONS = 0

021 VENT IN WORK R
BY NEW71 GROUP CLASSIFICATION

PAGE 1 OF 1

CROSS TABULATION OF									
NEW71									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	SSTUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
021									
NATURAL	1	130	104	103	35	45	419		
		31.0	25.3	24.6	8.4	10.7	45.7		
		47.6	40.5	44.4	44.9	63.4			
ARTIFICIAL	2	143	156	129	43	24	497		
		28.8	31.4	26.0	8.7	5.2	54.3		
		52.4	59.5	55.6	55.1	36.6			
COLUMN		273	262	232	78	71	916		
TOTAL		29.8	28.4	25.3	8.5	7.8	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
12.62804 4 0.0144 32.477 NONE
NUMBER OF MISSING OBSERVATIONS = 12

022 VENT IN KITCHEN
BY NEW71 GROUP CLASSIFICATION

PAGE 1 OF 1

CROSS TABULATION OF									
NEW71									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	SSTUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
022									
NATURAL	1	147	126	111	35	43	442		
		31.6	27.3	24.0	7.6	9.3	50.3		
		53.8	47.7	47.8	44.9	60.6			
ARTIFICIAL	2	126	138	121	43	28	456		
		27.6	30.3	26.5	9.4	6.1	49.7		
		46.2	52.3	52.2	55.1	39.4			
COLUMN		273	264	232	78	71	918		
TOTAL		29.7	28.8	25.3	8.5	7.7	100.0		

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
6.54246 4 0.1421 35.268 NONE
NUMBER OF MISSING OBSERVATIONS = 10

NEW071									
COUNT	ROW PCT	MARKAM	JEDDAH	RIYADH	PROJECT	SETUD	ROW TOTAL		
COL PCT		1.001	2.001	3.001	4.001	5.001			
023	1	129	104	96	34	44	407		
		31.7	25.6	23.6	8.4	10.8	44.4		
		47.3	39.7	41.4	43.6	42.0			
ARTIFICIAL	2	144	158	136	44	27	509		
		28.3	31.0	28.7	8.6	5.3	53.6		
		52.7	40.3	58.6	56.4	38.0			
TOTAL	COLUMN TOTAL	273	262	232	78	71	916		
		29.8	23.6	25.3	8.5	7.8	100.0		

[illegible]

13.00617	4	0.0112	31.547	NONE
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NUMBER OF MISSING OBSERVATIONS = 12

COUNT	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW TOTAL
COL PCT	1.001	2.001	3.001	4.001	5.001	
1	271	270	230	78	70	919
	29.5	29.4	25.0	8.5	7.6	99.0
	99.3	98.5	99.1	100.0	98.6	
2	22	4	2		1	9
	22.2	4.4	2.2		11.1	1.0
	.7	1.5	.9		1.6	
COLUMN TOTAL	273	274	232	78	71	928
	29.4	29.5	25.0	8.6	7.7	100.0

CELLS WITH 5.0%
MIN 2.0%
SIGNIFICANCE
0.0%
CHI-SQUARE
ZAVOVS-INO

1.77917	4	0.7763	0.689	3 of	10 (50.0%)
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NUMBER OF MISSING OBSERVATIONS = 0

NEW071									
COUNT	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW TOTAL			
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001			
1	38	26	152	48	35	319			
YES	11.9	8.2	47.6	21.3	17.0	34.4			
	13.9	9.5	65.5	87.2	49.3				
2	235	248	80	10	36	609			
NO	35.6	40.7	15.1	1.6	5.9	65.6			
	86.1	90.5	36.5	12.6	50.7				
COLUMN TOTAL	273	274	232	78	71	928			
	29.4	29.5	25.0	8.4	7.7	100.0			

[illegible]

	329,019%	6	0.000	26.10%	NONE
None					
Small					
Medium					
Large					
Very Large					
Extremely Large					
Total					

0 - 5011 VARSIES MISSILE, 50 120000

		NEW971					ROW TOTAL
COUNT	MAXKAM	JEDDAH	RIYADH	PROJECT	SETUP		
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001	
026	1	222	230	227	78	63	820
		27.1	28.0	27.7	9.5	7.7	88.4
		81.3	83.9	97.8	100.0	88.7	
YES	2	51	44	5		8	108
		47.2	40.7	4.6		7.4	11.6
		18.7	16.1	2.2		11.3	
NO	COLUMN	273	274	232	78	71	928
	TOTAL	29.6	29.5	23.0	8.4	7.7	100.0

[illegible]

	\$.9768		.		0.0000		6.243		NONE
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NUMBER OF MISSING OBSERVATIONS

MEV871	COUNT	MAKKAH	JEDDAH	RIYADH	PROJECT	STATUS	ROW
COL	PCT	1.001	2.001	3.001	4.001	5.001	TOTAL
1		121	129	59	14	14	337
		35.9	38.3	17.5	4.2	4.2	49.3
		43.0	71.7	36.2	51.9	22.6	
2		77	38	44	8	19	188
		41.0	20.2	24.5	4.3	10.1	27.5
		30.6	21.1	28.2	29.6	30.6	
3		27	8	18	1	11	65
		41.5	12.3	27.7	1.5	16.9	9.5
		10.7	4.4	11.0	3.7	17.7	
4		17	2	21	1	10	51
		33.3	3.9	41.2	2.0	19.6	7.5
		6.7	1.1	12.9	3.7	16.1	
5		1	2	12	2	3	20
		5.0	10.0	60.0	10.0	15.0	2.9
		.4	1.1	7.4	7.4	6.8	
6		3		5		4	12
		25.0		41.7		33.3	1.8
		1.2		3.1		6.5	
7		1	1	2	1		5
		20.0	20.0	40.0	20.0		.7
		.4	.6	1.2	3.7		
8		5					5
		100.0					.7
		2.0					
9							1
						100.0	.1
						1.6	

[illegible]

128.96735	32	0.000	0.039	26.07	45 (57.82)
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792 - SNOLIAVASED ENFISIN JO 2360N
NUMBER OF MISSING OBSERVATIONS =

MEV071									
COUNT	MARKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	TOTAL			
1	130	96	65	3	20	314			
	41.4	30.6	20.7	1.0	6.4	37.7			
	52.2	41.0	31.1	3.9	31.3				
2	72	91	70	17	17	267			
	27.0	34.1	24.2	6.4	6.4	32.1			
	28.9	38.9	33.5	22.1	26.6				
3	17	13	38	17	8	93			
	18.3	14.0	40.9	18.3	8.6	11.2			
	6.8	5.6	18.2	22.1	12.5				
4	15	19	18	11	12	75			
	20.0	25.3	24.0	14.7	16.0	9.0			
	6.0	8.1	8.6	16.3	18.8				
5	4	5	8	18	3	38			
	10.5	13.2	21.1	47.4	7.9	4.6			
	1.6	2.1	3.8	23.4	4.7				
6	5	5	2	5	3	20			
	25.0	25.0	10.0	25.0	15.0	2.4			
	2.0	2.1	1.0	6.5	4.7				
7	2	1	3	4		10			
	20.0	10.0	30.0	40.0		1.2			
	.8	.4	1.4	5.2					
8	2	1	3	1	1	8			
	25.0	12.5	37.5	12.5	12.5	1.0			
	.8	.4	1.4	1.3	1.6				
9	2	3	2	1		8			
	25.0	37.5	25.0	12.5		1.0			
	.8	1.3	1.0	1.3					
COLUMN TOTAL	269	234	209	77	64	833			
	29.9	28.1	25.1	9.2	7.7	100.0			

CHI-SQUARE 32
180.30209
NUMBER OF MISSING OBSERVATIONS = 95
SIGNIFICANCE 0.0000
0.615
19 OF 45 (42.22)
CELLS WITH E.F. < 5

MEV071									
COUNT	MARKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	TOTAL			
1	124	83	74	12	41	334			
	37.1	24.9	22.2	3.6	12.3	36.4			
	45.6	31.1	32.2	15.4	57.7				
2	12	25	5		1	43			
	27.9	59.1	11.6		2.3	4.7			
	4.4	9.4	2.2		1.4				
3	103	124	72	28	16	366			
	31.2	35.8	20.8	8.1	4.0	37.7			
	39.7	46.4	31.3	35.9	19.7				
4	9	10	24	2	1	46			
	19.6	21.7	52.2	4.3	2.2	5.0			
	3.3	3.7	10.4	2.6	1.4				
5	10	22	48	34	10	124			
	8.1	17.7	38.7	27.4	8.1	13.5			
	3.7	8.2	20.9	43.6	14.1				
6	9	3	7	2	4	23			
	34.0	12.0	28.0	8.0	16.0	2.7			
	3.3	1.1	3.0	2.6	5.6				
COLUMN TOTAL	272	267	230	78	71	918			
	29.6	29.1	25.1	8.5	7.7	100.0			

CHI-SQUARE 9.6
175.43172
NUMBER OF MISSING OBSERVATIONS = 10
SIGNIFICANCE 0.0000
1.936
6 OF 30 (20.00)
CELLS WITH E.F. < 5

MEV071									
COUNT	MARKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	TOTAL			
1	72	40	41	6	13	172			
	41.9	23.3	23.8	3.3	7.6	19.1			
	26.5	15.7	18.1	7.7	18.3				
2	72	49	40	3	8	172			
	41.9	28.5	23.3	1.7	4.7	19.1			
	26.5	19.3	17.7	3.8	11.3				
3	34	27	16	2	4	83			
	41.0	32.5	19.3	2.4	4.8	9.2			
	12.5	10.4	7.1	2.6	5.6				
4	94	138	129	67	46	474			
	19.8	29.1	27.2	14.1	9.7	52.6			
	34.6	56.3	57.1	85.9	66.8				
COLUMN TOTAL	272	254	226	78	71	901			
	30.2	28.2	25.1	8.7	7.9	100.0			

CHI-SQUARE 9.6
180.30209
NUMBER OF MISSING OBSERVATIONS = 27
SIGNIFICANCE 0.0000
6.541
NONE
CELLS WITH E.F. < 5

MEU071									
COUNT	OWN OR RENT	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001			
1	145	103	107	8	52	435			
2	37.9	23.7	24.6	1.8	12.0	48.9			
3	40.4	37.4	44.1	10.3	73.2				
4	108	171	125	70	19	493			
5	21.9	36.7	25.4	16.2	3.9	53.1			
6	39.6	42.4	53.9	89.7	26.8				
COLUMN TOTAL	273	274	232	78	71	928			
ROW TOTAL	29.4	29.3	25.0	8.4	7.7	100.0			

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
91.52615 4 0.0000 33.281 NONE
NUMBER OF MISSING OBSERVATIONS = 0

MEU071									
COUNT	WAY OF OWNING	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001			
1	49	22	20	2	9	102			
2	48.0	21.6	19.6	2.0	8.8	23.4			
3	29.7	21.4	18.7	25.0	17.3				
4	23	4	5		5	39			
5	59.0	15.4	12.8		12.8	9.0			
6	13.9	5.8	4.7		9.6				
7	85	59	48	4	32	250			
8	34.0	23.4	27.2	2.4	12.8	57.3			
9	51.5	37.3	43.4	75.0	61.5				
10	8	16	14		4	44			
11	18.2	36.4	31.8		13.6	10.1			
12	4.8	15.5	13.1		11.5				
COLUMN TOTAL	165	103	107	1.8	52	435			
ROW TOTAL	37.9	23.7	24.6	1.8	12.0	100.0			

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
25.08842 12 0.0144 0.717 5 OF 20 (25.0%)
NUMBER OF MISSING OBSERVATIONS = 493

MEU071									
COUNT	AMOUNT OF RENT	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001			
1	33	42	35	29	4	143			
2	23.1	29.4	24.3	20.3	2.8	29.0			
3	30.6	24.6	28.0	41.4	21.1				
4	50	47	42	24	11	194			
5	25.3	34.5	21.6	12.4	5.7	39.4			
6	46.3	39.2	33.6	36.3	57.9				
7	19	50	30	12	1	112			
8	17.0	44.6	26.8	10.7	9	22.7			
9	17.4	29.2	24.0	17.1	5.3				
10	5.3	31.4	42.1	10.3	10.3	19			
11	9	3.5	6.4	2.9	10.3	3.9			
12	10.0	40.0	40.0	10.0		10			
13	9	2.3	3.2	1.4		2.0			
14	24.7	13.3	40.0	13.3	4.7	15			
15	3.7	1.2	4.8	2.9	5.3	3.0			
COLUMN TOTAL	108	171	125	70	19	493			
ROW TOTAL	21.9	34.7	25.4	14.2	3.9	100.0			

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
32.70394 29 0.0592 0.385 14 OF 30 (46.7%)
NUMBER OF MISSING OBSERVATIONS = 435

MEU071									
COUNT	PERIOD OF LIVING	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001			
1	140	173	154	57	31	555			
2	25.2	31.2	27.7	10.3	5.6	59.8			
3	51.3	43.1	66.4	73.1	43.7				
4	70	69	55	17	24	237			
5	29.5	29.1	23.2	7.2	11.0	25.5			
6	25.6	25.2	23.7	21.8	36.6				
7	29	14	14	2	11	69			
8	40.6	20.3	20.3	2.9	15.9	7.4			
9	10.3	5.1	6.0	2.4	15.5				
10	10	7	4	2		25			
11	40.0	28.0	24.0	8.0		2.7			
12	3.7	2.4	2.6	2.4					
13	14	4	1		1	20			
14	70.0	20.0	5.0		5.0	2.2			
15	5.1	1.5	.4		1.4				
16	4	3	1			8			
17	10.0	37.5	12.5			.9			
18	1.5	1.1	.4						
19	7	4	1		2	14			
20	50.0	28.4	7.1		14.3	1.5			
21	2.4	1.5	.4		2.8				
COLUMN TOTAL	273	274	232	78	71	928			
ROW TOTAL	29.4	29.3	25.0	8.4	7.7	100.0			

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
37.94237 24 0.0001 0.612 14 OF 35 (40.0%)
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q33 NUM. OF FAMILIES
BY NEWQ71 GROUP CLASSIFICATION
----- PAGE 1 OF 1 -----

NEWQ71									
COUNT	MAKKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.00	2.00	3.00	4.00	5.00			
1	75	58	105	56	31	325			
	23.1	17.8	32.3	17.2	9.3	35.2			
	27.6	21.2	45.9	24.8	13.7				
2	57	40	54	6	14	171			
	33.3	23.4	31.6	3.3	8.2	18.3			
	21.0	16.7	23.6	7.7	19.7				
3	48	27	13	2	9	99			
	48.5	27.5	13.1	2.0	9.1	10.7			
	17.6	9.9	5.7	2.6	12.7				
4	37	30	14	2	4	107			
	34.6	46.7	13.1	1.9	3.7	11.6			
	13.6	18.3	6.1	2.6	5.6				
5	55	98	43	12	13	221			
	24.9	44.3	19.5	5.4	5.9	23.9			
	20.2	35.9	18.8	15.4	18.3				
COLUMN	272	273	229	78	71	923			
TOTAL	29.5	29.6	24.8	8.5	7.7	100.0			

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

141.10293 16 0.0000 7.615 NONE

NUMBER OF MISSING OBSERVATIONS = 5

----- C R O S S T A B U L A T I O N O F -----
Q36 RELATIONSHIP
BY NEWQ71 GROUP CLASSIFICATION
----- PAGE 1 OF 1 -----

NEWQ71									
COUNT	MAKKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.00	2.00	3.00	4.00	5.00			
1	189	135	155	69	56	604			
	31.3	22.4	25.7	11.4	9.3	45.9			
	69.5	49.5	69.5	38.5	78.9				
2	83	138	68	9	15	313			
	26.5	44.1	21.7	2.9	4.8	34.1			
	30.5	50.5	30.5	11.5	21.1				
COLUMN	272	273	223	78	71	917			
TOTAL	29.7	29.8	24.3	8.5	7.7	100.0			

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

53.67667 4 0.0000 24.236 NONE

NUMBER OF MISSING OBSERVATIONS = 11

----- C R O S S T A B U L A T I O N O F -----
Q37 NUM. OF SERVANTS
BY NEWQ71 GROUP CLASSIFICATION
----- PAGE 1 OF 1 -----

NEWQ71									
COUNT	MAKKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.00	2.00	3.00	4.00	5.00			
1	137	112	92	38	26	405			
	33.8	22.7	22.7	9.4	6.4	82.8			
	86.2	83.6	86.0	69.1	76.5				
2	18	16	11	10	7	62			
	29.0	25.8	17.7	16.1	11.3	12.7			
	11.3	11.9	10.3	12.2	20.6				
3	3	6	3	4	1	17			
	17.6	35.3	17.6	23.3	5.9	3.5			
	1.9	4.5	2.8	7.3	2.9				
4	1		1	3		5			
	20.0		20.0	68.0		1.0			
	.6		.9	5.5					
COLUMN	159	134	107	55	34	489			
TOTAL	32.3	27.4	21.9	11.2	7.0	100.0			

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

22.05812 12 0.0369 0.348 10 OF 20 (50.0%)

NUMBER OF MISSING OBSERVATIONS = 439

----- C R O S S T A B U L A T I O N O F -----
Q38 PLACE OF LIVING
BY NEWQ71 GROUP CLASSIFICATION
----- PAGE 1 OF 1 -----

NEWQ71									
COUNT	MAKKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.00	2.00	3.00	4.00	5.00			
1	148	128	103	50	31	460			
	32.2	27.8	22.4	10.9	6.7	94.3			
	93.7	95.3	96.3	98.9	91.2				
2	10	6	4	5	3	28			
	35.7	21.4	14.3	17.9	10.7	5.7			
	6.3	4.5	3.7	9.1	8.8				
COLUMN	158	134	107	55	34	488			
TOTAL	32.4	27.5	21.9	11.3	7.0	100.0			

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5

3.02847 4 0.5331 1.931 2 OF 10 (20.0%)

NUMBER OF MISSING OBSERVATIONS = 440

----- C R O S S T A B U L A T I O N O F -----
039 NUM. OF DRIVERS
BY MEU071 GROUP CLASSIFICATION
PAGE 1 OF 1

MEU071											
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	SSUD	ROW				
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL				
039	1	40	39	28	22	8	137				
		29.2	25.5	20.4	16.1	5.8	84.4				
	2	85.1	100.0	90.3	81.3	72.7	17				
		41.2	23.5	17.6	23.5	17.6	11.0				
	3	14.9		9.7	16.8	27.3	1				
					100.0	3.7	.6				
COLUMN		47	39	31	27	11	155				
TOTAL		30.3	25.2	20.0	17.4	7.1	100.0				

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<.5

13.87267 8 0.0851 0.071 9 OF 15 (60.023)
NUMBER OF MISSING OBSERVATIONS = 773

----- C R O S S T A B U L A T I O N O F -----
040 PLACE OF LIVING
BY MEU071 GROUP CLASSIFICATION
PAGE 1 OF 1

MEU071											
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	SSUD	ROW				
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL				
040	1	26	17	22	13	4	84				
		31.0	20.2	26.2	15.5	7.1	54.2				
INSIDE H		55.3	43.6	71.0	48.1	56.5					
	2	21	22	9	16	5	71				
OUTSIDE H		29.6	31.0	12.7	19.7	7.0	45.8				
		44.7	56.4	29.0	51.9	45.3					
COLUMN		47	39	31	27	11	155				
TOTAL		30.3	25.2	20.0	17.4	7.1	100.0				

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<.5

5.70230 4 0.2225 5.039 NONE
NUMBER OF MISSING OBSERVATIONS = 773

----- C R O S S T A B U L A T I O N O F -----
041 TERRACE WALL
BY MEU071 GROUP CLASSIFICATION
PAGE 1 OF 1

MEU071											
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	SSUD	ROW				
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL				
041	1	198	152	148	37	50	585				
		33.8	26.0	25.3	6.3	8.5	63.0				
HIGH WALL		72.3	55.5	63.8	47.4	70.4					
	2	75	122	84	41	21	343				
LOW WALL		21.9	35.6	24.5	12.0	6.1	37.0				
		27.5	46.5	30.2	32.6	29.4					
COLUMN		273	274	232	78	71	928				
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0				

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<.5

27.14590 4 0.0000 26.242 NONE
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
042 TERRACE USE
BY MEU071 GROUP CLASSIFICATION
PAGE 1 OF 1

MEU071											
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	SSUD	ROW				
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL				
042	1	143	123	94	14	42	428				
		34.6	29.9	22.0	3.7	9.8	46.1				
YES		54.2	46.7	40.5	20.5	59.2					
	2	125	144	138	42	29	500				
NO		25.0	29.2	27.6	12.4	5.8	53.9				
		45.8	53.3	59.5	75.5	60.8					
COLUMN		273	274	232	78	71	928				
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0				

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<.5

35.40164 4 0.0000 32.746 NONE
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
043 WAY OF USING TERRACE
BY MEU071 GROUP CLASSIFICATION
PAGE 1 OF 1

MEU071											
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	SSUD	ROW				
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL				
043	1	8	3	15	2	10	38				
		21.1	7.9	39.5	3.3	26.3	8.8				
SLEEP		5.2	2.3	16.0	13.3	23.8					
	2	61	59	37	9	21	187				
DRYCL		32.6	31.6	19.8	6.8	17.2	43.3				
		39.9	46.1	39.4	60.0	50.0					
GATHER	3	33	39	19		7	118				
		44.9	33.1	16.1		5.9	27.3				
		34.6	30.5	20.2		16.7					
	4	27	27	18	2	3	77				
CN PLAY		35.1	35.1	23.4	2.6	3.9	17.8				
		17.6	21.1	19.1	13.3	7.1					
OTM	5	4		5	2	1	12				
		33.3		41.7	16.7	8.3	2.8				
		2.6		5.3	13.3	2.4					
	COLUMN	133	128	94	15	42	432				
TOTAL		35.4	29.6	21.8	3.5	9.7	100.0				

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<.5

53.81717 16 0.0000 0.417 9 OF 23 (36.023)
NUMBER OF MISSING OBSERVATIONS = 496

344 REASON OF UNUSED TERRACE
BY NEW071 GROUP CLASSIFICATION

NEW071							
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW TOTAL
COL PCT		1.20	2.00	3.00	4.00	5.00	
1		42	49	35	6	6	133
		30.4	35.5	25.4	4.3	4.3	27.8
		31.4	33.6	25.4	9.7	20.7	
2		17	9	11	7	1	45
		37.8	20.0	24.4	15.6	2.2	9.1
		13.9	6.2	8.0	11.3	3.4	
3		47	41	37	27	13	135
		25.4	22.2	30.8	14.6	7.0	37.2
		38.5	28.1	41.3	63.5	44.8	
4		16	47	35	22	9	129
		12.4	36.4	27.1	17.1	7.0	26.0
		13.1	31.2	25.4	35.3	31.0	
COLUMN TOTAL		122	146	138	62	29	497
		24.5	29.4	27.8	12.5	5.8	100.0

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
35.39535 12 0.0004 2.626 1 OF 20 (5.02)

NUMBER OF MISSING OBSERVATIONS = 431

345 WINDOWS OVERLOOKED
BY NEW071 GROUP CLASSIFICATION

C R O S S T A B U L A T I O N O F											
NEW071											
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW	TOTAL			
COL PCT											
YES	1	332	153	113	27	32	457				
		28.9	33.5	24.7	5.9	7.0	49.2				
		43.4	55.8	48.7	34.6	45.1					
NO	2	141	121	119	51	39	471				
		29.9	25.7	25.3	10.8	8.3	50.8				
		51.6	44.2	51.3	63.4	54.9					
COLUMN		273	274	232	78	71	928				
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0				

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
12.05549 4 0.0169 34.944 NONE

NUMBER OF MISSING OBSERVATIONS = 0

346 CURTAINS FOR PRIVACY
BY NEW071 GROUP CLASSIFICATION

C R O S S T A B U L A T I O N O F									
NEW071									
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW	TOTAL	
COL PCT									
1	184	213	154	45	47	445			
28.5	33.0	24.2	7.0	7.3	69.5				
67.4	77.7	67.2	57.7	46.2					
2	89	61	74	33	24	283			
31.4	21.6	26.9	11.7	8.5	30.5				
32.6	22.3	32.8	42.3	33.8					
COLUMN	273	274	232	78	71	928			
TOTAL	29.4	29.5	25.0	8.4	7.7	100.0			

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
15.39411 4 0.0039 21.632 NONE

NUMBER OF MISSING OBSERVATIONS = 0

347 HOUSE YARD OVERLOOKED
BY NEW071 GROUP CLASSIFICATION

NEW071									
COUNT	1	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW	TOTAL	
COL PCT		1-001	2-001	3-001	4-001	5-001			
267	1	143	134	122	32	40	496		
		29.3	31.0	24.6	6.3	8.1	54.3		
		54.2	56.2	54.2	41.4	62.5			
NO	2	125	120	103	45	24	417		
		30.0	28.8	24.7	10.3	5.8	45.7		
		45.3	43.8	43.8	58.4	37.5			

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
7.17395 4 0.1270 29.231 NONE

NUMBER OF MISSING OBSERVATIONS = 0

348 NEIGHBOUR YARD OVERLOOKED
BY NEW071 GROUP CLASSIFICATION

C R O S S T A B U L A T I O N O F									
NEW071									
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW	TOTAL	
COL PCT									
YES	1	164	166	131	30	44	517		
		31.7	28.2	25.3	5.8	8.9	56.4		
		60.1	53.3	58.2	39.0	67.6			
NO	2	109	128	94	47	22	400		
		27.3	32.0	23.5	11.8	5.3	43.6		
		39.9	46.7	41.8	61.0	32.4			
COLUMN TOTAL		273	274	225	77	68	917		
		29.3	29.9	24.5	8.4	7.4	100.0		

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
15.90218 4 0.0032 29.662 NONE

NUMBER OF MISSING OBSERVATIONS = 11

349 FAMILY PRIVACY
BY NEW071 GROUP CLASSIFICATION

C R O S S T A B U L A T I O N O F									
NEW071									
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	ROW	TOTAL	
COL PCT									
1	232	240	198	48	61	819			
30.8	29.3	24.2	8.3	7.4	88.8				
92.3	87.6	86.1	89.5	88.4					
2	21	34	32	8	8	103			
20.4	33.0	31.1	7.3	7.8	11.2				
7.7	12.4	13.9	10.5	11.4					
COLUMN	273	274	230	76	69	922			
TOTAL	29.6	29.7	24.9	8.2	7.5	100.0			

CHI-SQUARE 9.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.<5
5.53915 4 0.2363 7.708 NONE

NUMBER OF MISSING OBSERVATIONS = 4

Q50 BALCONIES ARE USELESS
BY MEU071 GROUP CLASSIFICATION
CROSS TABULATION OF
PAGE 1 OF 1

MEU071									
COUNT		JEDDAH		RIYADH		PROJECT		SSTUD	
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001	6.001	7.001	8.001
1	172	170	140	140	44	41	41	41	41
2	32.7	29.0	23.9	7.5	7.5	7.0	7.0	7.0	7.0
3	70.3	62.0	68.0	74.6	74.6	75.9	75.9	75.9	75.9
4	31	104	46	15	15	13	13	13	13
5	29.0	32.3	23.7	5.4	5.4	4.7	4.7	4.7	4.7
6	29.7	35.0	32.0	25.4	25.4	24.1	24.1	24.1	24.1
7	273	274	206	59	59	54	54	54	54
8	31.5	31.6	23.8	6.8	6.8	6.2	6.2	6.2	6.2
9	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
10	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
11	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
12	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
13	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
14	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
15	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
16	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
17	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
18	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
19	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
20	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
21	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
22	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
23	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
24	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
25	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
26	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
27	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
28	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
29	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
30	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
31	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
32	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
33	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
34	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
35	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
36	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
37	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
38	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
39	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
40	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
41	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
42	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
43	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
44	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
45	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
46	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
47	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
48	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
49	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
50	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
51	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
52	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
53	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
54	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
55	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
56	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
57	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
58	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
59	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
60	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
61	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
62	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
63	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
64	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
65	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
66	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
67	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
68	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
69	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
70	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
71	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
72	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
73	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
74	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
75	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
76	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
77	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
78	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
79	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
80	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
81	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
82	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
83	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
84	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
85	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
86	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
87	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
88	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
89	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
90	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
91	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
92	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
93	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
94	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
95	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
96	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
97	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
98	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
99	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0
100	29.7	29.8	22.9	7.5	7.5	7.0	7.0	7.0	7.0

CHI-SQUARE 0.7
SIGNIFICANCE
7.23305 4 D.0979 17.397
NUMBER OF MISSING OBSERVATIONS = 62
CELLS WITH E.F.<5
NONE

Q51 OUTSIDE YARDS ARE USELESS
BY MEU071 GROUP CLASSIFICATION
CROSS TABULATION OF
PAGE 1 OF 1

MEU071									
COUNT		JEDDAH		RIYADH		PROJECT		SSTUD	
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001	6.001	7.001	8.001
YES	1	178	167	113	25	32	32	32	32
		34.6	32.4	21.9	4.9	6.2	6.2	6.2	6.2
		65.2	60.9	49.3	54.7	48.5	48.5	48.5	48.5
NO	2	95	107	116	47	34	34	34	34
		23.3	26.8	29.1	11.8	8.5	8.5	8.5	8.5
		36.8	39.1	50.7	65.3	51.5	51.5	51.5	51.5
COLUMNS		273	274	229	72	64	64	64	64
TOTAL		29.9	30.0	25.1	7.9	7.2	7.2	7.2	7.2
TOTAL		916	916	916	916	916	916	916	916

NEW071									
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSTUD	ROW	TOTAL	
COL PCT									

1	230	230	230	179	42	54	755		
AVAILABLE	30.5	30.5	30.5	23.7	8.2	7.2	81.6		
	84.2	84.2	83.9	77.2	79.5	76.1			

2	43	44	44	53	16	17	173		
NOT AVAIL	24.9	25.4	25.4	30.6	9.2	9.8	18.6		
	15.8	16.1	16.1	22.8	20.5	23.9			

COLUMN	273	274	274	232	78	71	928		
TOTAL	29.4	29.5	29.5	25.0	8.4	7.7	100.0		

CHI-SQUARE	D.F.	SIGNIFICANCE			MIN E.F.		CELLS WITH E.F.<5		

6.90307	4	0.1408			13.236		NONE		

NUMBER OF MISSING OBSERVATIONS = 0

NEW971									
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSTUD	ROW	TOTAL	
COL PCT									
AVAILABLE	1	109	115	120	29	32	405		
		26.9	28.4	29.6	7.2	7.9	43.6		
		39.9	42.0	51.7	37.2	45.1			
NOT AVAIL	2	164	159	112	49	39	523		
		31.4	30.4	21.4	9.4	7.5	56.4		
		60.1	58.0	48.3	62.8	54.9			
COLUMN TOTAL		273	274	232	78	71	928		
		29.4	29.5	25.0	8.4	7.7	100.0		
CHI-SQUARE	D.F.	SIGNIFICANCE		MIN E.F.		CELLS WITH E.F.<5			
9.33994	4	0.0521		30.926		NONE			

NUMBER OF MISSING OBSERVATIONS = 0

NEW271

COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSTUD	ROW	TOTAL	
COL PCT									
1	132	129	100	23	27	411	411		
AVAILABLE	32.1	31.4	24.3	5.6	4.6	44.3			
	48.4	47.1	43.1	29.5	38.0				
2	143	145	132	55	44	517	517		
NOT AVAIL	27.3	28.0	25.5	10.4	8.5	55.7			
	51.6	52.9	56.9	70.5	62.0				
COLUMN	273	274	232	78	71	928	928		
TOTAL	29.4	29.5	25.0	8.4	7.7	100.0			
CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.		CELLS WITH E.F.<5				
10.87760	4	0.0230	31.445		NONE				
NUMBER OF MISSING OBSERVATIONS = 0									

NUMBER OF MISSING OBSERVATIONS = 0

NEW971									
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSTUD	ROW	TOTAL	
COL PCT									
1	36	84	53	5	24	252	252		
TRADITIONAL D	34.1	33.3	21.0	2.0	9.5	27.3			
	32.1	30.7	22.8	6.4	33.8				
2	182	190	179	73	47	671	671		
CONTEMPR D	27.1	25.3	26.7	10.9	7.0	72.7			
	67.9	69.3	77.2	93.6	66.2				
COLUMN	245	274	232	78	71	923	923		
TOTAL	29.0	29.7	25.1	8.5	7.7	100.0			
CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.		CELLS WITH E.F.<5				
25.63691	4	0.0000	19.385		NONE				
NUMBER OF MISSING OBSERVATIONS = 5									

NUMBER OF MISSING OBSERVATIONS = 5

NEW71									
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSTUD	ROW	TOTAL	
COL PCT									
1	243	265	224	77	70	904	904		
AVAILABLE	29.6	29.3	24.8	8.5	7.7	97.4			
	93.2	96.7	96.6	98.7	95.6				
2	5	9	8	1	1	24	24		
NOT AVAIL	20.8	32.5	33.3	4.2	4.2	2.6			
	1.3	3.3	3.4	1.3	1.4				
COLUMN	273	274	232	78	71	928	928		
TOTAL	29.4	29.5	25.0	8.4	7.7	100.0			
CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.		CELLS WITH E.F.<5				
2.74967	4	0.6006	1.836		2 OF 10 (20.02)				
NUMBER OF MISSING OBSERVATIONS = 0									

NUMBER OF MISSING OBSERVATIONS = 0

NEW071									
COUNT	ROW PCT	MAKAM	JEDDAH	RIYADH	PROJECT	SSTUD	ROW	TOTAL	
COL PCT									
1	232	217	171	71	51	712	712		
	28.4	30.5	24.0	10.0	7.2	76.7			
	74.0	79.2	73.7	91.0	71.8				
2	71	57	61	7	20	216	216		
	32.9	26.4	28.2	3.2	9.5	23.3			
	26.0	20.3	26.3	9.0	28.2				
COLUMN	273	274	232	78	71	928	928		
TOTAL	29.4	29.5	25.0	8.4	7.7	100.0			
CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.		CELLS WITH E.F.<5				
15.14073	4	0.0106	16.326		NONE				
NUMBER OF MISSING OBSERVATIONS = 0									

NUMBER OF MISSING OBSERVATIONS = 0

461 POST OFFICE
BY NEW971 GROUP CLASSIFICATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW971									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	STUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
1	AVAILABLE	116	114	81	34	24	389		
		29.3	29.3	20.3	13.9	6.2	41.9		
		42.5	41.6	34.9	69.2	33.8			
2	NOT AVAIL	137	140	151	24	37	539		
		29.1	29.7	28.0	4.5	8.7	58.1		
		57.5	58.4	65.1	30.8	64.2			
COLUMN TOTAL		273	274	232	78	71	928		
		29.4	29.5	25.0	8.4	7.7	100.0		

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
30.54229 4 0.0000 29.762 NONE
NUMBER OF MISSING OBSERVATIONS = 0

462 ELEMENTARY SCHOOL
BY NEW971 GROUP CLASSIFICATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW971									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	STUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
1	AVAILABLE	239	231	204	71	58	802		
		29.7	28.3	25.4	8.9	7.2	86.4		
		87.2	84.3	87.9	91.0	81.7			
2	NOT AVAIL	35	43	28	7	13	126		
		27.8	34.1	22.2	5.6	10.3	13.6		
		12.8	15.7	12.1	9.0	18.3			
COLUMN TOTAL		273	274	232	78	71	928		
		29.4	29.5	25.0	8.4	7.7	100.0		

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
4.39223 4 0.3555 9.640 NONE
NUMBER OF MISSING OBSERVATIONS = 0

463 INTERMEDIATE SCHOOL
BY NEW971 GROUP CLASSIFICATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW971									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	STUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
1	AVAILABLE	180	183	168	57	48	636		
		28.3	28.3	26.4	9.0	7.5	68.5		
		65.9	66.8	72.4	73.1	67.6			
2	NOT AVAIL	93	91	46	21	23	292		
		31.8	31.2	21.9	7.2	7.9	31.5		
		34.1	33.2	27.6	26.9	32.4			
COLUMN TOTAL		273	274	232	78	71	928		
		29.4	29.5	25.0	8.4	7.7	100.0		

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
3.63723 4 0.4973 22.341 NONE
NUMBER OF MISSING OBSERVATIONS = 0

464 SECONDARY SCHOOL
BY NEW971 GROUP CLASSIFICATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW971									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	STUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
1	AVAILABLE	137	151	127	24	35	474		
		23.9	31.9	24.8	5.1	7.4	51.1		
		50.2	55.1	54.7	30.8	49.3			
2	NOT AVAIL	136	123	103	34	36	454		
		30.0	27.1	23.1	11.9	7.9	48.9		
		49.8	44.9	45.3	49.2	50.7			
COLUMN TOTAL		273	274	232	78	71	928		
		29.4	29.5	25.0	8.4	7.7	100.0		

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
16.08017 4 0.0029 34.735 NONE
NUMBER OF MISSING OBSERVATIONS = 0

465 OPEN AREAS
BY NEW971 GROUP CLASSIFICATION
CROSS TABULATION OF
PAGE 1 OF 1

NEW971									
COUNT	ROW PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	STUD	ROW		
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL		
1	AVAILABLE	109	145	135	63	26	478		
		22.3	30.3	28.2	13.2	5.4	51.5		
		39.9	52.9	58.2	80.8	36.6			
2	NOT AVAIL	164	129	97	15	45	450		
		36.4	28.7	21.6	3.3	10.0	48.5		
		60.1	47.1	41.8	19.2	43.4			
COLUMN TOTAL		273	274	232	78	71	928		
		29.4	29.5	25.0	8.4	7.7	100.0		

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
52.06457 4 0.0000 34.429 NONE
NUMBER OF MISSING OBSERVATIONS = 0

866 NEIGHBOURS RELATIONSHIP
BY MEU071 GROUP CLASSIFICATION

C R O S S T A B U L A T I O N O F

COUNT ROW PCT COL PCT	NAKKAM	JEDDAM	RIYADH	PROJECT	SSTUD	ROW TOTAL
1	101	50	47	12	28	238
2	42.4	21.0	19.7	5.0	11.8	25.6
3	37.0	18.2	20.3	15.6	39.4	
4	103	113	109	35	31	391
5	26.3	28.9	27.9	9.0	7.9	62.1
6	37.7	41.2	47.0	46.9	43.7	
7	51	76	61	20	11	219
8	23.3	36.7	27.9	9.1	5.0	23.6
9	13.7	27.7	26.3	25.6	15.5	
10	13	35	15	11	1	80
11	22.5	43.8	18.8	13.8	1.3	8.6
12	6.6	12.8	6.5	16.1	1.4	
COLUMN TOTAL	273	274	232	78	71	928
	29.4	29.5	25.0	8.4	7.7	100.0

CHI-SQUARE 0.0000 SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

56.08604 12 0.0000 6.121 NONE

NUMBER OF MISSING OBSERVATIONS = 0

867 CHANGE OF RELATION
BY MEU071 GROUP CLASSIFICATION

C R O S S T A B U L A T I O N O F

COUNT ROW PCT COL PCT	NAKKAM	JEDDAM	RIYADH	PROJECT	SSTUD	ROW TOTAL
1	197	172	162	38	47	594
2	32.1	23.9	23.8	6.4	7.9	65.2
3	72.2	61.8	61.2	48.7	46.2	
4	8	4	4	1	4	21
5	38.1	19.0	19.0	4.8	19.0	2.3
6	2.9	1.5	1.7	1.3	5.6	
7	63	98	86	39	20	311
8	21.9	31.5	27.7	12.5	6.4	33.5
9	26.9	35.8	37.1	50.0	28.2	
COLUMN TOTAL	273	274	232	78	71	928
	29.4	29.5	25.0	8.4	7.7	100.0

CHI-SQUARE 0.0011 SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

25.82271 3 0.0011 1.607 2 OF 15 (13.32)

NUMBER OF MISSING OBSERVATIONS = 0

868 01ST FOR SPECIAL GROUP
BY MEU071 GROUP CLASSIFICATION

C R O S S T A B U L A T I O N O F

COUNT ROW PCT COL PCT	NAKKAM	JEDDAM	RIYADH	PROJECT	SSTUD	ROW TOTAL
1	148	154	117	38	36	493
2	30.0	31.2	23.7	7.7	7.3	53.1
3	54.2	56.2	50.4	48.7	50.7	
4	125	120	115	40	35	435
5	28.7	27.6	26.4	9.2	8.0	66.9
6	45.8	43.8	49.6	51.3	49.3	
COLUMN TOTAL	273	274	232	78	71	928
	29.4	29.5	25.0	8.4	7.7	100.0

CHI-SQUARE 0.0000 SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

2.62457 4 0.0000 33.281 NONE

NUMBER OF MISSING OBSERVATIONS = 0

869 SATISFYING OF DISTRICT
BY MEU071 GROUP CLASSIFICATION

C R O S S T A B U L A T I O N O F

COUNT ROW PCT COL PCT	NAKKAM	JEDDAM	RIYADH	PROJECT	SSTUD	ROW TOTAL
1	202	213	176	48	47	706
2	25.6	30.2	24.9	9.6	6.7	76.1
3	74.0	77.7	75.9	87.2	66.2	
4	71	61	56	10	24	222
5	32.0	27.5	25.2	4.5	10.8	23.9
6	26.0	22.3	24.1	12.8	33.8	
COLUMN TOTAL	273	274	232	78	71	928
	29.4	29.5	25.0	8.4	7.7	100.0

CHI-SQUARE 0.0000 SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

10.16362 4 0.0378 16.985 NONE

NUMBER OF MISSING OBSERVATIONS = 0

870 REFERENCE OF MOVING R D
BY MEU071 GROUP CLASSIFICATION

C R O S S T A B U L A T I O N O F

COUNT ROW PCT COL PCT	NAKKAM	JEDDAM	RIYADH	PROJECT	SSTUD	ROW TOTAL
1	128	122	105	52	40	447
2	23.4	27.3	23.5	11.6	8.9	48.2
3	46.9	44.5	45.3	66.7	56.3	
4	11	13	13	1	1	39
5	23.2	33.5	33.3	2.6	2.6	4.2
6	4.0	4.7	5.6	1.3	1.4	
7	134	139	114	25	30	462
8	30.3	31.4	25.8	5.7	6.8	47.6
9	49.1	50.7	49.1	32.1	42.3	
COLUMN TOTAL	273	274	232	78	71	928
	29.4	29.5	25.0	8.4	7.7	100.0

CHI-SQUARE 0.0000 SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

17.16731 8 0.0284 2.984 2 OF 15 (13.32)

NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q72 CITY IS NOT AS BEFORE
BY MEU071 GROUP CLASSIFICATION
----- PAGE 1 OF 1 -----

MEU071												
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW					
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL					
272	1	243	241	222	75	68	869					
YES		23.0	30.0	25.5	8.4	7.8	93.6					
		89.0	95.3	95.7	96.2	95.8						
NO	2	30	13	10	3	3	59					
		50.8	22.0	16.9	5.1	5.1	6.4					
		11.8	4.7	4.3	3.8	4.2						
COLUMN		273	274	232	78	71	928					
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0					

CMI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
14.03324 4 0.0072 4.514 2 OF 10 (20.0%)
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q73 CITY WAS BETTER
BY MEU071 GROUP CLASSIFICATION
----- PAGE 1 OF 1 -----

MEU071												
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW					
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL					
Q73	1	70	52	52	13	13	200					
YES		35.0	26.0	26.0	6.5	6.5	21.6					
		25.6	19.0	22.4	16.7	18.3						
NO	2	203	222	180	43	58	728					
		27.9	30.5	24.7	8.9	8.0	78.6					
		74.4	81.0	77.6	83.3	81.7						
COLUMN		273	274	232	78	71	928					
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0					

CMI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
5.41791 4 0.2470 15.302 NONE
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q74 NEW SUBDIVISION X OLD CONCEPT
BY MEU071 GROUP CLASSIFICATION
----- PAGE 1 OF 1 -----

MEU071												
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW					
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL					
Q74	1	208	206	169	56	64	703					
YES		29.6	29.3	24.0	8.0	9.1	76.2					
		76.2	75.2	73.2	74.7	91.4						
NO	2	63	69	62	19	6	220					
		29.5	30.9	28.2	8.6	2.7	23.8					
		23.8	24.8	26.8	25.3	8.6						
COLUMN		273	274	231	75	70	923					
TOTAL		29.6	29.7	25.0	8.1	7.6	100.0					

CMI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
10.37073 4 0.0346 16.685 NONE
NUMBER OF MISSING OBSERVATIONS = 5

----- C R O S S T A B U L A T I O N O F -----
Q75 HIGHRISE BUILDING
BY MEU071 GROUP CLASSIFICATION
----- PAGE 1 OF 1 -----

MEU071												
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW					
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL					
Q75	1	225	240	213	72	64	816					
YES		27.6	29.4	26.1	8.8	8.1	87.9					
		82.4	87.6	91.8	92.3	93.0						
NO	2	43	34	19	6	3	112					
		42.9	30.4	17.0	5.4	4.5	12.1					
		17.6	12.4	8.2	7.7	7.0						
COLUMN		273	274	232	78	71	928					
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0					

CMI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
14.23795 4 0.0066 8.569 NONE
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q76 NEW BUILDING REF TRIBUTIONS
BY MEU071 GROUP CLASSIFICATION
----- PAGE 1 OF 1 -----

MEU071												
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW					
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL					
Q76	1	216	216	188	62	55	737					
YES		29.3	29.3	25.5	8.4	7.5	79.4					
		79.1	78.8	81.0	79.5	77.5						
NO	2	57	53	44	16	16	191					
		29.8	30.4	23.0	8.4	8.4	20.6					
		20.9	21.2	19.0	20.5	22.5						
COLUMN		273	274	232	78	71	928					
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0					

CMI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
0.60910 4 0.9420 14.613 NONE
NUMBER OF MISSING OBSERVATIONS = 0

----- C R O S S T A B U L A T I O N O F -----
Q77 NEW ENGLISH OLD BUILD
BY MEU071 GROUP CLASSIFICATION
----- PAGE 1 OF 1 -----

MEU071												
COUNT	ROW PCT	MAKKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW					
COL PCT		1.001	2.001	3.001	4.001	5.001	TOTAL					
Q77	1	202	244	180	63	53	744					
YES		27.2	33.1	24.2	8.5	7.1	80.2					
		74.0	89.8	77.6	80.8	74.6						
NO	2	71	28	32	15	18	184					
		38.6	15.2	28.3	8.2	9.8	19.8					
		24.0	10.2	22.4	19.2	25.4						
COLUMN		273	274	232	78	71	928					
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0					

CMI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
24.82927 4 0.0001 14.076 NONE
NUMBER OF MISSING OBSERVATIONS = 0

073

NEW071

COUNT	MAKKAH	JEDDAH	RIYADH	PROJECT	STATUS	ROW						
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001						
1	43	39	61	29	17	189						
	22.8	20.6	32.3	15.3	9.0	20.8						
	15.8	15.2	26.5	37.2	23.9							
2	71	38	45	18	9	181						
	39.2	21.0	24.9	9.9	5.0	20.0						
	26.1	14.3	19.6	23.1	12.7							
3	48	36	42	7	19	152						
	31.6	23.7	27.6	4.6	12.5	16.8						
	17.6	14.1	18.3	9.0	26.8							
4	49	37	18	10	5	119						
	41.2	31.1	15.1	8.4	4.2	13.1						
	18.0	14.5	7.8	12.8	7.0							
5	61	106	64	14	21	266						
	22.9	39.8	24.1	5.3	7.9	29.3						
	22.4	41.4	27.8	17.9	29.6							
COLUMN	272	256	230	78	71	907						
TOTAL	30.0	28.2	25.4	8.6	7.8	100.0						

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

73.46720 16 0.0000 9.355 NONE

NUMBER OF MISSING OBSERVATIONS = 21

NEW071										
COUNT	MAKKAH	JEDDAH	RIYADH	PROJECT	STATUS	ROW				
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	TOTAL				
GAG IN	1	26	17	43	37	131				
		19.3	13.0	32.8	28.2	14.4				
		9.6	6.6	18.7	47.4	11.3				
GAG ON	2	7	4	10	10	32				
		21.9	12.5	31.3	31.3	3.5				
		2.6	1.6	4.3	12.8	1.4				
FRONT Y	3	25	36	11	3	82				
		30.5	43.9	13.4	3.7	9.0				
		9.2	16.1	4.8	3.8	9.9				
BESIDE M	4	191	181	157	24	405				
		31.6	29.9	26.0	4.0	68.7				
		70.2	70.7	68.3	30.8	73.2				
PAR FM	5	21	15	7	4	49				
		42.9	30.6	14.3	8.2	5.4				
		7.7	5.9	3.0	5.1	2.8				
OTH	6	2	3	2		8				
		25.0	37.5	25.0		.9				
		.7	1.2	.9		1.4				
COLUMN TOTAL		272	256	230	78	987				
		30.0	28.2	25.4	8.6	100.0				

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

139.56410 20 0.0000 0.626 9 OF 30 (30.0%)

NUMBER OF MISSING OBSERVATIONS = 21

MEUR71										
COUNT	MAKKAH	JEDDAH	RIYADH	PROJECT	STATUS	ROW				
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001				
1	26	32	11	1	2	72				
	36.1	44.6	15.3	1.4	2.8	7.8				
	9.5	11.7	4.7	1.3	2.8					
2	247	242	221	77	69	856				
	23.9	23.3	25.8	9.0	8.1	92.2				
	90.5	88.3	95.3	18.7	97.2					
COLUMN	273	274	232	78	71	928				
TOTAL	29.4	29.5	25.0	8.4	7.7	100.0				
CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.		CELLS WITH E.F. < 5					
17.01901	4	0.0019	3.509		NONE					

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

17.01301 4 0.0019 5.509 NONE

NUMBER OF MISSING OBSERVATIONS = 0

MEUR71														
COUNT	MAKKAH	JEDDAH	RIYADH	PROJECT	STATUS	ROW								
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001								
1	46	55	39	15	15	170								
2	27.1	32.4	22.9	8.8	8.8	18.5								
3	17.0	20.1	17.1	10.7	21.7	13								
4	10	4	1			1.6								
5	64.7	26.7	6.7			163								
6	3.7	1.5	.4			17.8								
7	48	45	39	17	12	172								
8	29.4	27.4	23.9	11.7	7.4	18.7								
9	17.7	16.4	17.1	25.0	17.4	3								
10	45	45	39	14	9	.5								
11	37.3	26.2	22.7	8.1	5.2	239								
12	24.0	16.6	17.1	18.4	13.0	26.0								
13	2	3				154								
14	40.0	40.0				16.8								
15	.7	1.1				918								
16	57	69	73	23	17	100.0								
17	23.8	28.9	30.5	9.6	7.1									
18	21.0	25.2	32.0	30.3	24.4									
19	43	53	37	5	16									
20	27.9	34.4	24.0	3.2	10.4									
21	15.9	19.3	16.2	6.6	23.2									
22	271	274	228	76	69									
23	29.5	29.8	24.8	8.3	7.5									

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

39.47333 24 0.0243 0.376 10 OF 35 (28.6%)

NUMBER OF MISSING OBSERVATIONS = 10

333 TRANS TO MOSQUE
BY NEW071 GROUP CLASSIFICATION
CROSS TABULATION OF
PAGE 1 OF 1

COUNT ROW PCT COL PCT	NEW071					TOTAL
	MAKAM	JEDDAH	RIYADH	PROJECT	SSTUD	
1	222	207	194	64	62	749
WALKING	29.6	27.6	25.9	8.3	8.3	81.6
	81.6	76.1	84.3	85.3	89.9	
2		100.0				1
BUS						.1
3	50	44	36	11	7	148
CAR	29.3	32.1	21.4	6.5	4.2	18.3
	18.4	25.3	15.7	16.7	10.1	
COLUMN TOTAL	272	272	230	75	69	918
	29.6	29.6	25.1	8.2	7.5	100.0

CHI-SQUARE 9.7
SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
12.29475 8 0.1385 0.075 5 OF 15 (33.3%)
NUMBER OF MISSING OBSERVATIONS = 10

334 DISTANCE TO MOSQUE
BY NEW071 GROUP CLASSIFICATION
CROSS TABULATION OF
PAGE 1 OF 1

COUNT ROW PCT COL PCT	NEW071					TOTAL
	MAKAM	JEDDAH	RIYADH	PROJECT	SSTUD	
1	33	37	29	12	17	128
0-50M	25.8	25.9	22.7	9.4	13.3	23.6
	25.4	24.5	17.0	26.1	37.8	
2	24	19	28	8	10	89
50-100M	27.0	21.3	31.5	9.0	11.2	16.4
	18.5	12.6	16.4	17.4	22.2	
3	31	28	51	7	10	127
100-200M	24.4	22.0	40.2	5.5	7.9	23.4
	23.8	18.5	29.8	15.2	22.2	
4	23	41	42	13	7	126
200-500M	18.3	32.5	33.3	10.3	5.6	23.2
	17.7	27.2	24.6	28.3	15.6	
5	16	13	13	3	1	44
500-1000M	31.8	29.5	29.5	6.8	2.3	8.1
	10.8	5.6	7.6	4.5	2.2	
6	5	13	7	3		28
1-5K	17.9	46.4	25.0	10.7		5.2
	3.8	8.6	4.1	6.5		
7			1			1
5-10K			100.0			.2
COLUMN TOTAL	130	151	179	44	45	343
	23.9	27.8	31.5	8.5	8.3	100.0

CHI-SQUARE 9.7
SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
32.67536 24 0.1111 0.083 9 OF 35 (25.7%)
NUMBER OF MISSING OBSERVATIONS = 385

332 IMPROVEMENT OF BUS SYSTEM
BY NEW071 GROUP CLASSIFICATION
CROSS TABULATION OF
PAGE 1 OF 1

COUNT ROW PCT COL PCT	NEW071					TOTAL
	MAKAM	JEDDAH	RIYADH	PROJECT	SSTUD	
1	259	241	217	65	65	847
YES	30.6	28.5	25.6	7.7	7.7	91.3
	94.9	85.0	93.5	83.3	91.5	
2	14	35	15	13	6	81
NO	12.3	40.7	18.5	16.8	7.4	8.7
	5.1	12.0	6.5	16.7	8.5	
COLUMN TOTAL	273	276	232	78	71	928
	29.4	29.5	25.0	8.4	7.7	100.0

CHI-SQUARE 9.7
SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
15.39005 4 0.0032 6.197 NONE
NUMBER OF MISSING OBSERVATIONS = 0

COUNT ROW PCT COL PCT	NEWQ71					ROW TOTAL
	MARKAM	JEDDAH	RIYADH	PROJECT	SSUD	
1	1.001	2.001	3.001	4.001	5.001	
WALKING	81	71	43	22	13	230
	35.2	30.9	18.7	9.6	5.7	25.5
	30.3	26.1	18.9	29.7	19.4	
2	1	1	1	1	1	4
SUS	25.0	25.0	25.0		25.0	.4
	.4	.4	.4		1.5	
3	181	200	183	52	53	669
CAR	27.1	29.9	27.4	7.8	7.9	76.1
	48.8	73.5	80.6	70.3	70.1	
COLUMN TOTAL	243	272	227	74	67	903
	29.1	30.1	25.1	8.2	7.4	100.0

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
12.99452 8 0.1120 0.297 5 OF 15 (33.3%)
NUMBER OF MISSING OBSERVATIONS = 25

COUNT ROW PCT COL PCT	NEWQ71					ROW TOTAL
	MARKAM	JEDDAH	RIYADH	PROJECT	SSUD	
1	1.001	2.001	3.001	4.001	5.001	
0-50M	7	18	2	4	2	33
	21.2	54.5	6.1	12.1	6.1	6.2
	5.4	12.2	1.2	8.9	4.9	
50-100M	9	7	8	4		28
	32.1	25.0	28.6	14.3		5.2
	6.9	4.7	4.7	8.9		
100-200M	12	5	19	3	6	47
	25.5	10.4	40.4	10.4	12.8	8.8
	9.2	3.4	11.0	11.1	14.4	
200-500M	30	24	25	8	9	96
	31.5	25.0	26.0	8.3	9.4	17.9
	23.1	16.2	14.5	17.8	22.0	
500-1000M	29	22	33	5	7	96
	30.2	22.9	34.4	5.2	7.3	17.9
	22.5	16.9	19.2	11.1	17.1	
1-5K	35	40	69	12	16	192
	12.2	31.3	35.9	6.3	8.3	35.8
	28.9	40.5	40.1	26.7	39.0	
5-10K	7	8	10	3		28
	25.0	28.6	35.7	10.7		5.2
	5.4	5.4	5.8	6.7		
10-30K	1	4	5	4	1	15
	6.7	26.7	35.3	26.7	6.7	2.8
	.5	2.7	2.9	8.9	2.4	
>30K			1			.2
			100.0			
			.6			
COLUMN TOTAL	130	148	172	45	41	536
	24.3	27.6	32.1	8.4	7.6	100.0

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
53.92840 32 0.0090 0.076 18 OF 45 (40.0%),
NUMBER OF MISSING OBSERVATIONS = 392

COUNT ROW PCT COL PCT	NEWQ71					ROW TOTAL
	MARKAM	JEDDAH	RIYADH	PROJECT	SSUD	
1	1.001	2.001	3.001	4.001	5.001	
WALKING	40	42	44	16	19	183
	32.5	23.0	25.1	8.7	10.4	22.4
	23.3	18.3	23.0	25.4	28.4	
2		7	5	2	1	15
SUS	46.7	33.3	13.3	6.7	1.8	1.8
	3.0	3.0	3.2	1.5		
3	197	181	149	45	47	619
CAR	31.5	29.2	24.1	7.3	7.6	75.8
	76.7	74.7	74.5	71.4	70.1	
COLUMN TOTAL	257	230	200	43	67	817
	31.5	28.2	24.5	7.7	8.2	100.0

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
11.65432 8 0.1672 1.157 5 OF 15 (33.3%)
NUMBER OF MISSING OBSERVATIONS = 111

COUNT ROW PCT COL PCT	NEWQ71					ROW TOTAL
	MARKAM	JEDDAH	RIYADH	PROJECT	SSUD	
1	1.001	2.001	3.001	4.001	5.001	
0-50M	4	10	2	4	2	22
	18.2	45.5	9.1	18.2	9.1	4.7
	3.1	8.4	1.4	9.8	5.0	
50-100M	7	6	4	4	1	22
	31.8	27.3	18.2	18.2	4.5	6.7
	5.5	5.0	2.8	9.8	2.5	
100-200M	7	3	9		3	22
	31.8	13.6	40.9		13.6	4.7
	5.5	2.5	6.2		7.5	
200-500M	20	9	28	7	9	73
	27.4	12.3	38.4	9.6	12.3	15.5
	15.7	7.6	19.3	17.1	22.5	
500-1000M	26	15	30	1	5	77
	33.8	19.5	39.0	1.3	6.5	16.5
	20.5	12.6	20.7	2.4	12.5	
1-5K	42	45	53	18	17	175
	24.0	25.7	30.3	10.3	9.7	37.1
	33.1	37.8	36.6	43.9	42.5	
5-10K	13	22	9	2	2	48
	27.1	45.8	18.8	4.2	4.2	10.2
	10.2	13.5	6.2	4.9	5.0	
10-30K	7	8	9	4	1	29
	24.1	27.6	31.0	13.8	3.4	6.1
	5.5	6.7	6.2	9.8	2.5	
>30K	1	1	1	1		.4
	25.0	25.0	25.0	25.0		.8
	.8	.8	.7	2.4		
COLUMN TOTAL	127	119	145	41	40	472
	26.9	25.2	30.7	8.7	8.5	100.0

CHI-SQUARE 0.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F.< 5
52.81320 32 0.0117 0.339 15 OF 45 (33.3%)
NUMBER OF MISSING OBSERVATIONS = 456

COUNT ROW PCT COL PCT	NEWB71					ROW TOTAL
	MAKAM	JEDDAM	RIYADH	PROJECT	STUD	
1	19	12	8	5	1	45
2	42.2	26.7	17.3	11.1	2.2	5.0
3	7.2	4.5	3.6	4.6	1.5	19
4	2	13	3	1	1	2.1
5	10.5	48.4	15.8	5.3	1.5	833
6	8	4.9	1.3	1.5	1.5	92.9
7	24.3	24.1	21.6	7.1	4.6	897
8	29.2	28.9	23.7	8.5	7.7	100.0
9	92.0	90.6	95.1	93.4	97.0	264
10	26.6	26.6	22.5	7.6	6.6	29.7
11	29.6	29.7	25.1	8.5	7.4	100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
20.30131 8 0.0093 1.398 5 OF 15 (33.32)
NUMBER OF MISSING OBSERVATIONS = 31

COUNT ROW PCT COL PCT	NEWB71					ROW TOTAL
	MAKAM	JEDDAM	RIYADH	PROJECT	STUD	
1	1	5	3	1	1	10
2	10.0	50.0	30.0	10.0	10.0	1.8
3	7	3.5	1.8	2.4	2.4	1.7
4	2	1	1	1	1	4
5	50.0	25.0	25.0	1.0	1.0	7
6	1.5	7	6	1	1	1.5
7	25.0	37.5	23.0	12.5	2.4	8
8	1.5	1.8	3.8	2.4	2.4	1.5
9	8	1	4	1	1	15
10	53.3	4.7	26.7	6.7	6.7	2.8
11	5.9	7	2.3	1.9	2.4	2.4
12	13	1	6	2	2	24
13	54.2	4.2	25.0	8.3	8.3	4.4
14	9.6	7	3.5	3.8	4.8	203
15	37	43	41	18	24	37.2
16	28.1	21.2	30.0	8.9	11.8	102
17	42.2	29.9	35.7	34.0	37.1	18.7
18	28	27	34	7	6	27.7
19	27.5	26.5	33.3	6.9	5.9	151
20	20.7	18.8	19.9	13.2	14.3	27.7
21	16	58	48	23	6	28
22	10.6	38.4	31.8	15.2	4.8	5.1
23	11.9	40.3	28.1	43.6	14.3	28
24	8	8	11	1	1	5.1
25	28.6	28.6	39.3	3.8	2.4	135
26	5.6	5.6	6.4	1	1	24.3
27	135	144	171	53	42	24.3
28	24.3	26.4	31.4	9.7	7.7	345
29						100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
72.32965 32 0.0001 9.306 24 OF 45 (53.32)
NUMBER OF MISSING OBSERVATIONS = 383

COUNT ROW PCT COL PCT	NEWB71					ROW TOTAL
	MAKAM	JEDDAM	RIYADH	PROJECT	STUD	
1	16	20	16	8	4	64
2	25.0	31.3	25.0	12.5	6.3	7.4
3	6.2	7.7	7.6	12.3	6.1	6
4	1	3	2	1	1	7
5	16.7	50.0	33.3	1.9	1.9	791
6	4	1.2	0.9	0.9	0.9	91.9
7	242	237	193	57	42	791
8	30.6	30.0	26.4	7.2	7.8	91.9
9	93.4	91.2	91.5	87.7	93.9	861
10	259	260	211	45	66	100.0
11	30.1	30.2	24.5	7.5	7.7	100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
5.30756 8 0.7243 0.453 7 OF 15 (46.72)
NUMBER OF MISSING OBSERVATIONS = 67

COUNT ROW PCT COL PCT	NEWB71					ROW TOTAL
	MAKAM	JEDDAM	RIYADH	PROJECT	STUD	
1	2	2	3	4	4	13
2	15.4	15.4	38.5	30.8	30.8	3.0
3	2.0	1.5	3.7	11.1	11.1	10
4	40.0	30.0	20.0	1.0	1.0	2.3
5	4.1	2.3	1.5	3.7	3.7	11
6	4	1	4	2	2	2.6
7	36.4	9.1	36.4	18.2	18.2	15
8	4.1	0.8	2.9	3.6	3.6	3.5
9	26.7	13.3	46.7	6.7	6.7	38
10	4.1	1.5	5.1	2.8	3.7	8.9
11	14	4	17	1	1	129
12	36.8	10.5	44.7	2.6	5.3	30.1
13	14.3	3.0	12.5	2.8	7.4	100
14	29	31	41	15	13	23.3
15	22.5	24.0	31.8	11.6	10.1	87
16	29.6	23.5	30.1	41.7	48.1	20.3
17	15	42	31	6	6	26
18	15.0	42.0	31.0	6.0	6.0	6.1
19	15.3	31.8	22.8	16.7	22.2	429
20	12	42	23	6	4	100.0
21	13.8	48.3	24.4	4.9	4.6	27
22	12.2	31.8	16.9	16.7	14.8	36
23	14	5	6	1	1	26
24	53.8	19.2	23.1	3.8	2.8	6.1
25	14.3	3.8	4.4	2.8	2.8	98
26	22.3	30.8	31.7	8.4	6.3	132
27						100.0

CHI-SQUARE 9.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
74.14745 32 0.0000 0.429 24 OF 45 (53.32)
NUMBER OF MISSING OBSERVATIONS = 499

COUNT		MEMB71										ROW TOTAL			
ROW	PCT	MAKASS	JEDDAH	RIYADH	PROJECT	SSUD	ROW	PCT	MAKASS	JEDDAH	RIYADH	PROJECT	SSUD	ROW	PCT
COL	PCT	1.001	2.001	3.001	4.001	5.001	COL	PCT	1.001	2.001	3.001	4.001	5.001	COL	PCT
1		32	23	13	11	4	108		48.1	25.9	12.0	10.2	3.7	11.7	
	<100M	19.2	10.3	5.6	4.5	5.8									
2		28	24	25	4	7	92		30.4	30.4	27.2	4.3	7.6	10.0	
	100-200M	10.3	10.3	10.8	3.3	10.1									
3		25	23	28	6	3	85		29.4	27.1	32.9	7.1	3.5	9.2	
	200-300M	9.2	8.4	12.1	7.9	4.3									
4		18	25	15	3	7	68		24.5	34.8	22.5	4.4	10.3	7.4	
	300-400M	6.4	9.2	6.5	3.9	10.1									
5		34	49	36	8	11	138		24.6	35.5	26.1	5.8	8.0	15.0	
	400-500M	12.5	17.9	15.5	10.5	15.9									
6		25	18	15	9	4	71		35.2	25.4	21.3	12.7	5.6	7.7	
	500-600M	9.2	6.6	6.5	17.8	5.8									
7		4	8	5	1	3	21		19.0	35.1	23.8	4.8	14.3	2.3	
	600-700M	1.5	2.9	2.2	1.3	6.3									
8		6	6	9		3	24		25.0	25.0	37.5		12.5	2.6	
	700-800M	2.2	2.2	3.9		4.3									
9		79	88	86	34	27	314		25.2	28.0	27.4	10.8	8.6	34.1	
	>500M	29.2	32.2	31.1	44.7	39.1									
COLUMN TOTAL		271	275	232	76	69	921		29.4	29.6	25.2	8.3	7.5	108.0	

[illegible]

COUNT HOW PCT COL PCT	NEW71					SIGNIFICANCE	D.F.	CHI-SQUARE	4	0.0000	MIN E.F.	CELLS WITH E.	NONE
	IRAKKAN	JEDDAH	RIYADH	PROJECT	STUD								
093		1.001	2.001	3.001	4.001	5.001							
1	339	229	214	66	71								
SAUDI	30.9	27.3	25.5	7.9	8.5								
	94.9	83.6	92.2	84.6	100.0								
2	14	45	18	12									
HOW SAUDI	15.7	50.6	20.2	13.5									
	5.1	16.4	7.8	15.4									
COLUMN TOTAL	273	274	232	78	71								
	29.4	29.5	25.0	9.4	7.7								

NEW071							
COUNT	INNAKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW	TOTAL
COL PCT	1.001	2.001	3.001	4.001	5.001		
376							
1	272	248	232	71	71	914	
	27.2	24.8	23.2	7.1	7.1	91.4	
ARAB	97.6	97.8	100.0	91.0	100.0		
2	1	6		7		14	
	7.1	42.9		50.0		1.5	
NON ARAB	.4	2.2		9.0			
COLUMN	273	274	232	78	71	928	
TOTAL	29.4	29.5	25.0	9.4	7.7	100.0	

		NEWB71						ROW
	COUNT	MAKKAH	JEDDAH	RIYADH	PROJECT	STUD	TOTAL	
	ROW PCT	COL PCT						
677			1.00	2.00	3.00	4.00	5.00	
SINGLE	1	52	50	47	13	9	171	
		30.6	29.2	27.5	7.6	5.3	18.4	
		19.0	18.2	20.3	16.7	12.7		
MARRIED	2	221	224	105	65	62	757	
		29.2	29.6	24.6	8.6	8.2	81.6	
		81.0	81.8	79.7	83.3	87.3		
COLUMN		273	274	232	78	71	928	
TOTAL		29.4	29.5	25.0	8.4	7.7	100.0	

MEUS71									
COUNT	MAKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.00	2.00	3.00	4.00	5.00			
1	46	70	72	21	12	221			
	20.8	31.7	32.6	9.5	5.4	30.6			
	20.5	31.3	40.7	35.0	20.7				
2	73	69	49	15	19	228			
	32.4	30.7	21.8	6.7	8.4	31.1			
	32.6	33.8	27.7	25.0	32.8				
3	40	34	23	14	10	123			
	32.5	29.3	18.7	11.4	8.1	17.0			
	17.9	17.4	13.0	23.3	17.2				
4	32	15	17	6	4	74			
	43.2	20.3	23.0	8.1	5.4	10.2			
	14.5	7.4	9.6	10.0	6.9				
5	18	9	5	3	3	38			
	47.4	23.7	13.2	7.9	7.9	5.3			
	3.0	4.4	2.8	5.0	5.2				
6	10	6	5	1	4	24			
	41.7	16.7	20.8	4.2	14.7	3.3			
	4.5	2.0	2.8	1.7	6.9				
7	3	3	3		1	8			
	37.5	12.5	37.5		12.5	1.1			
	1.3	.5	1.7		1.7				
8			1		3	4			
			25.0		75.0	.6			
			.6		5.2				
9	2		2		2	4			
	33.3		33.3		33.3	.8			
	.9		1.1		3.4				
COLUMN	224	204	177	40	38	723			
TOTAL	31.0	28.2	26.5	8.3	8.8	100.0			

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
72.61770 32 0.0001 0.321 19 OF 45 (42.223)
NUMBER OF MISSING OBSERVATIONS = 203

MEUS71									
COUNT	MAKAN	JEDDAH	RIYADH	PROJECT	STUD	ROW			
ROW PCT	COL PCT	1.00	2.00	3.00	4.00	5.00			
1	41	57	48	20	14	180			
	22.8	31.7	26.7	11.1	7.8	24.9			
	13.4	27.9	27.1	33.3	24.1				
2	63	62	61	23	17	226			
	27.9	27.4	27.0	10.2	7.5	31.3			
	28.3	30.4	34.5	38.3	29.3				
3	34	41	38	10	9	152			
	35.5	27.0	25.0	6.6	5.9	21.1			
	24.2	20.1	21.5	16.7	15.5				
4	34	20	15	7	6	82			
	41.5	24.4	18.3	8.5	7.3	11.4			
	15.2	9.8	8.5	11.7	10.3				
5	18	16	6		4	44			
	40.9	34.4	13.4		9.1	6.1			
	8.1	7.8	3.4		6.9				
6	3	3	4		1	13			
	38.5	23.1	30.8		7.7	1.8			
	2.2	1.5	2.3		1.7				
7	3	4	2		3	14			
	35.7	28.6	16.3		21.4	1.9			
	2.2	2.0	1.1		5.2				
8	1	1	2			4			
	25.0	25.0	50.0			.6			
	.4	.5	1.1						
9	2		1		4	7			
	28.4		16.3		37.1	1.0			
	.9		.6		6.9				
COLUMN	223	204	177	40	38	722			
TOTAL	30.9	28.3	26.5	8.3	8.8	100.0			

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
56.34618 32 0.0044 0.321 22 OF 45 (48.923)
NUMBER OF MISSING OBSERVATIONS = 206

NEW071									
COUNT	JEDDAM	MITAHM	PROJECT	SSUD	ROW				
ROW PCT	MAKAM	2.00	3.00	4.00	TOTAL				
COL PCT	1.00	2.00	3.00	4.00	5.00				
1	100.0				1				
2	11.4	29	36.7	12.7	79				
	4.0	16.2	16.4	16.1	10.9				
3	38	32	36	11	131				
	29.0	24.4	27.5	8.4	18.0				
	17.0	15.7	20.3	17.7	23.7				
4	32	42	44	12	141				
	22.7	29.8	31.2	8.5	19.4				
	14.3	20.4	24.9	19.4	18.4				
5	41	38	21	14	123				
	33.3	30.9	17.1	11.4	16.9				
	18.3	13.6	11.9	22.6	15.3				
6	31	26	13	8	83				
	37.3	31.3	13.7	9.6	11.4				
	13.3	12.7	7.3	12.9	8.3				
7	28	16	11	2	58				
	48.3	27.6	19.0	3.4	8.0				
	12.3	7.8	6.2	3.2	1.7				
8	11	7	4	2	27				
	40.7	25.9	14.8	7.4	3.7				
	4.9	3.4	2.3	3.2	5.1				
9	33	14	19	3	83				
	39.5	16.9	22.9	3.6	11.4				
	14.7	6.9	10.7	4.8	23.7				
COLUMN TOTAL	224	204	177	62	726				
	30.7	28.1	24.4	8.3	100.0				
CHI-SQUARE	9.7	SIGNIFICANCE	NIM E.F.	CELLS WITH E.F. < 5					

NEW071									
COUNT	JEDDAM	MITAHM	PROJECT	SSUD	ROW				
ROW PCT	MAKAM	2.00	3.00	4.00	TOTAL				
COL PCT	1.00	2.00	3.00	4.00	5.00				
1	10	12	2	1	25				
	40.0	48.0	8.0	4.0	2.7				
	3.7	4.4	.9	1.3					
2	93	116	125	31	391				
	23.8	29.7	32.0	7.9	42.1				
	34.1	42.3	33.9	39.7	36.6				
3	109	103	83	30	349				
	29.3	28.3	22.3	8.1	39.8				
	39.9	38.3	33.5	38.5	59.2				
4	45	24	17	10	98				
	45.9	24.3	17.3	10.2	10.6				
	16.3	8.8	7.3	12.8	2.8				
5	11	13	5	6	37				
	29.7	40.3	13.3	16.2	4.0				
	6.0	5.3	2.2	7.7					
6	5	2		1	8				
	42.3	23.0		12.3	.9				
	1.8	.7		1.4					
COLUMN TOTAL	273	274	232	78	928				
	29.4	29.3	25.0	8.4	100.0				
CHI-SQUARE	9.7	SIGNIFICANCE	NIM E.F.	CELLS WITH E.F. < 5					

NEW071									
COUNT	JEDDAM	MITAHM	PROJECT	SSUD	ROW				
ROW PCT	MAKAM	2.00	3.00	4.00	TOTAL				
COL PCT	1.00	2.00	3.00	4.00	5.00				
1	20.0	40.0	20.0		10				
	.7	2.2	.9		1.1				
2	5	16	3		25				
	20.0	64.0	12.0		2.7				
	1.8	5.8	1.3						
3	12	11	7		30				
	40.0	36.7	23.3		3.2				
	4.4	4.0	3.0						
4	31	37	15		89				
	34.8	41.6	16.9		9.6				
	11.4	13.3	6.3						
5	92	85	46		249				
	36.9	34.1	26.5		26.8				
	33.7	31.0	28.4						
6	103	91	121		379				
	27.2	24.0	31.9		40.8				
	37.7	33.2	52.2						
7	19	20	14		123				
	15.2	16.0	12.8		13.3				
	7.0	7.3	8.9						
8	9	8	2		21				
	42.9	33.1	9.3		2.3				
	3.3	2.9	.9						
COLUMN TOTAL	273	274	232	78	928				
	29.4	29.3	25.0	8.4	100.0				
CHI-SQUARE	9.7	SIGNIFICANCE	NIM E.F.	CELLS WITH E.F. < 5					

COUNT ROW PCT COL PCT	NEWB71										ROW TOTAL
	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	5.001	1.001	2.001	3.001	4.001	
8104											
1	34	46	25	8							113
2	30.1	40.7	22.1	7.1							12.4
3	12.6	17.4	10.9	10.3							
4	30	25	24	9	3						93
5	32.3	26.9	25.8	9.7	5.4						10.2
6	11.2	9.4	10.4	11.5	7.0						
7	22	22	35	8	5						92
8	23.9	23.9	38.0	8.7	5.4						10.1
9	8.2	8.3	15.2	10.3	7.0						
10	30	24	30	14	13						111
11	27.0	21.6	27.0	12.6	11.7						12.2
12	11.2	9.1	13.0	17.9	18.3						
13	38	24	32	6	20						120
14	31.7	20.0	24.7	5.0	16.7						13.1
15	14.1	9.1	13.9	7.7	28.2						
16	35	34	17	7	11						104
17	33.7	32.7	16.3	6.7	10.6						11.4
18	13.0	12.8	7.4	9.0	13.5						
19	32	34	22	4	4						98
20	32.7	36.7	22.4	4.1	4.1						10.7
21	11.9	13.6	9.6	5.1	5.6						
22	20	22	22	7	5						76
23	24.3	28.9	28.9	9.2	6.4						8.3
24	7.4	3.3	9.6	9.0	7.0						
25	28	32	23	15	8						106
26	24.4	30.2	21.7	14.2	7.5						11.6
27	10.4	12.1	10.0	19.2	11.3						
COLUMN TOTAL	269	265	230	78	71						913
	29.5	29.0	25.2	8.5	7.8						100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

67.07932 32 0.0003 5.910 NONE

NUMBER OF MISSING OBSERVATIONS = 15

COUNT ROW PCT COL PCT	NEWB71										ROW TOTAL
	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	5.001	1.001	2.001	3.001	4.001	
8105											
1	103	104	75	14	9						305
2	33.8	34.1	24.6	4.6	3.0						33.0
3	38.1	38.2	32.3	17.9	12.7						
4	162	161	153	63	62						601
5	27.0	24.8	25.5	10.5	10.3						65.1
6	60.0	59.2	65.9	80.8	87.3						
7	5	7	4	1							17
8	29.4	41.2	23.5	5.9							1.8
9	1.9	2.6	4.7	1.3							
COLUMN TOTAL	270	272	232	78	71						923
	29.3	29.5	25.1	8.5	7.7						100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

31.81332 8 0.0001 1.308 4 OF 15 (26.72)

NUMBER OF MISSING OBSERVATIONS = 3

COUNT ROW PCT COL PCT	NEWB71										ROW TOTAL
	MAKAM	JEDDAH	RIYADH	PROJECT	STUD	5.001	1.001	2.001	3.001	4.001	
8103											
1	11	8	4	1	1						25
2	44.0	32.0	16.0	4.0	4.0						2.7
3	4.0	2.9	1.7	1.3	1.4						
4	3	18	6								25
5	12.0	72.0	16.0								2.7
6	1.1	6.4	1.7								
7	22	16	10	24							72
8	30.6	22.2	13.9	33.3							7.8
9	8.1	5.8	4.3	33.8							
10	3	9	1	2							15
11	20.0	60.0	6.7	13.3							1.6
12	1.1	3.3	4	2.6							
13	202	178	182	73	36						671
14	30.1	24.5	27.1	10.9	5.4						72.3
15	74.0	65.0	78.4	93.6	50.7						
16	7	24	14	4							49
17	14.3	49.0	28.6	8.2	5.6						5.3
18	2.6	8.8	6.0								
19	25	21	17	2	6						71
20	35.2	29.6	23.9	2.8	8.5						7.7
21	9.2	7.7	7.3	2.6	8.5						
COLUMN TOTAL	273	276	232	78	71						928
	29.4	29.5	25.0	8.4	7.7						100.0

CHI-SQUARE D.F. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

155.98741 24 0.0000 1.118 11 OF 35 (31.42)

NUMBER OF MISSING OBSERVATIONS = 0

NEWQ71									
COUNT									
ROW PCT	COL PCT	MAKKAH	JEDDAH	RIYADH	PROJECT	SSTUD	ROW TOTAL		
		1.00	2.00	3.00	4.00	5.00			
1	1	29	59	41	9	19	157		
COMMENTS ADDED		18.5	37.6	26.1	5.7	12.1	100.0		
		100.0	100.0	100.0	100.0	100.0			
COLUMN		29	59	41	9	19	157		
TOTAL		18.5	37.6	26.1	5.7	12.1	100.0		

*** STATISTICS CANNOT BE COMPUTED WHEN THE NUMBER OF NON-EMPTY ROWS OR COLUMNS IS ON
NUMBER OF MISSING OBSERVATIONS = 771

APPENDIX E

GRAPHS OF

TOTAL RESPONSE (FIG 1)

ACCOMMODATION TYPE RESPONSE (FIG 2)

GROUP CLASSIFICATION RESPONSE (FIG 3)

OF Q2 - 1106

FIG. Q1 TYPE OF ACCOMEDATION

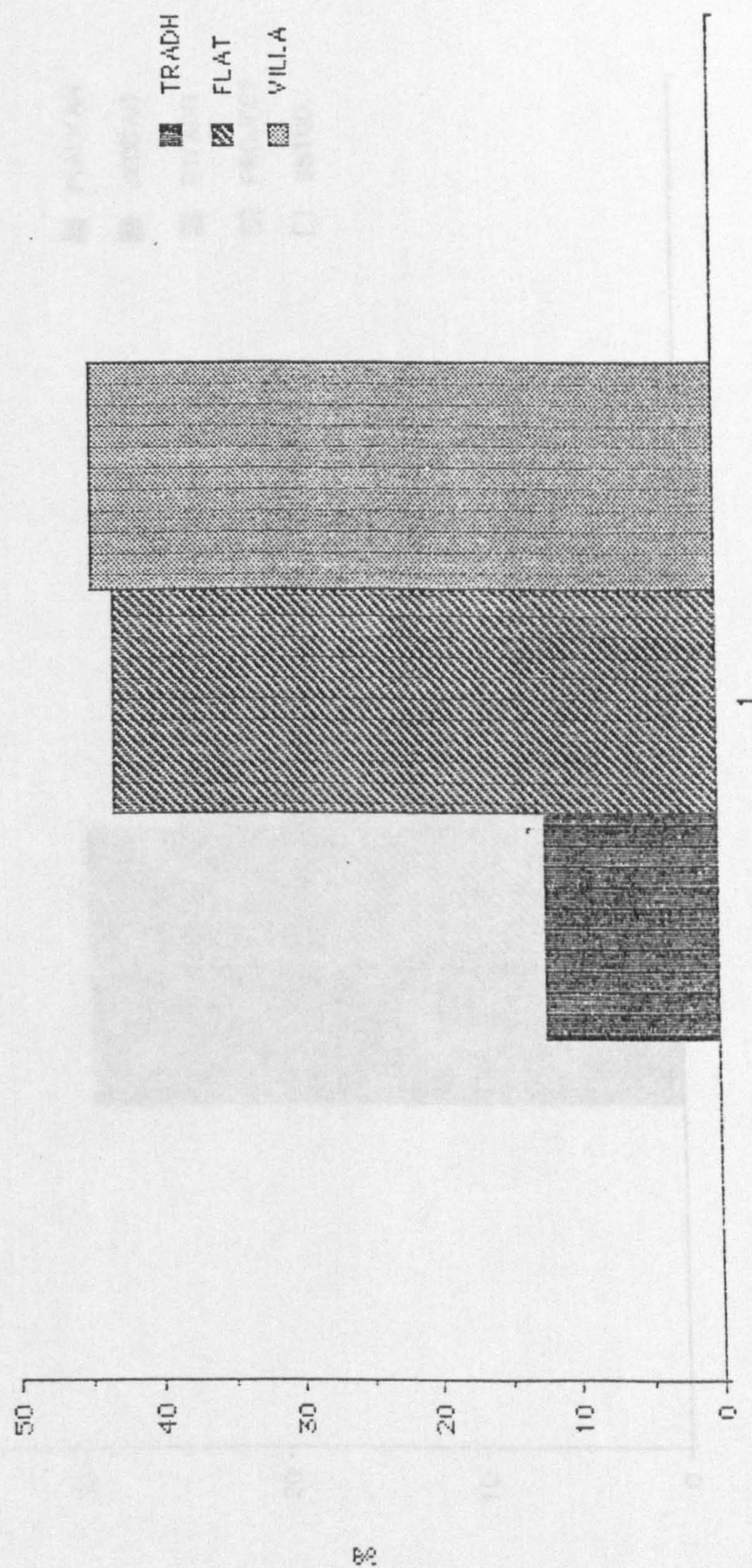


FIG. Q71 GROUP CLASSIFICATION

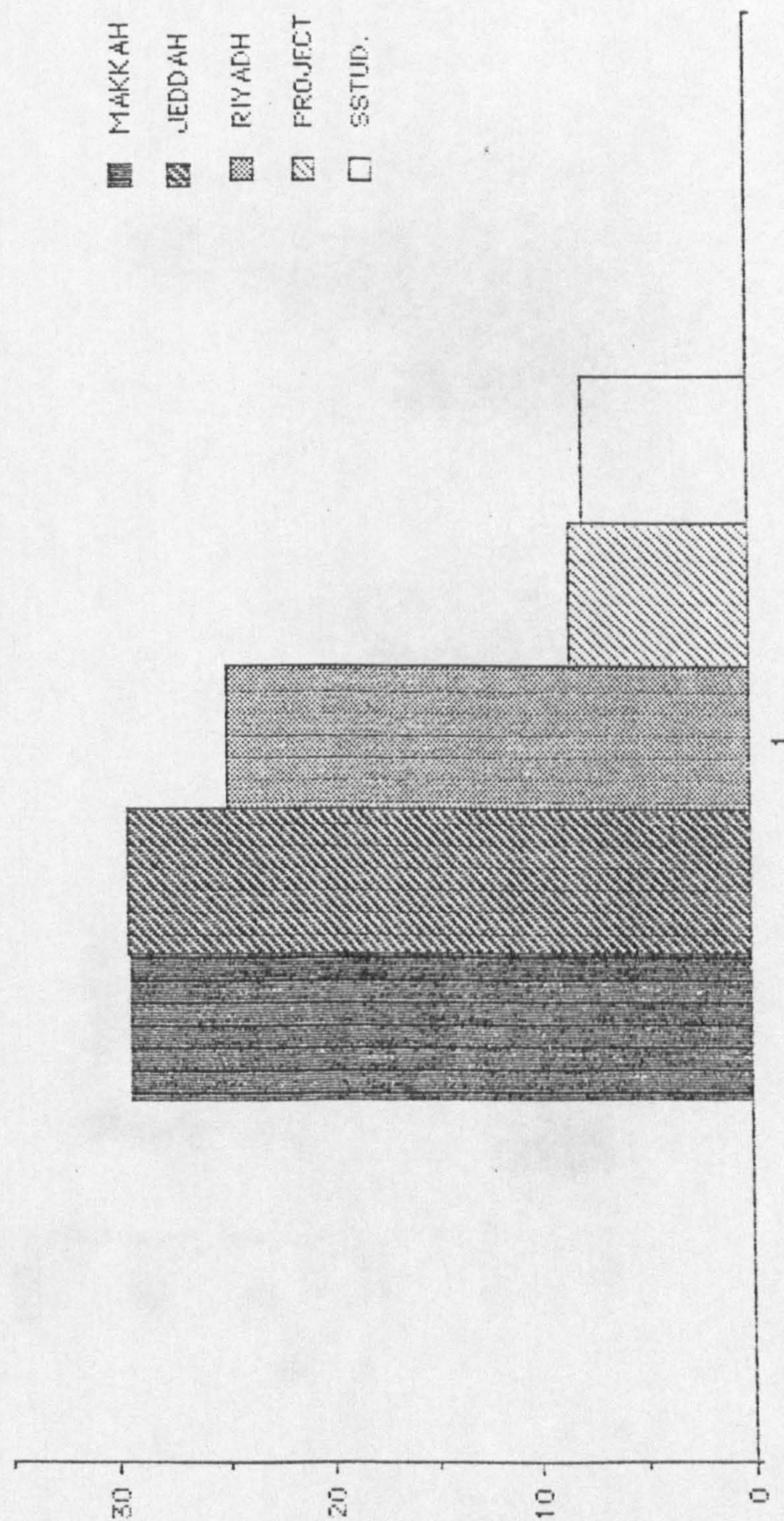


FIG. Q71 GROUP CLASSIFICATION VS. TYPE OF ACCOM.

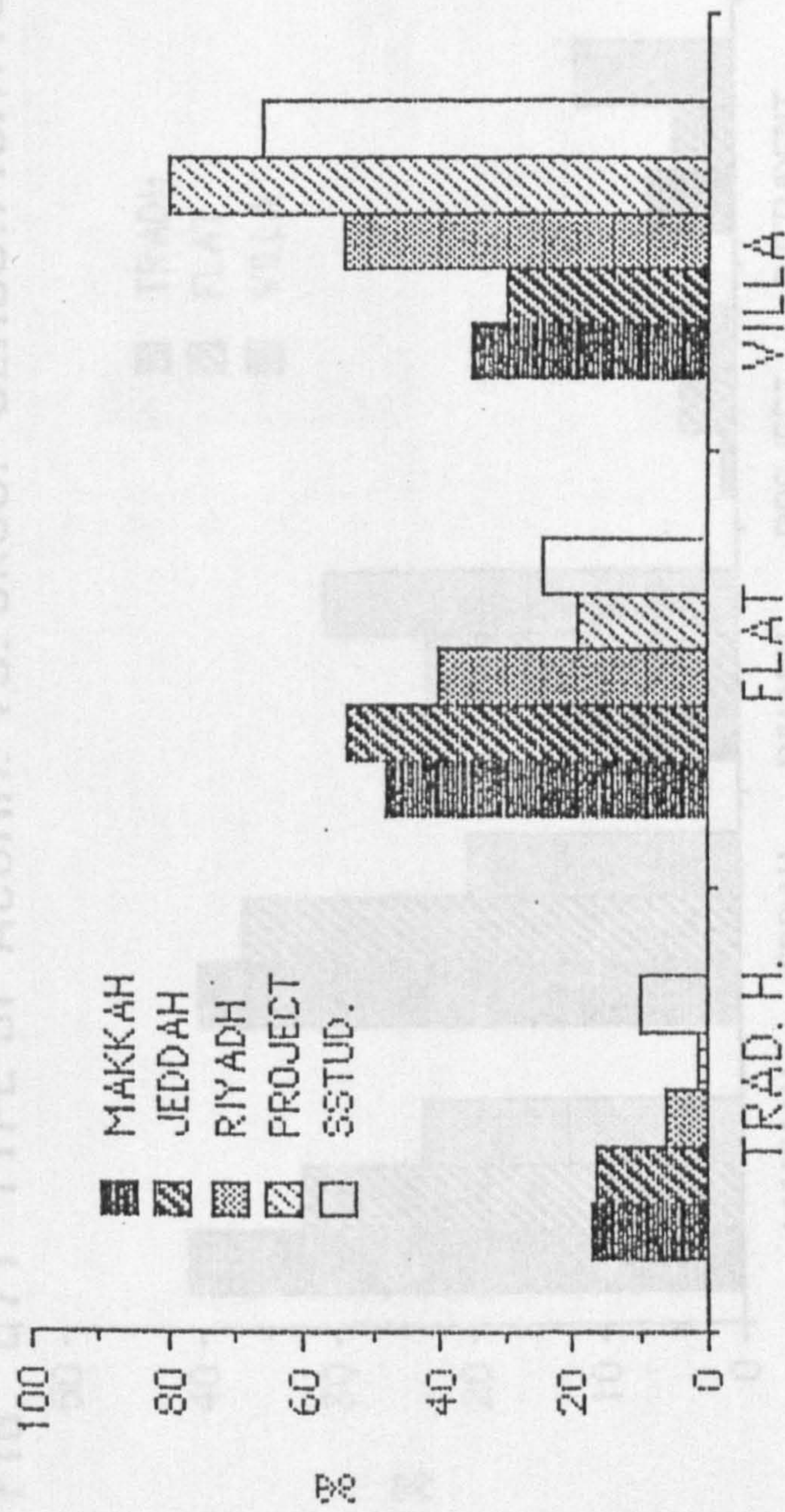


FIG. Q71 TYPE OF ACOMM. VS. GROUP CLASSIFICATION

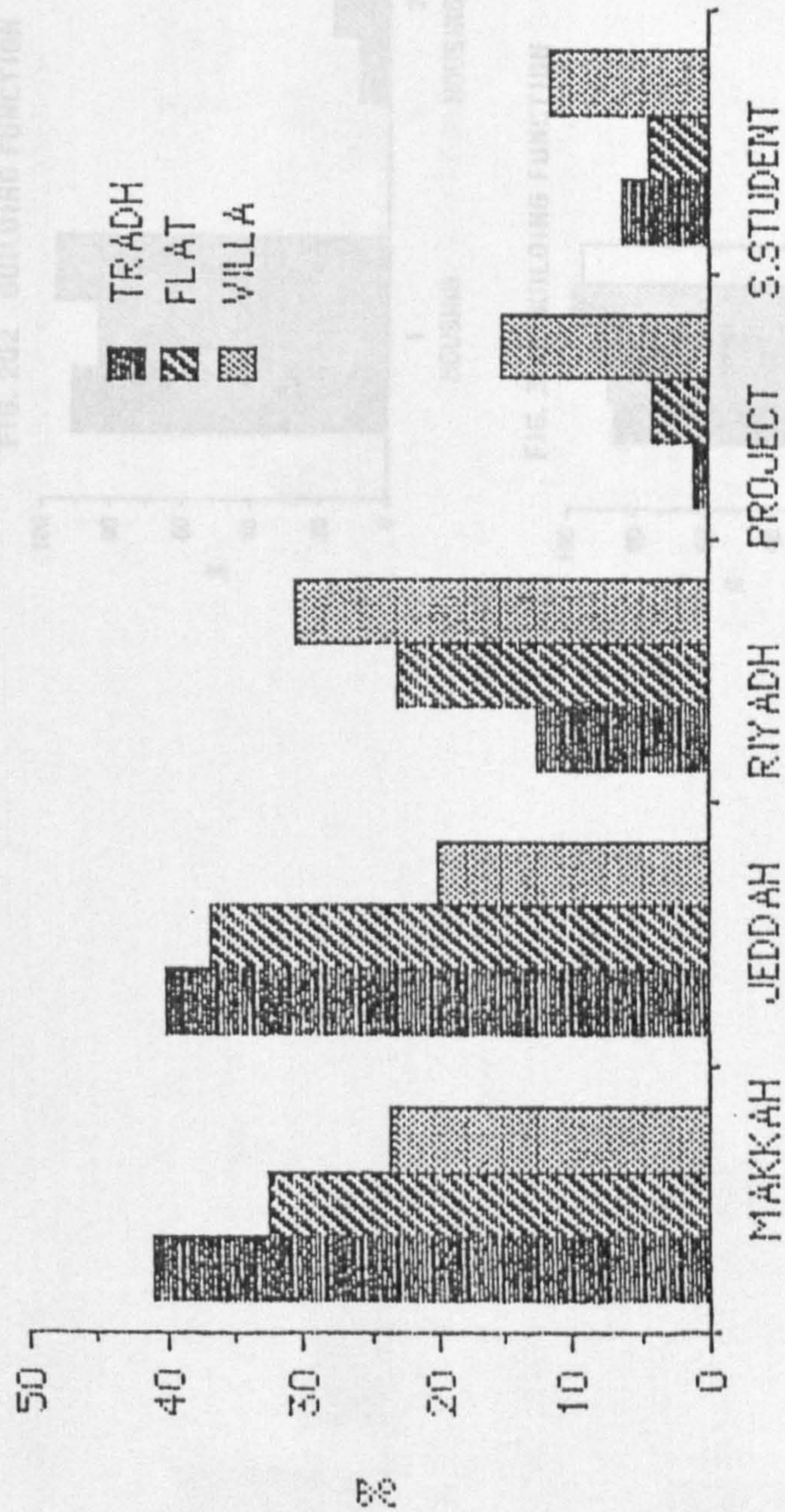


FIG. 1Q2 BUILDING FUNCTION

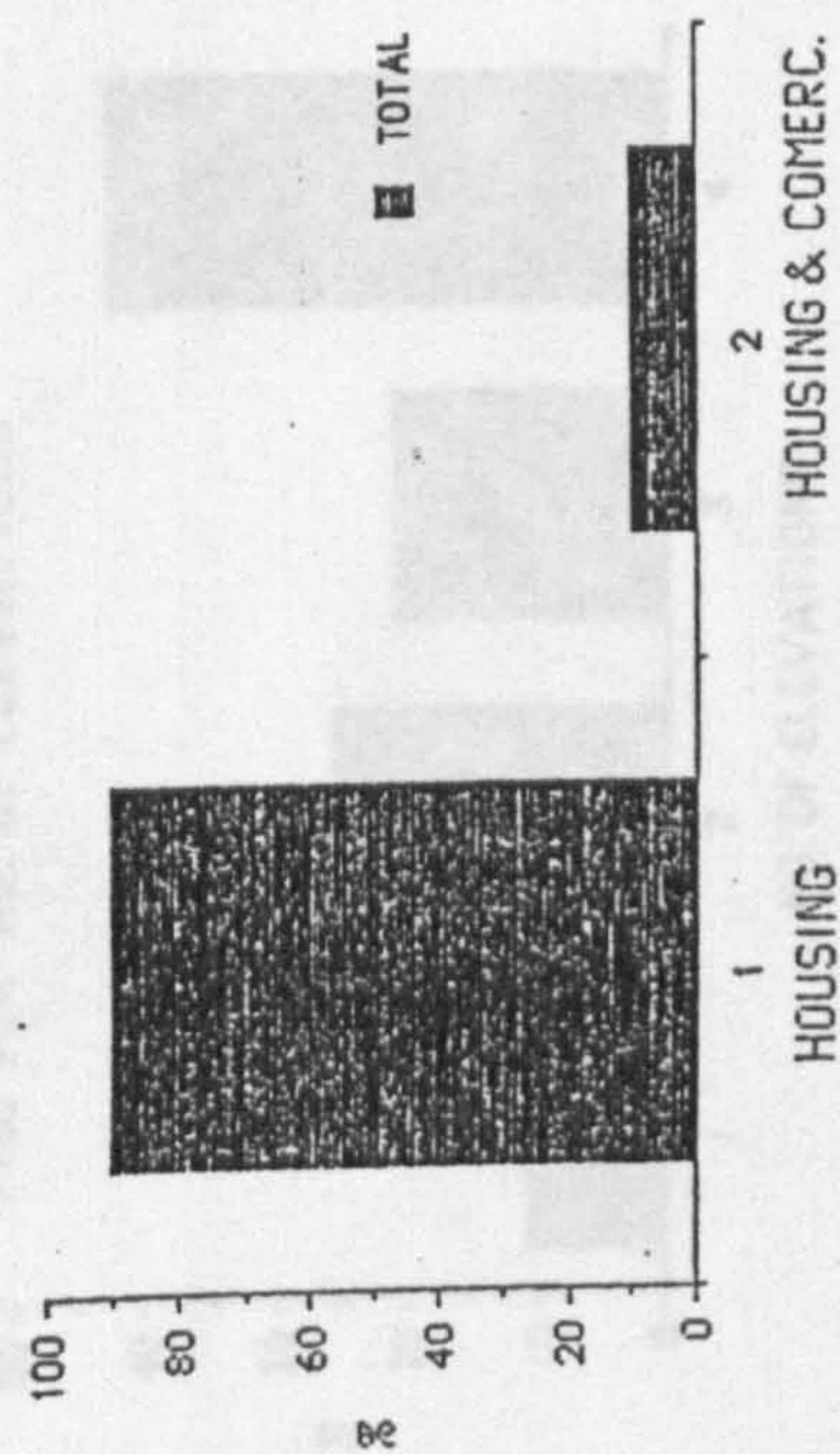


FIG. 2Q2 BUILDING FUNCTION

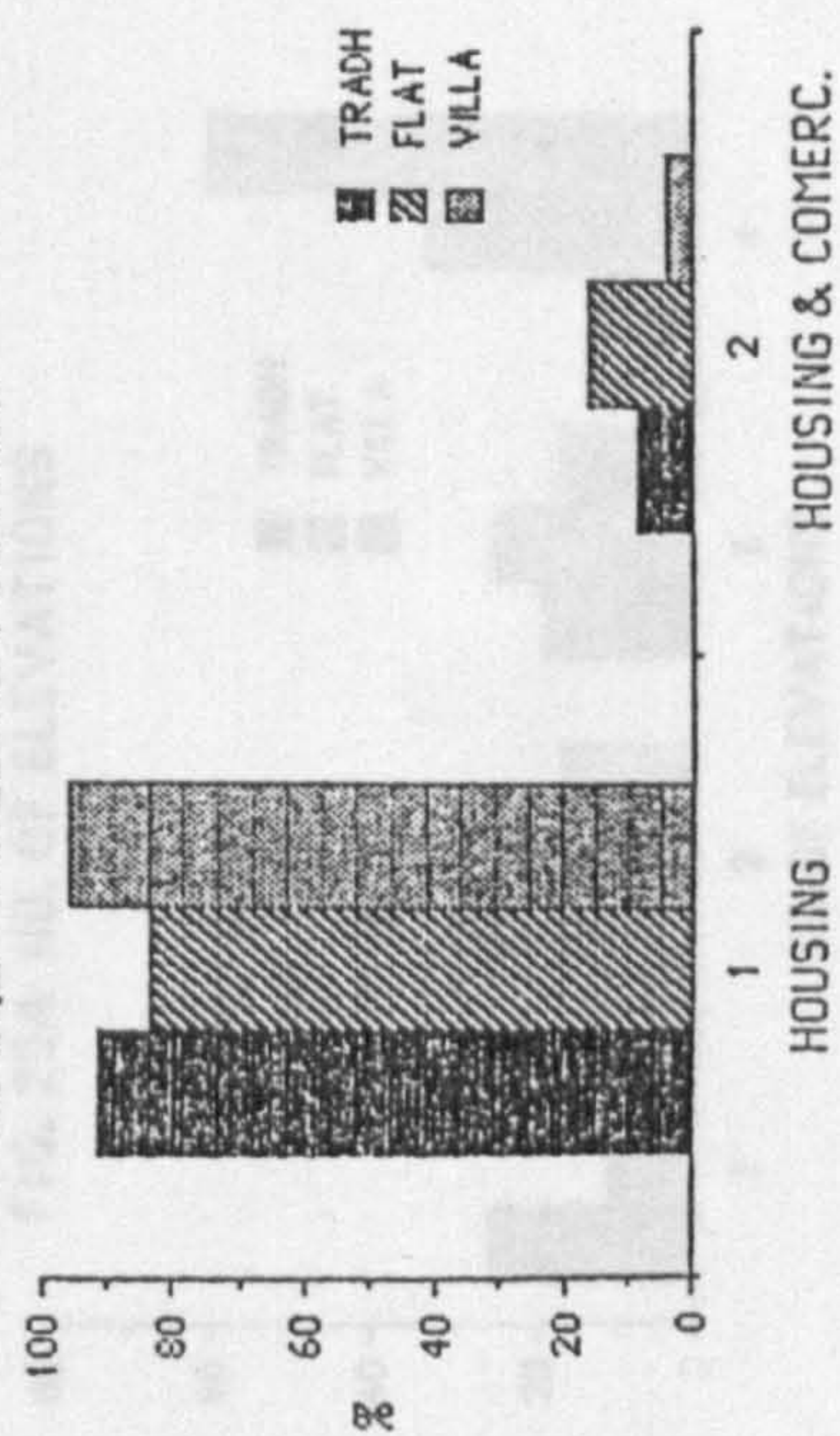


FIG. 3Q2 BUILDING FUNCTION

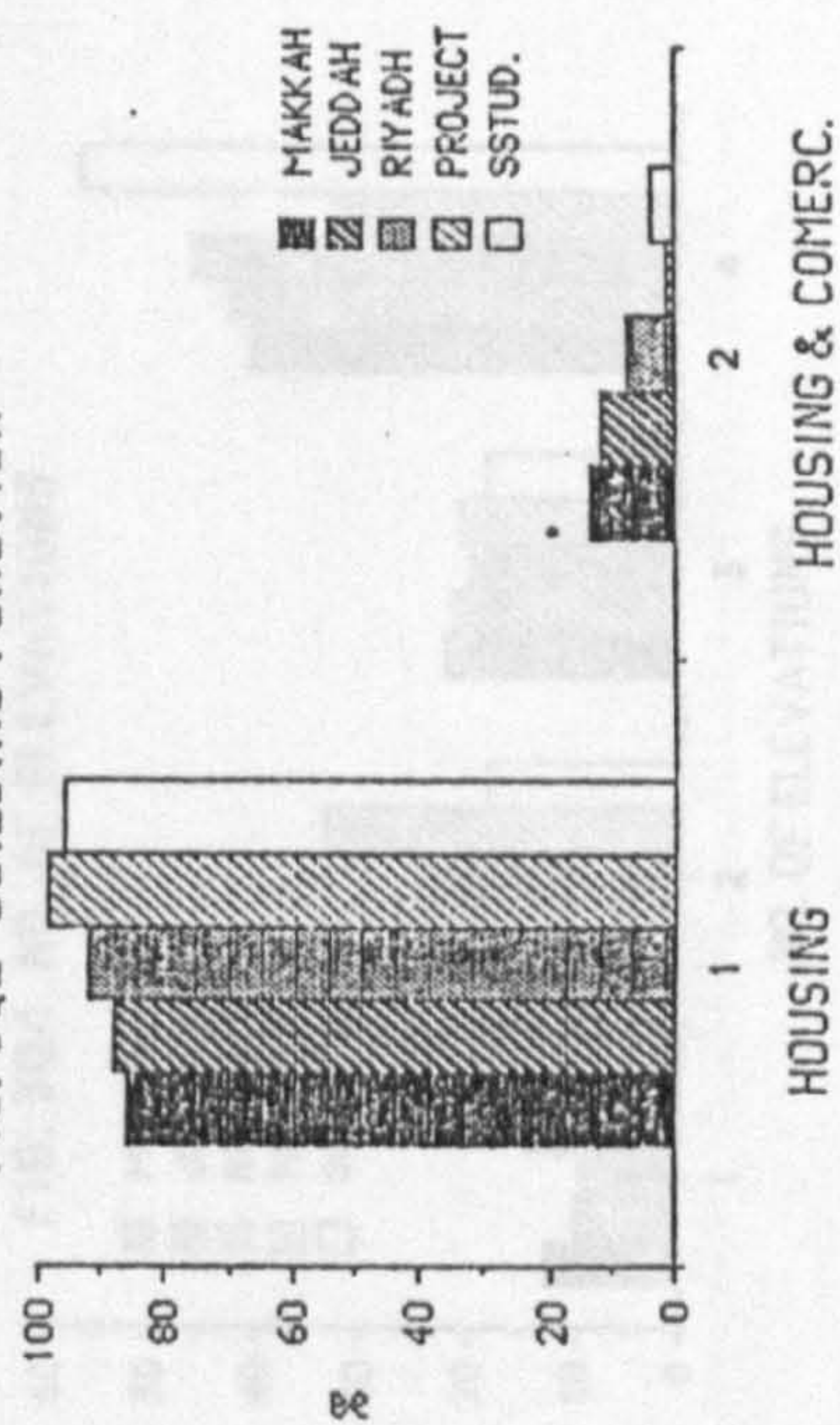


FIG. 1Q3 ADJACENT STREETS

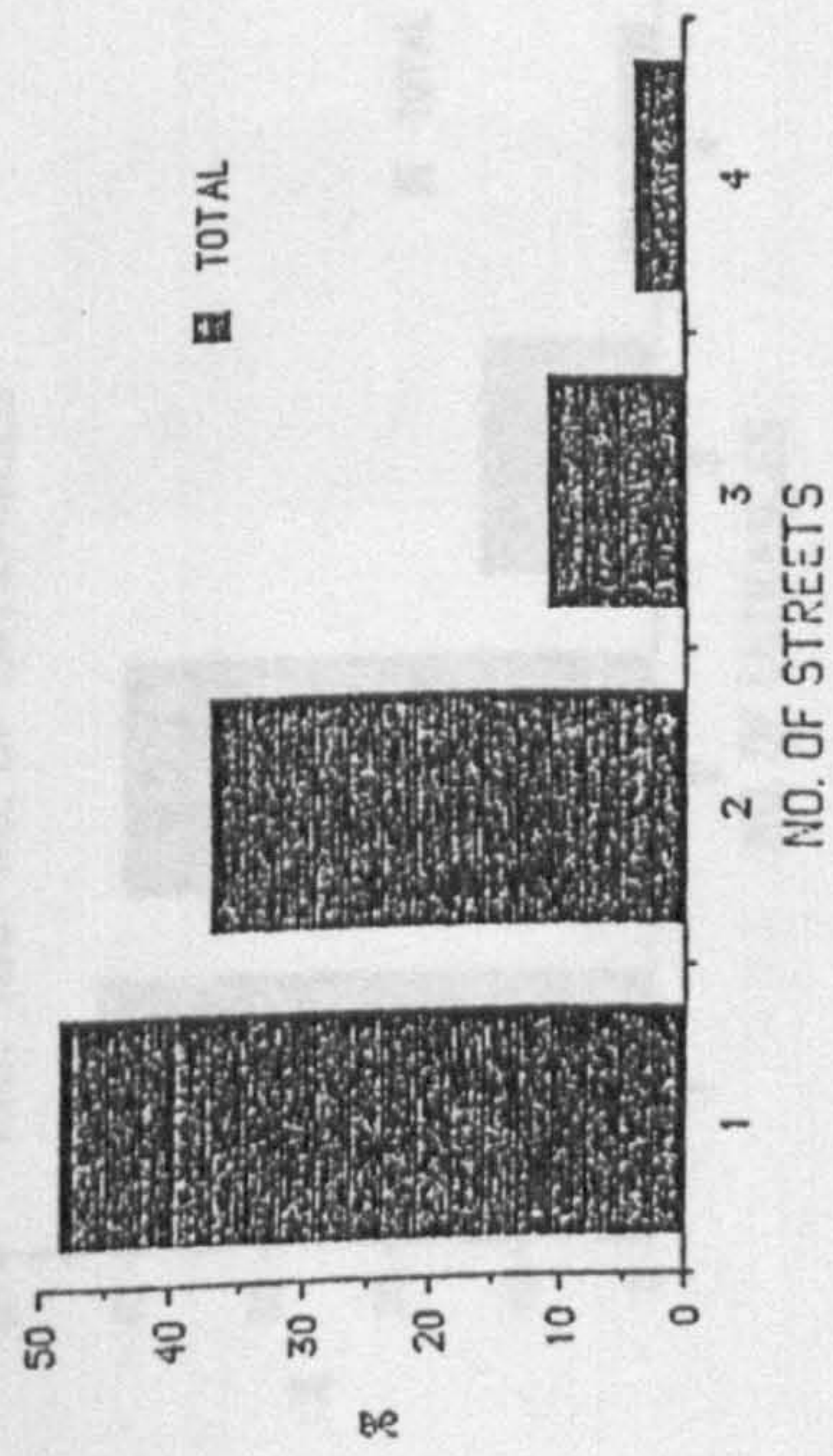


FIG. 1Q4 NO. OF ELEVATIONS

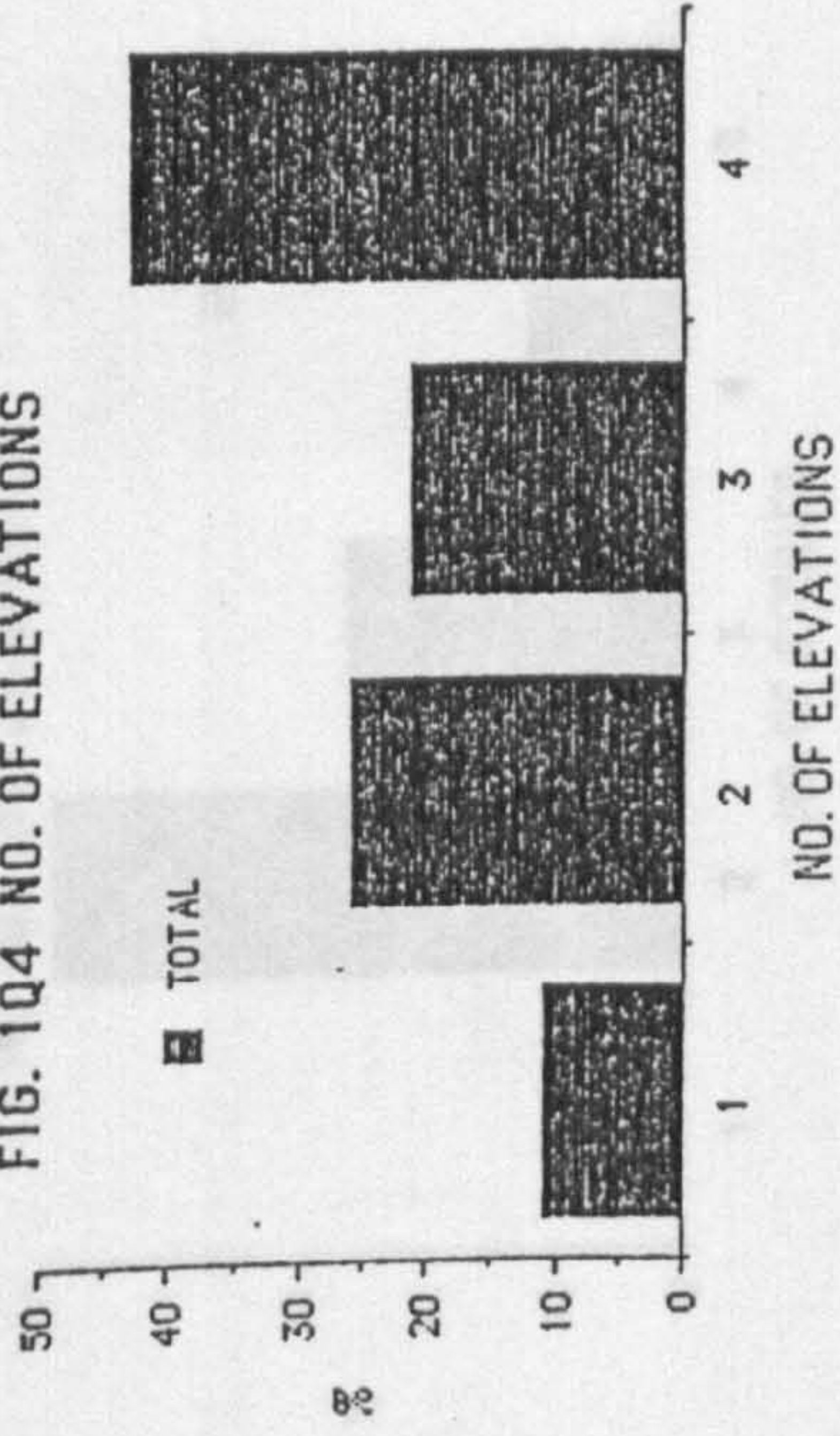


FIG. 2Q3 ADJACENT STREETS

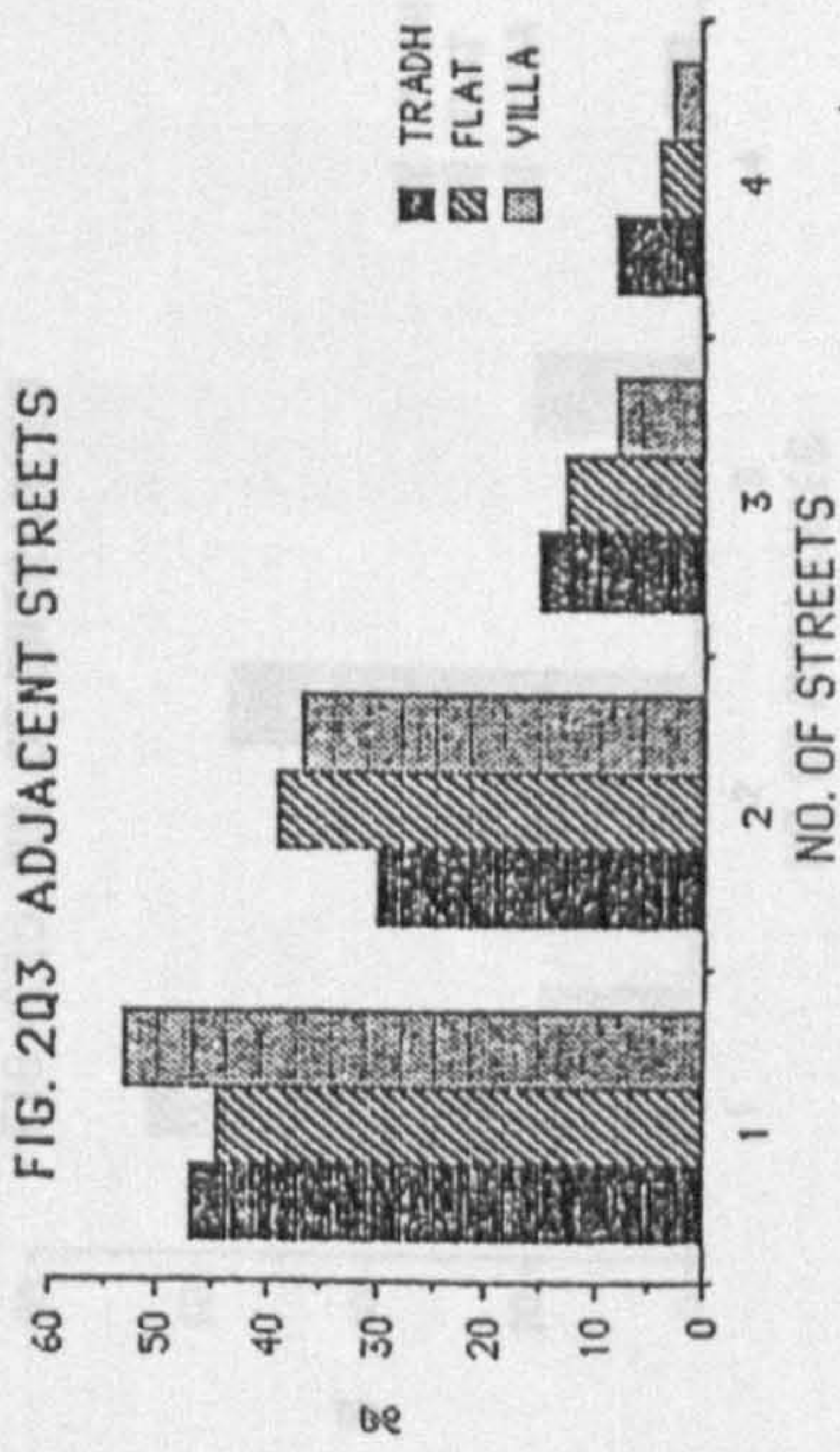


FIG. 2Q4 NO. OF ELEVATIONS

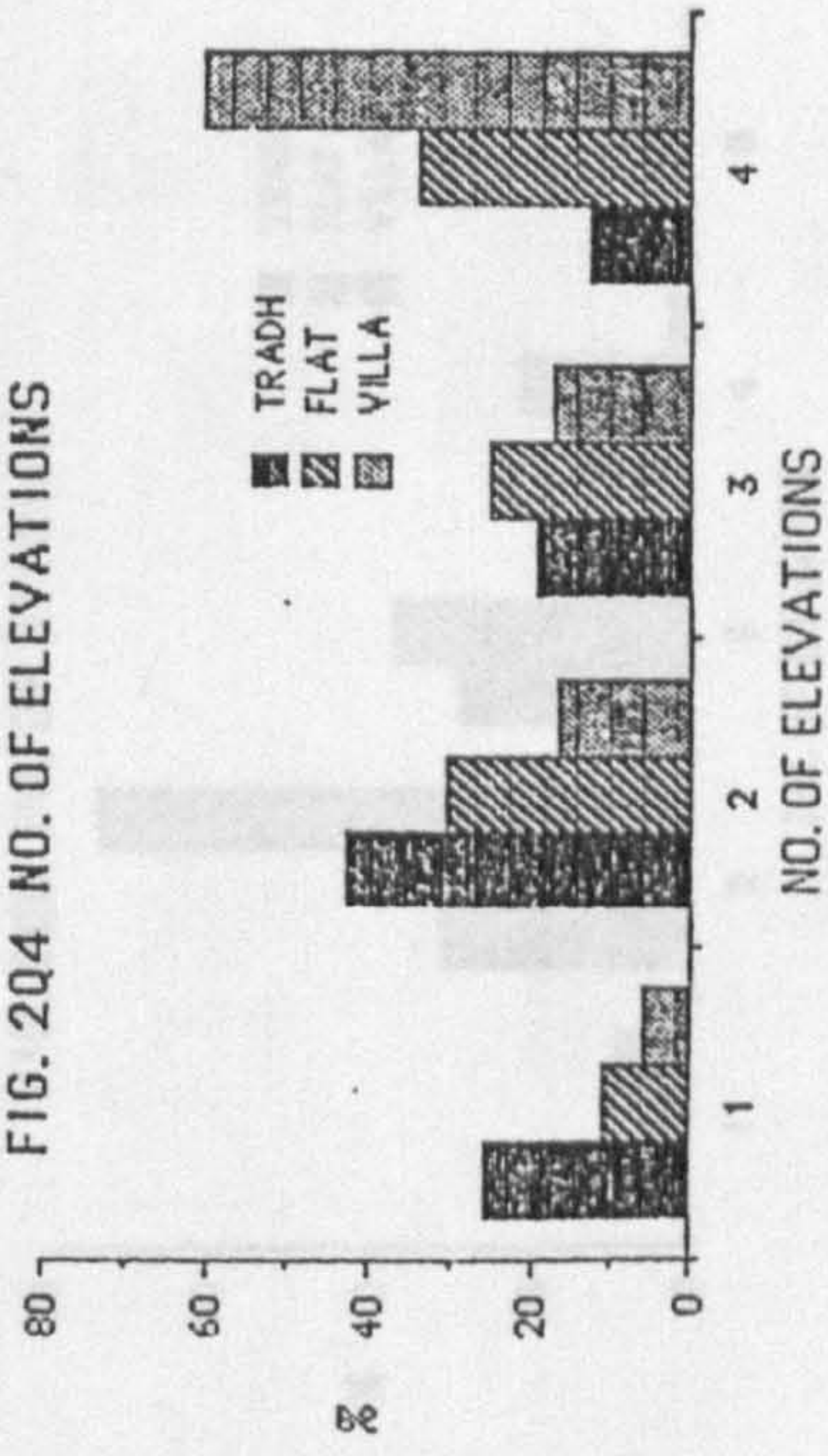


FIG. 3Q3 ADJACENT STREETS

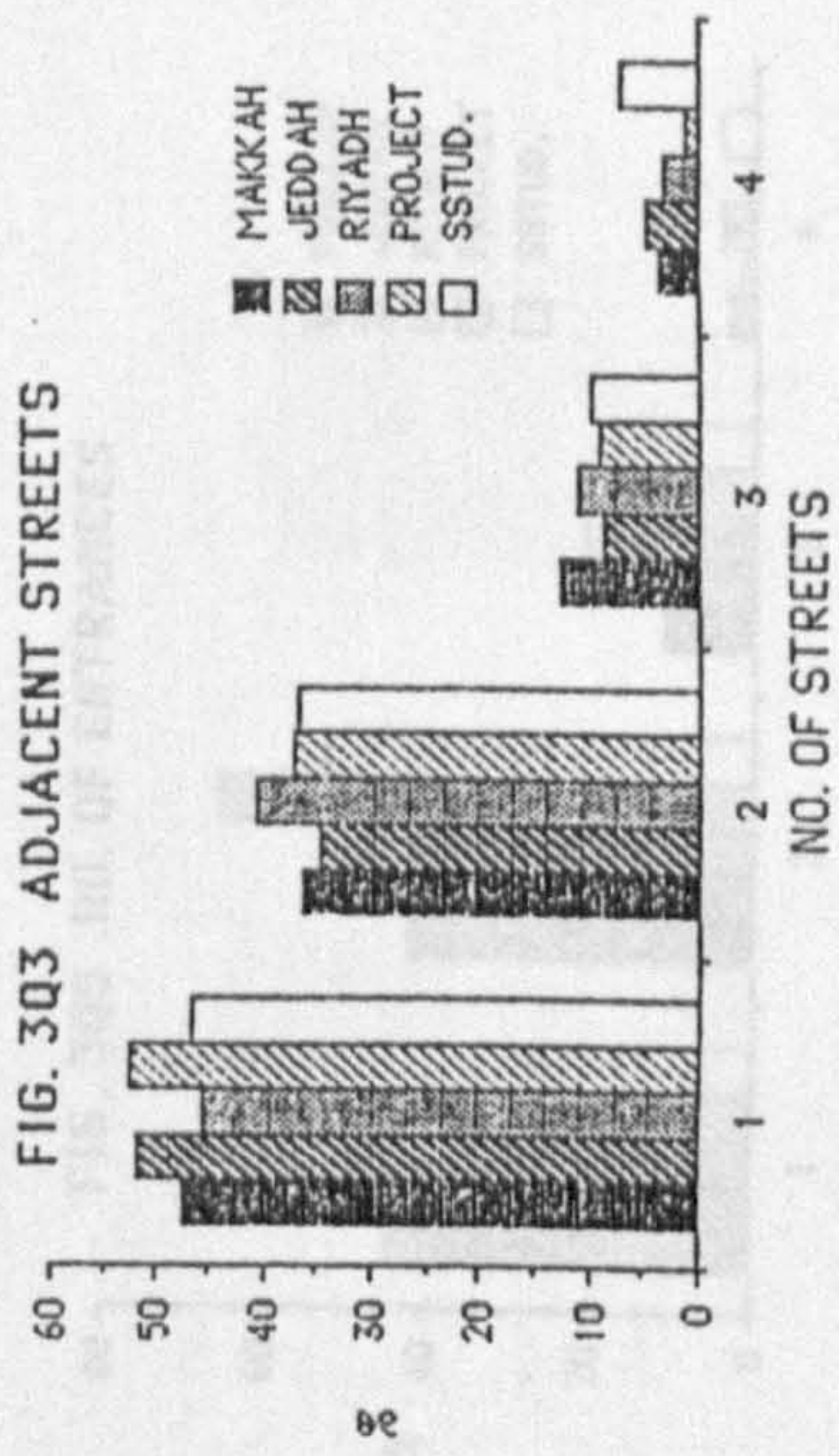


FIG. 3Q4 NO. OF ELEVATIONS

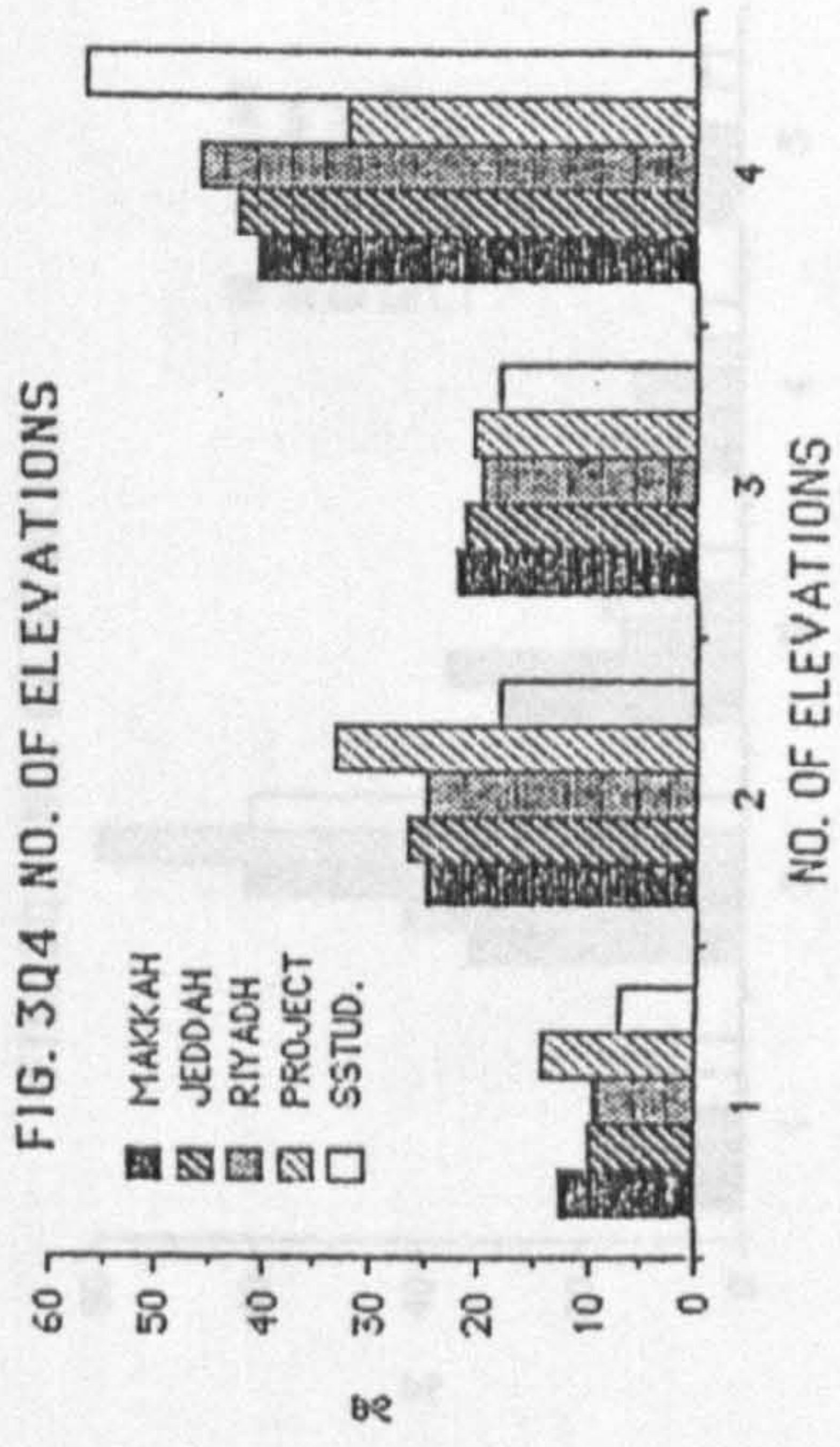


FIG. 1Q5 NO. OF ENTRANCES

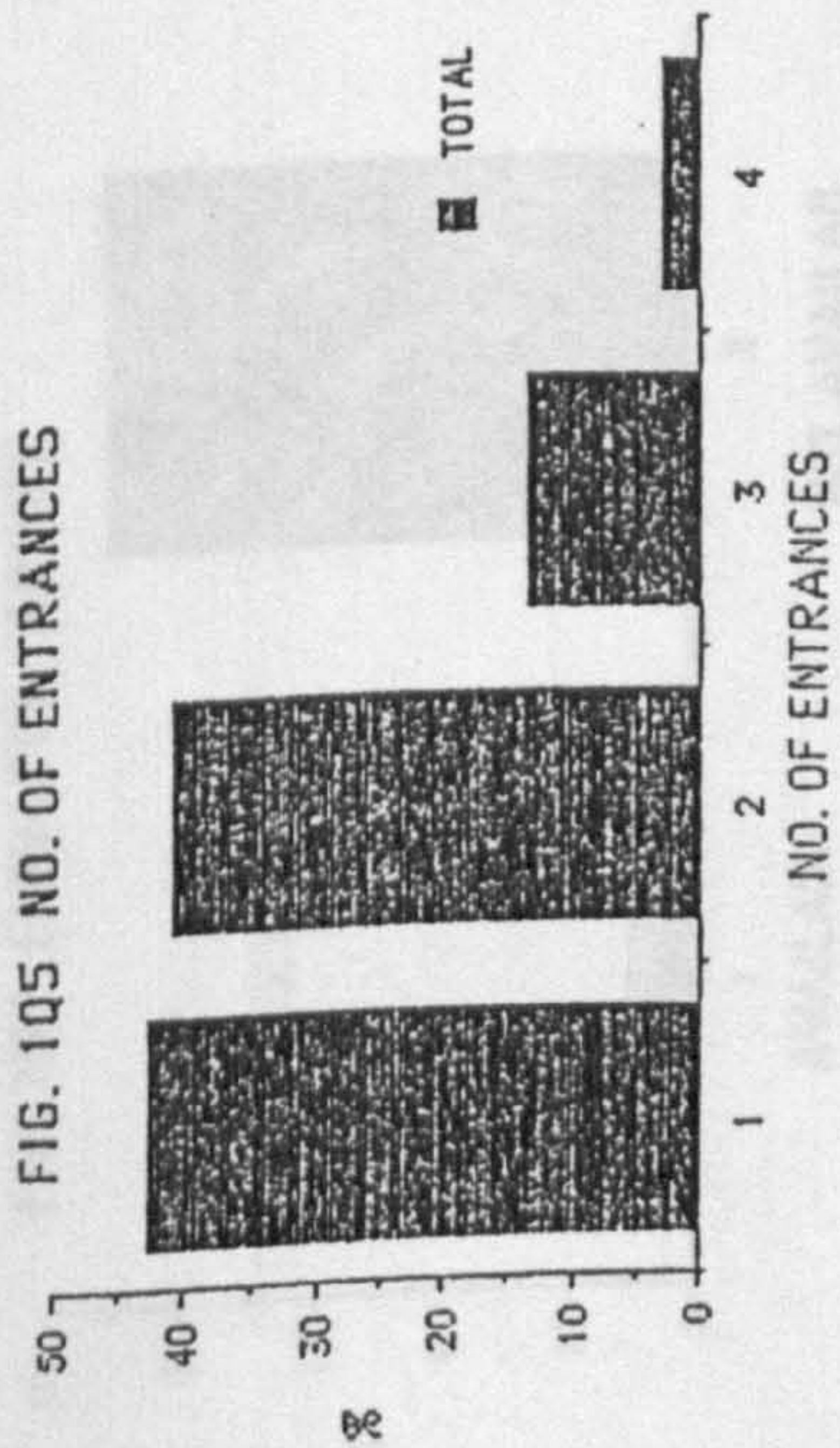


FIG. 2Q5 NO. OF ENTRANCES

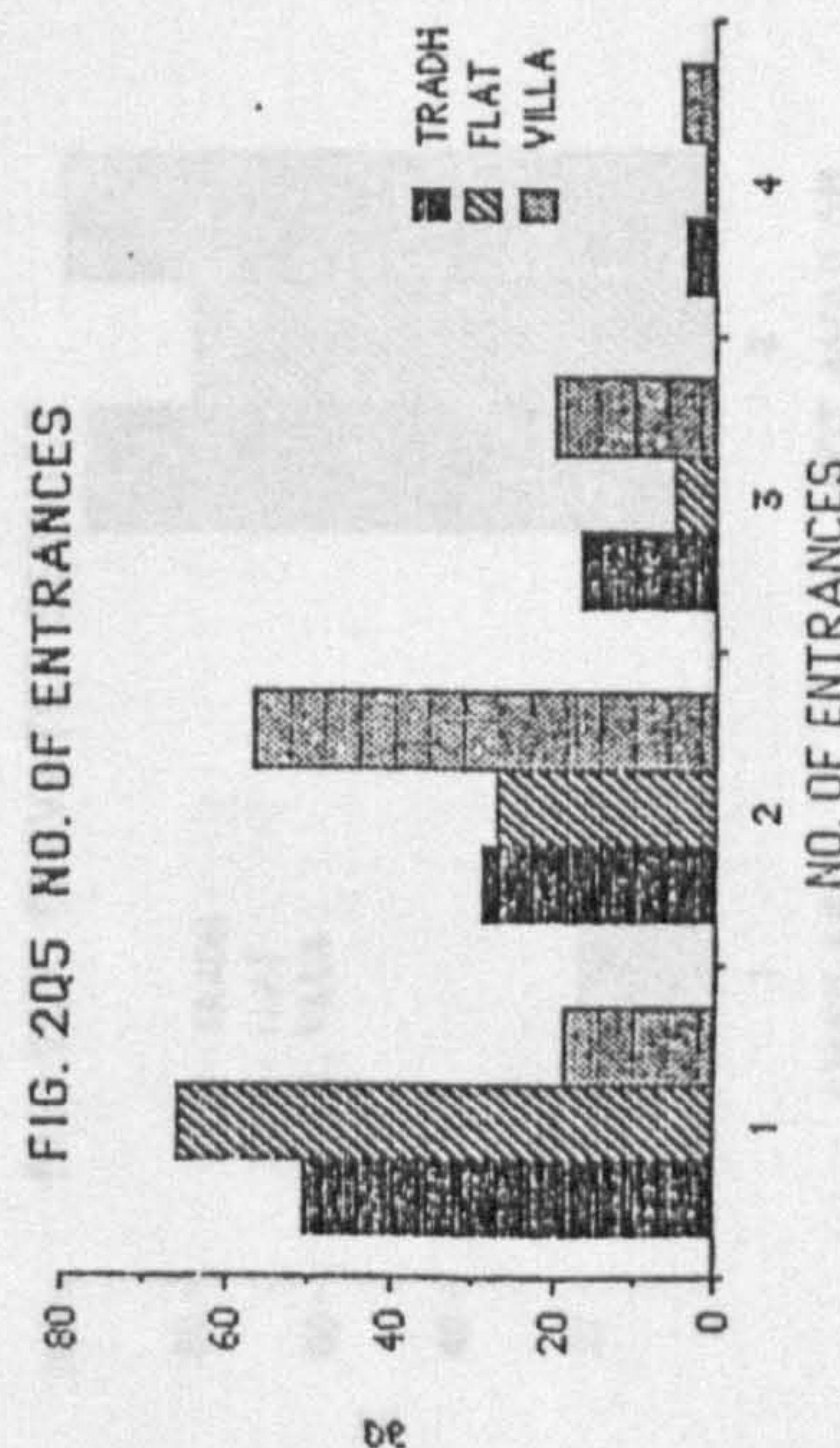


FIG. 3Q5 NO. OF ENTRANCES

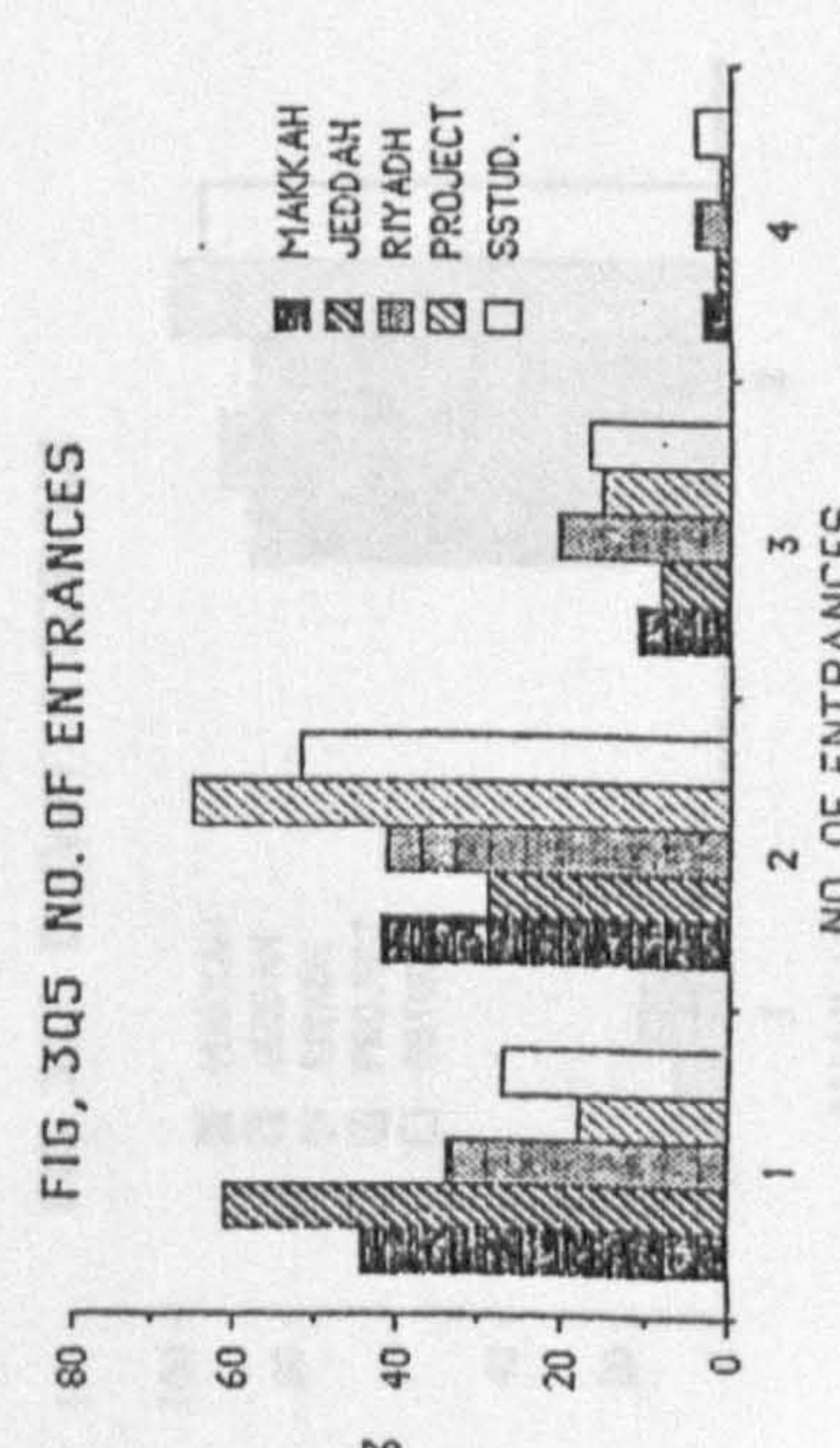


FIG. 1Q6 NO. OF STORIES

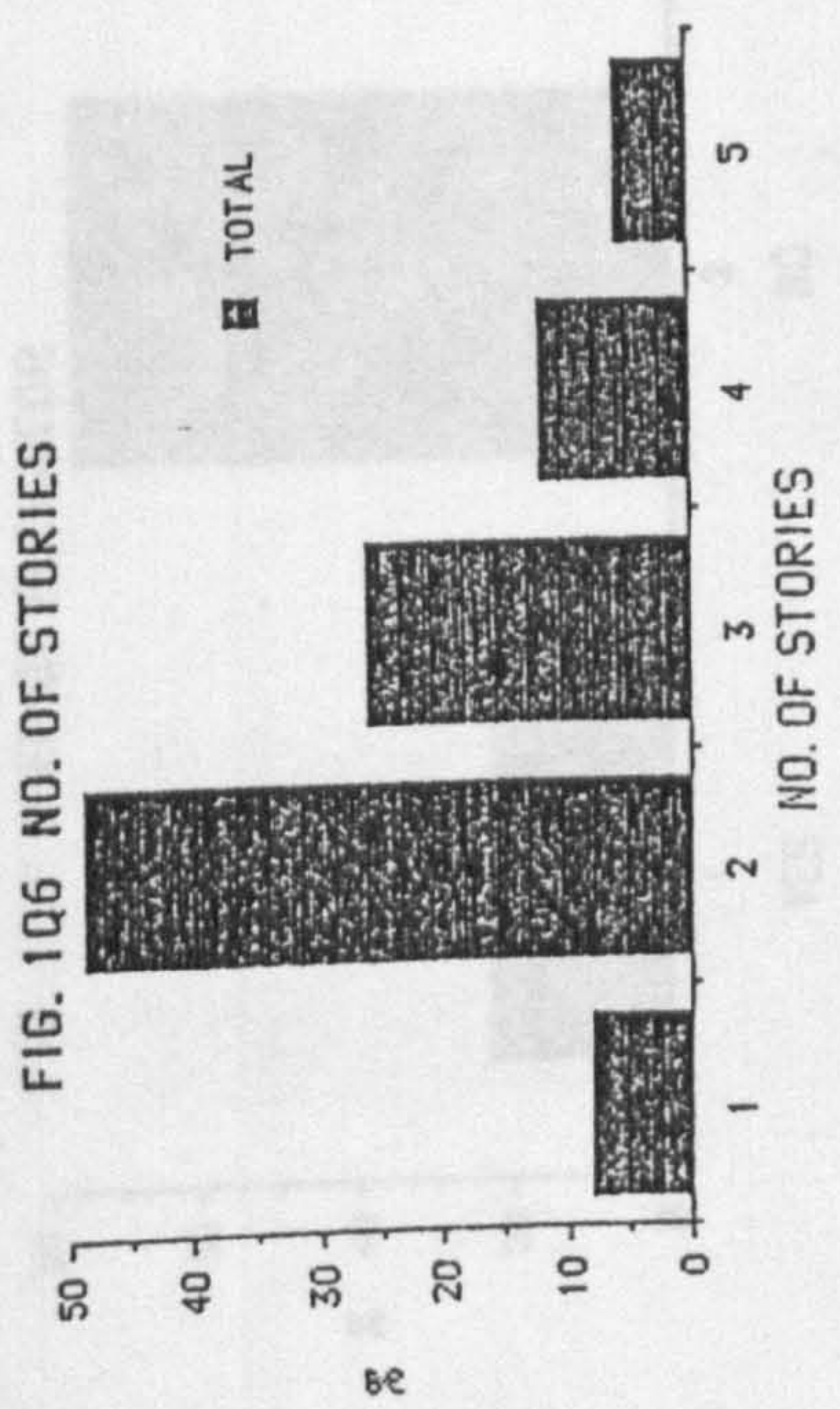


FIG. 2Q6 NO. OF STORIES

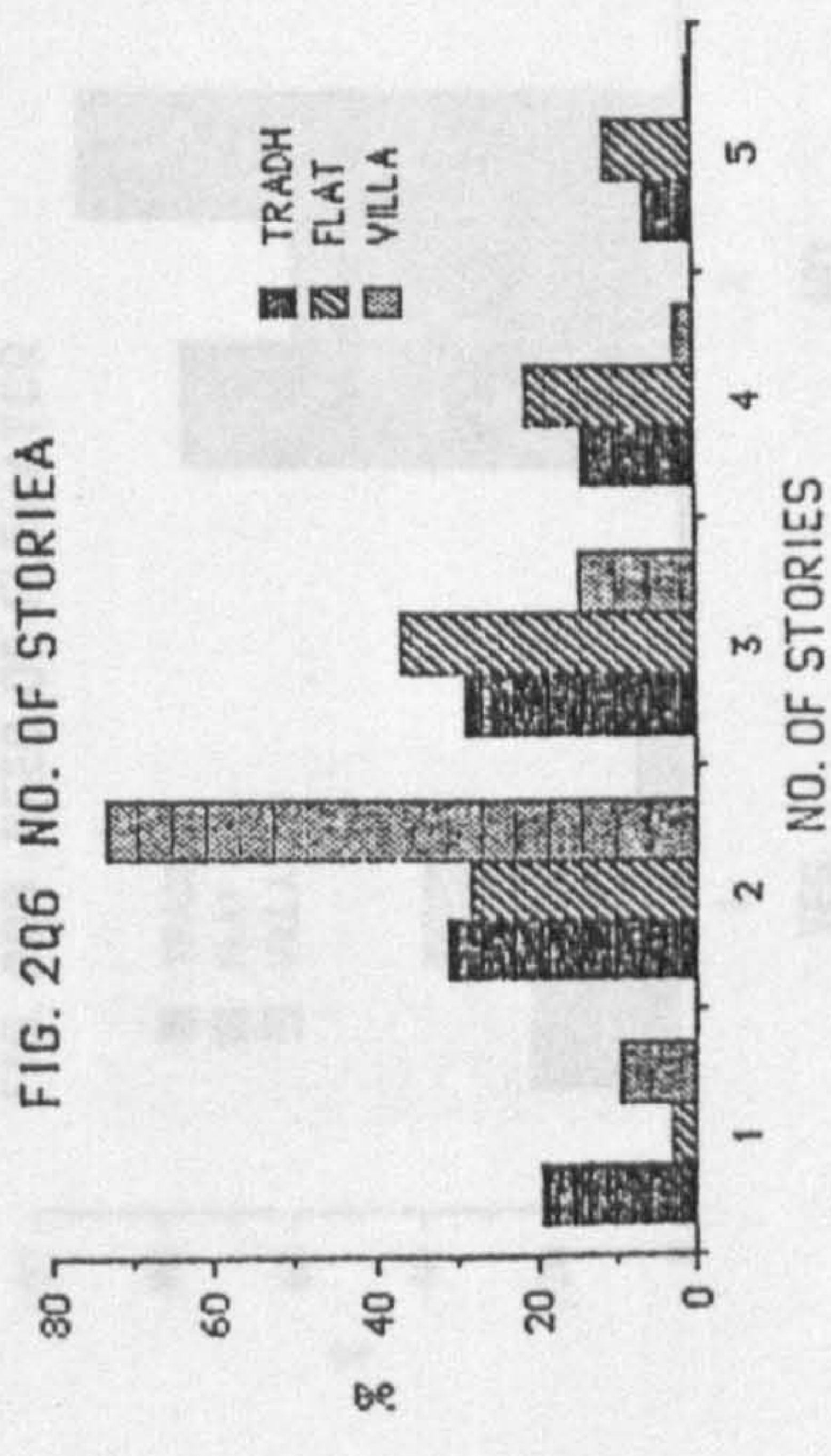


FIG. 3Q6 NO. OF STORIES

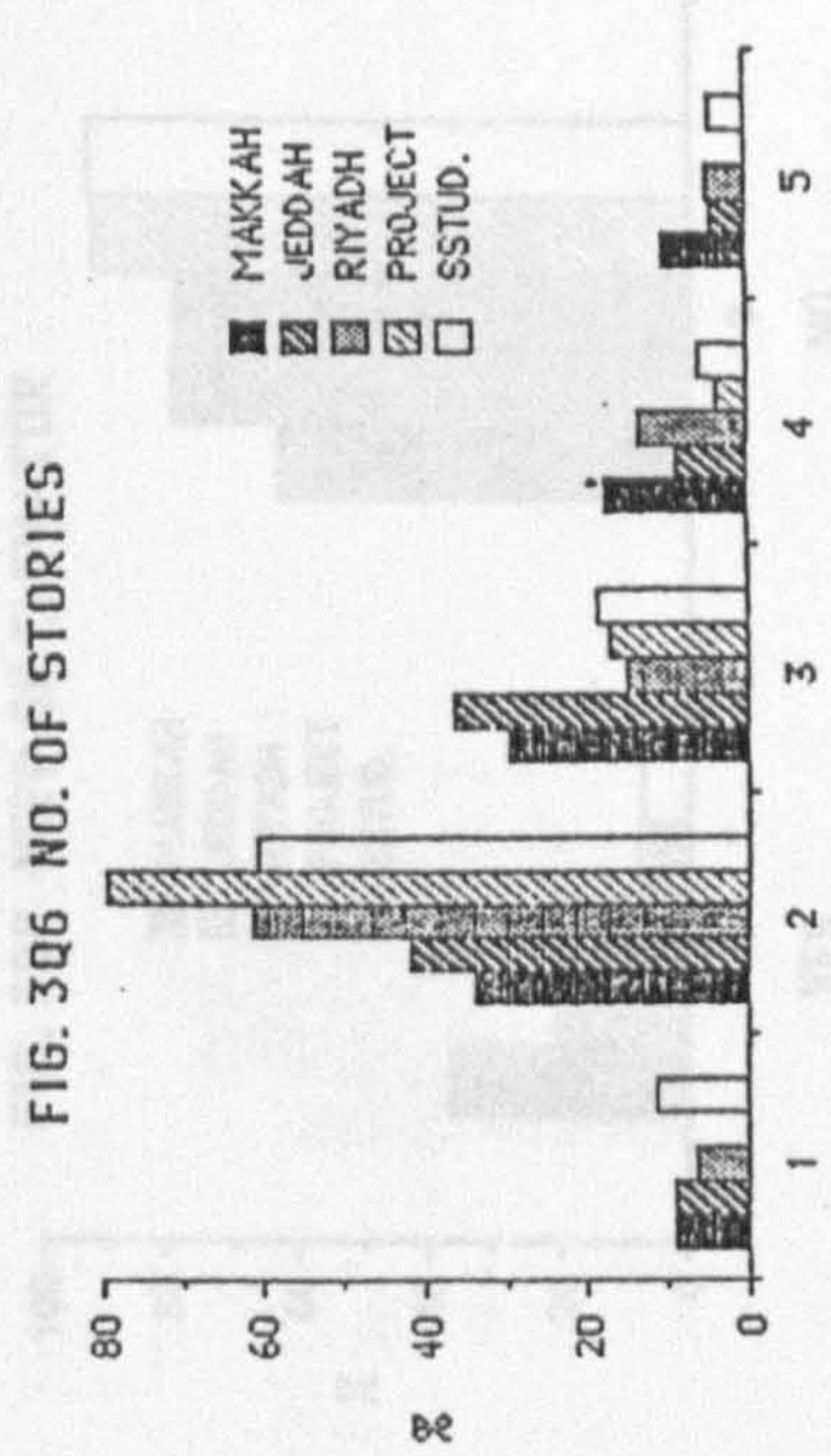


FIG. 1Q7 ELEVATOR SERVICE

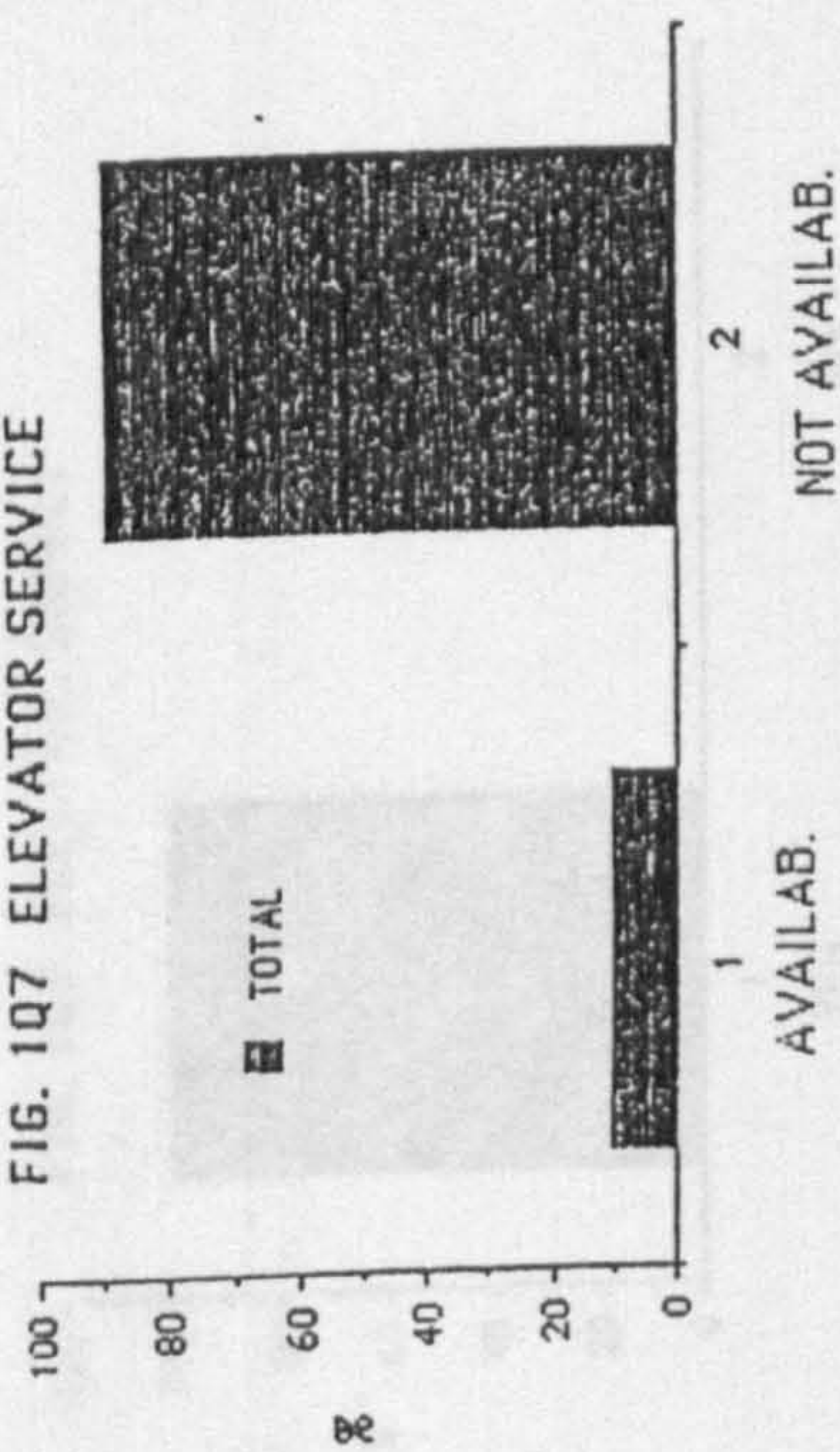


FIG. 1Q8 NEED OF ELEVATOR

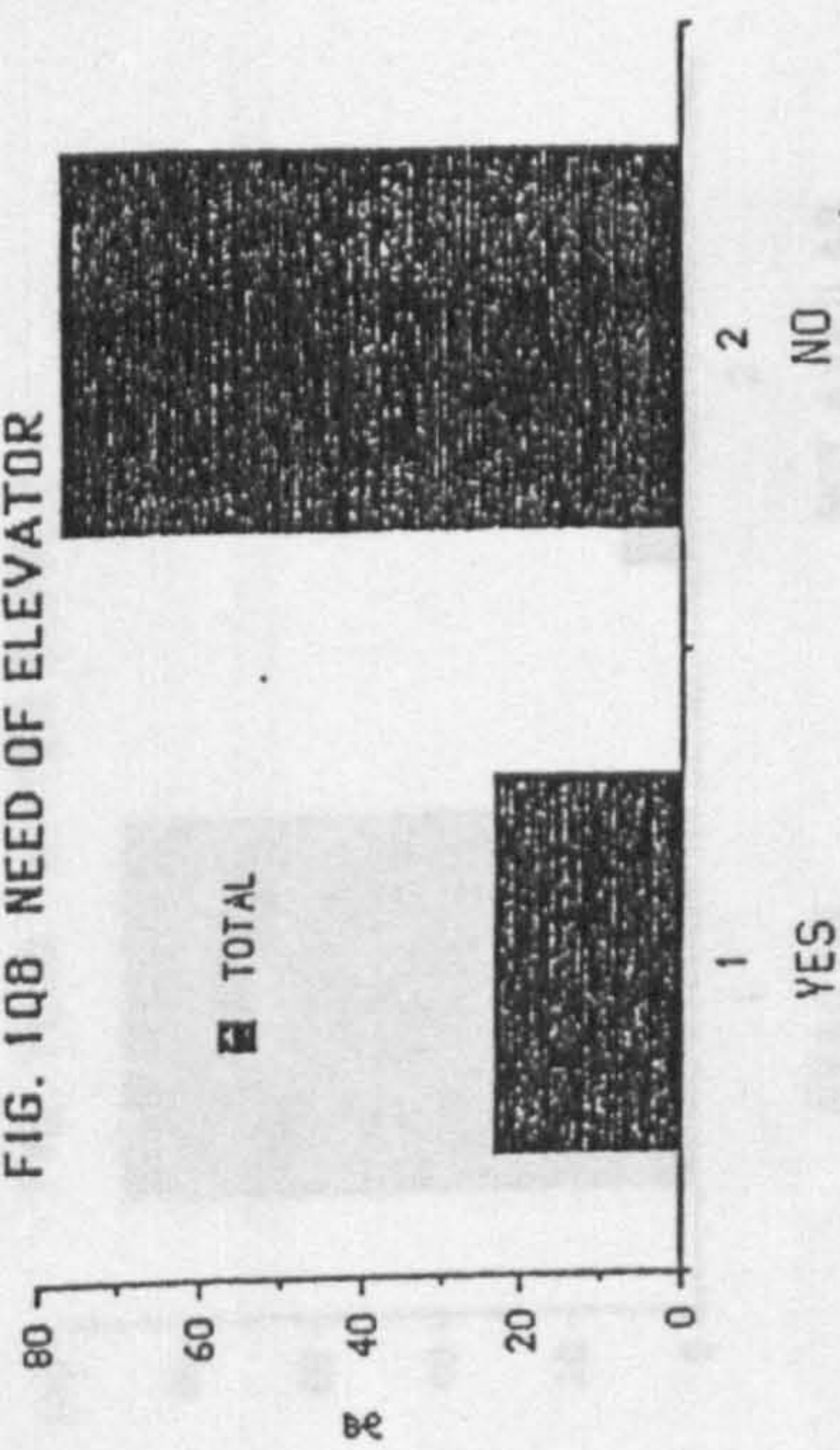


FIG. 2Q7 ELEVATOR SERVICE

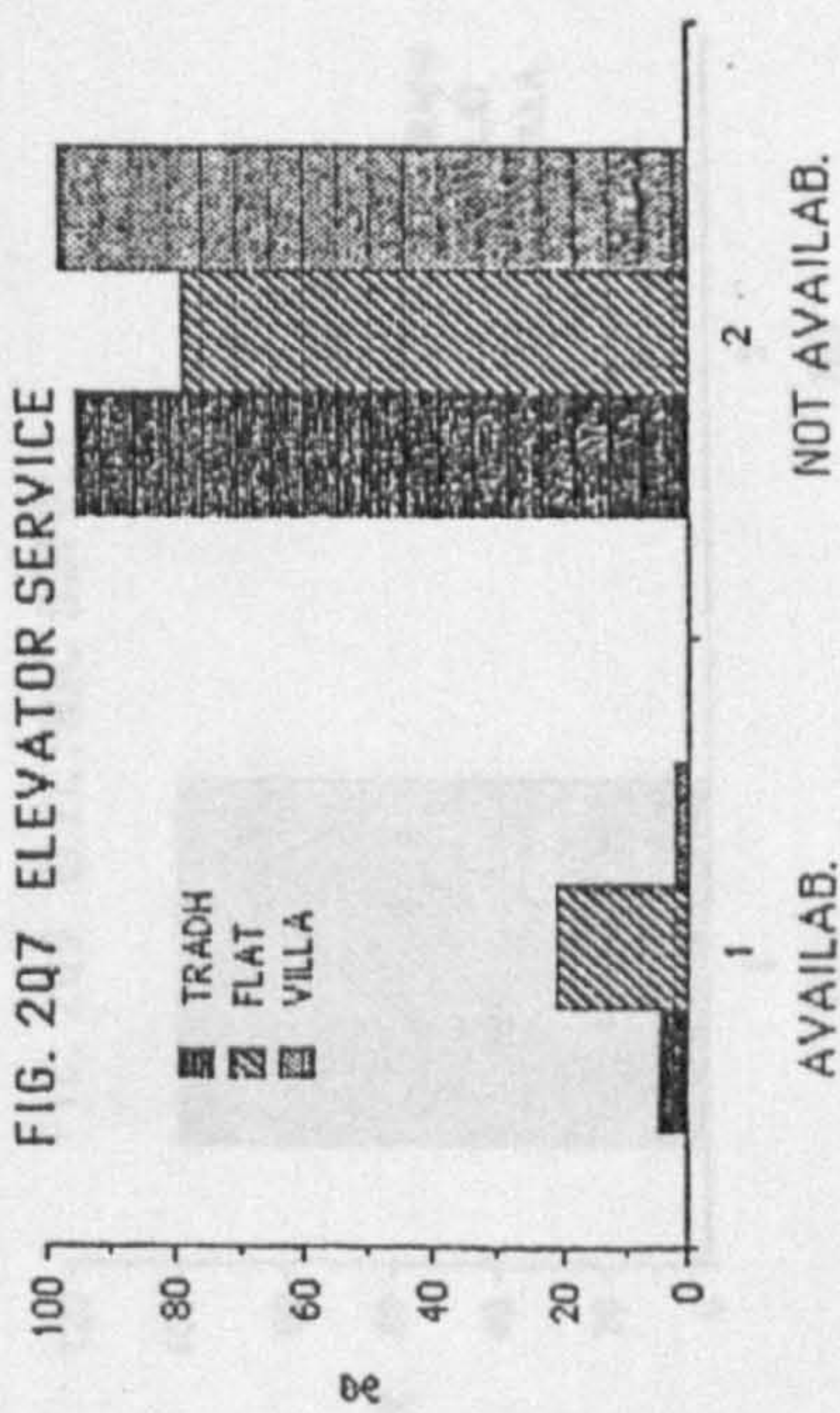


FIG. 2Q8 NEED OF ELEVATOR

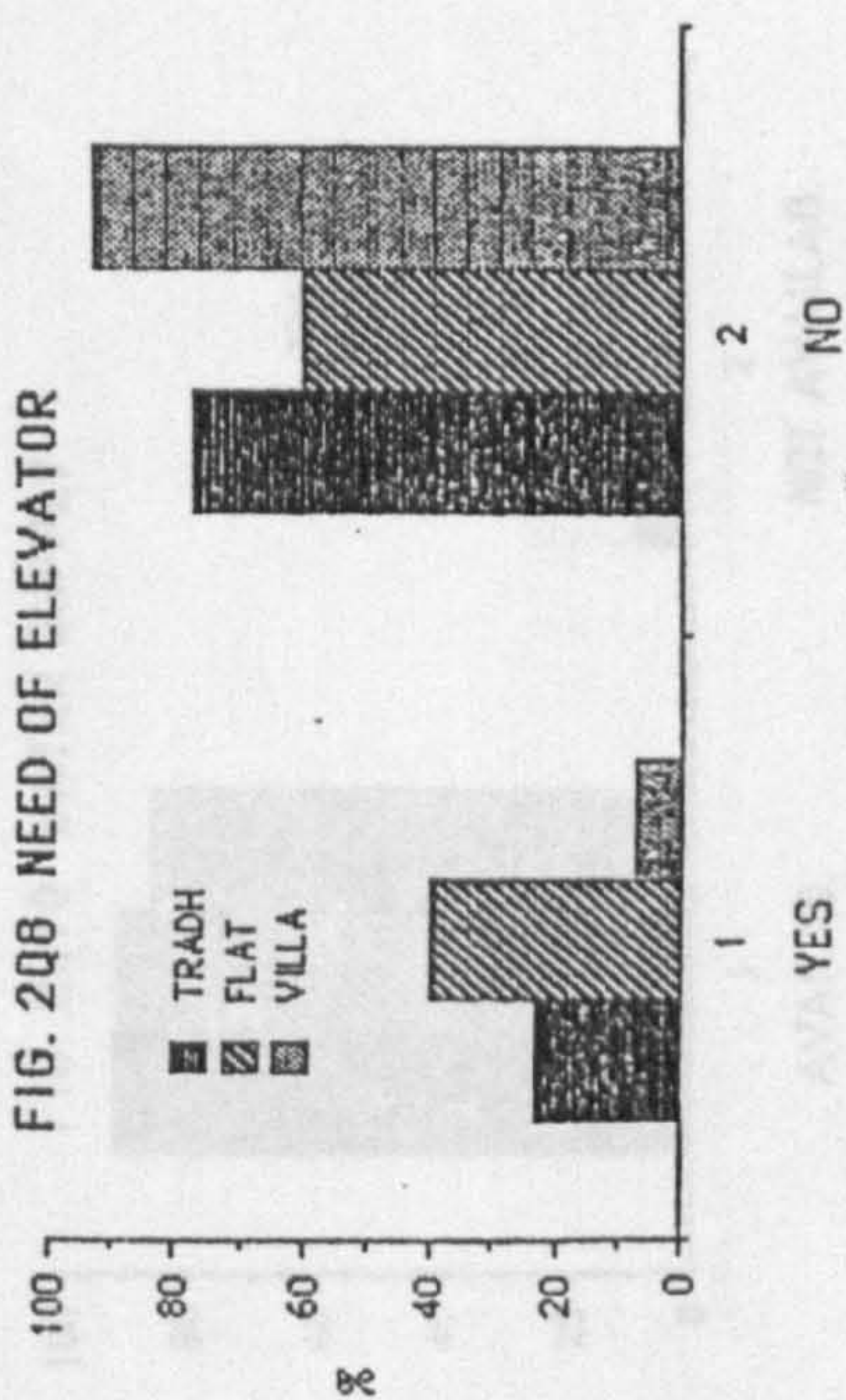


FIG. 3Q7 ELEVATOR SERVICE

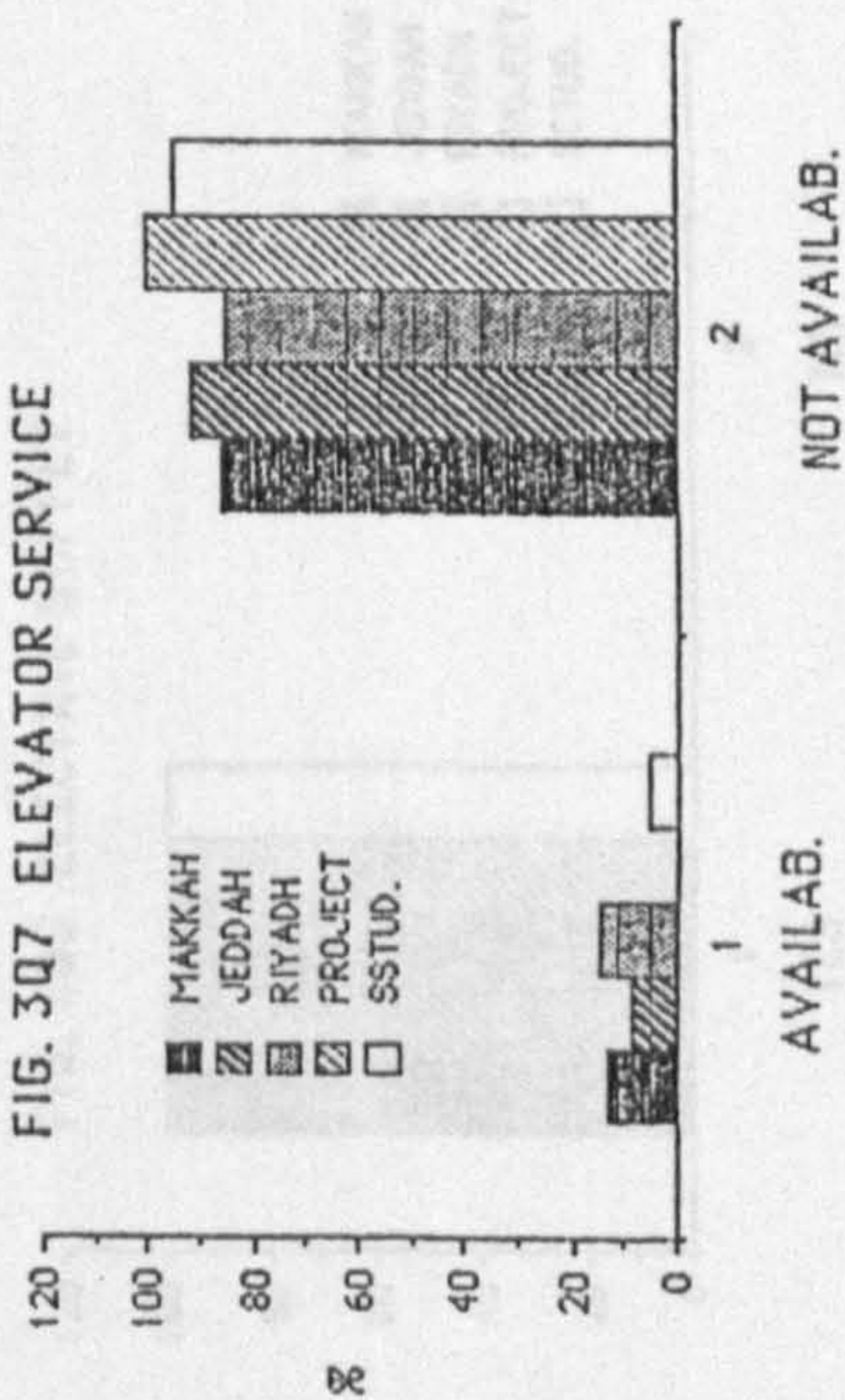


FIG. 3Q8 NEED OF ELEVATOR

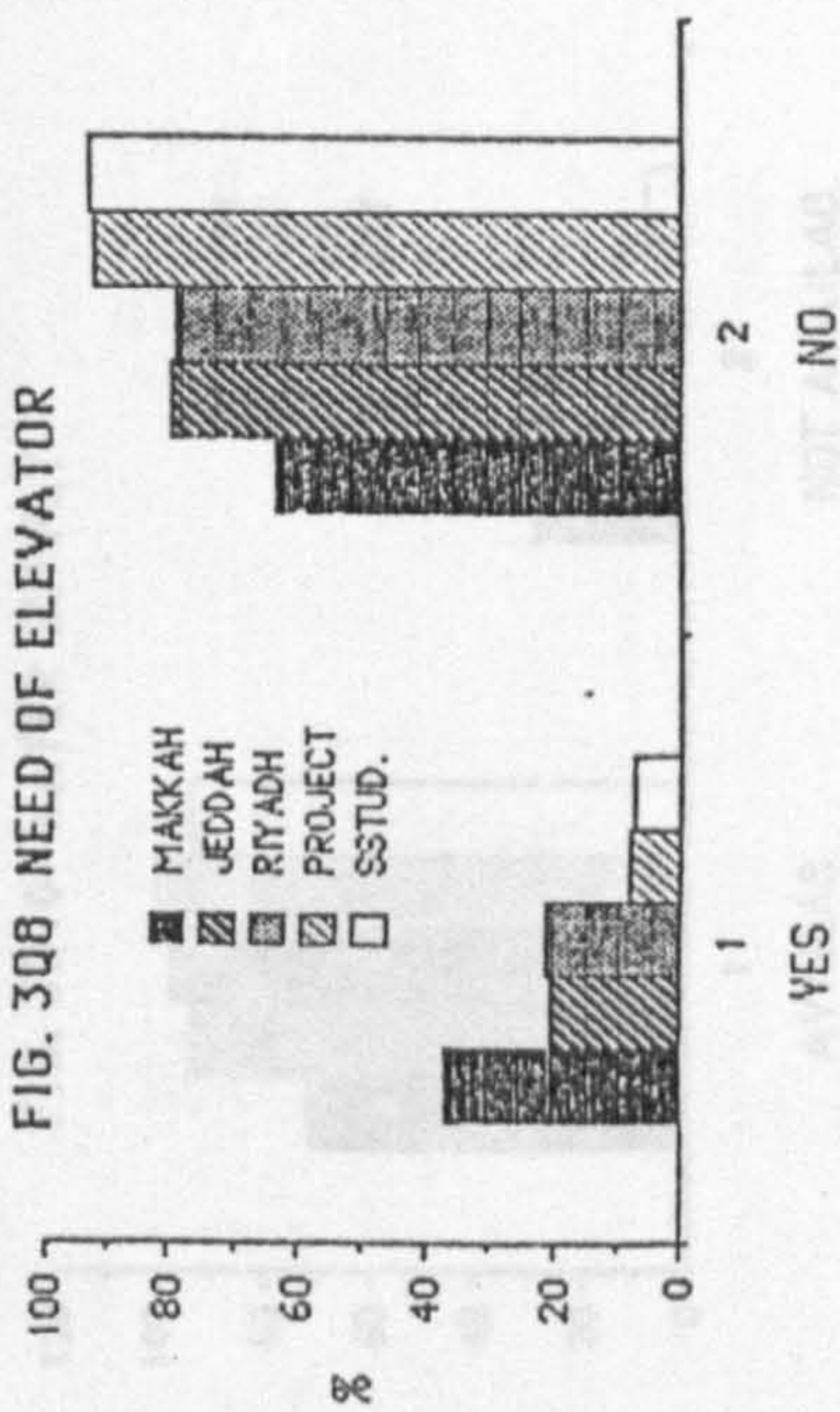


FIG. 1Q9 ELECTRIC SUPPLY

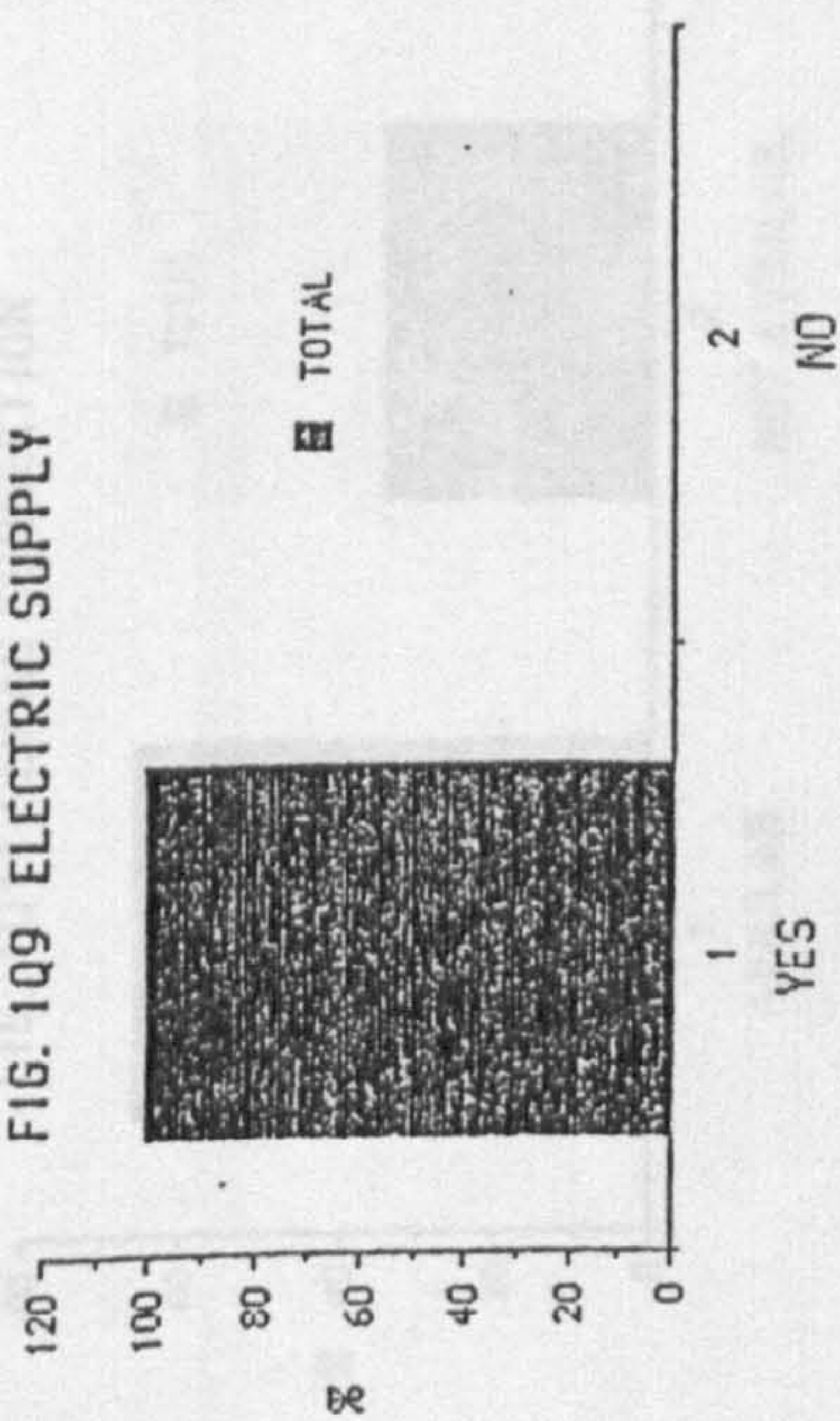


FIG. 1Q10 WATER SUPPLY

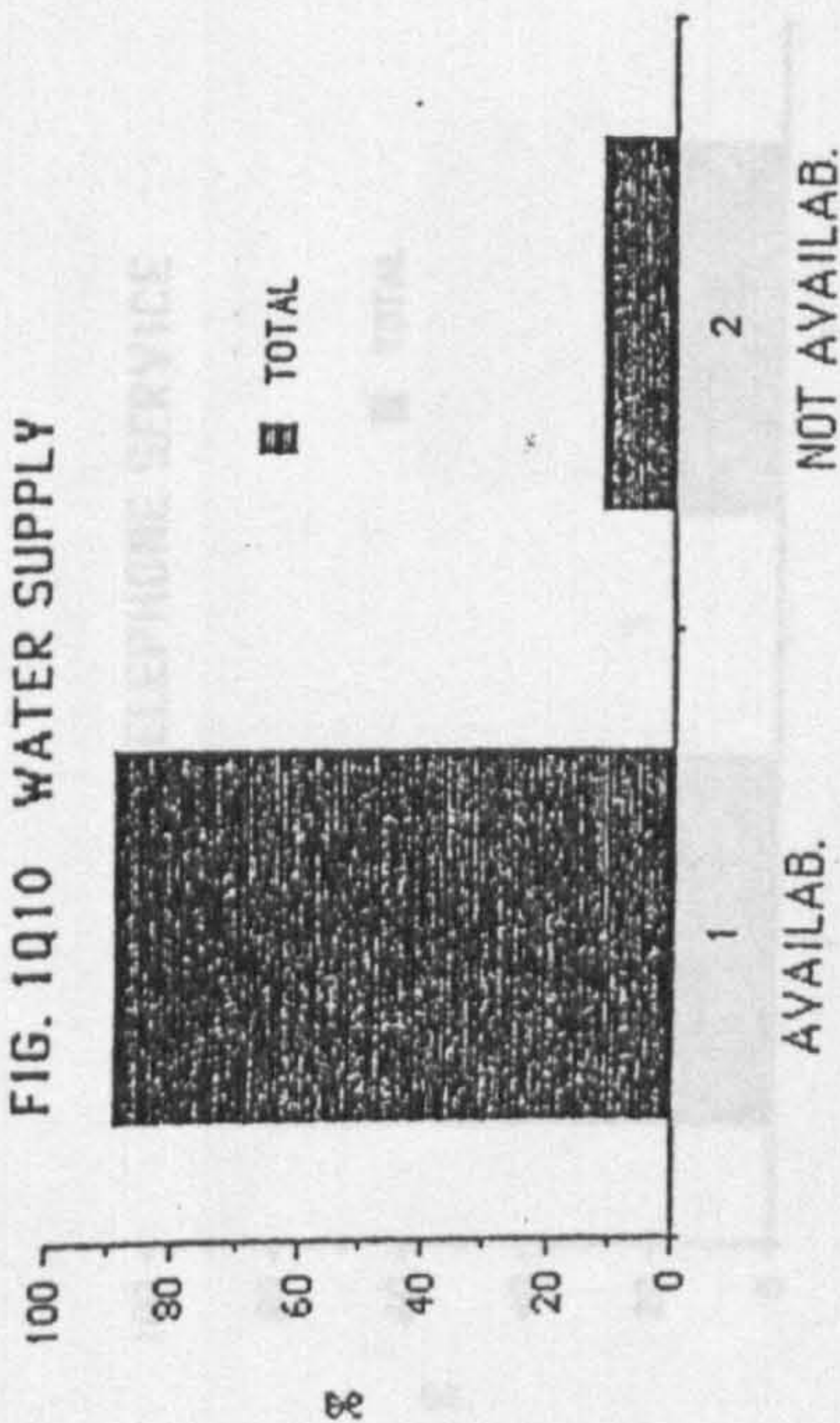


FIG. 2Q9 ELECTRIC SUPPLY

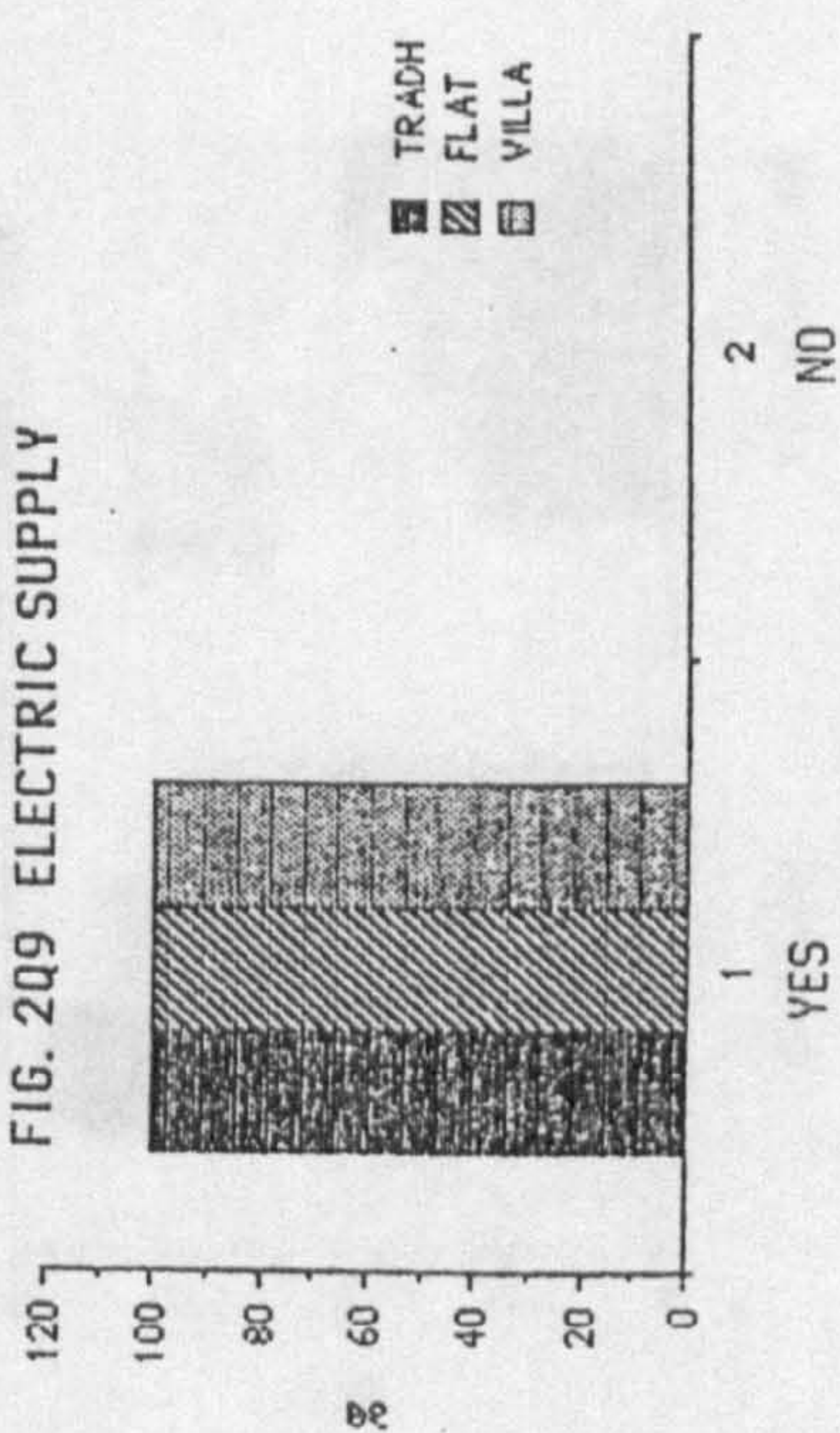


FIG. 2Q10 WATER SUPPLY

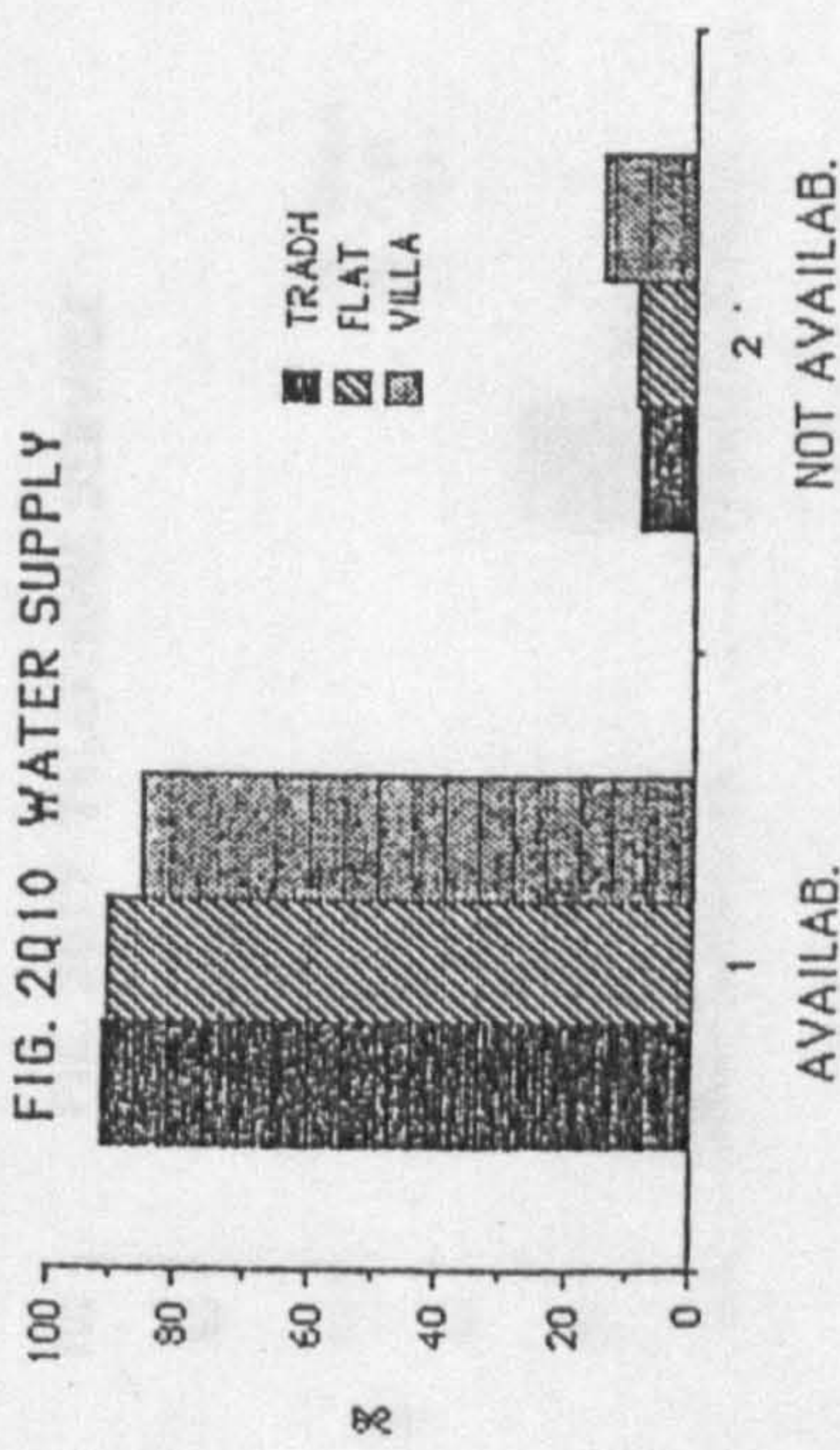


FIG. 3Q9 ELECTRIC SUPPLY

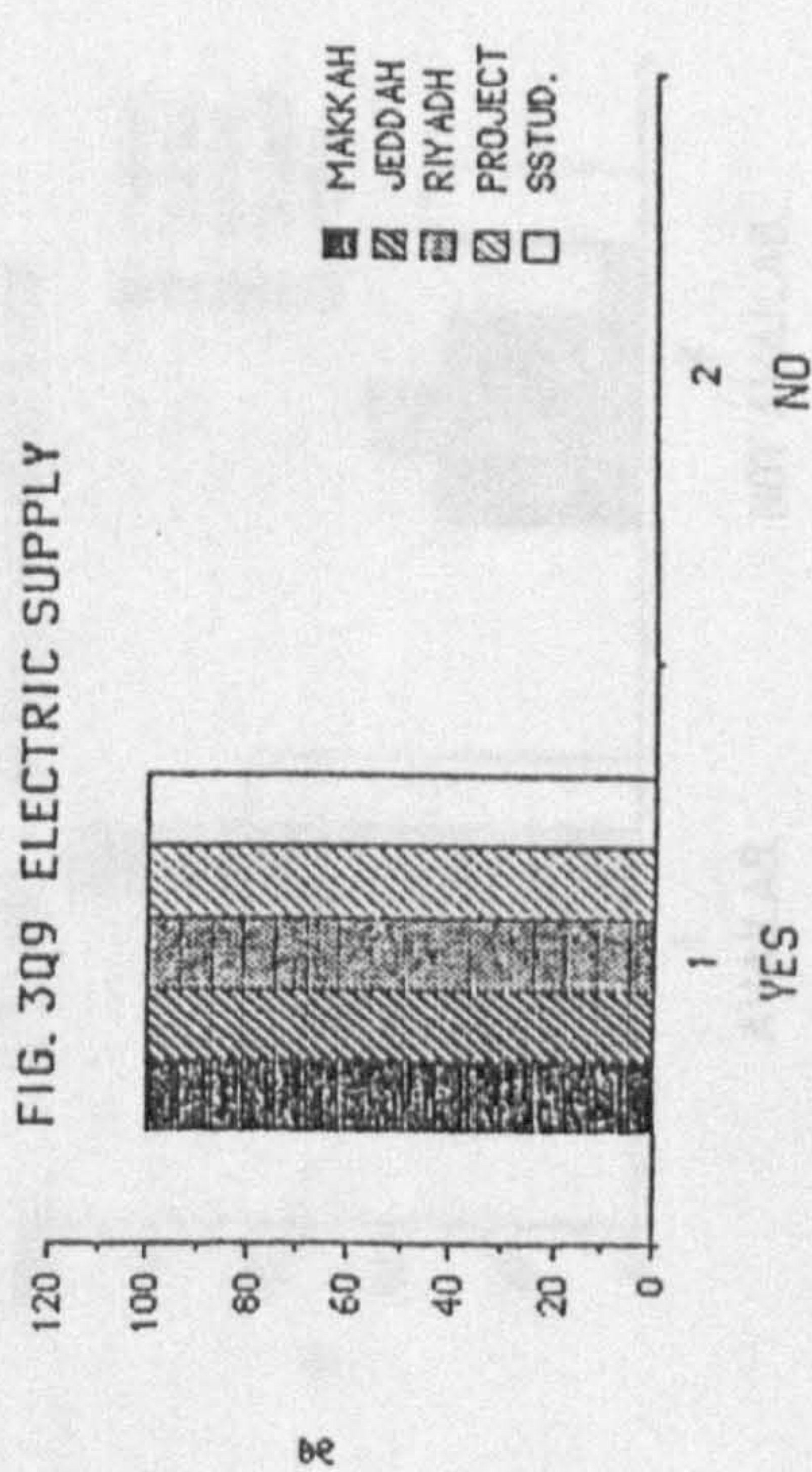


FIG. 3Q10 WATER SUPPLY

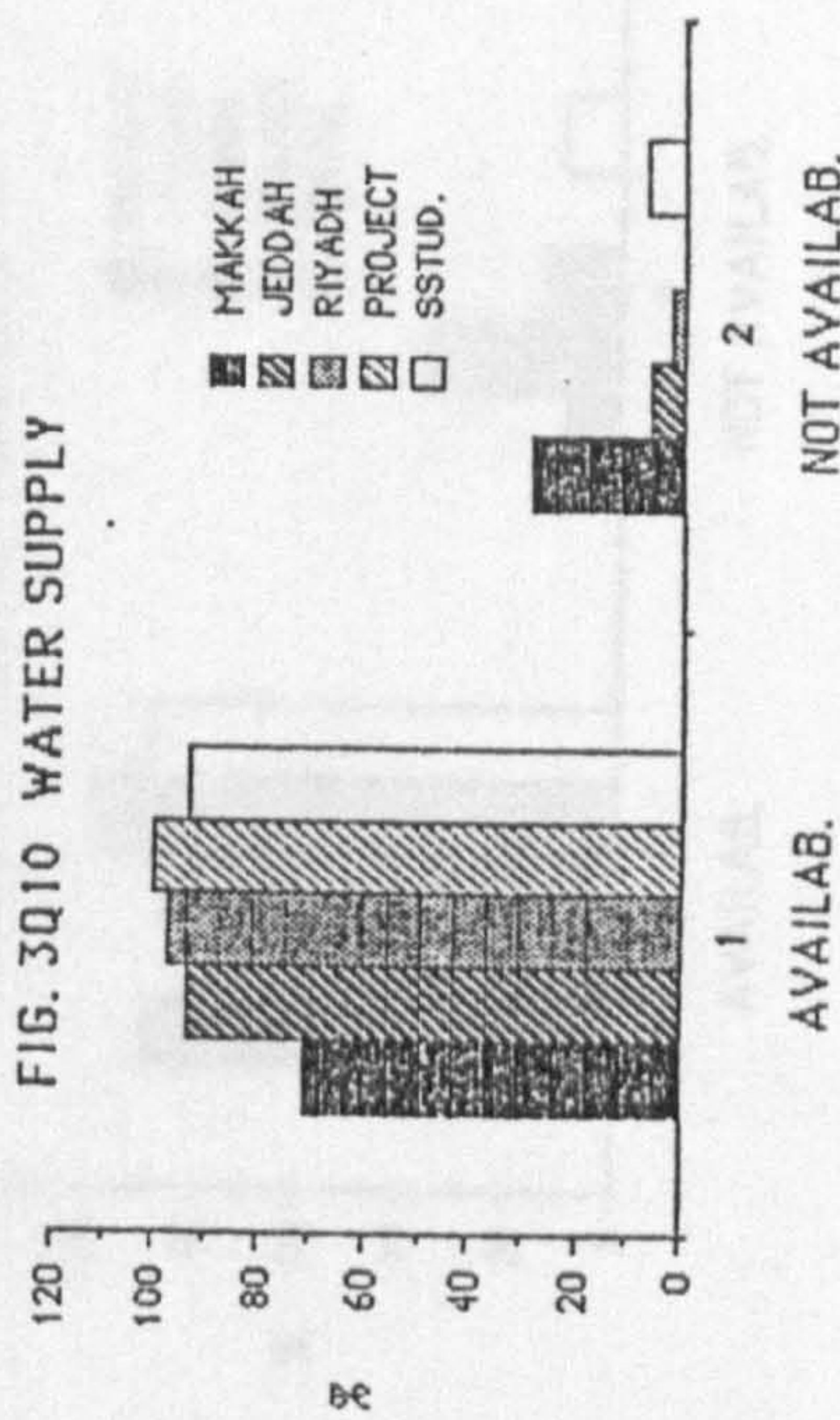


FIG. 1Q11 SEWAGE CONNECTION

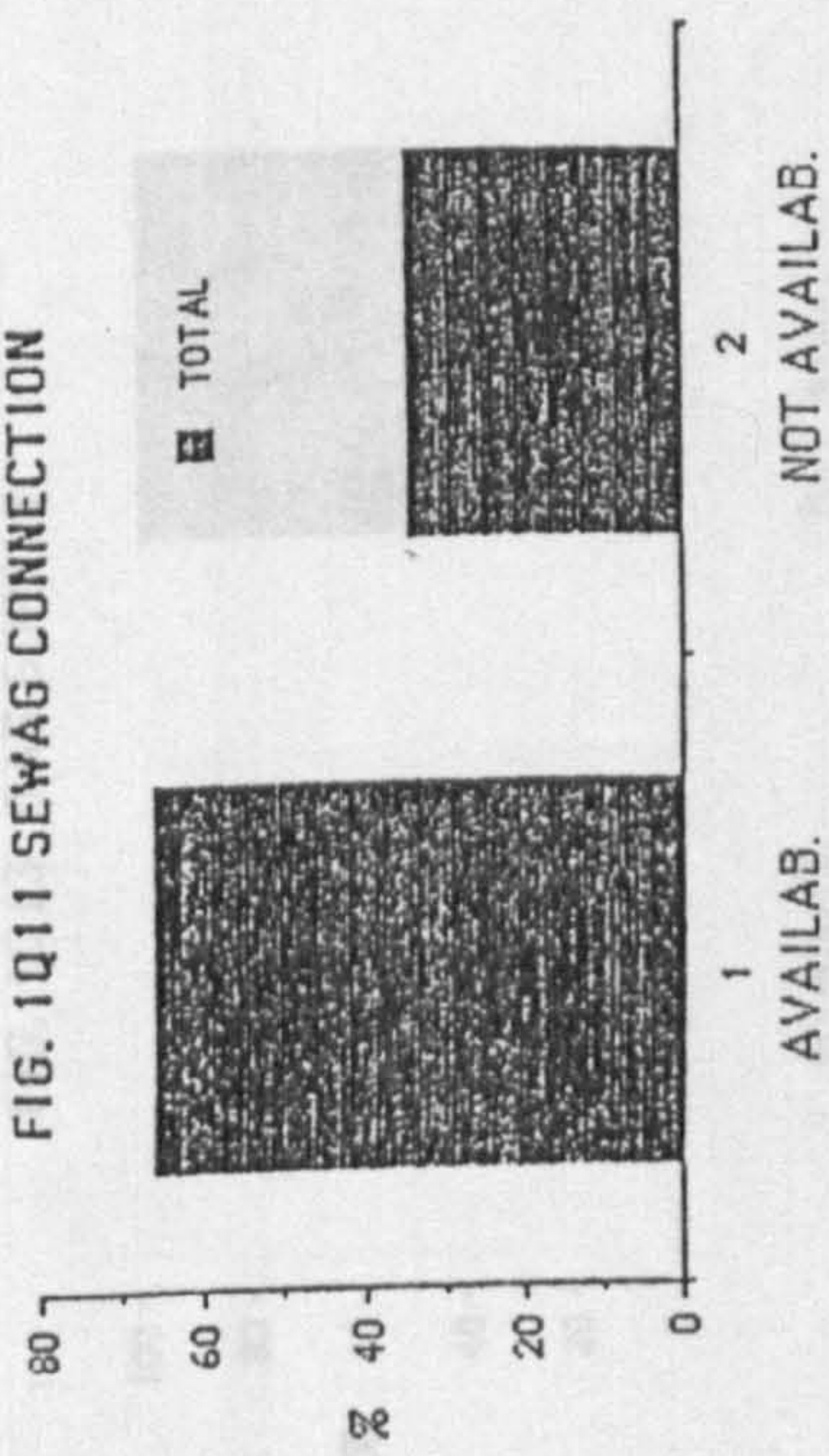


FIG. 1Q12 TELEPHONE SERVICE

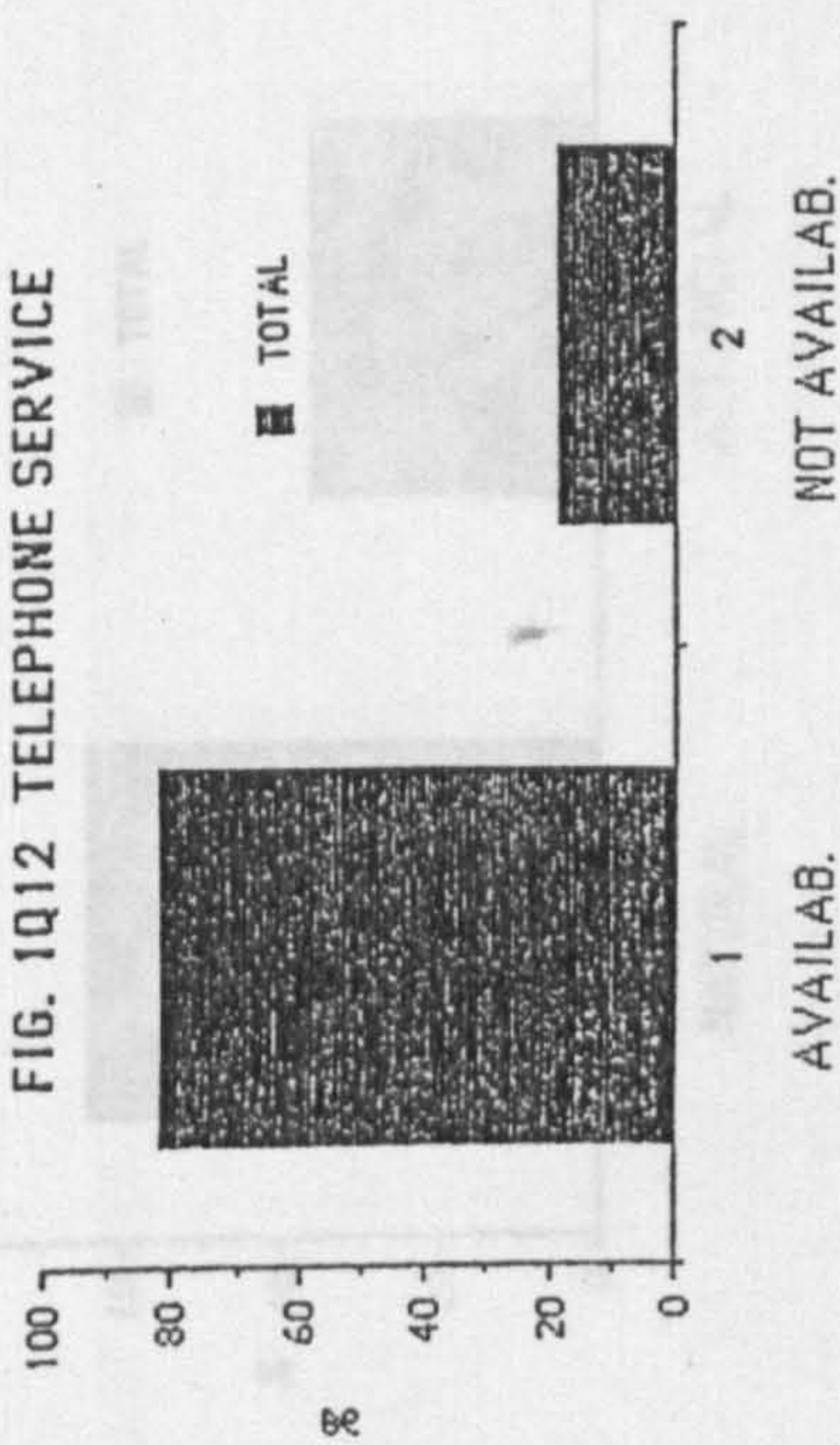


FIG. 2Q11 SEWAGE CONNECTION

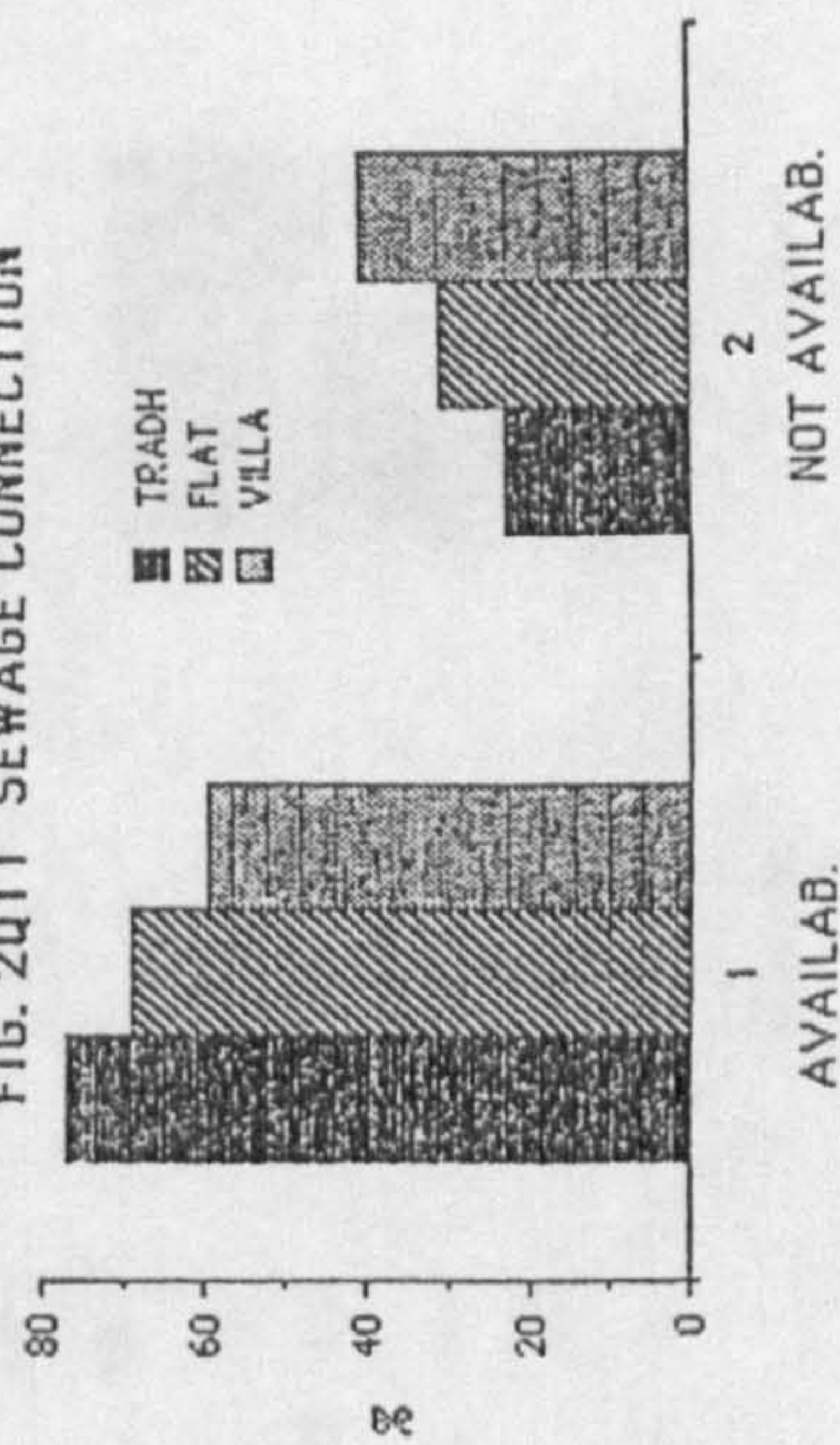


FIG. 2Q12 TELEPHONE SERVICE

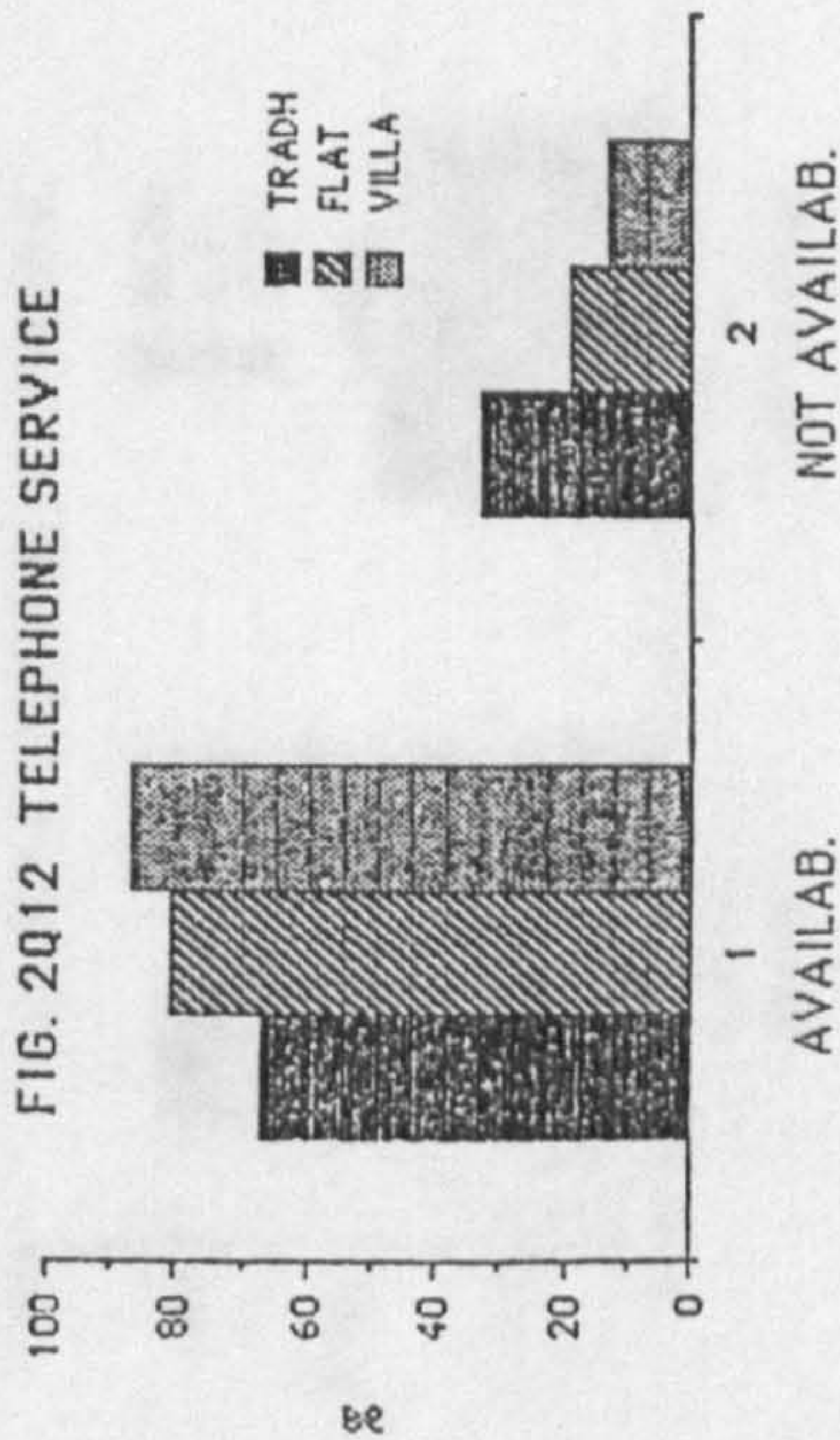


FIG. 3Q11 SEWAGE CONNECTION

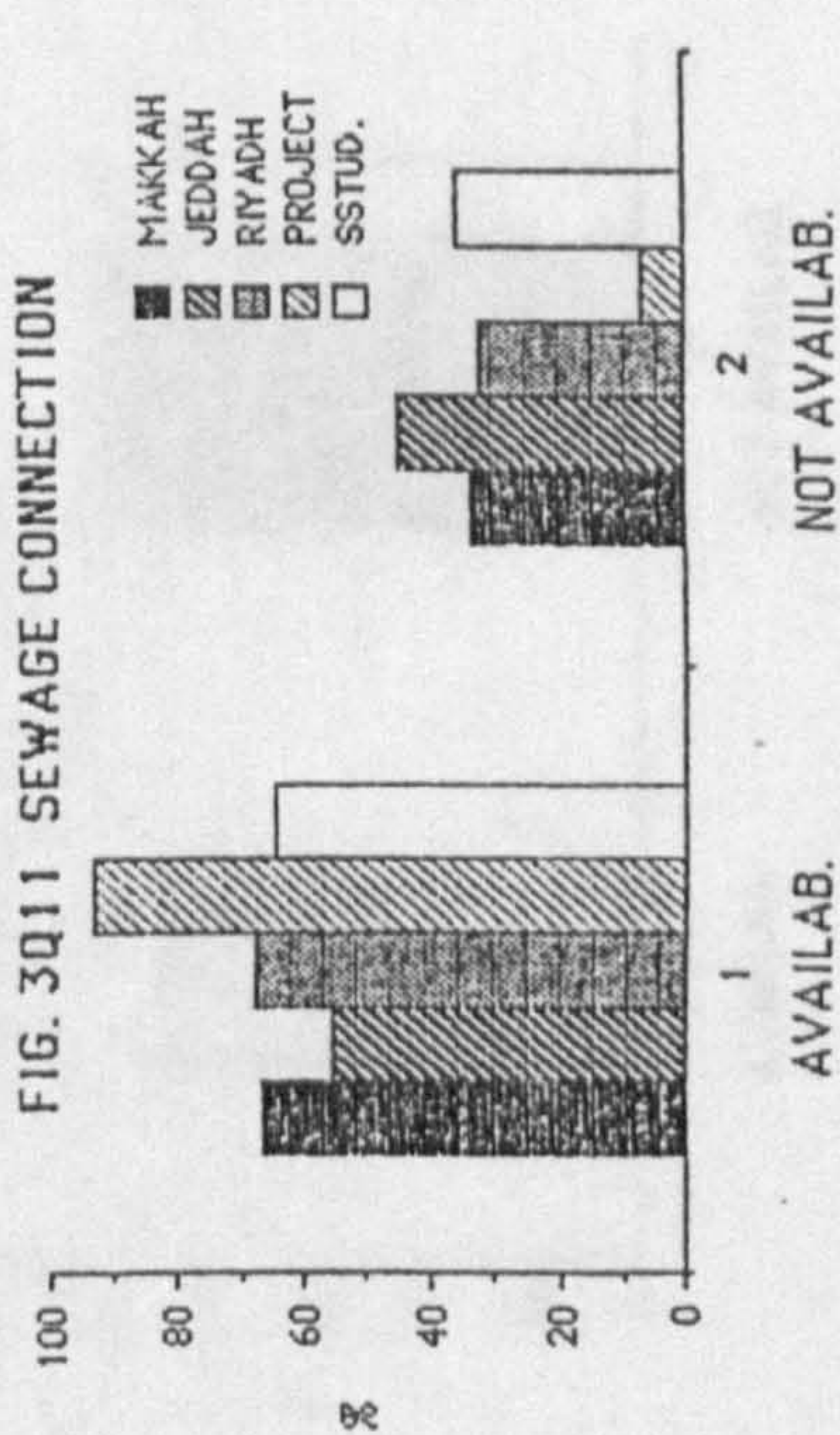


FIG. 3Q12 TELEPHON SERVICE

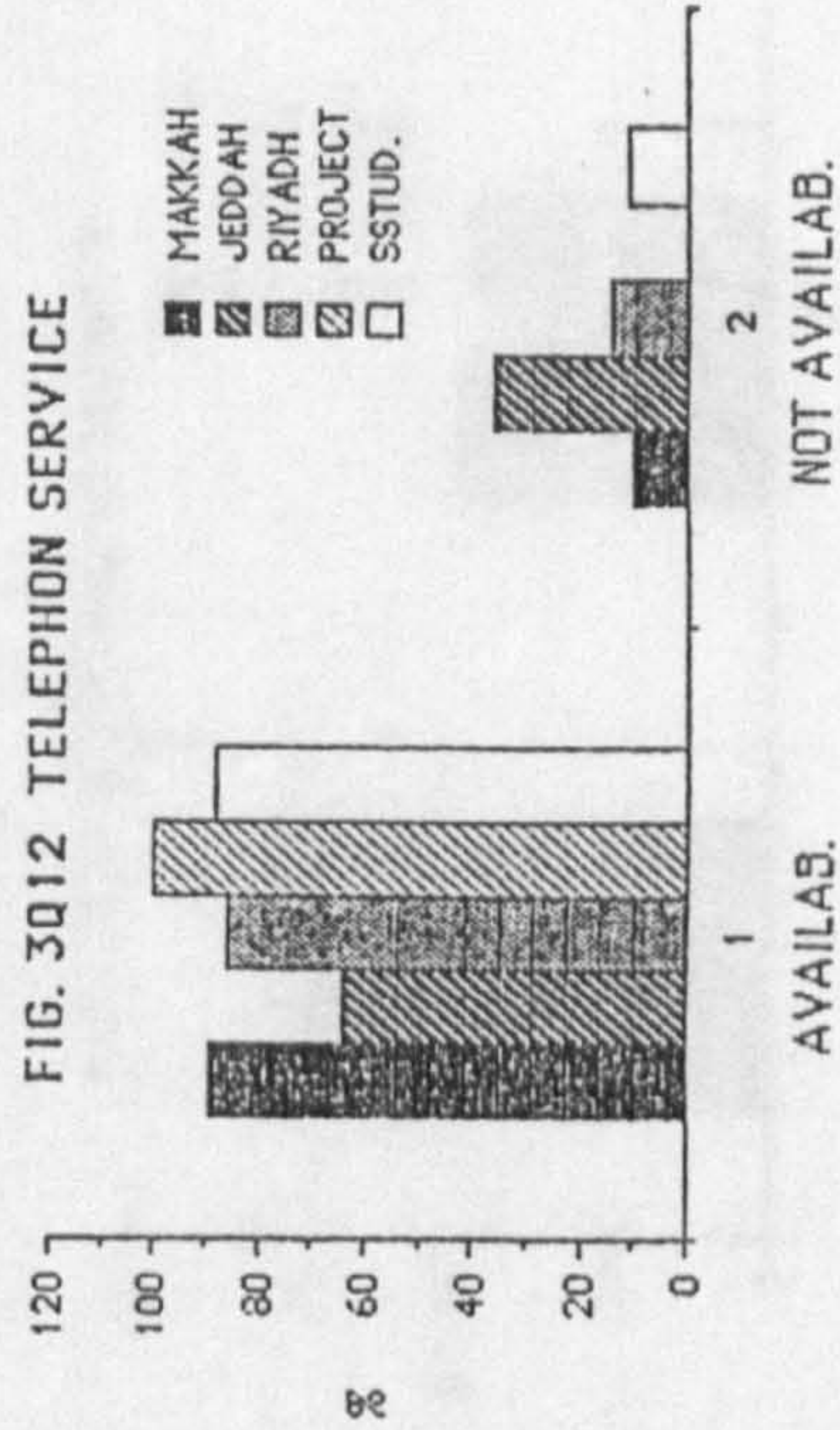


FIG. 1Q13 GAS SUPPLY

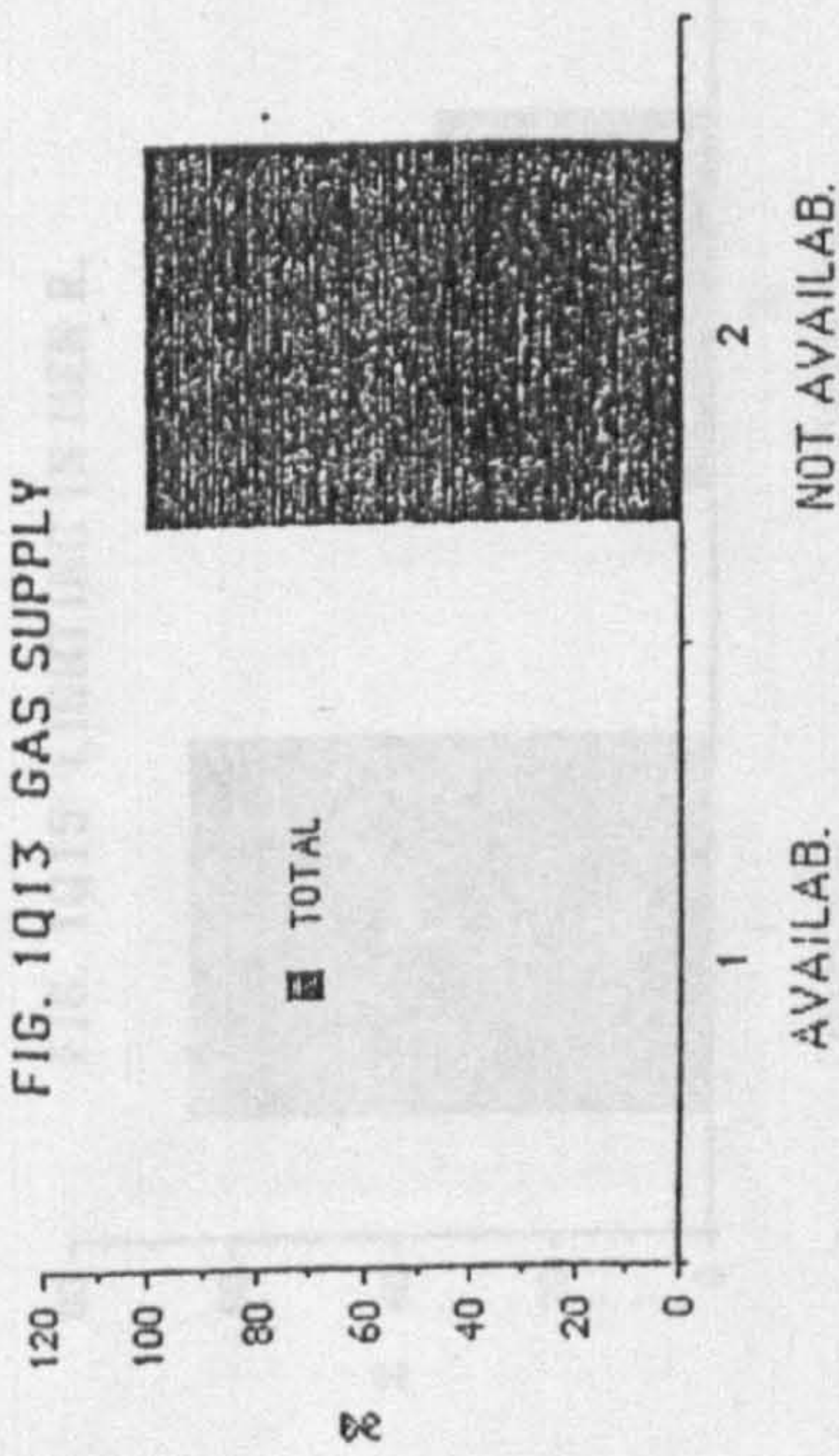


Fig. 1Q14 LIGHTING IN LIVING R.

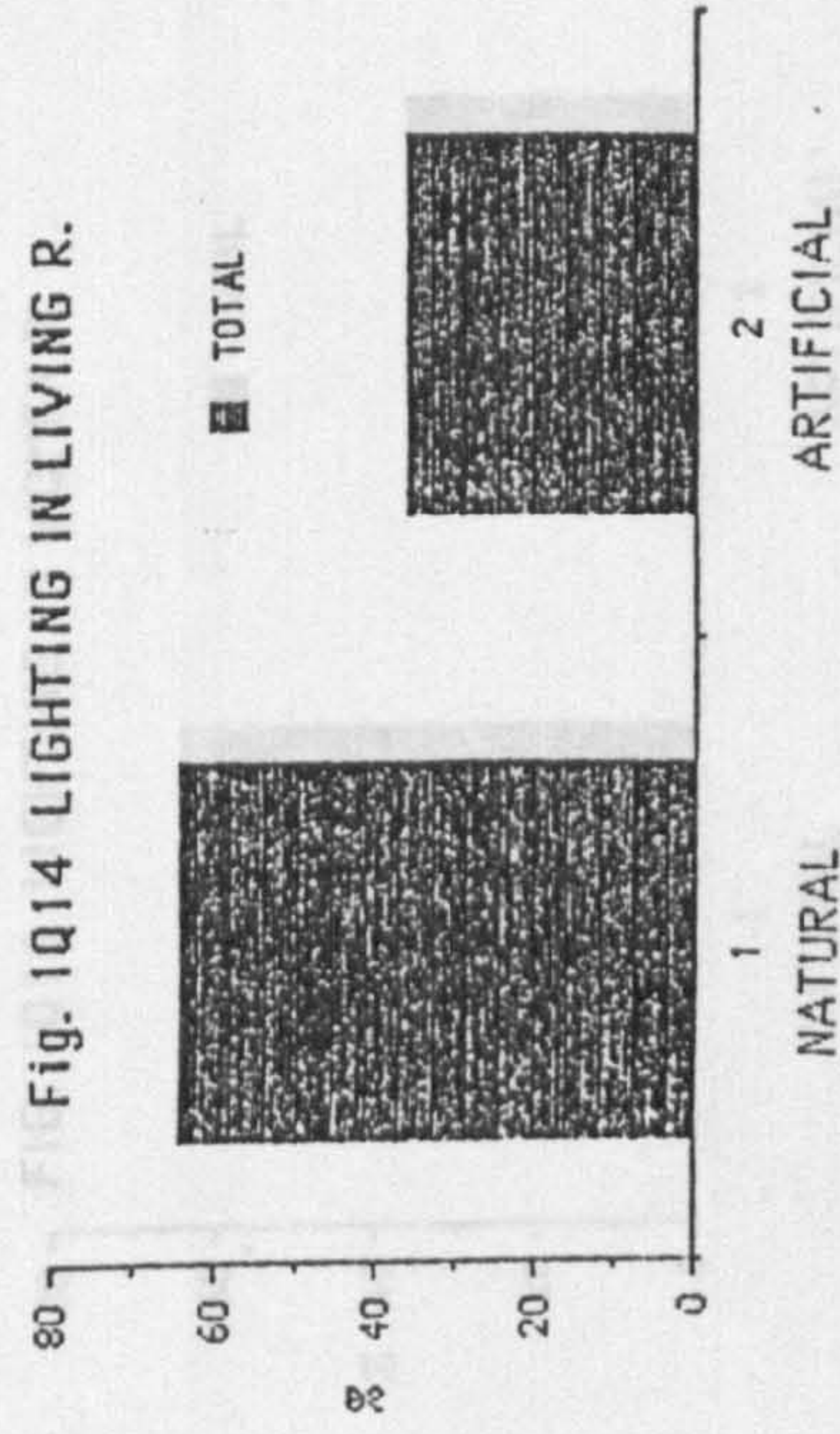


FIG. 2Q13 GAS SUPPLY

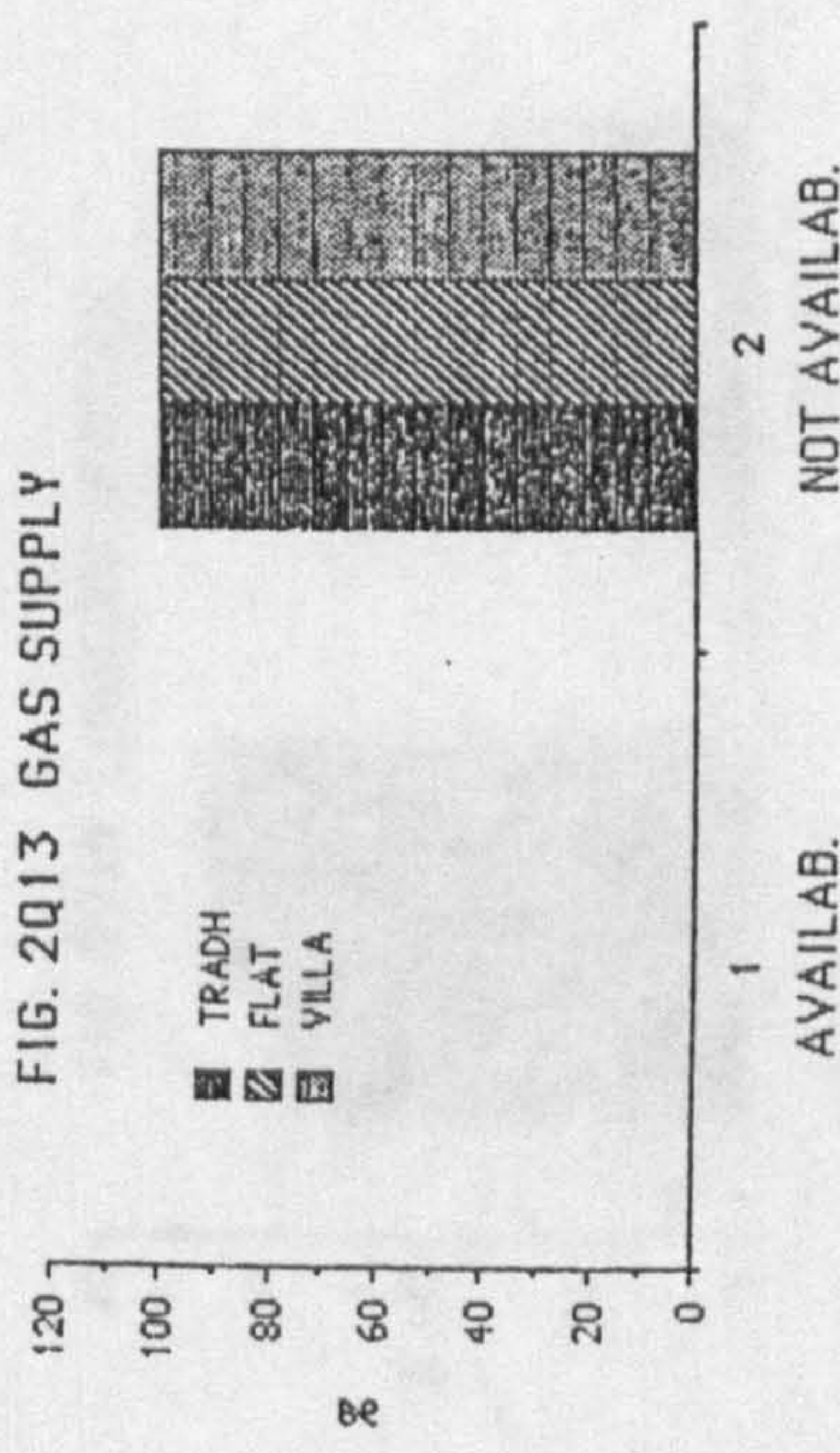


FIG. 2Q14 LIGHTING IN LIVING R.

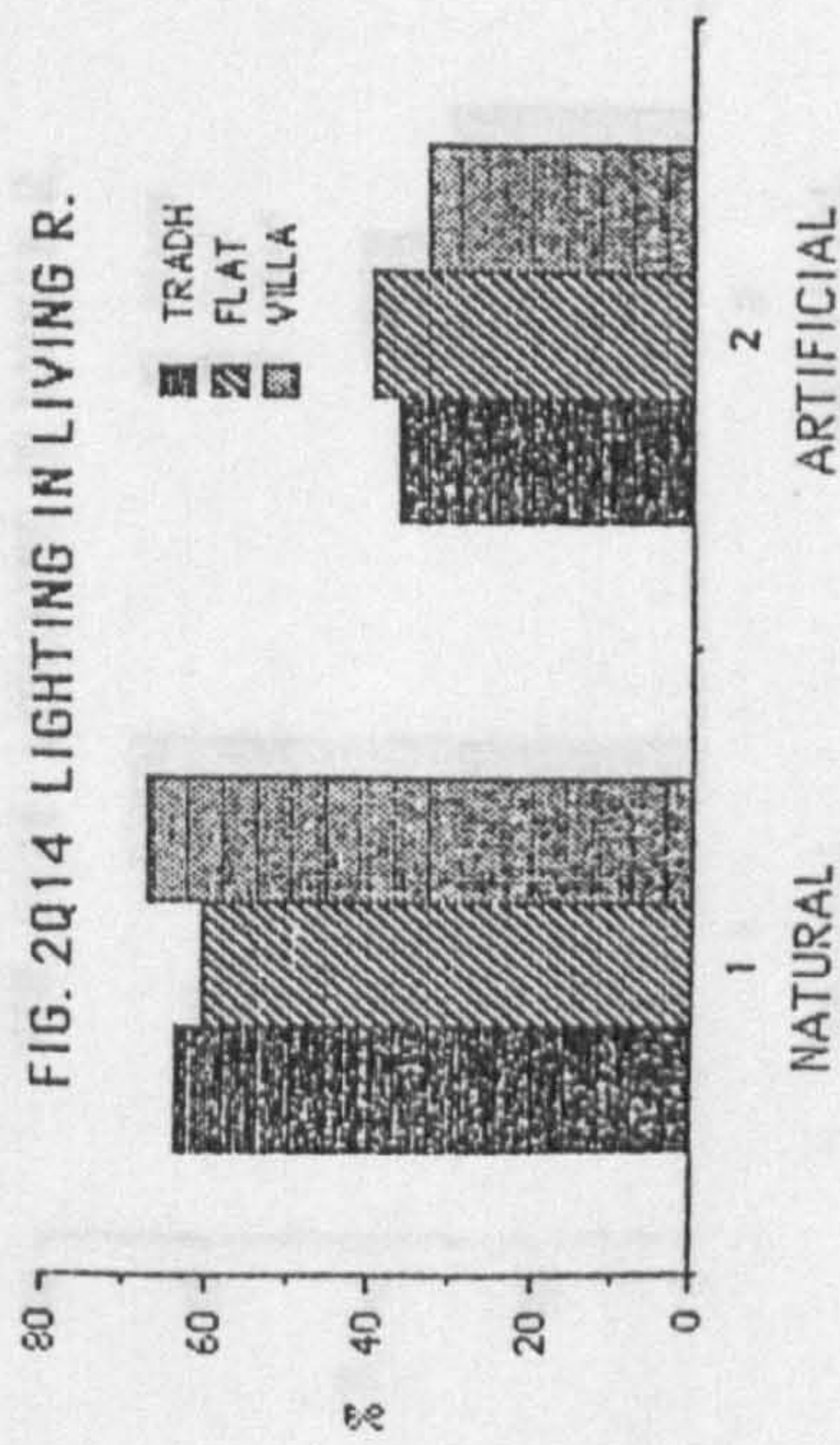


FIG. 3Q13 GAS SUPPLY

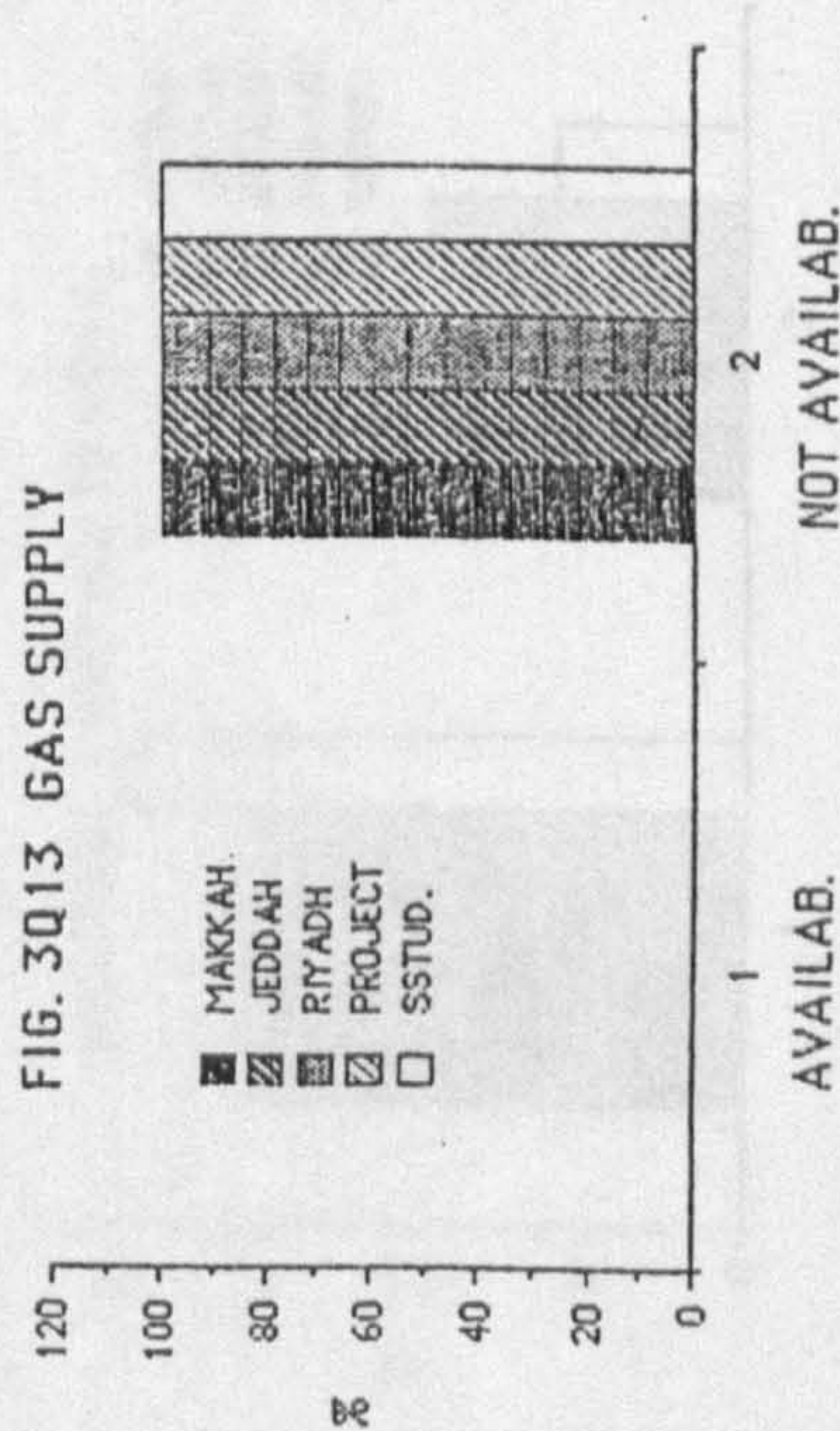


FIG. 3Q14 LIGHTING IN LIVING R.

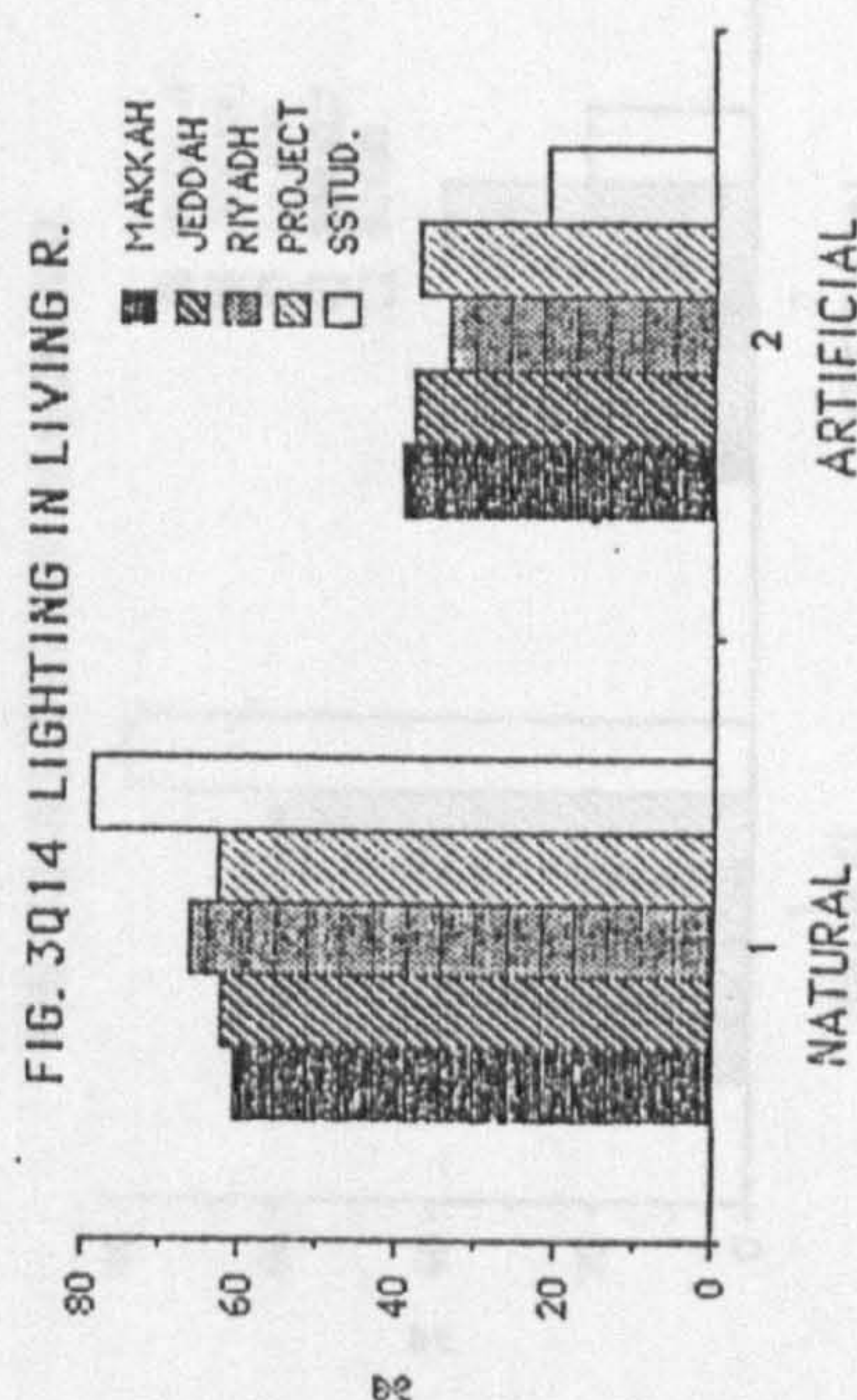


FIG. 1Q15 LIGHTING IN MEN R.

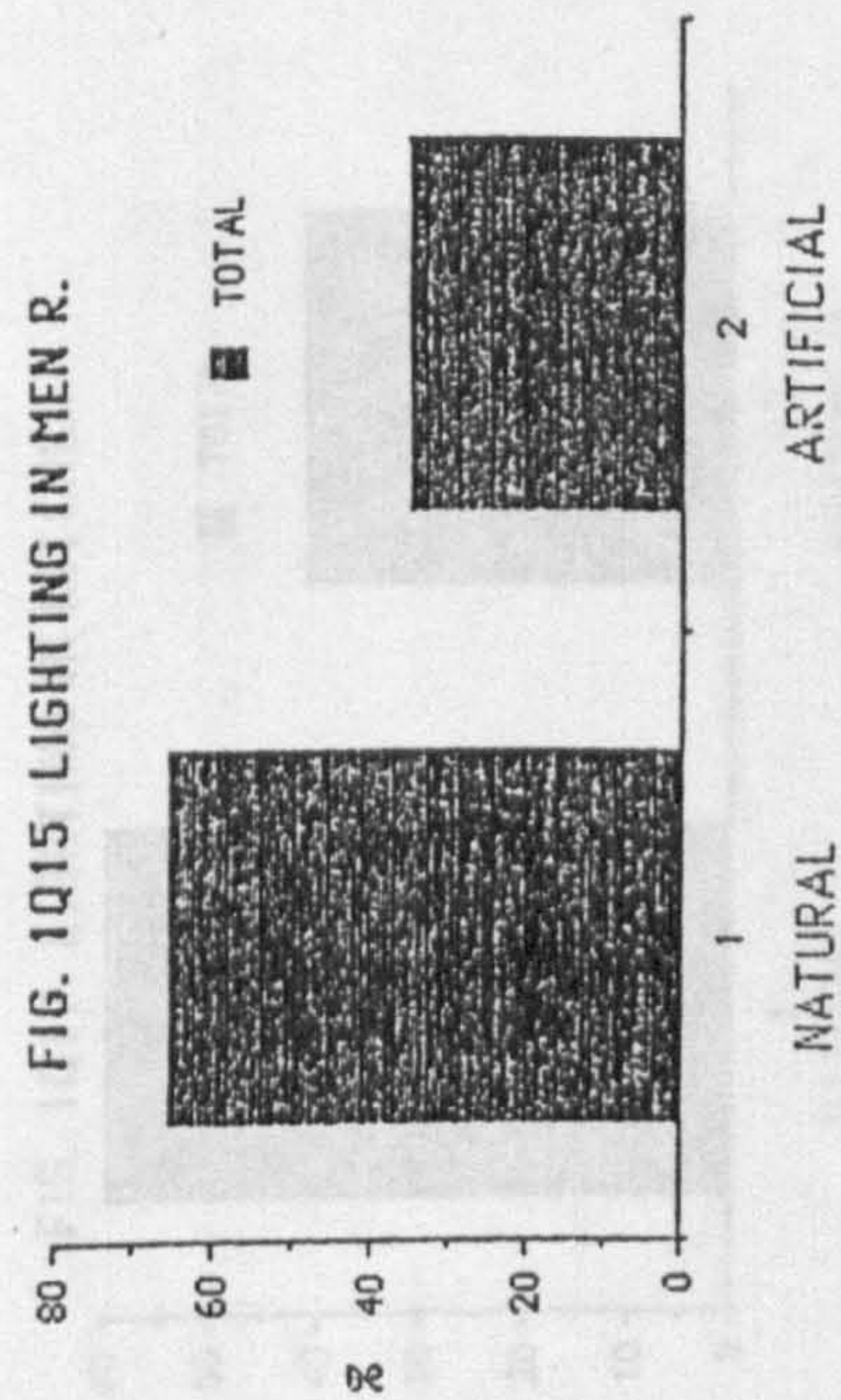


FIG. 1Q16 LIGHTING IN WOMEN R.

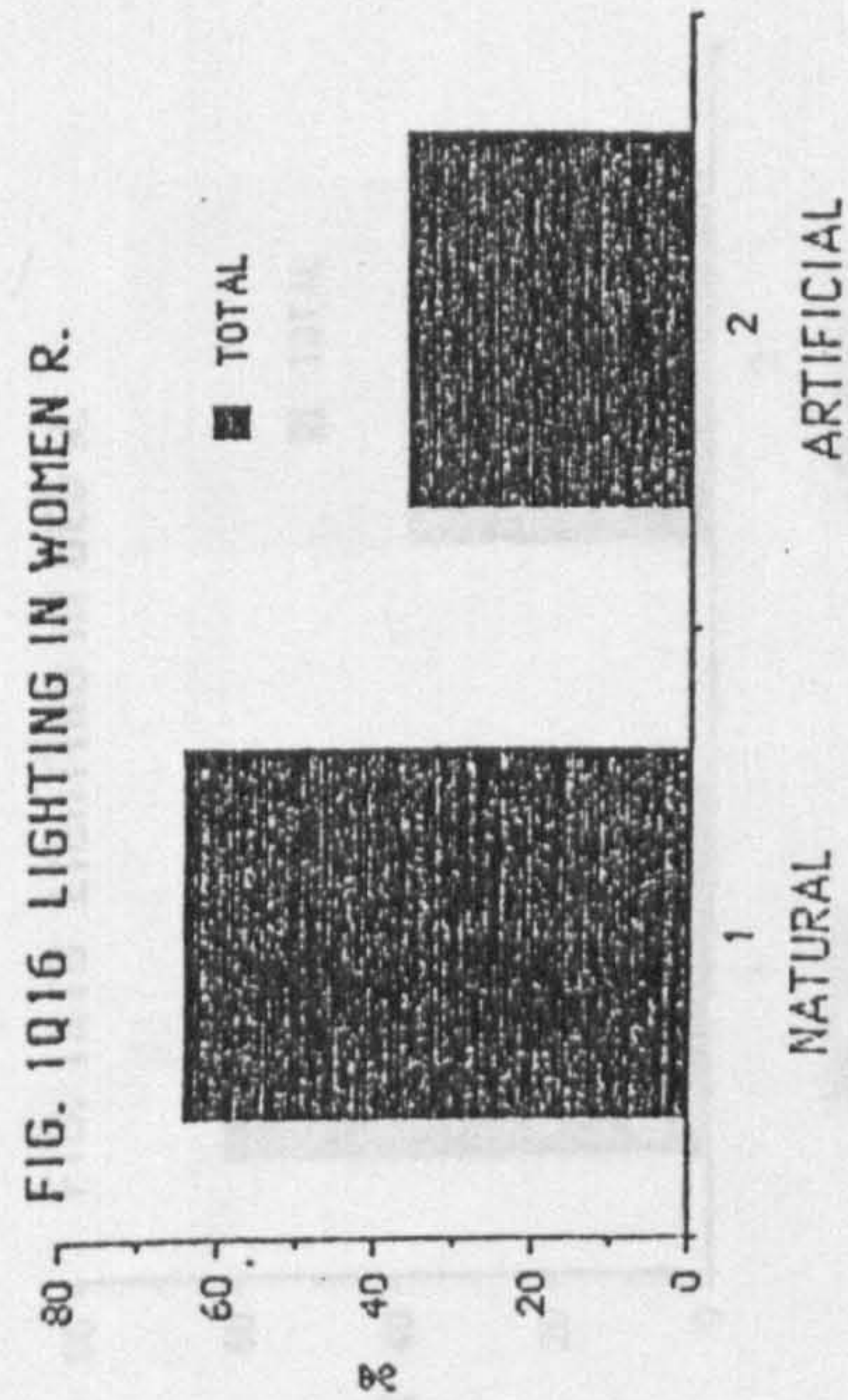


FIG. 2Q15 LIGHTING IN MEN R.

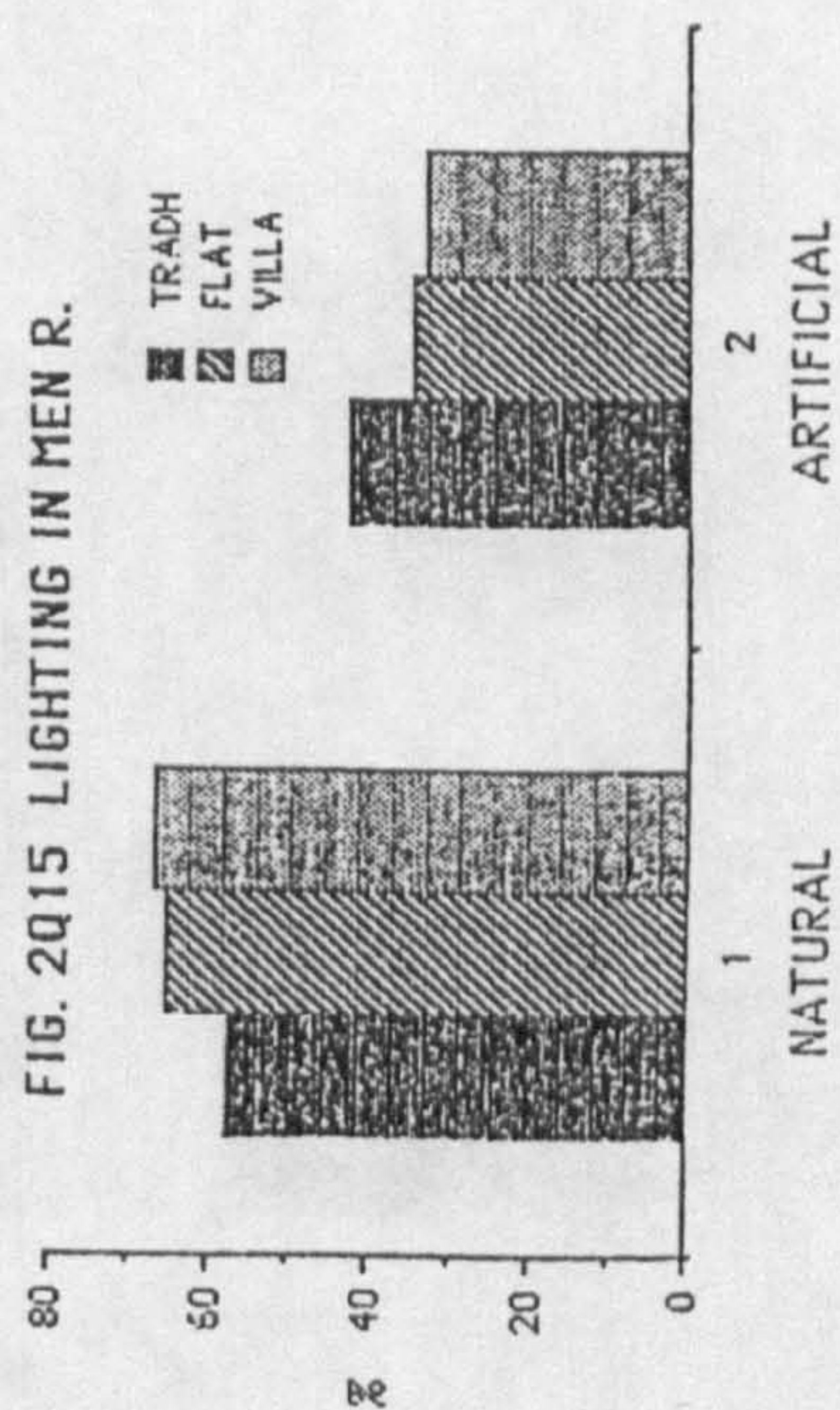


FIG. 2Q16 LIGHTING IN WOMEN R.

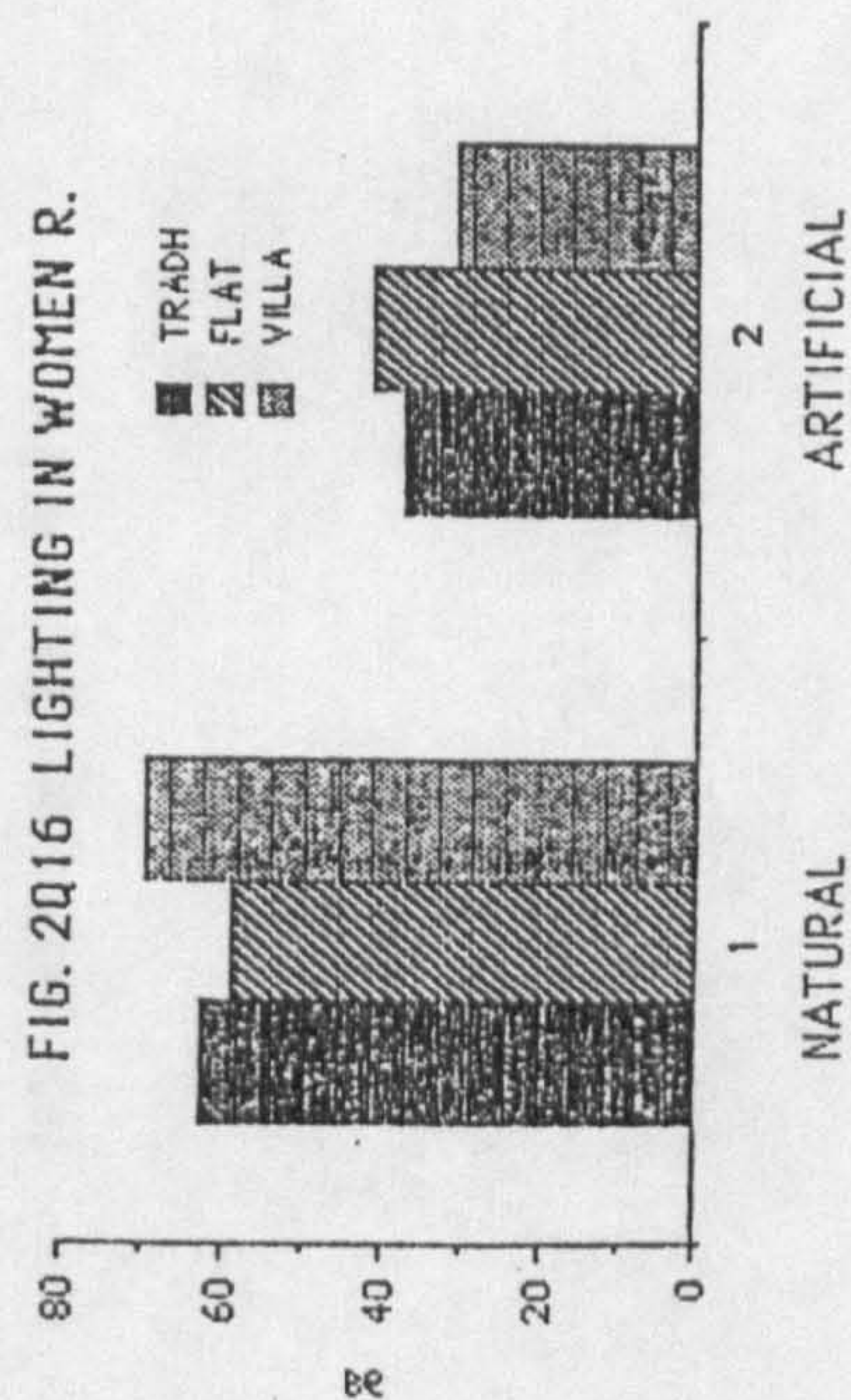


FIG. 3Q15 LIGHTING IN MEN R.

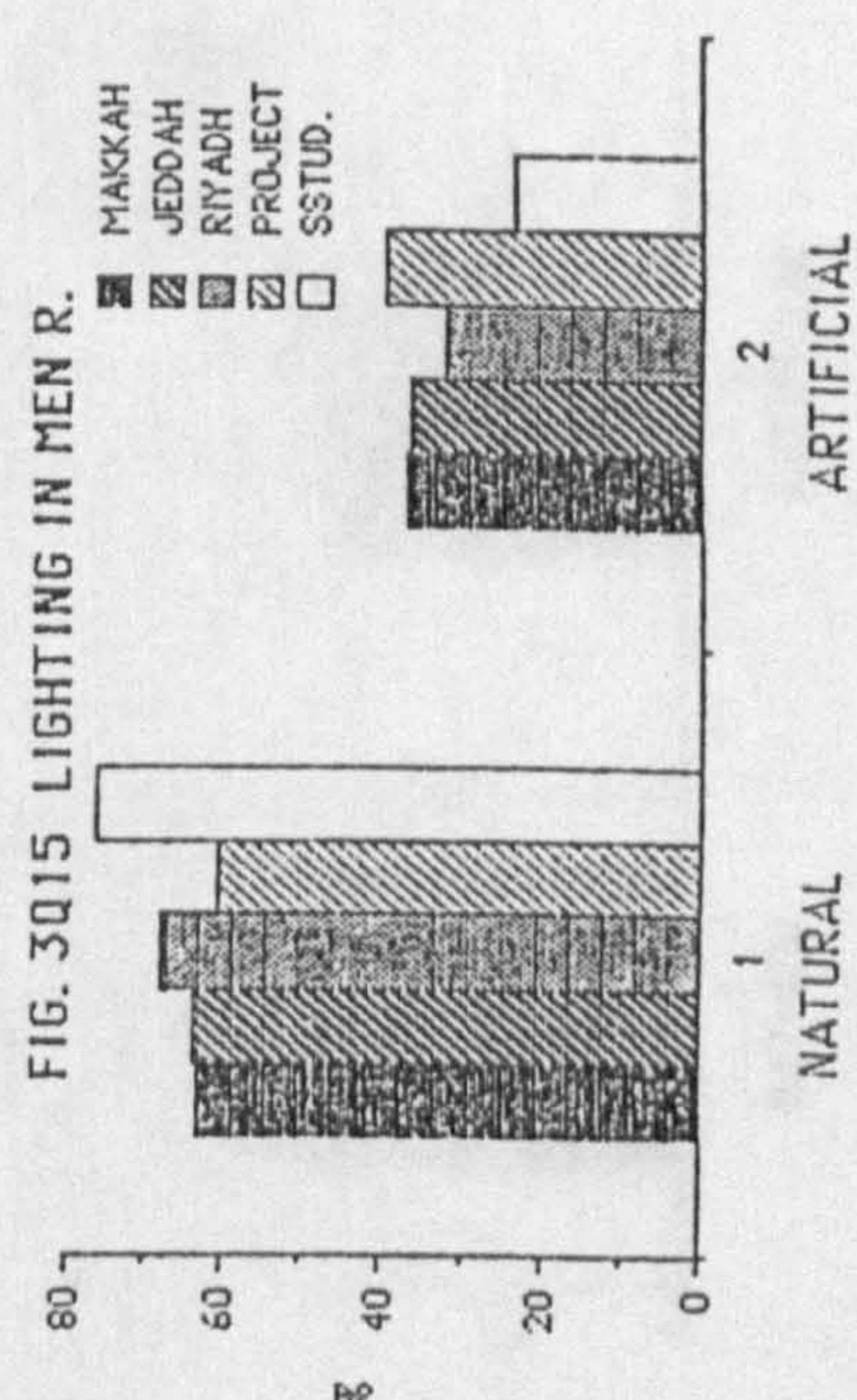


FIG. 3Q16 LIGHTING IN WOMEN R.

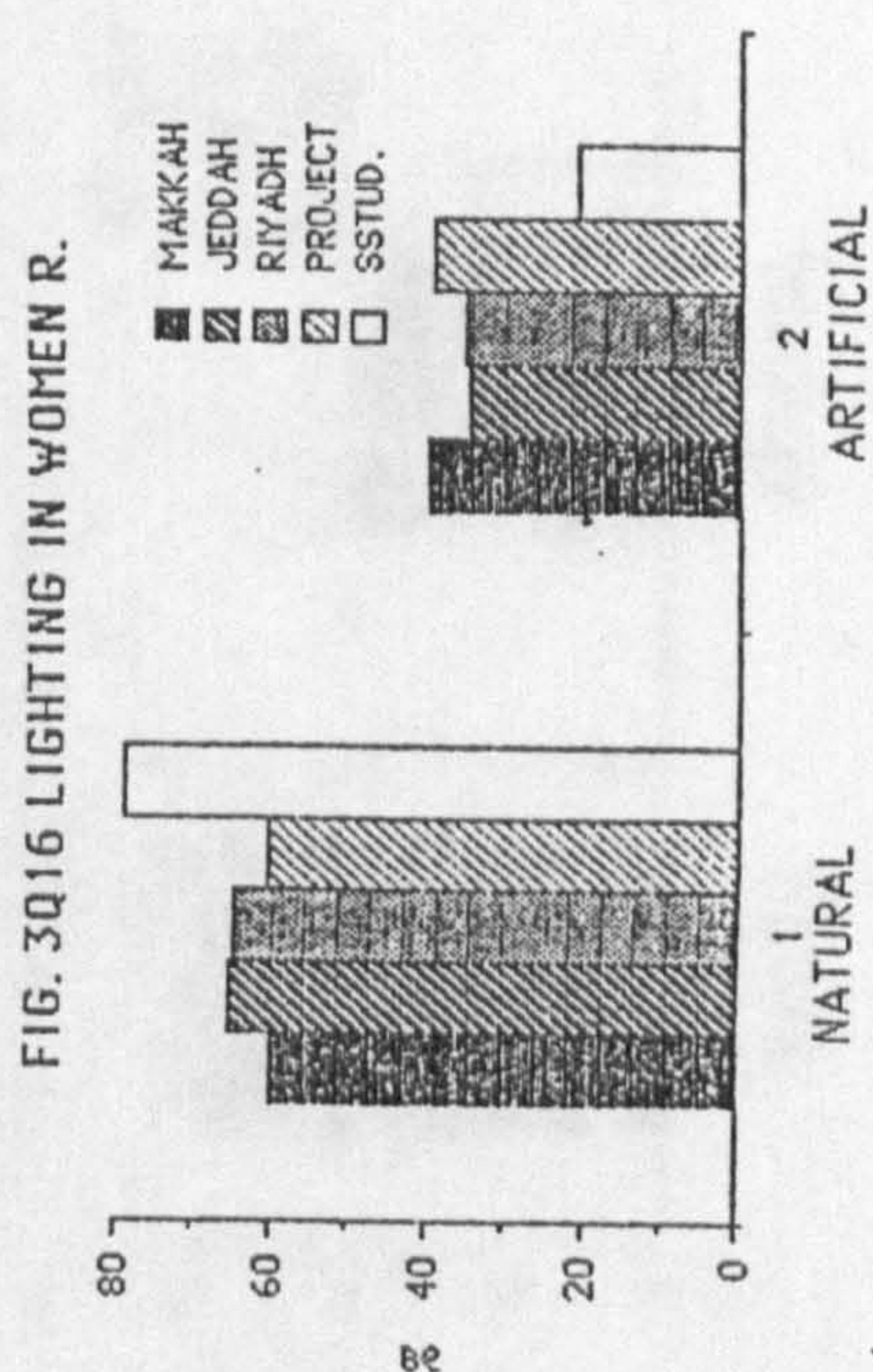


FIG. 1Q17 LIGHTING IN KITCHEN

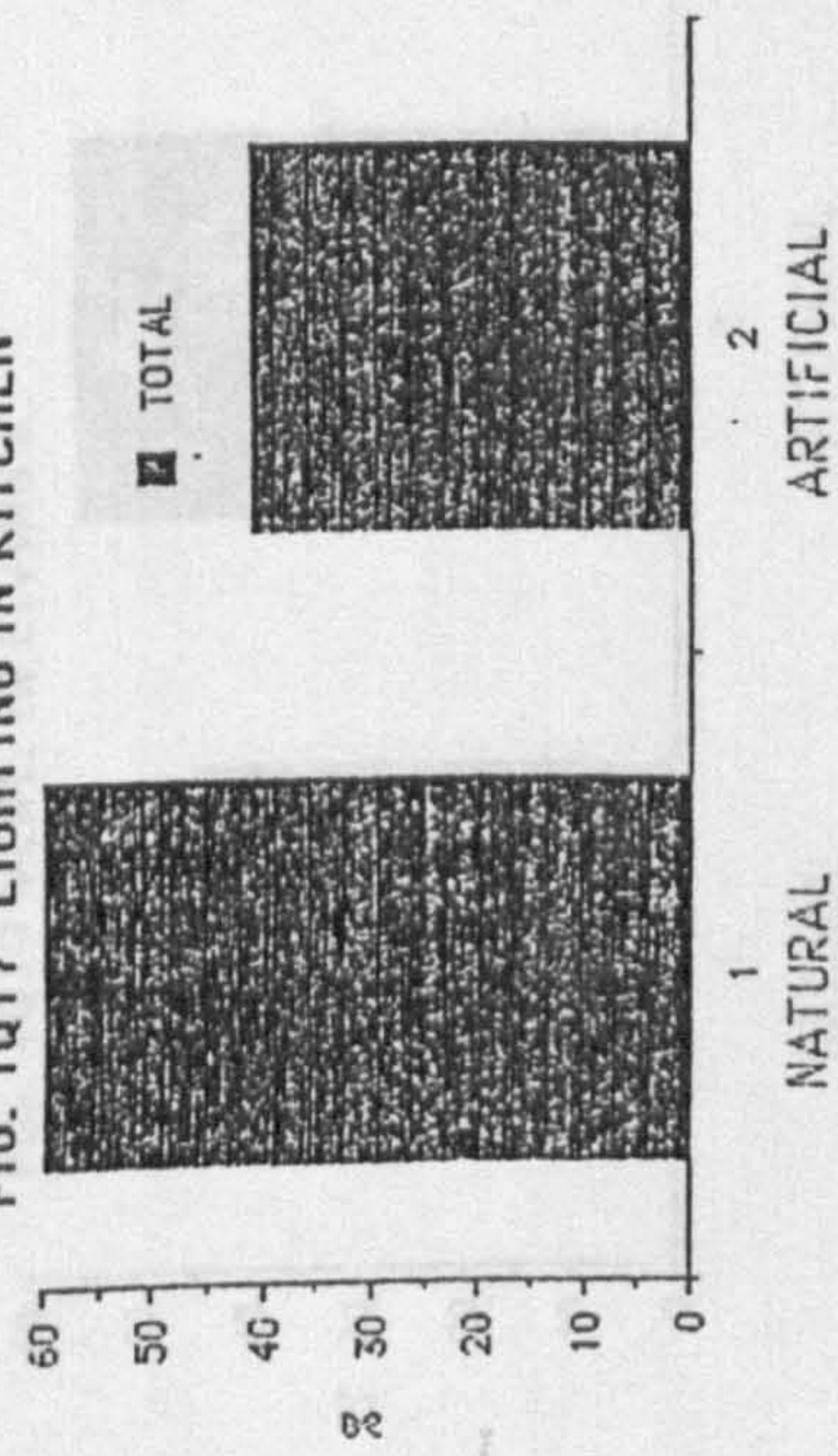


FIG. 2Q17 LIGHTING IN KITCHEN

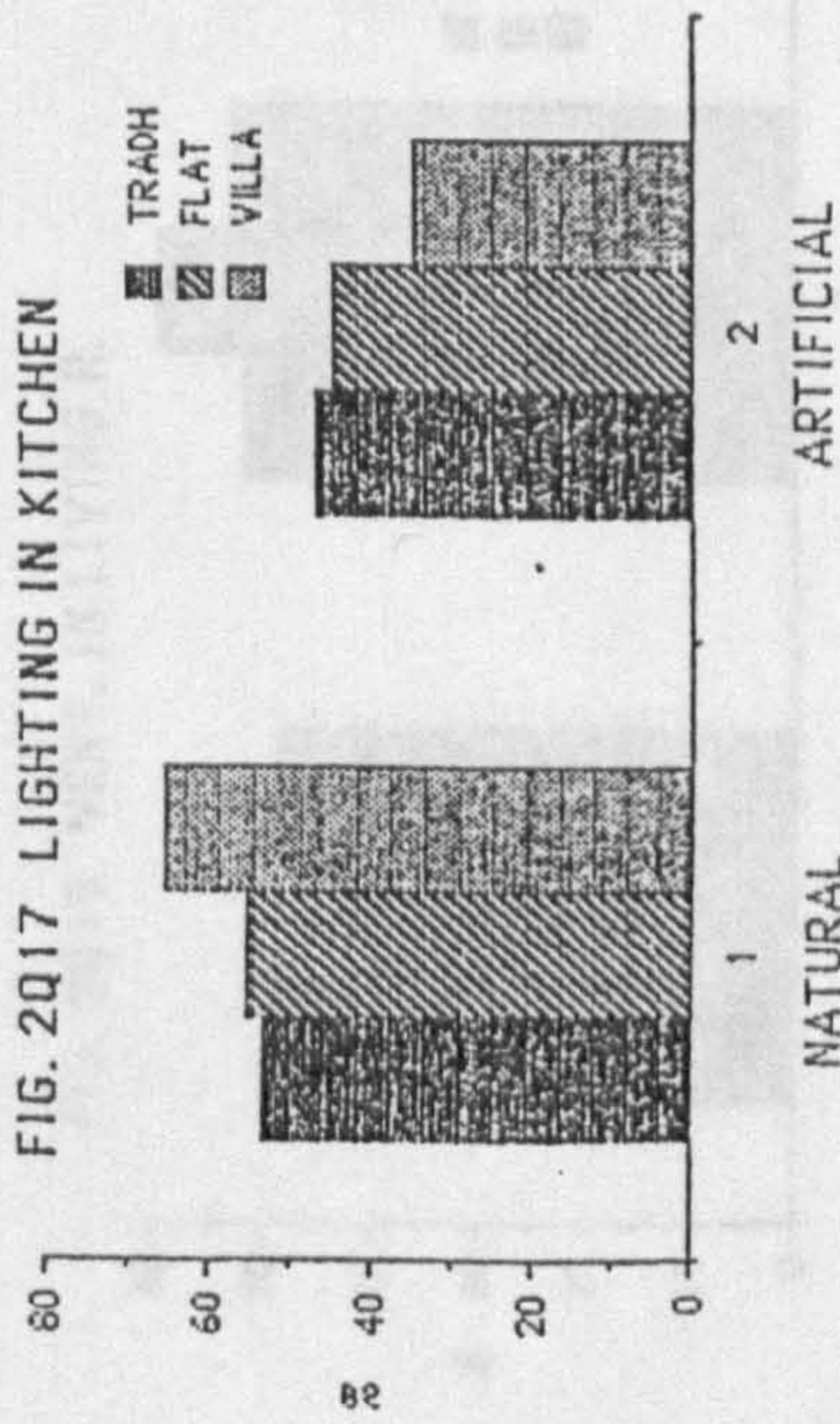


FIG. 3Q17 LIGHTING IN KITCHEN

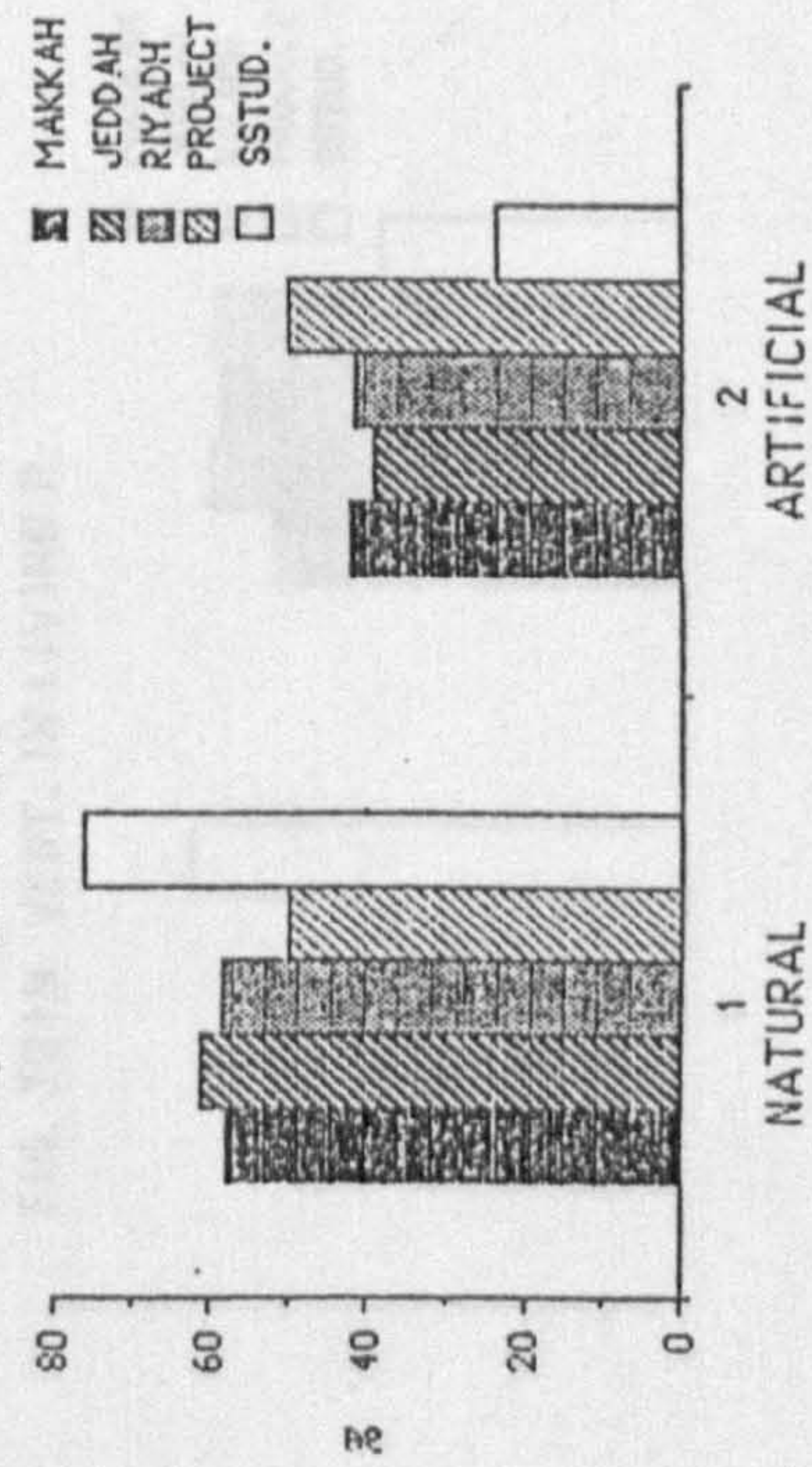


FIG. 1Q18 LIGHTING IN BED R.

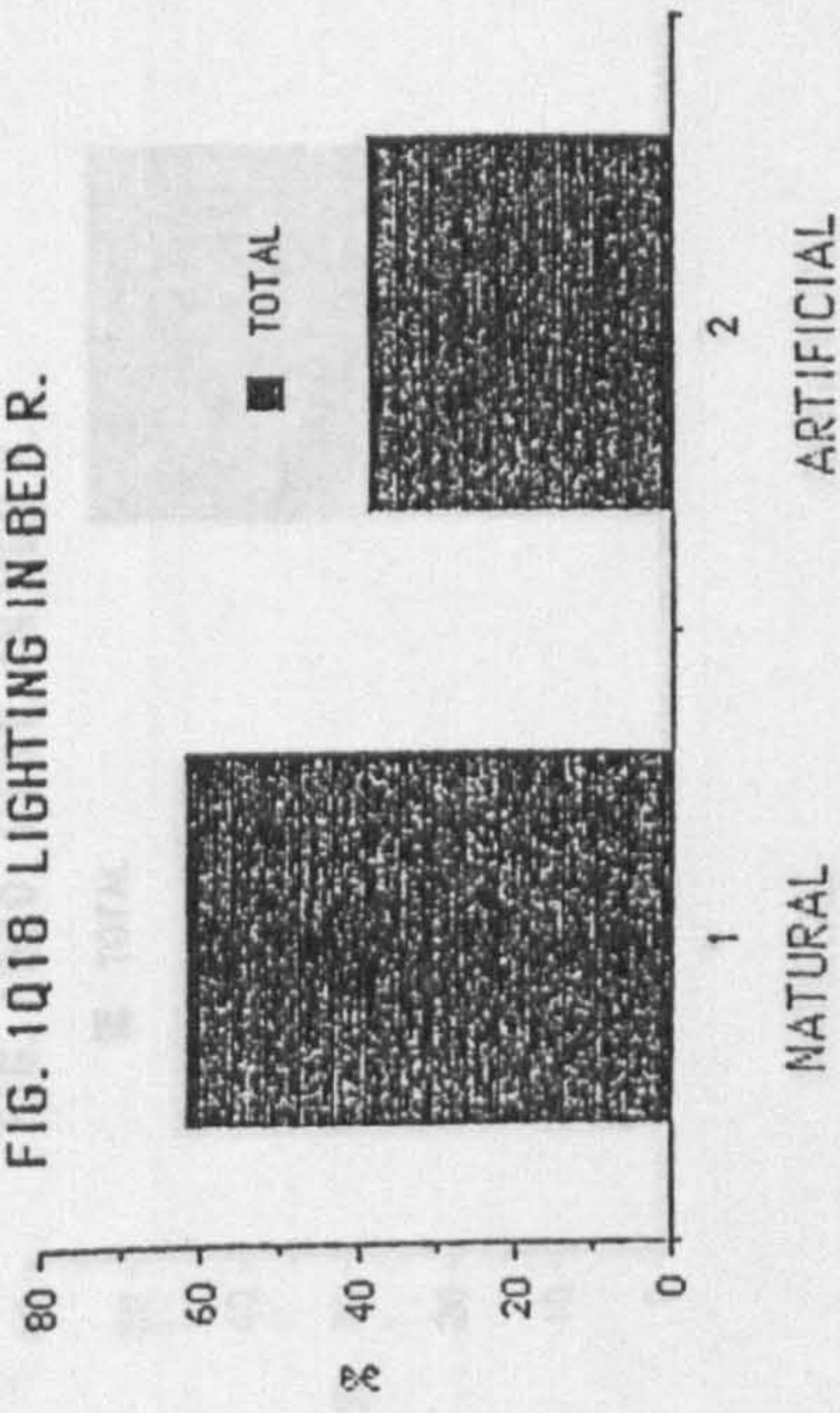


FIG. 2Q18 LIGHTING IN BED R.

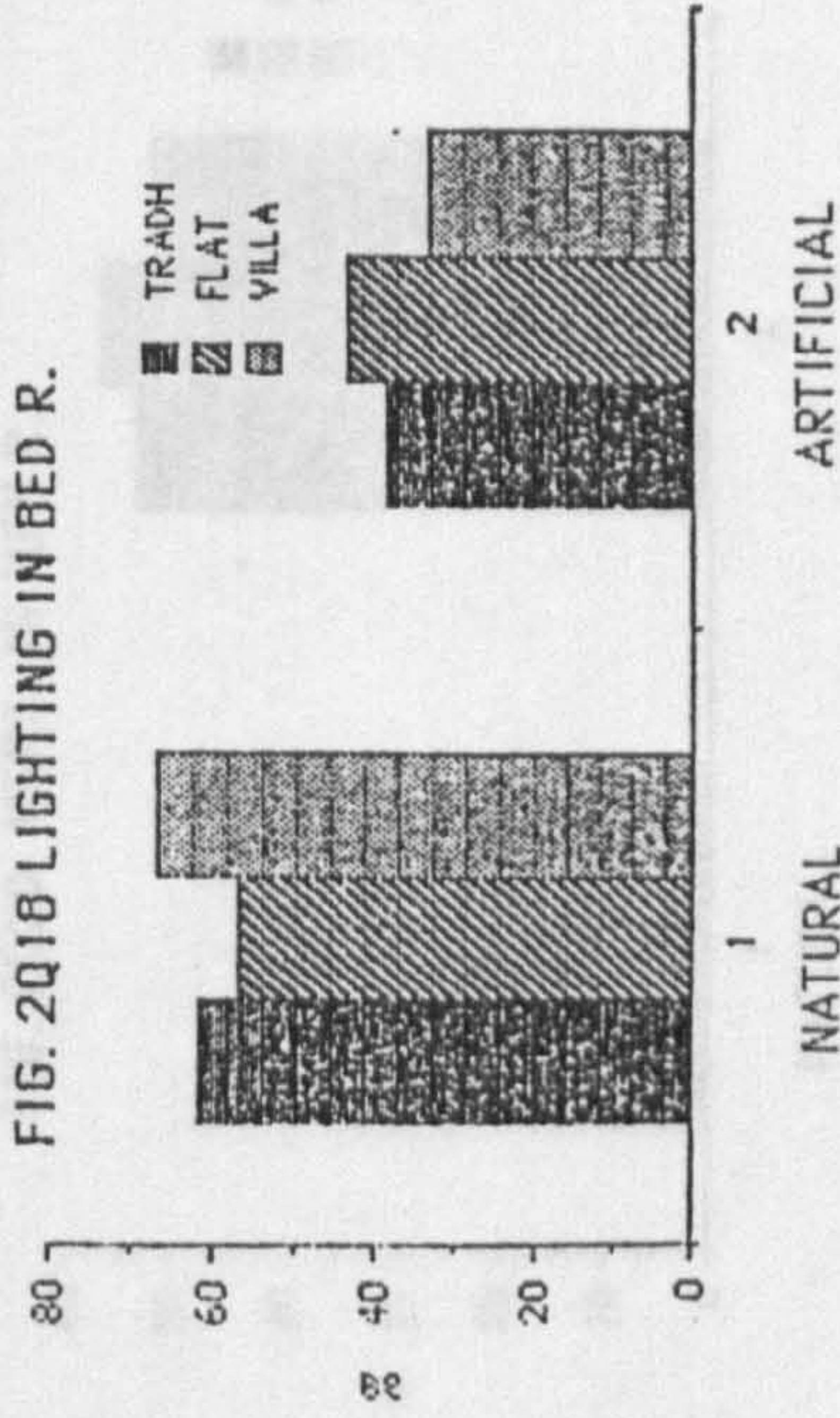


FIG. 3Q18 LIGHTING IN BED R.

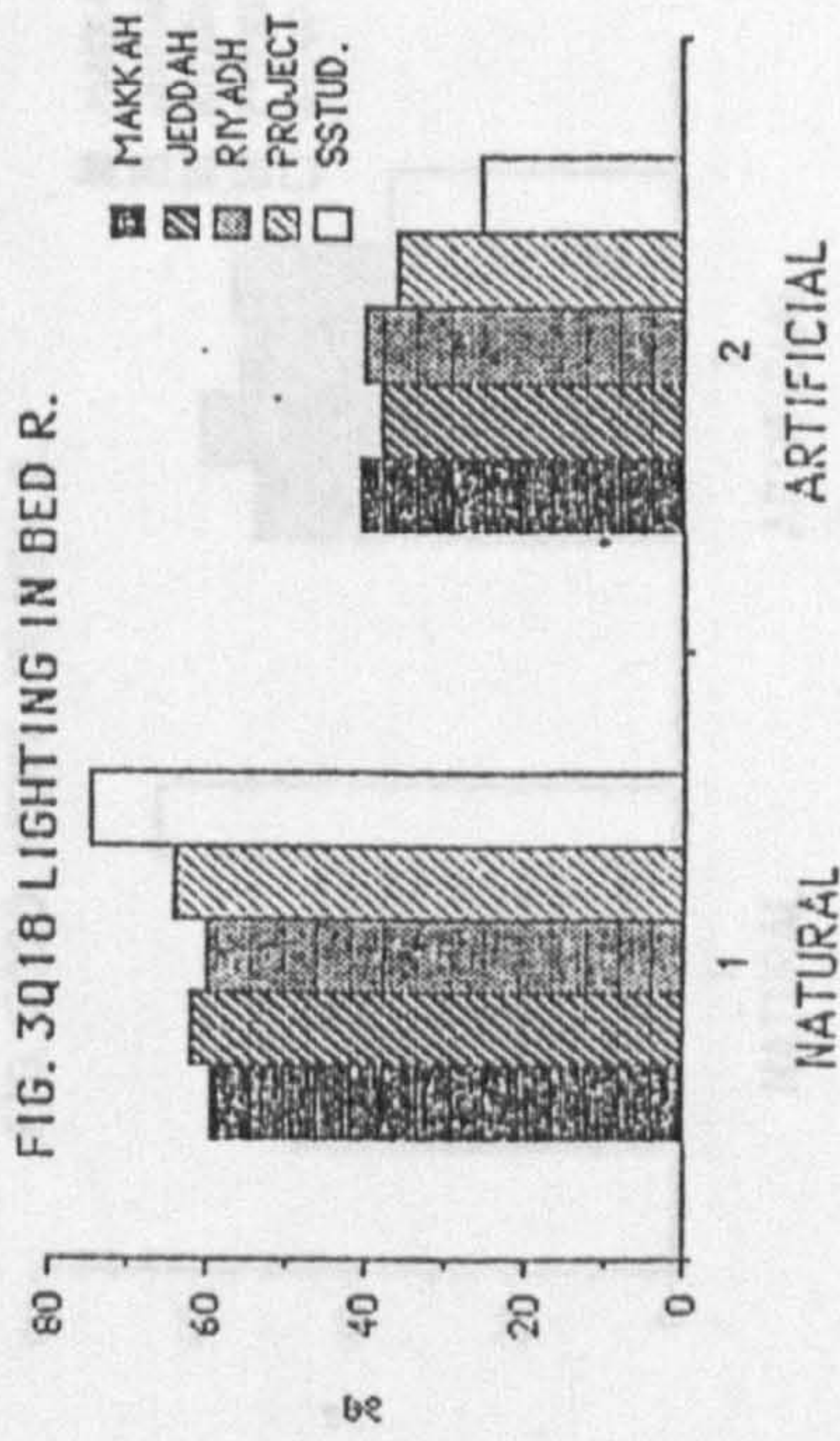


FIG. 1Q19 VENT. IN LIVING R.

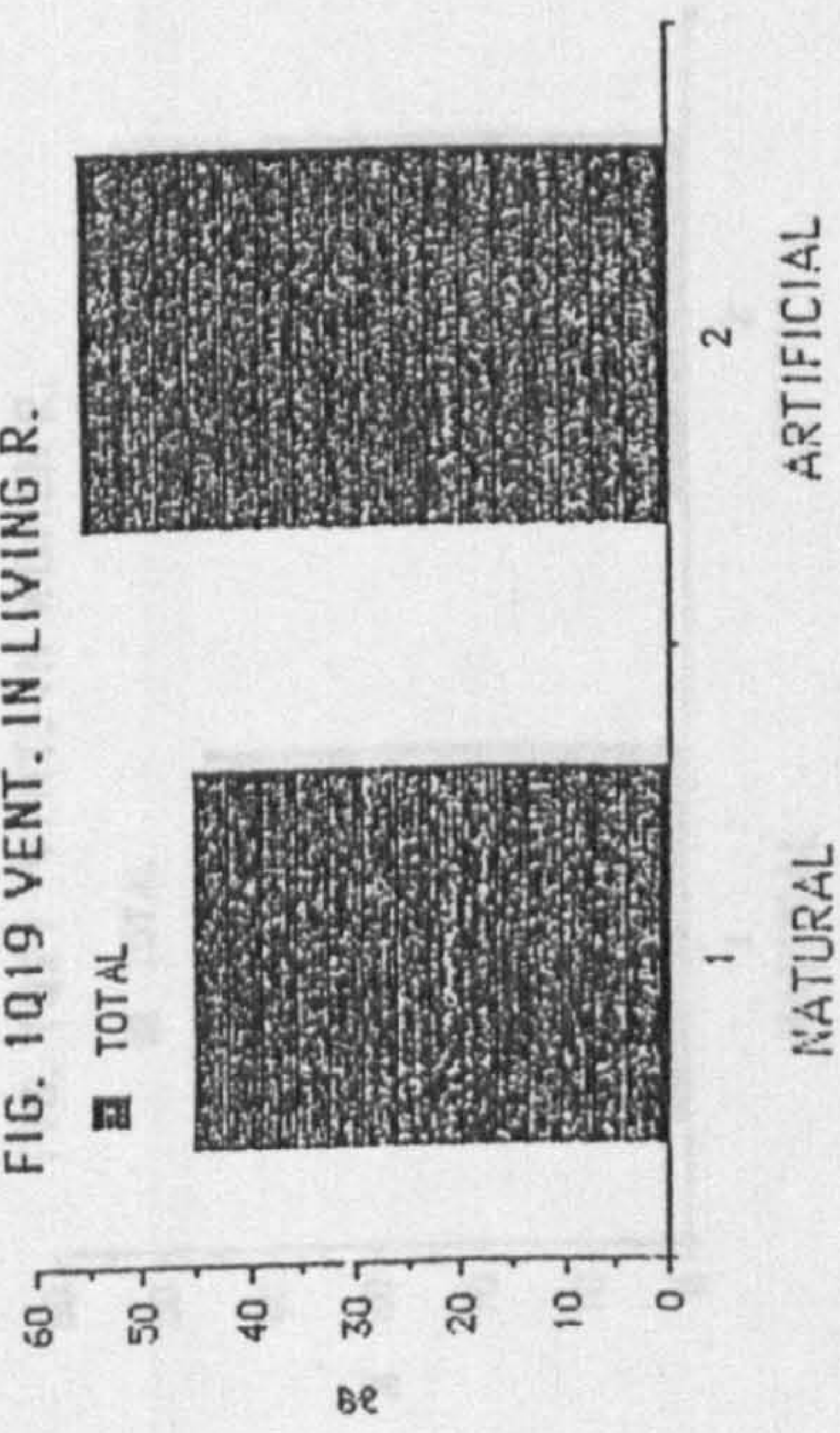


FIG. 2Q19 VENT. IN LIVING R.

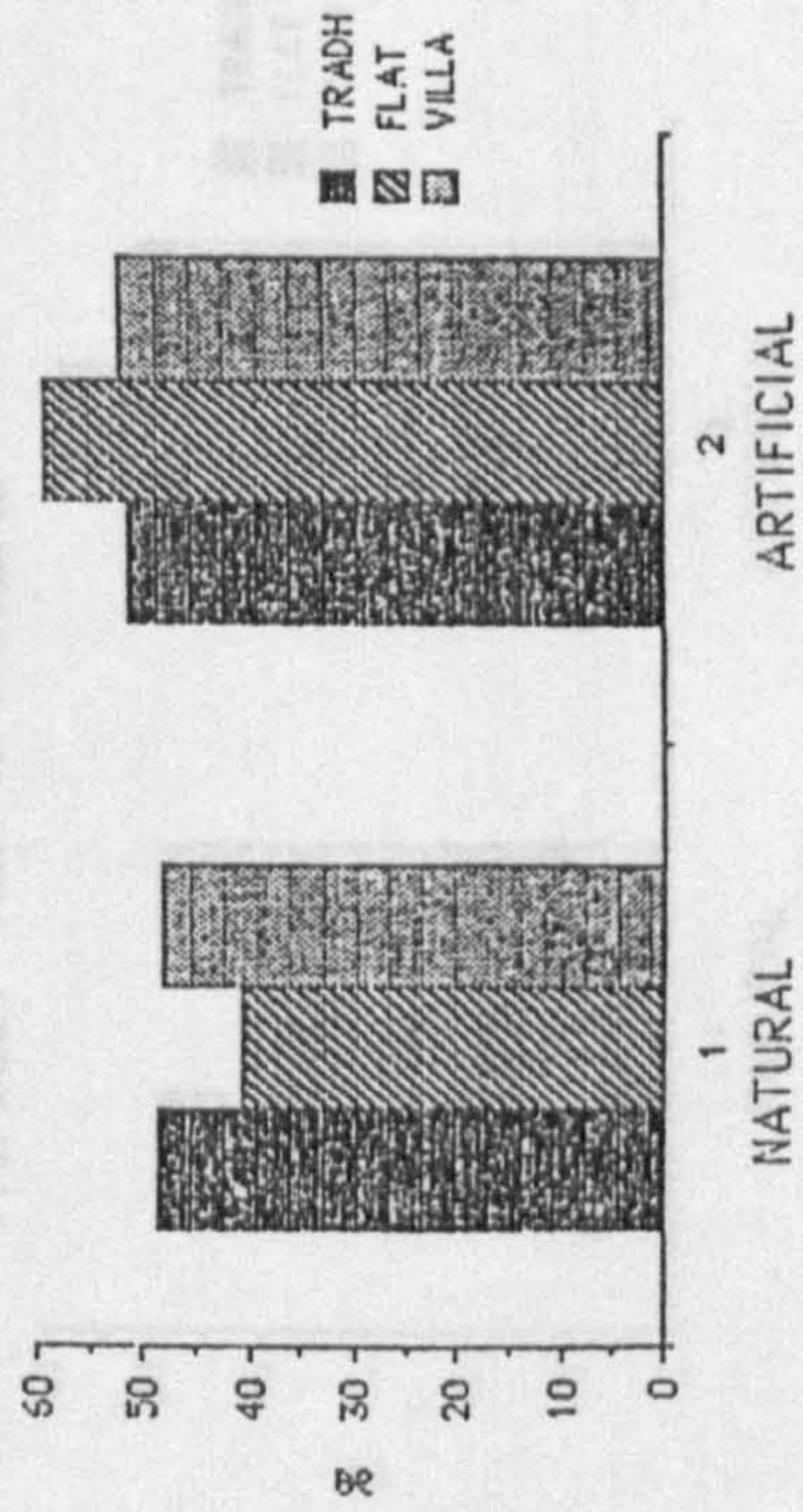


FIG. 3Q19 VENT. IN LIVING R.

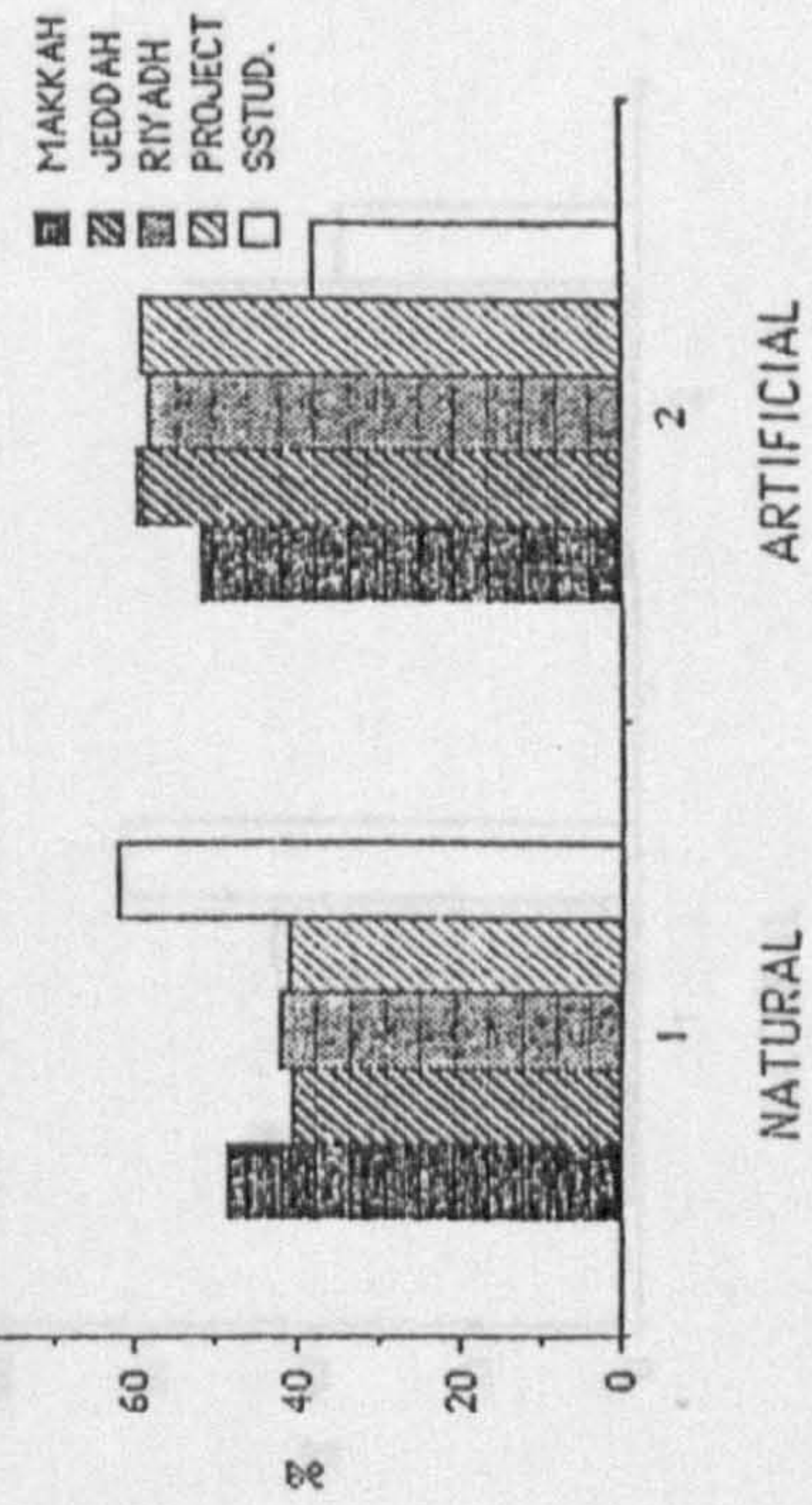


FIG. 1Q20 VENT. IN MEN R.

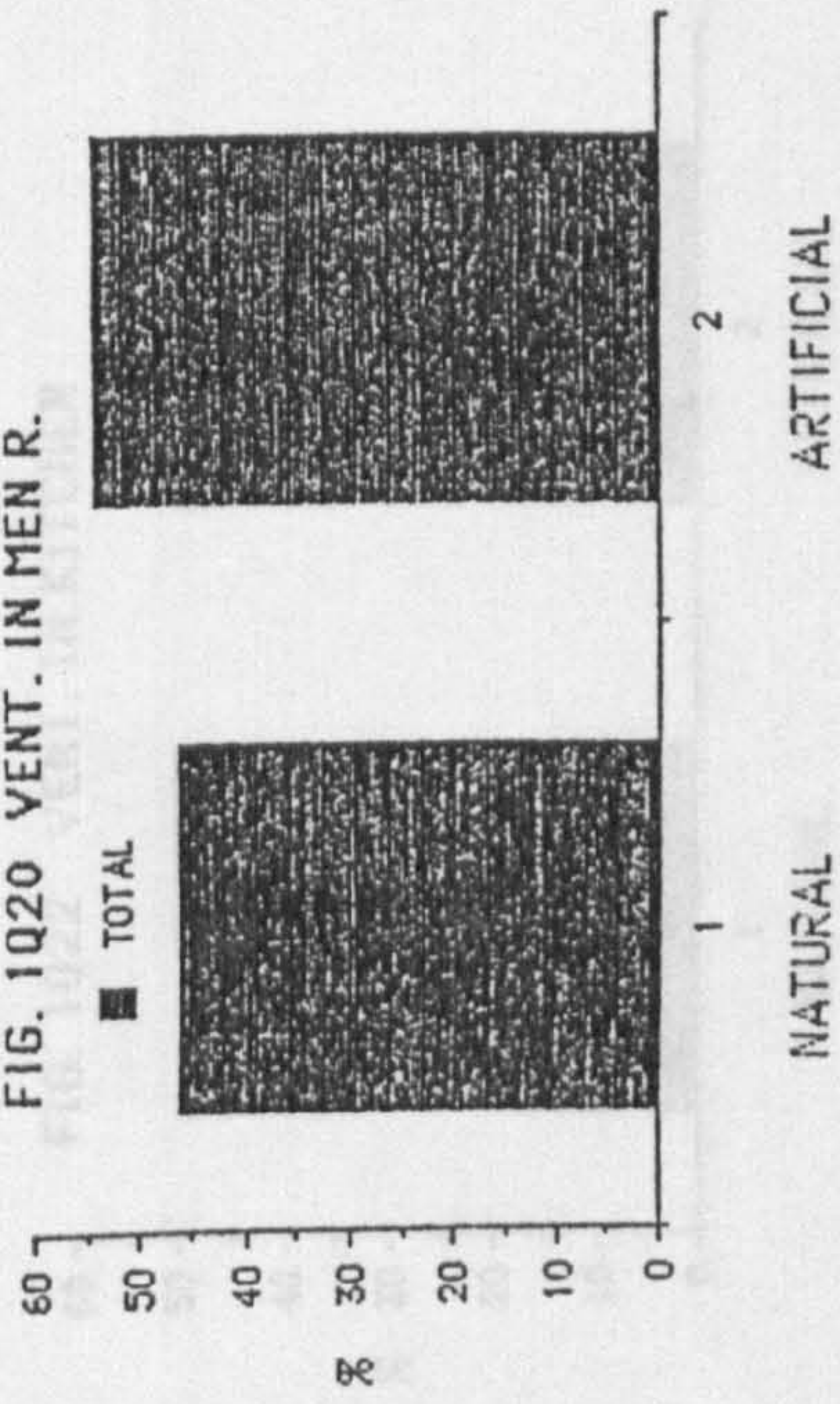


FIG. 2Q20 VENT. IN MEN R.

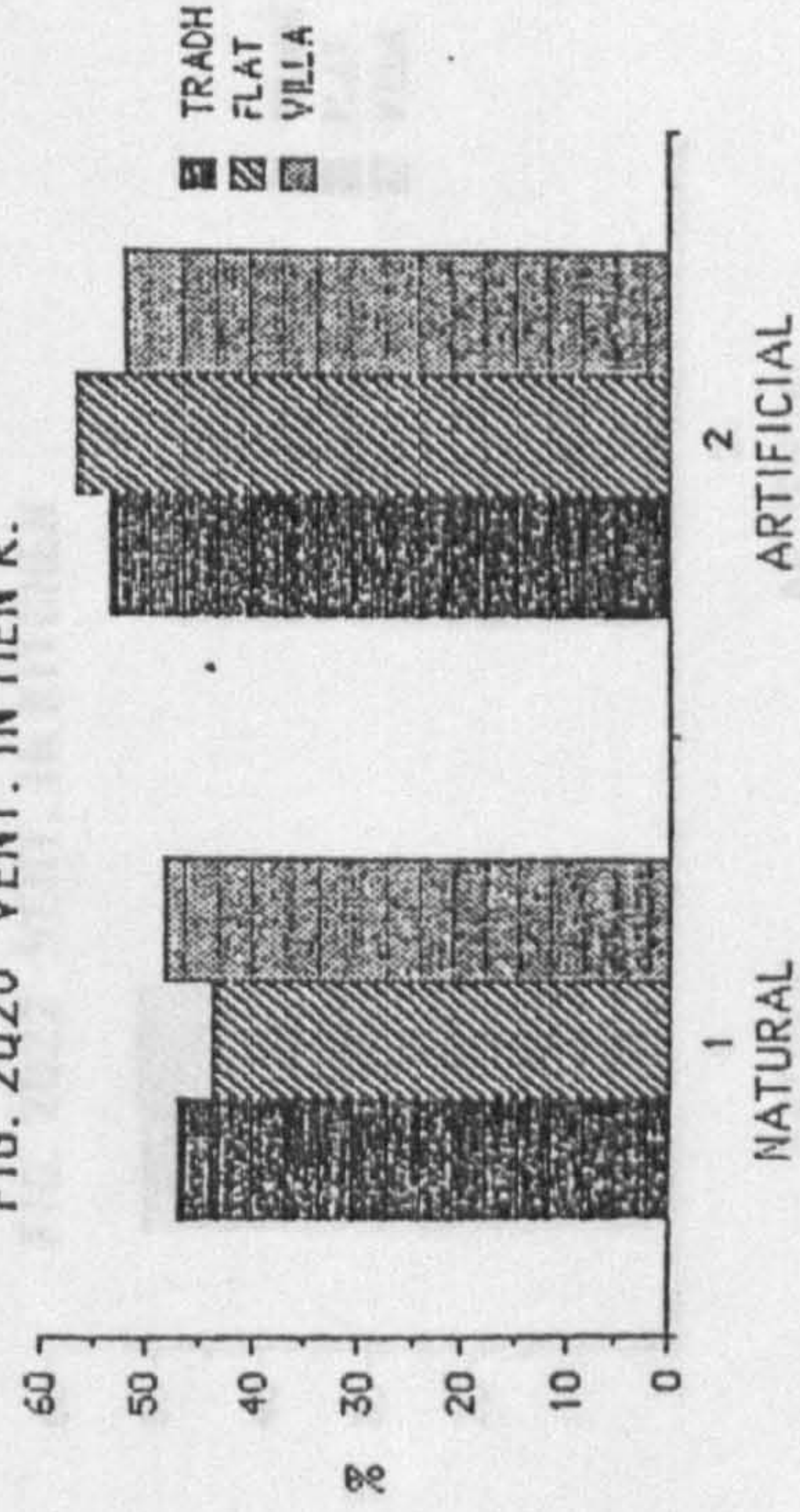


FIG. 3Q20 VENT. IN MEN R.

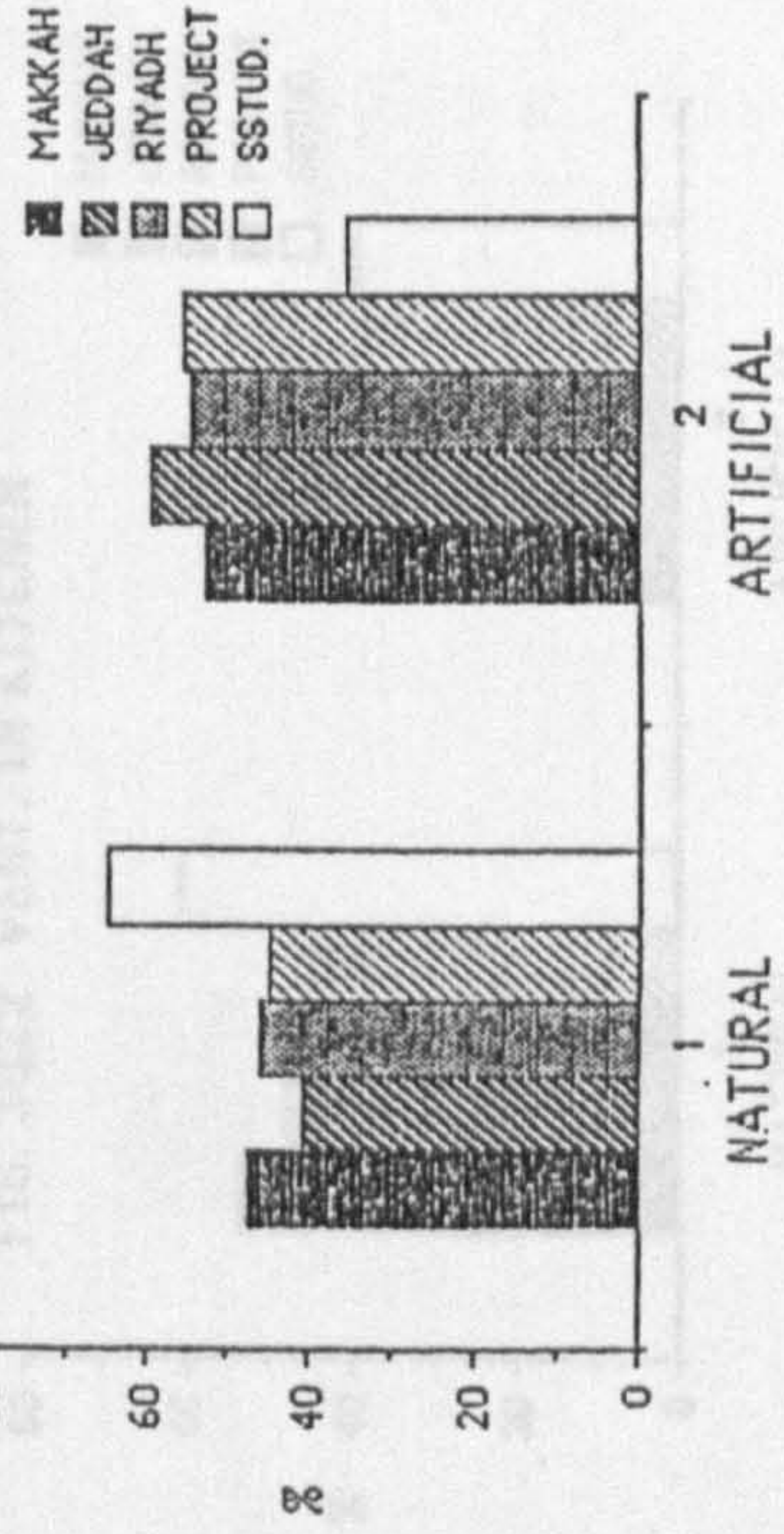


FIG. 1Q21 VENT. IN WOMEN R.

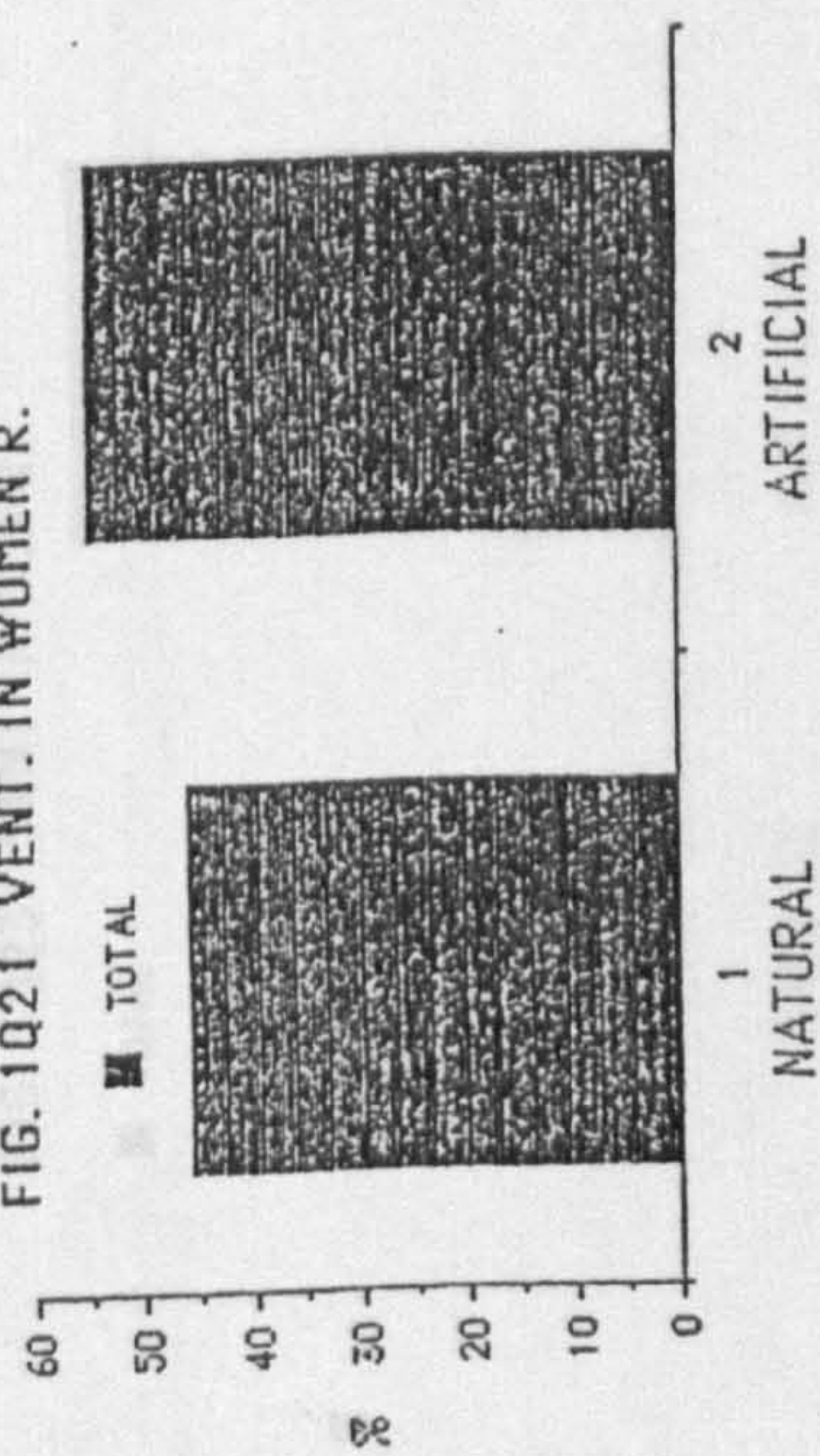


FIG. 1Q22 VENT. IN KITCHEN

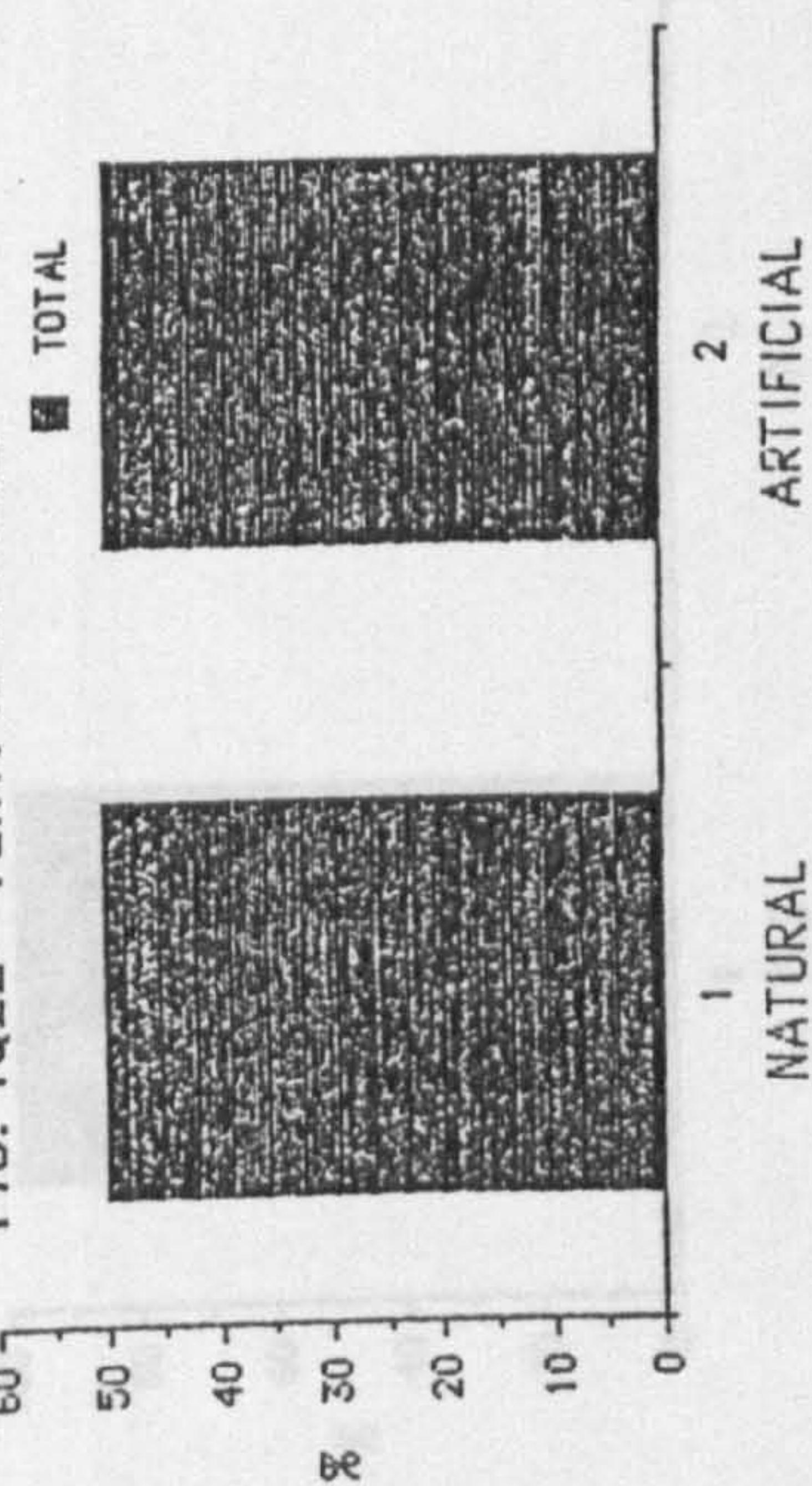


FIG. 2Q21 VENT IN WOMEN R.

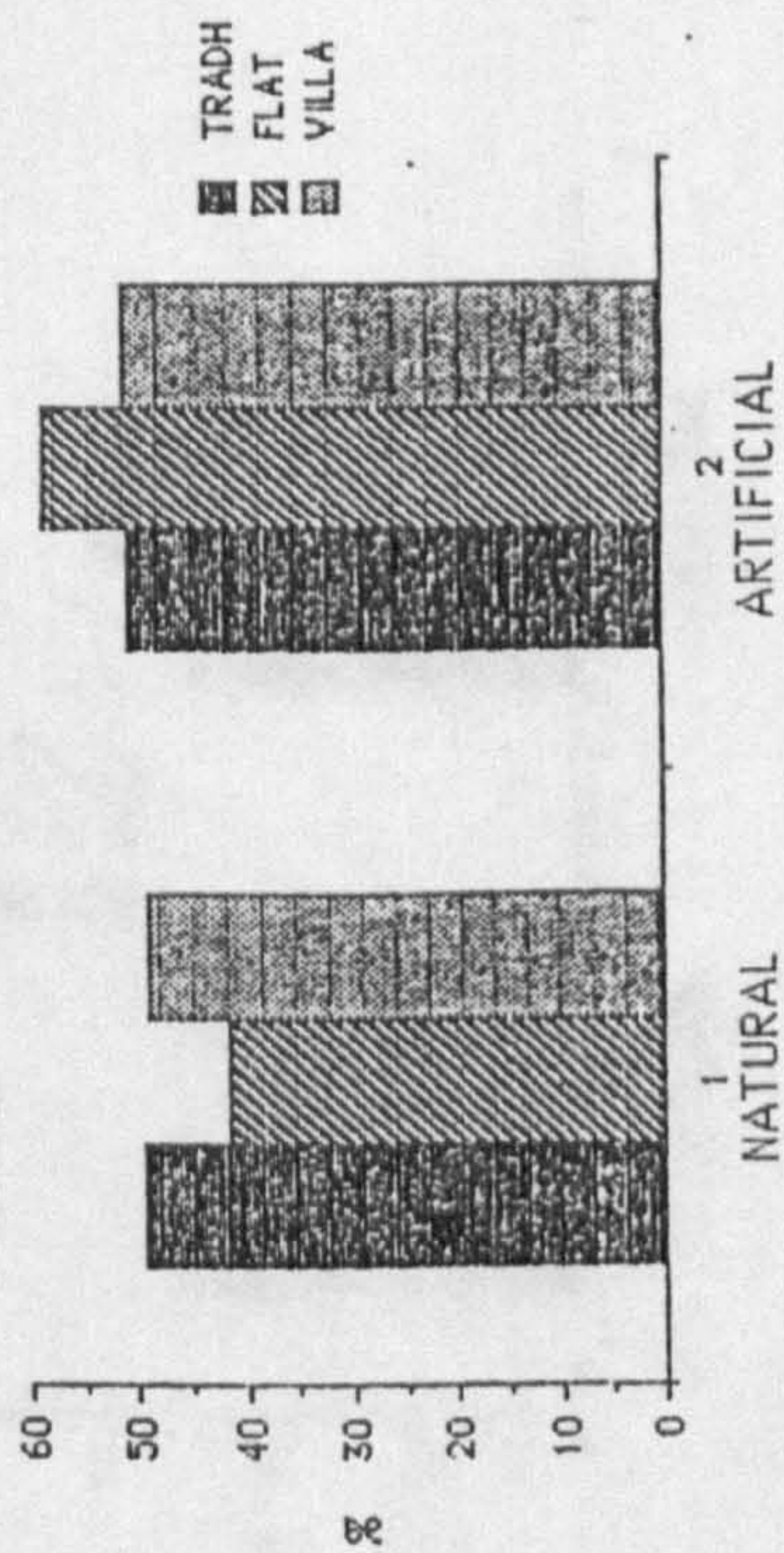


FIG. 2Q22 VENT. IN KITCHEN

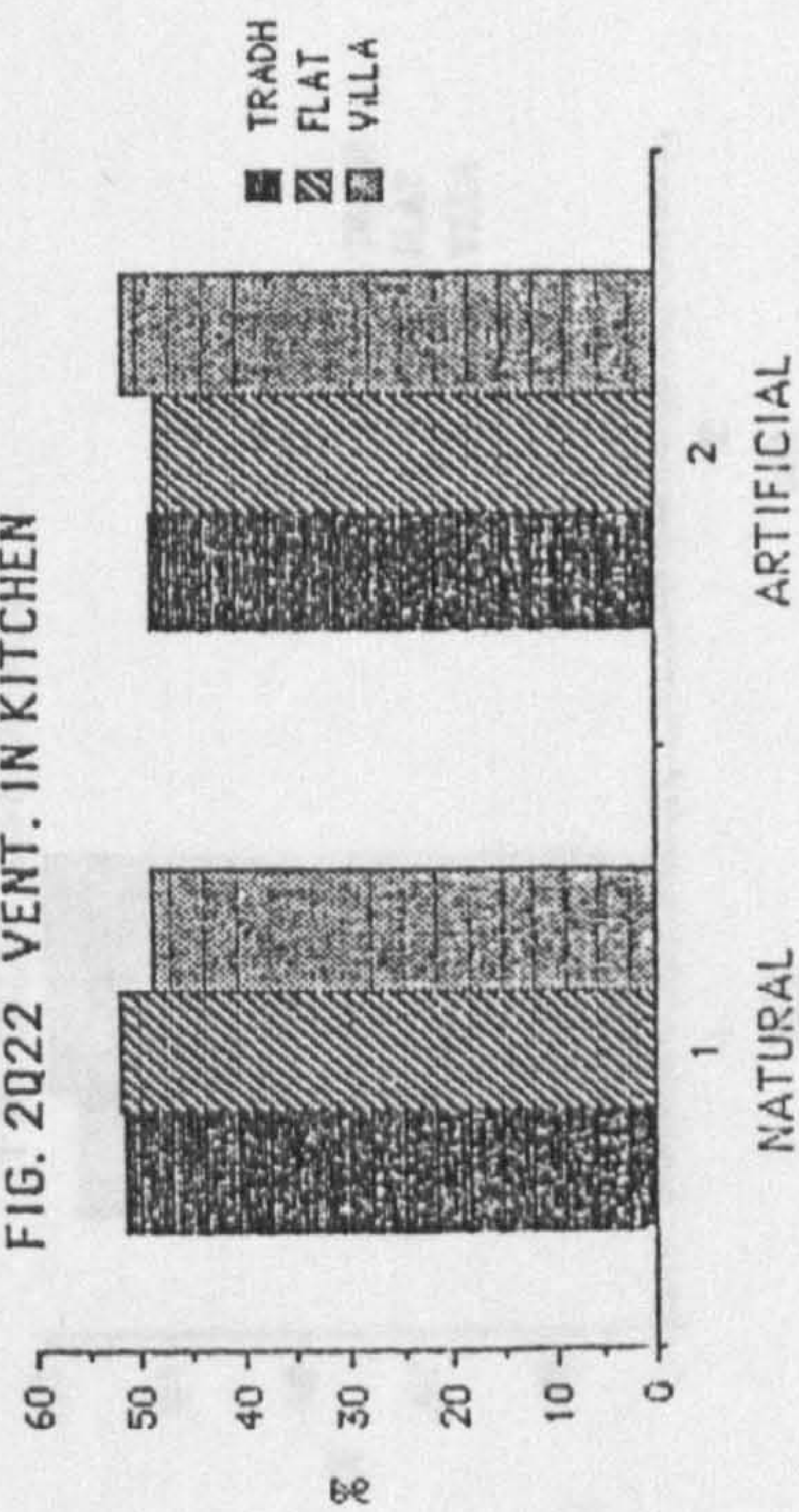


FIG. 3Q21 VENT. IN WOMEN R.

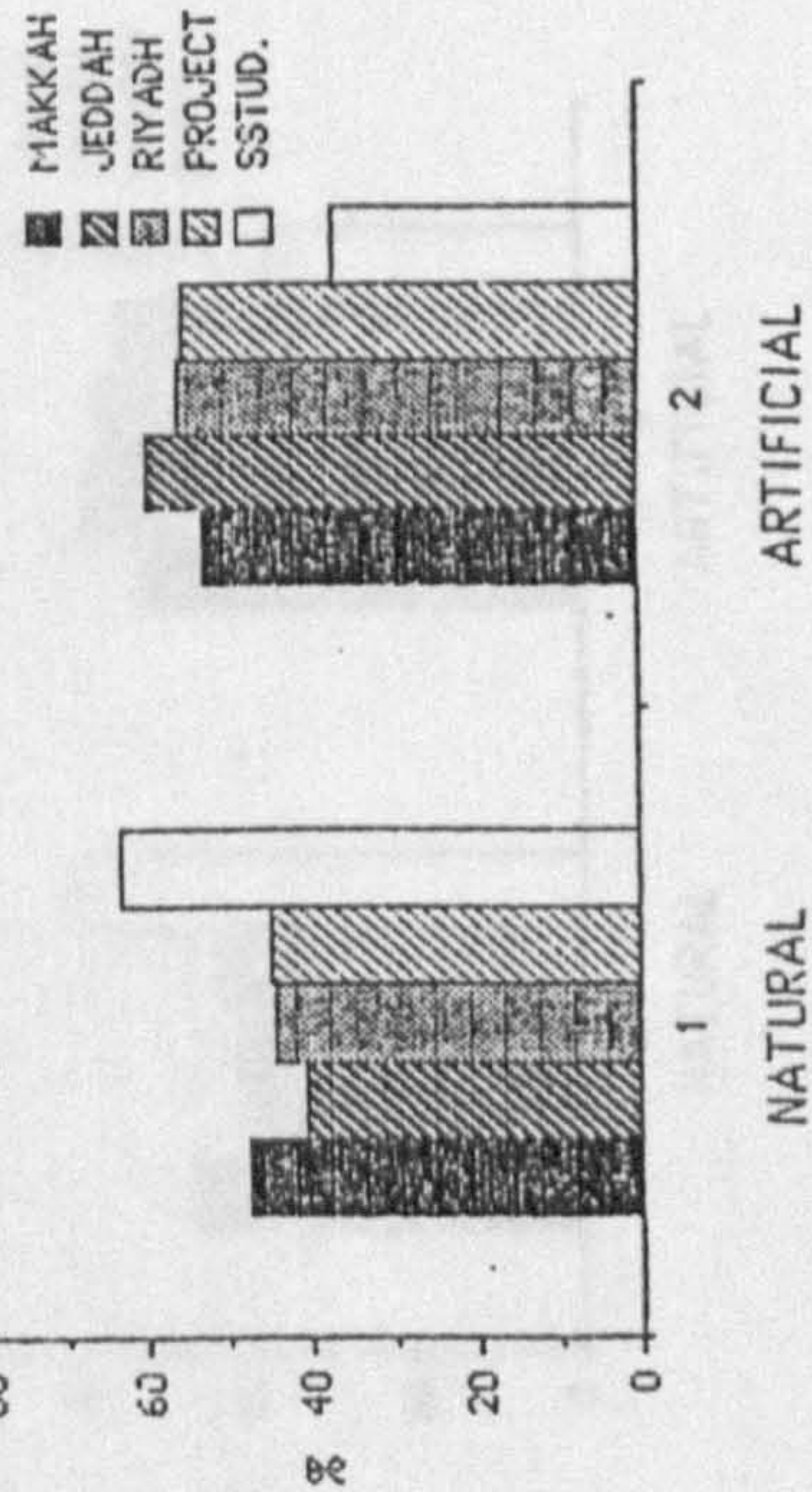


FIG. 3Q22 VENT. IN KITCHEN

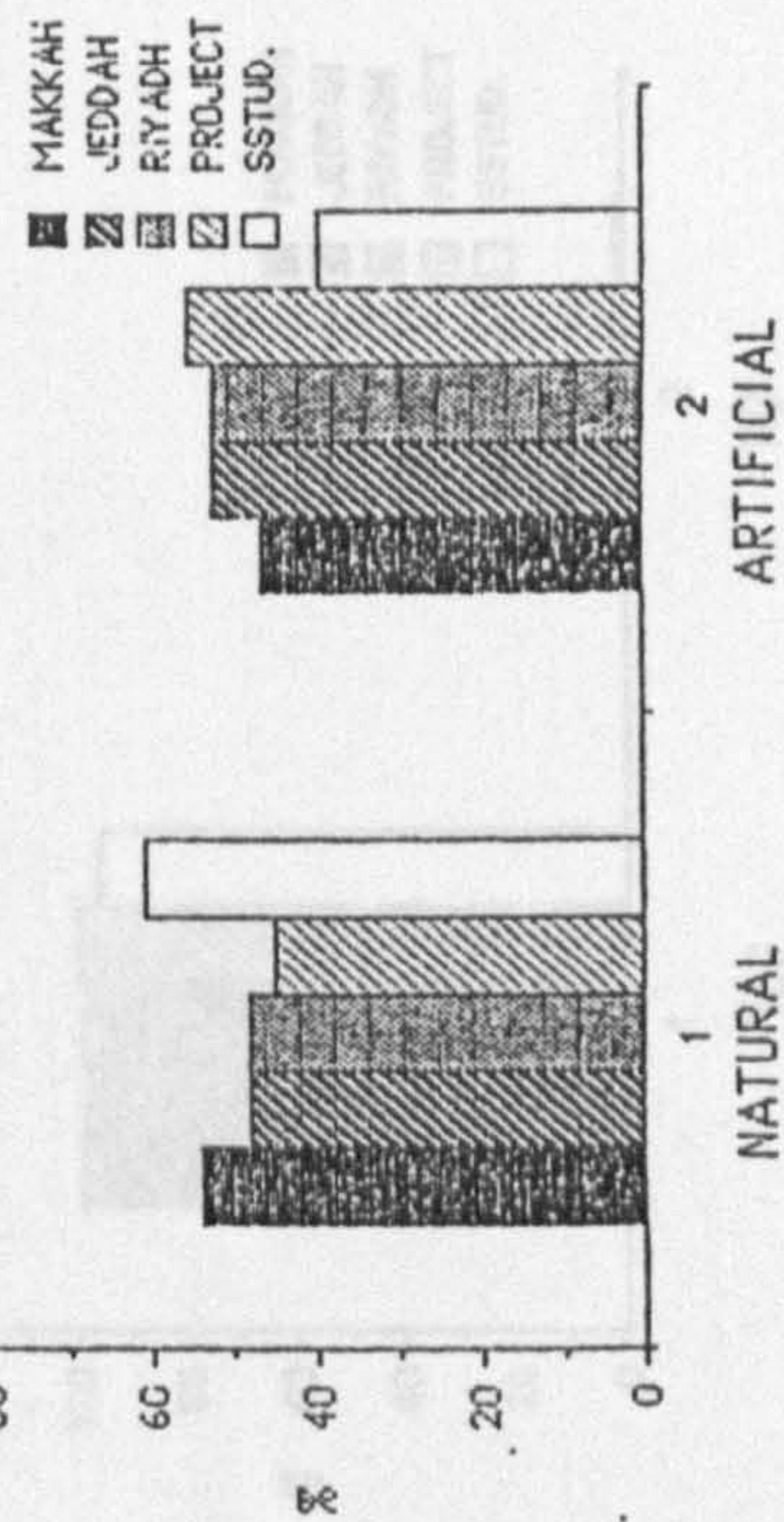


FIG. 1Q23 VENT IN BED R.

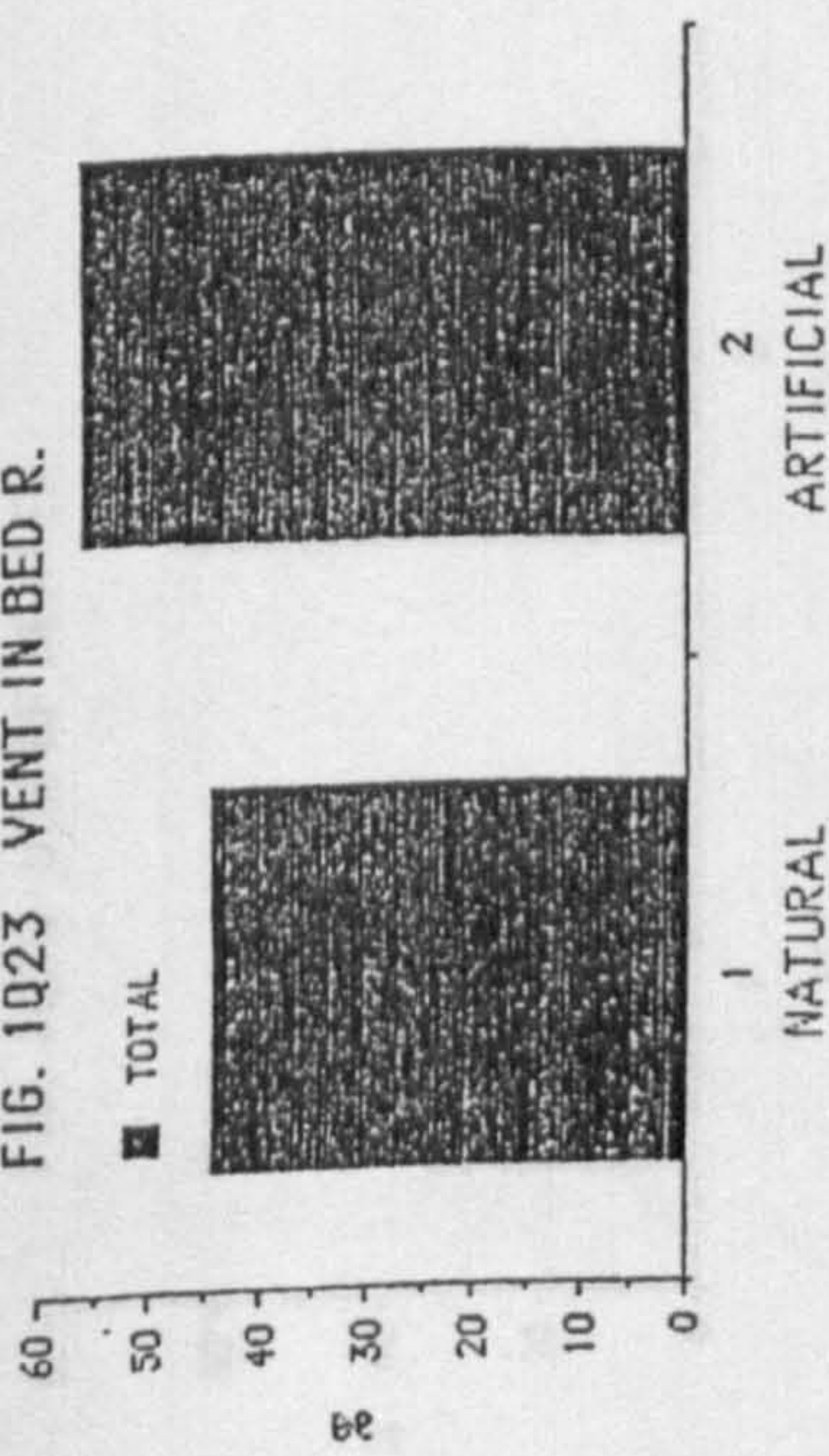


FIG. 2Q23 VENT IN BED R.

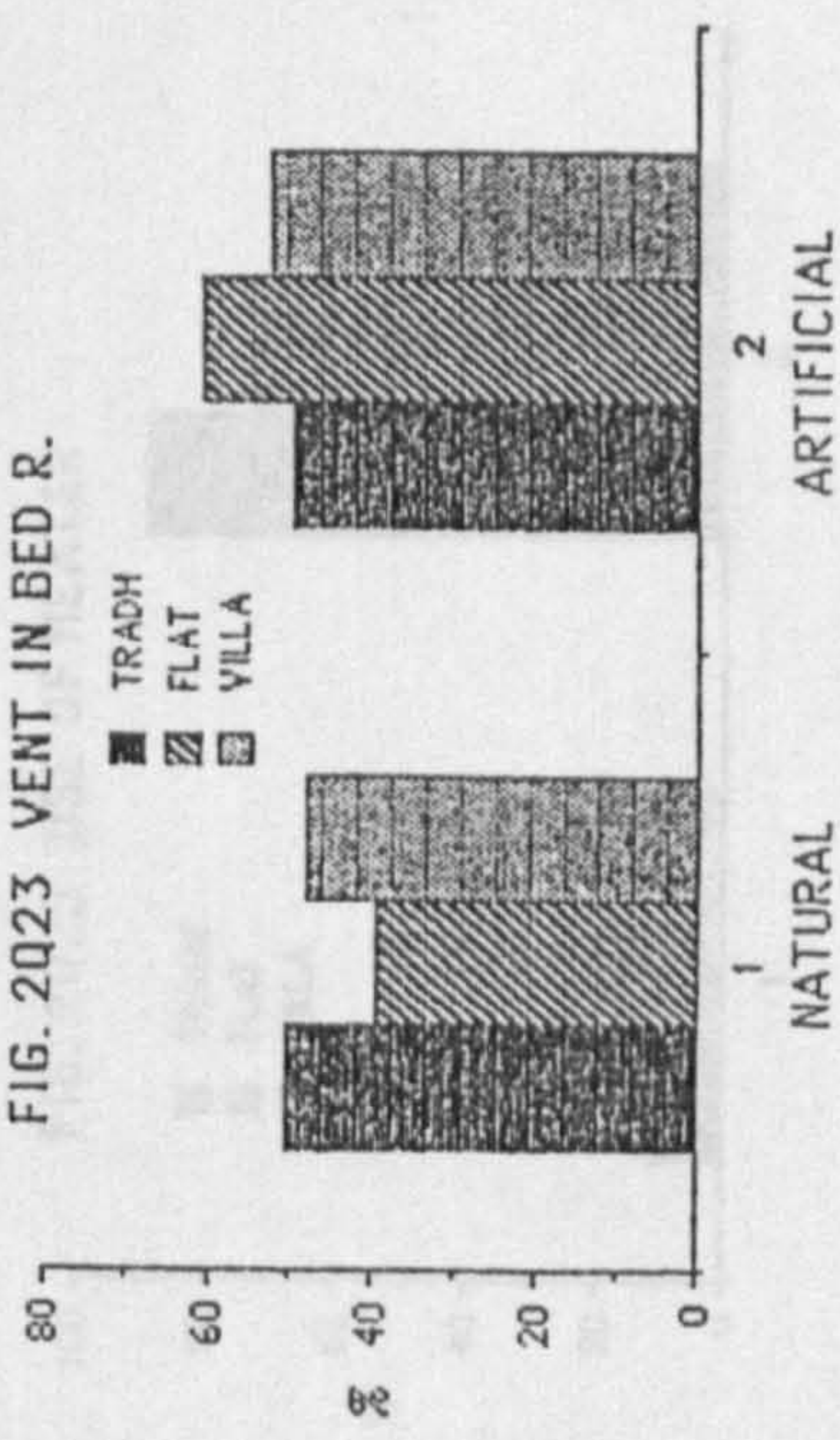


FIG. 3Q23 VENT IN BED R.

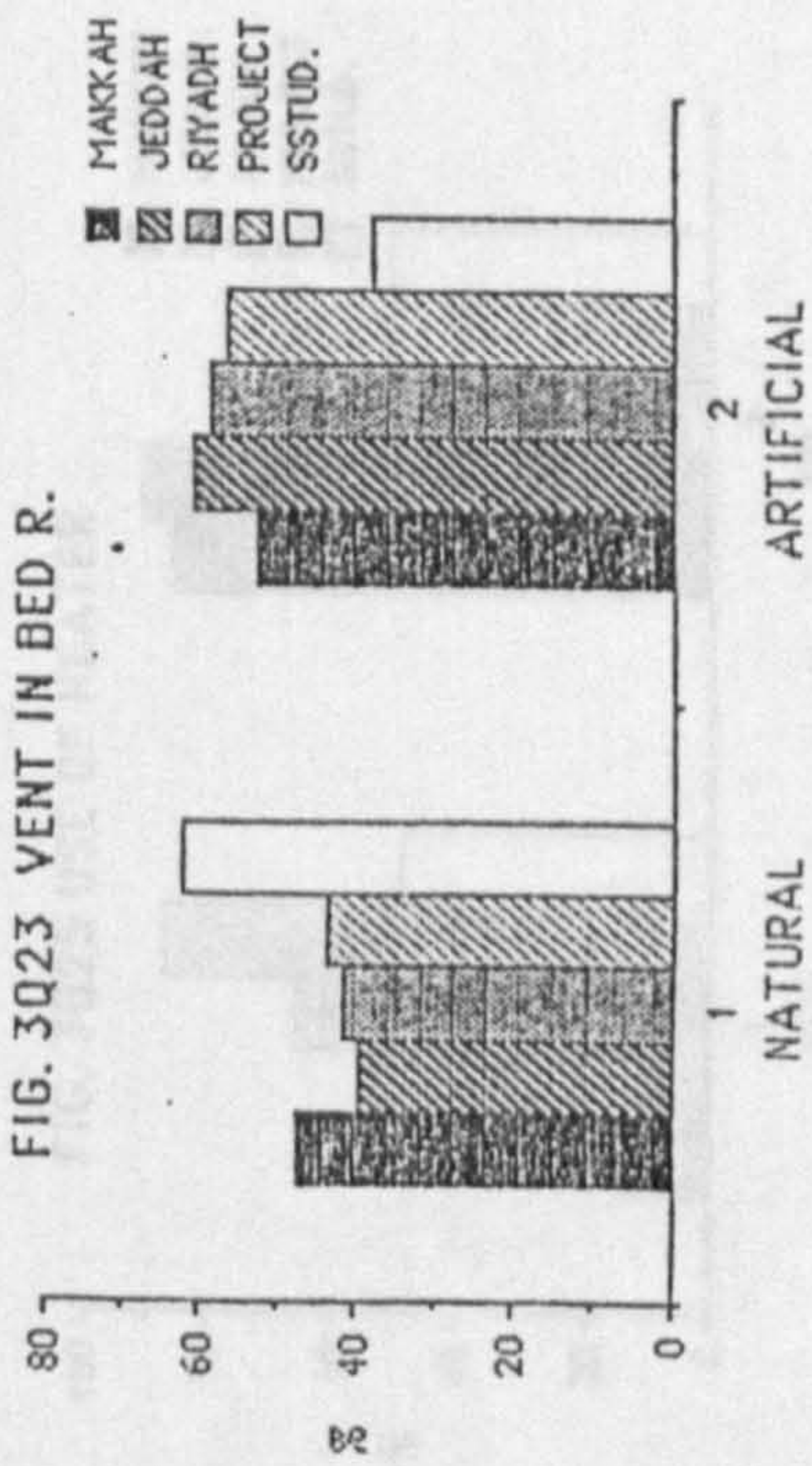


FIG. 1Q24 USE OF A.C.

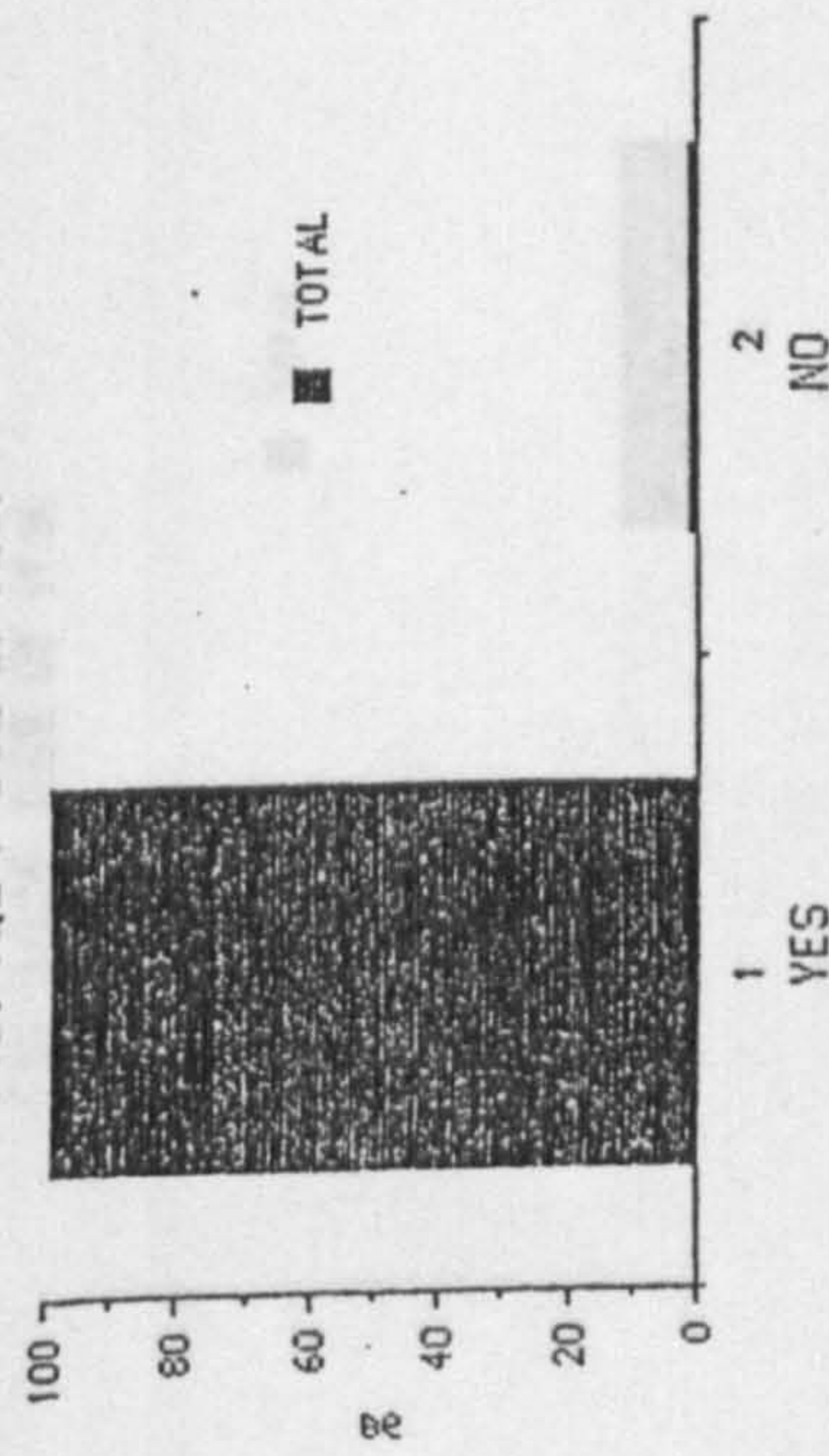


FIG. 2Q24 USE OF A.C.

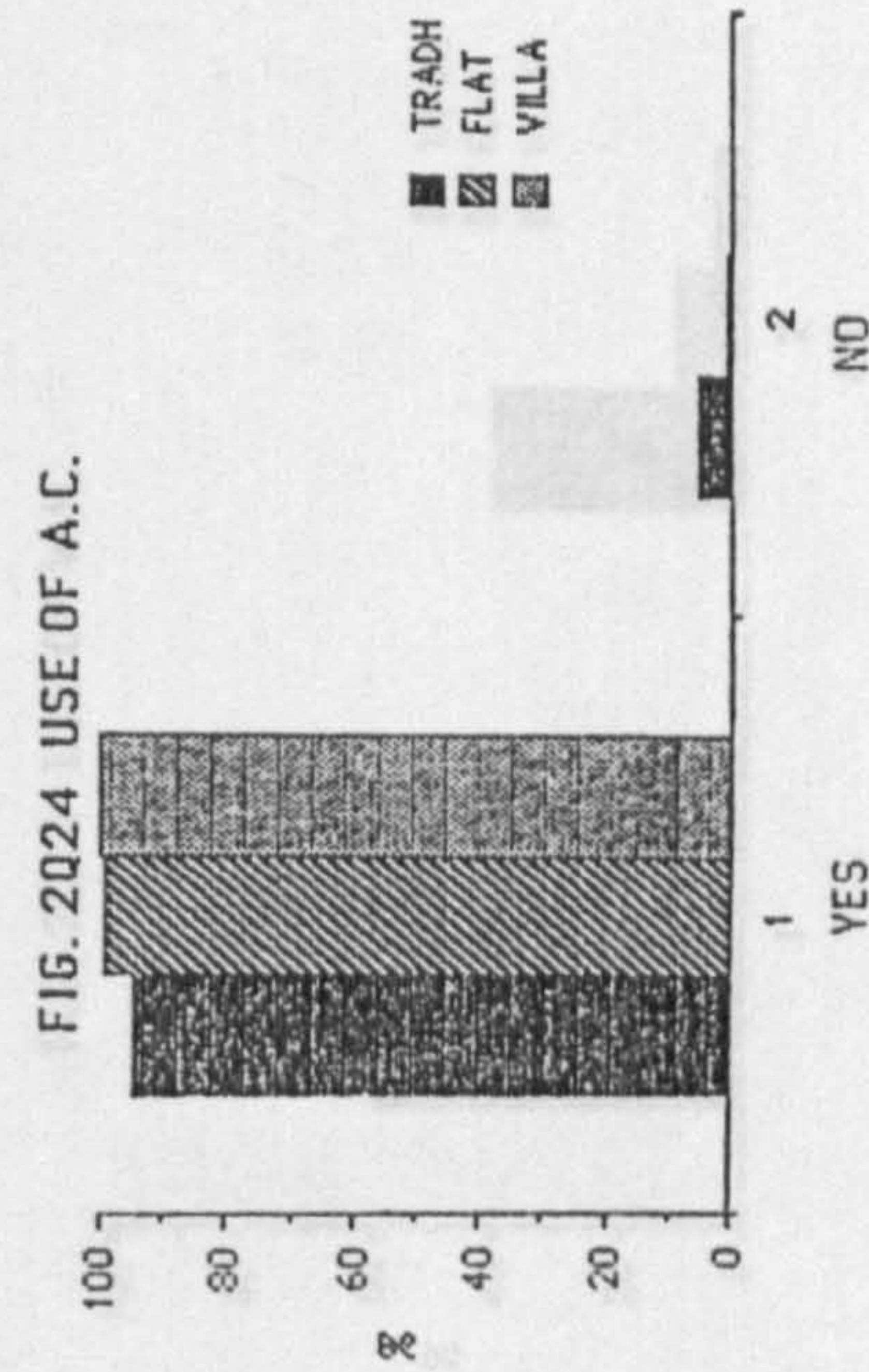


FIG. 3Q24 USE OF A.C.

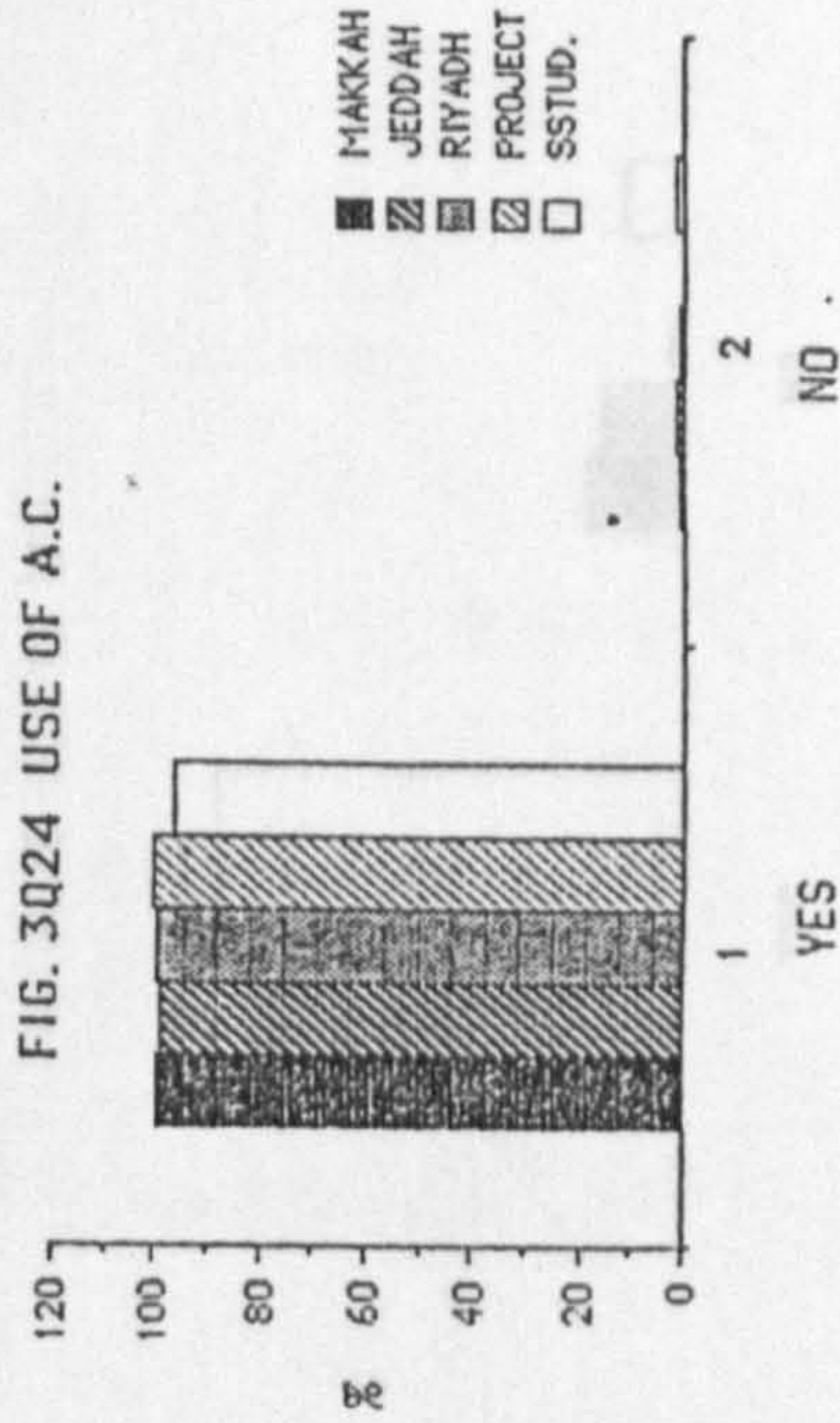


FIG. 1Q25 USE OF HEATER

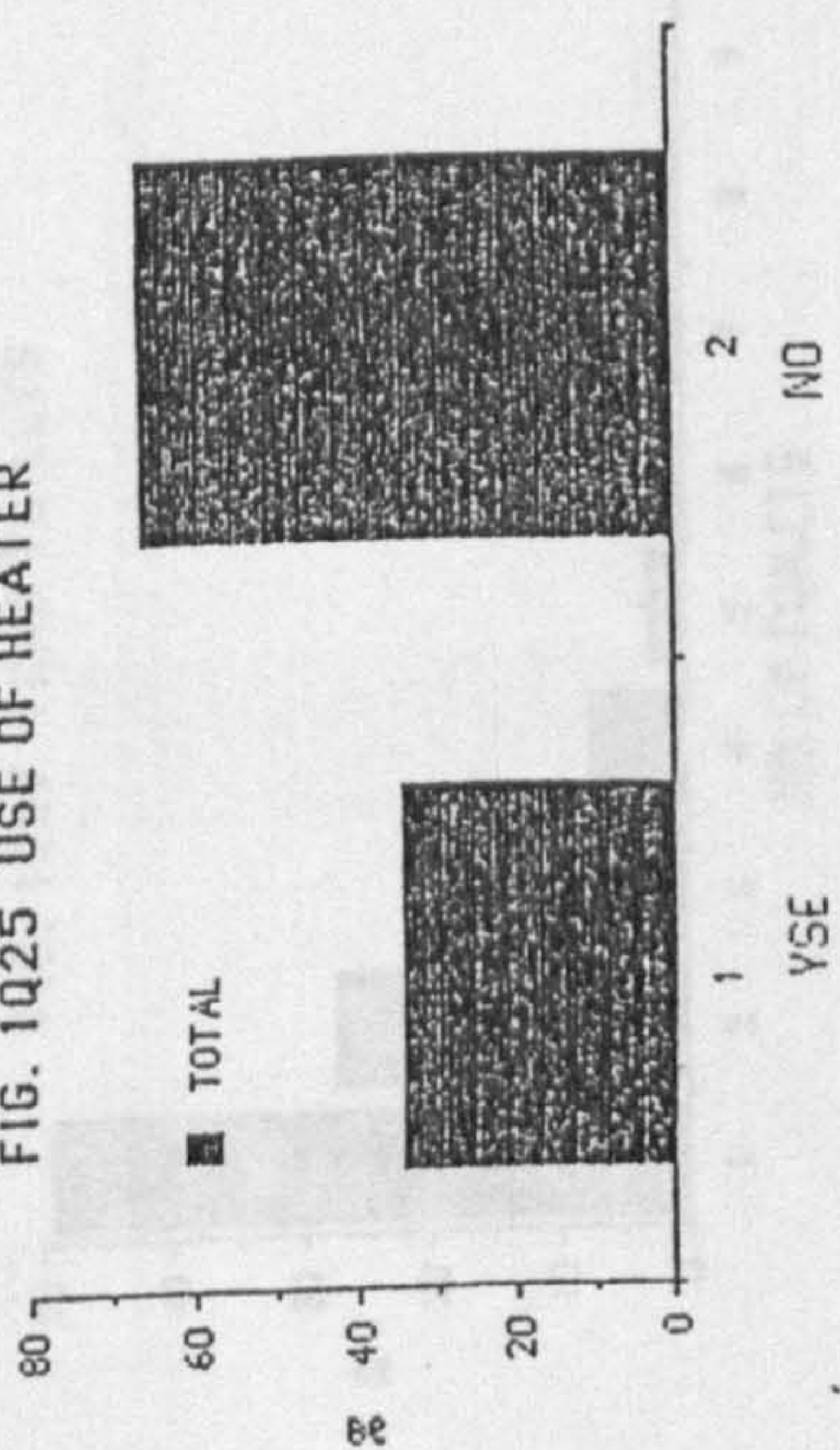


FIG. 2Q25 USE OF HEATER

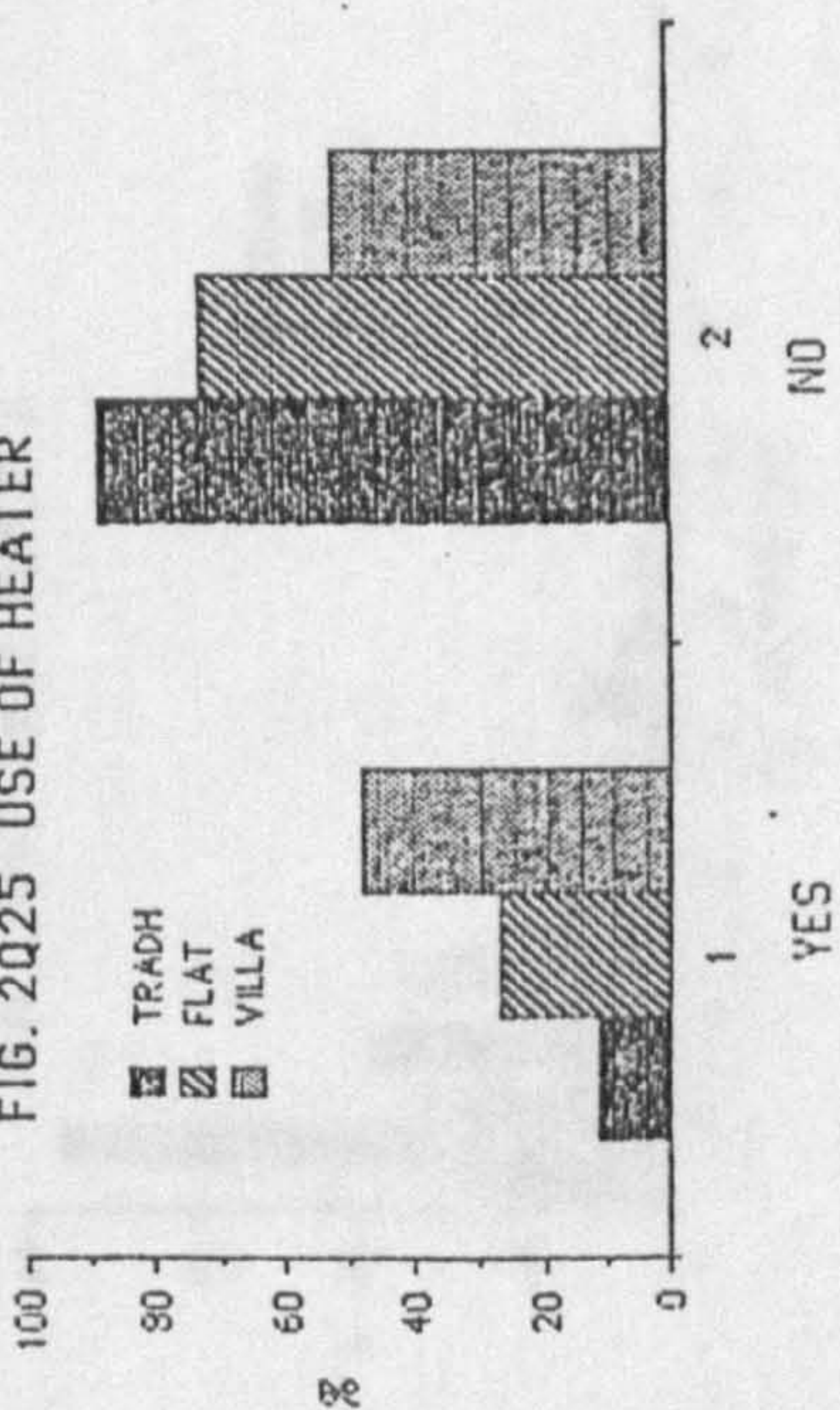


FIG. 3Q25 USE OF HEATER

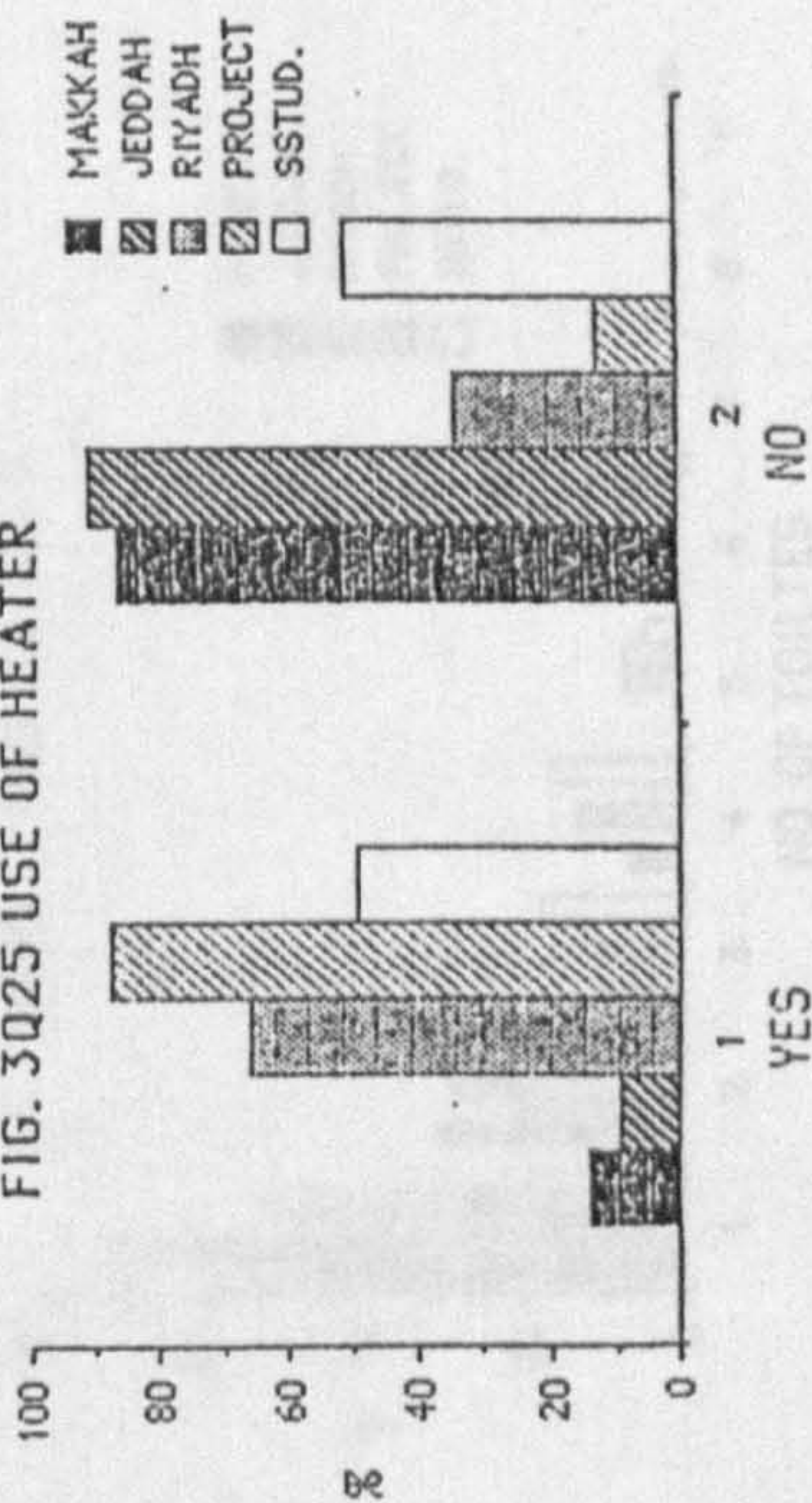


FIG. 1Q26 USE OF W.H.

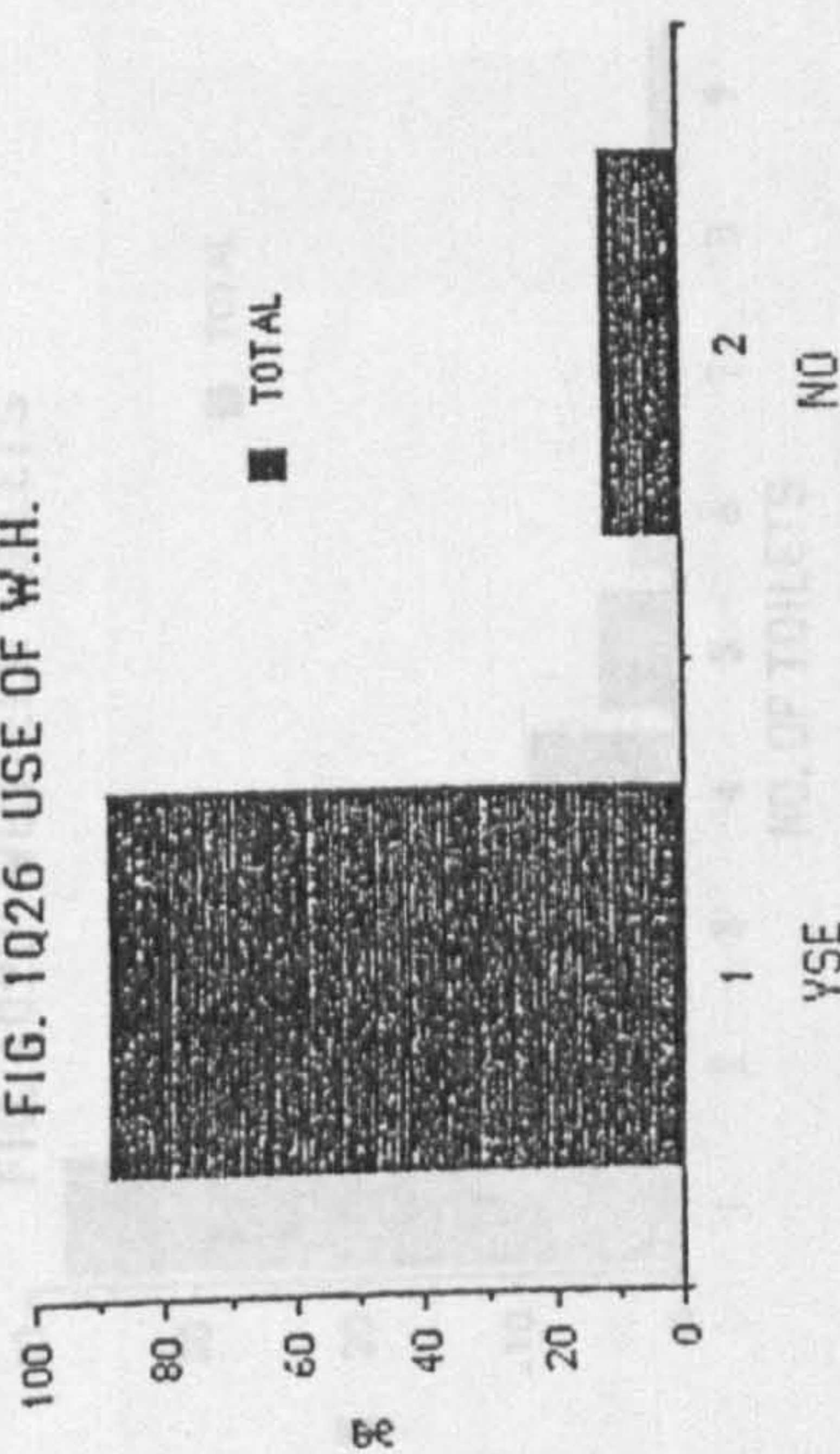


FIG. 2Q26 USE OF W.H.

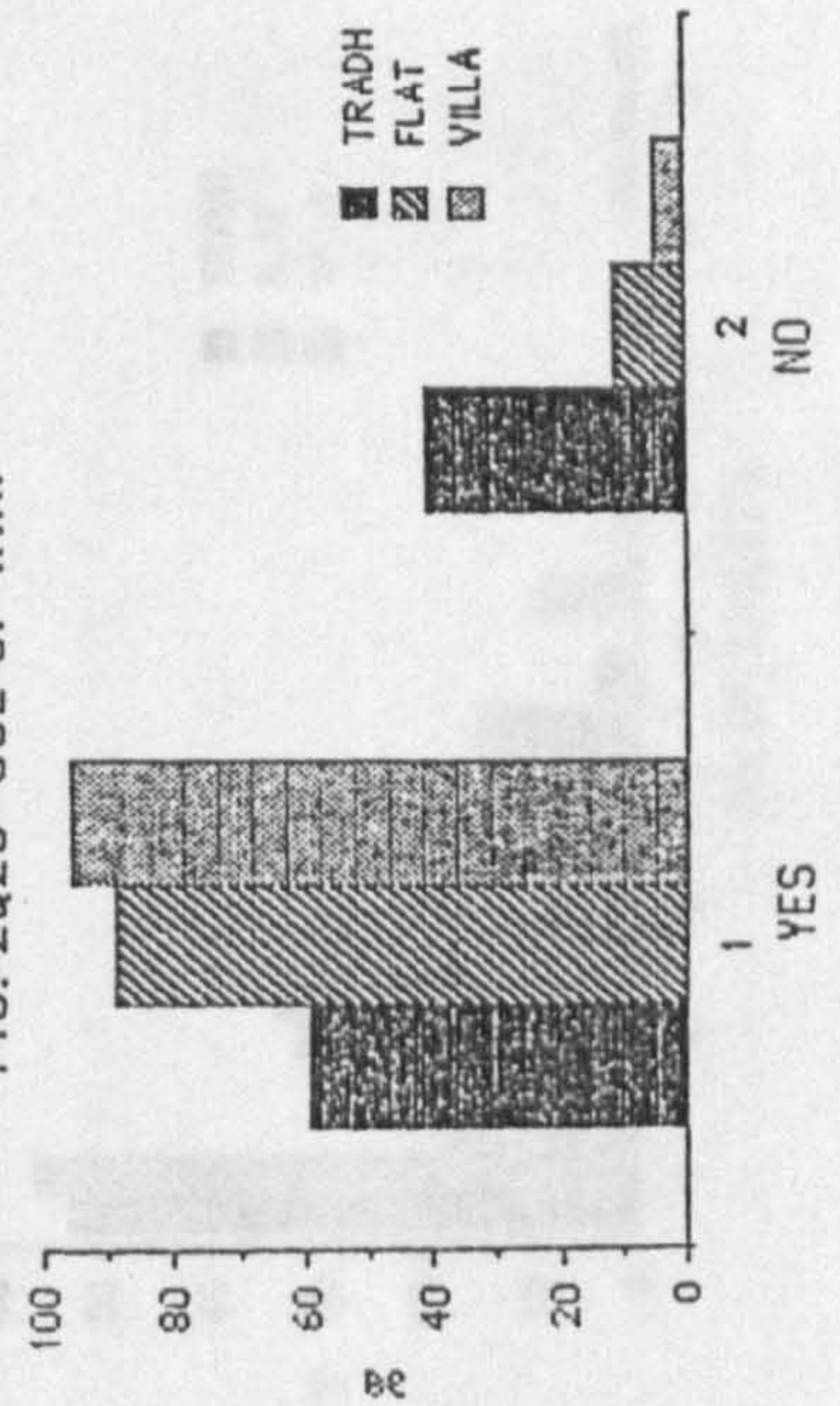


FIG. 3Q26 USE OF W.H.

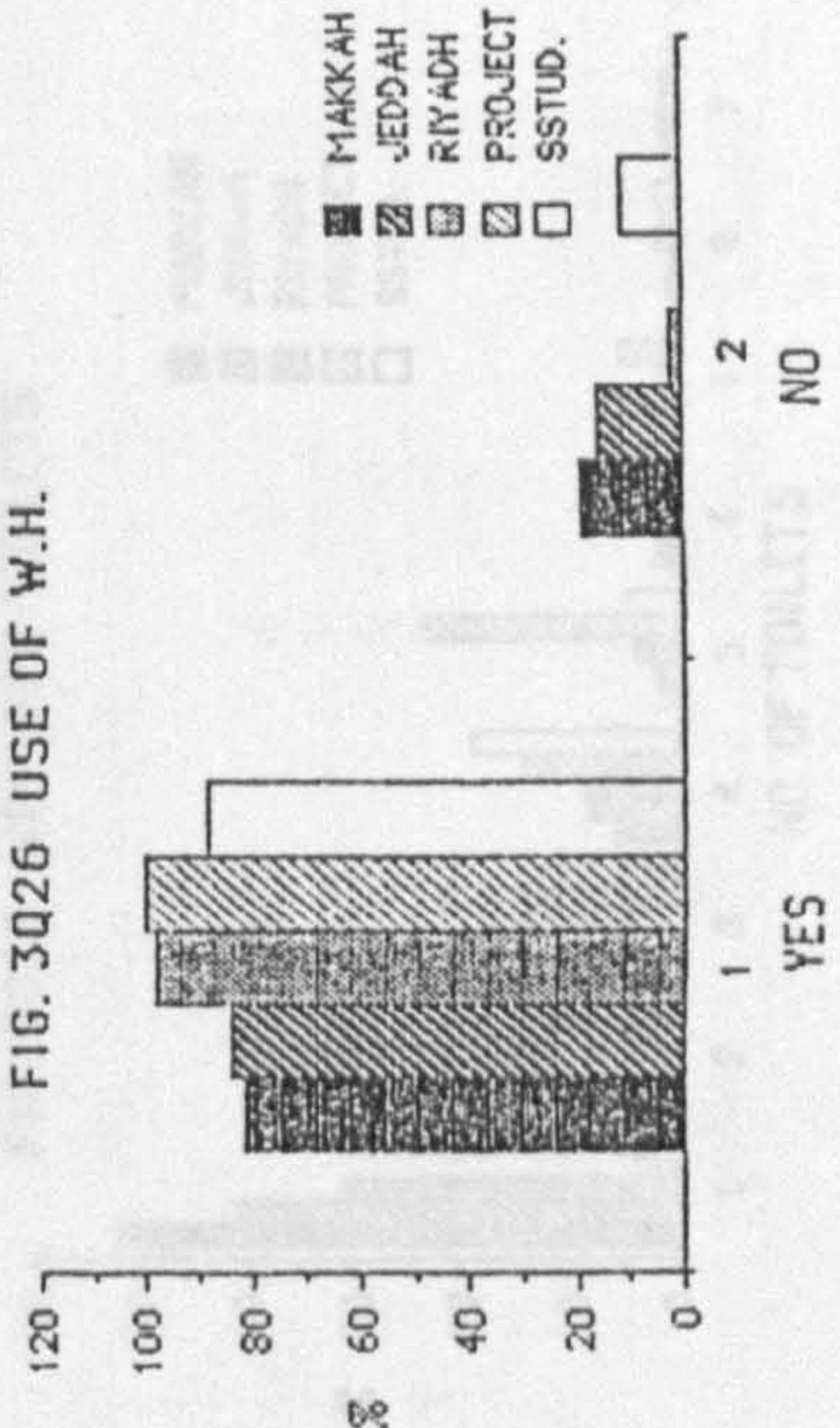


FIG. 1Q27 TRAD TOILETS

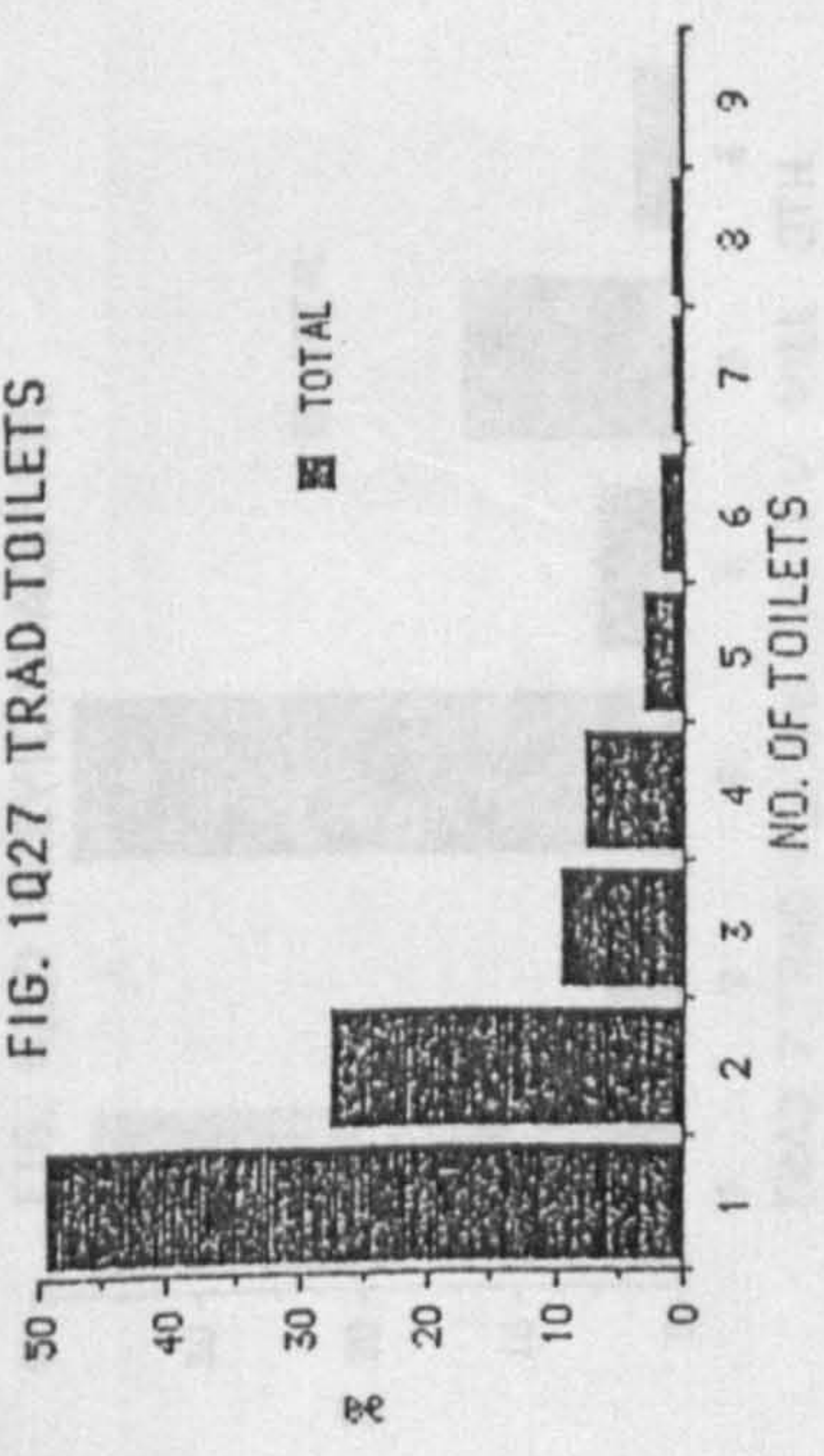


FIG. 2Q27 TRAD TOILETS

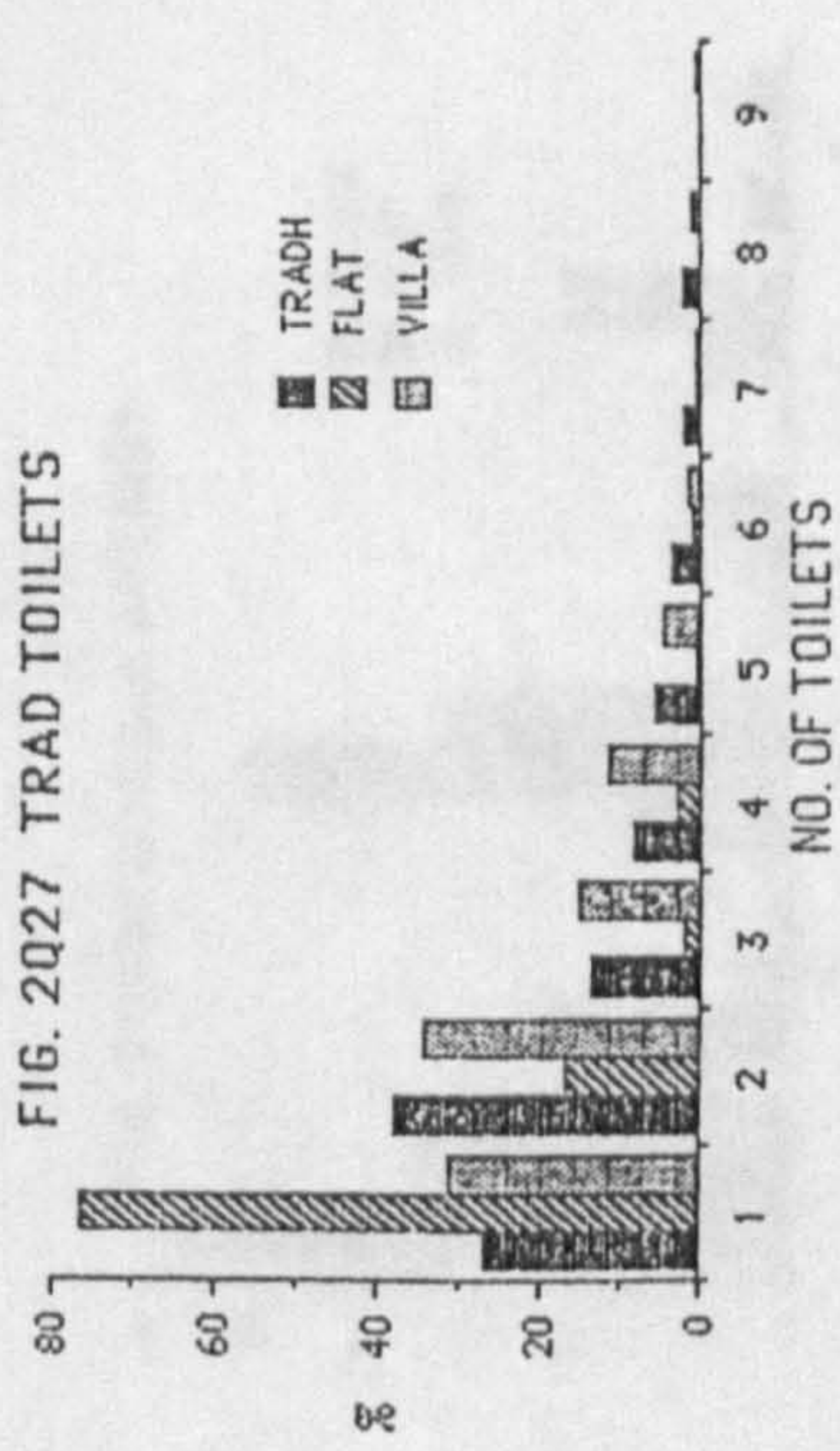


FIG. 3Q27 TRAD. TOILETS

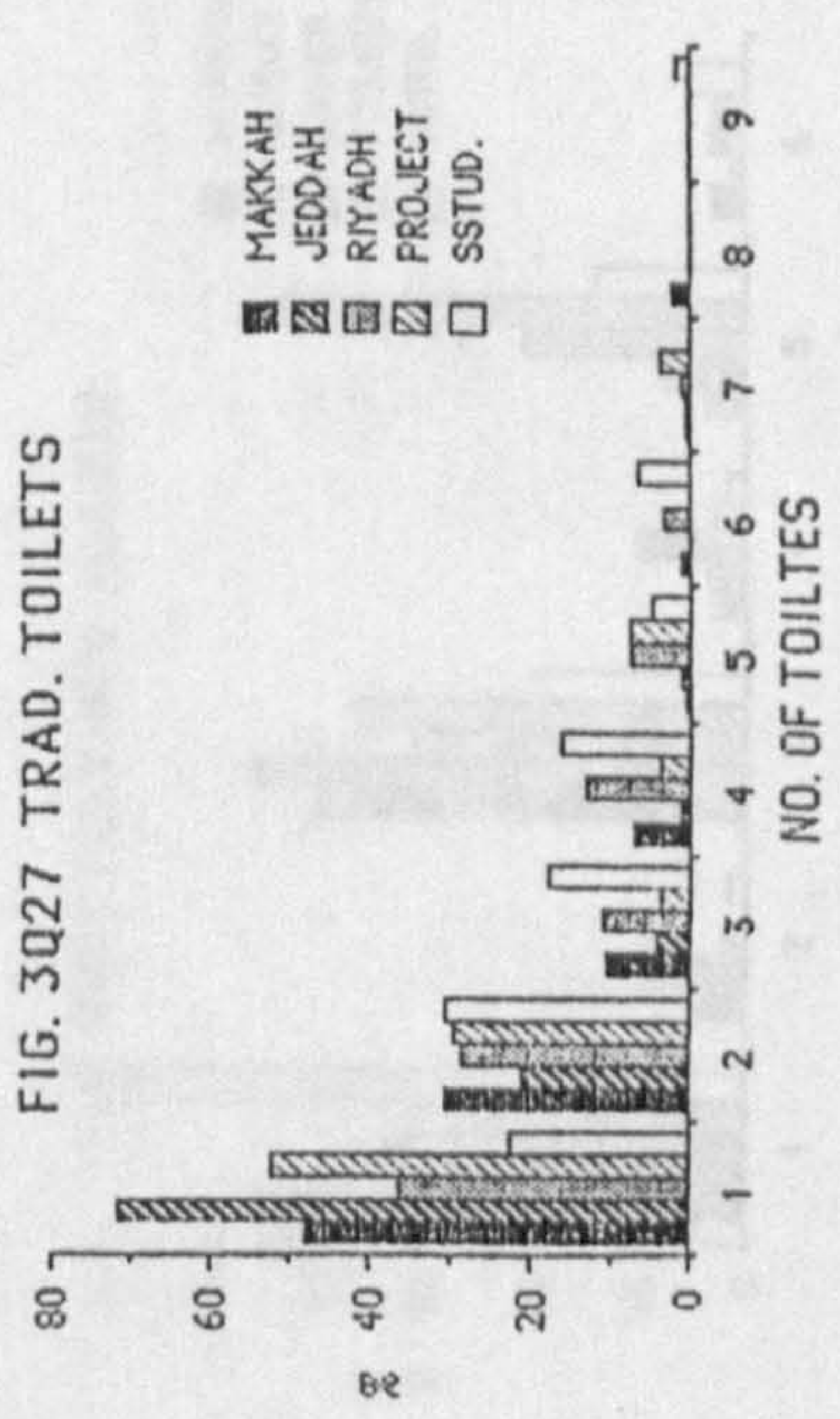


FIG. 1Q28 WESTERN TOILETS

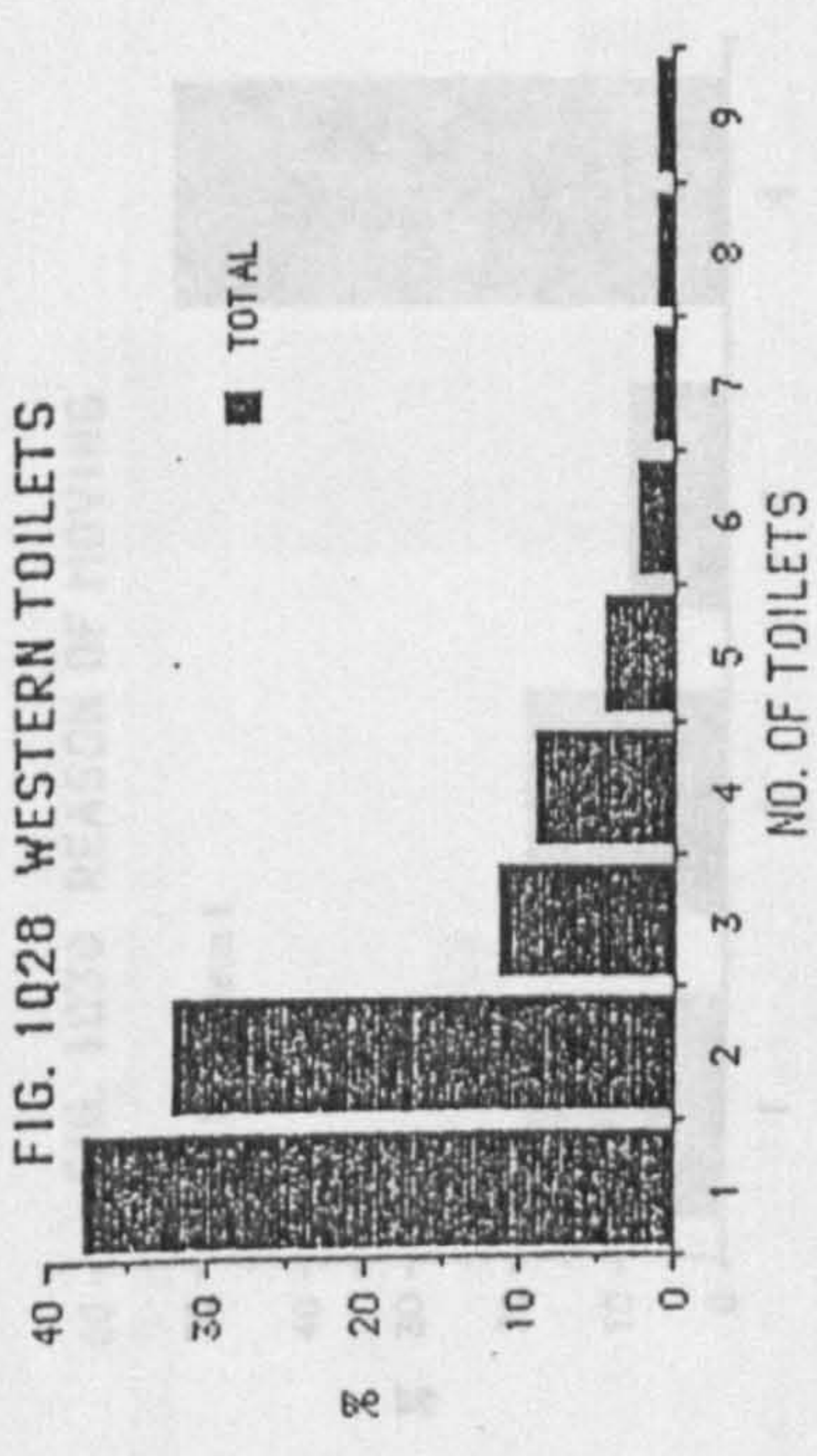


FIG. 2Q28 WESTERN TOILETS

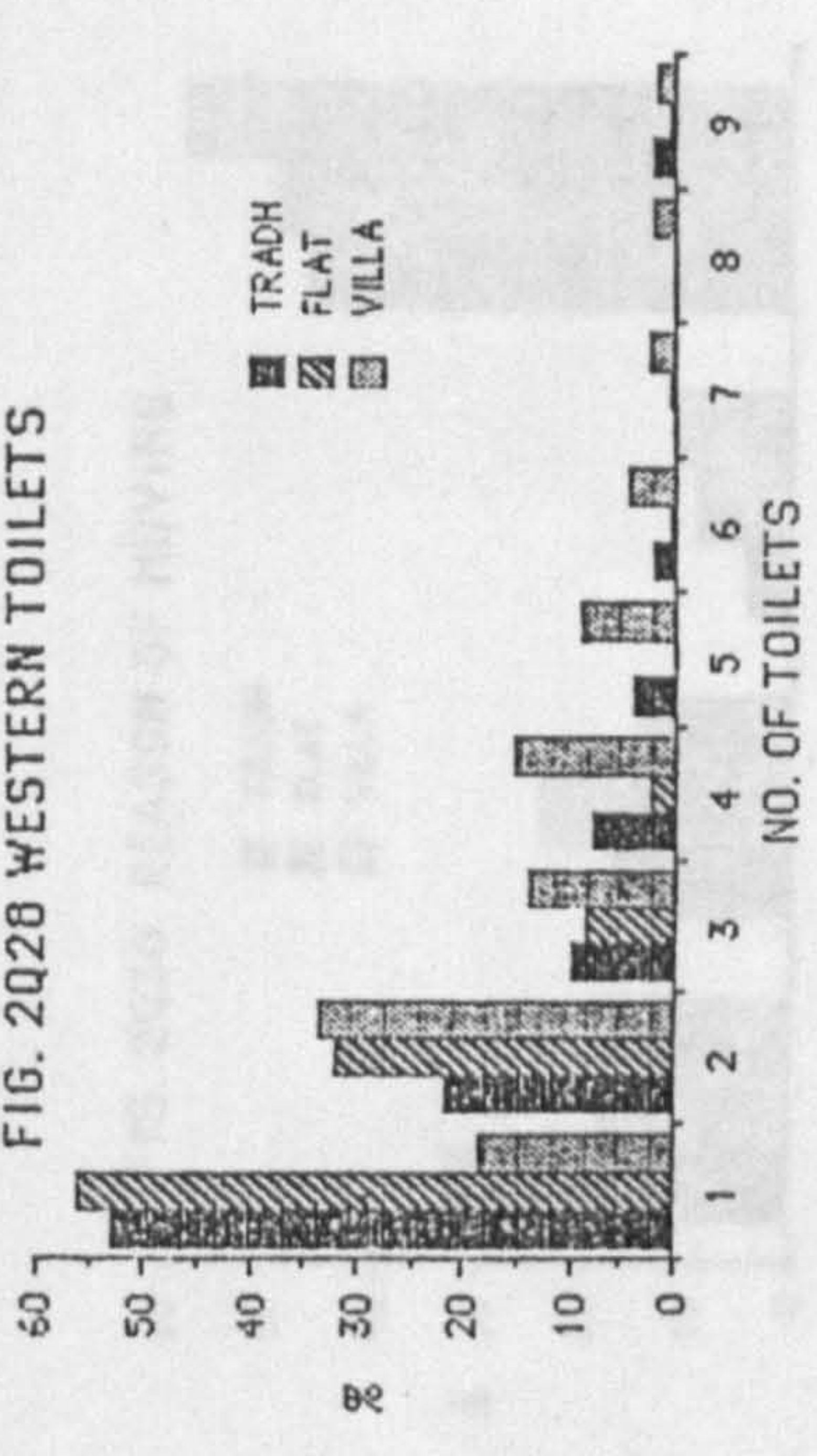


FIG. 3Q28 WESTERN TOILETS

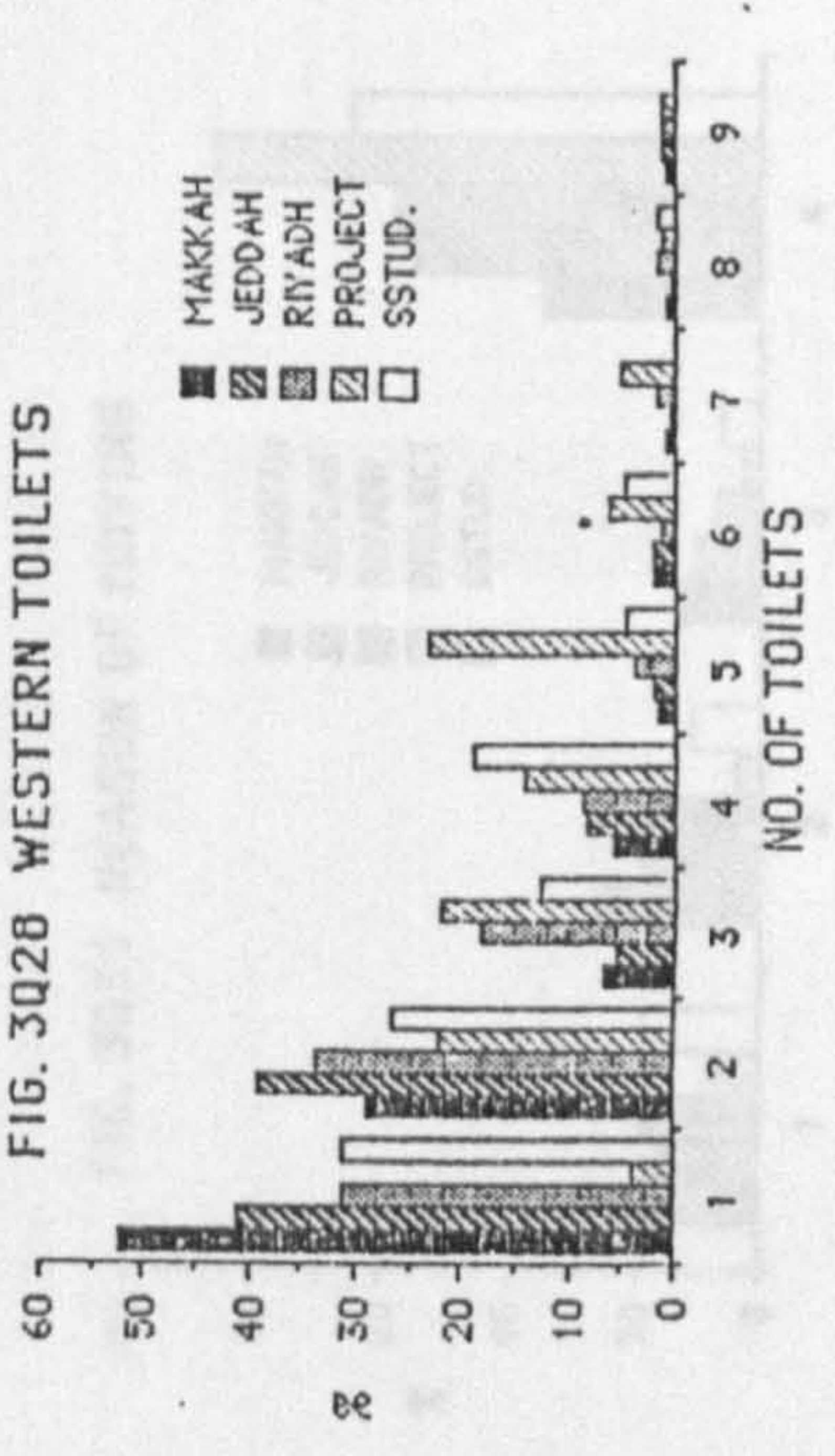


FIG. 1Q29 PREVIOUS ACCOMM.

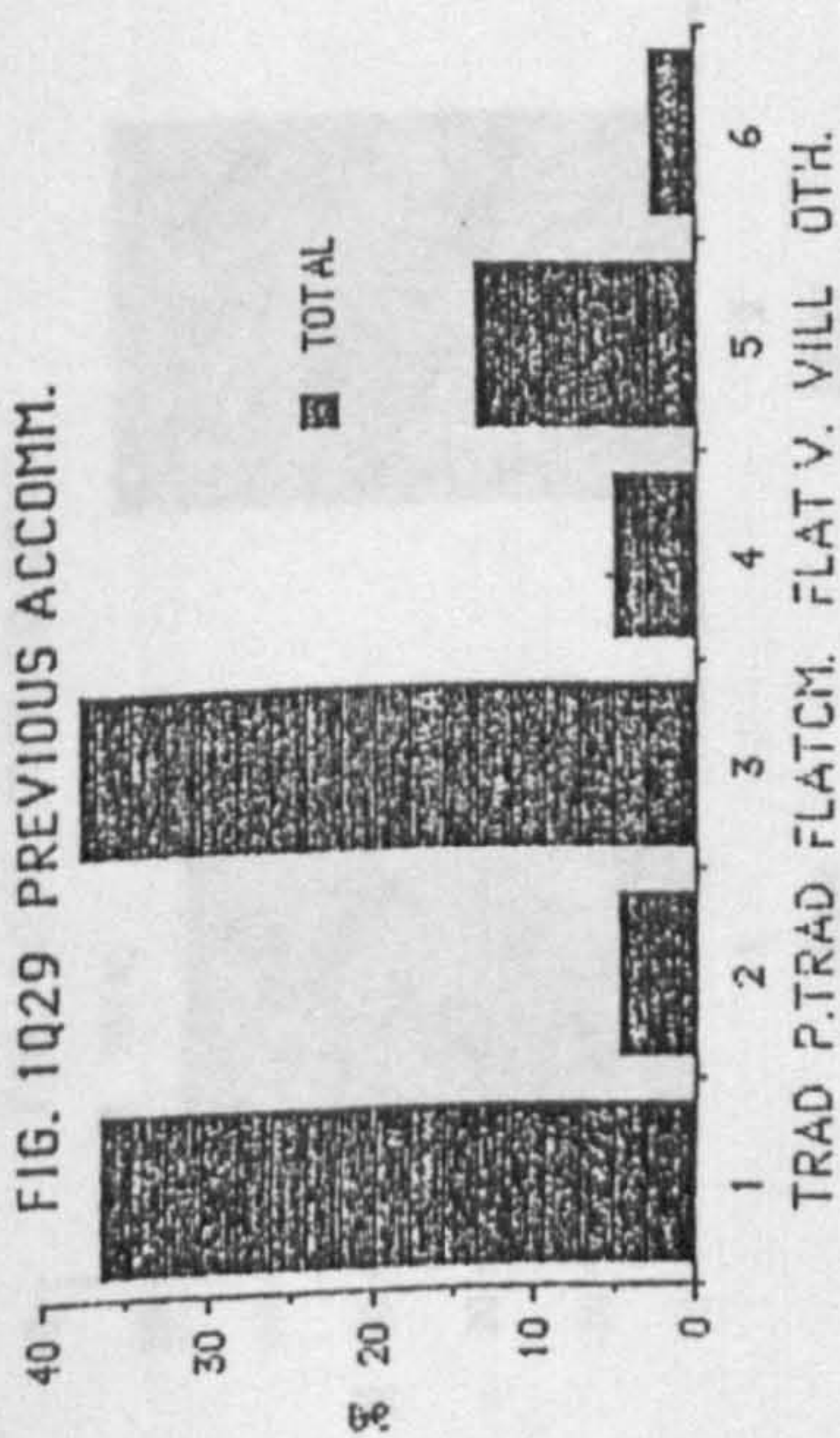


FIG. 1Q30 REASON OF MOVING

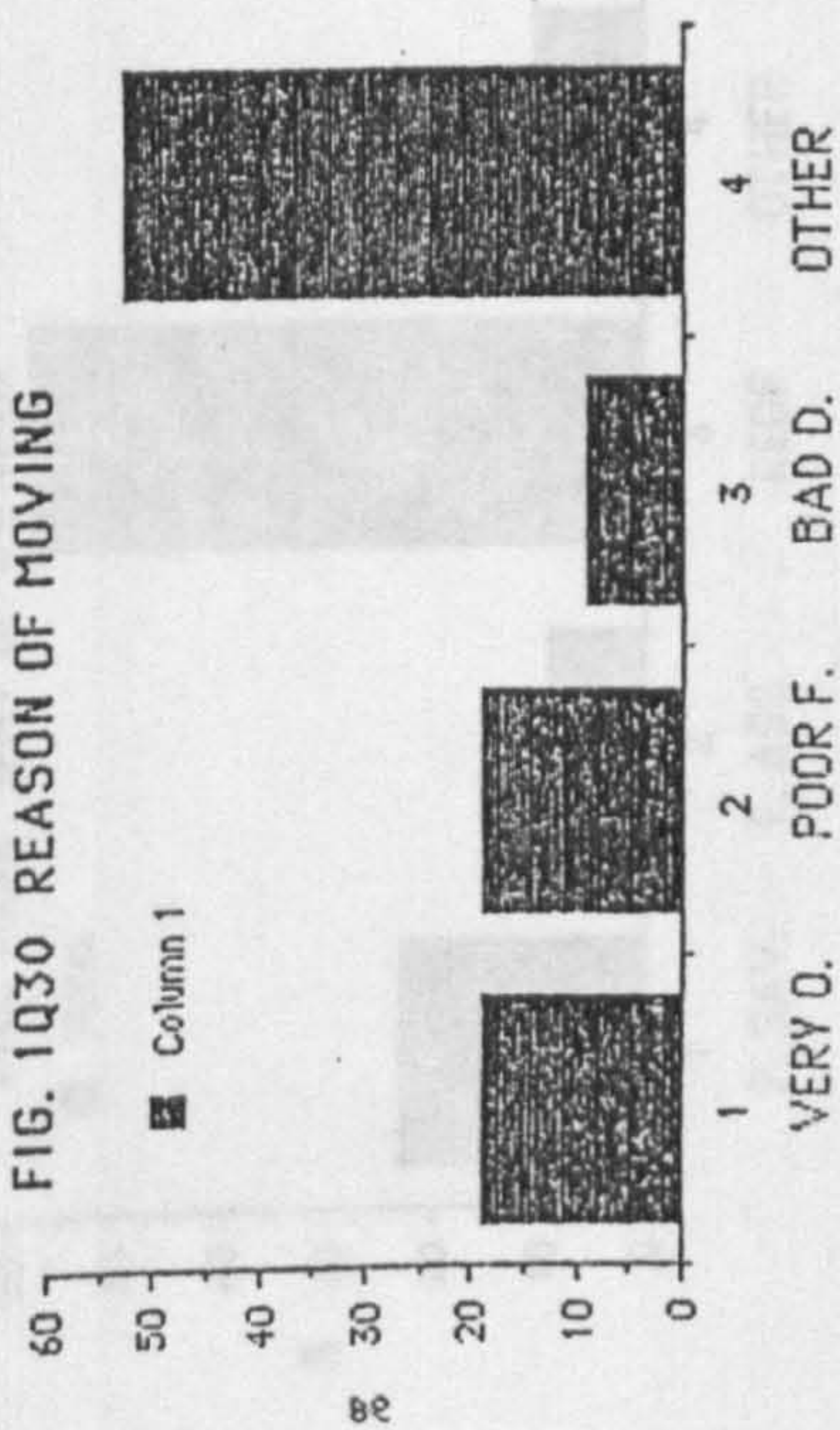


FIG. 2Q29 PREVIOUS ACCOMM.

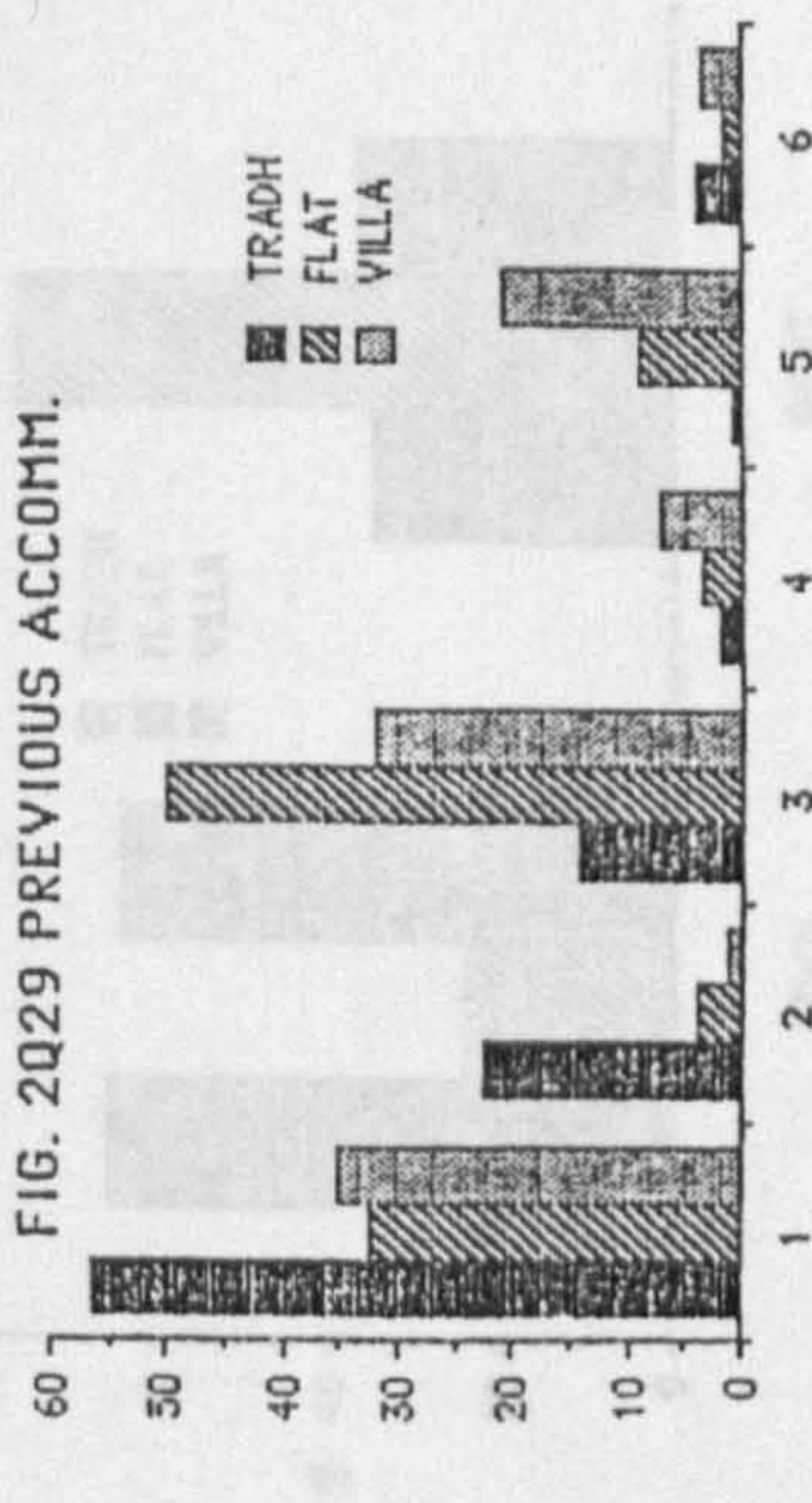


FIG. 2Q30 REASON OF MOVING

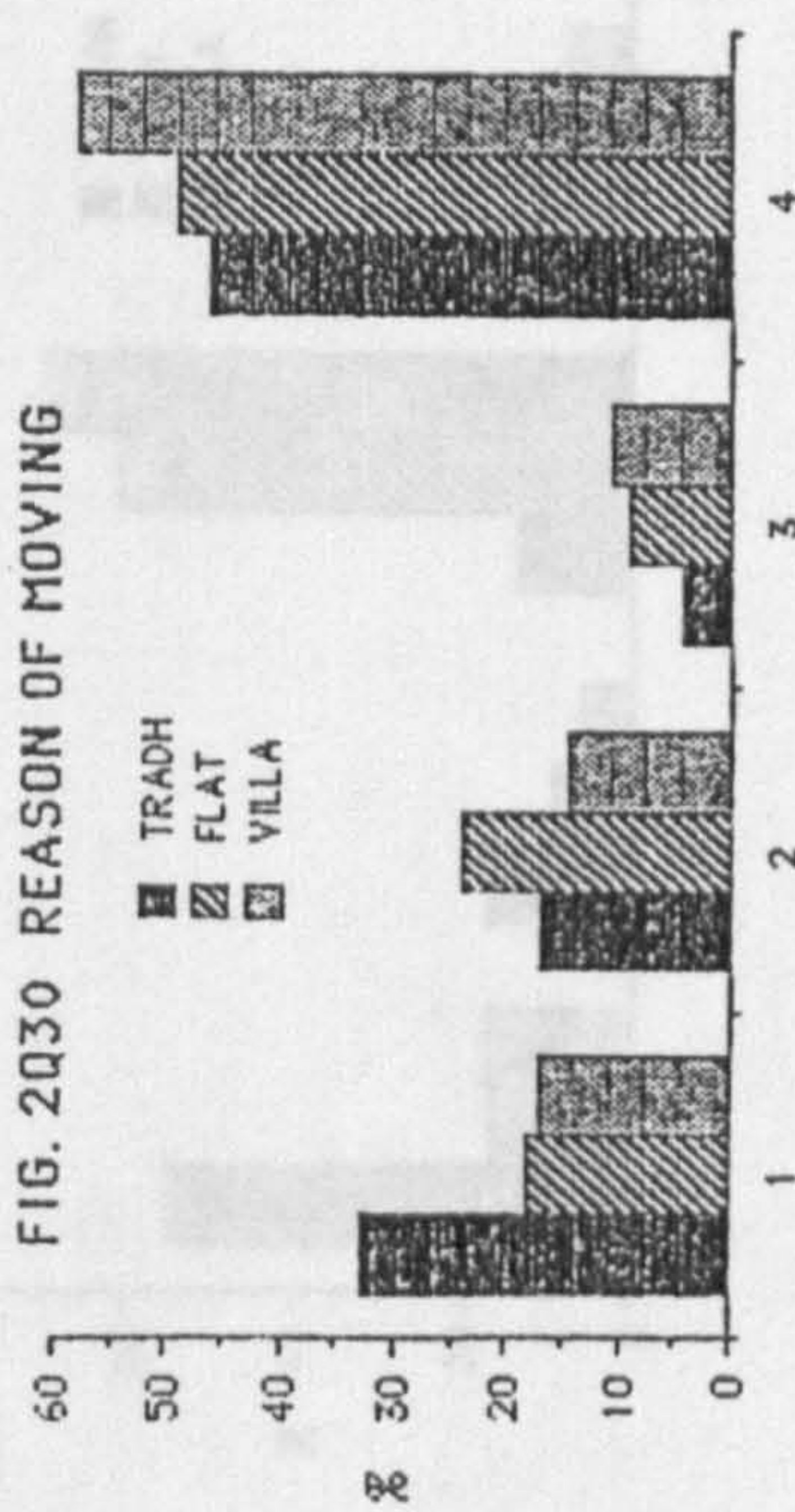


FIG. 3Q29 PREVIOUS ACCOMM.

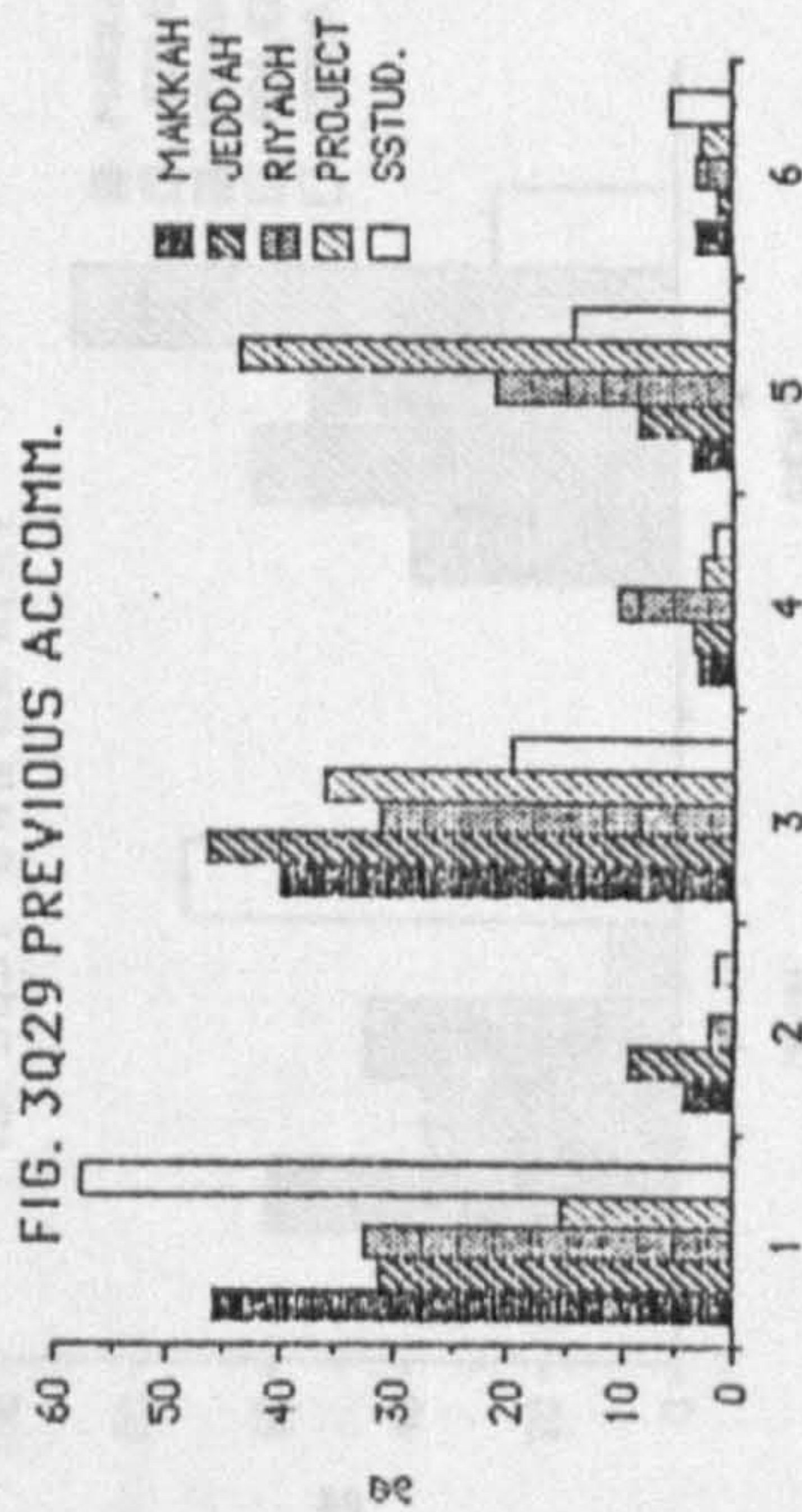


FIG. 3Q30 REASON OF MOVING

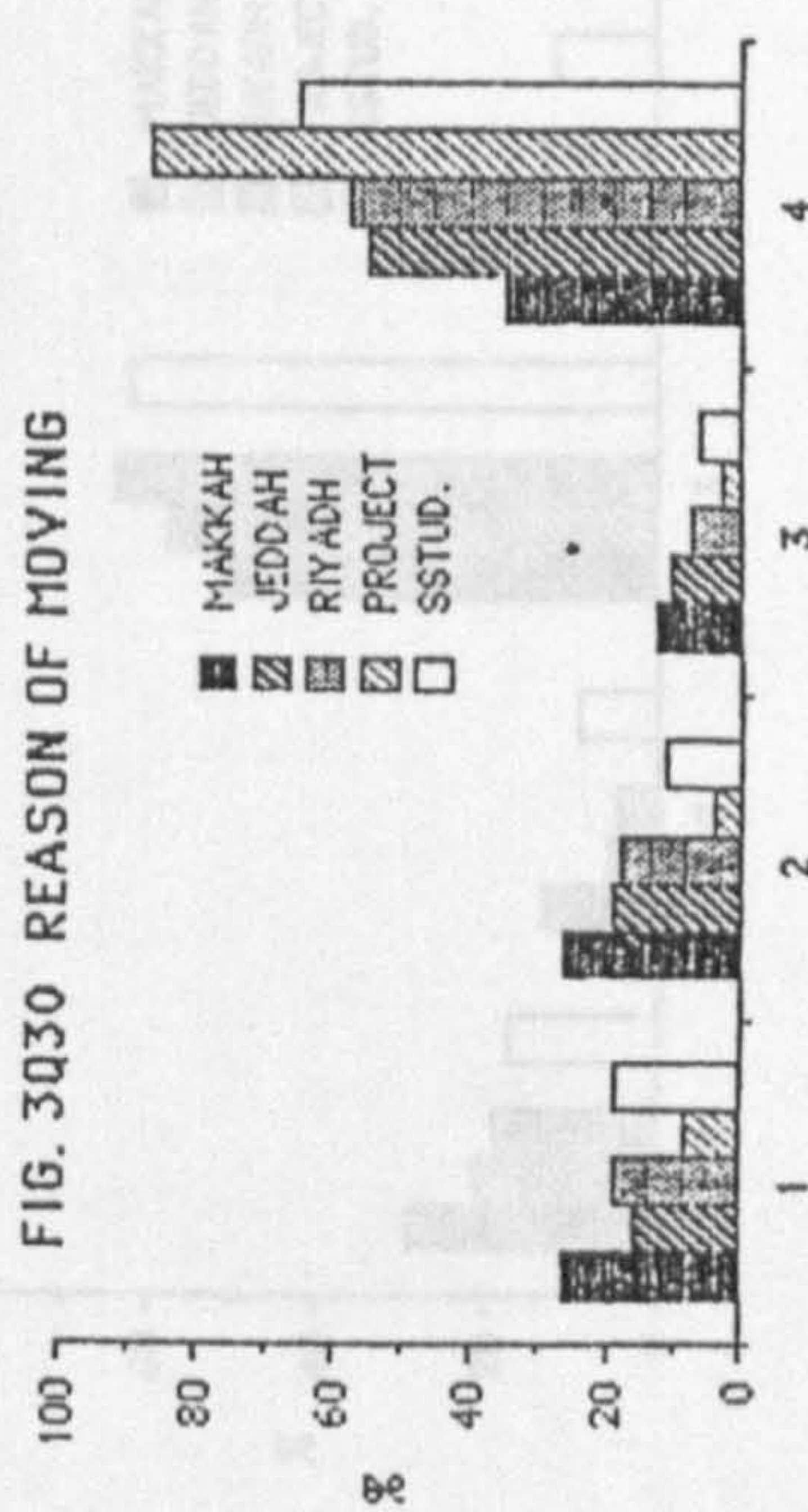


FIG. 1Q31 OWN OR RENT

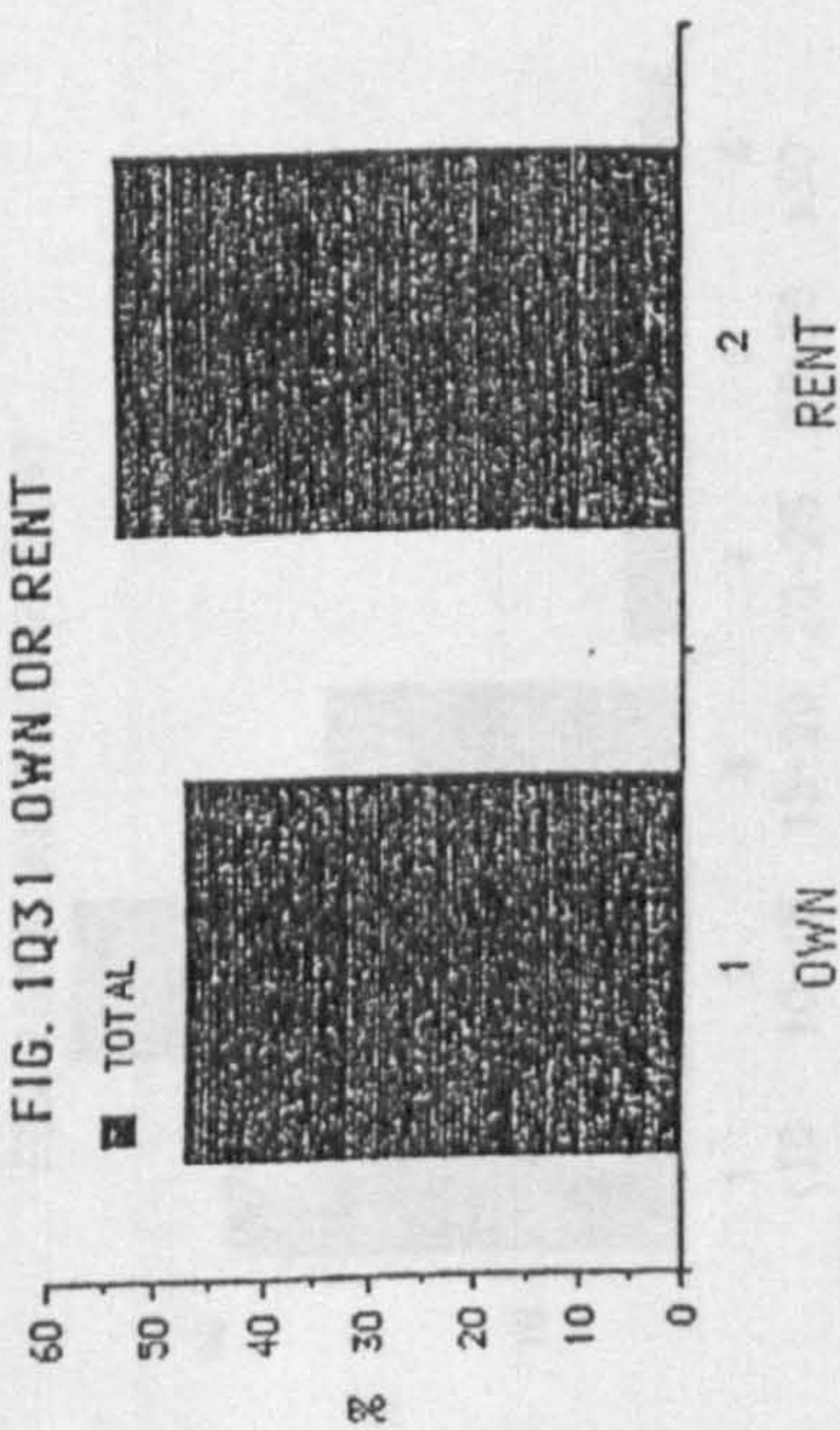


FIG. 1Q32 WAY OF OWNING

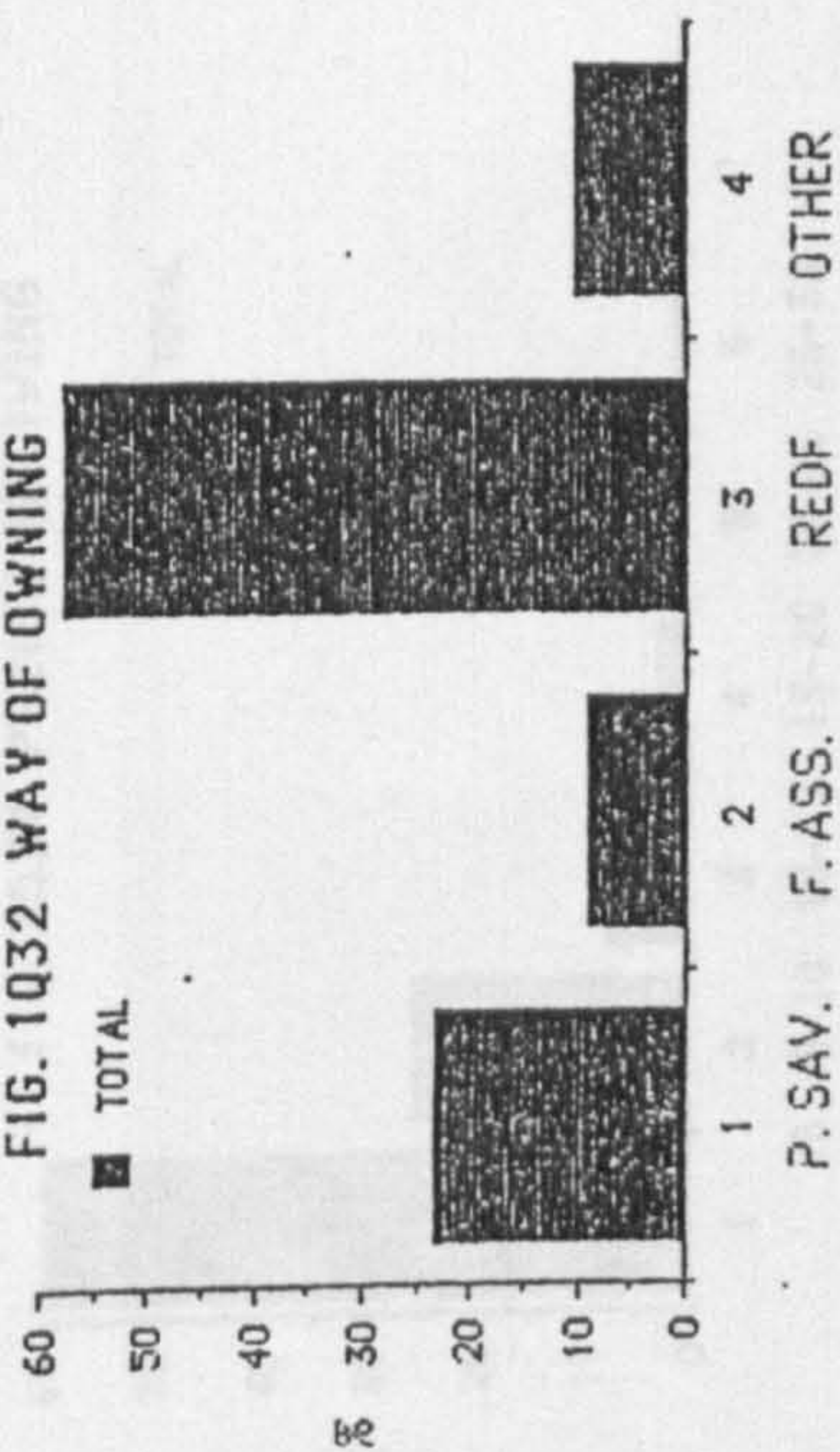


FIG. 2Q31 OWN OR RENT

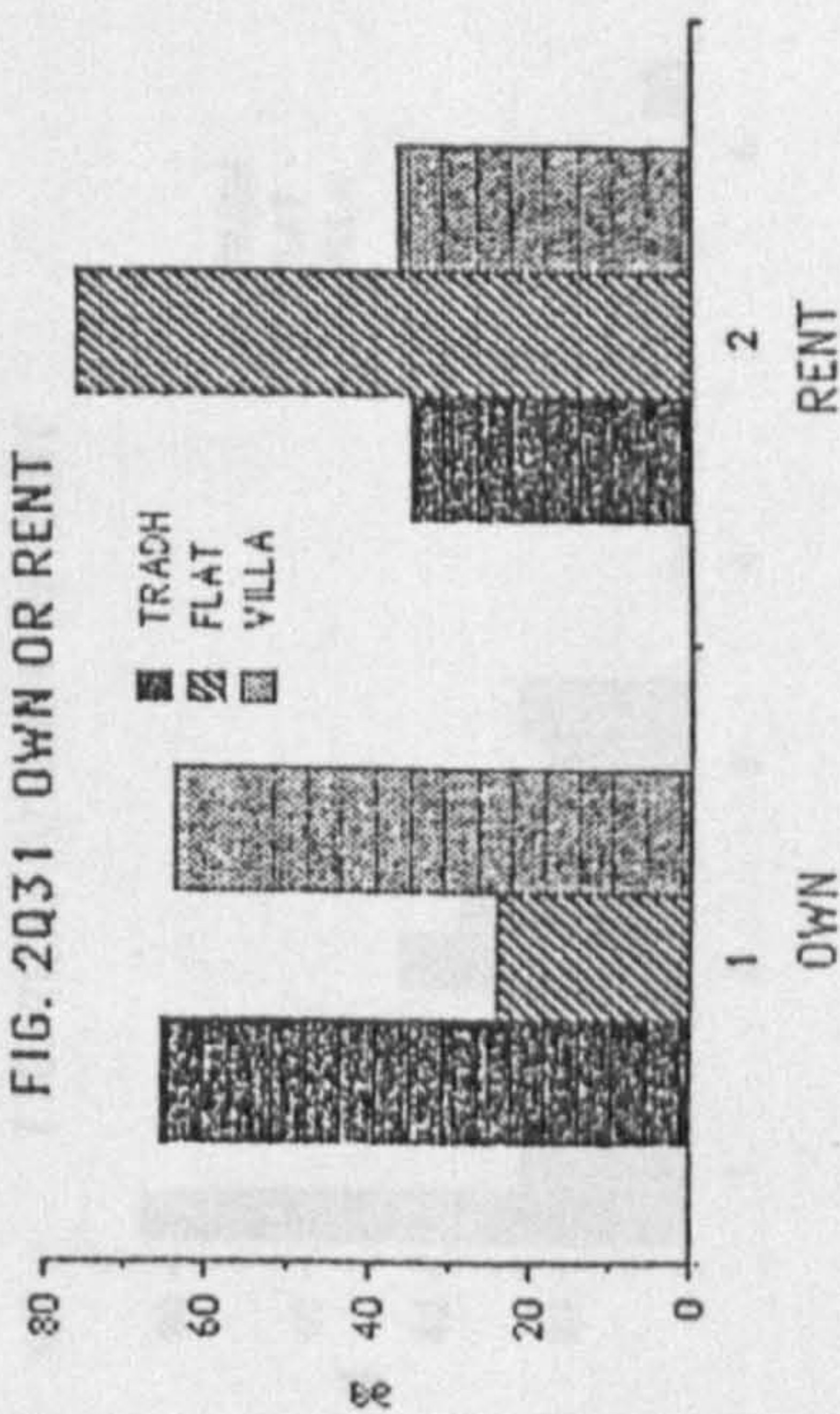


FIG. 2Q32 WAY OF OWNING

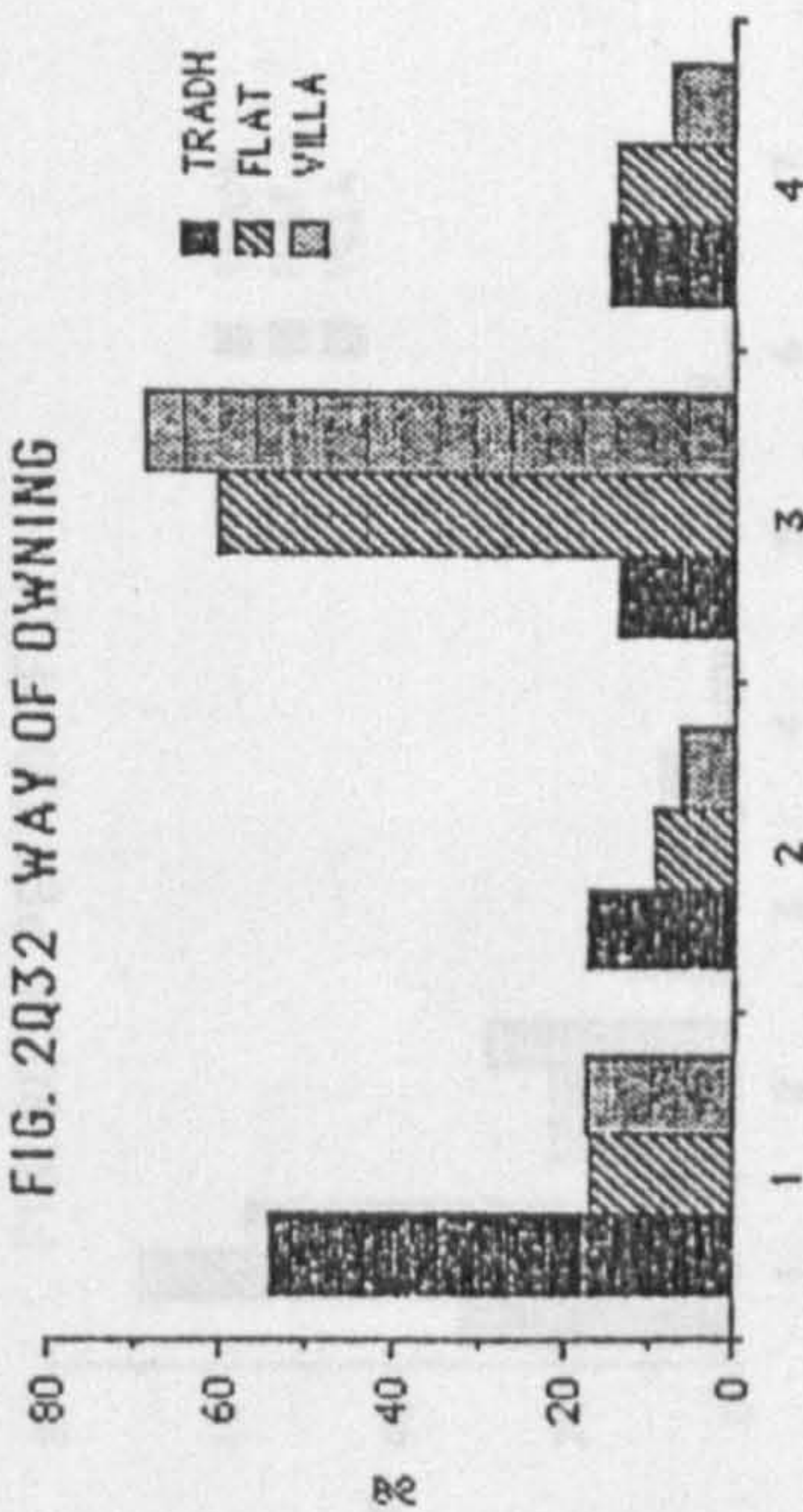


FIG. 3Q31 OWN OR RENT

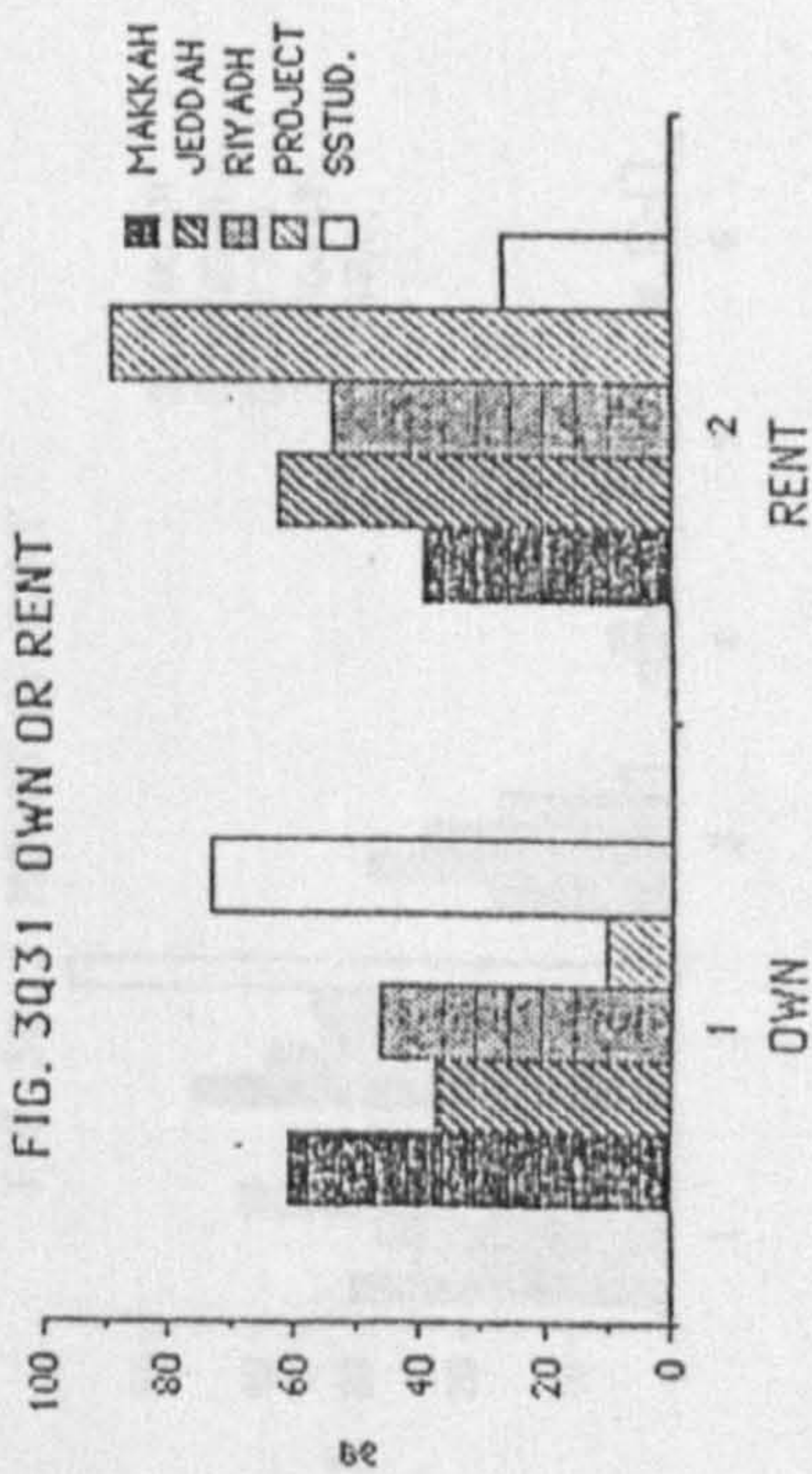


FIG. 3Q32 WAY OF OWNING

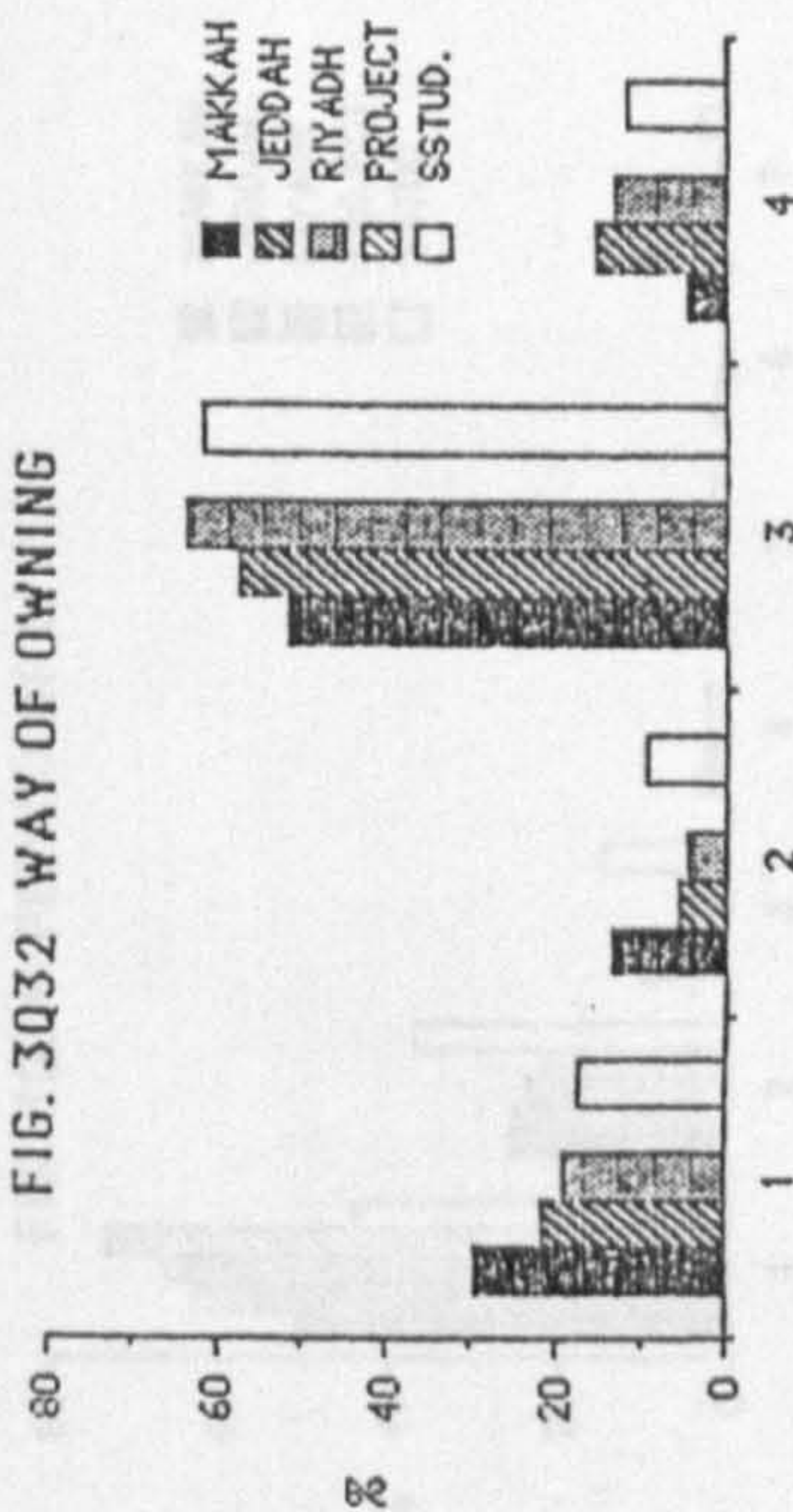


FIG. 1Q33 AMOUNT OF RENT

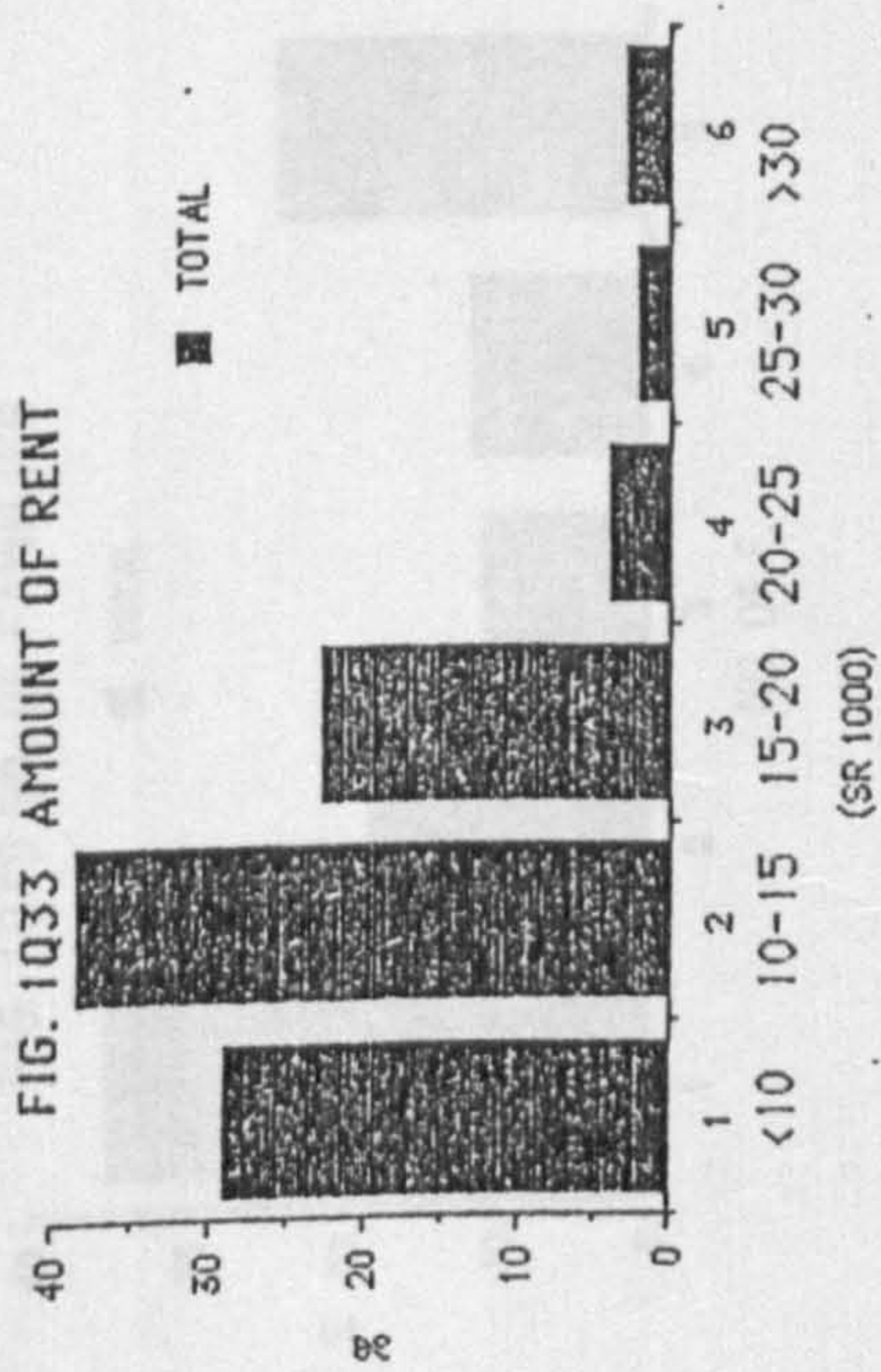


FIG. 2Q33 AMOUNT OF RENT

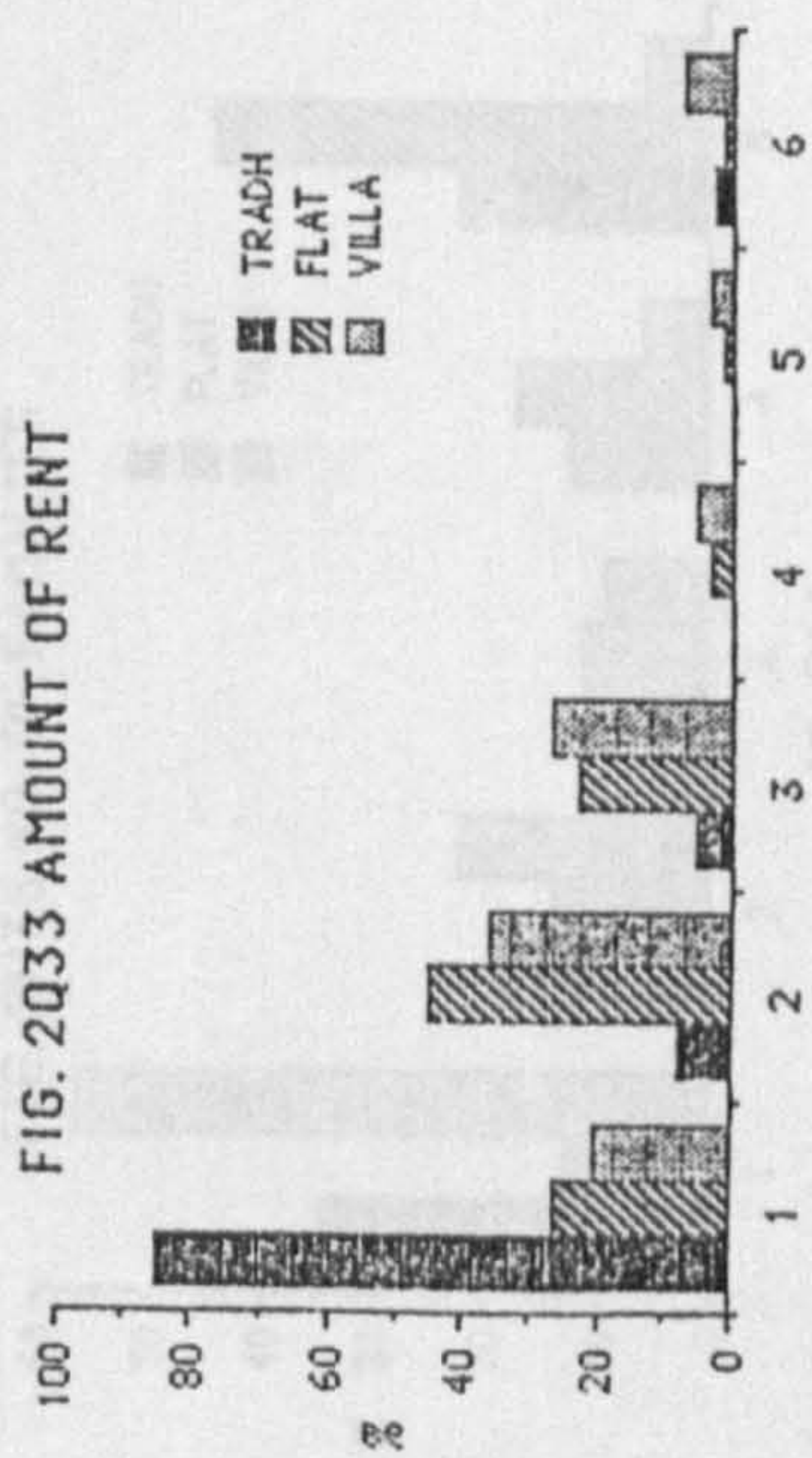


FIG. 3Q33 MOUNT OF RENT

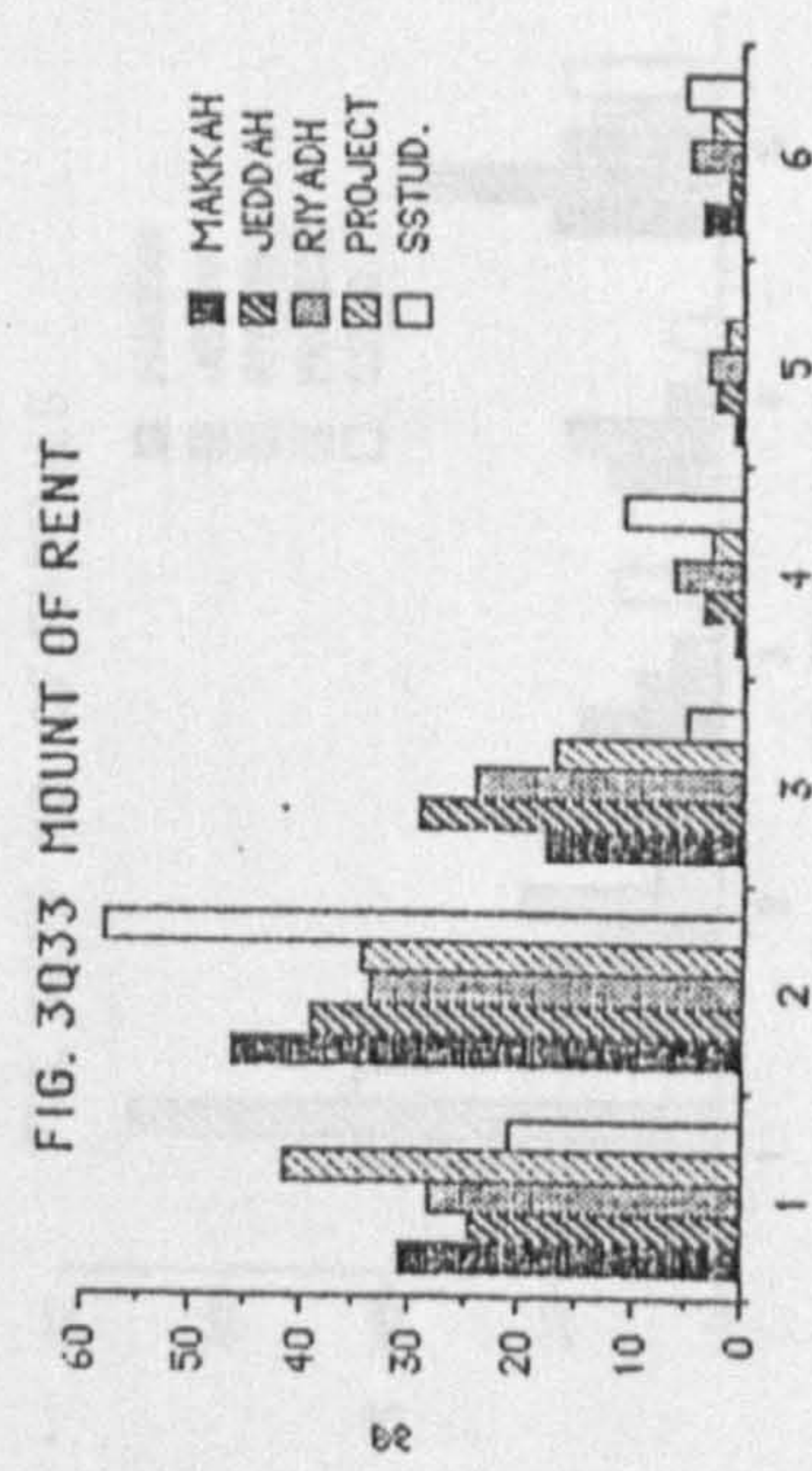


FIG. 1Q34 PERIOD OF LIVING

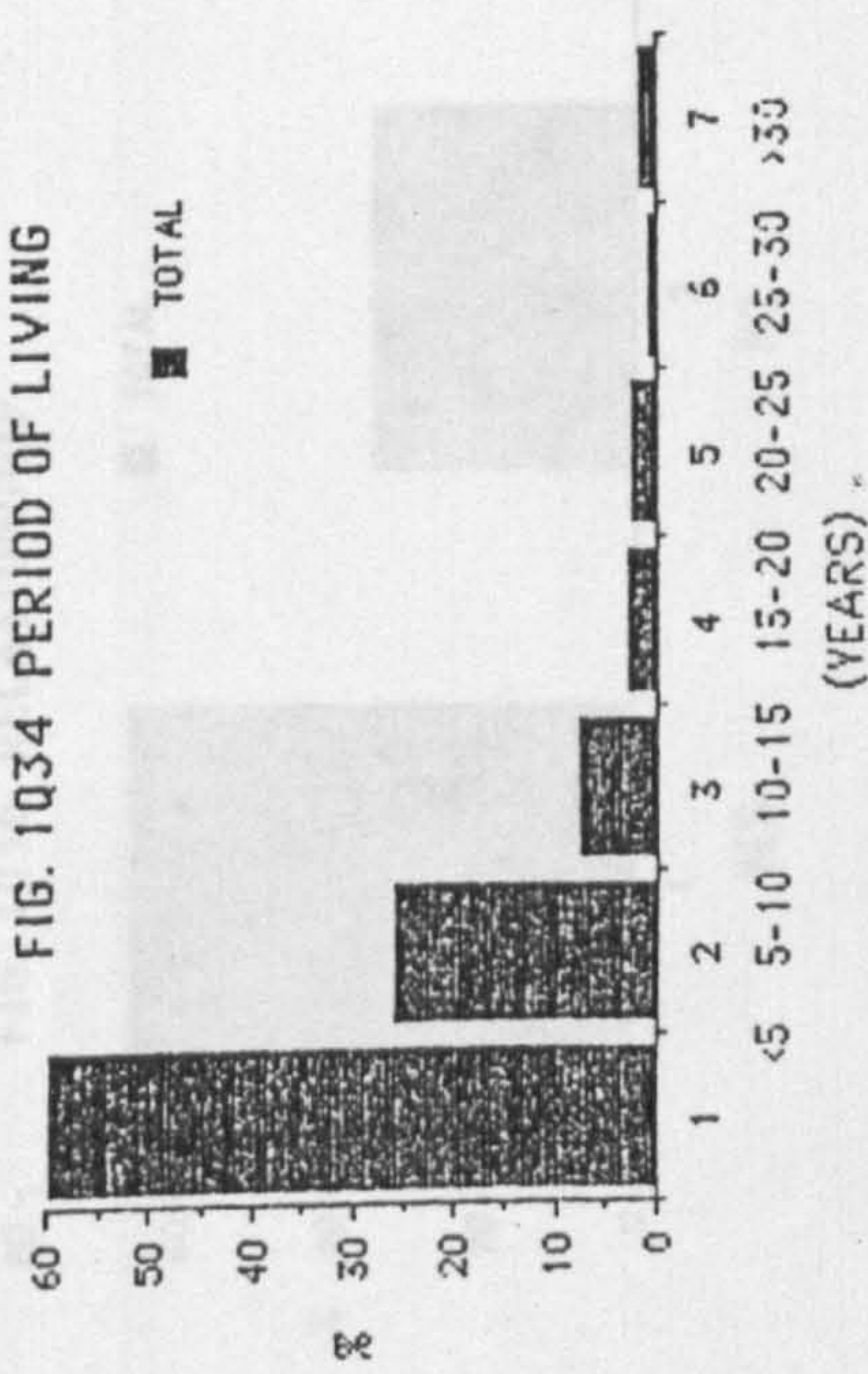


FIG. 2Q34 PERIOD OF LIVING

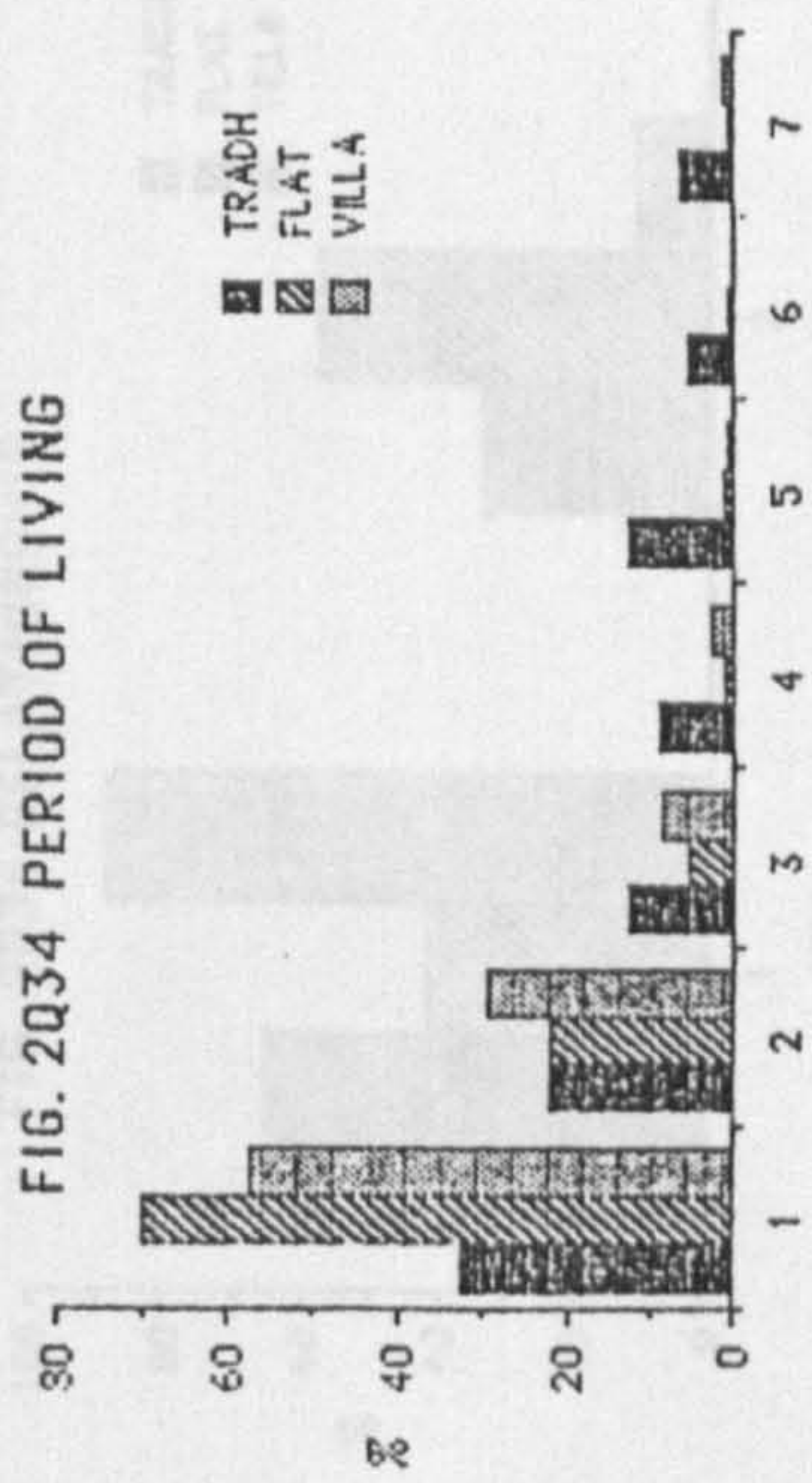


FIG. 3Q34 PERIOD OF LIVING

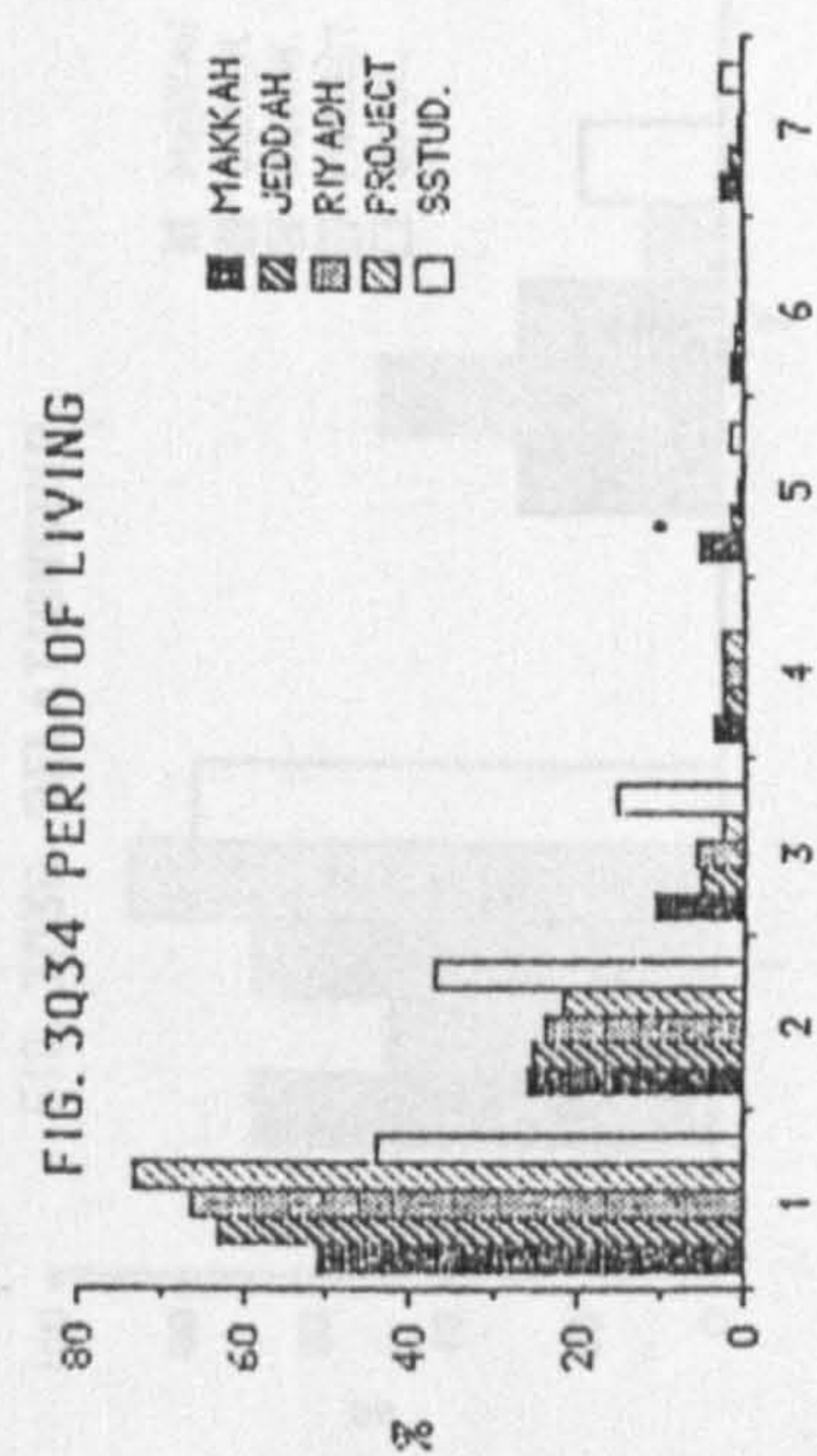


FIG. 1Q35 NO. OF FAMILIES

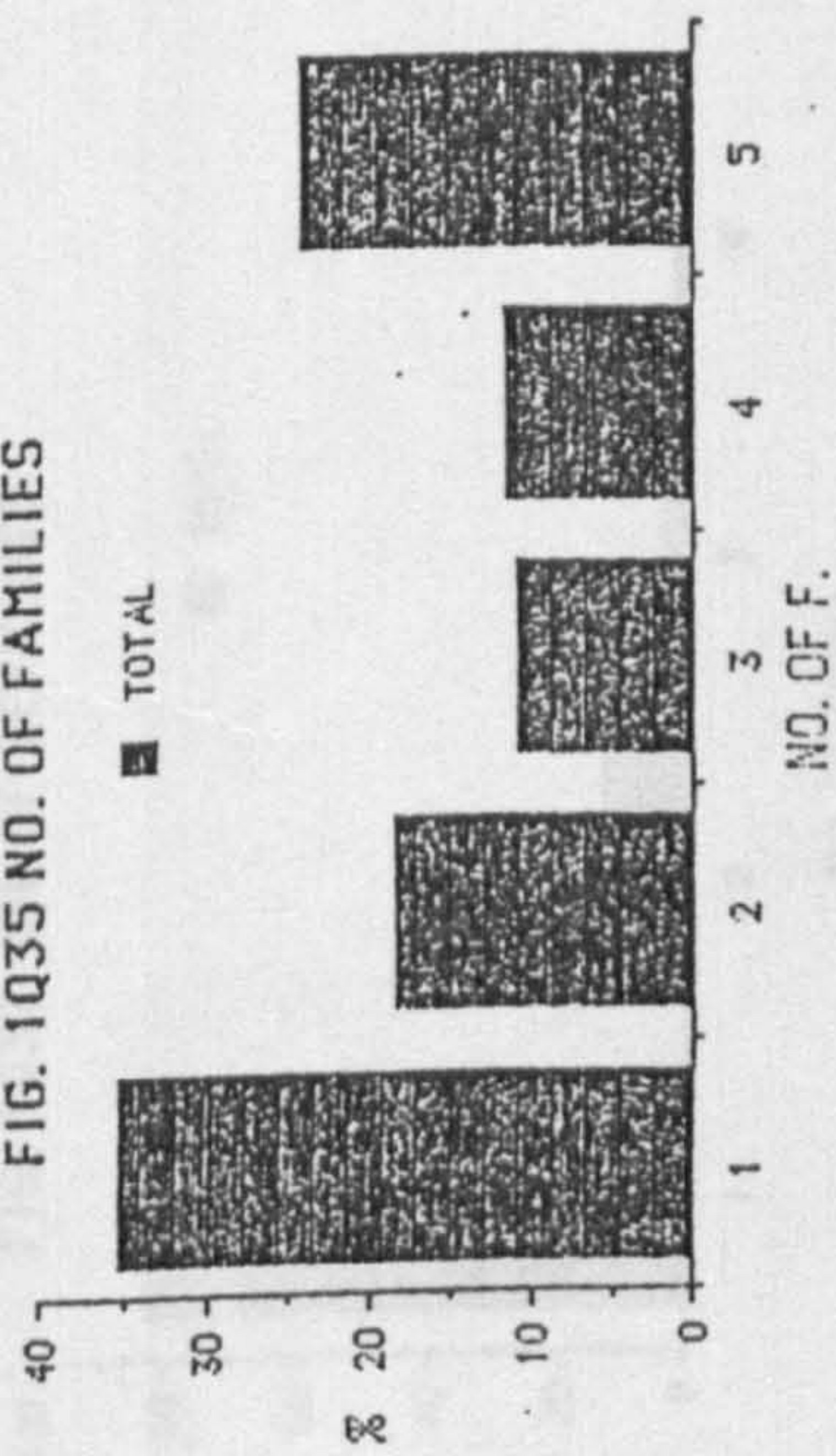


FIG. 1Q36 RELATIONSHIP

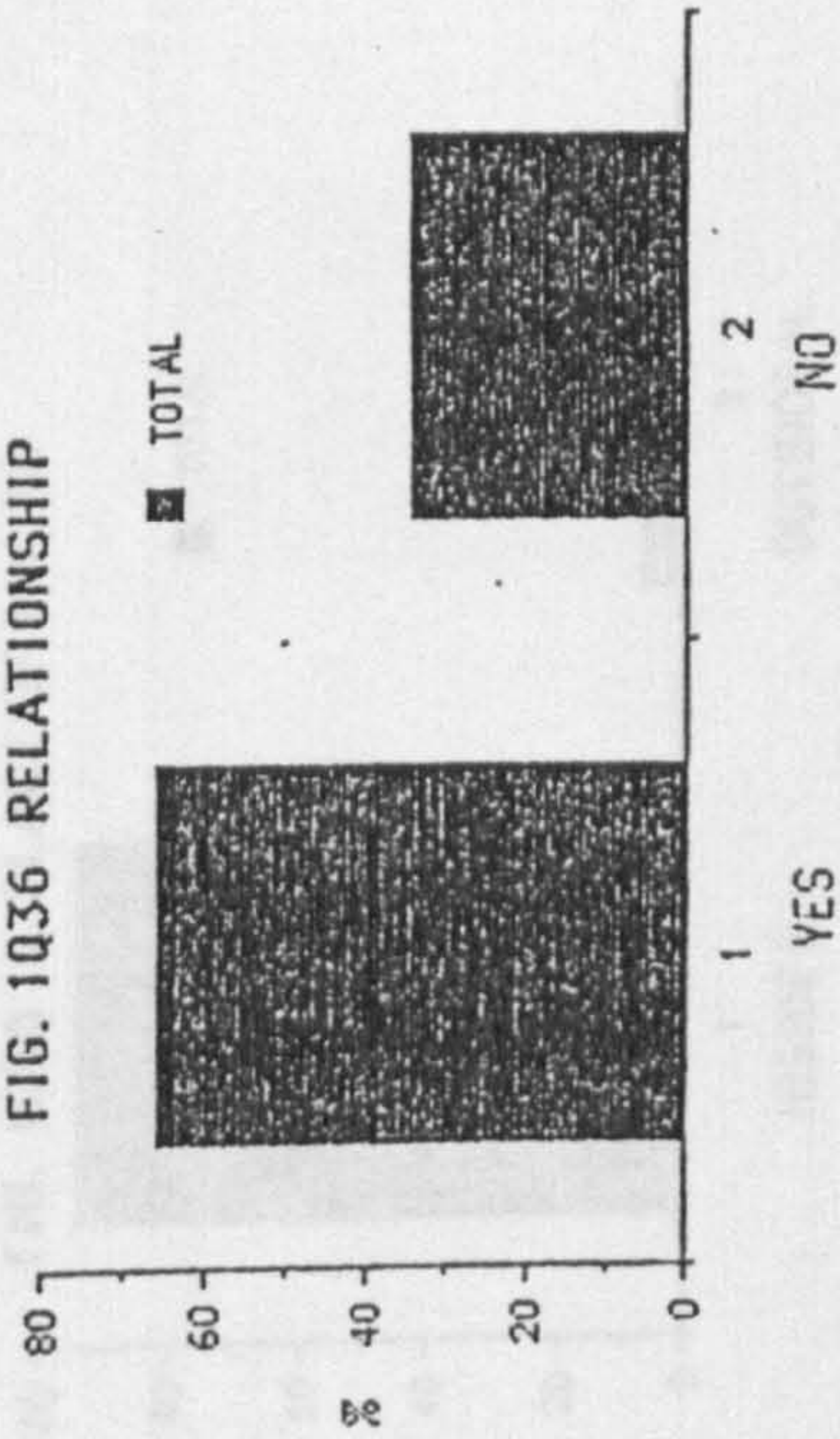


FIG. 2Q35 NO. OF FAMILIES

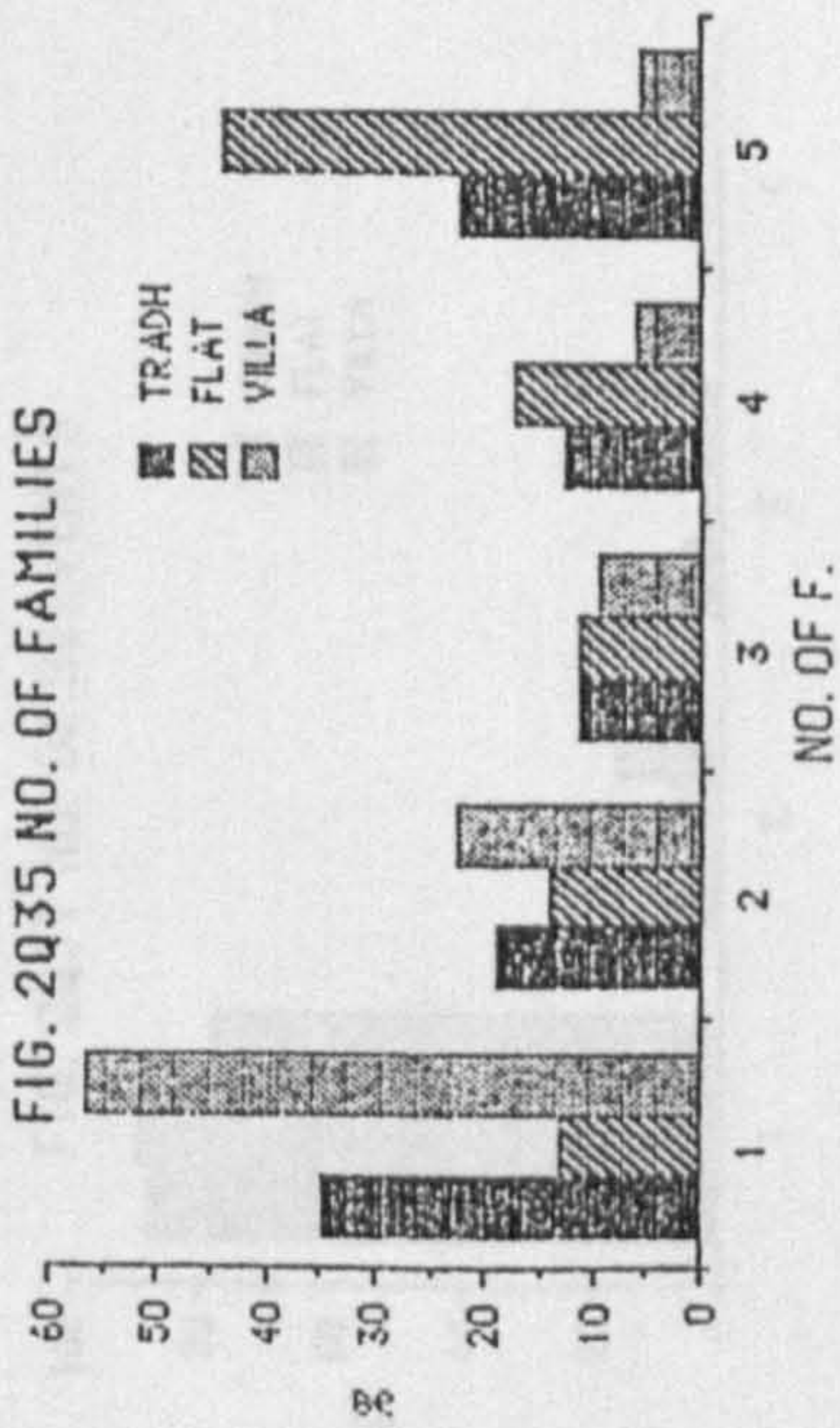


FIG. 2Q36 RELATIONSHIP

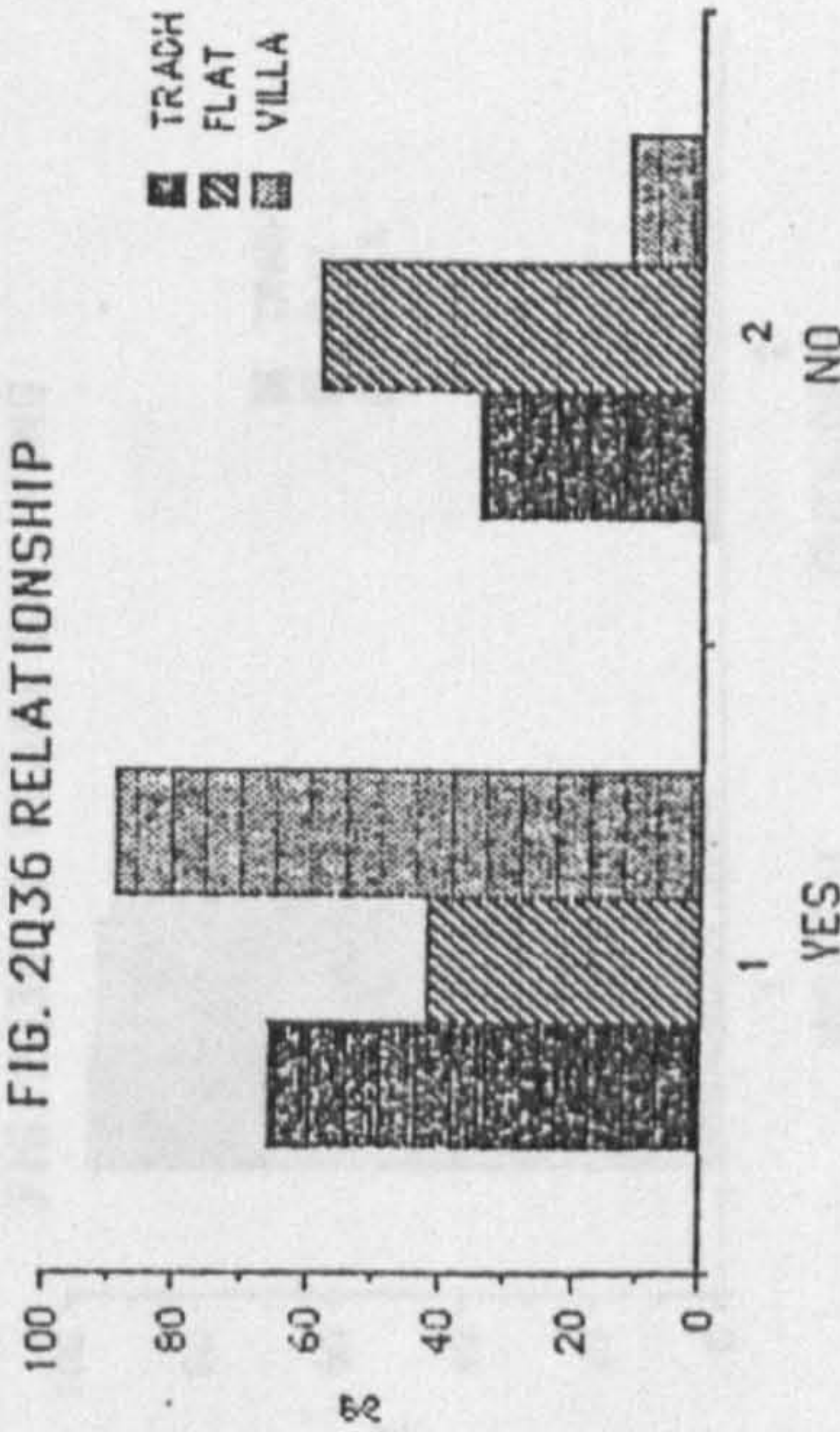


FIG. 3Q35 NO. OF FAMILIES

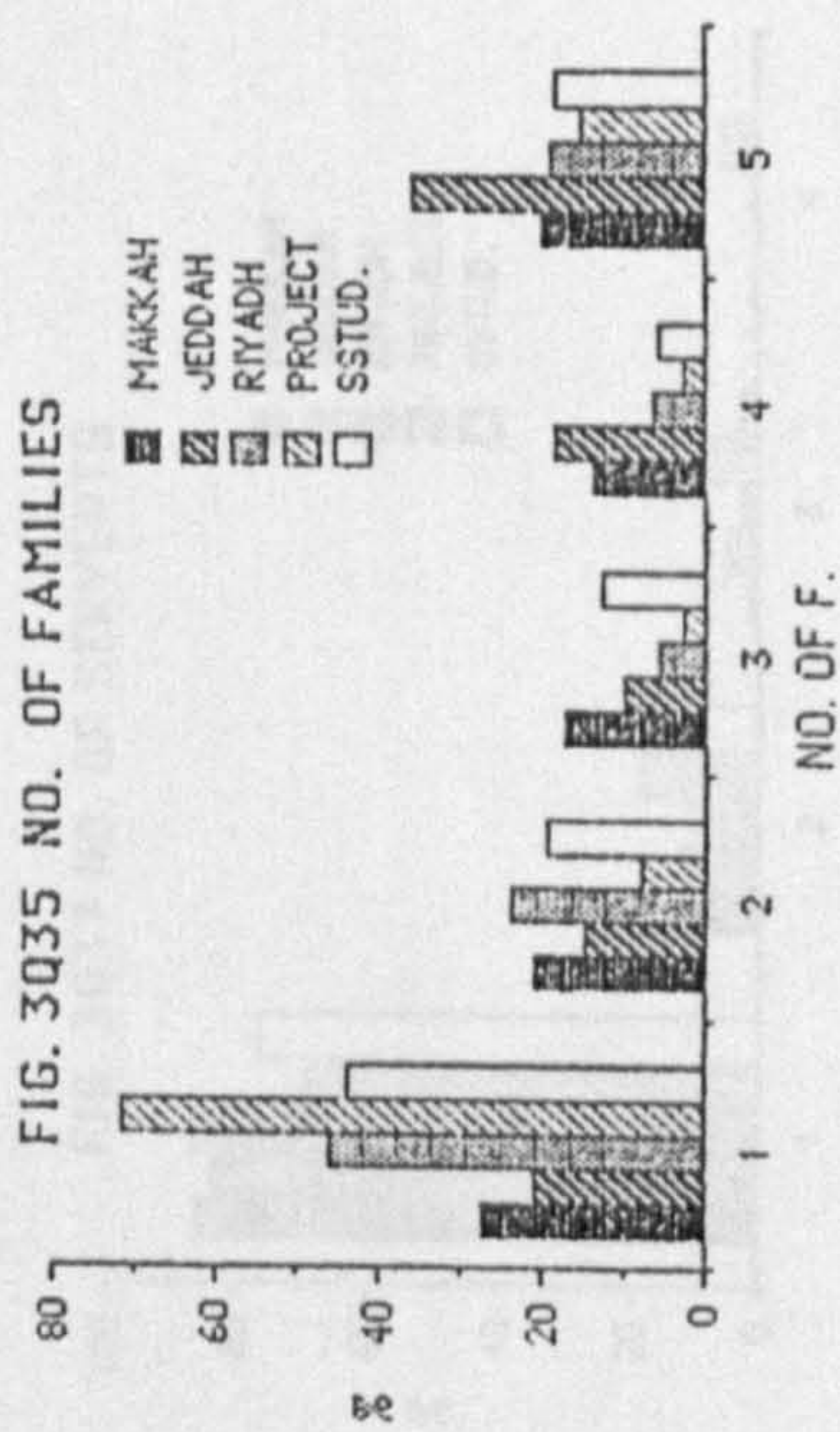


FIG. 3Q36 RELATIONSHIP

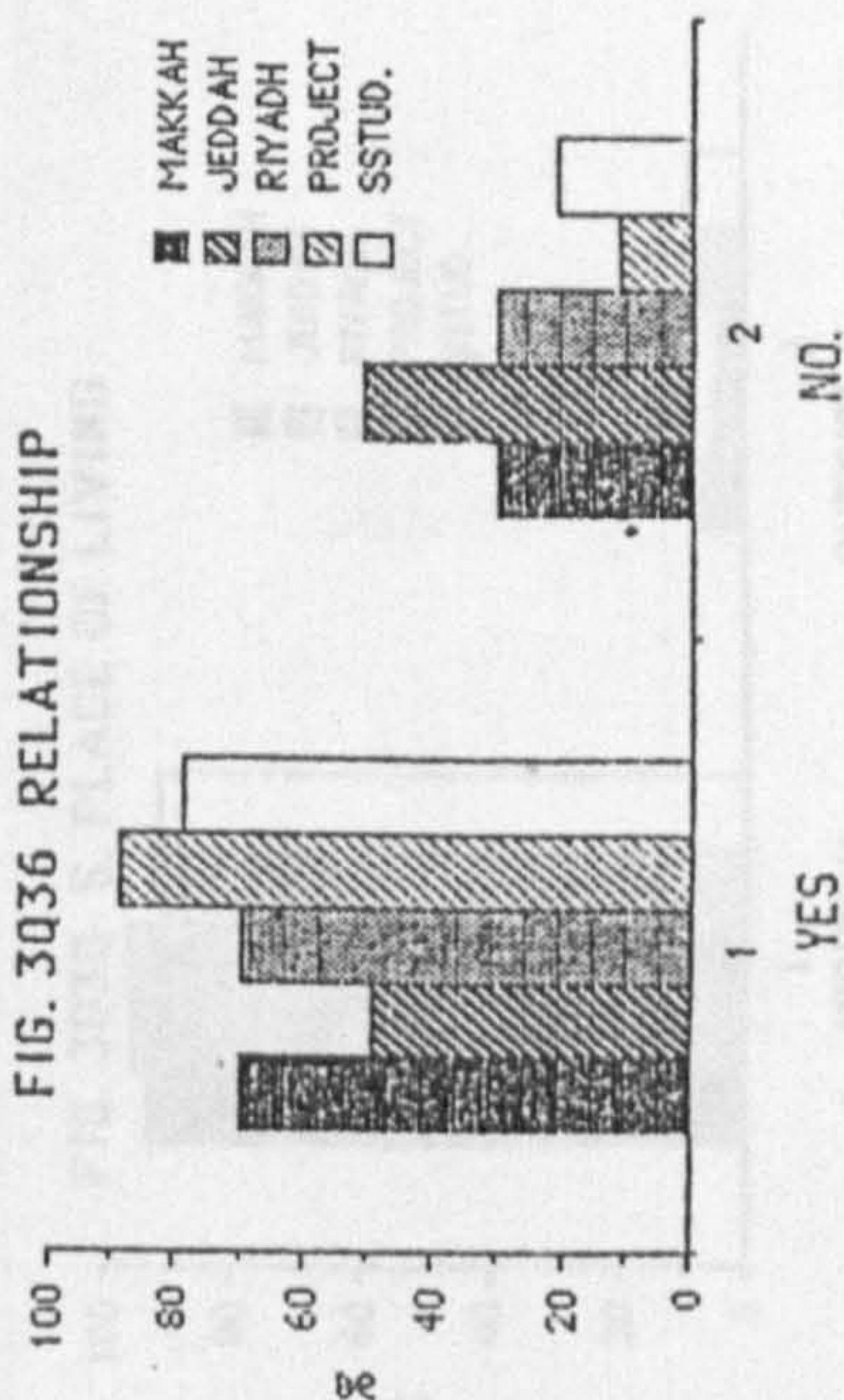


FIG. 1Q37 NO. OF SERVANTS

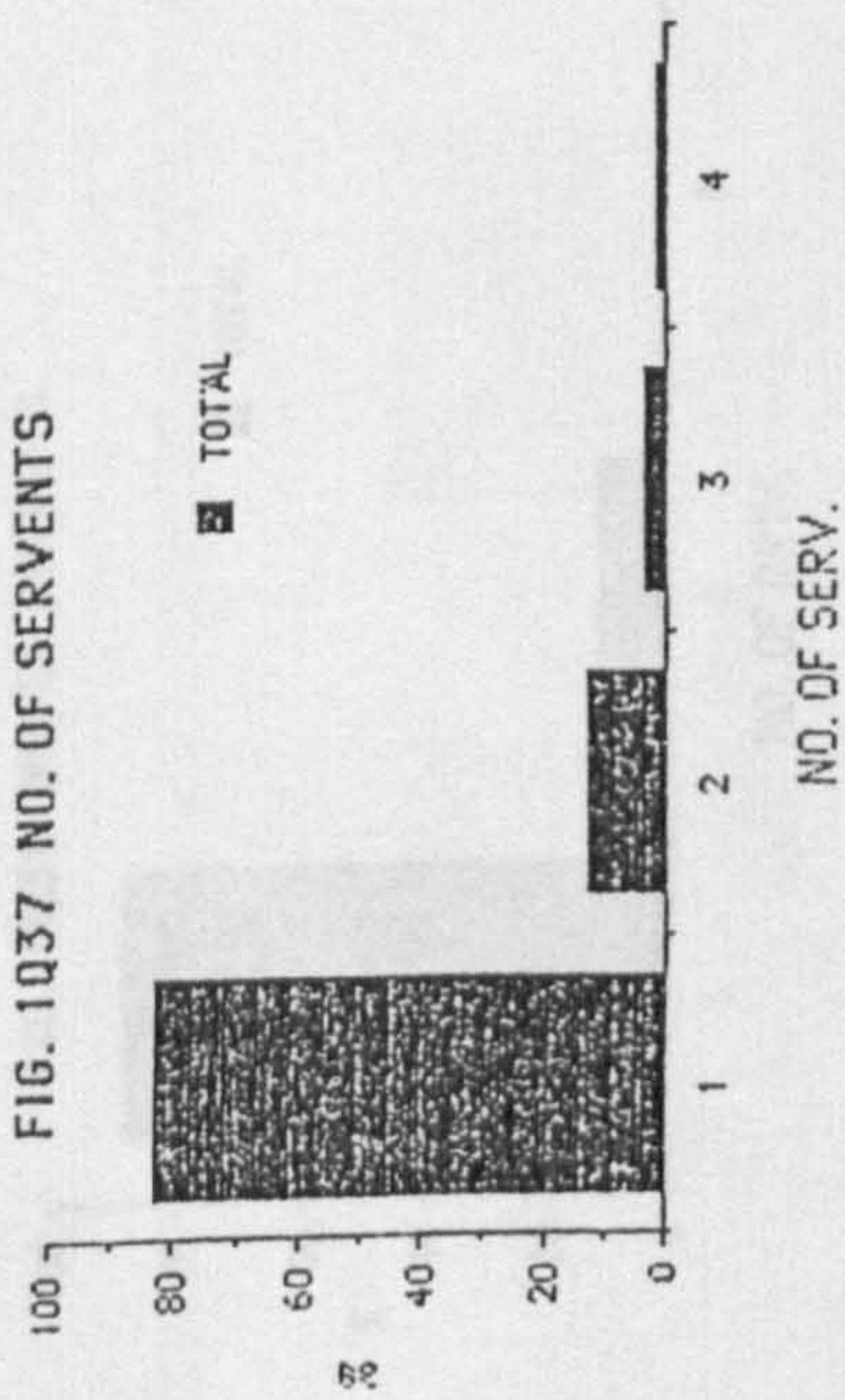


FIG. 2Q37 NO. OF SERVANTS

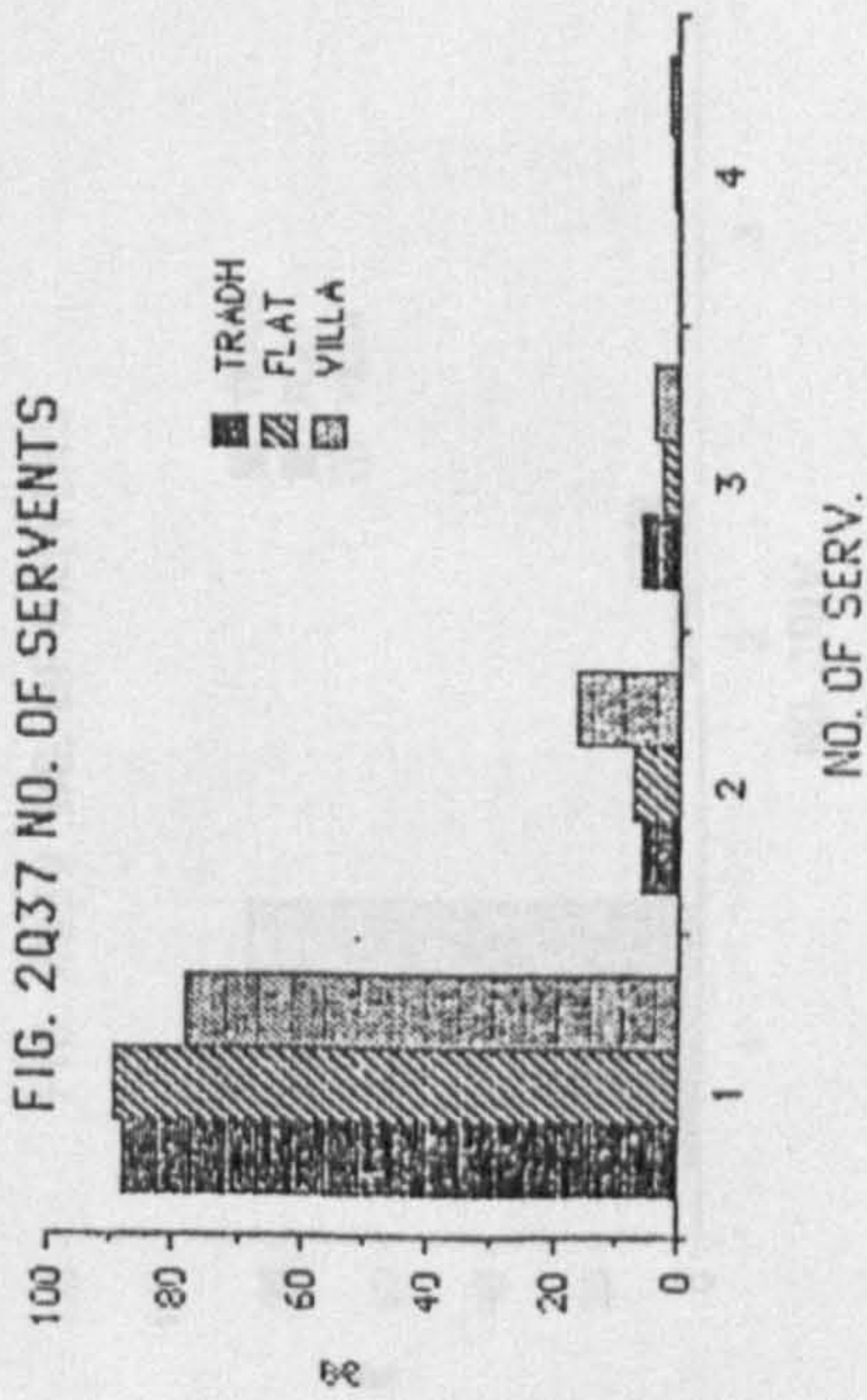


FIG. 3Q37 NO. OF SERVANTS

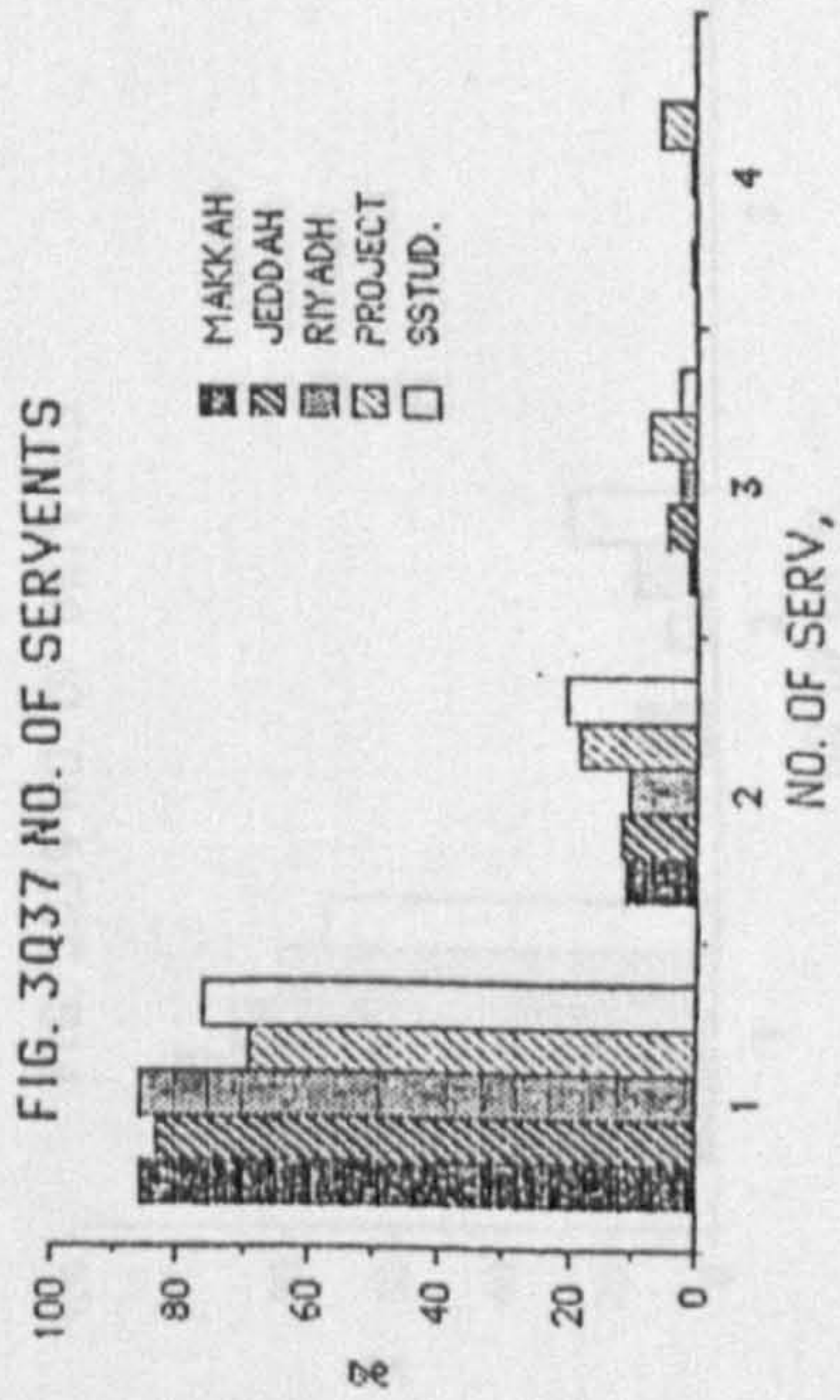


FIG. 1Q38 S. PLACE OF LIVING

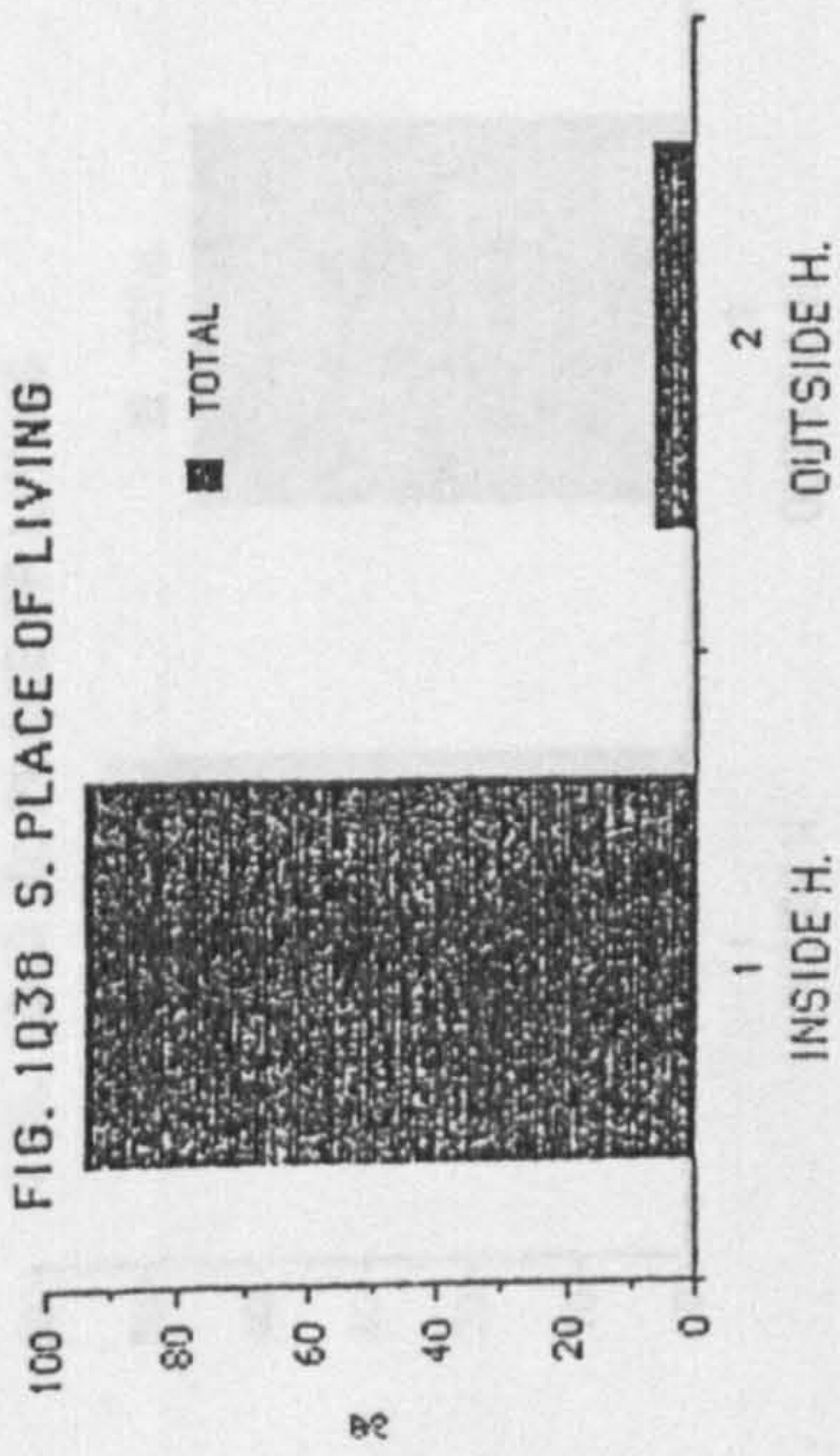


FIG. 2Q38 S. PLACE OF LIVING

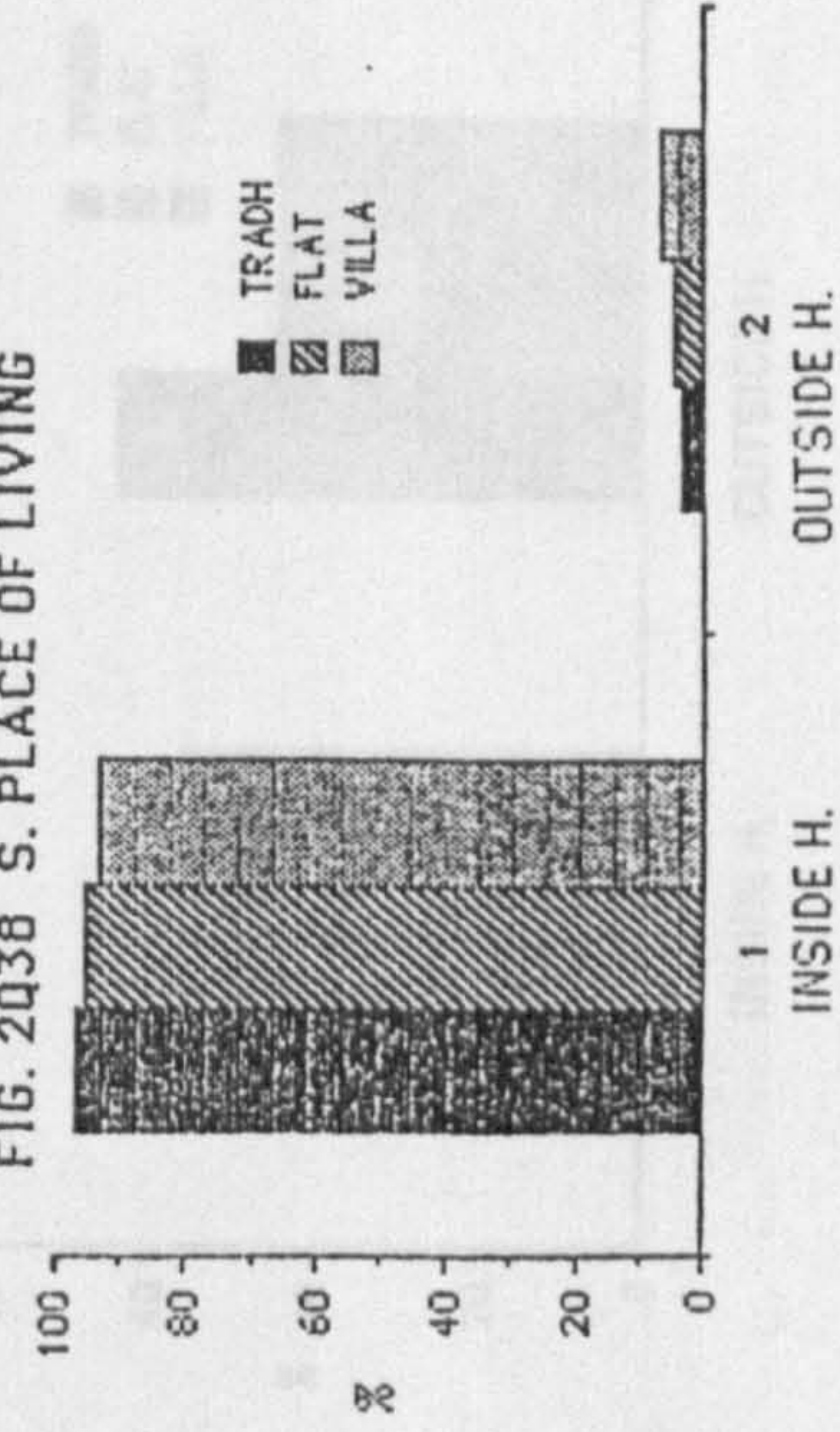


FIG. 3Q38 S. PLACE OF LIVING

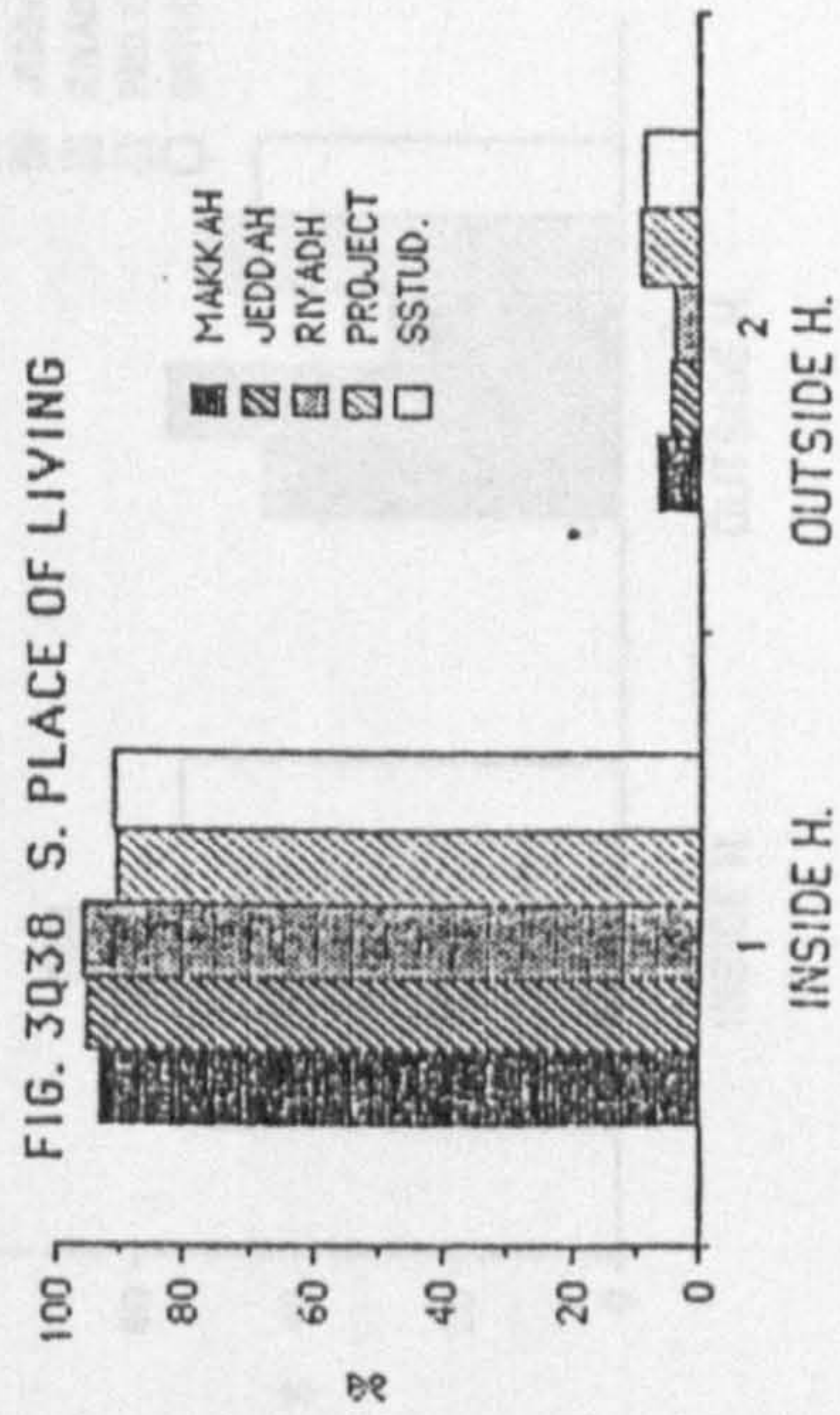


FIG. 1Q39 NO. OF DRIVERS

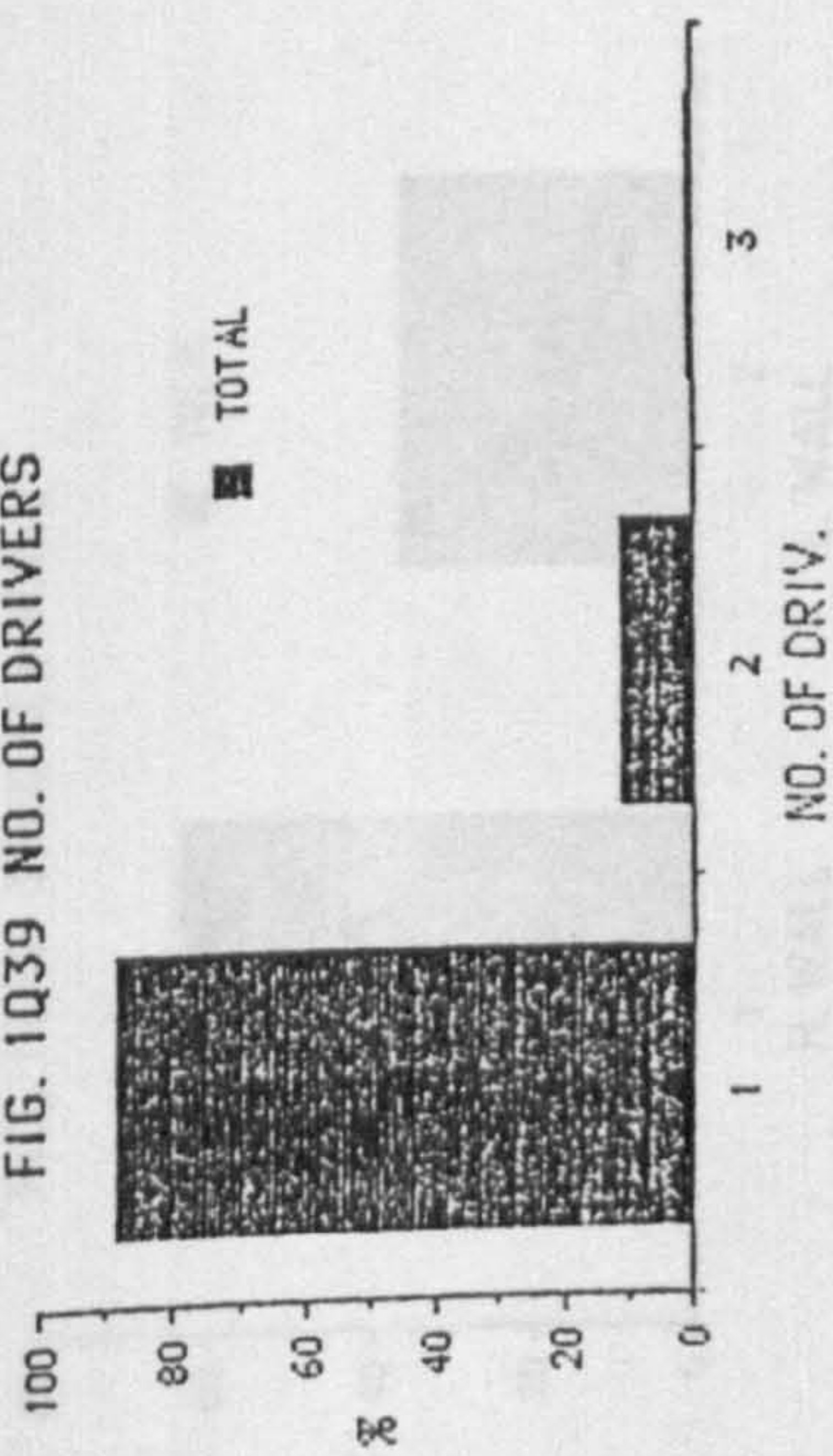


FIG. 1Q40 D. PLACE OF LIVING

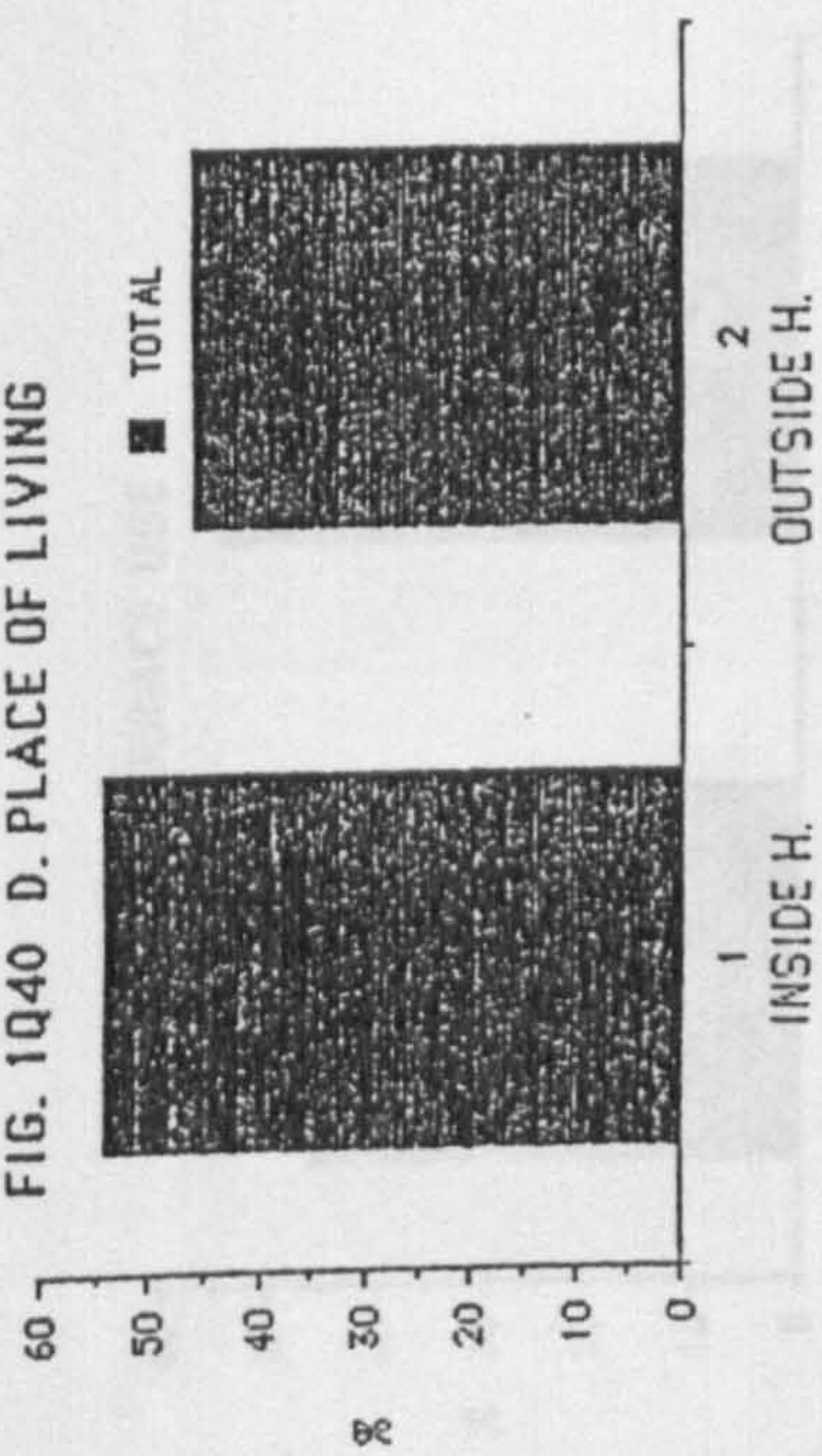


FIG. 2Q39 NO. OF DRIVERS

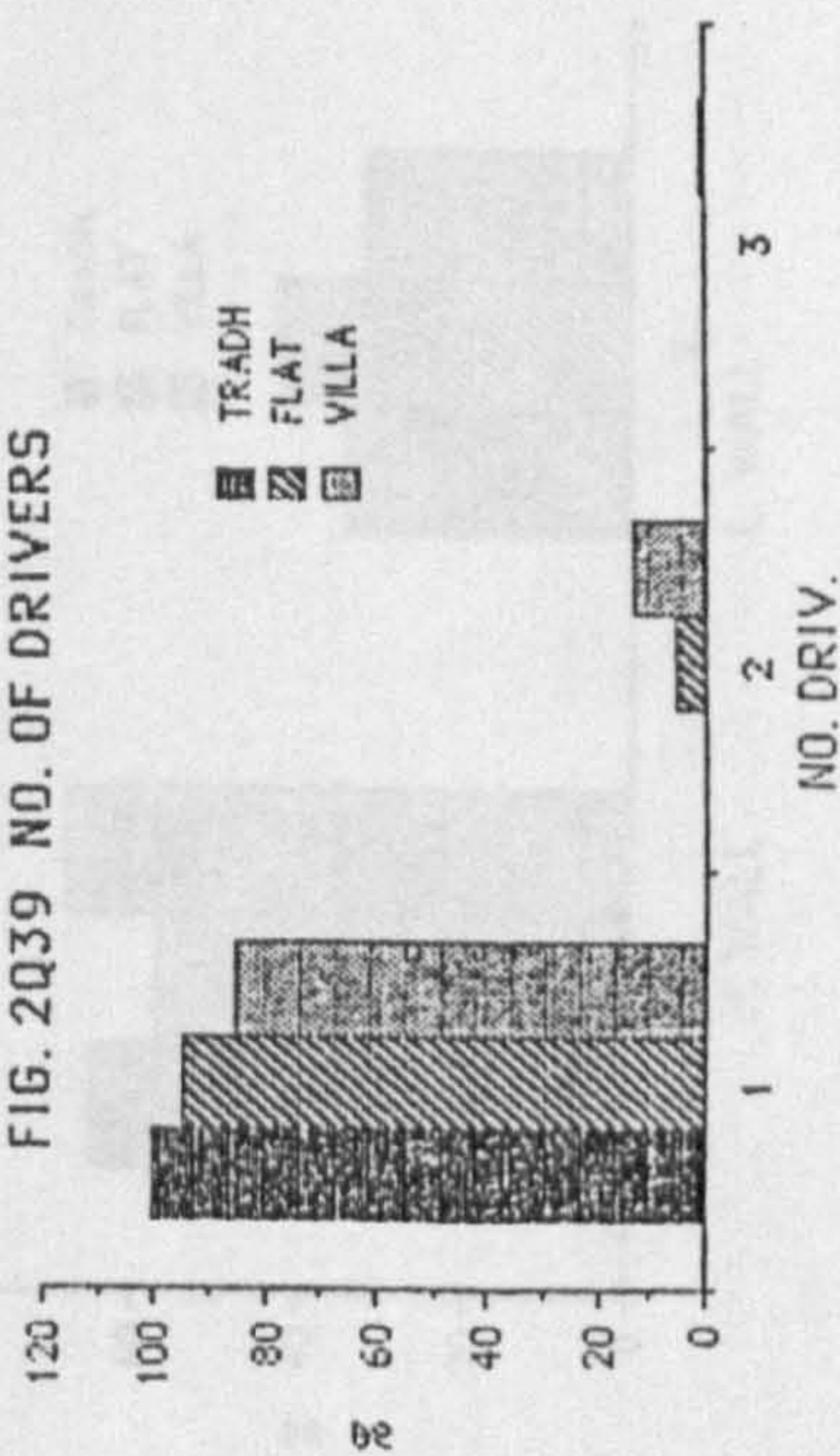


FIG. 2Q40 D. PLACE OF LIVING

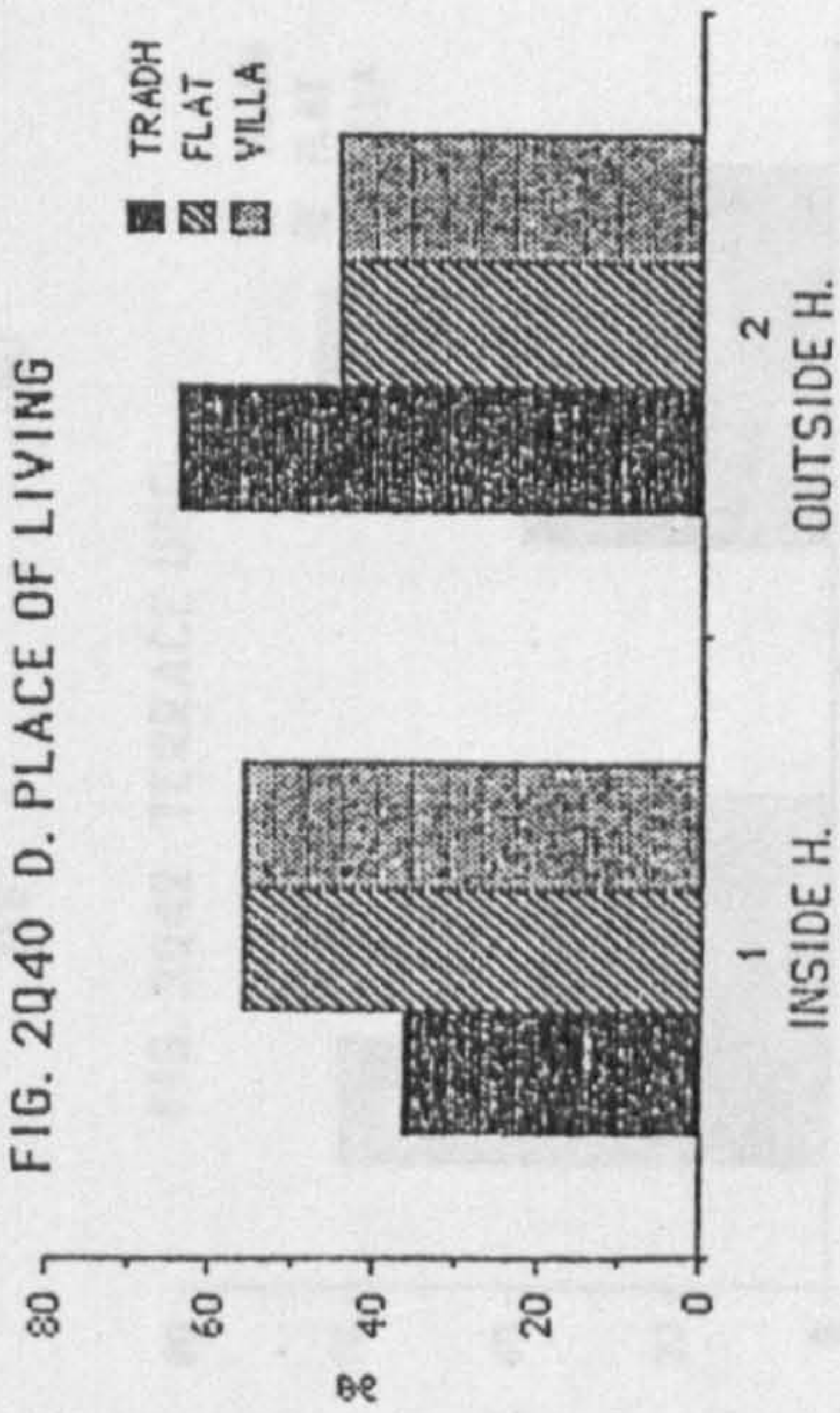


FIG. 3Q39 NO. OF DRIVERS

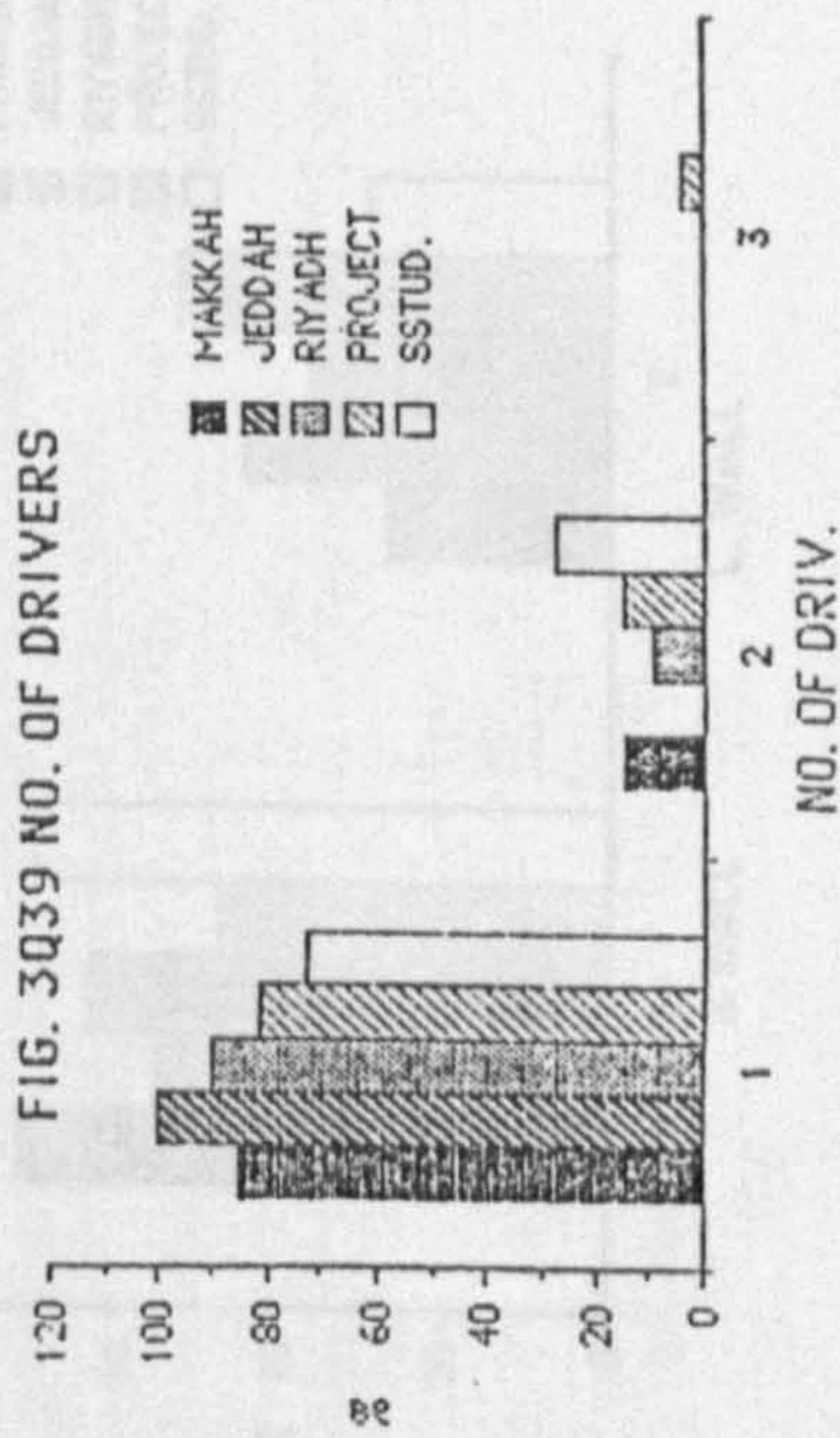


FIG. 3Q40 D. PLCE OF LIVING

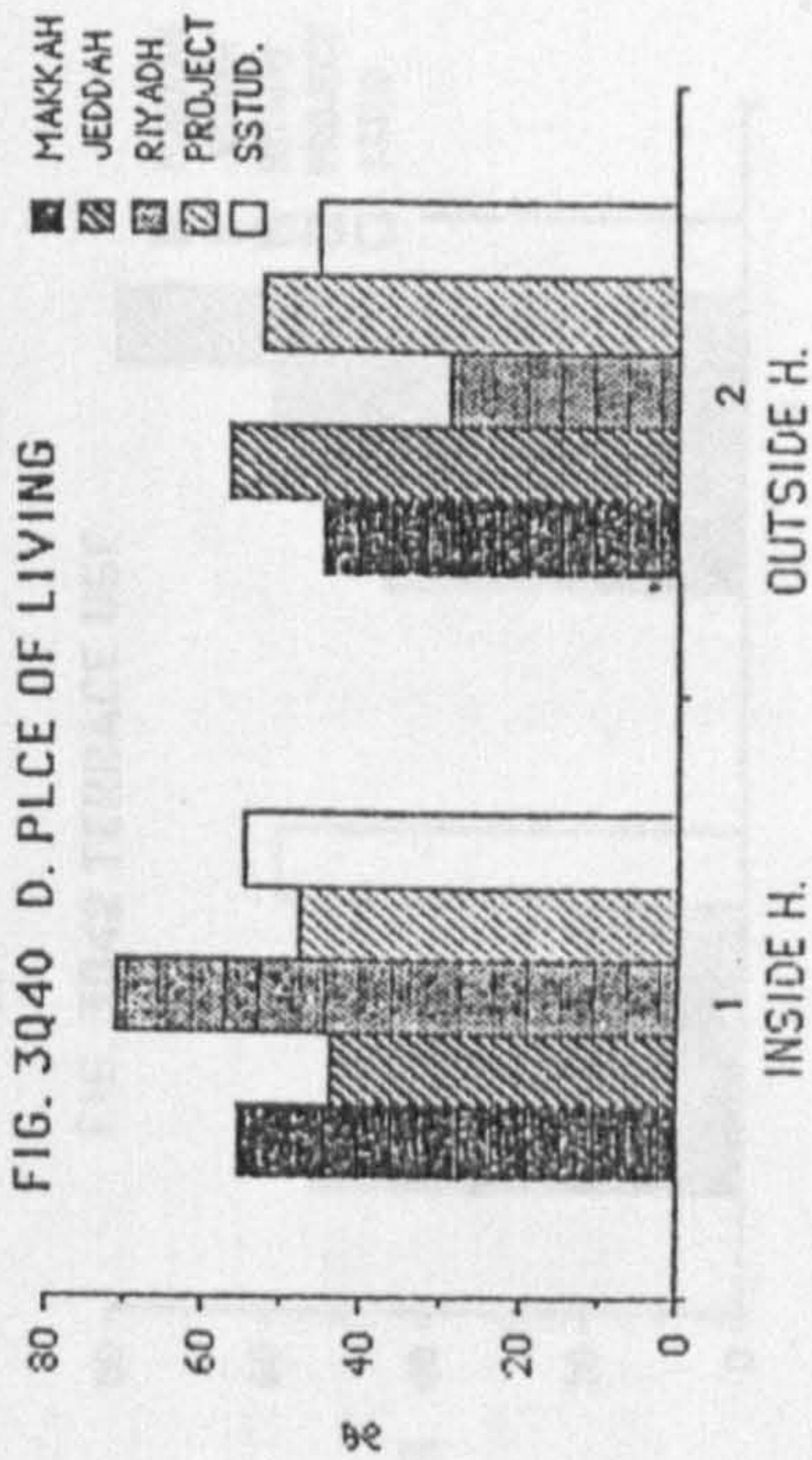


FIG. 1Q41 TERRACE WALL

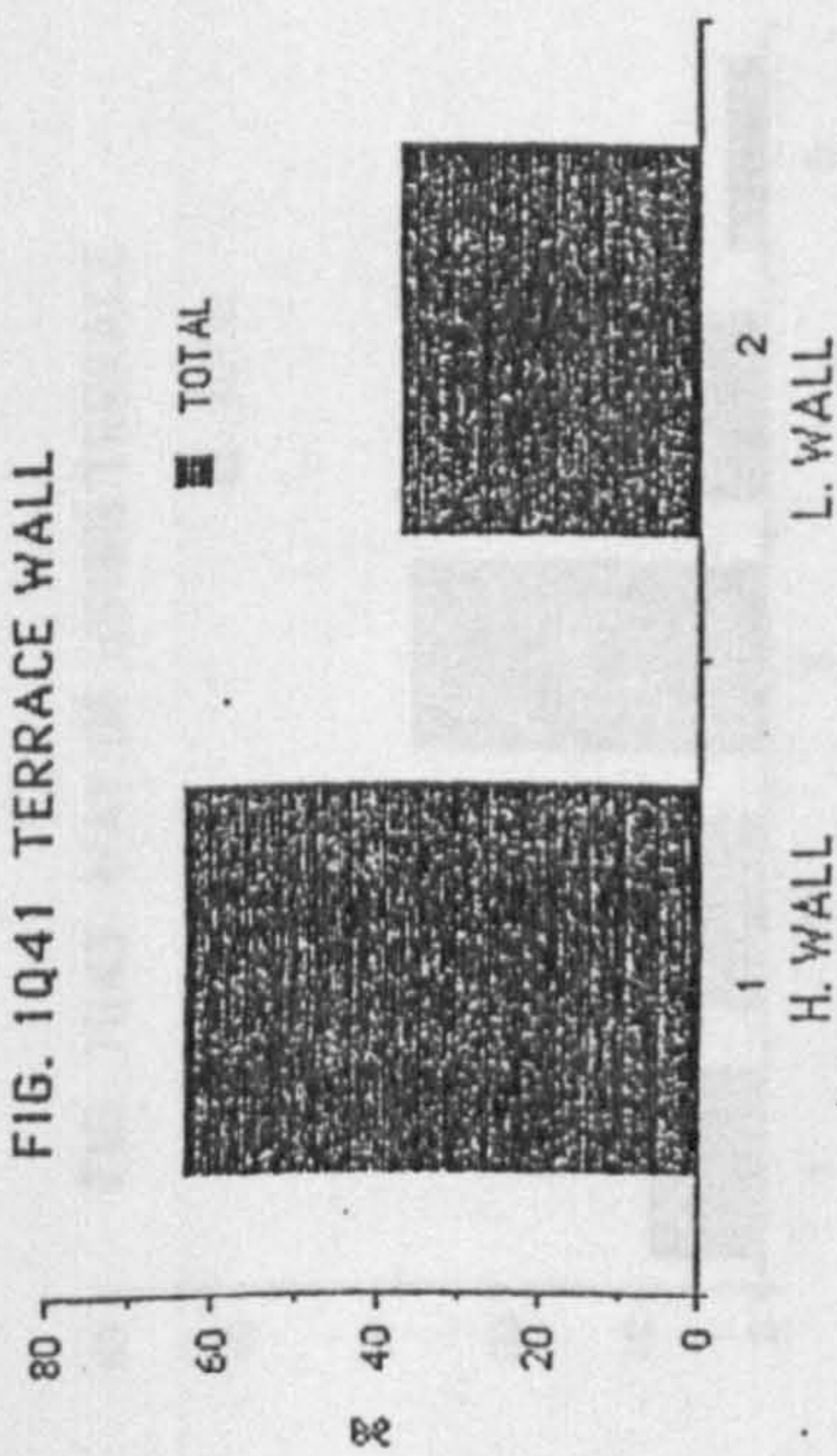


FIG. 1Q42 TERRACE USE

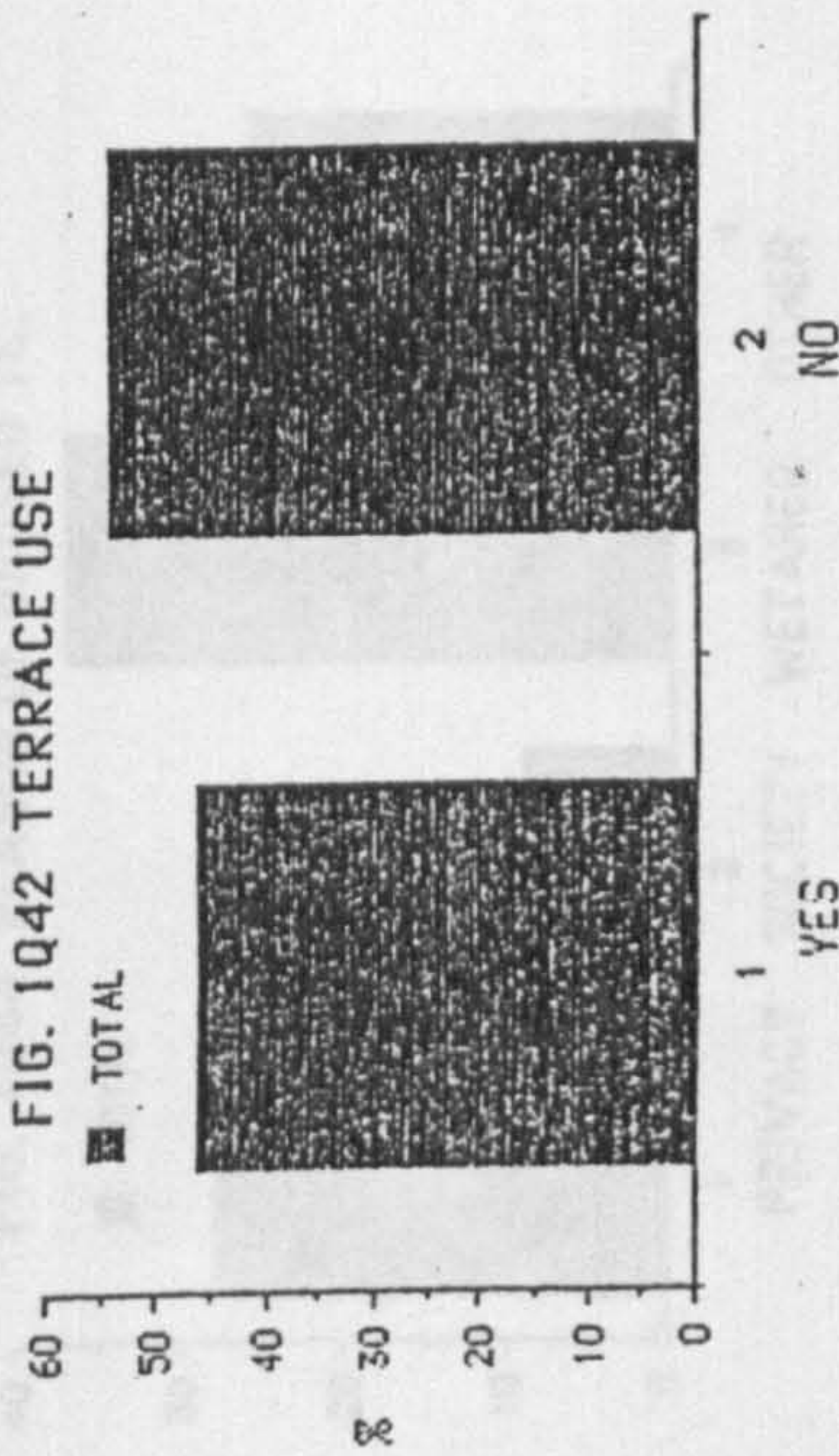


FIG. 2Q41 TERRACE WALL

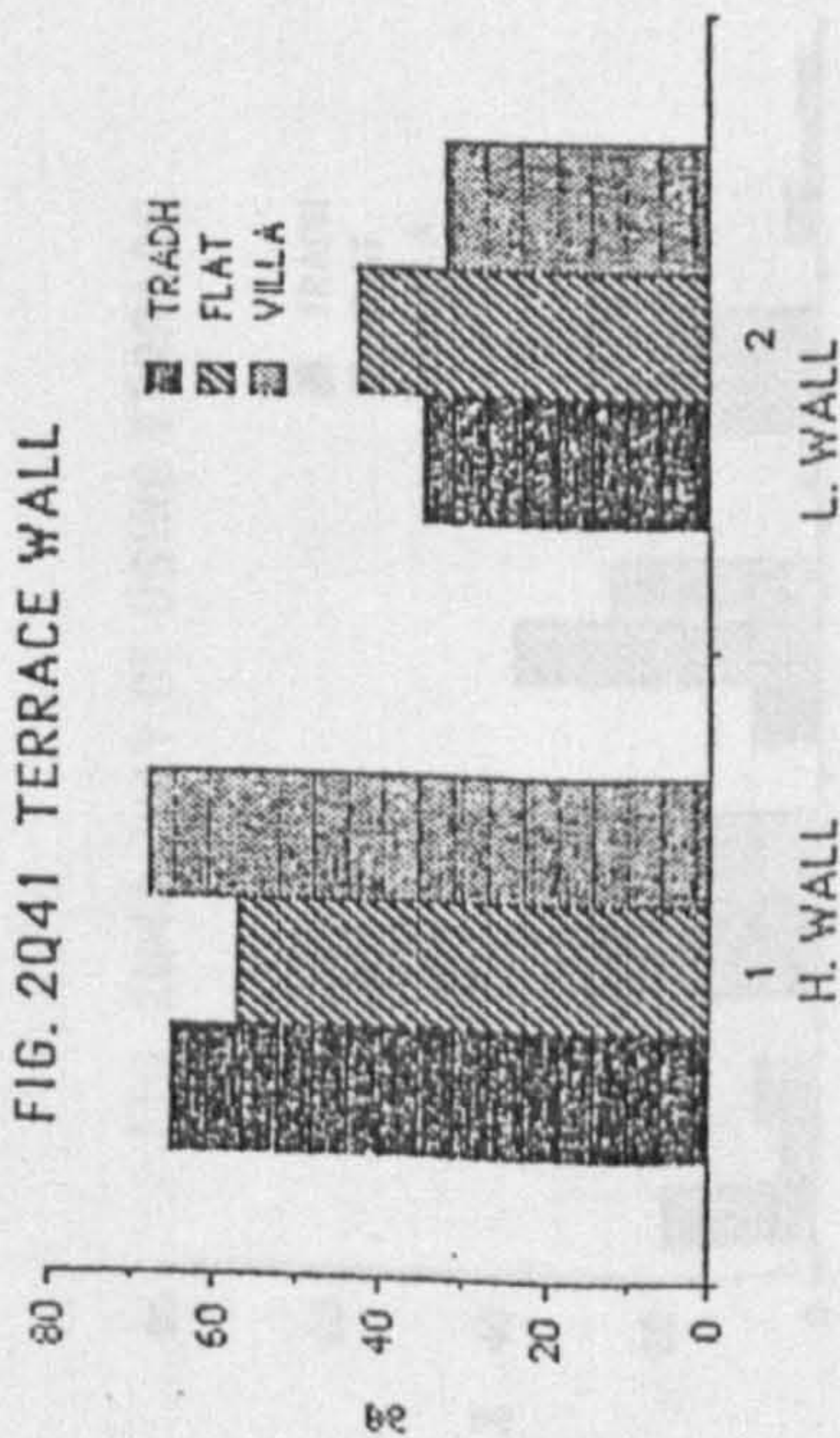


FIG. 2Q42 TERRACE USE

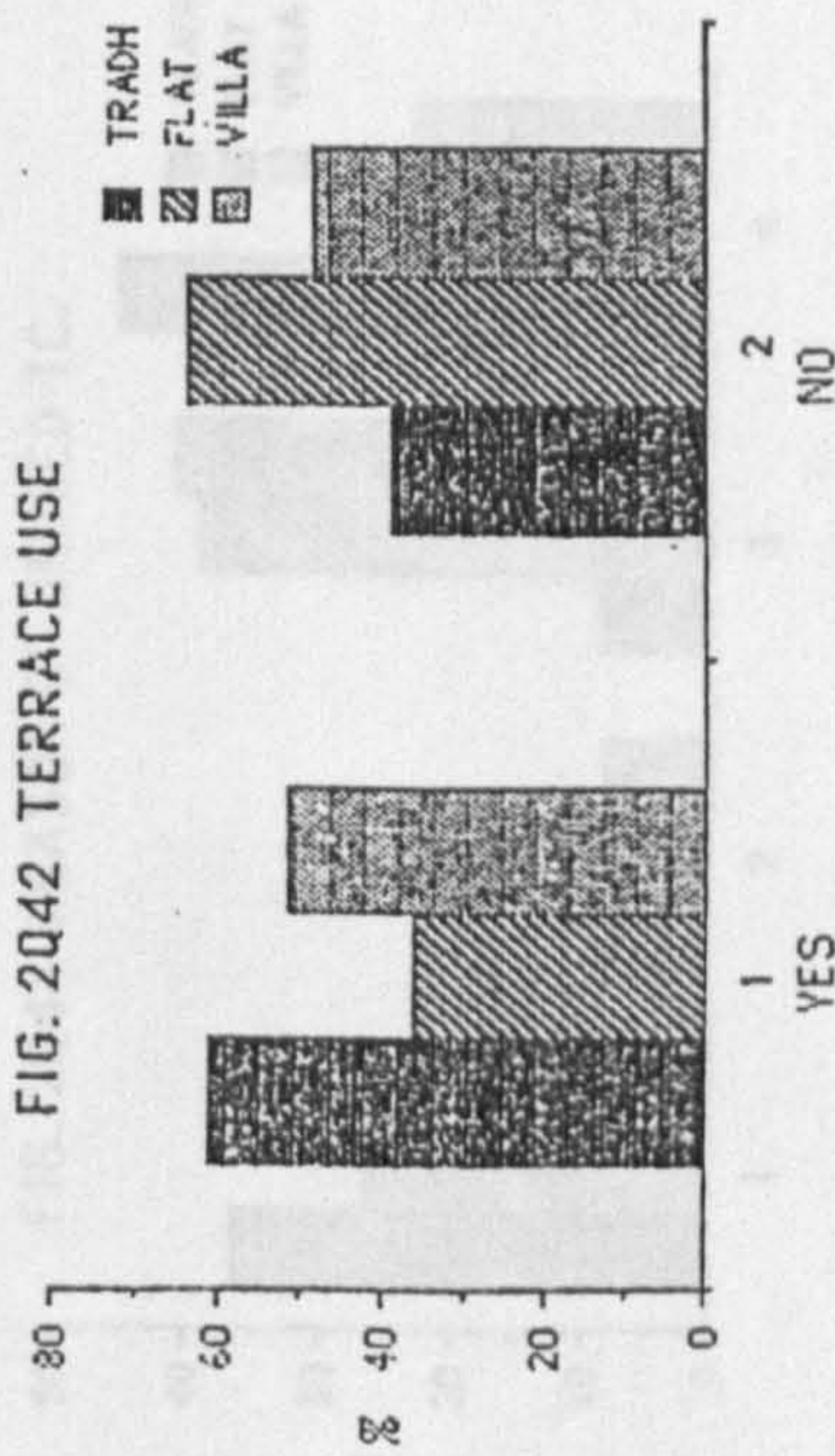


FIG. 3Q41 TERRACE WALL

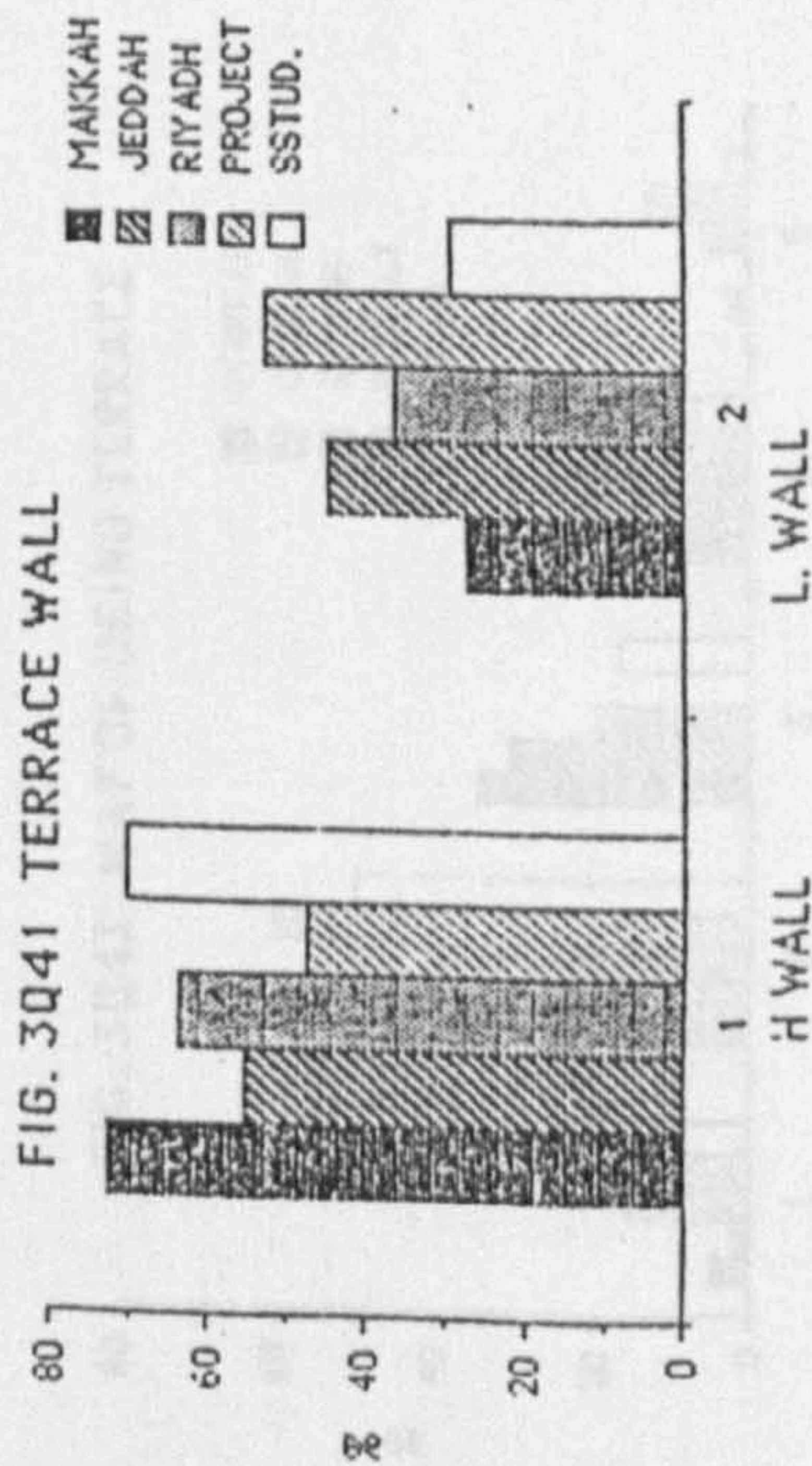


FIG. 3Q42 TERRACE USE

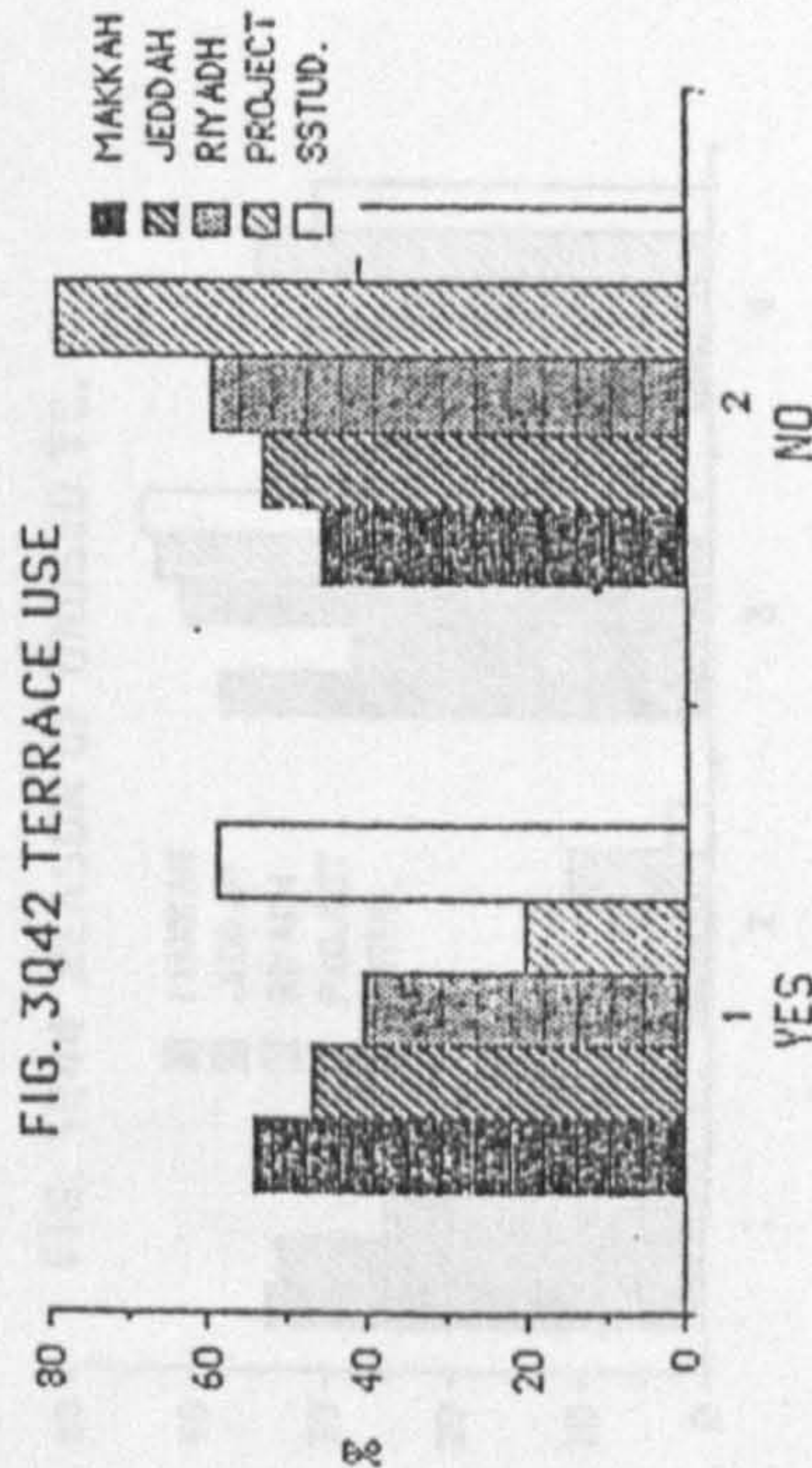


FIG. 1Q43 WAY OF USING TERRACE

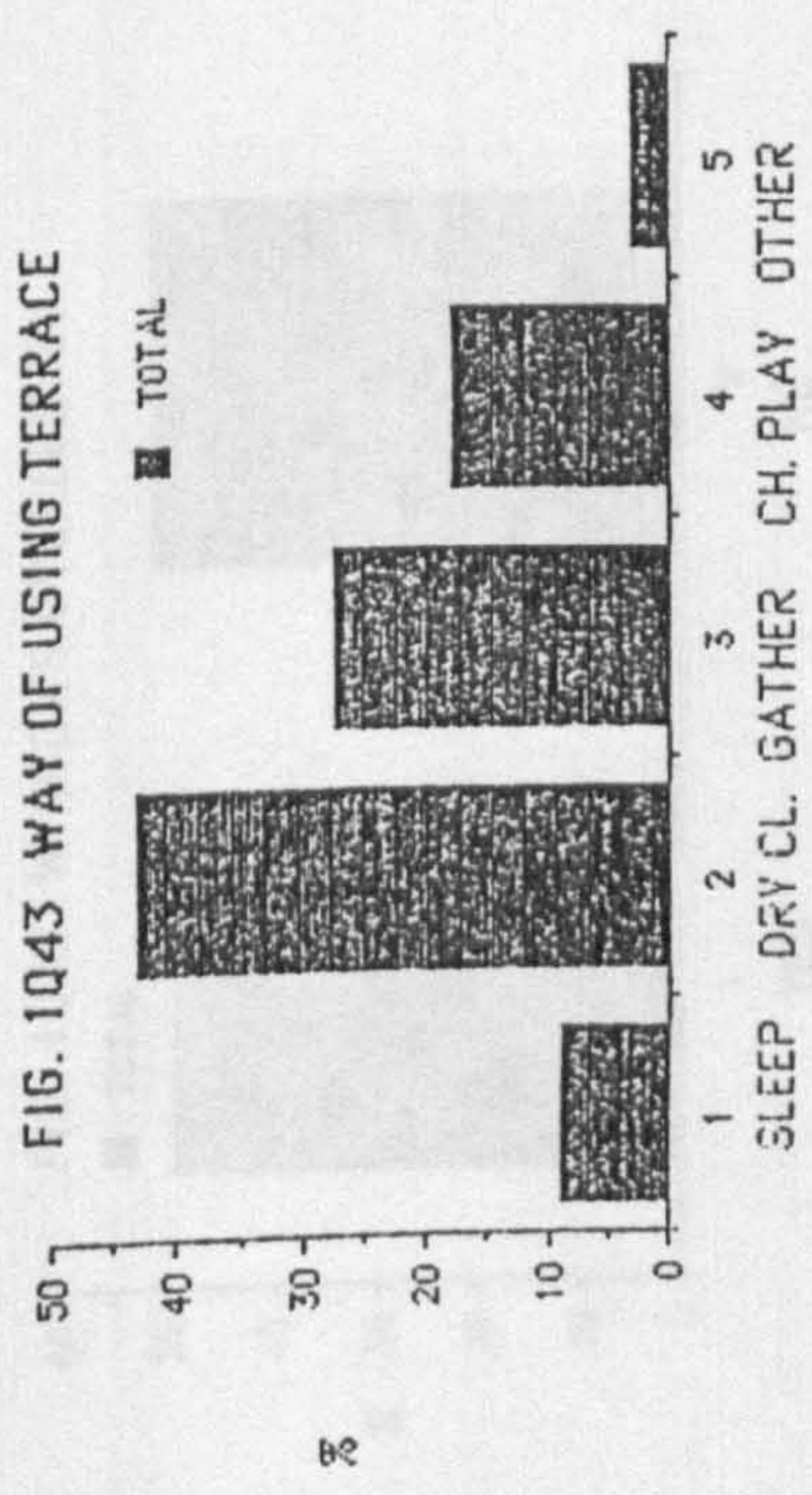


FIG. 1Q44 REASON OF UNUSED TC.

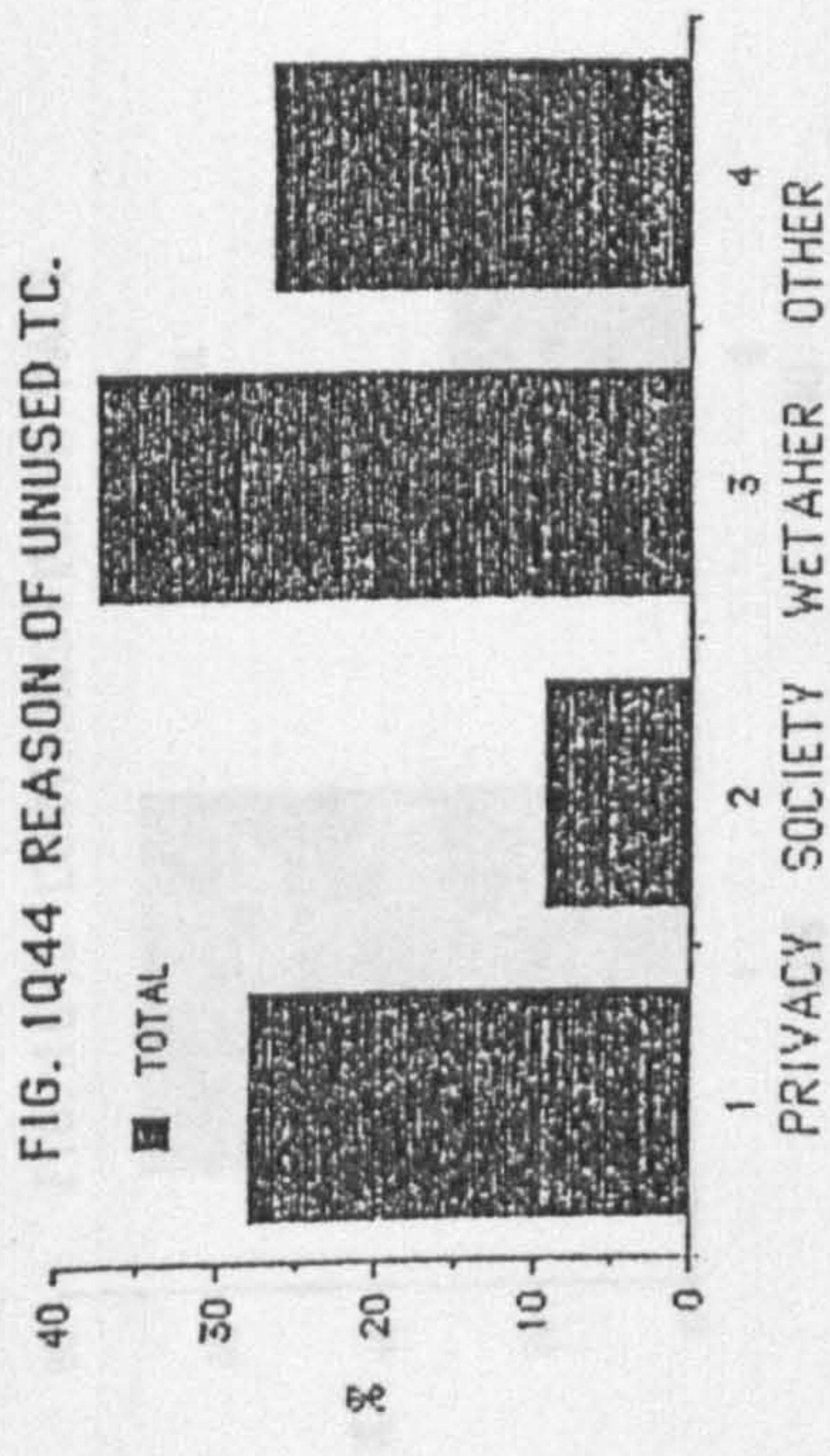


FIG. 2Q43 WAY OF USING TERRACE

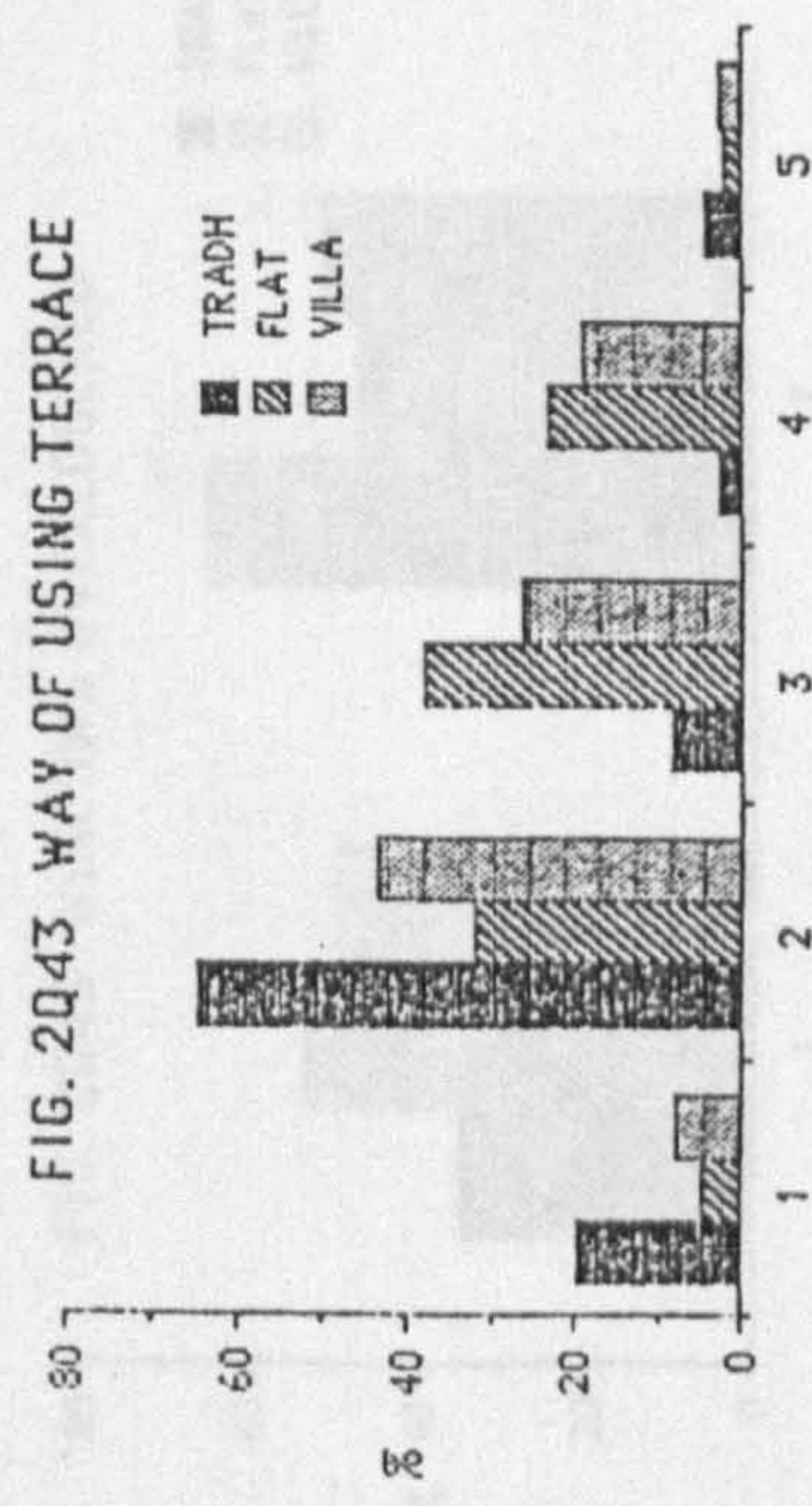


FIG. 2Q44 REASON OF UNUSED TC.

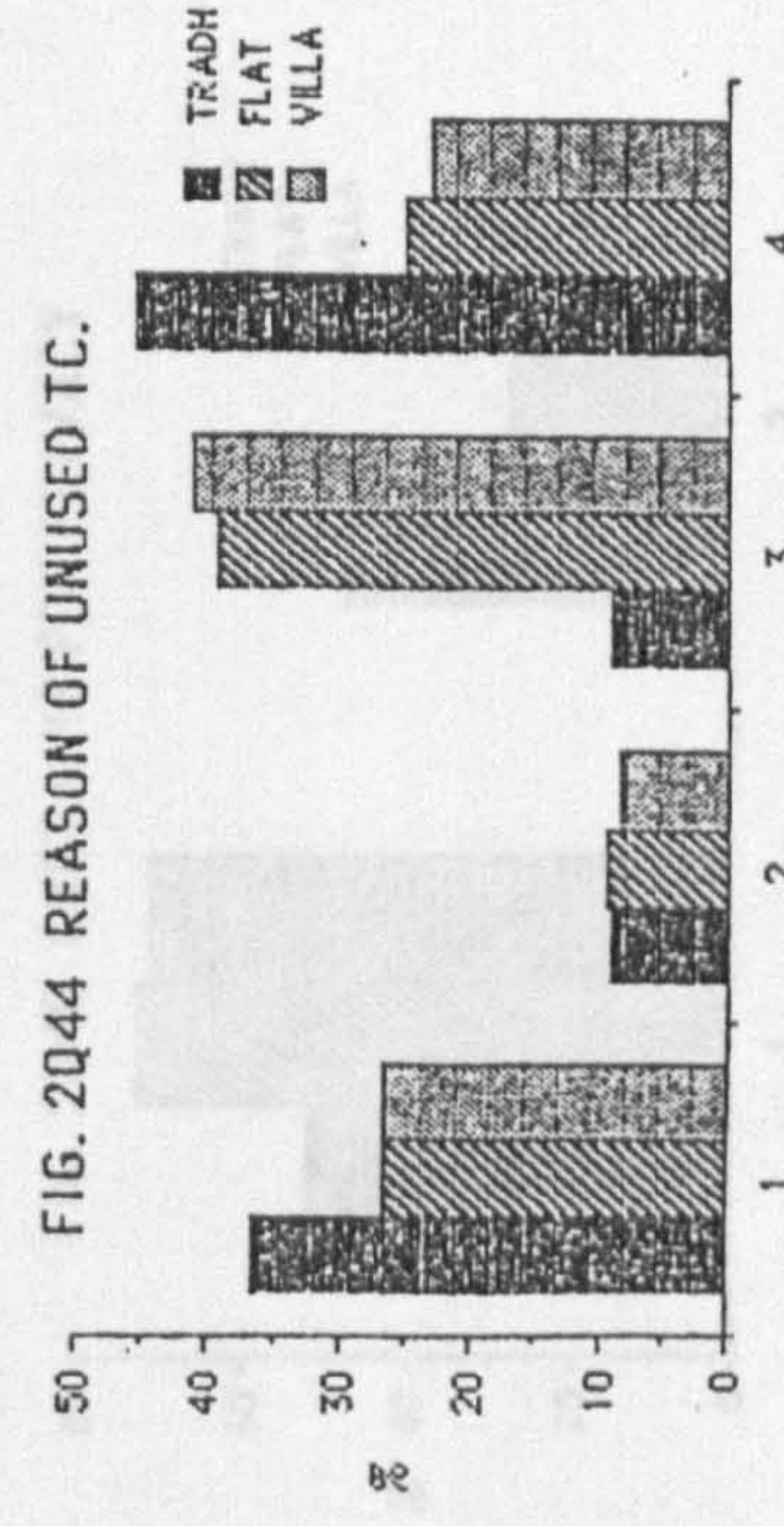


FIG. 3Q43 WAY OF USING TERRACE

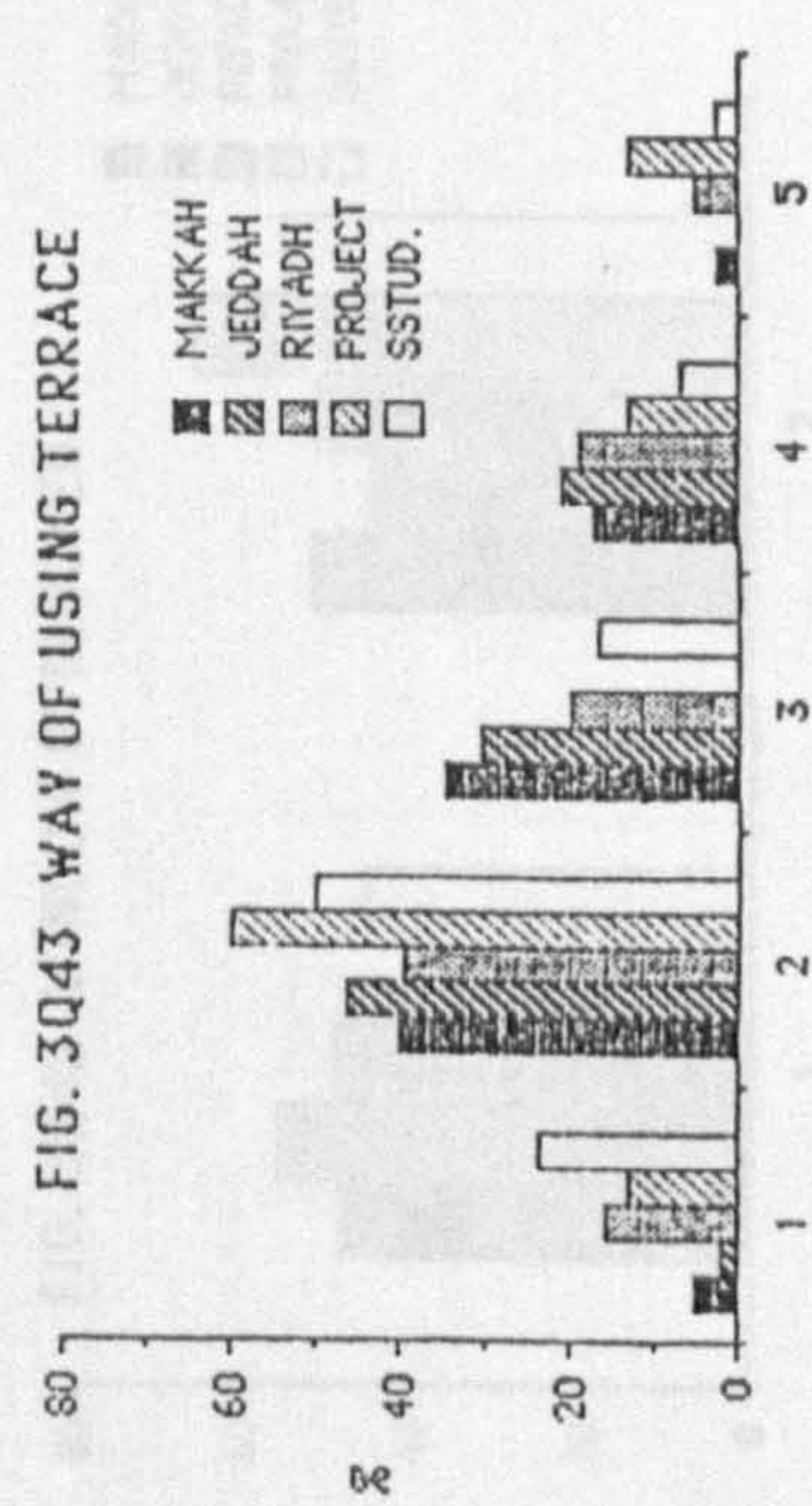


FIG. 3Q44 REASON OF UNUSED TC.

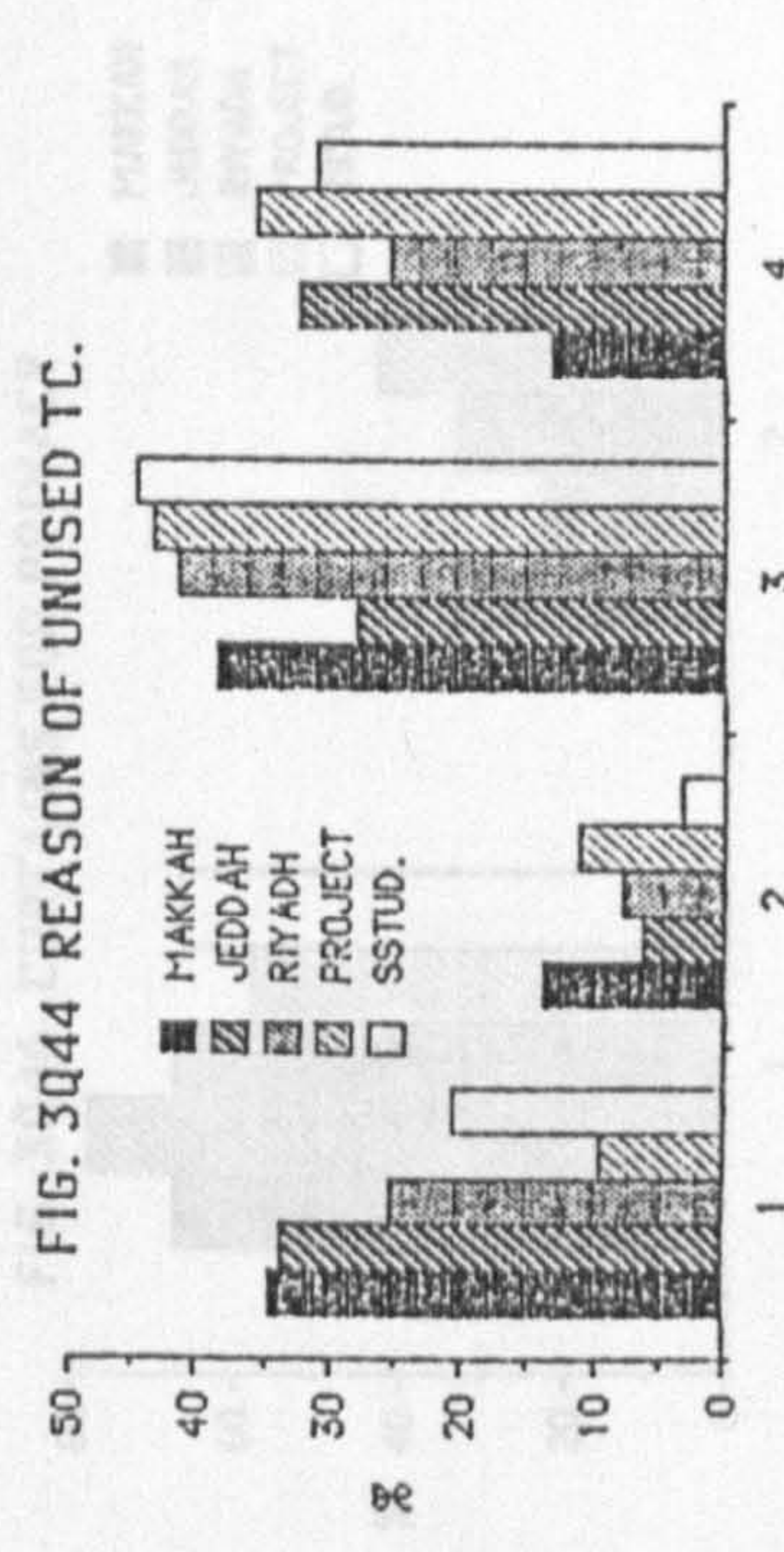


FIG. 1Q45 WINDOWS OVERLOOKED

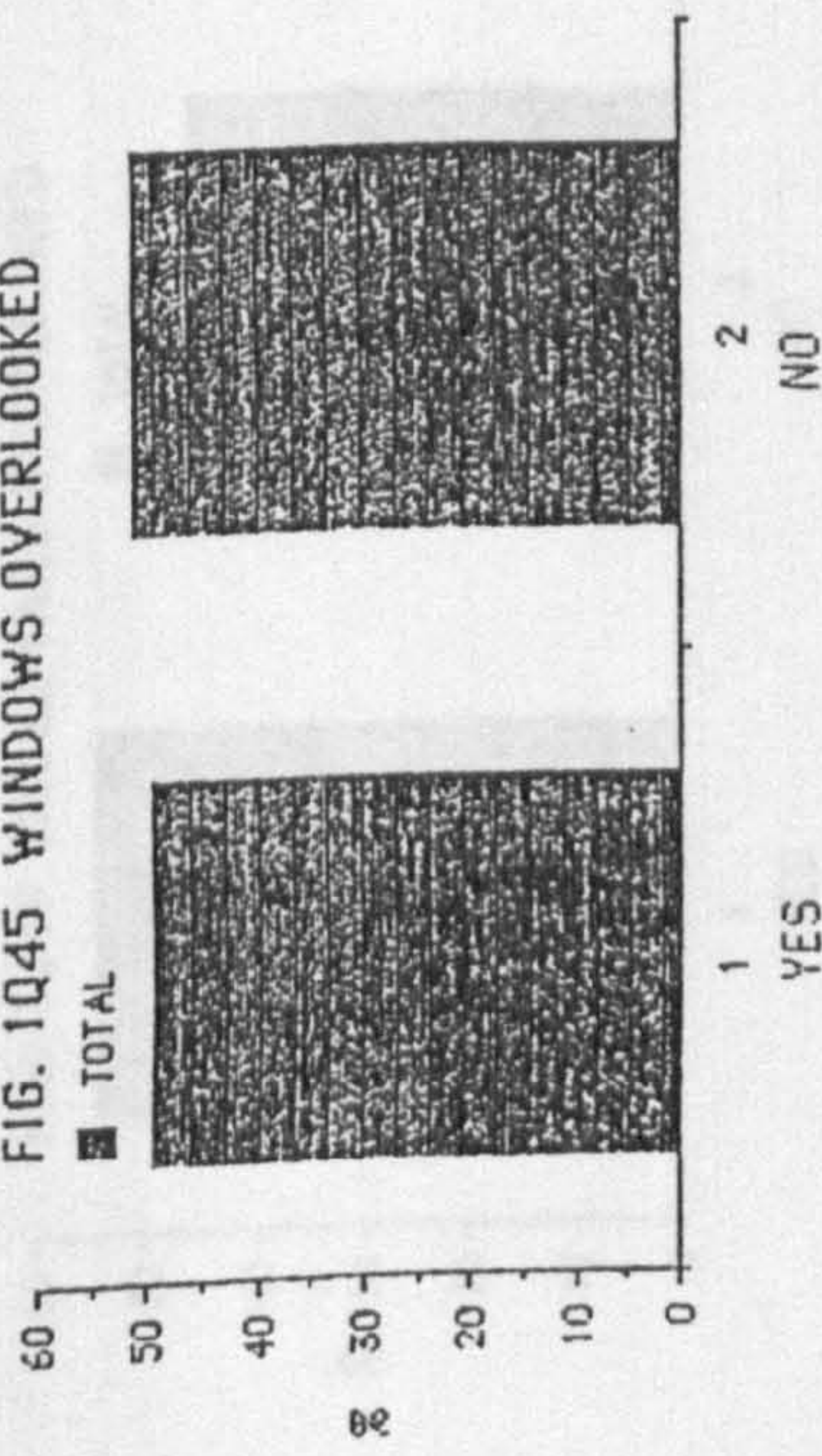


FIG. 1Q46 CURTAINS FOR PRIVACY

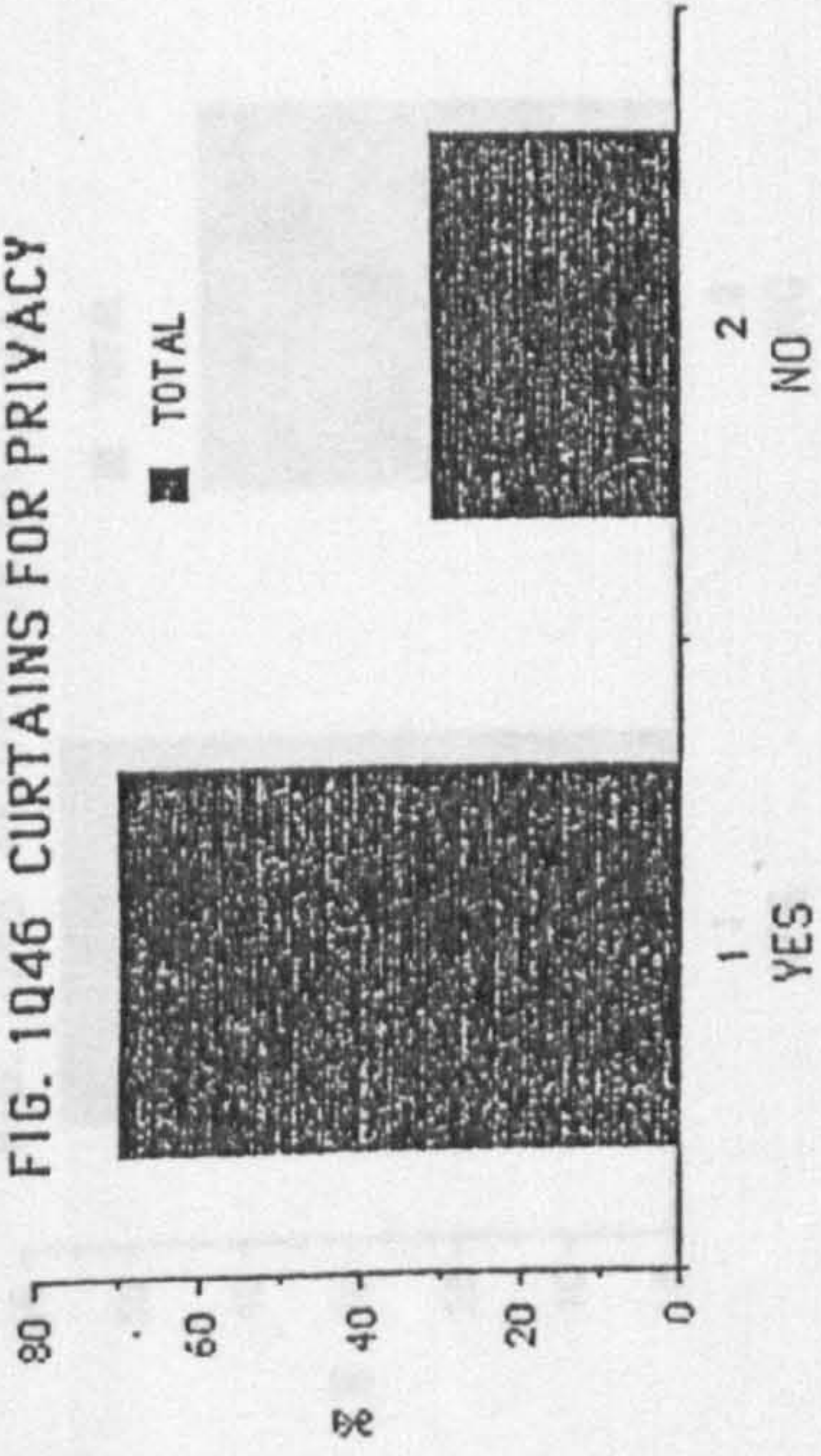


FIG. 2Q45 WINDOWS OVERLOOKED

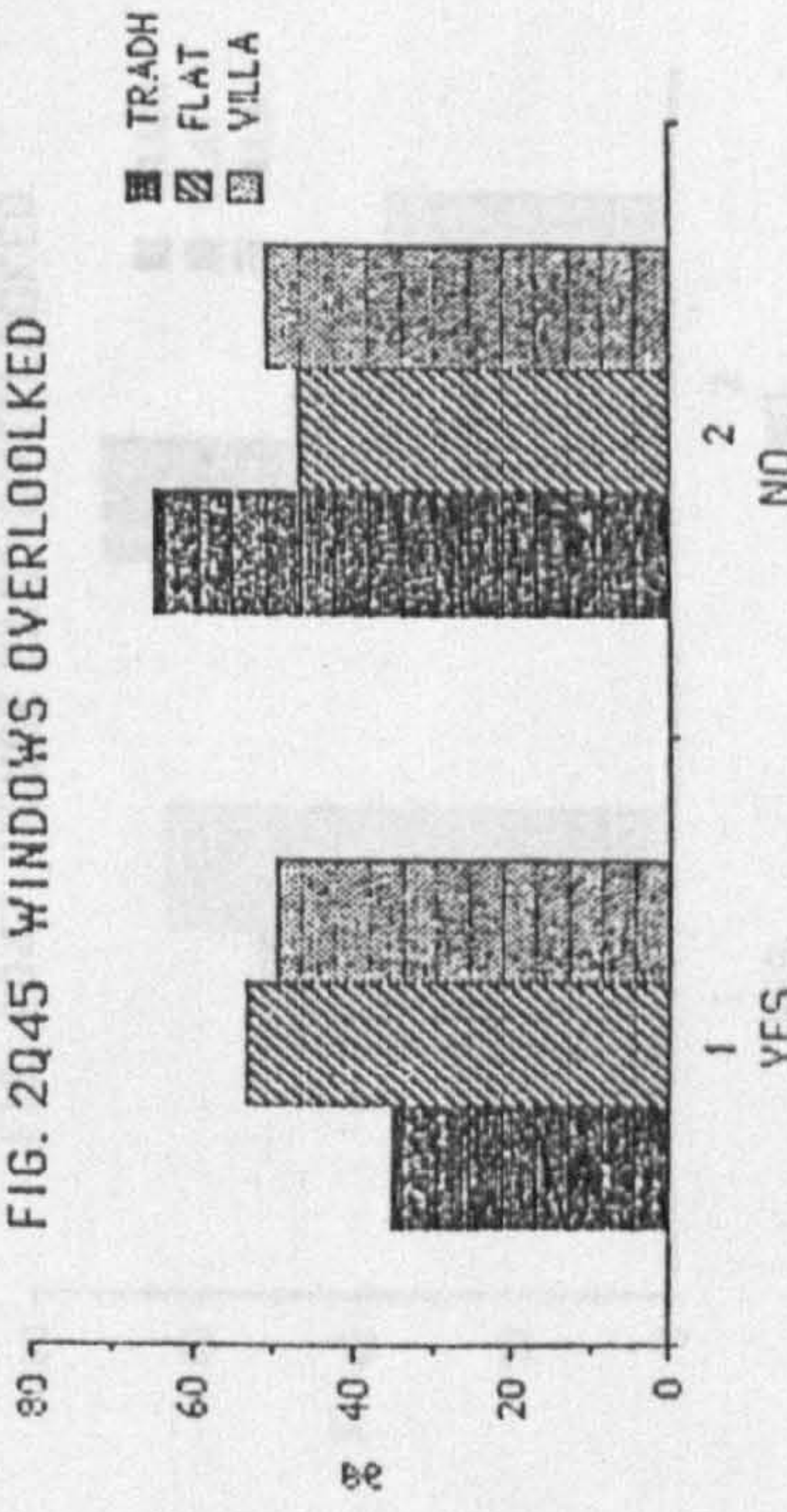


FIG. 2Q46 CURTAINS FOR PRIVACY

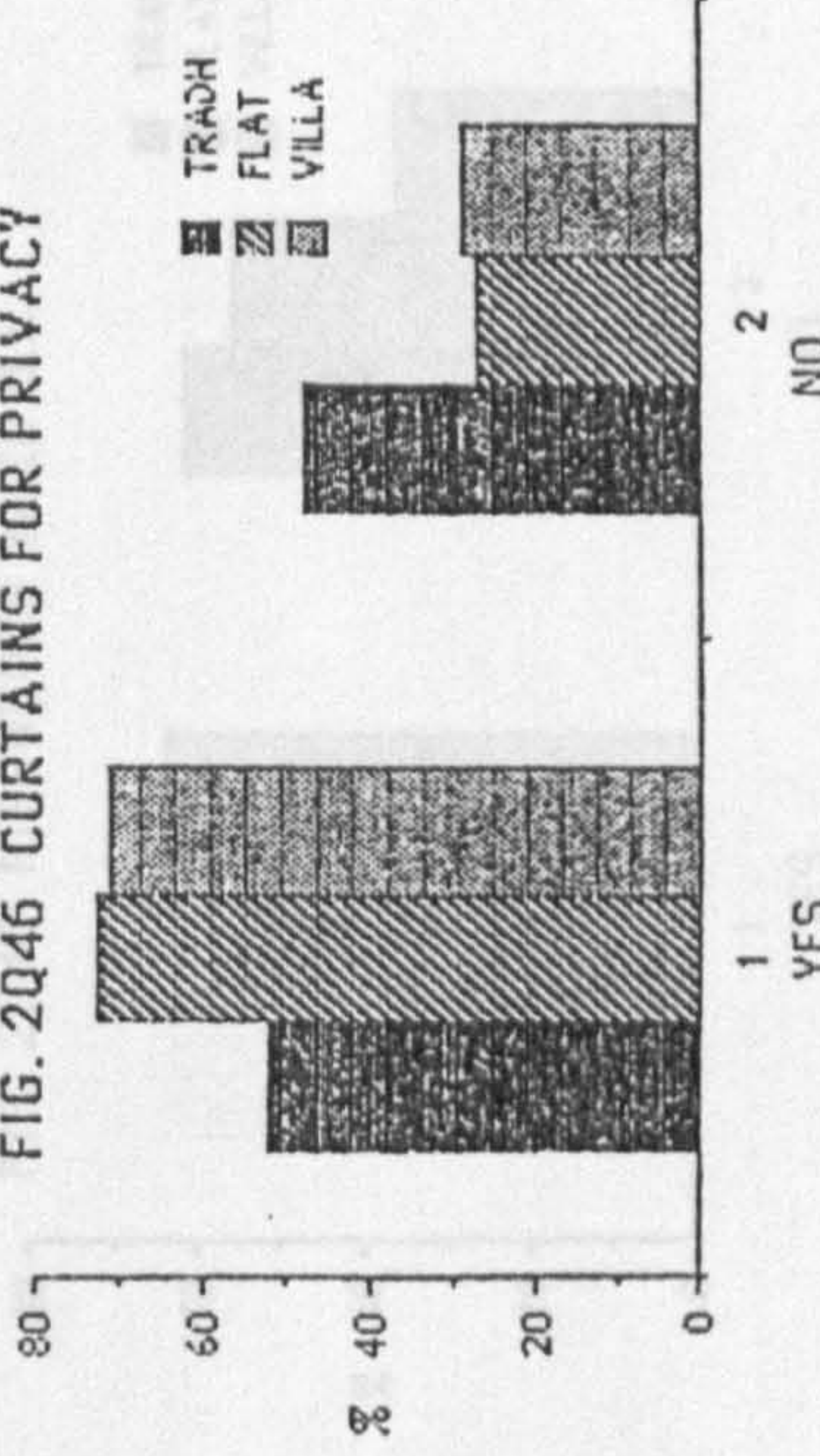


FIG. 3Q45 WINDOW OVERLOOKED

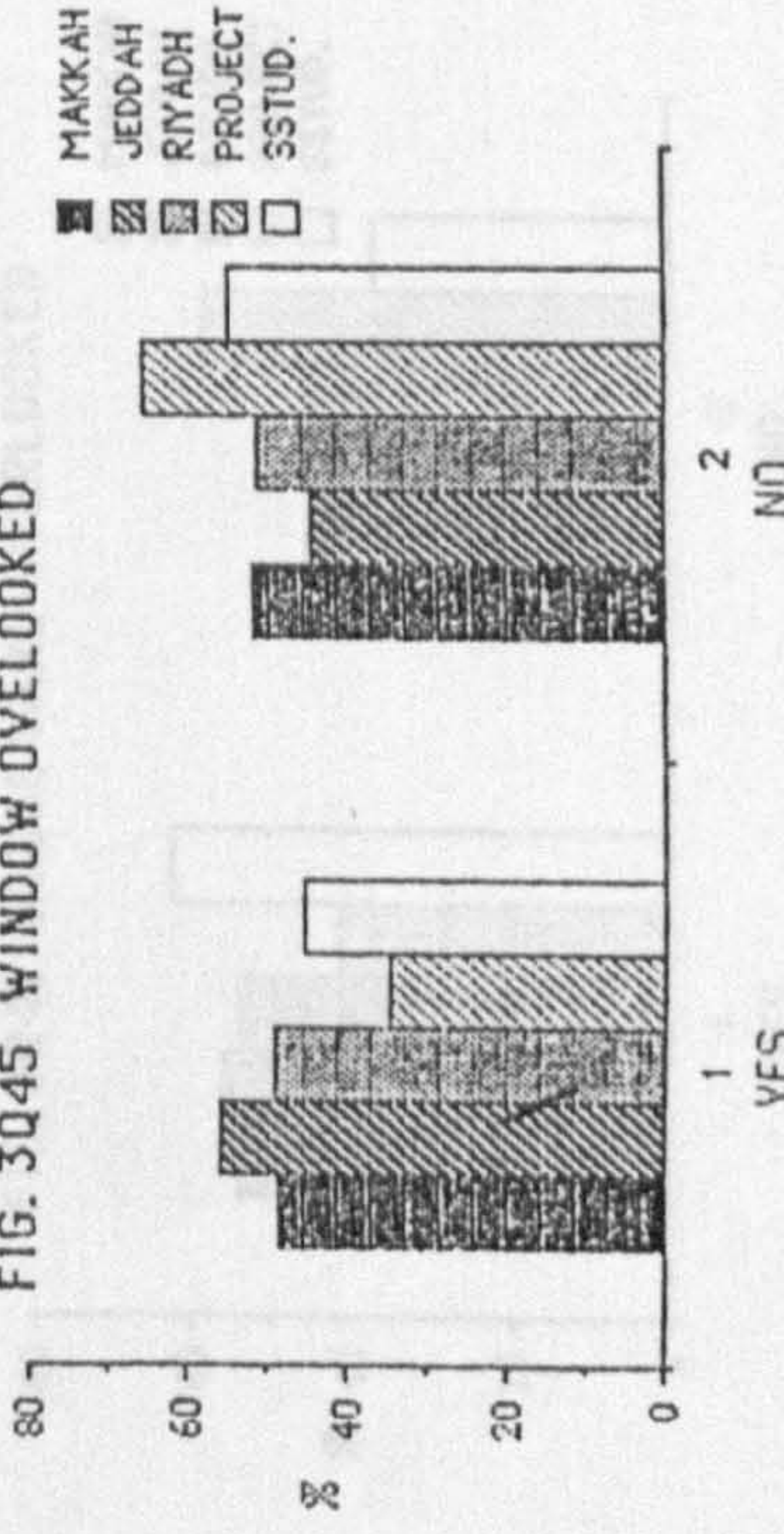


FIG. 3Q46 CURTAINS FOR PRIVACY

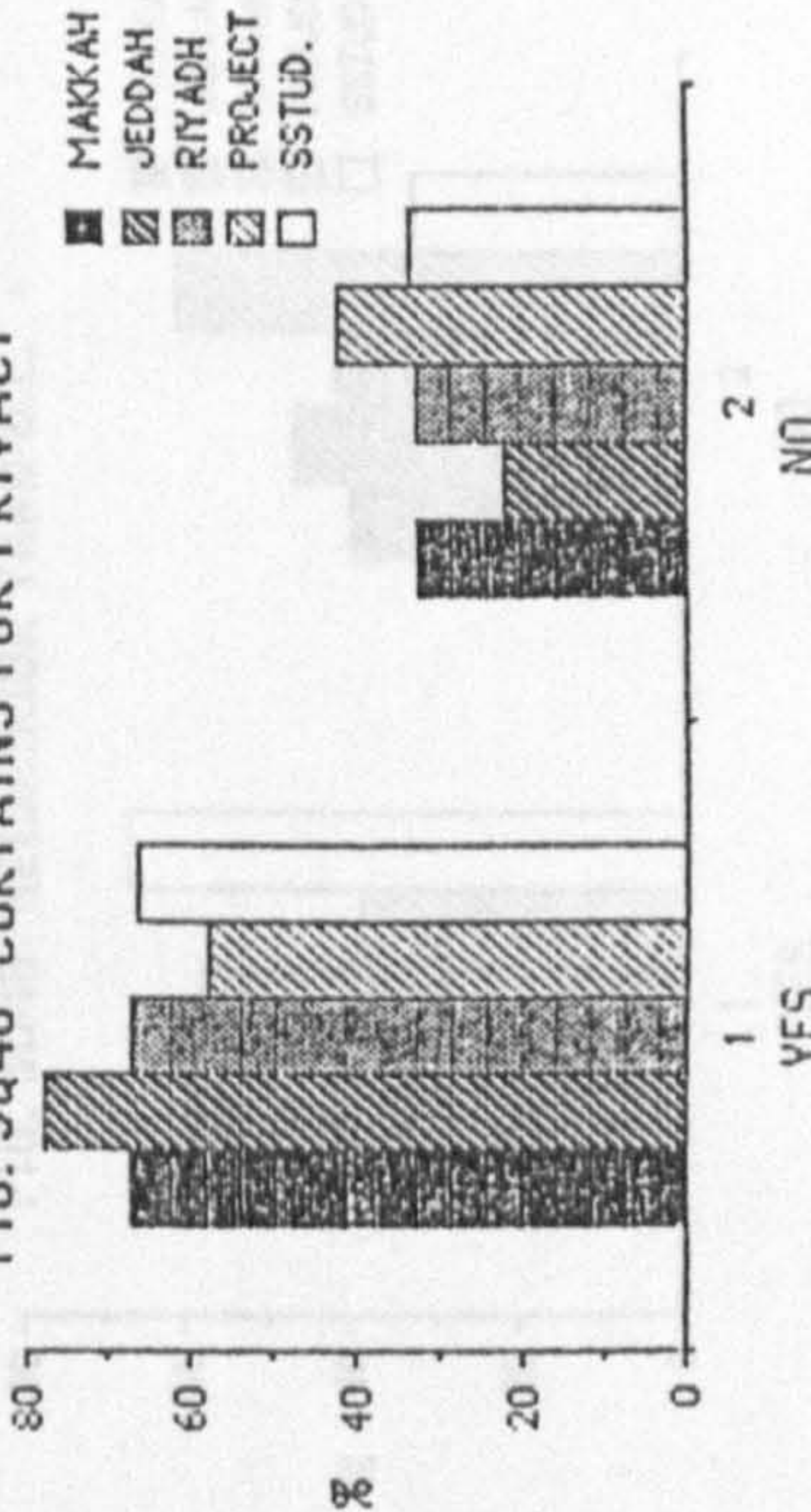


FIG. 1Q47 HOUSE YARD OVERLOOKED

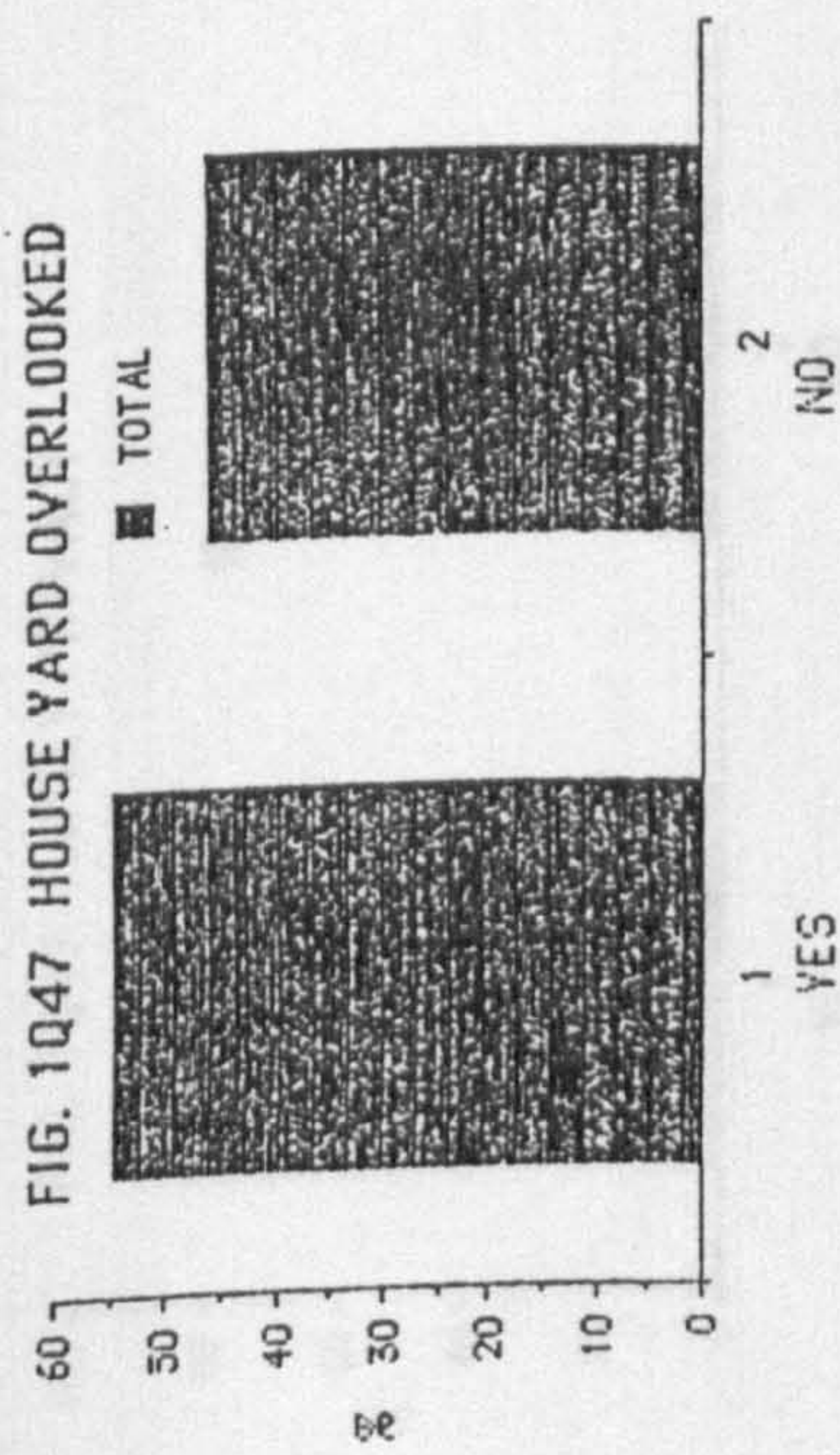


FIG. 1Q48 NEIGHBOUR YARD O.L.

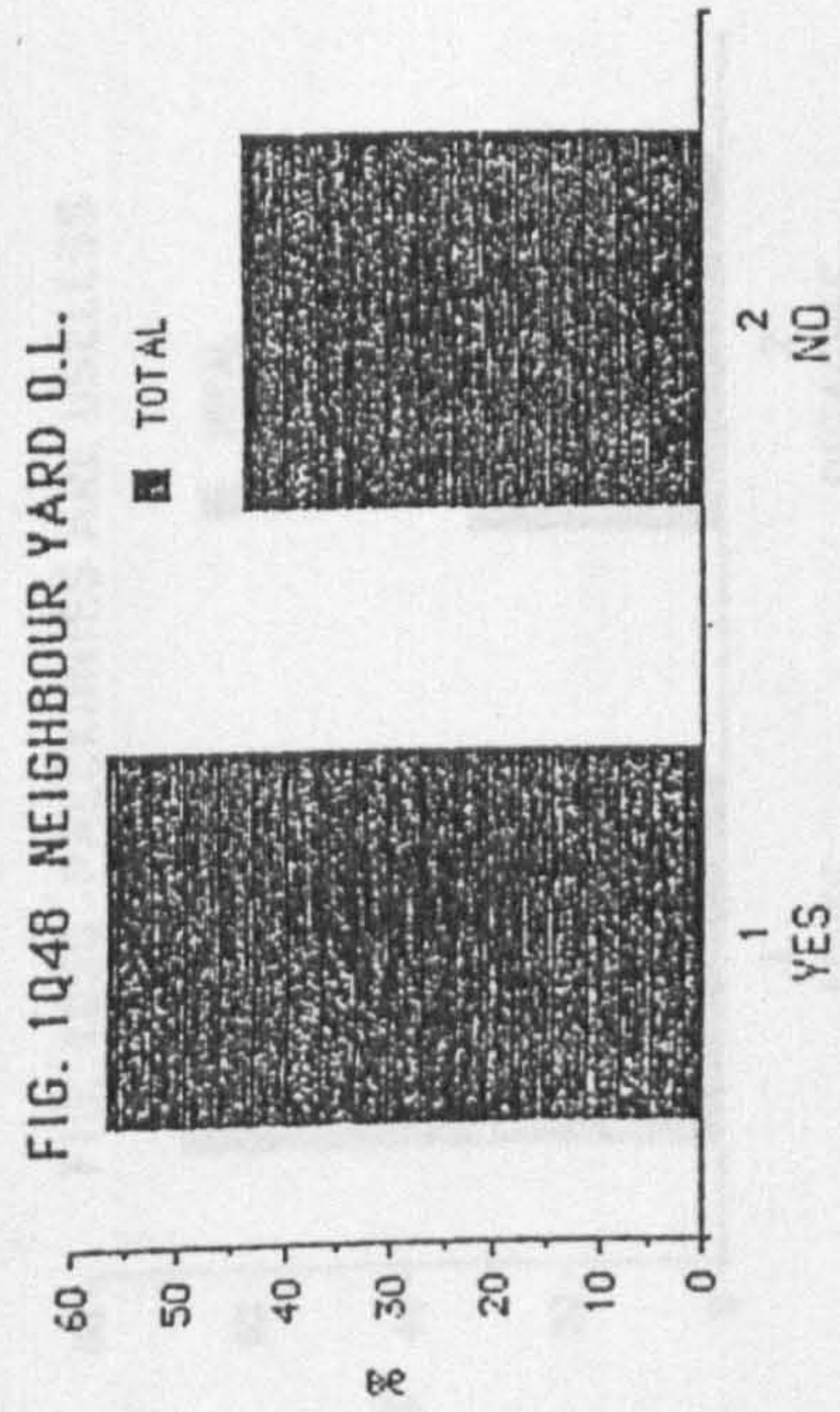


FIG. 2Q47 HOUSE YARD OVERLOOKED

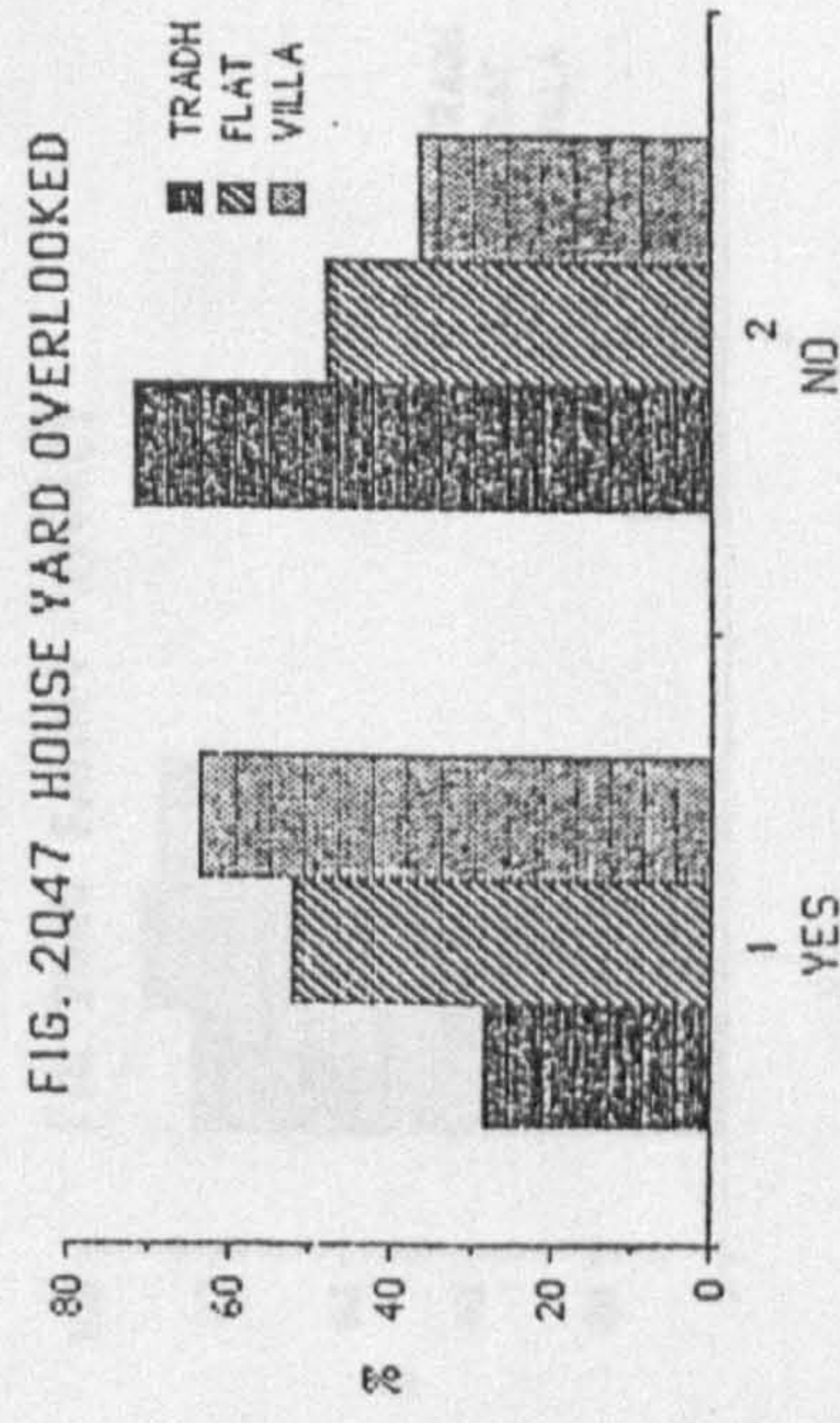


FIG. 2Q48 NIEGHBOUR YARD O.L.

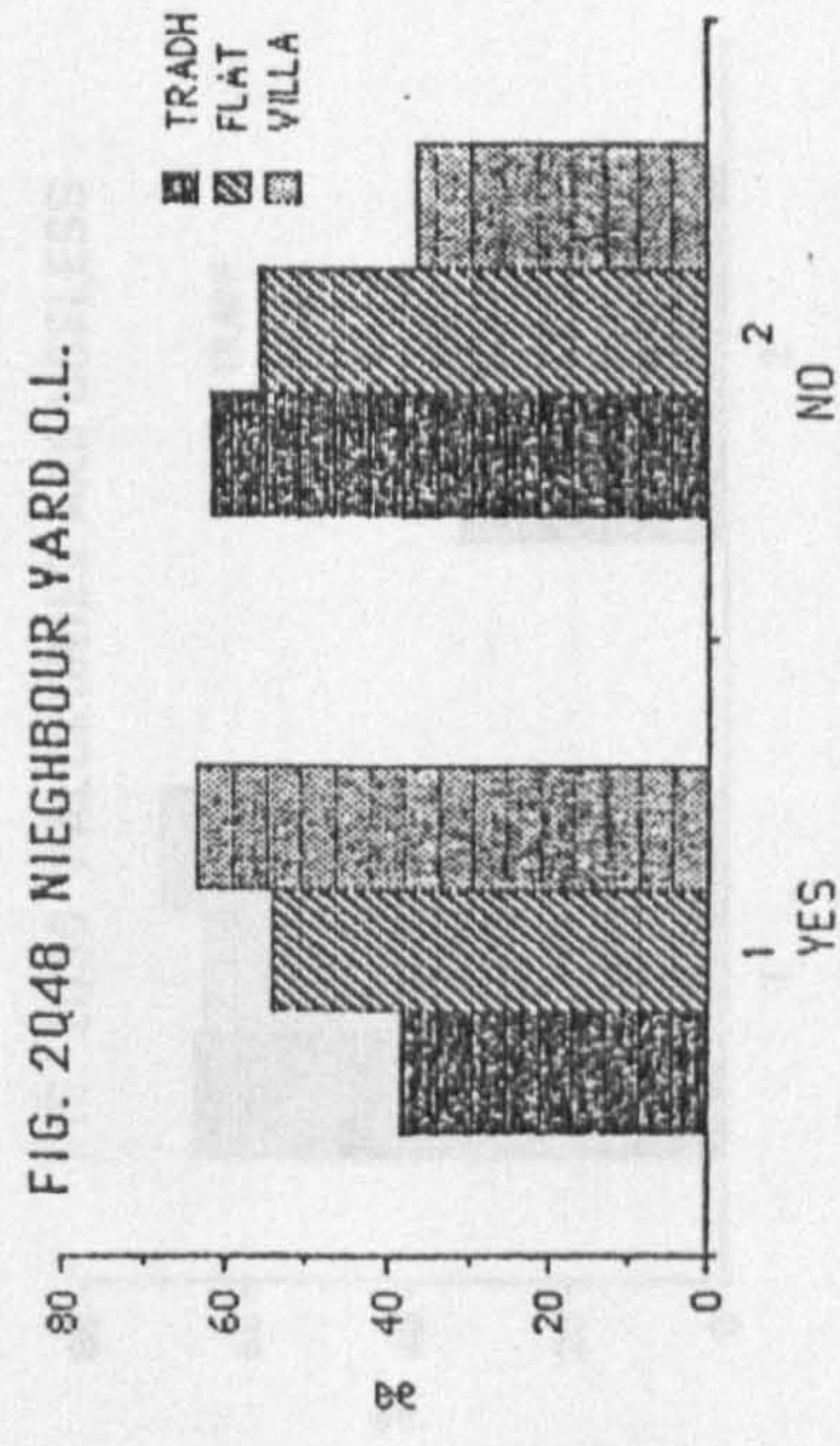


FIG. 3Q47 HOUSE YARD OVERLOOKED

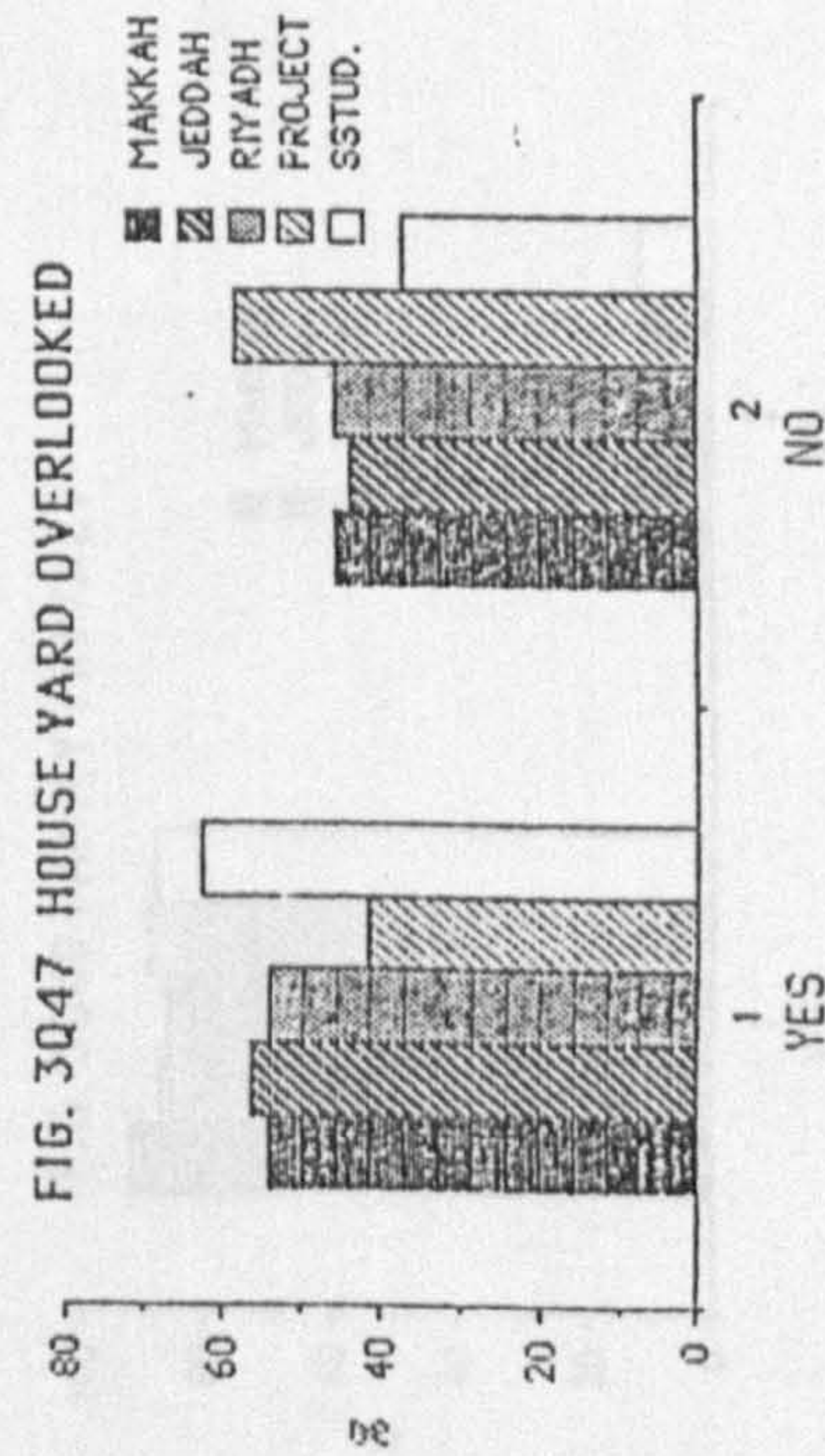


FIG. 3Q48 NEIGHBOUR YARD O.L.

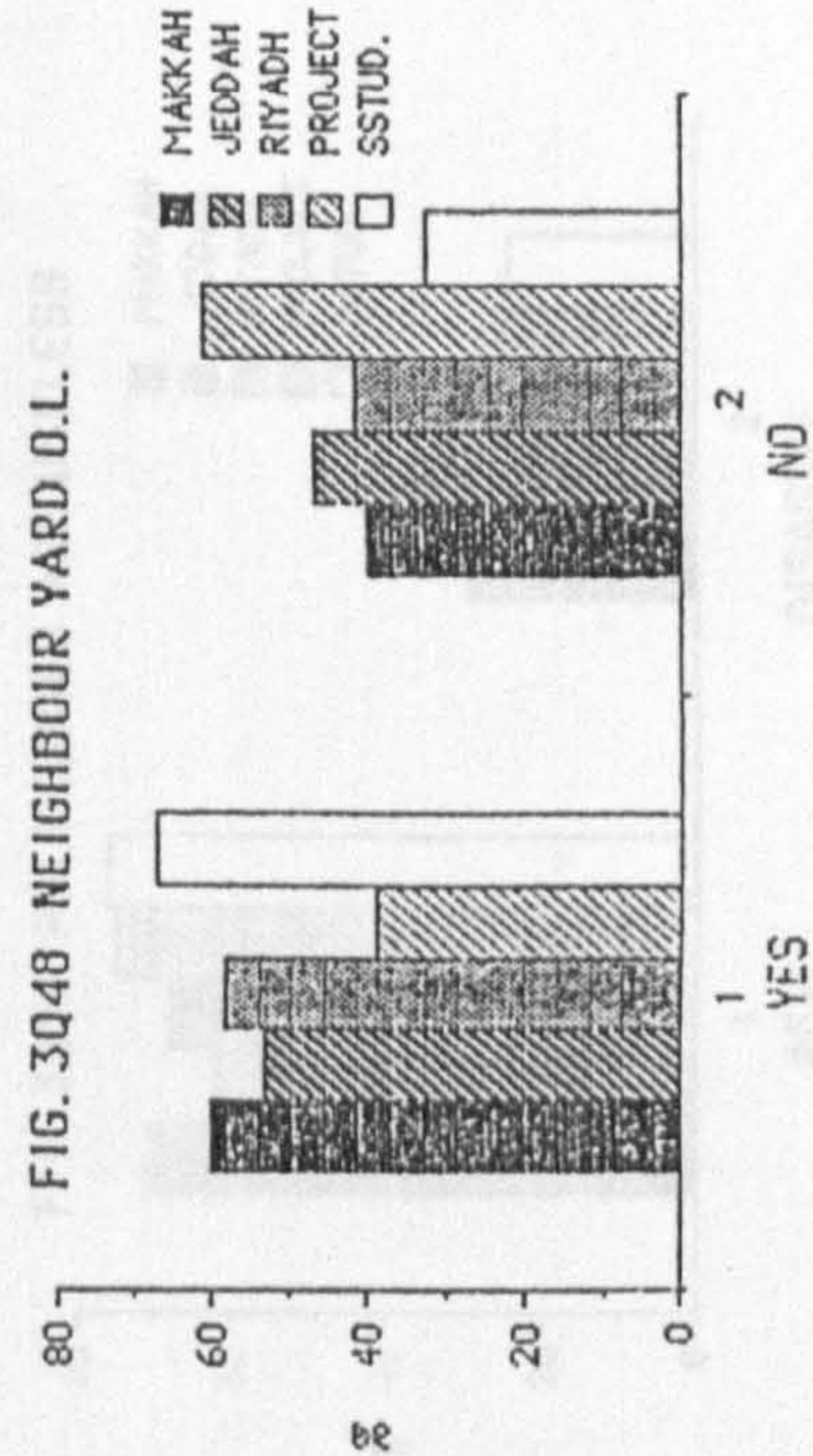


FIG. 1Q49 FAMILY PRIVACY

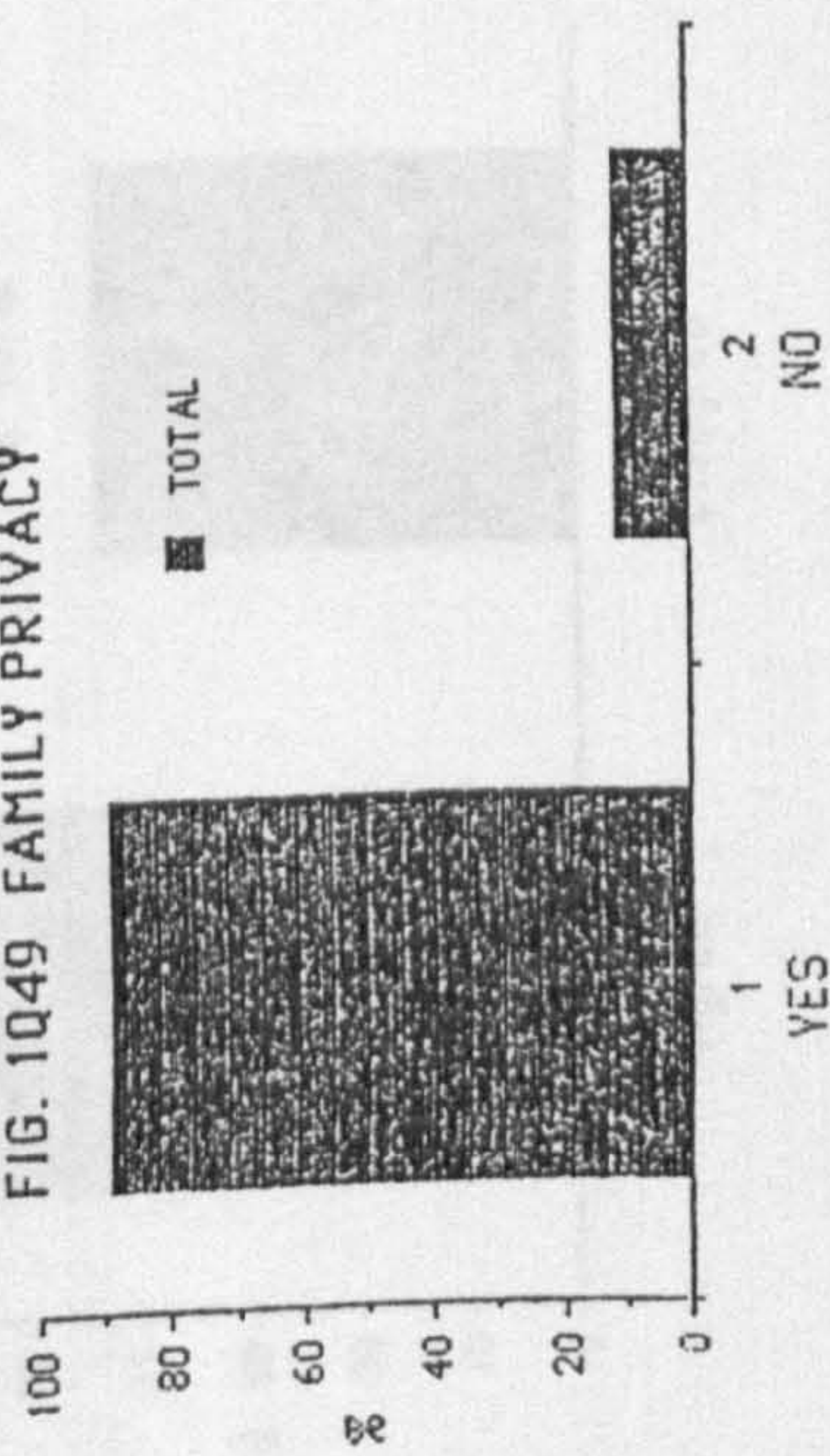


FIG. 1Q50 PALCKONIES ARE USELESS

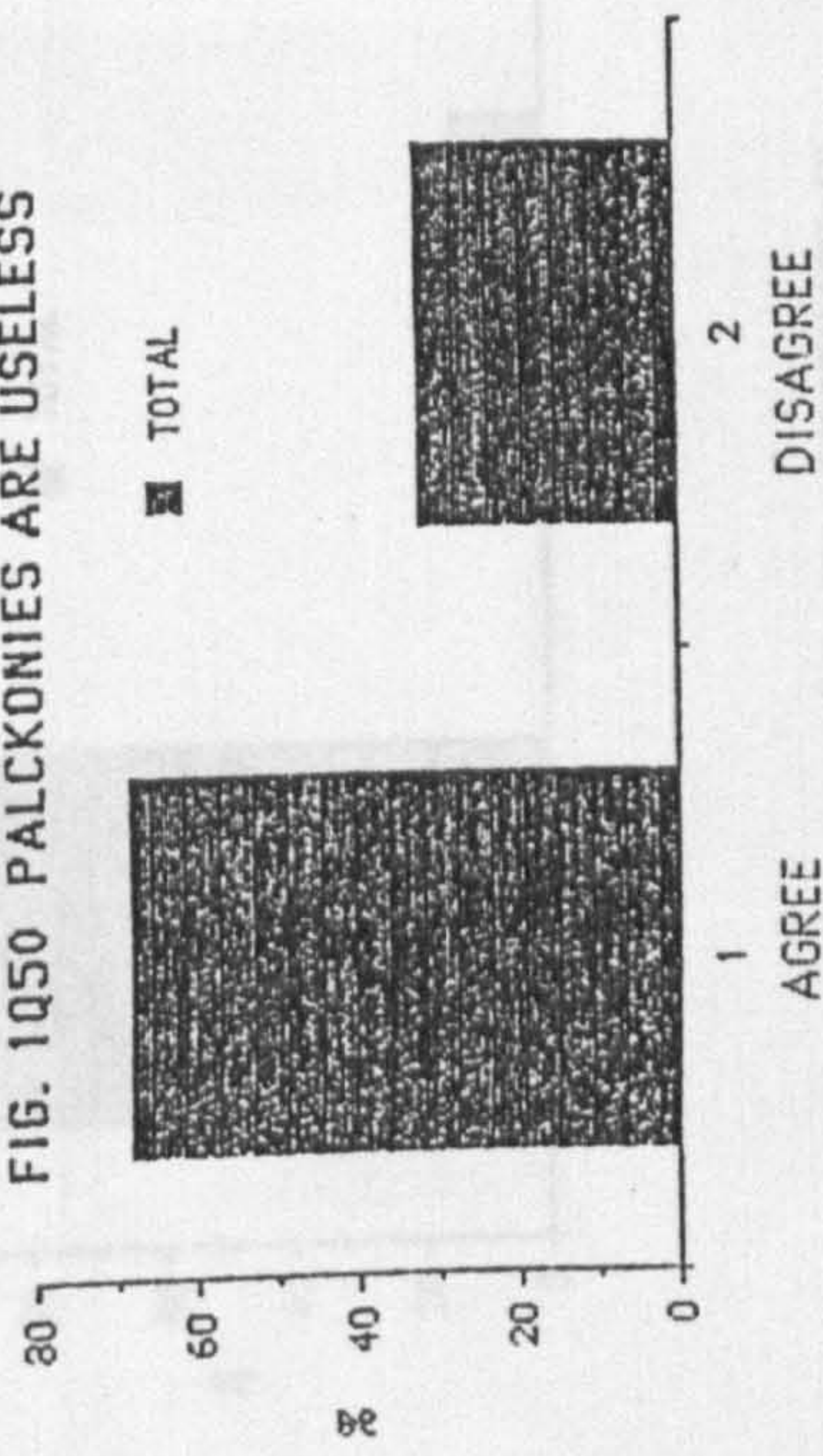


FIG. 2Q49 FAMILY PRIVACY

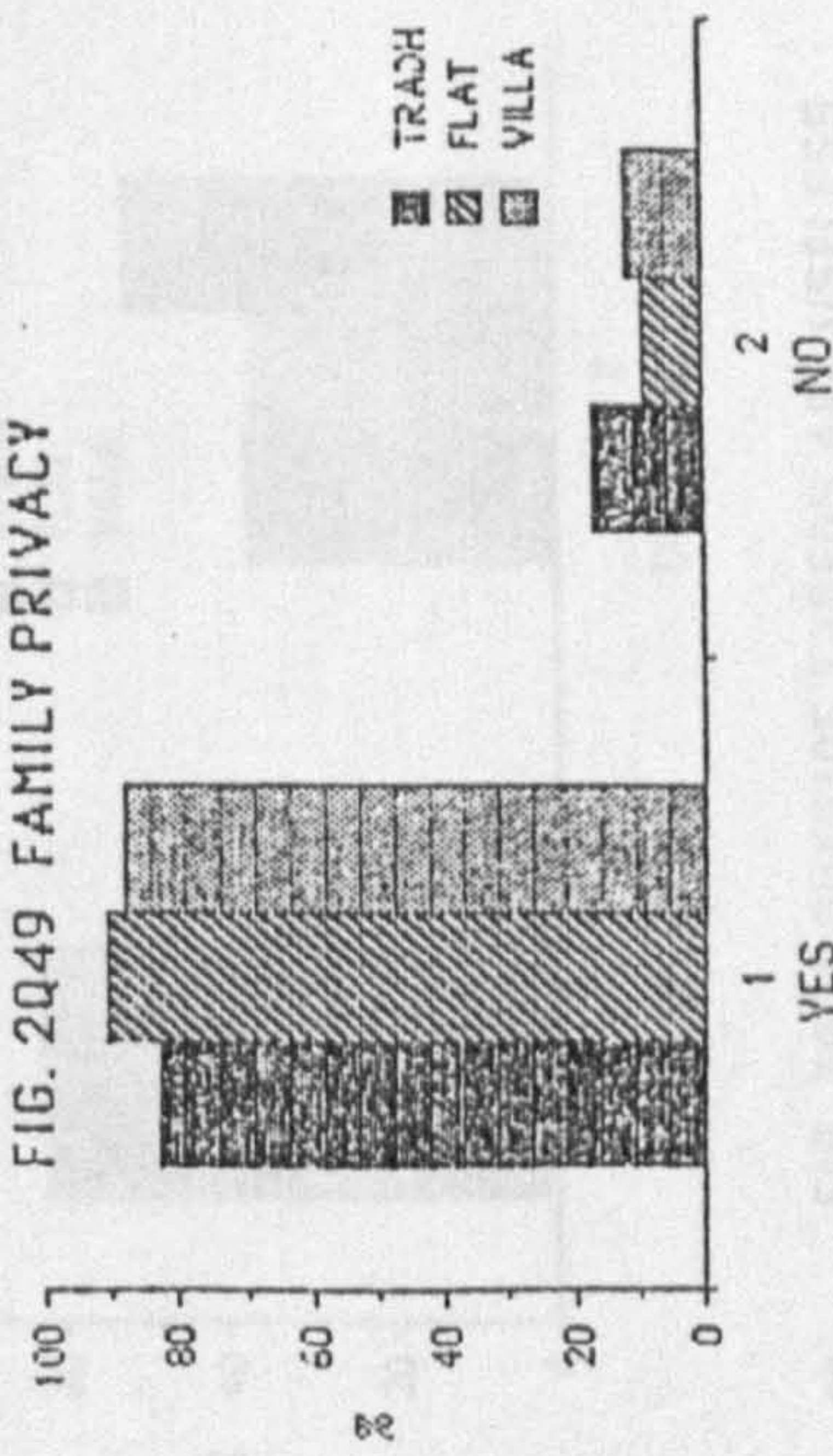


FIG. 2Q50 PALCKONIES ARE USELESS

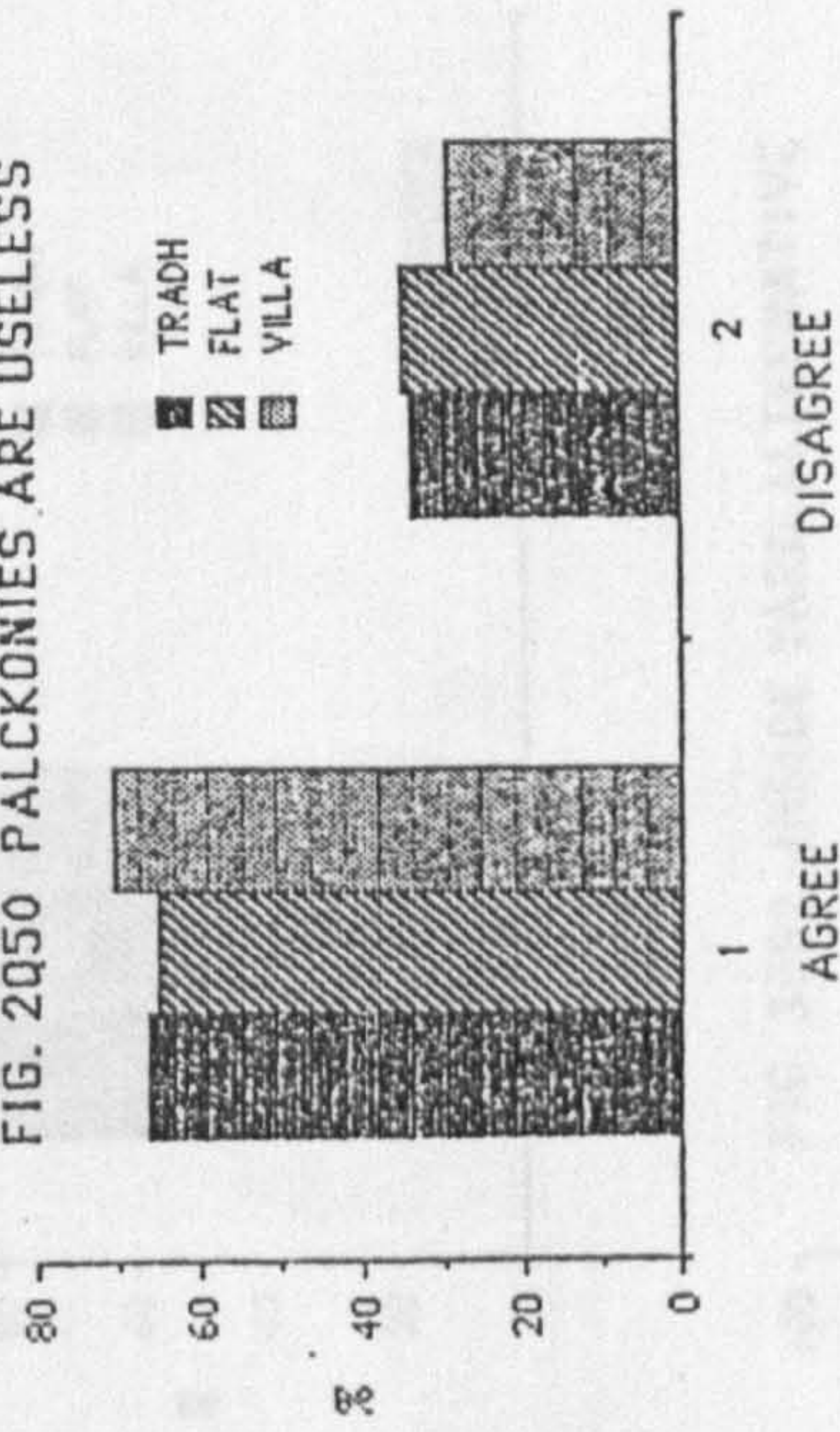


FIG. 3Q49 FAMILY PRIVACY

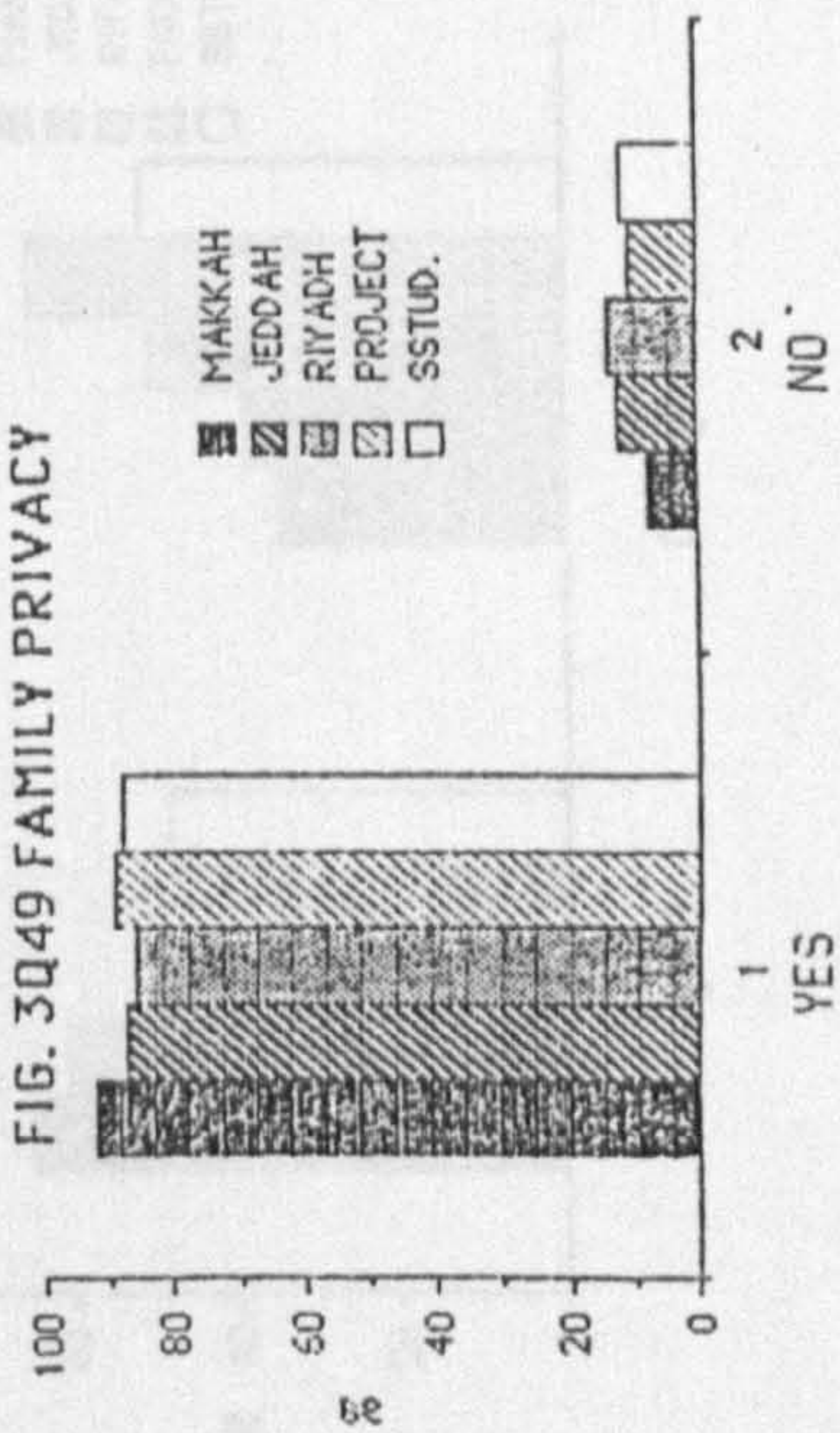


FIG. 3Q50 PALCKONIES ARE USELESS

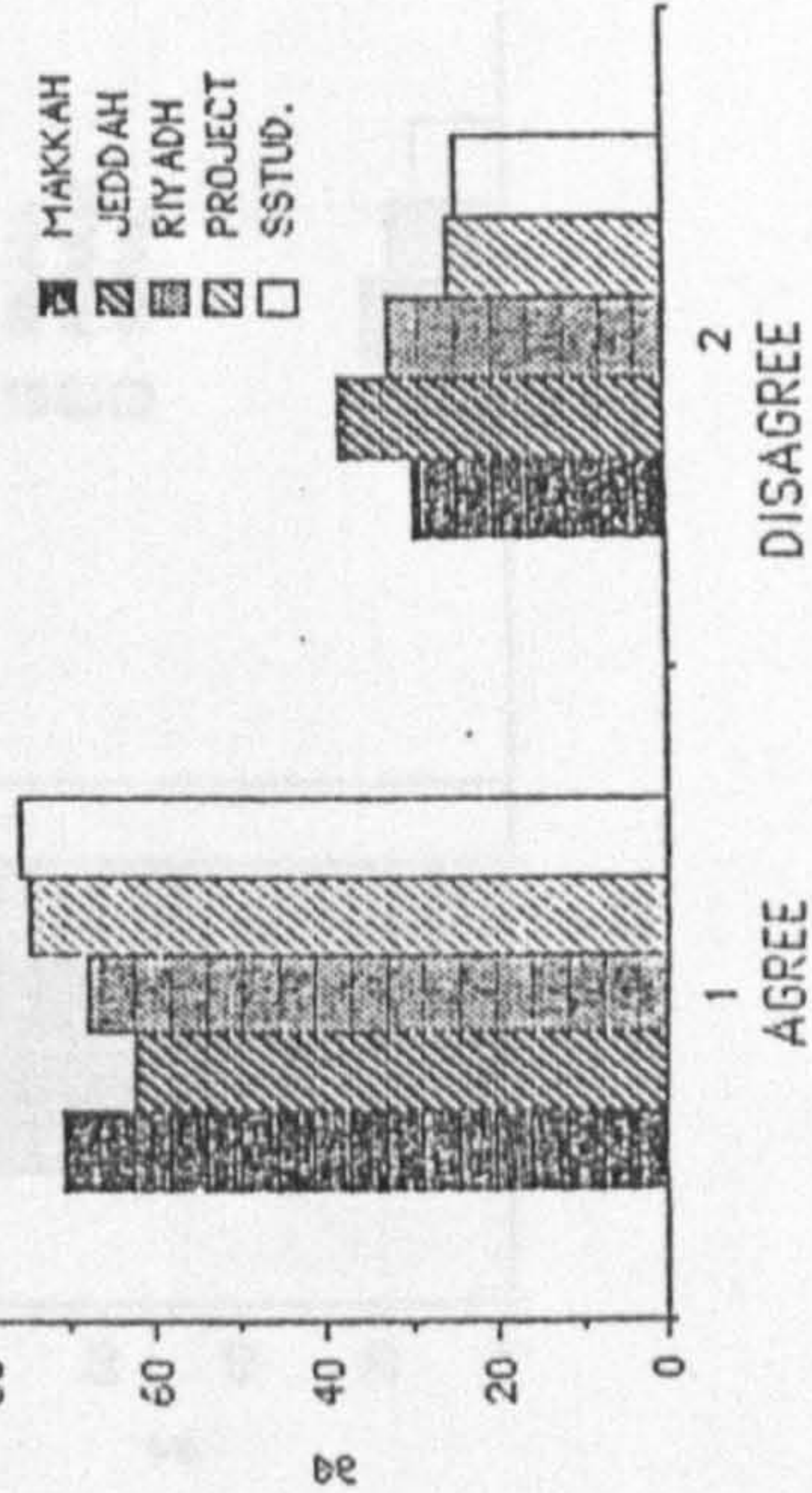


FIG. 1Q51 OUTSIDE YARDS ARE USELESS

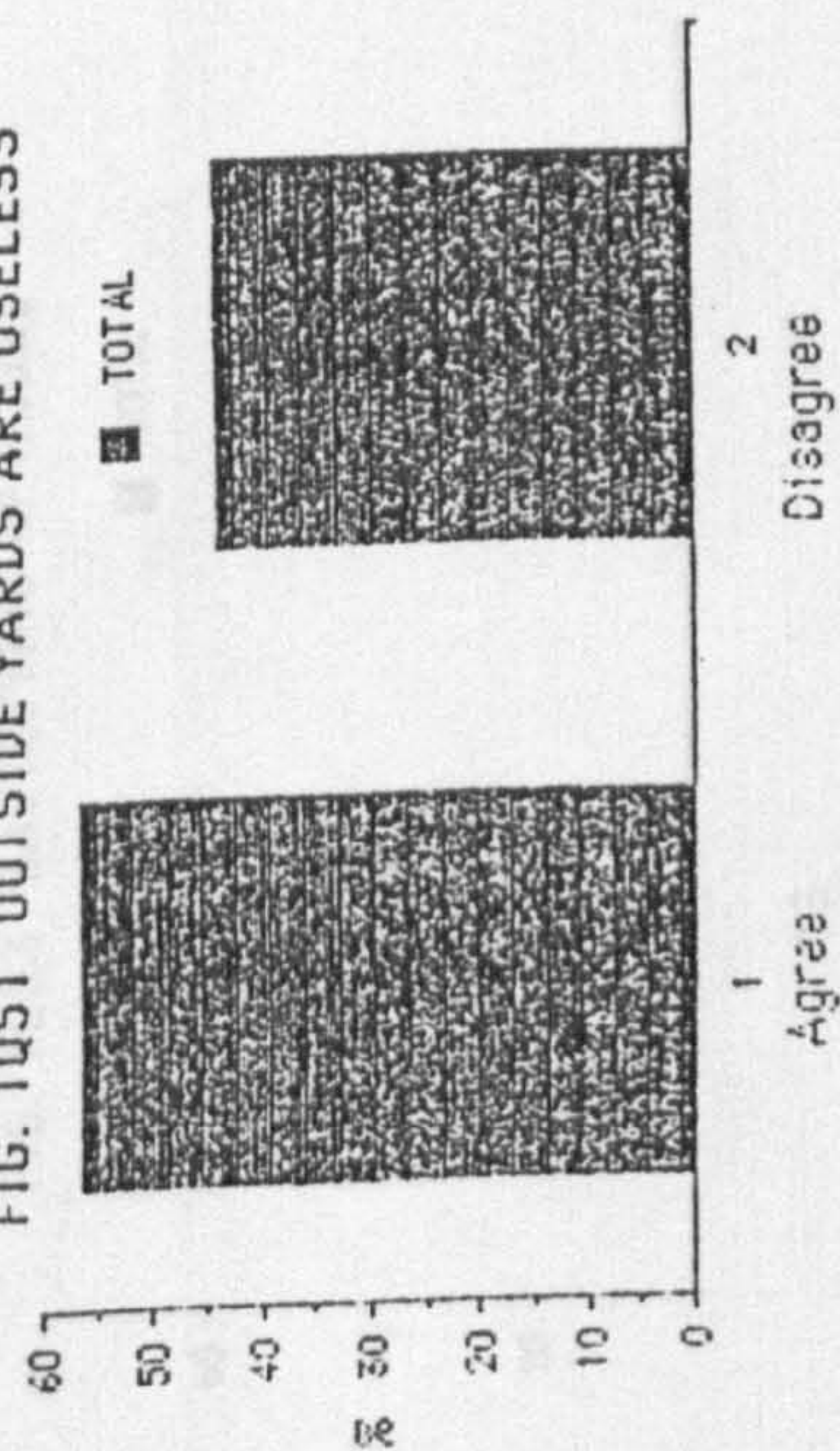


FIG. 2Q51 OUTSIDE YARDS ARE USELESS

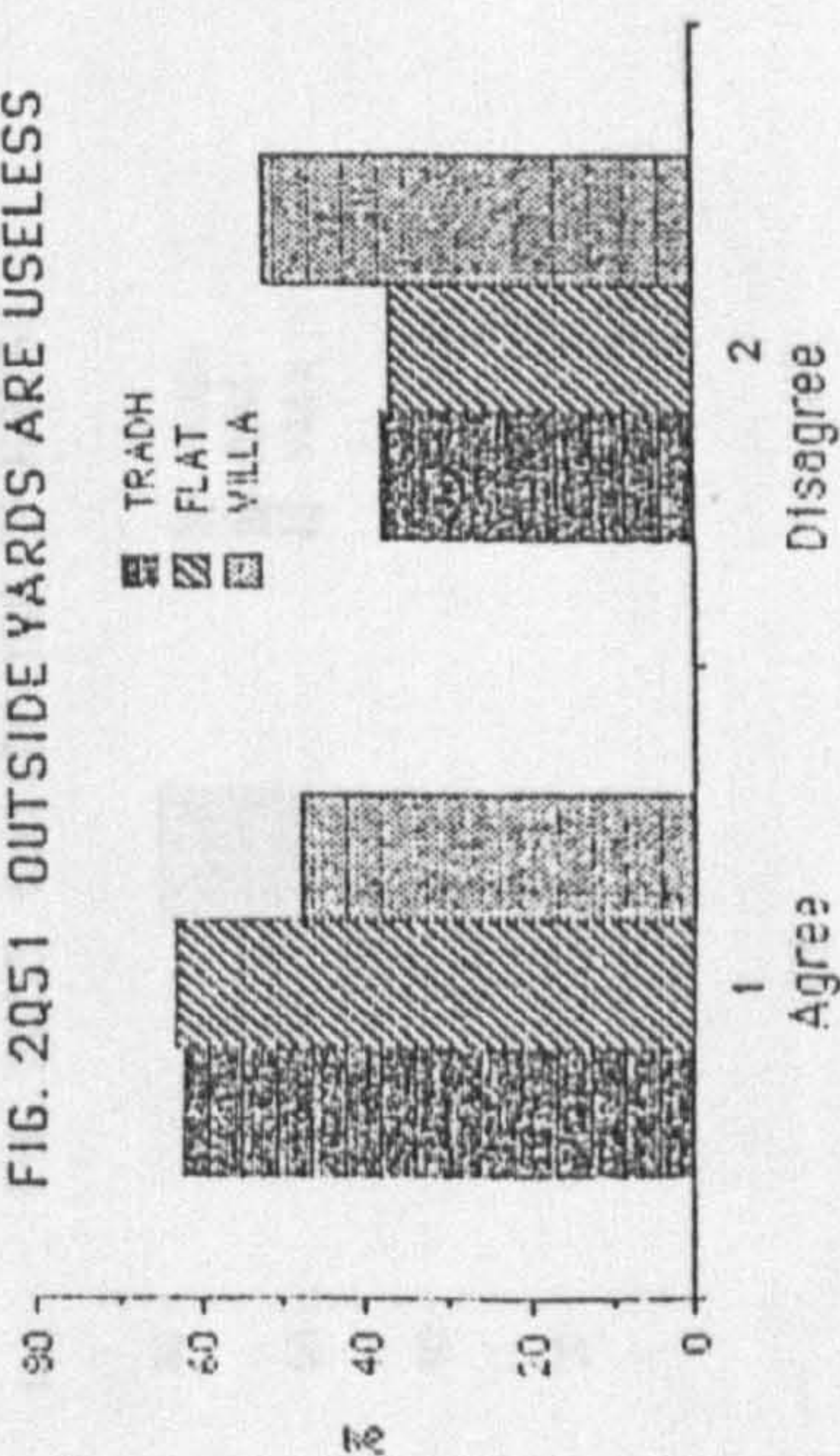


FIG. 3Q51 OUTSIDE YARDS ARE USELESS

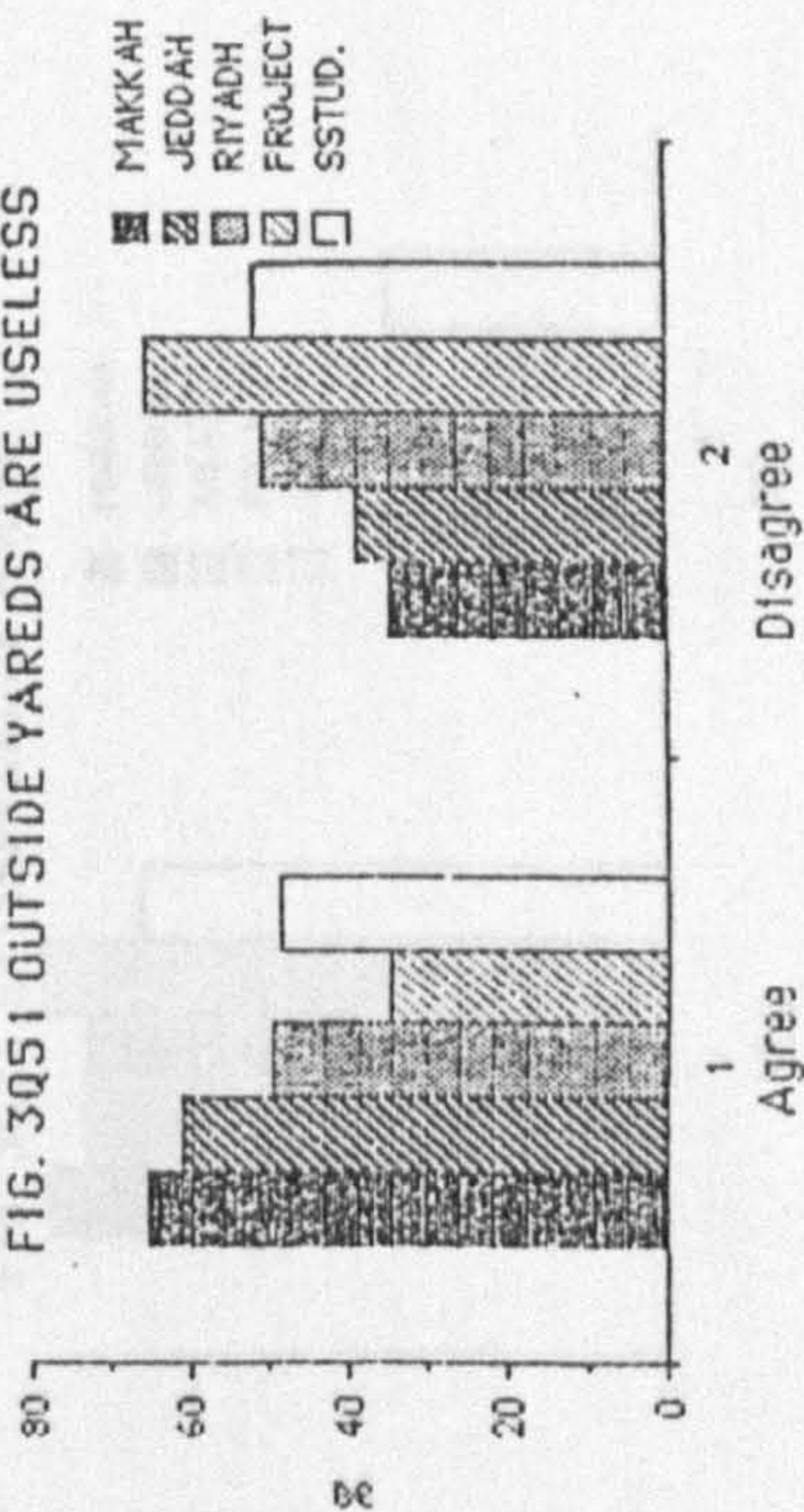


FIG. 1Q52 INSIDE YARD ALTERNATIVE

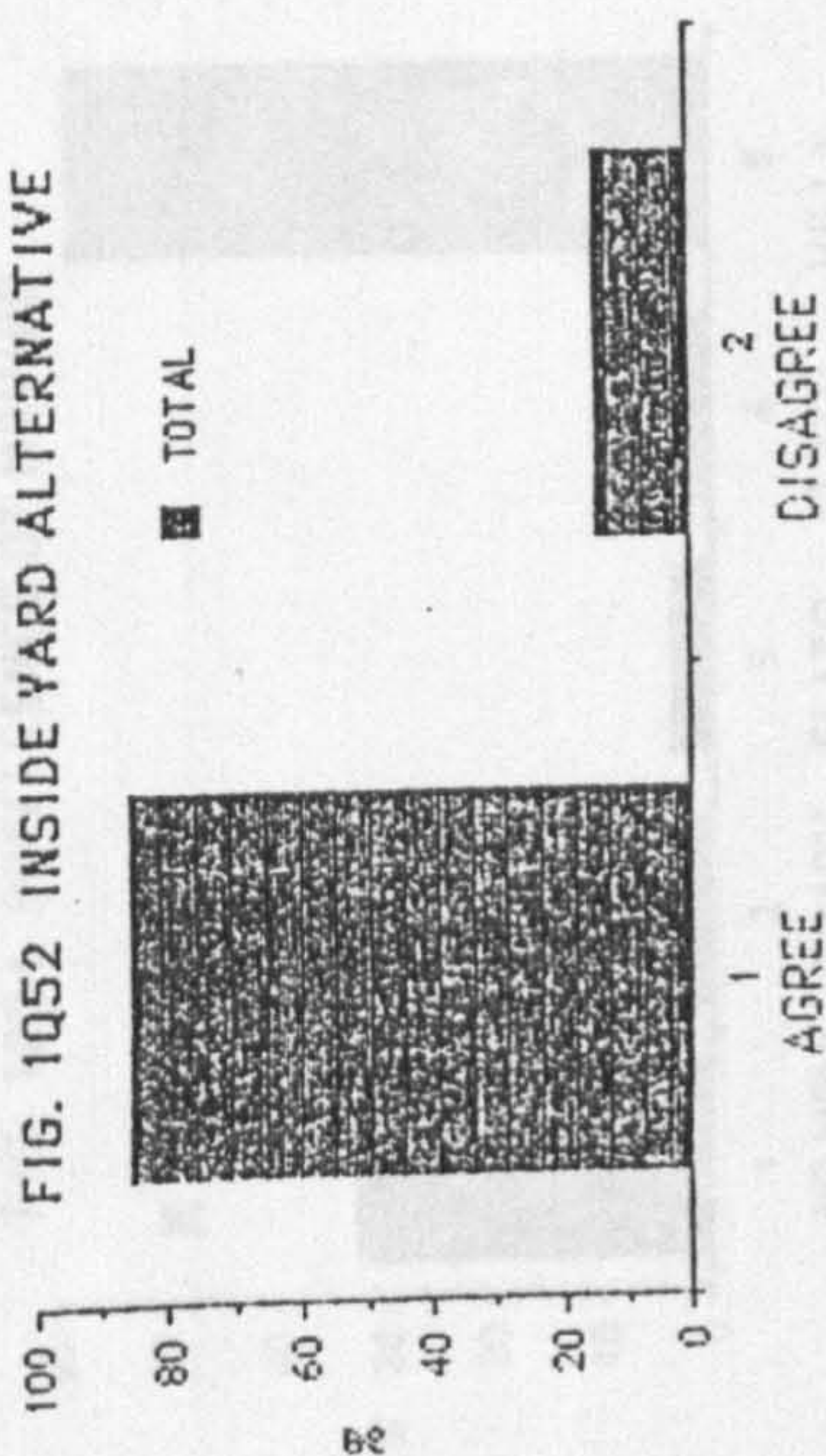


FIG. 2Q52 INSIDE YARD ALTERNATIVE

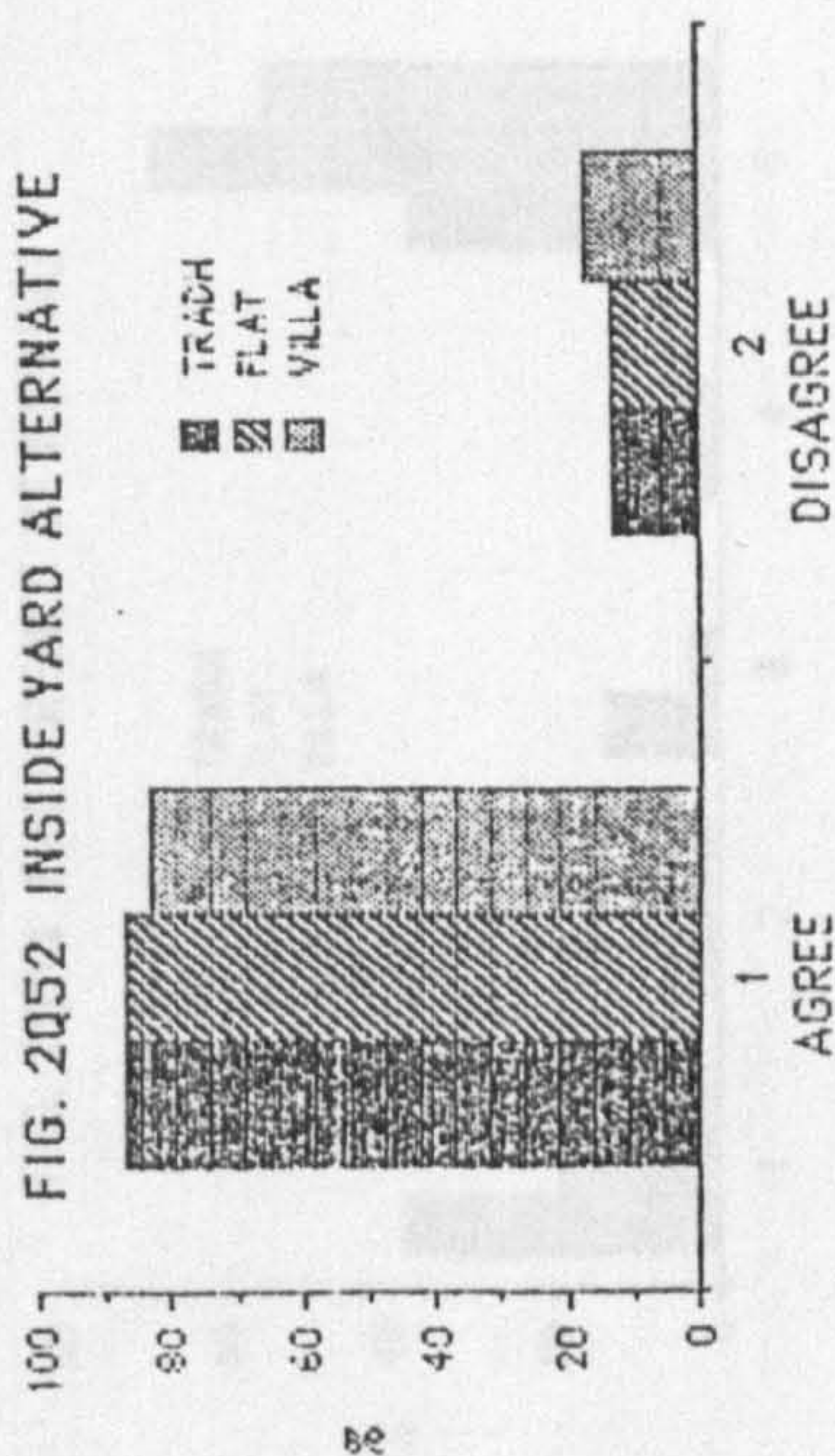


FIG. 3Q52 INSIDE YARD ALTERNATIVE

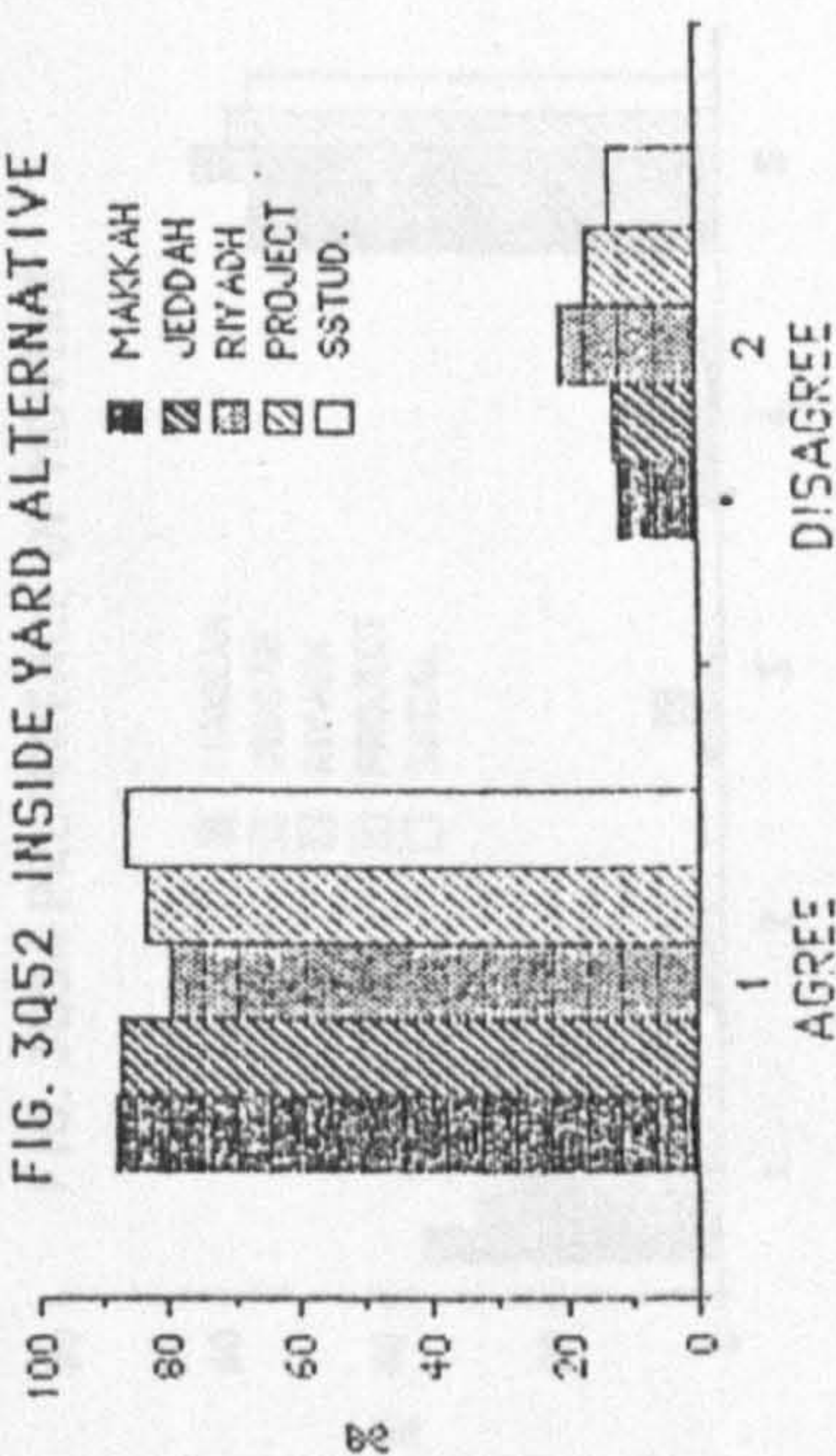


FIG. 1Q53 SATISFYING OF HOUSE

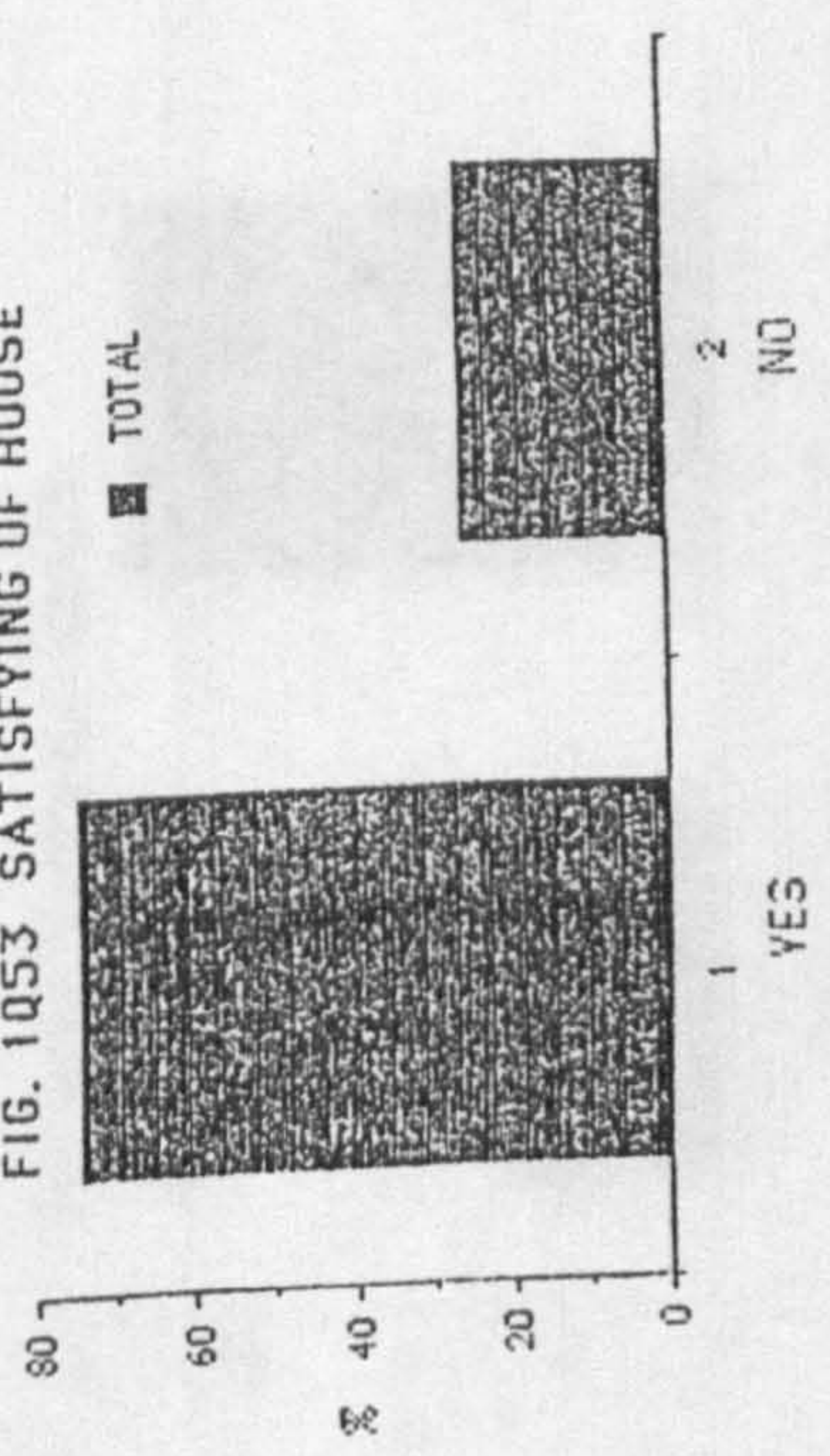


FIG. 2Q53 SATISFYING OF HOUSE

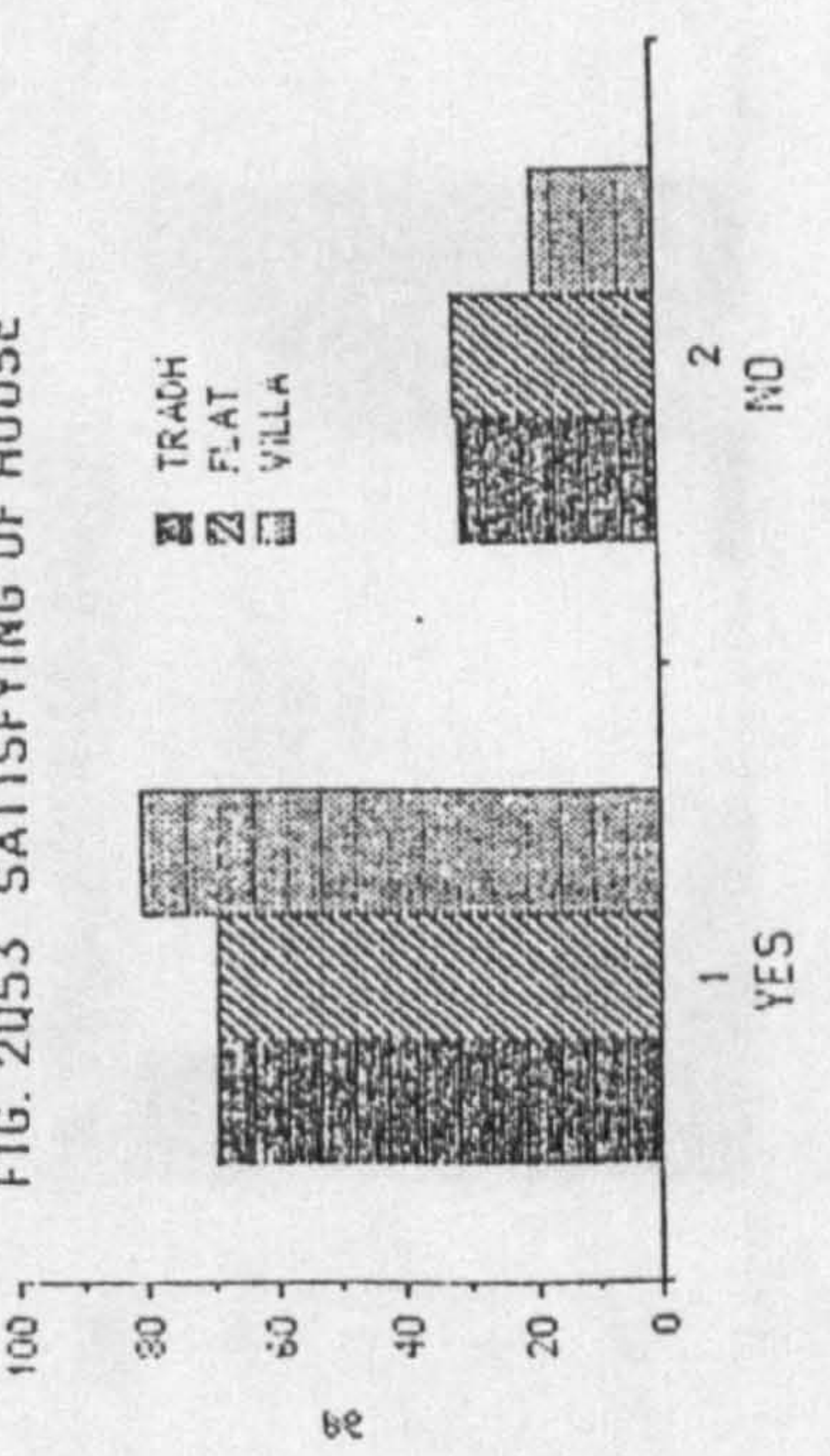


FIG. 3Q53 SATISFYING OF HOUSE

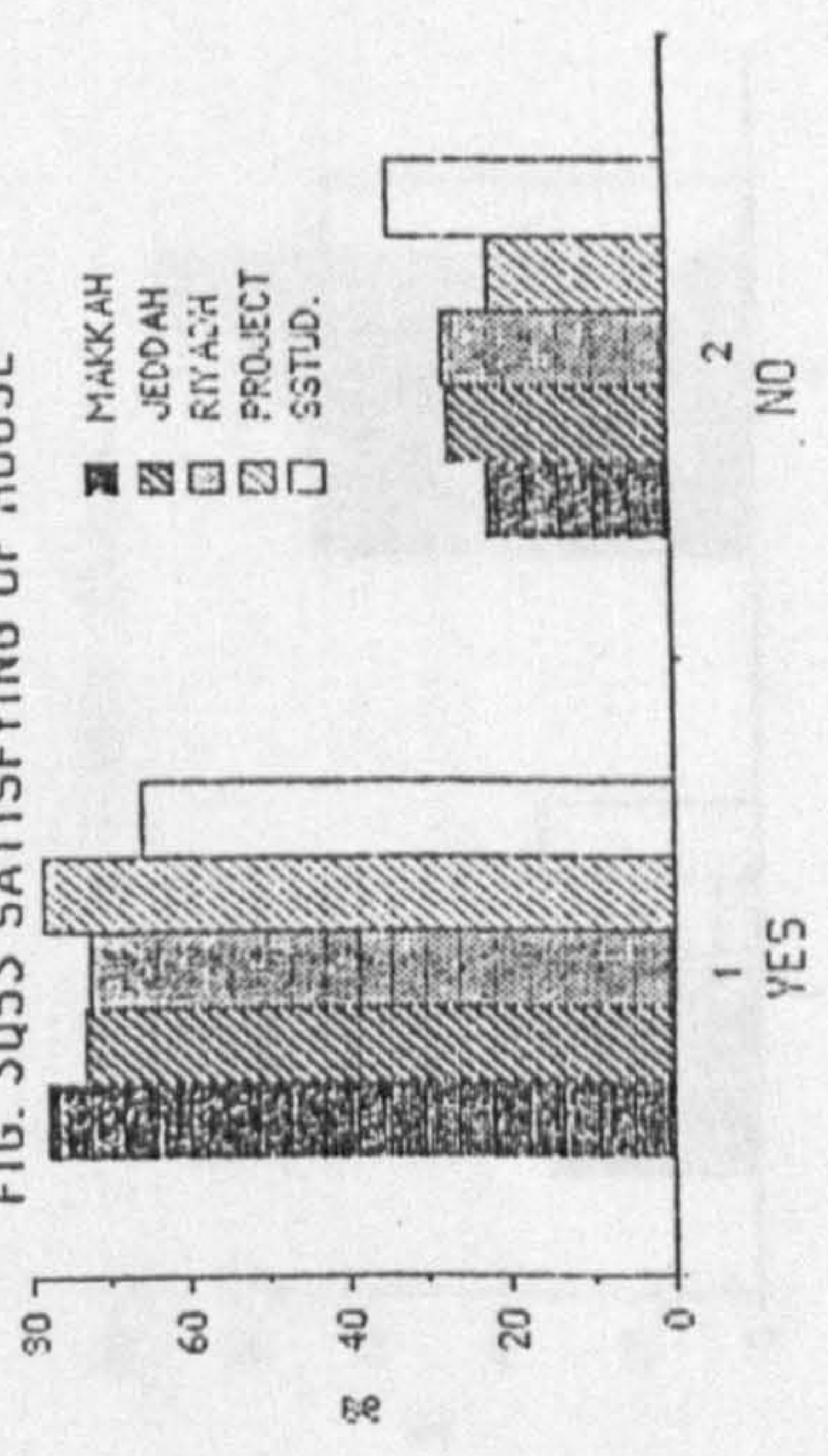


FIG. 1Q54 PREFERENCE OF MOVING

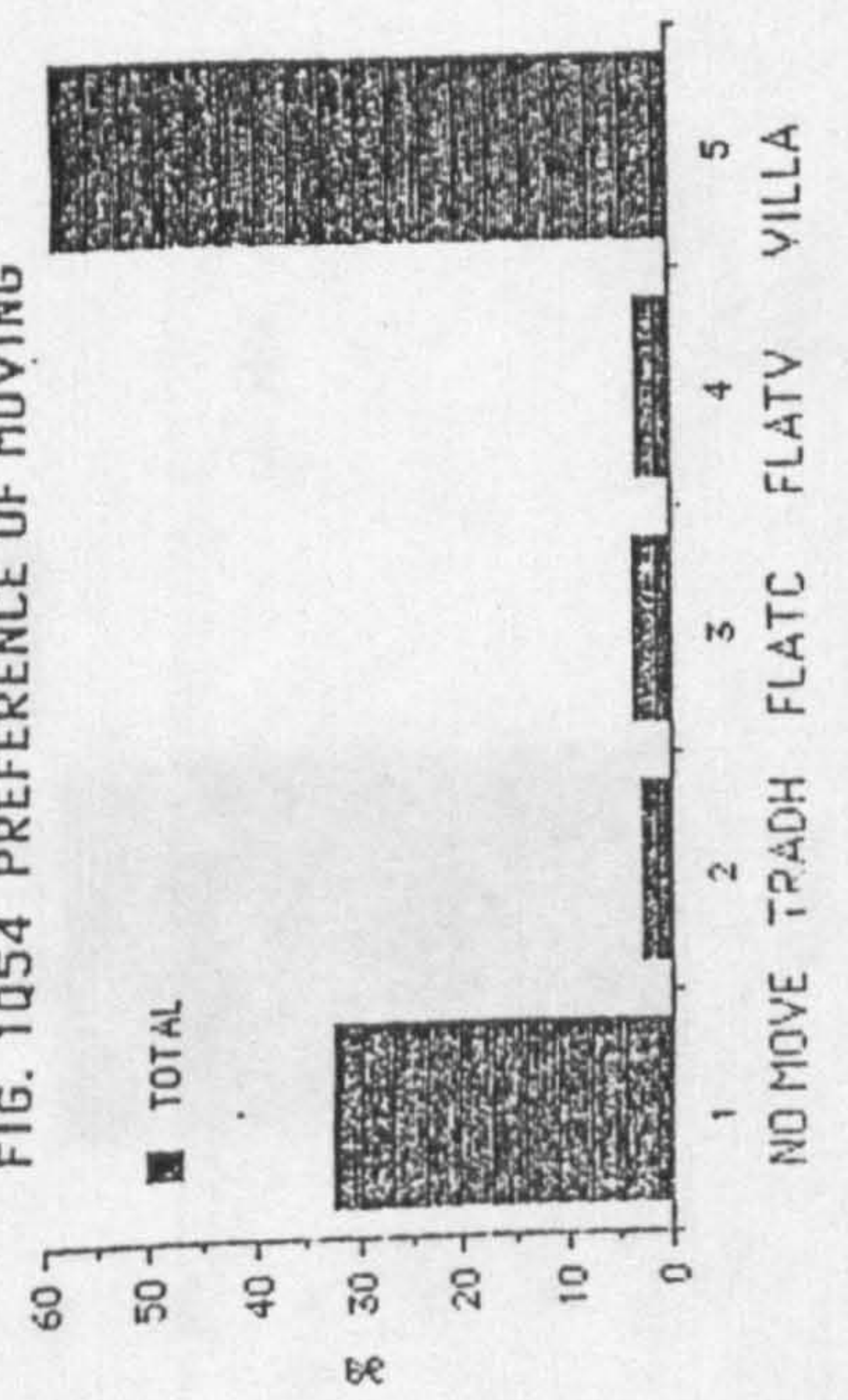


FIG. 2Q54 PREFERENCE OF MOVING

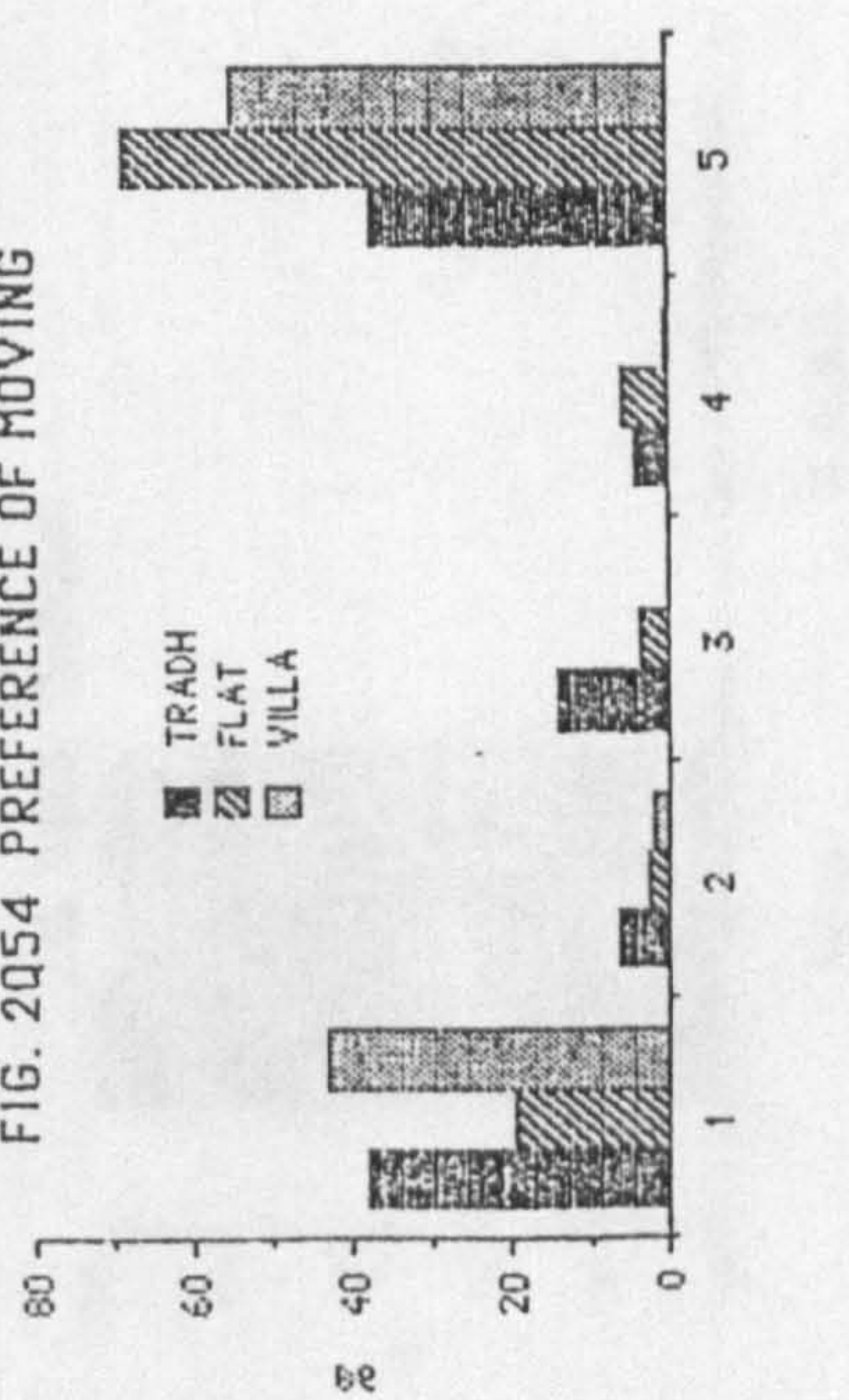
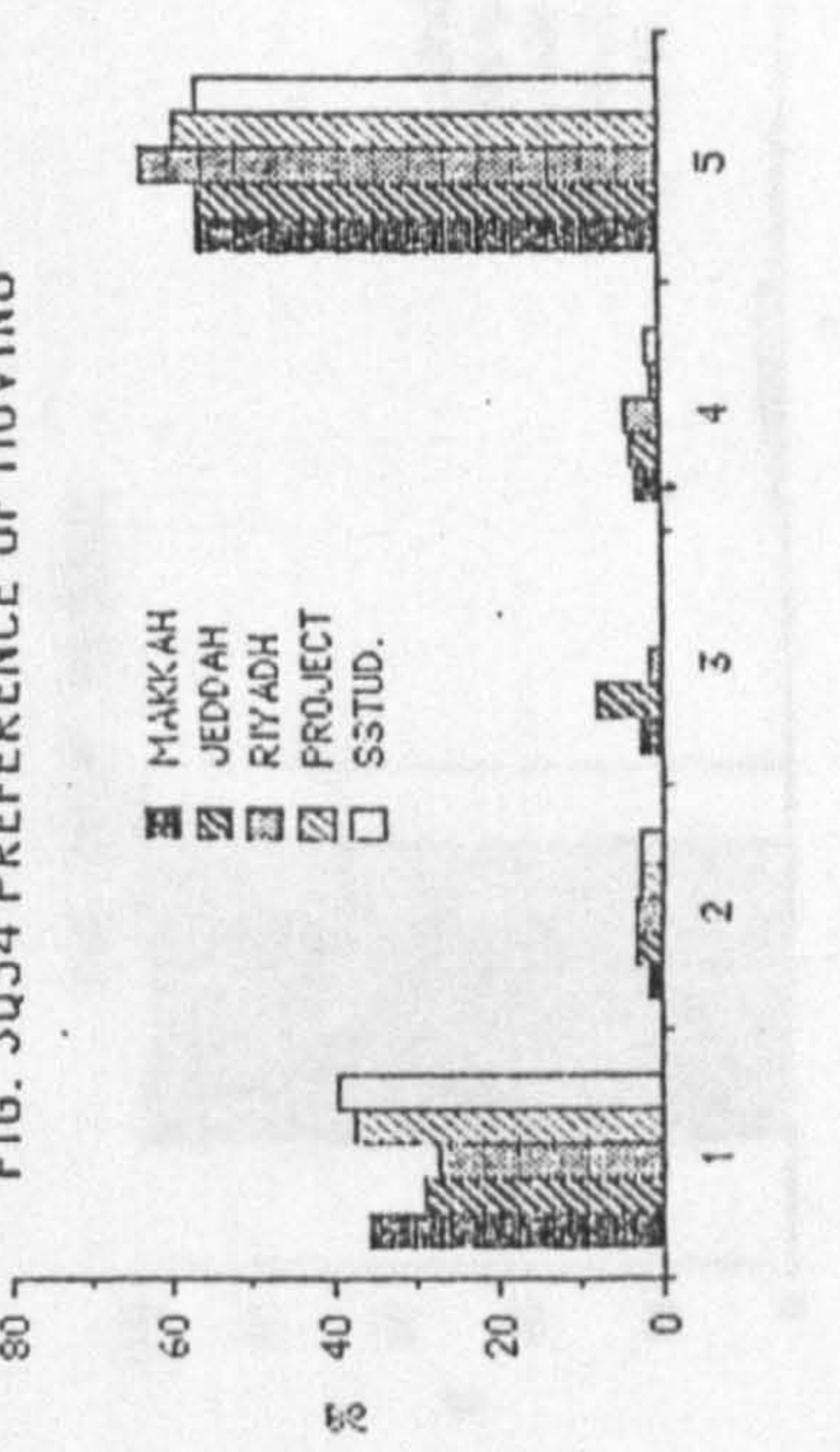
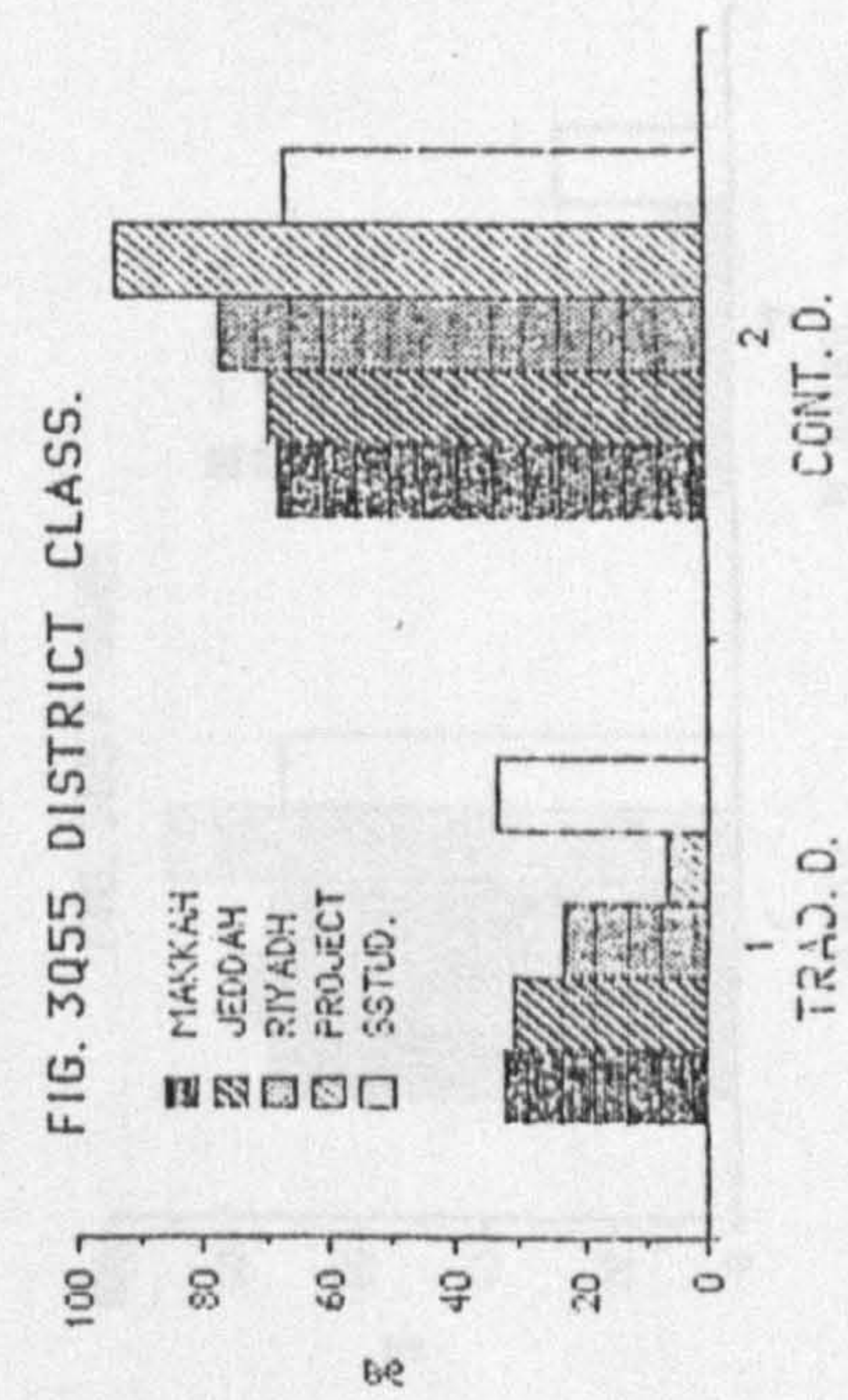
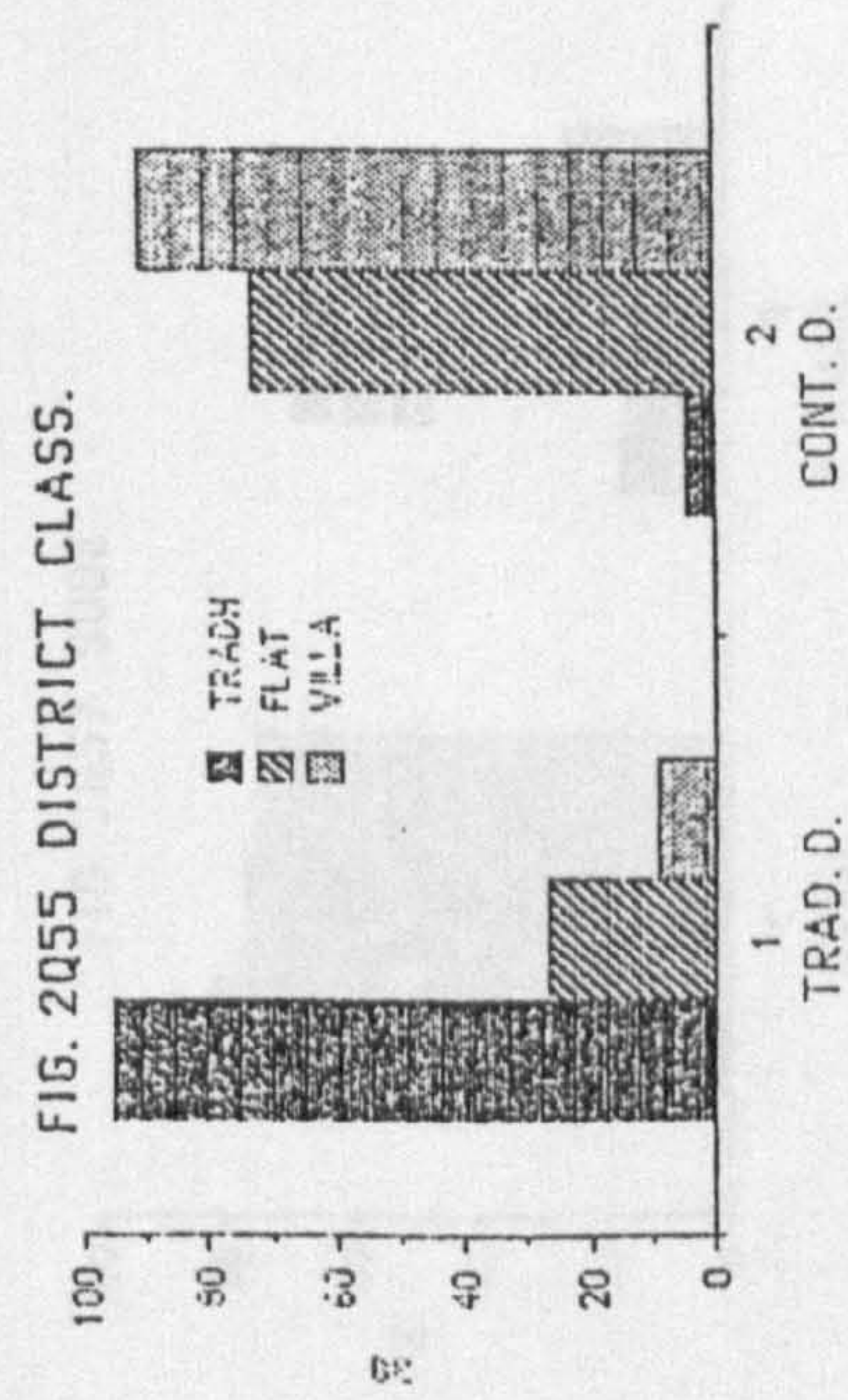
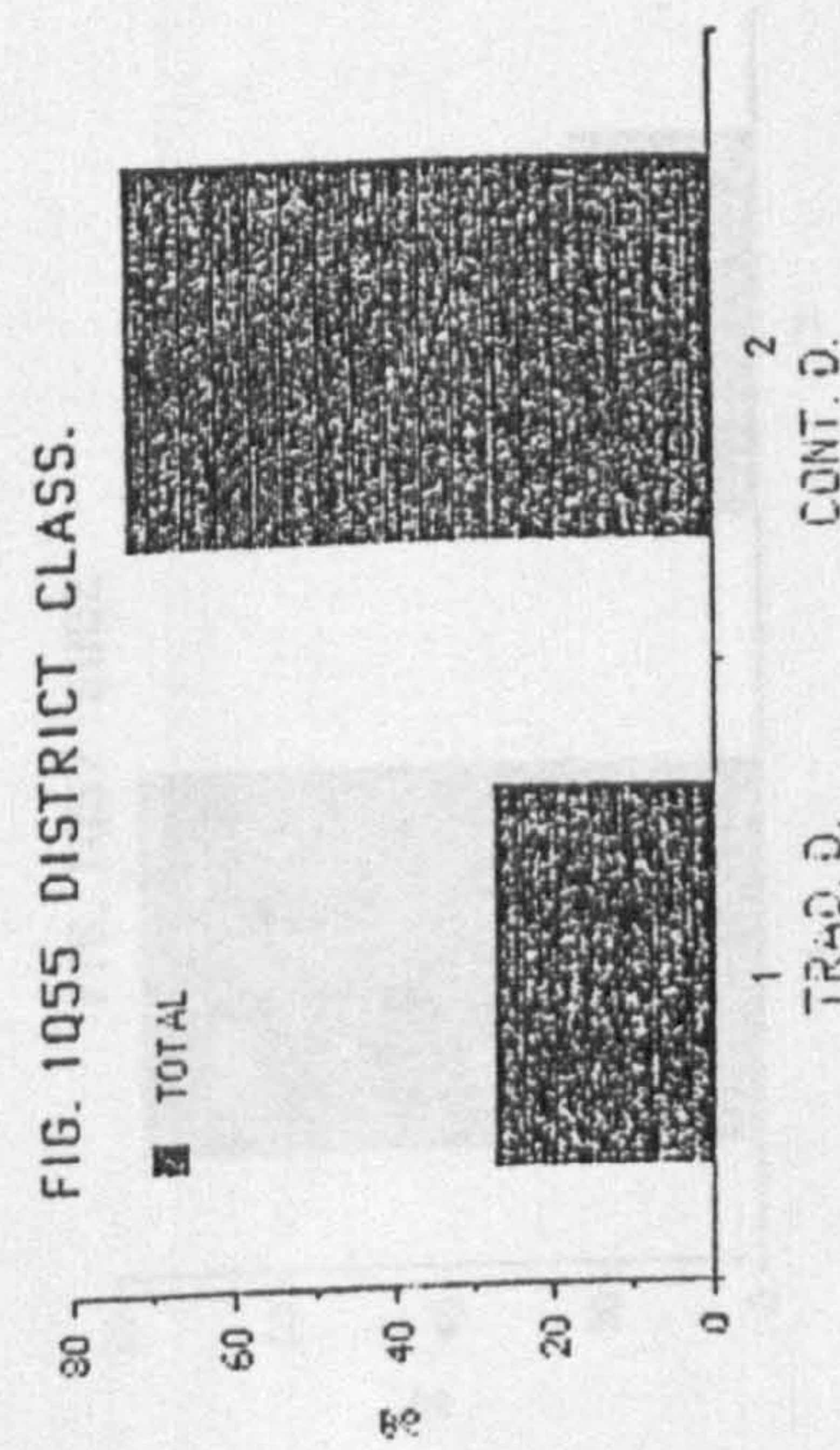
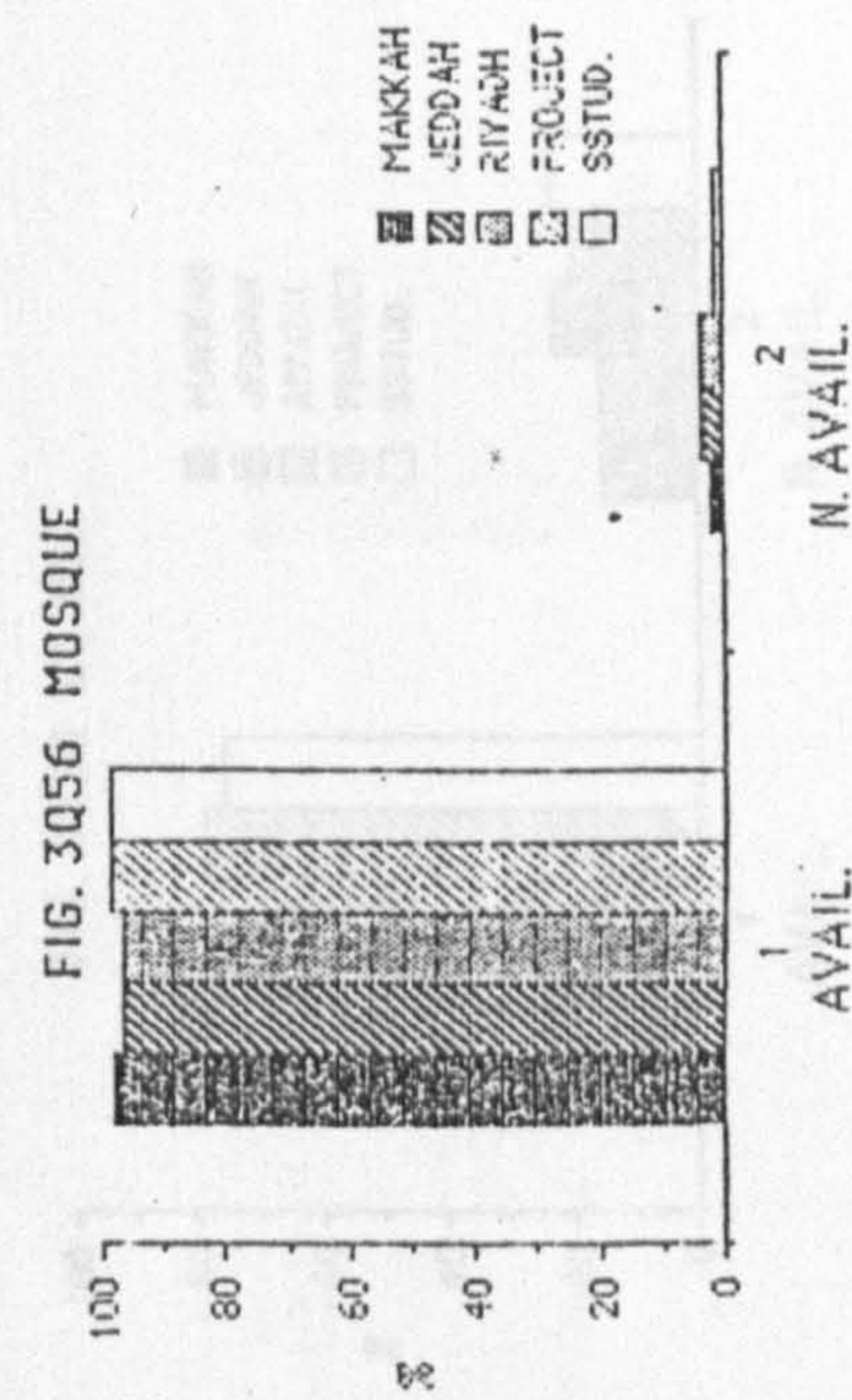
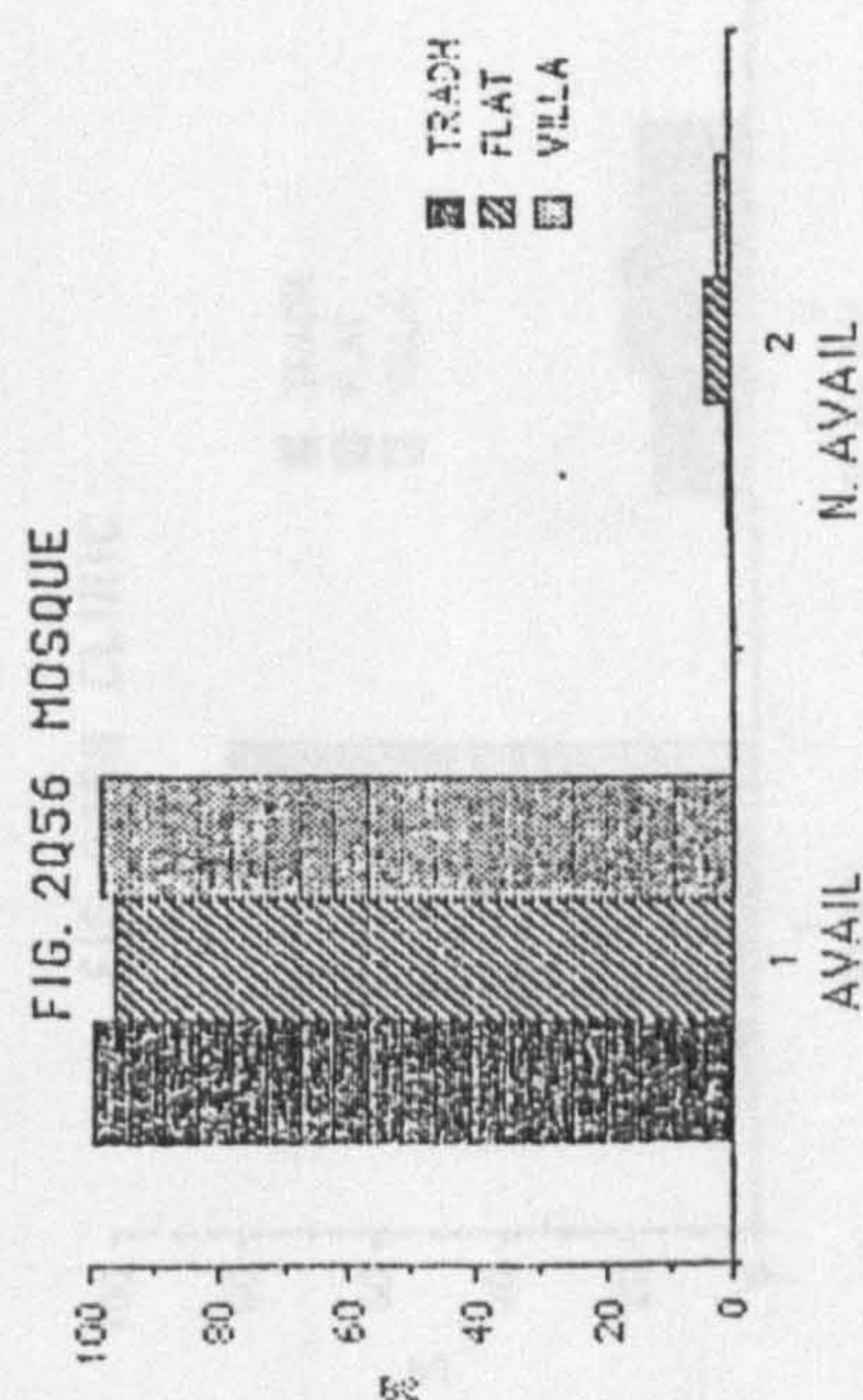
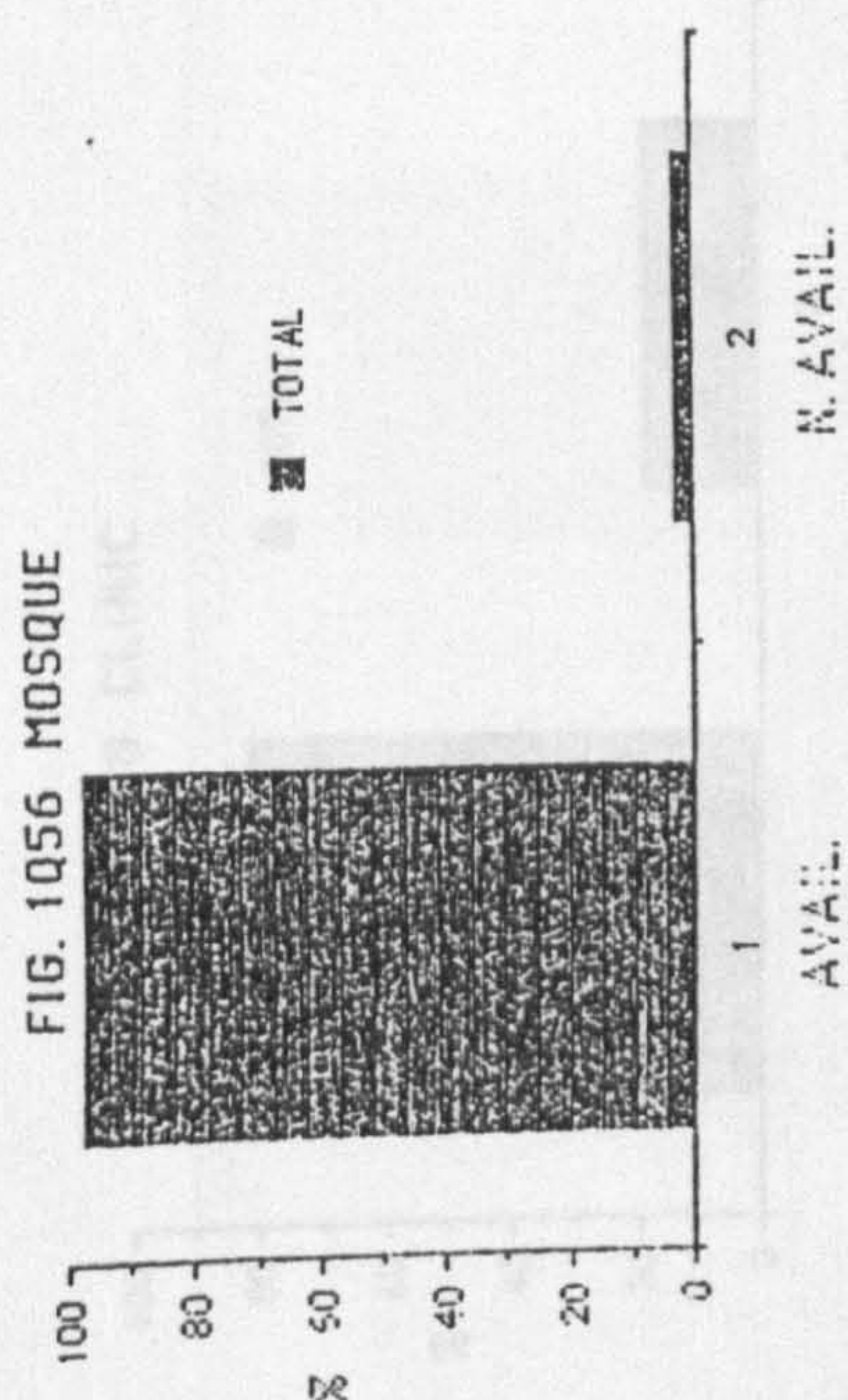


FIG. 3Q54 PREFERENCE OF MOVING





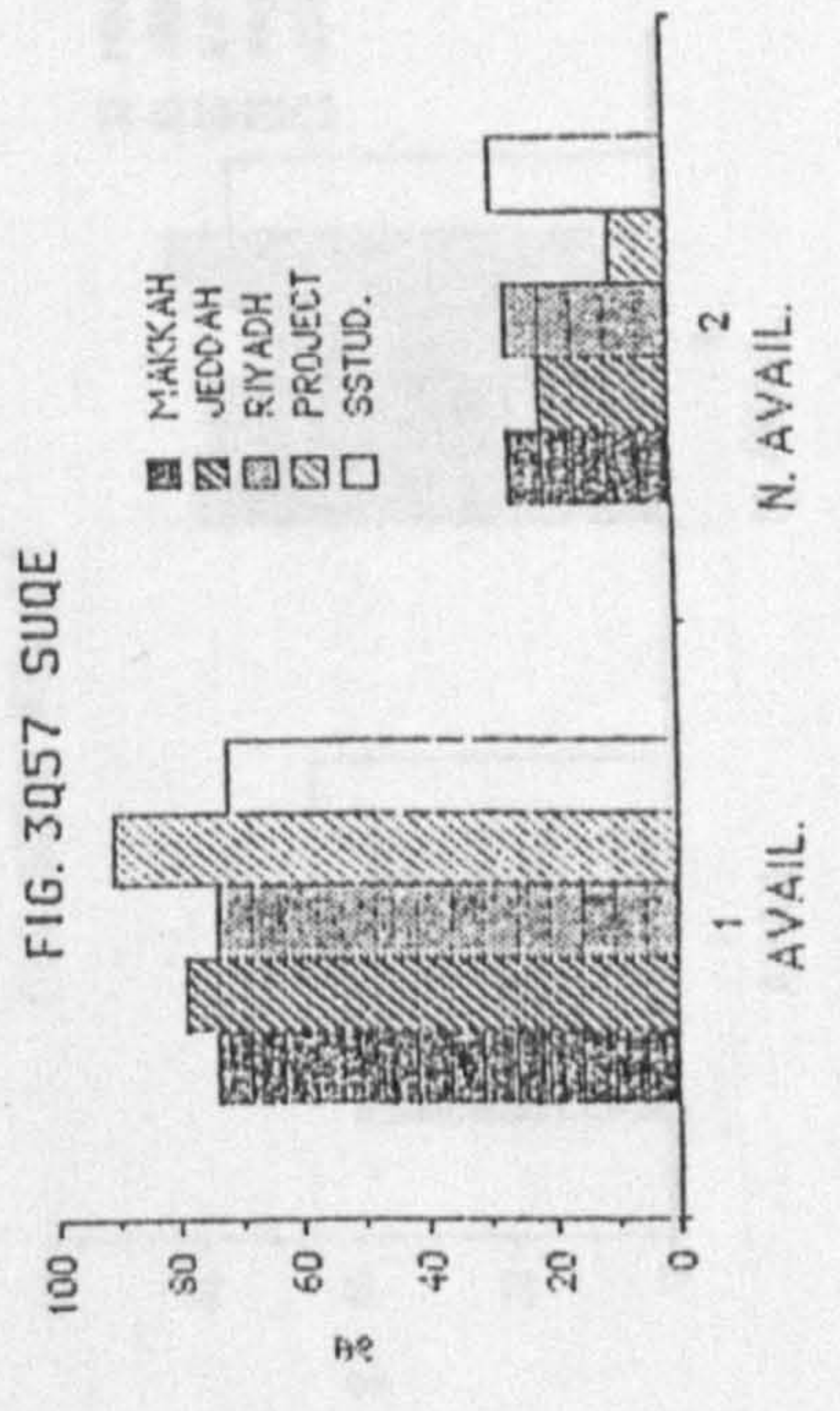
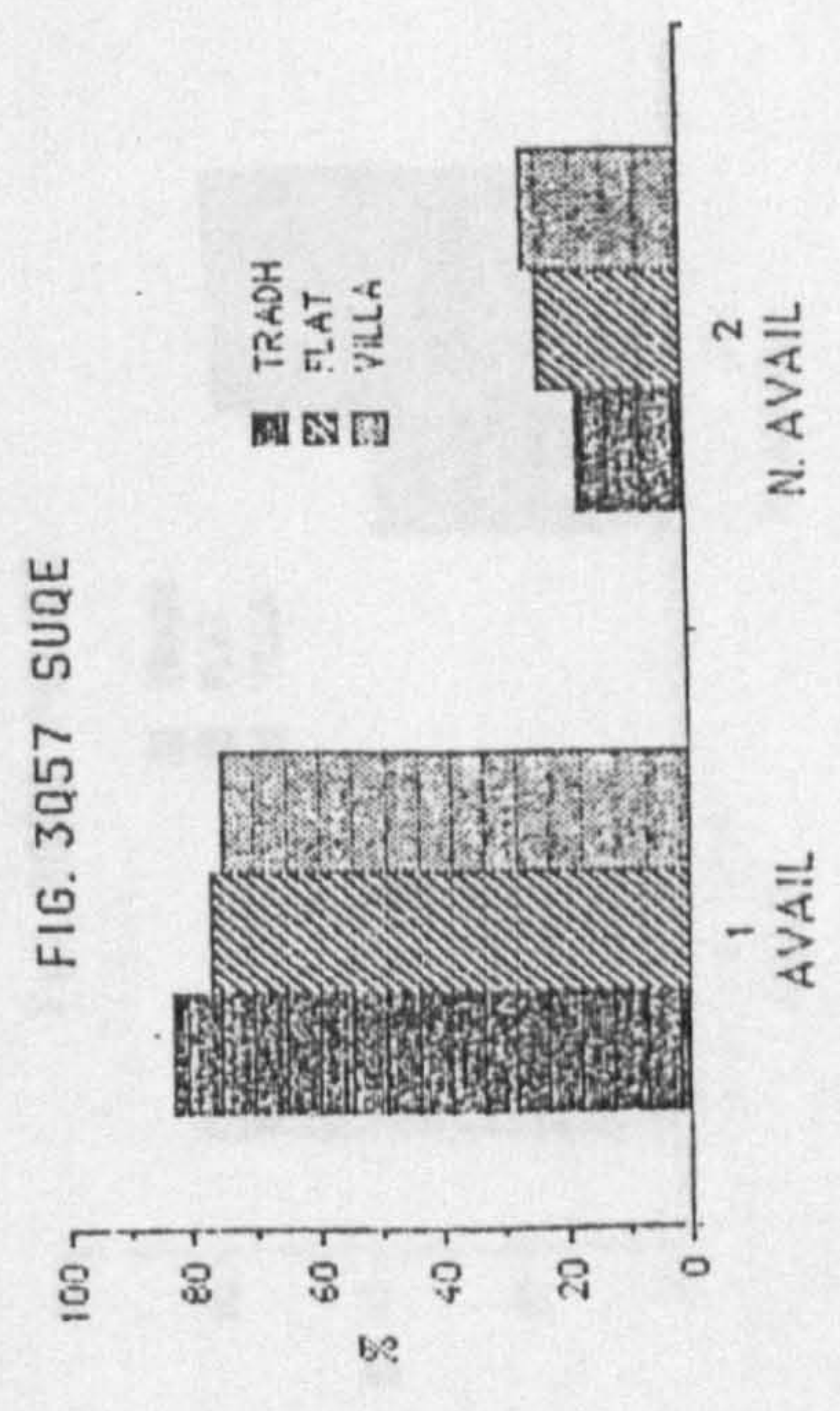
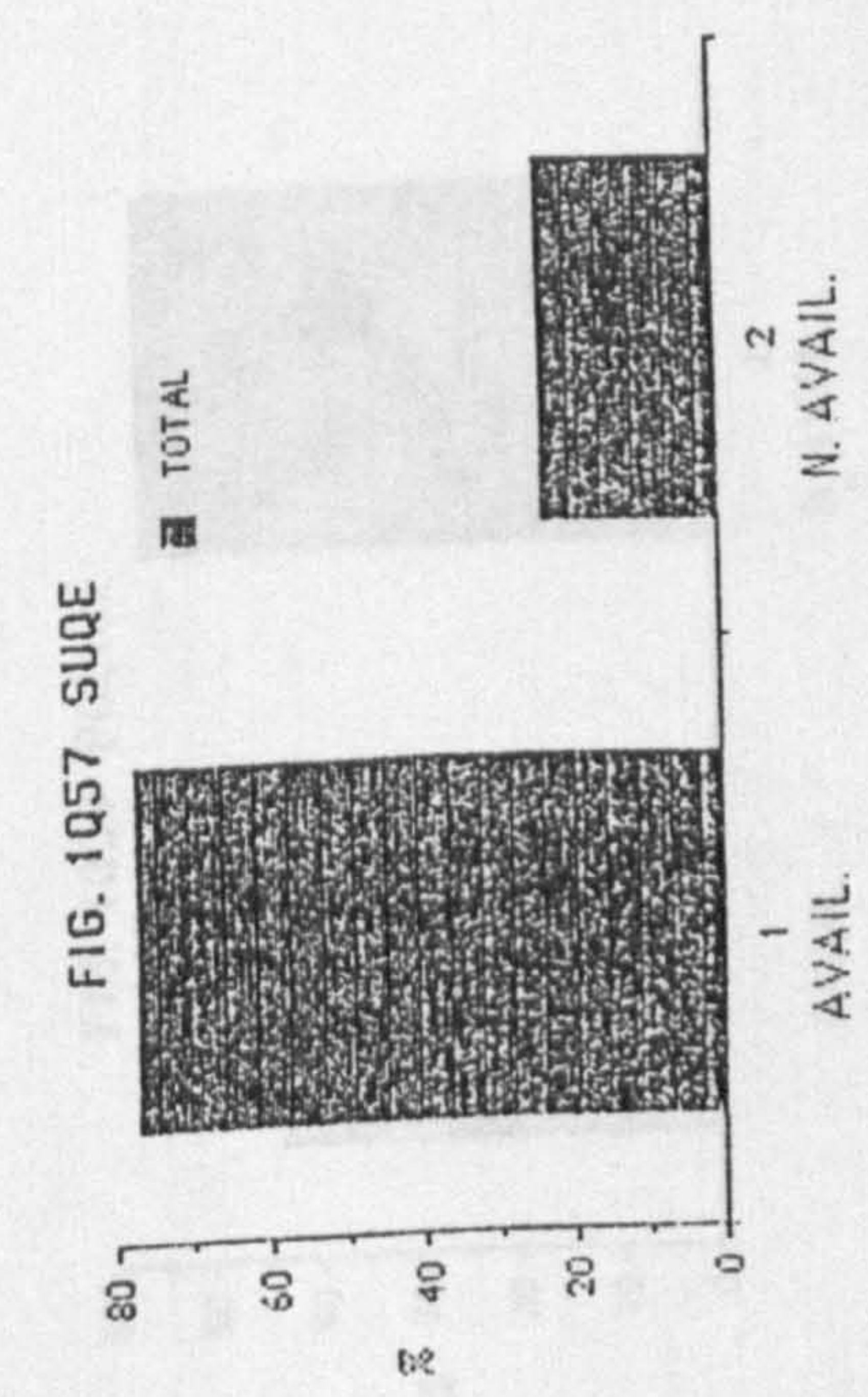
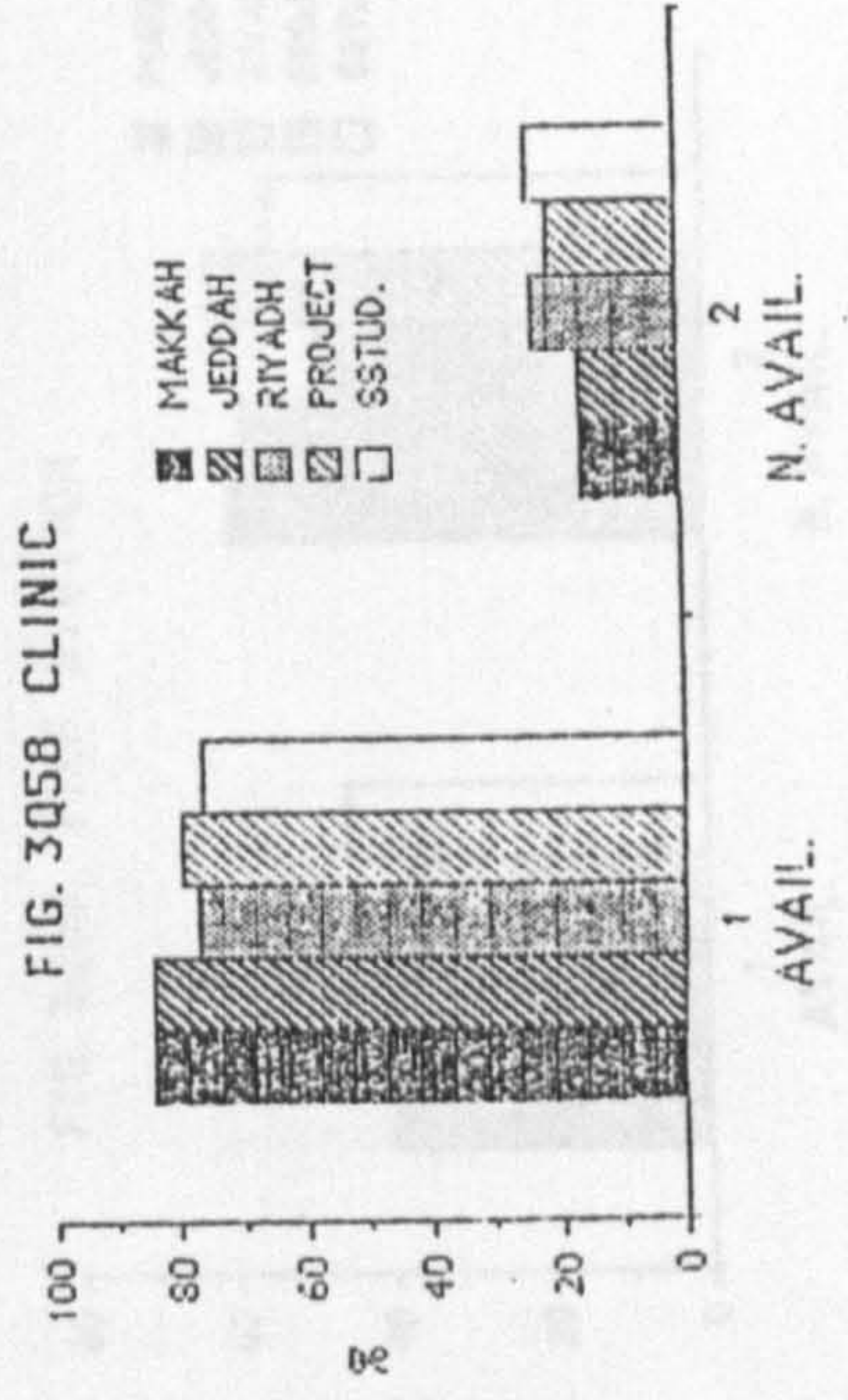
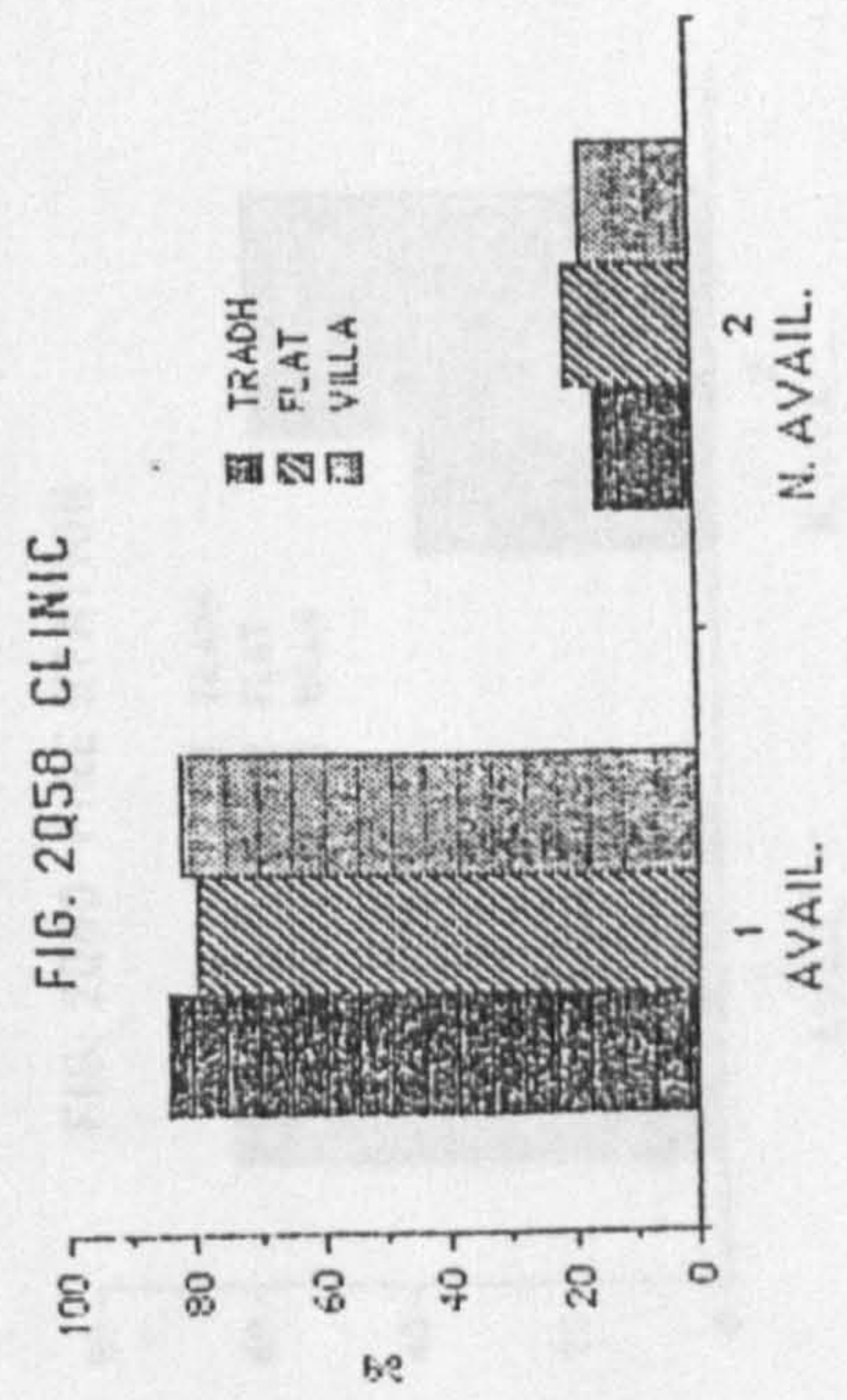
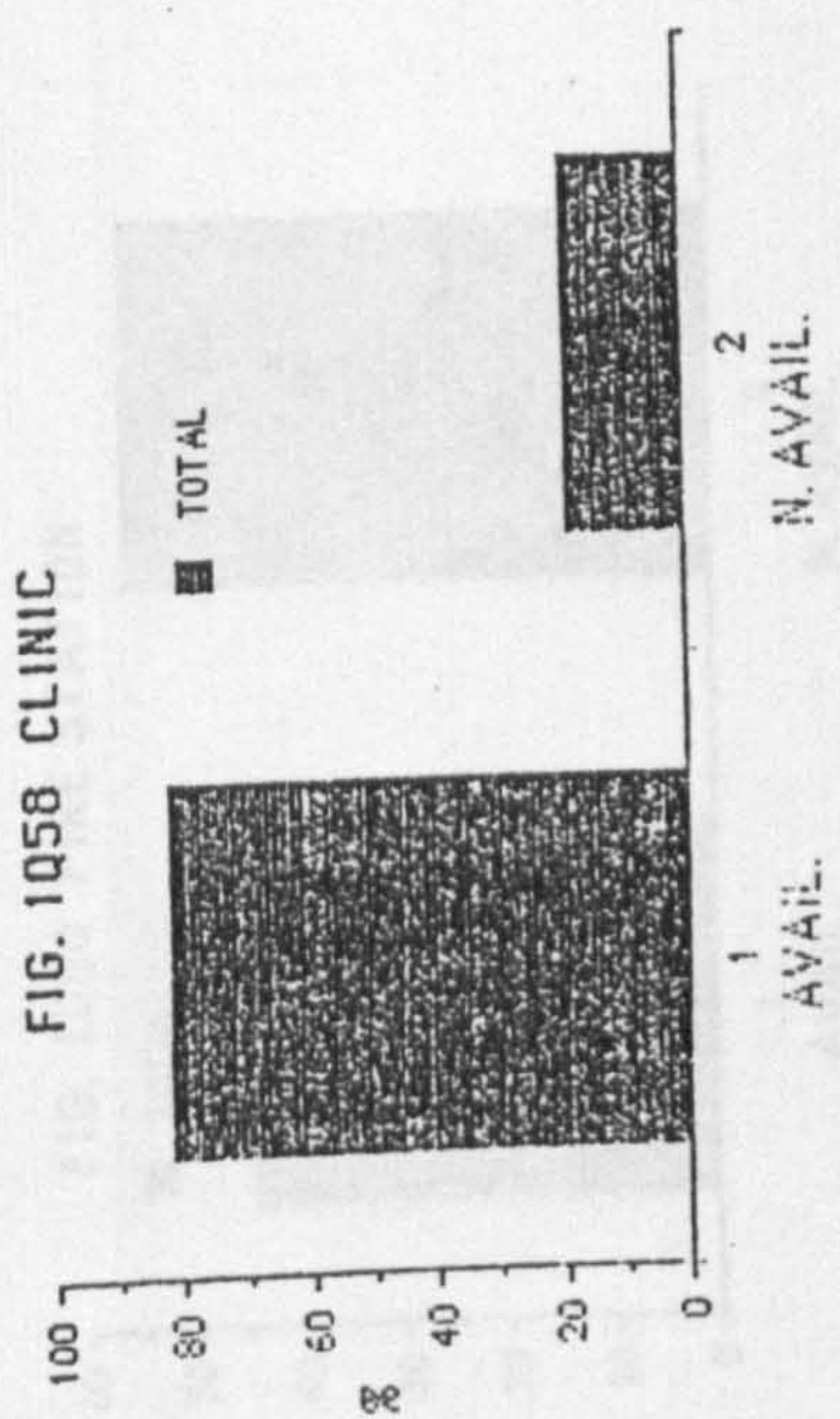


FIG. 1Q59 POLICE

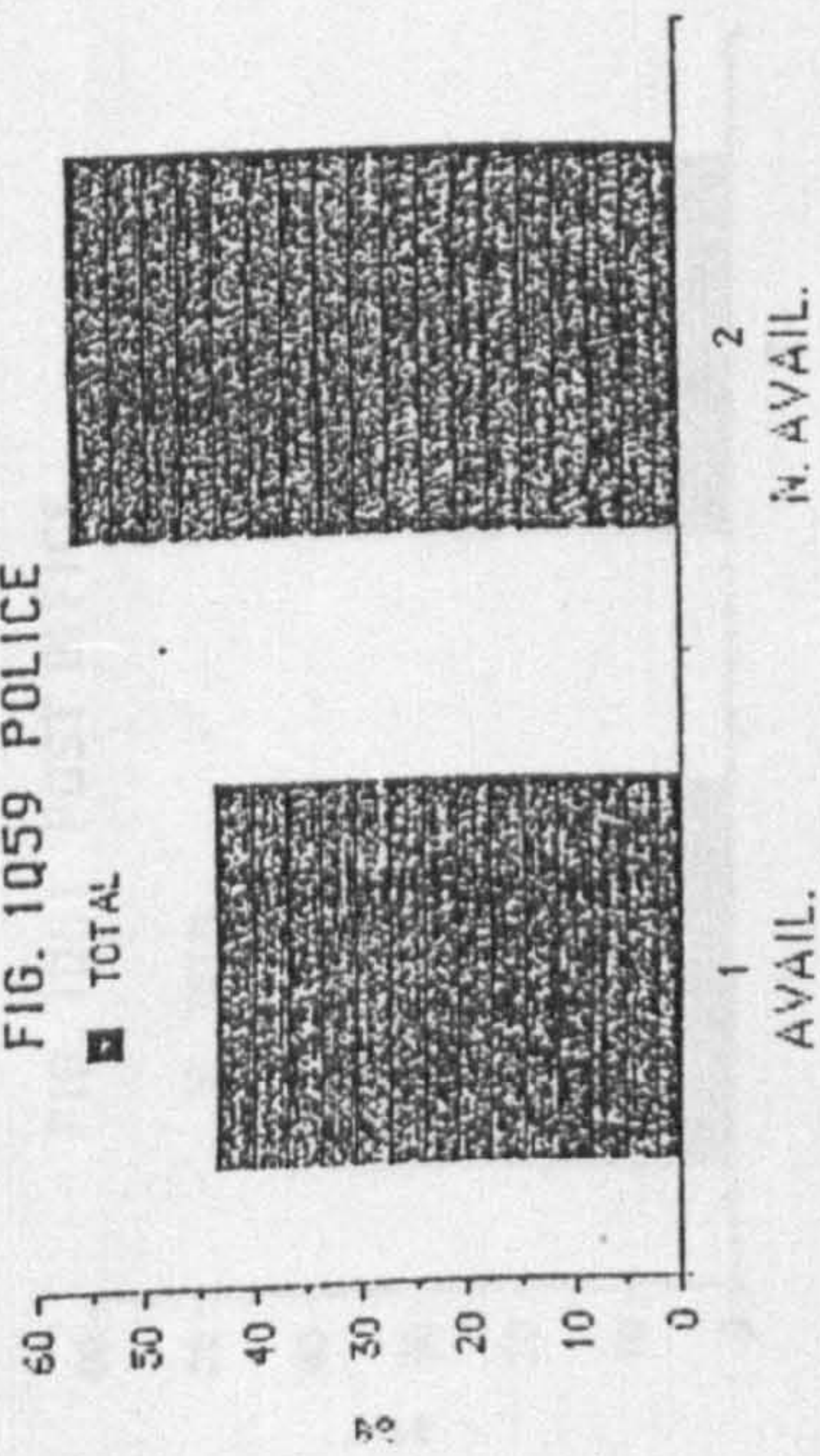


FIG. 1Q60 FIRE STATION

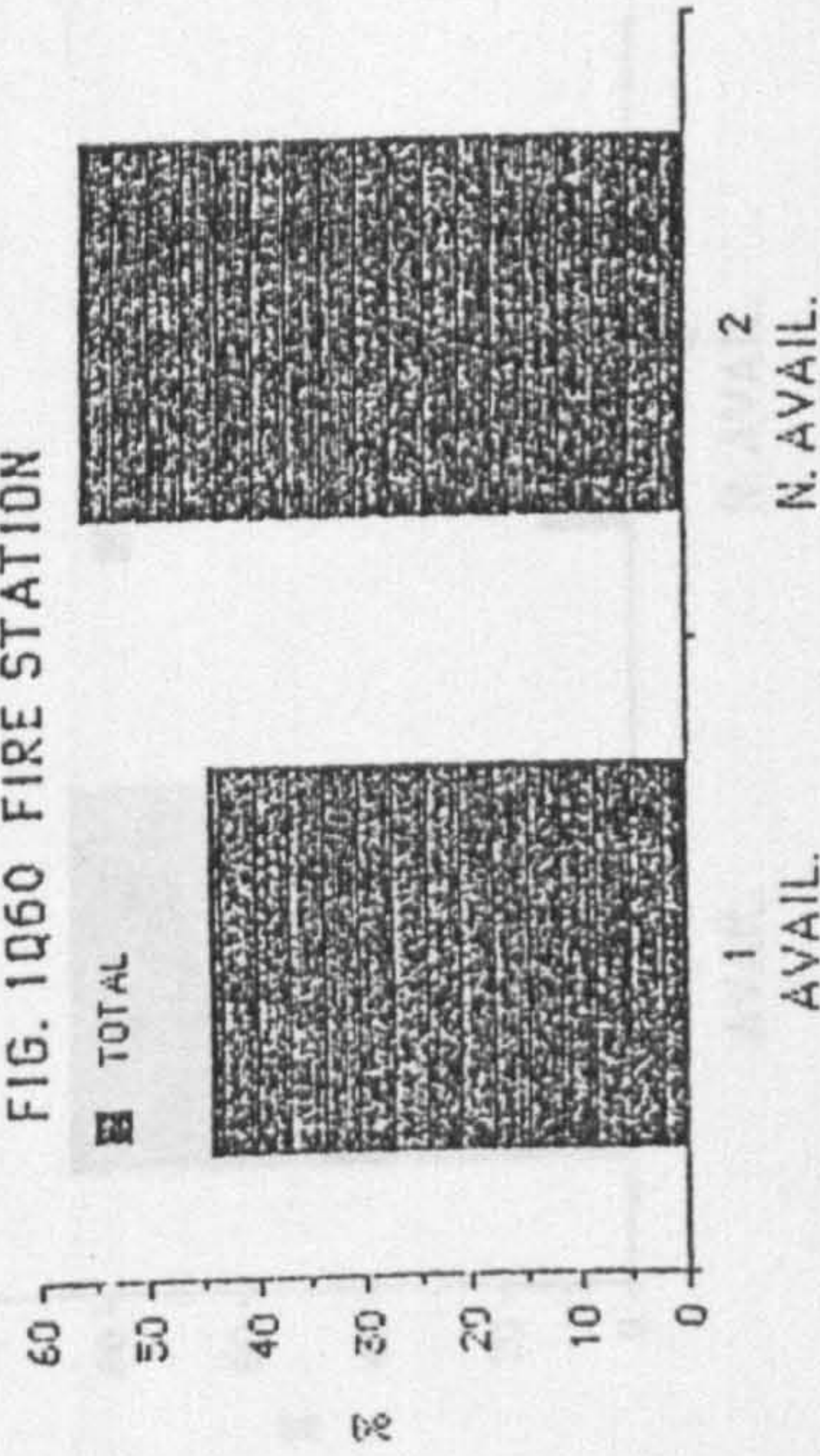


FIG. 2Q59 POLICE

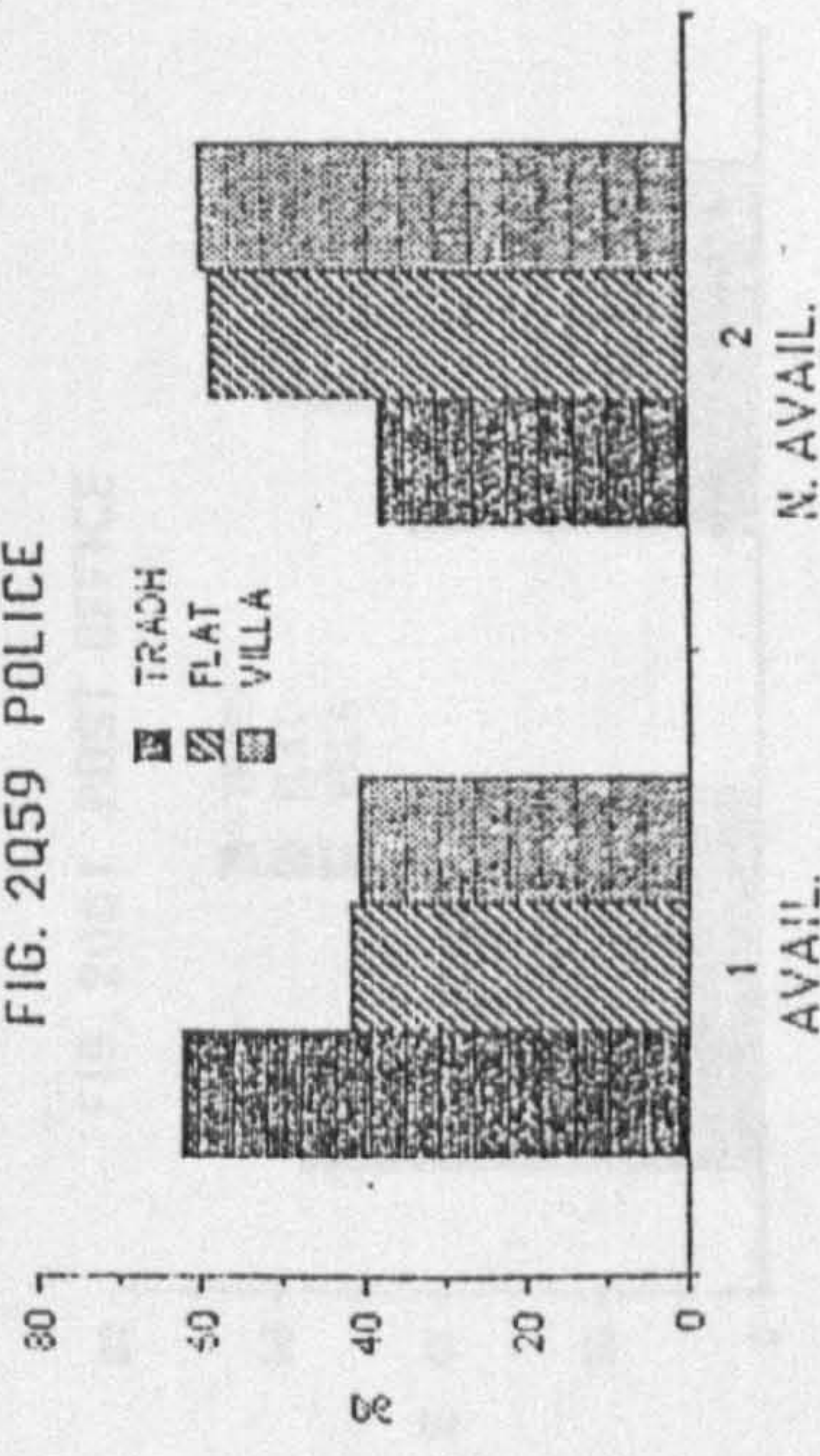


FIG. 2Q60 FIRE STATION

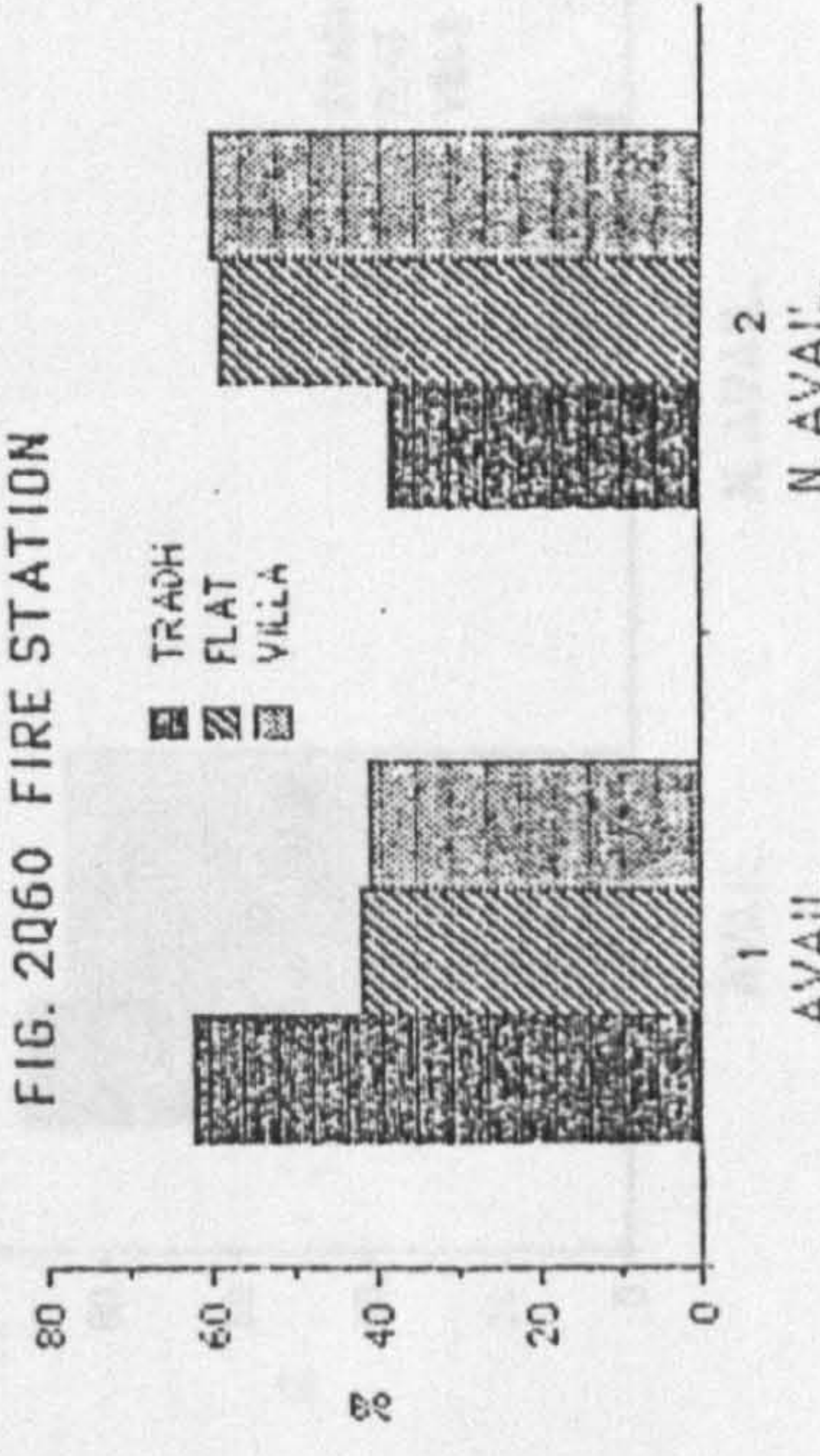


FIG. 3Q59 POLICE

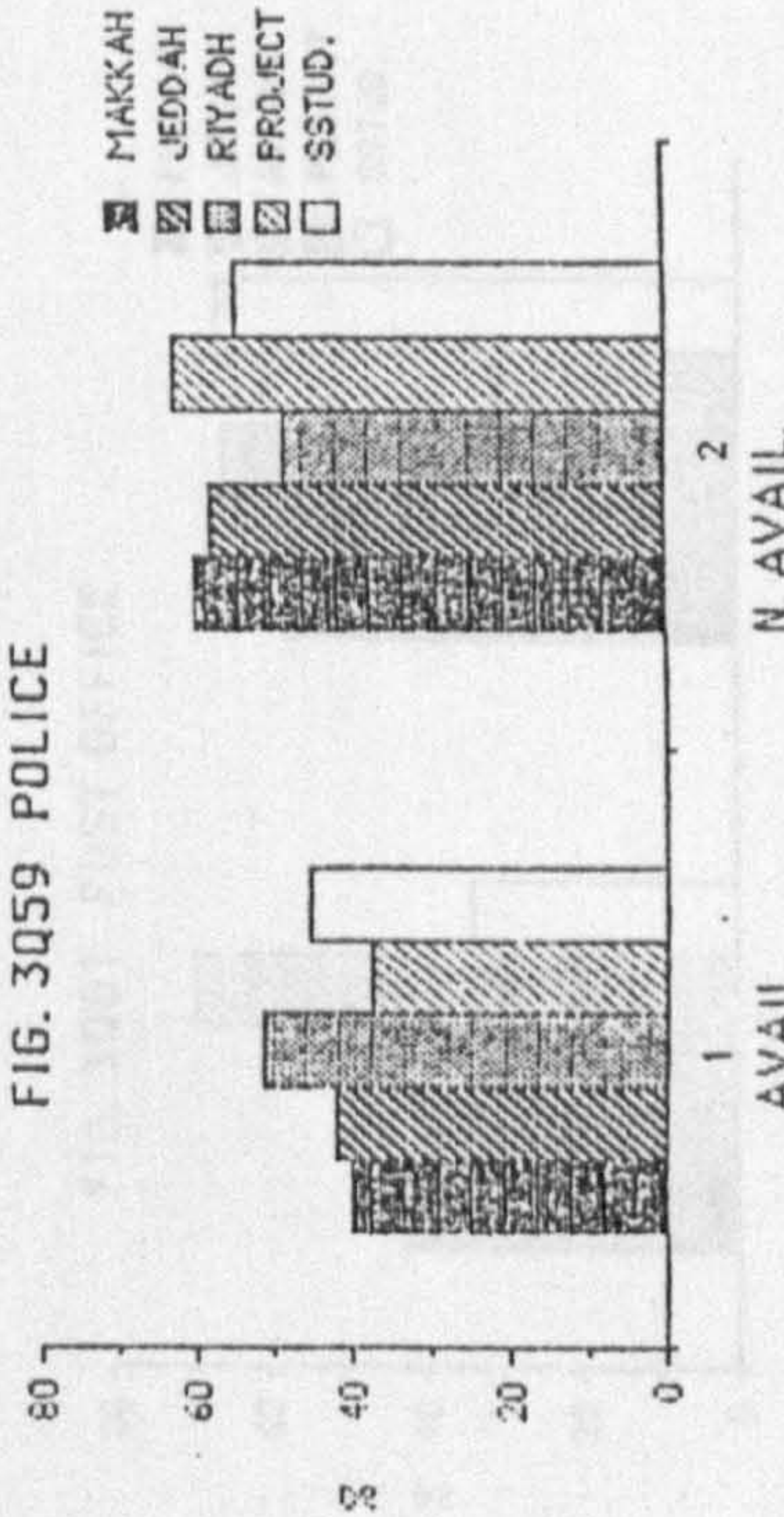


FIG. 3Q60 FIRE STATION

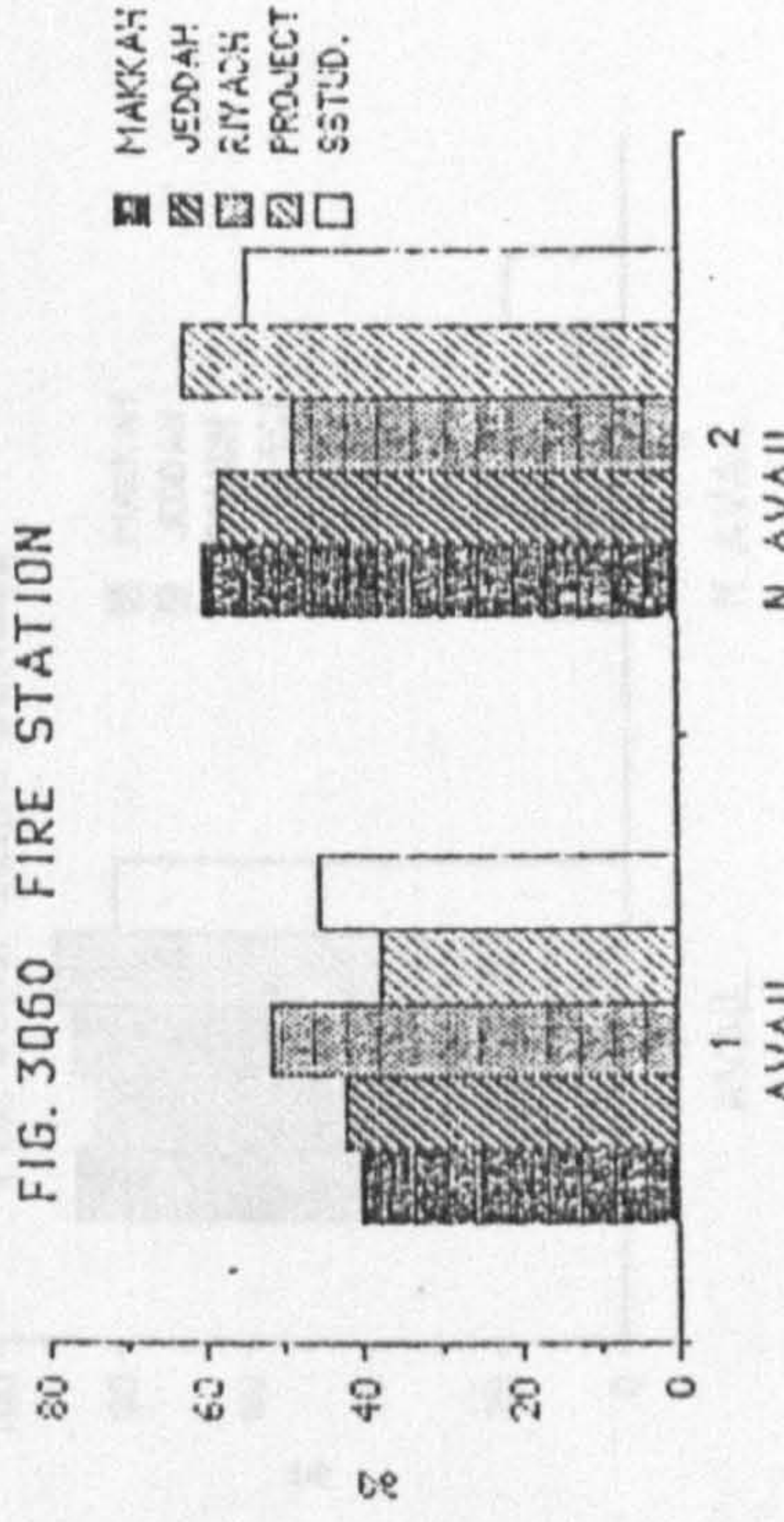


FIG. 1Q62 ELEM. SCHOOL

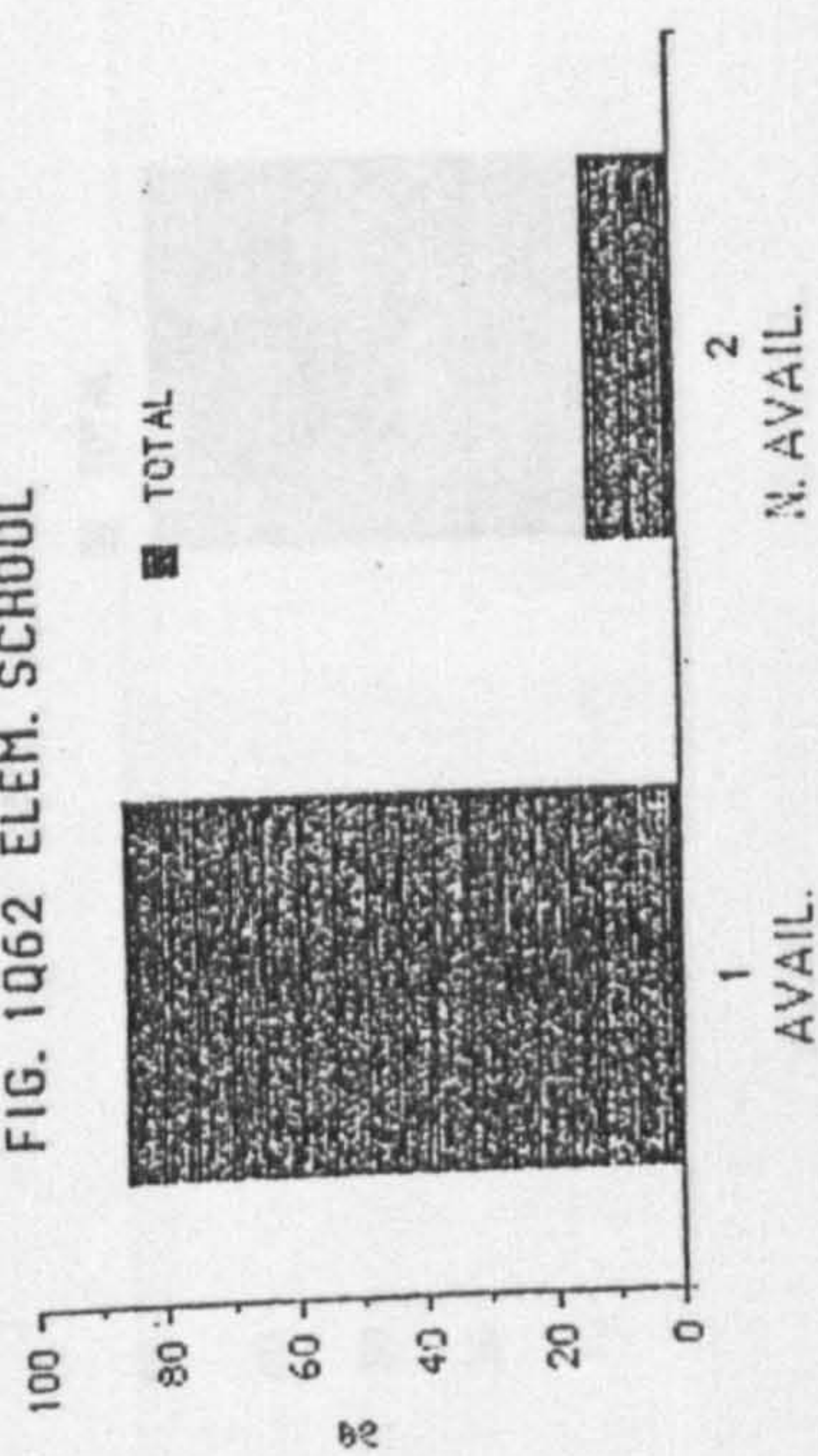


FIG. 2Q62 ELEM. SCHOOL

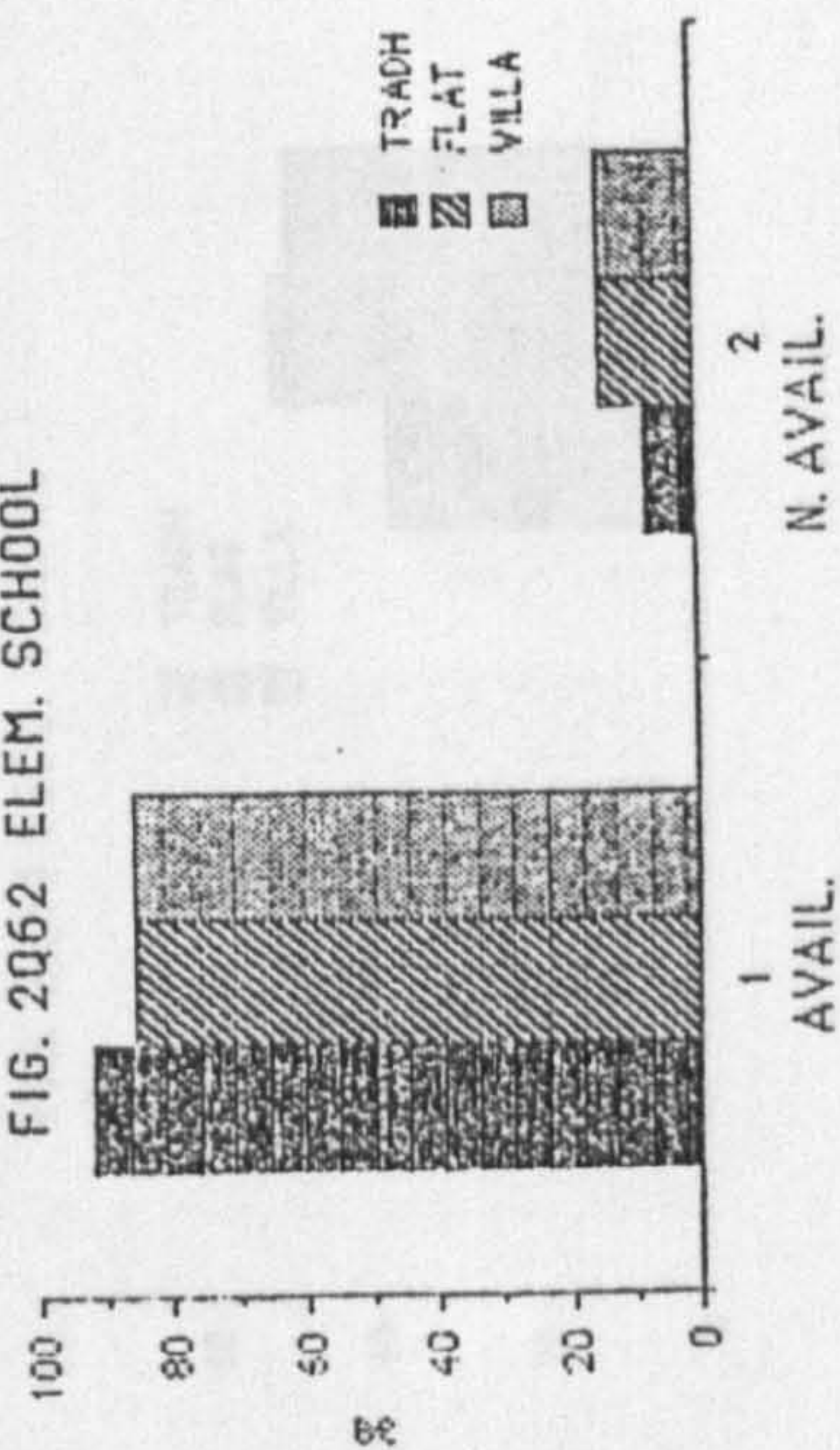


FIG. 3Q62 ELEM. SCHOOL

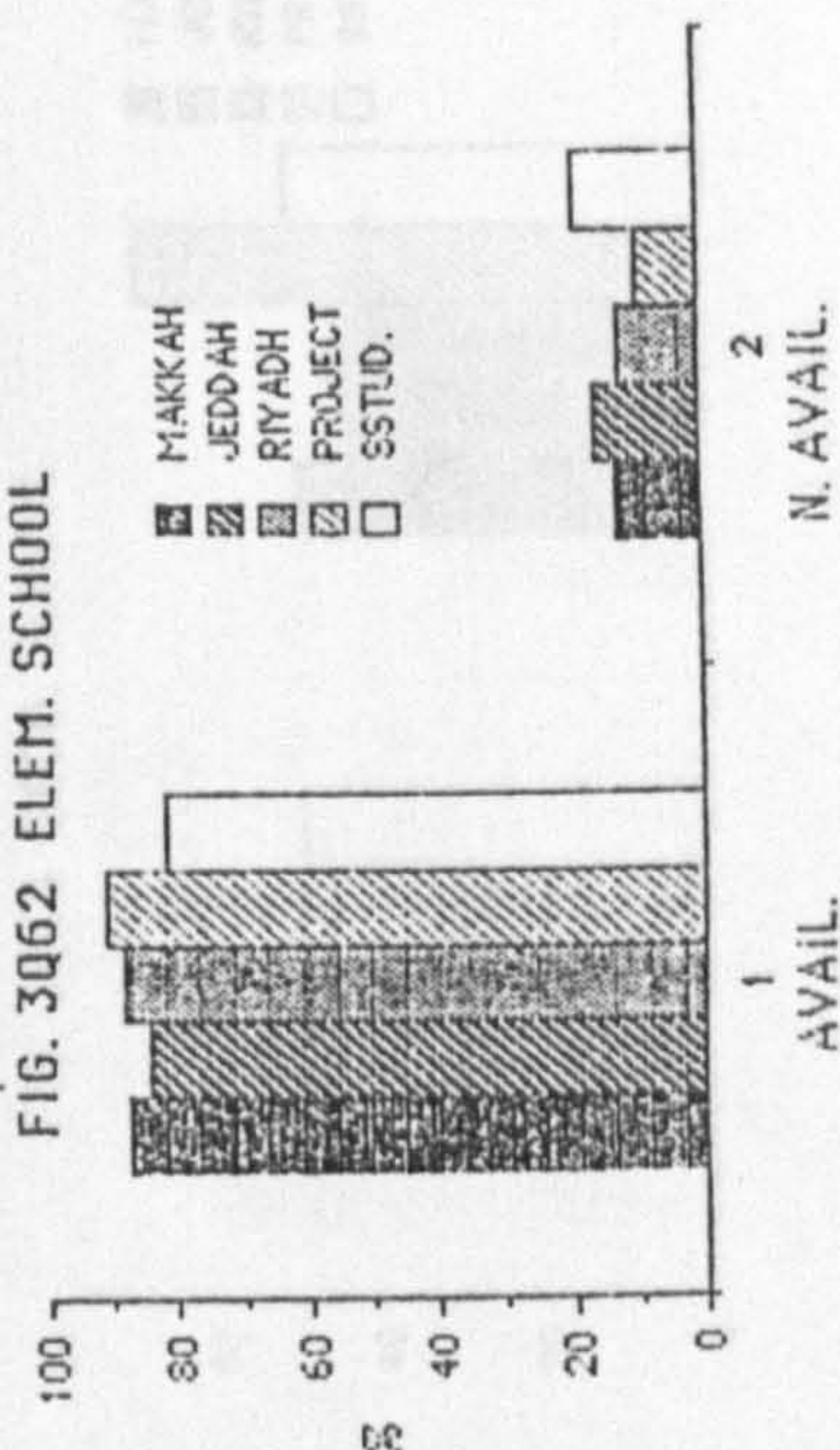


FIG. 1Q61 POST OFFICE

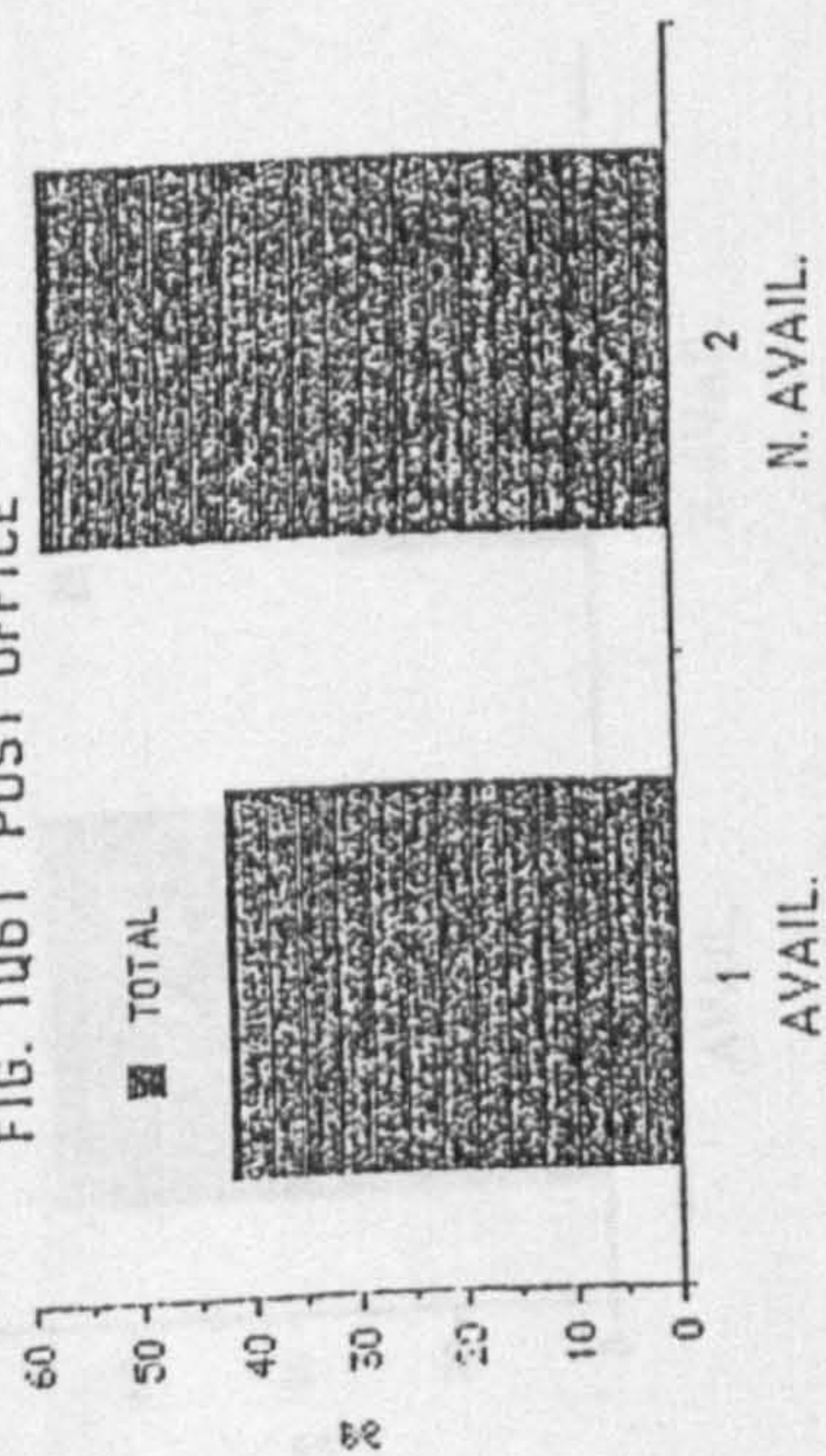


FIG. 2Q61 POST OFFICE

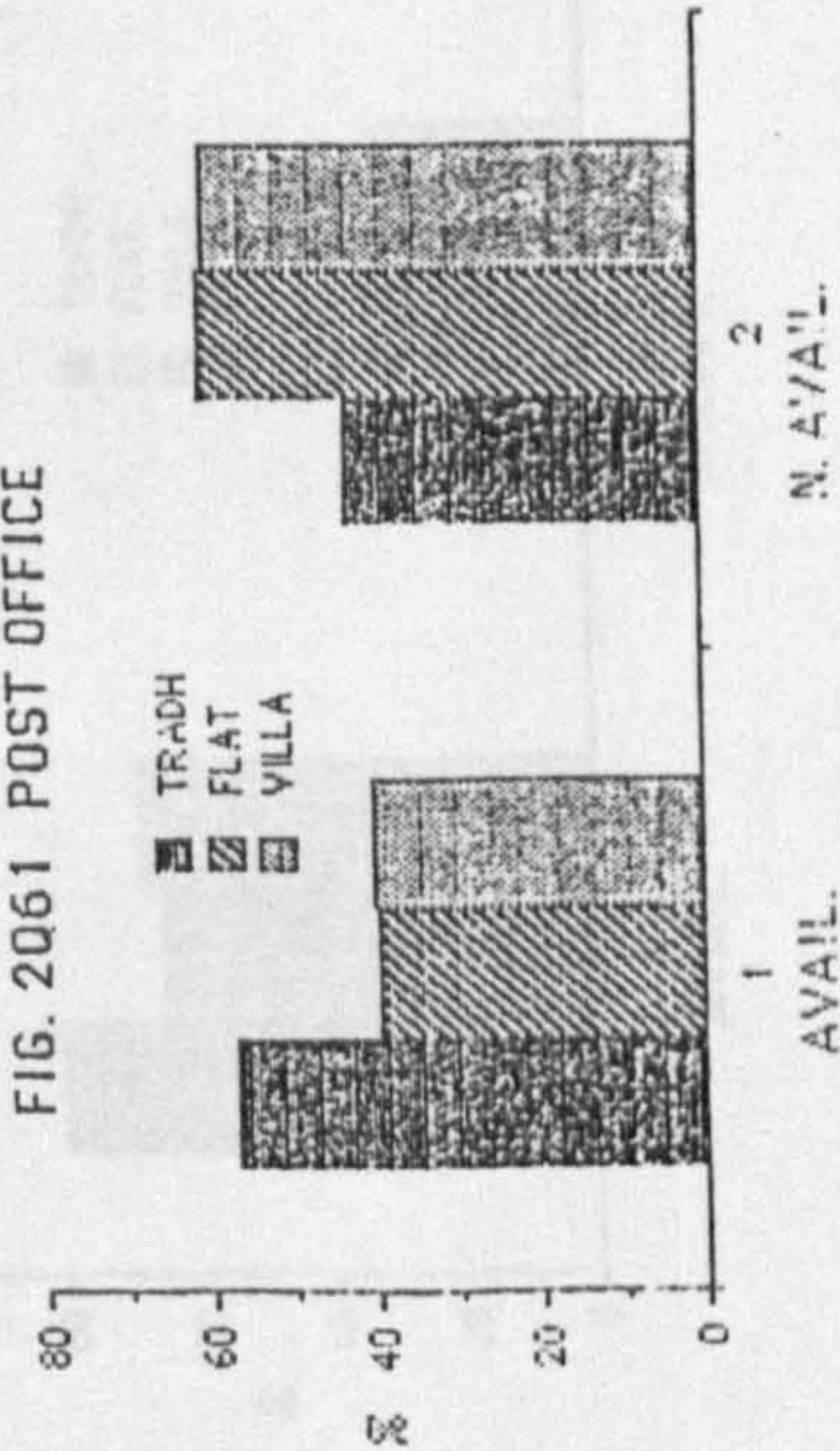


FIG. 3Q61 POST OFFICE

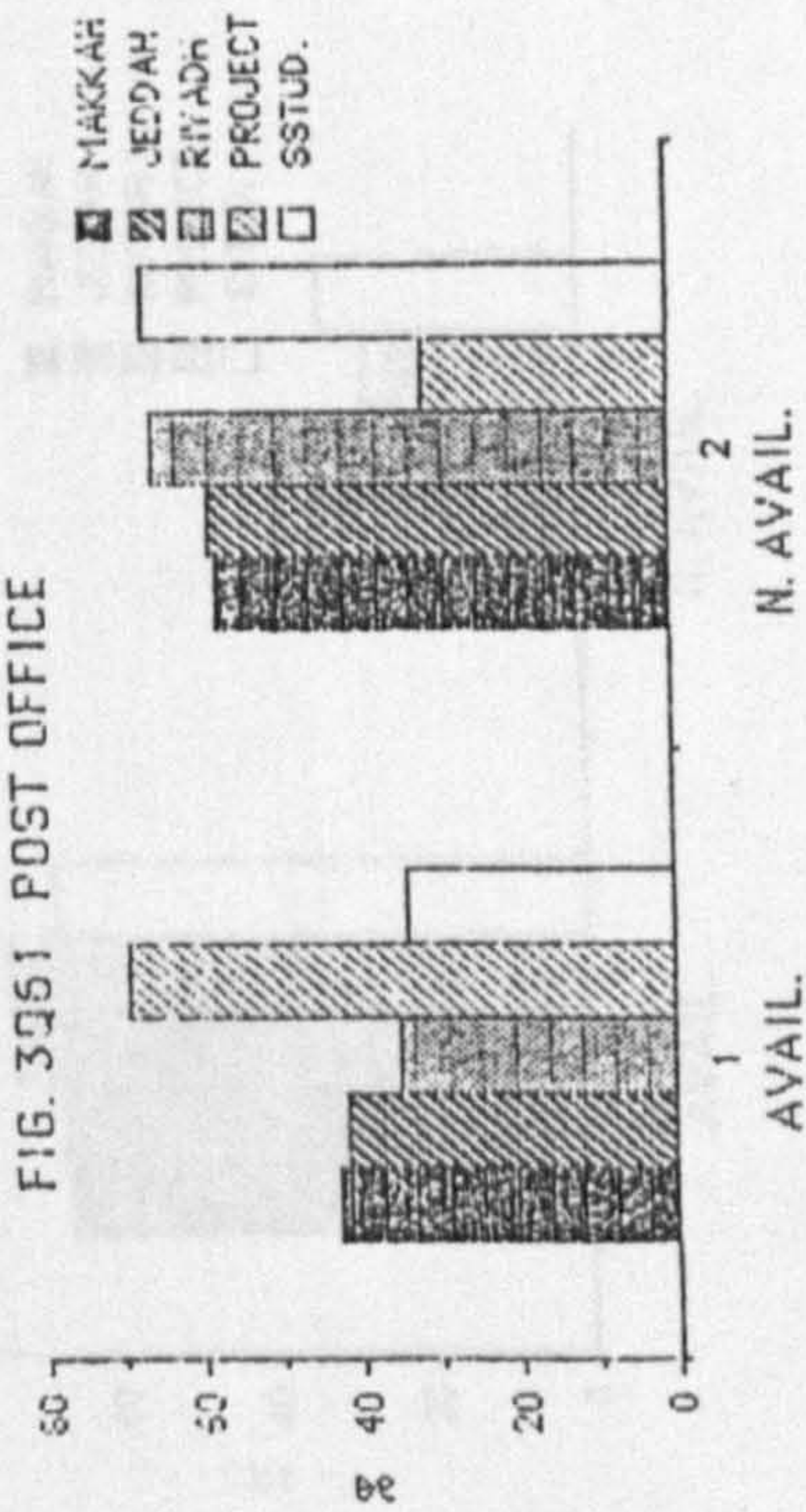


FIG. 1Q63 INTER. SCHOOL

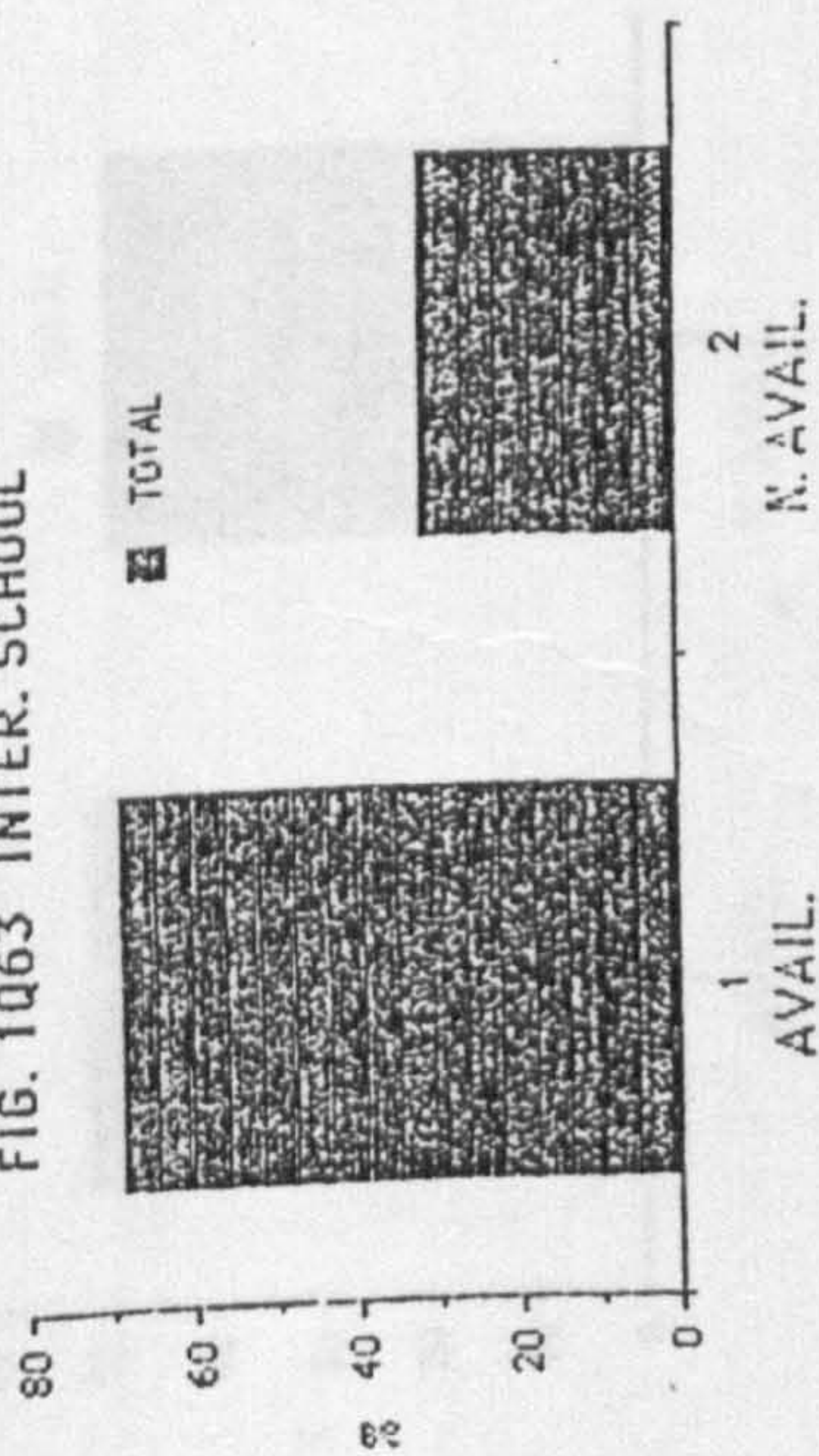


FIG. 1Q64 SECO. SCHOOL

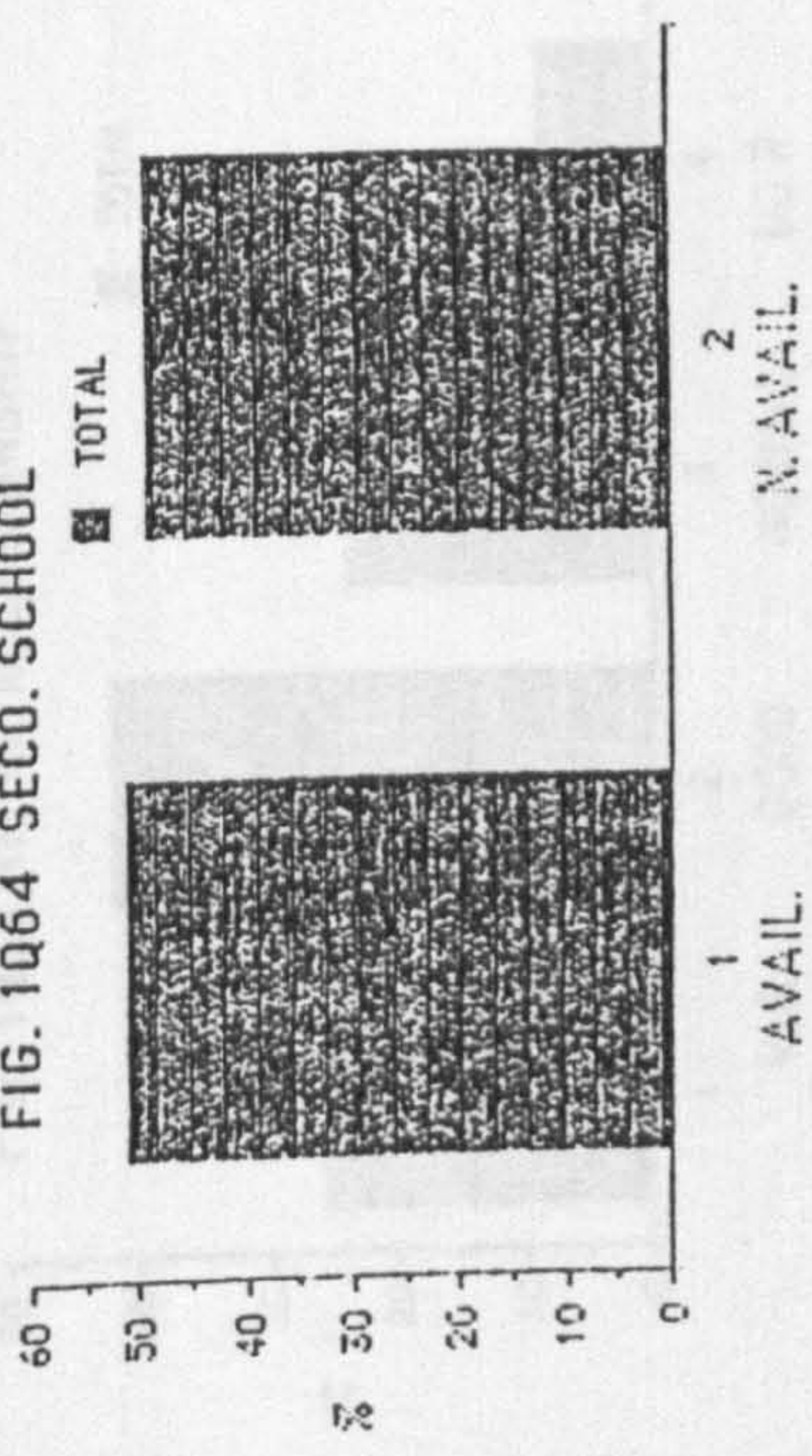


FIG. 2Q63 INTER. SCHOOL

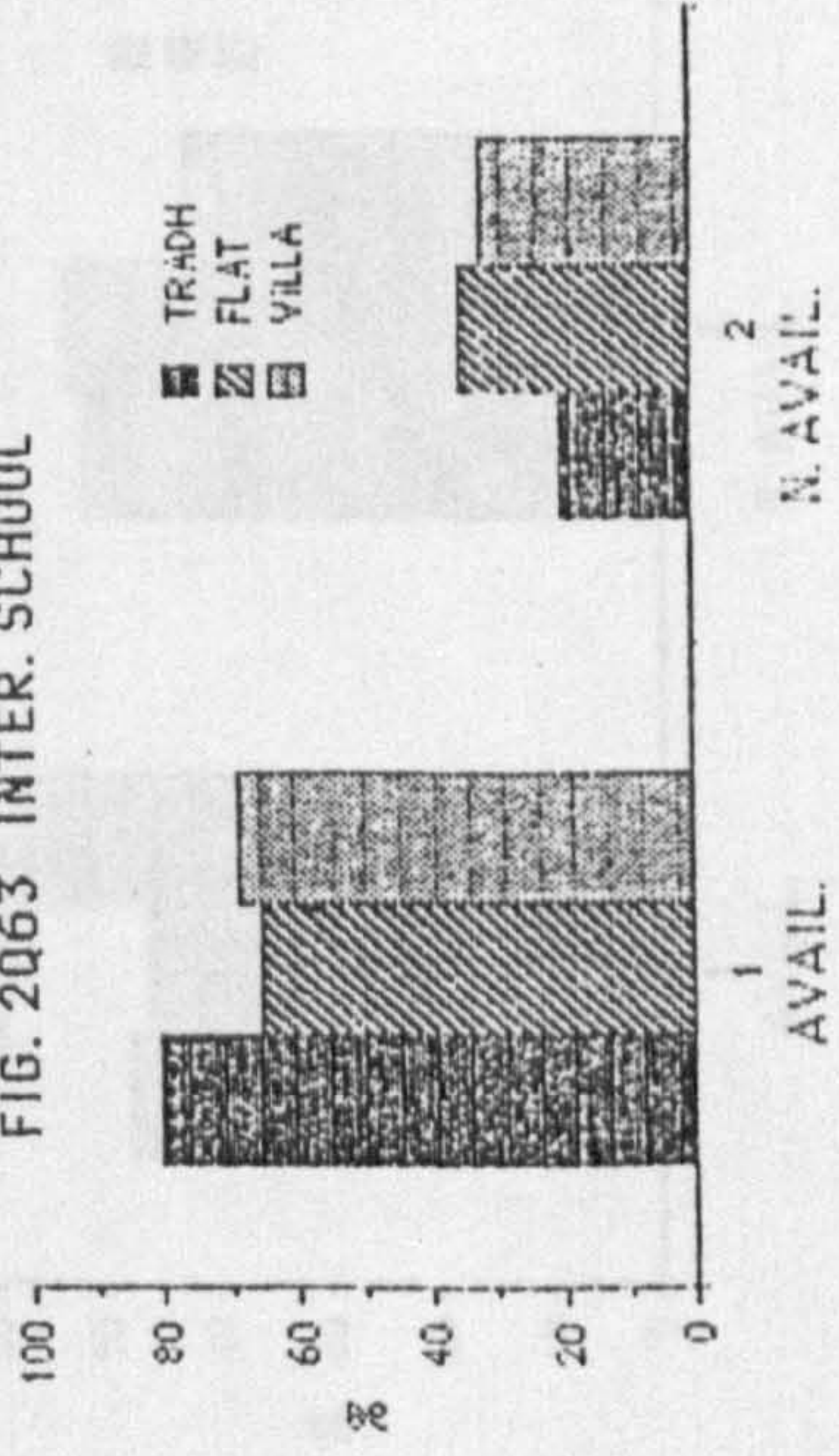


FIG. 2Q64 SECO. SCHOOL

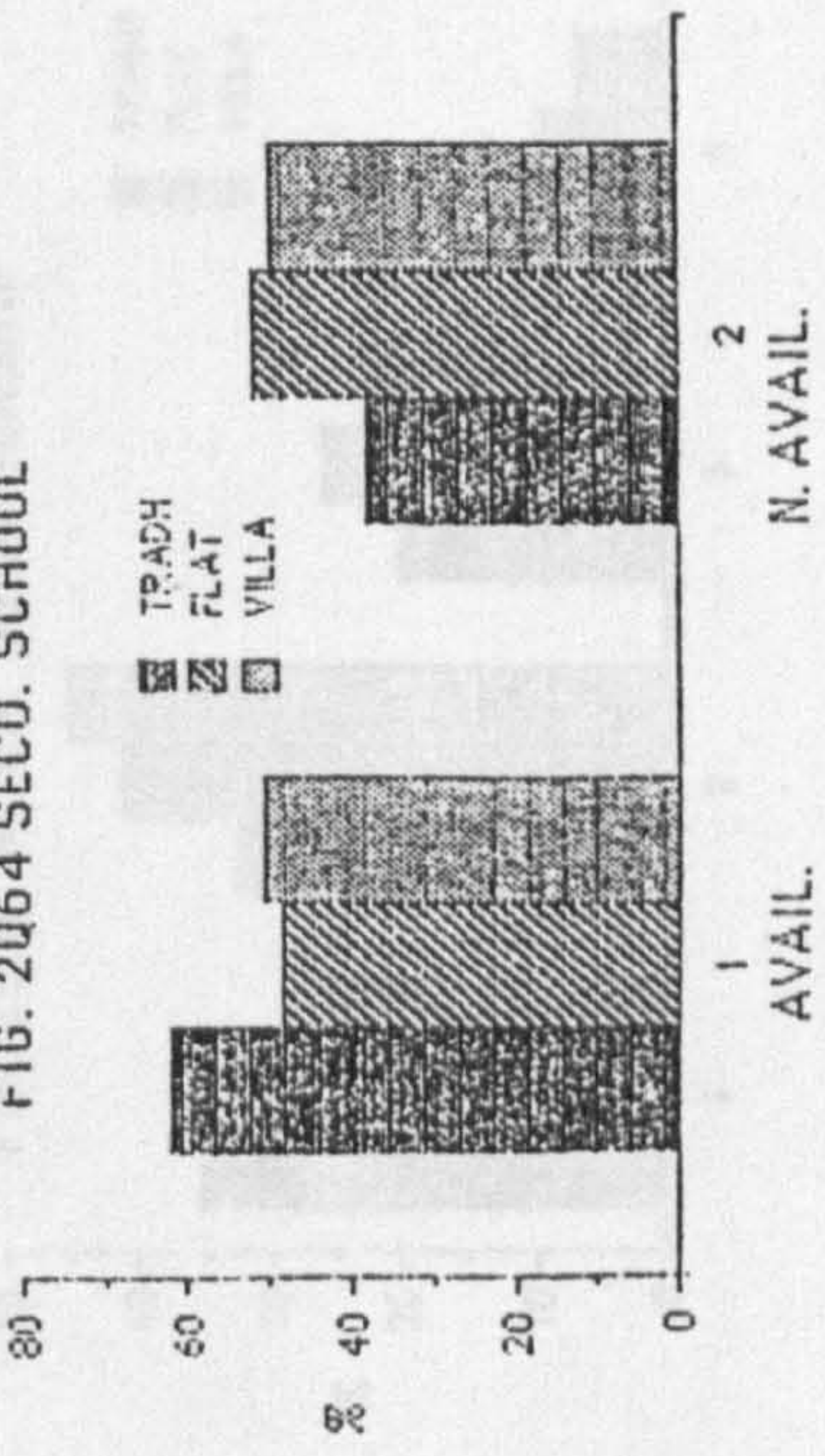


FIG. 3Q63 INTER. SCHOOL

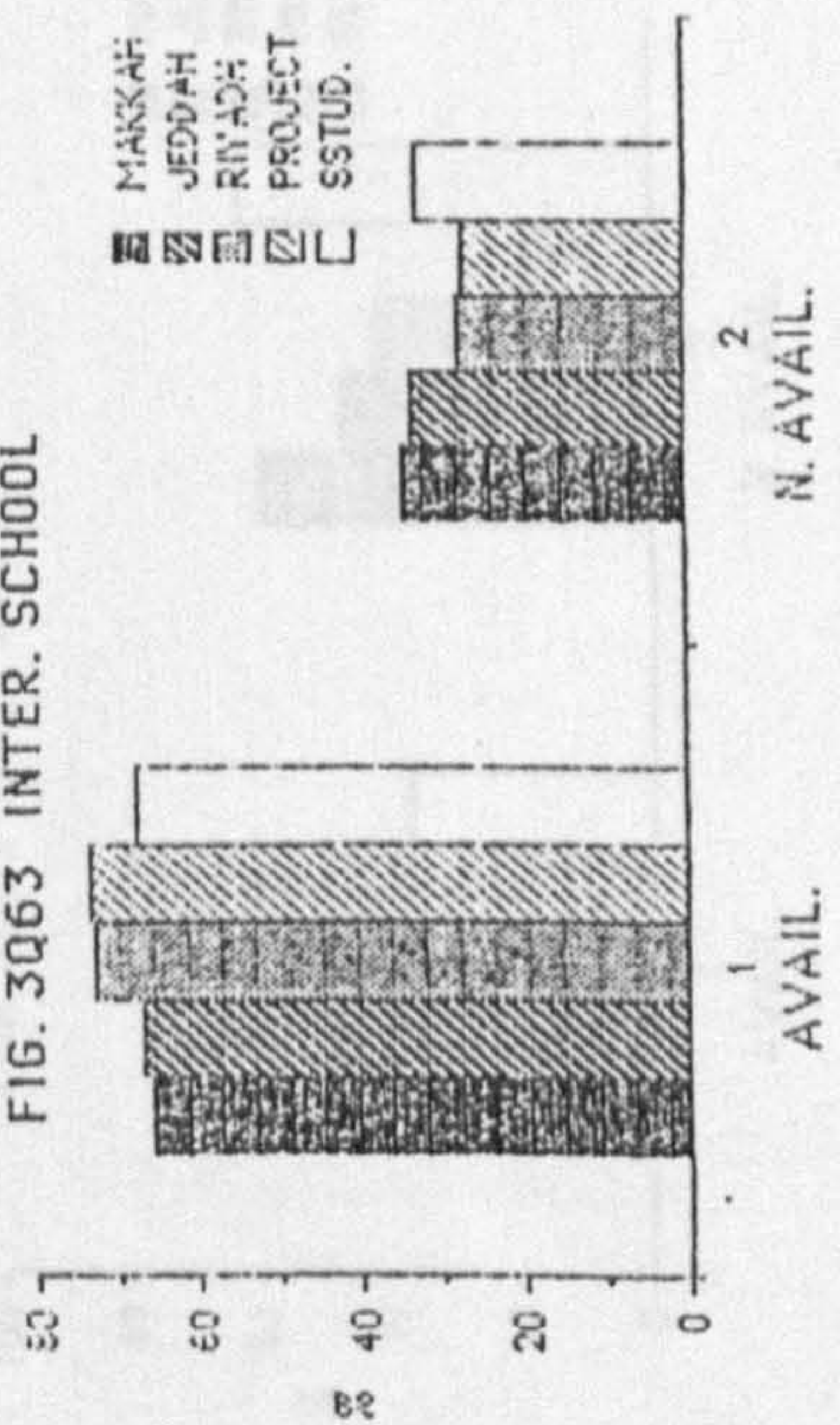


FIG. 3Q64 SECO. SCHOOL

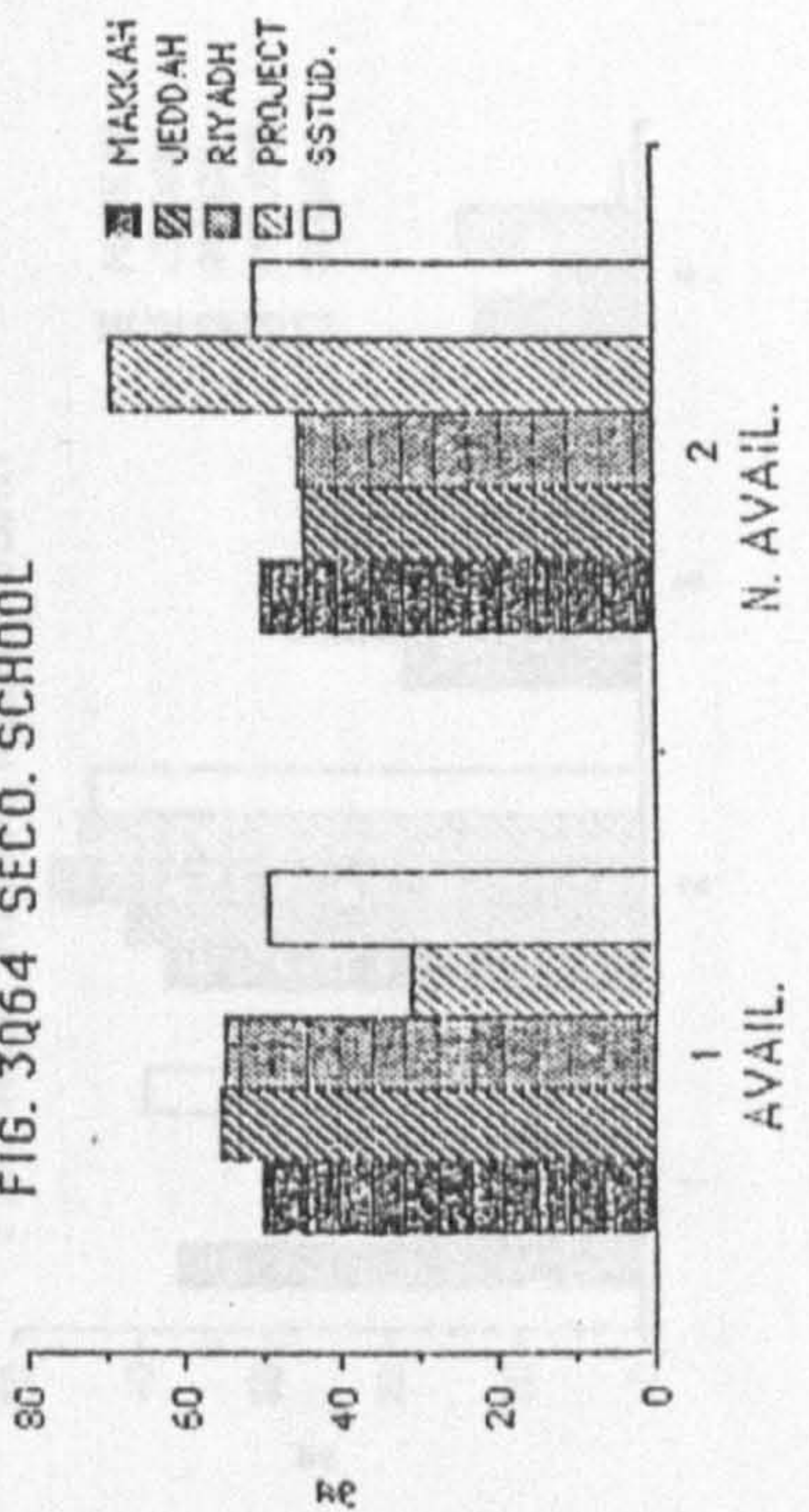


FIG. 1Q65 OPEN AREAS

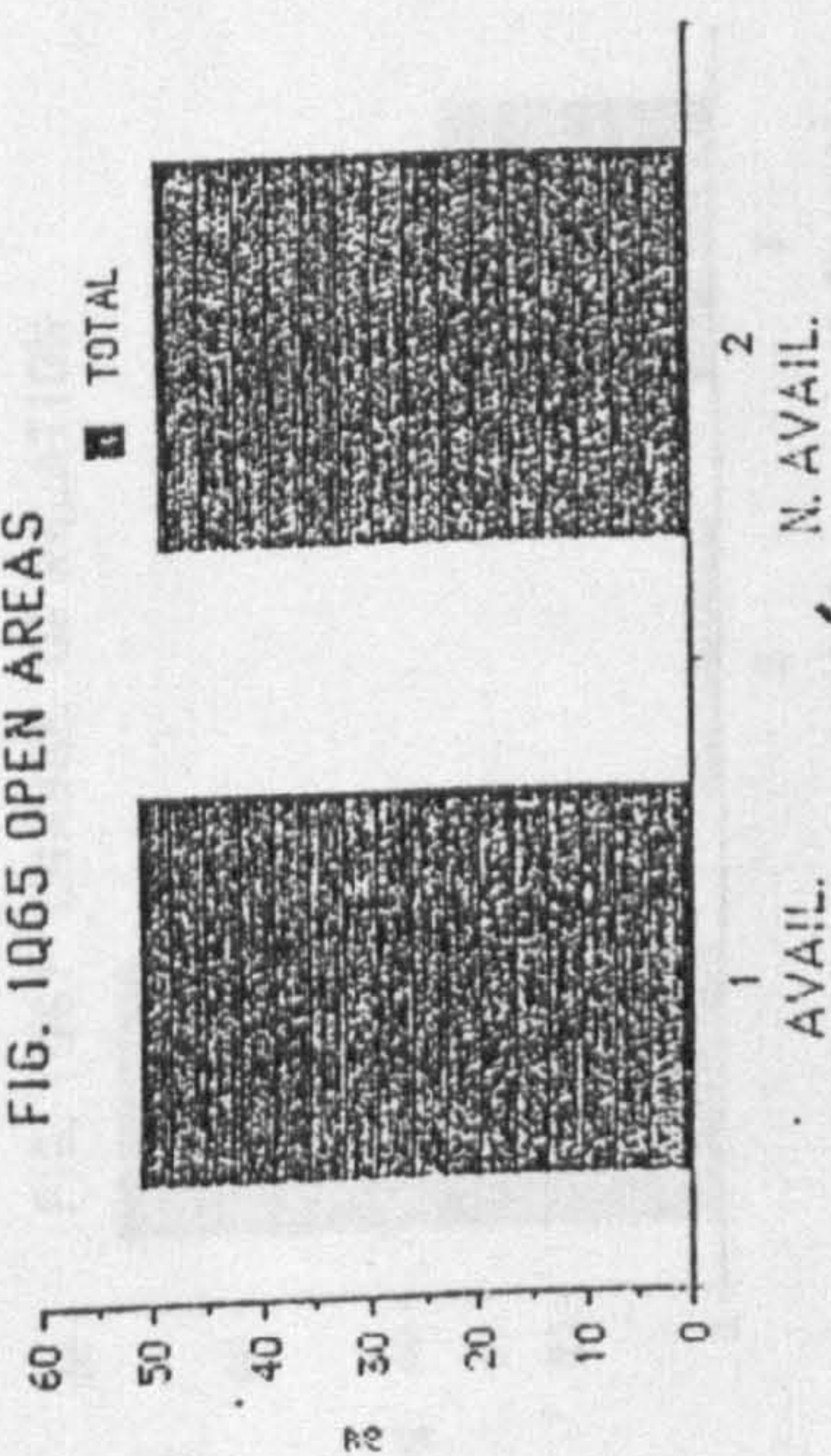


FIG. 2Q65 OPEN AREAS

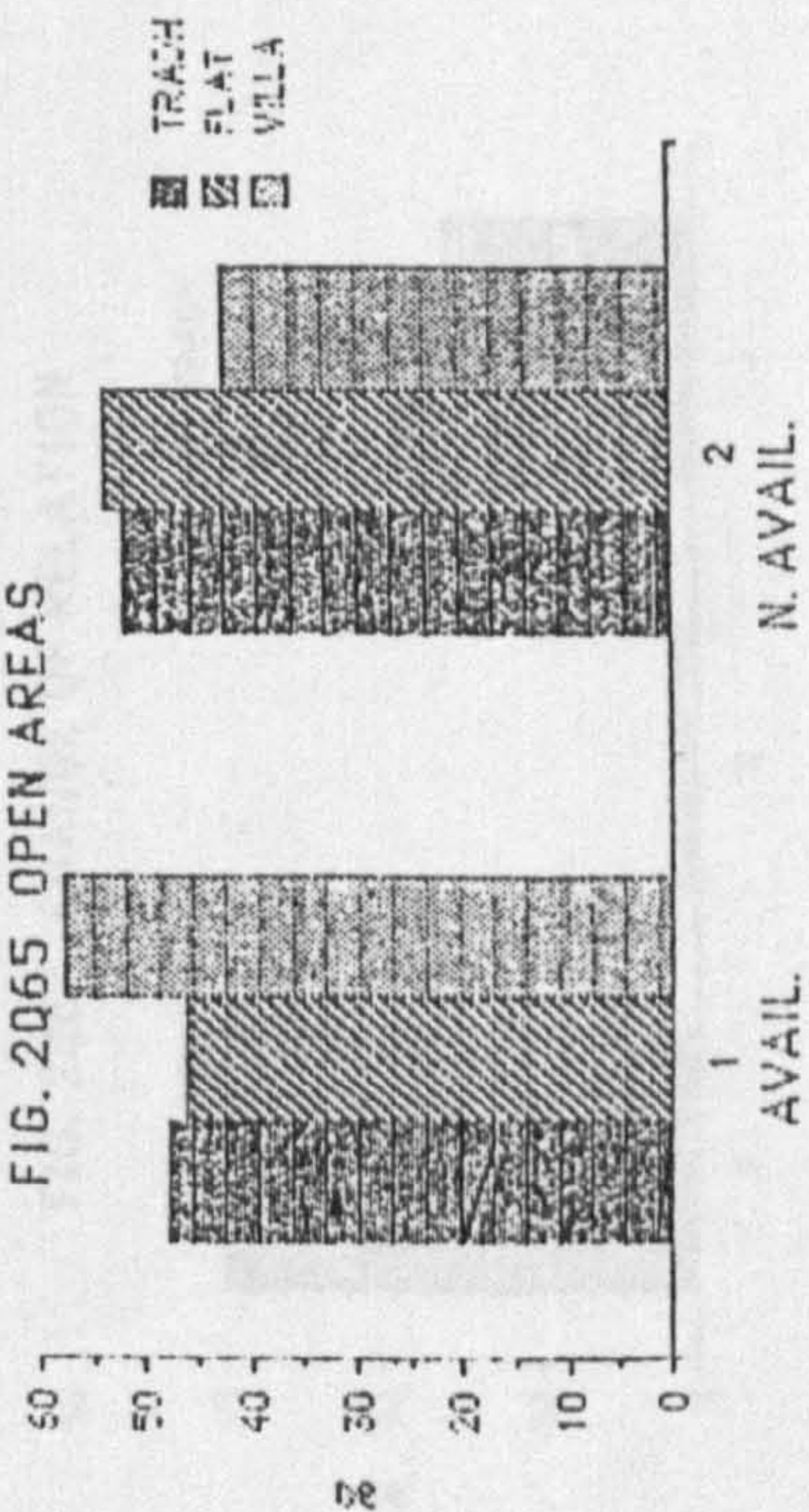


FIG. 3Q65 OPEN AREAS

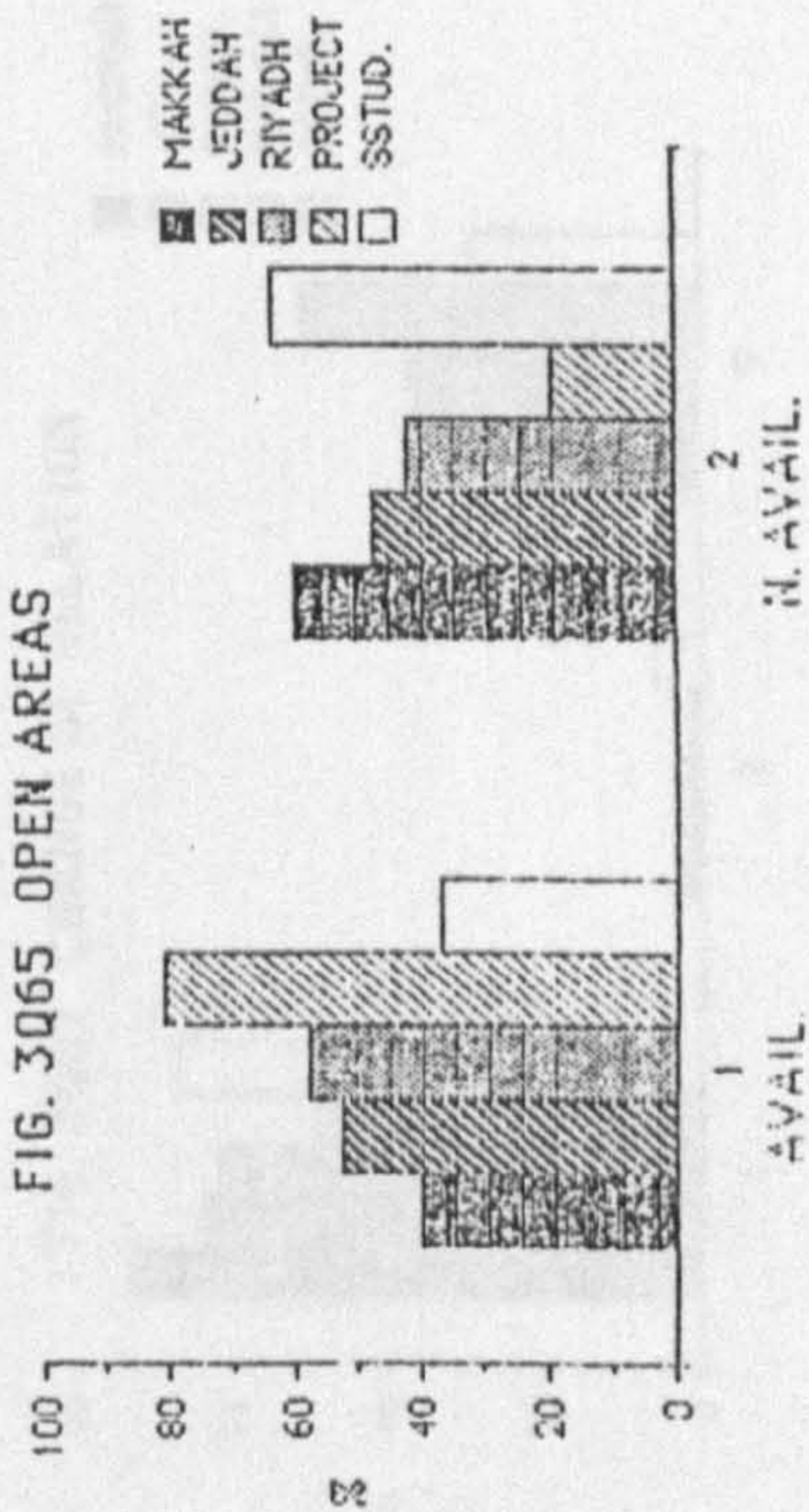


FIG. 1Q66 NEIGH. RELATIONSHIP

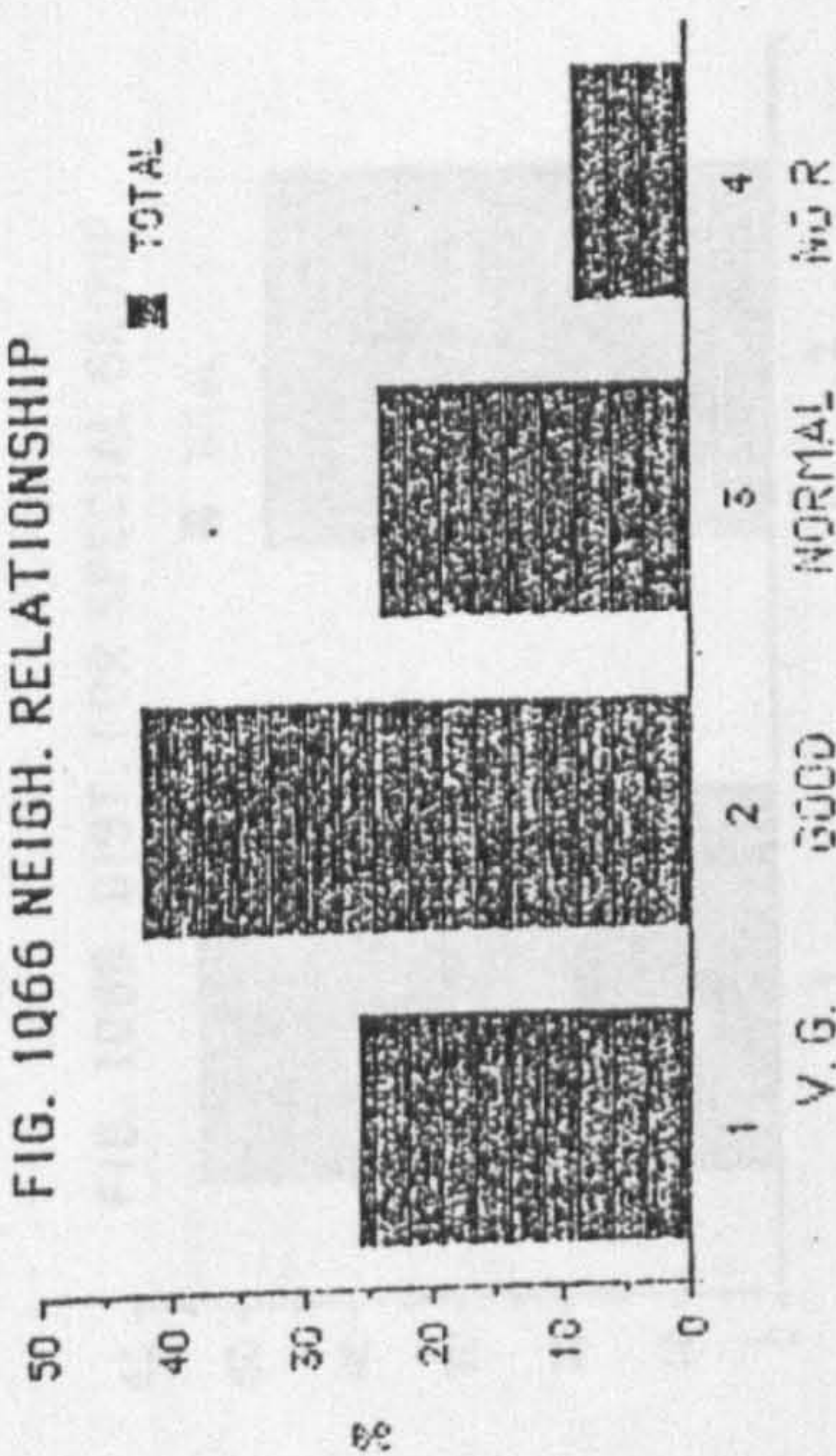


FIG. 2Q66 NEIGH. RELATIONSHIP

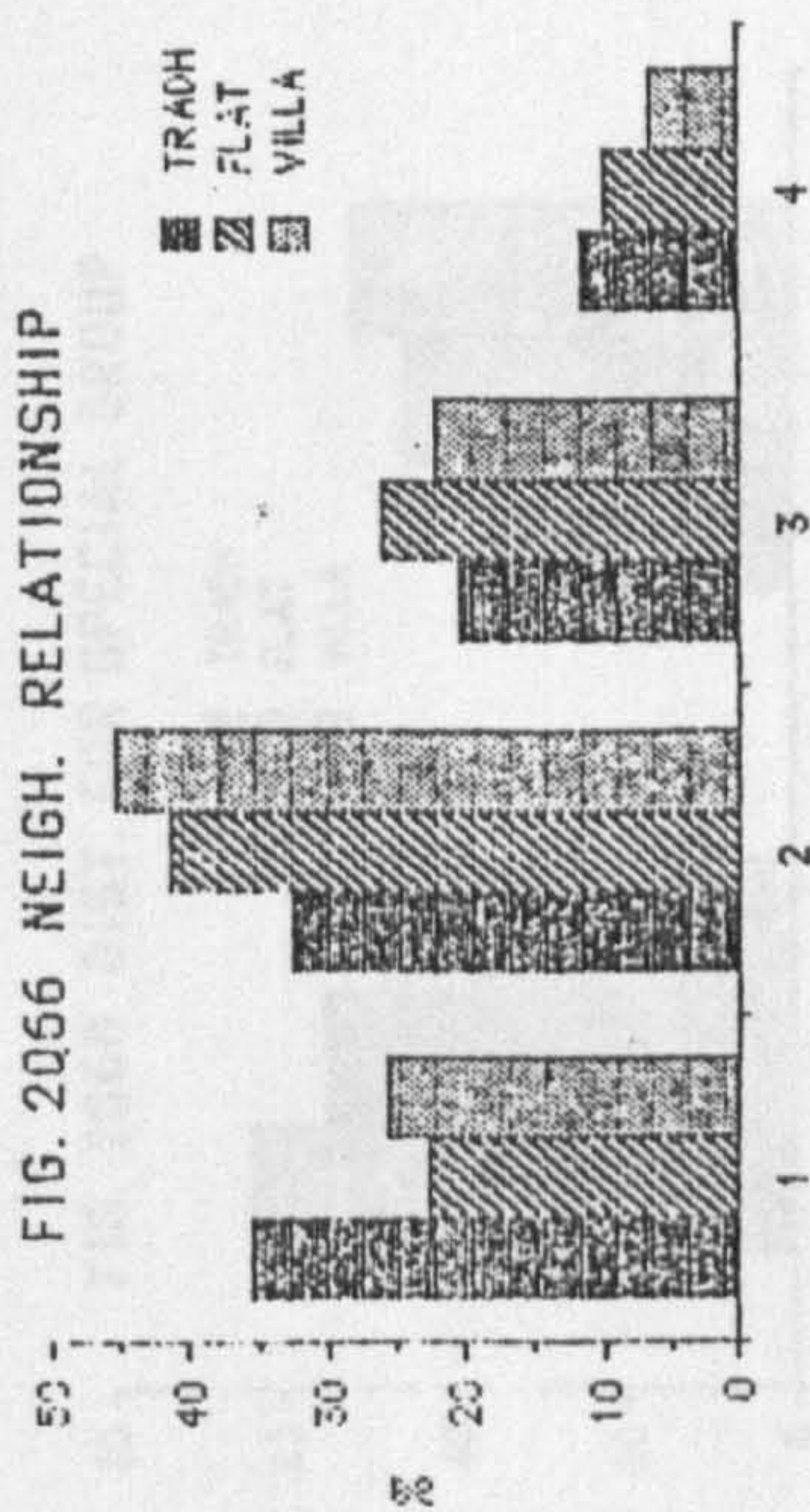


FIG. 3Q66 NEIGH. RELATIONSHIP

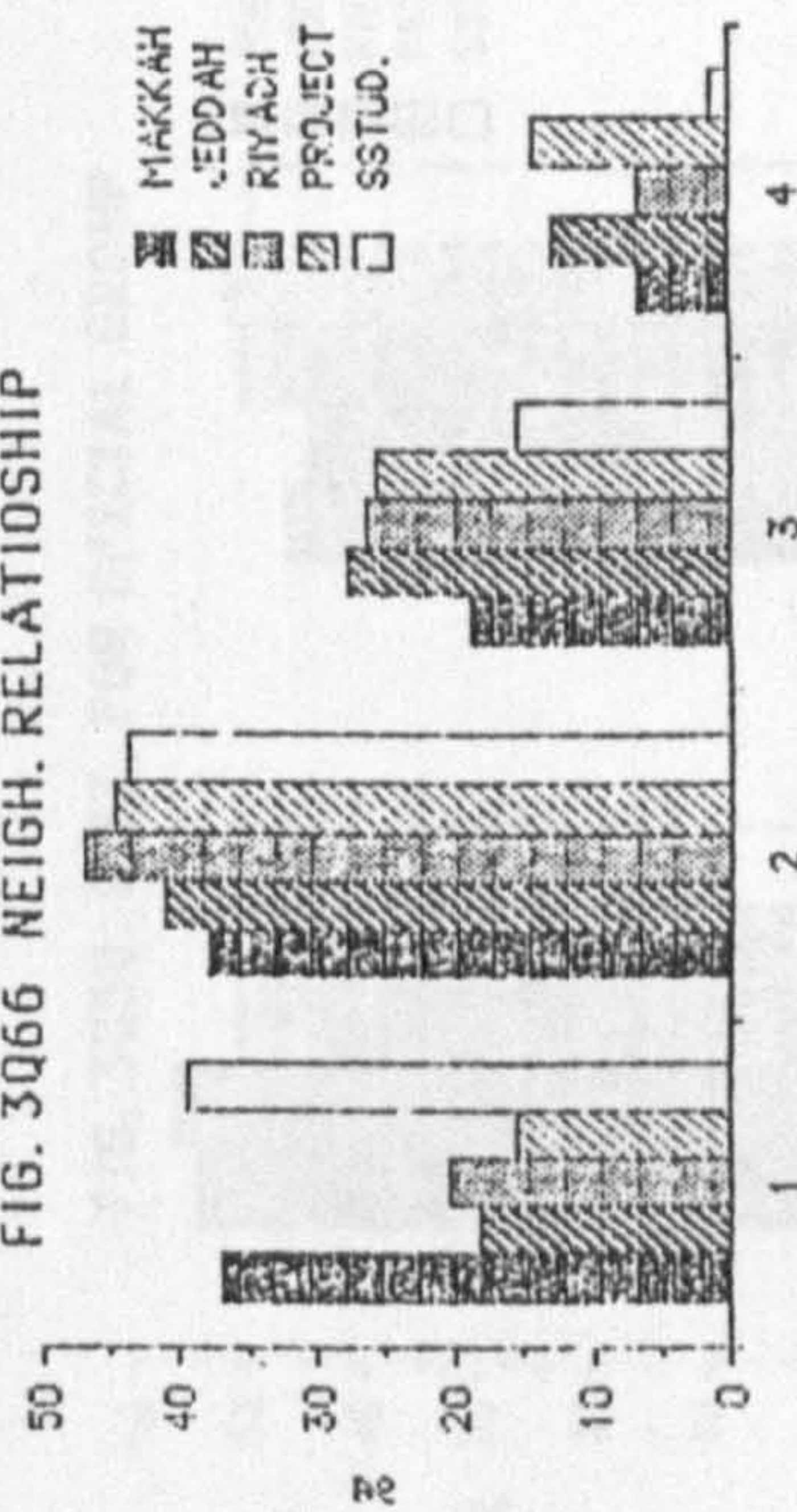


FIG. 1Q67 CHANGE OF RELATION

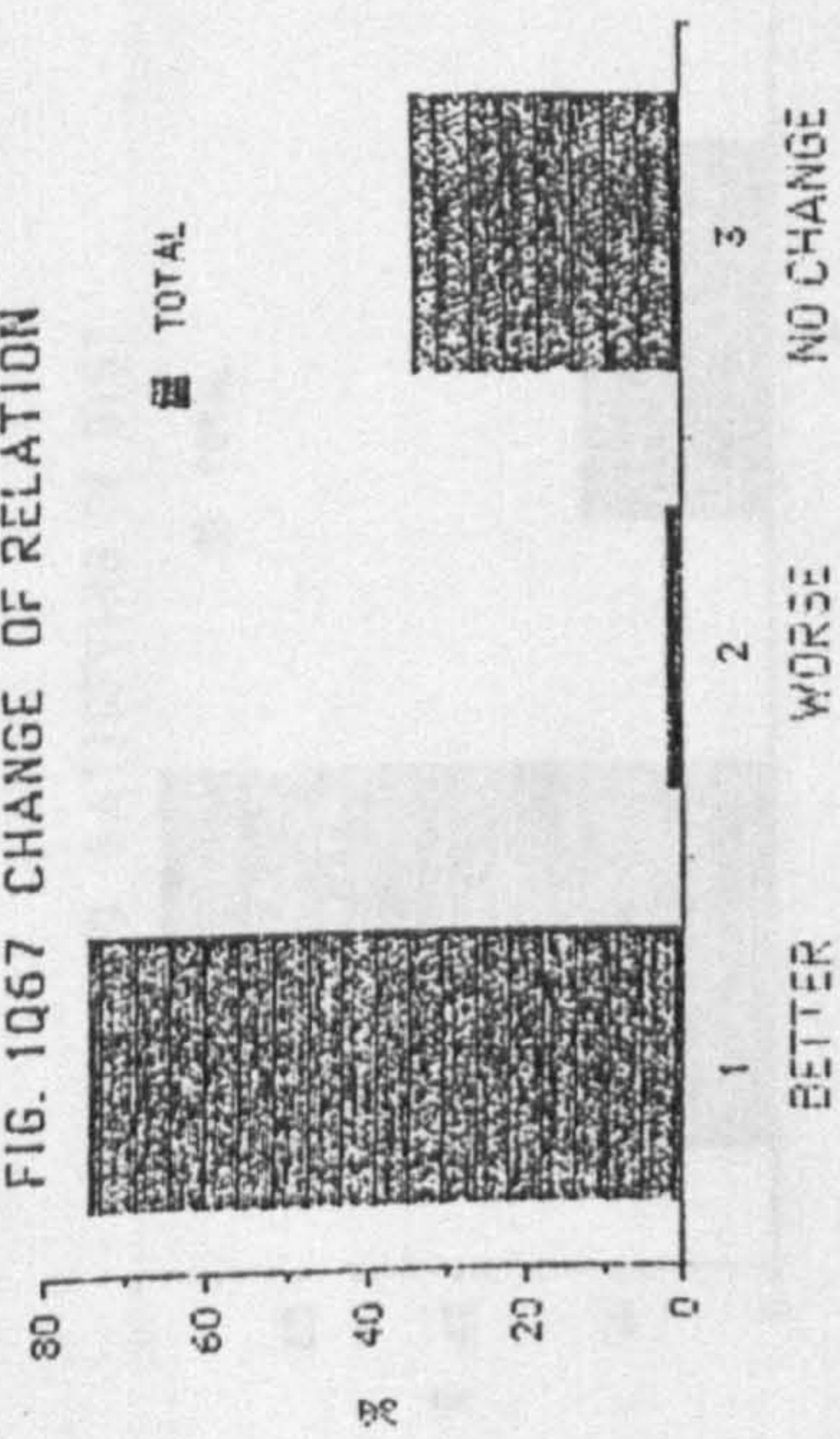


FIG. 2Q67 CHANGE OF RELATION

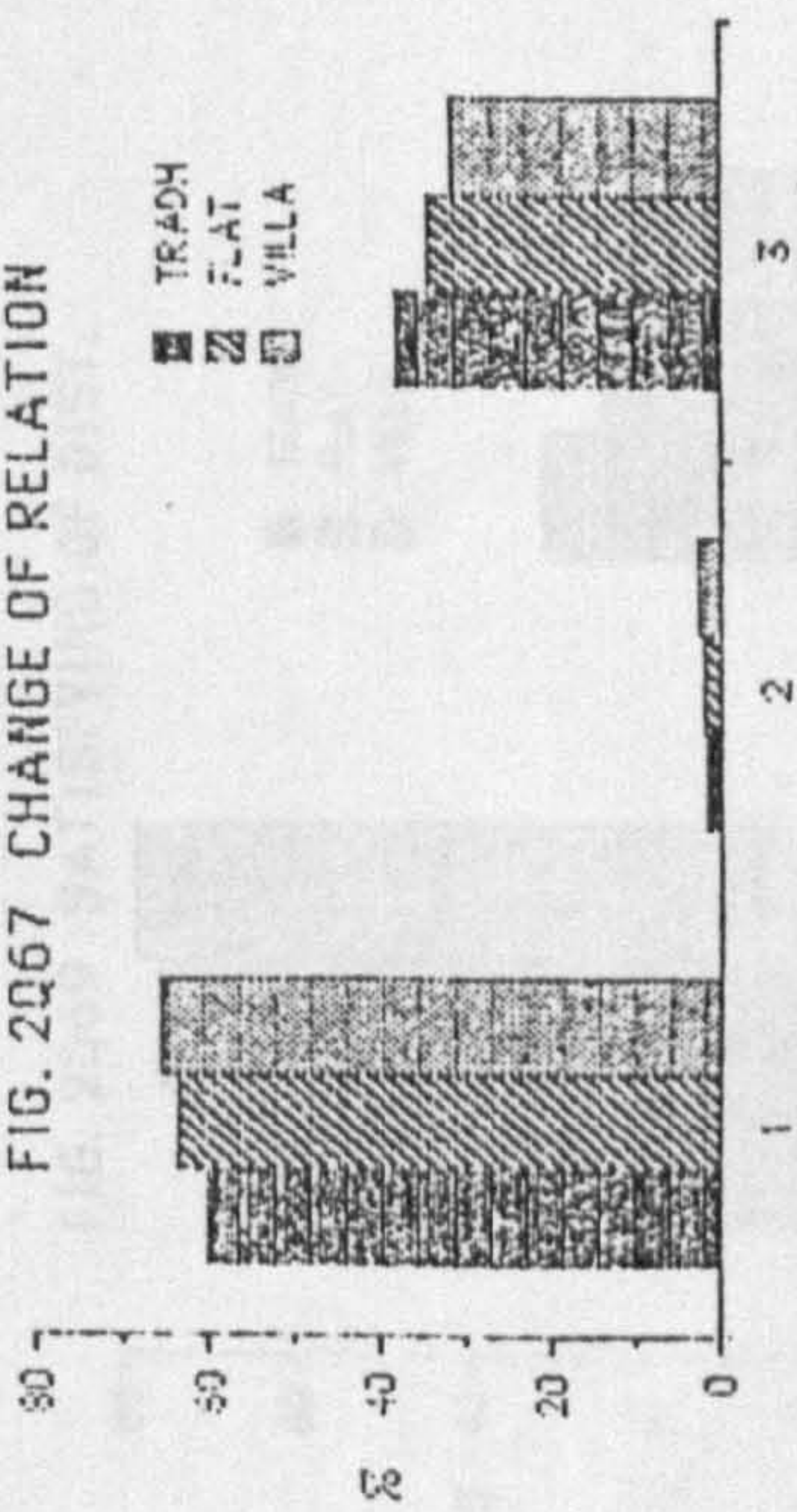


FIG. 3Q67 CHANGE OF RELATION

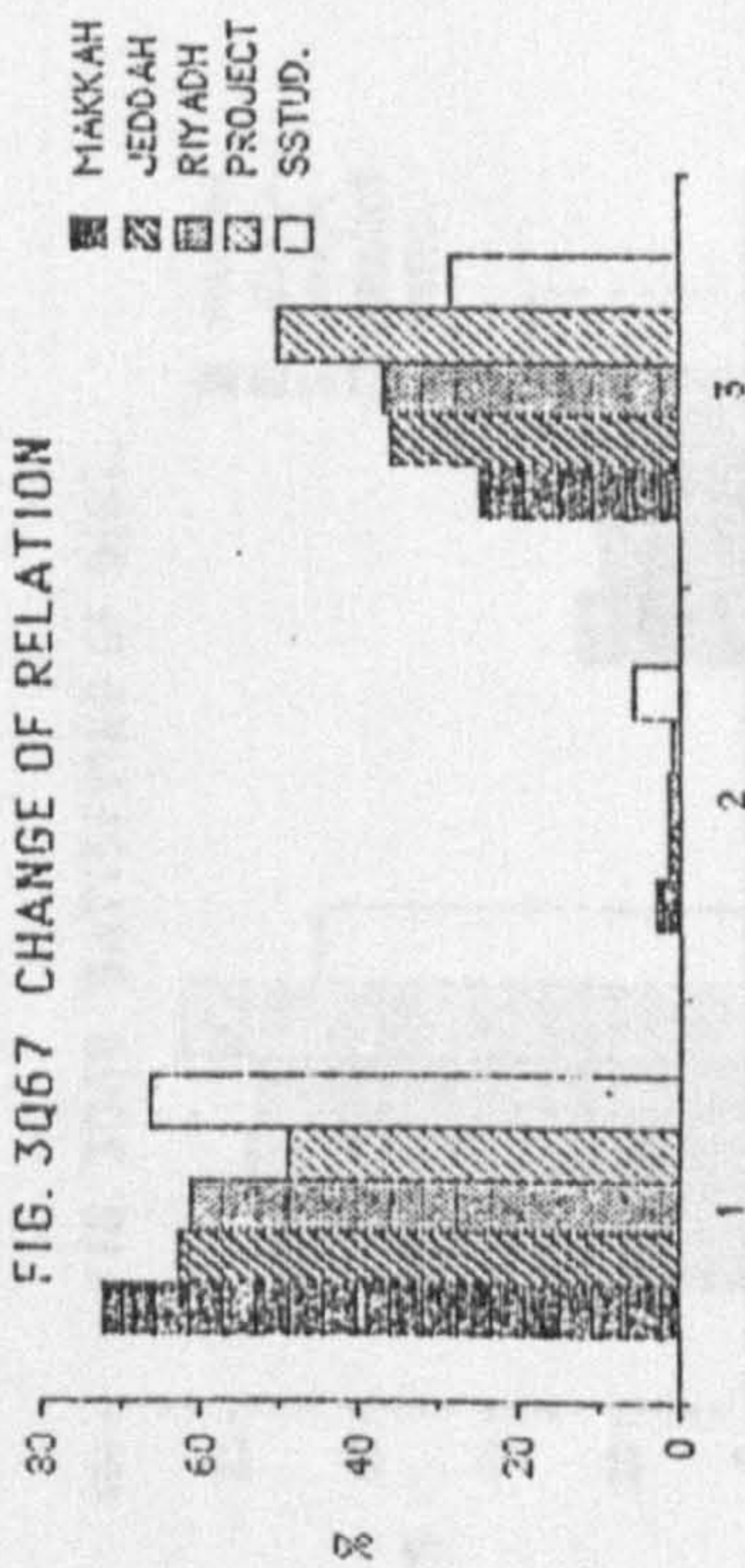


FIG. 1Q68 DIST. FOR SPECIAL GROUP

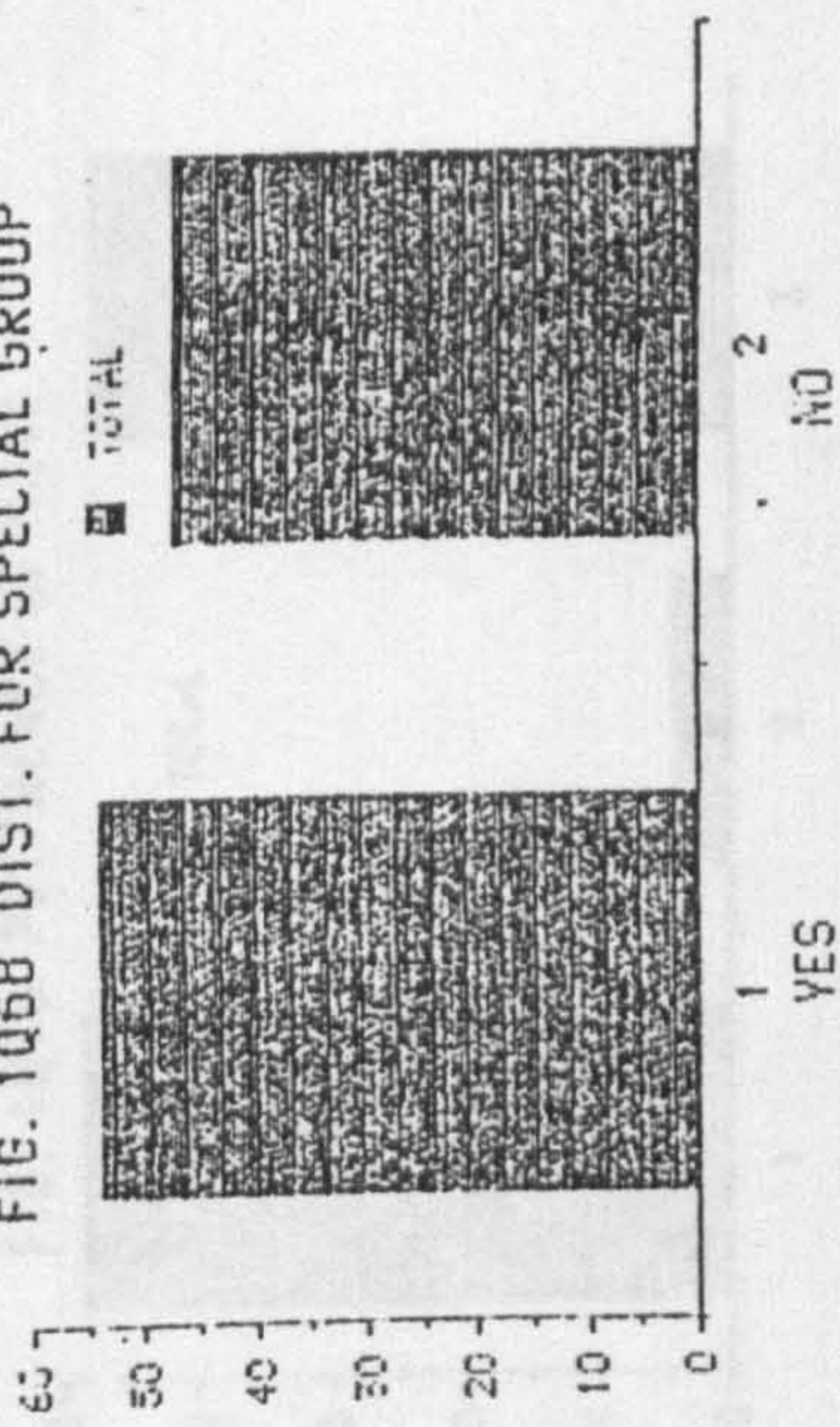


FIG. 2Q68 DIST. FOR SPECIAL GROUP

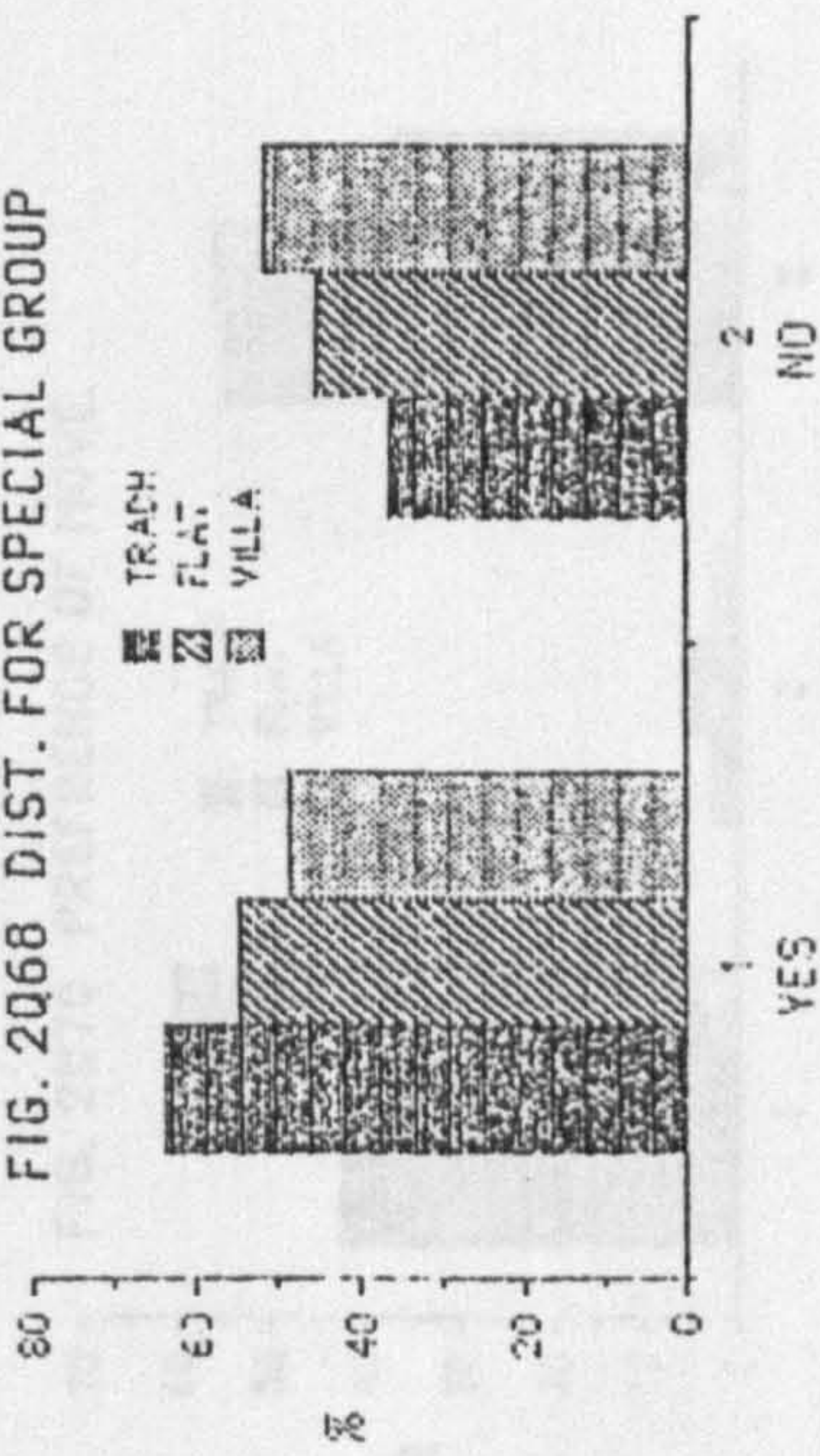


FIG. 3Q68 DIST. FOR SPECIAL GROUP

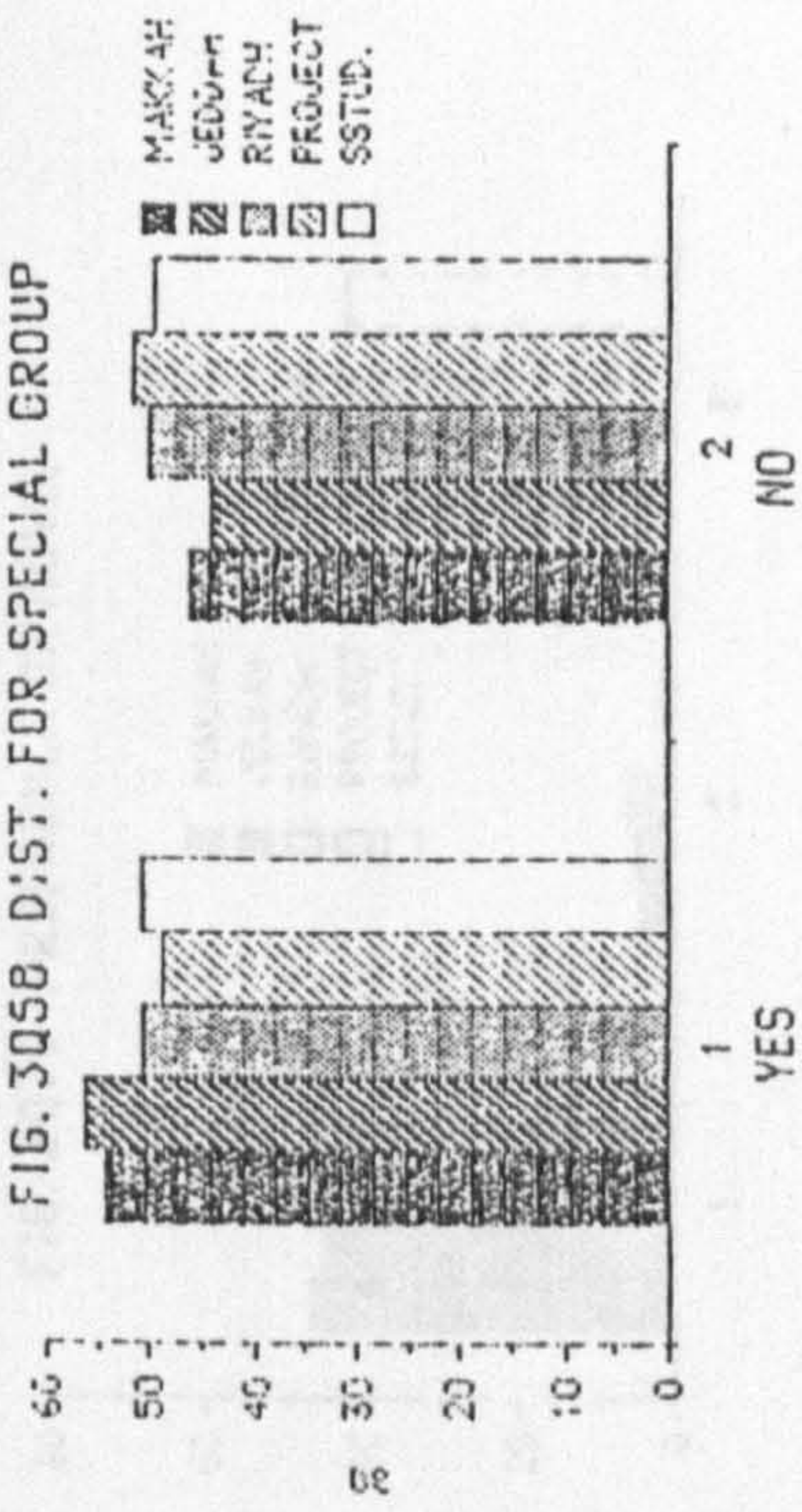


FIG. 1Q69 SATISFYING OF DIST.

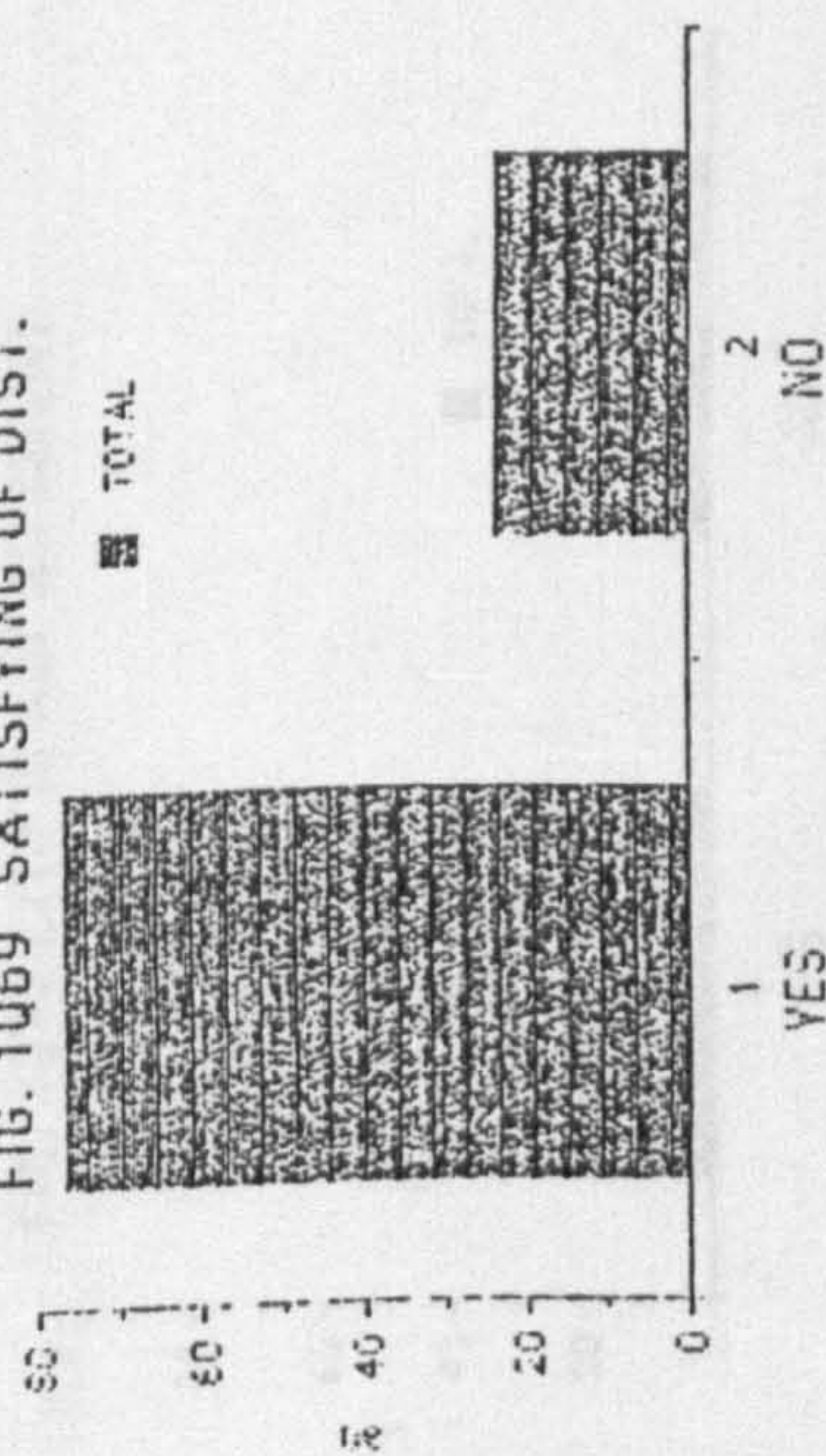


FIG. 2Q69 SATISFYING OF DIST.

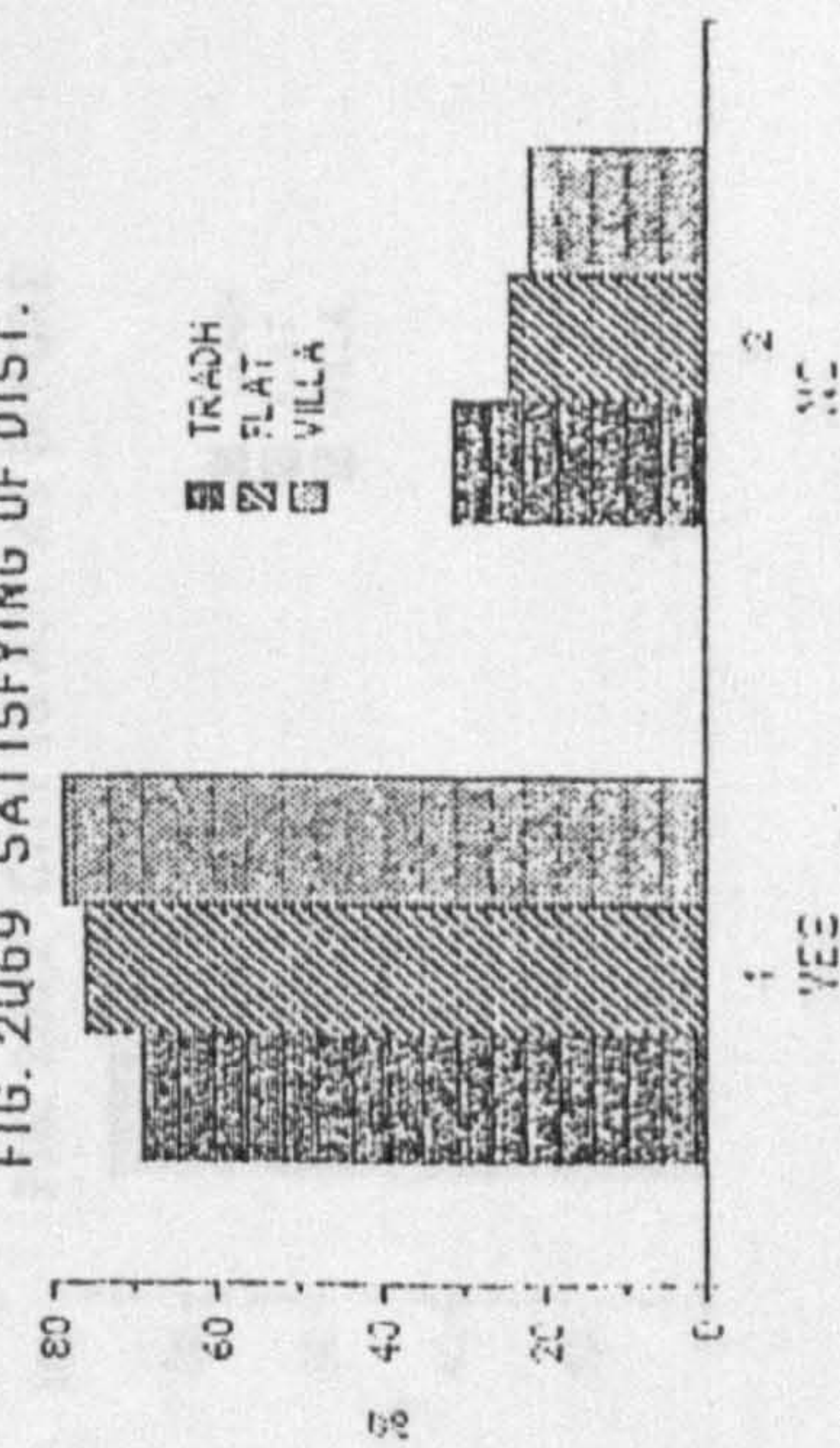


FIG. 3Q69 SATISFYING OF DIST.

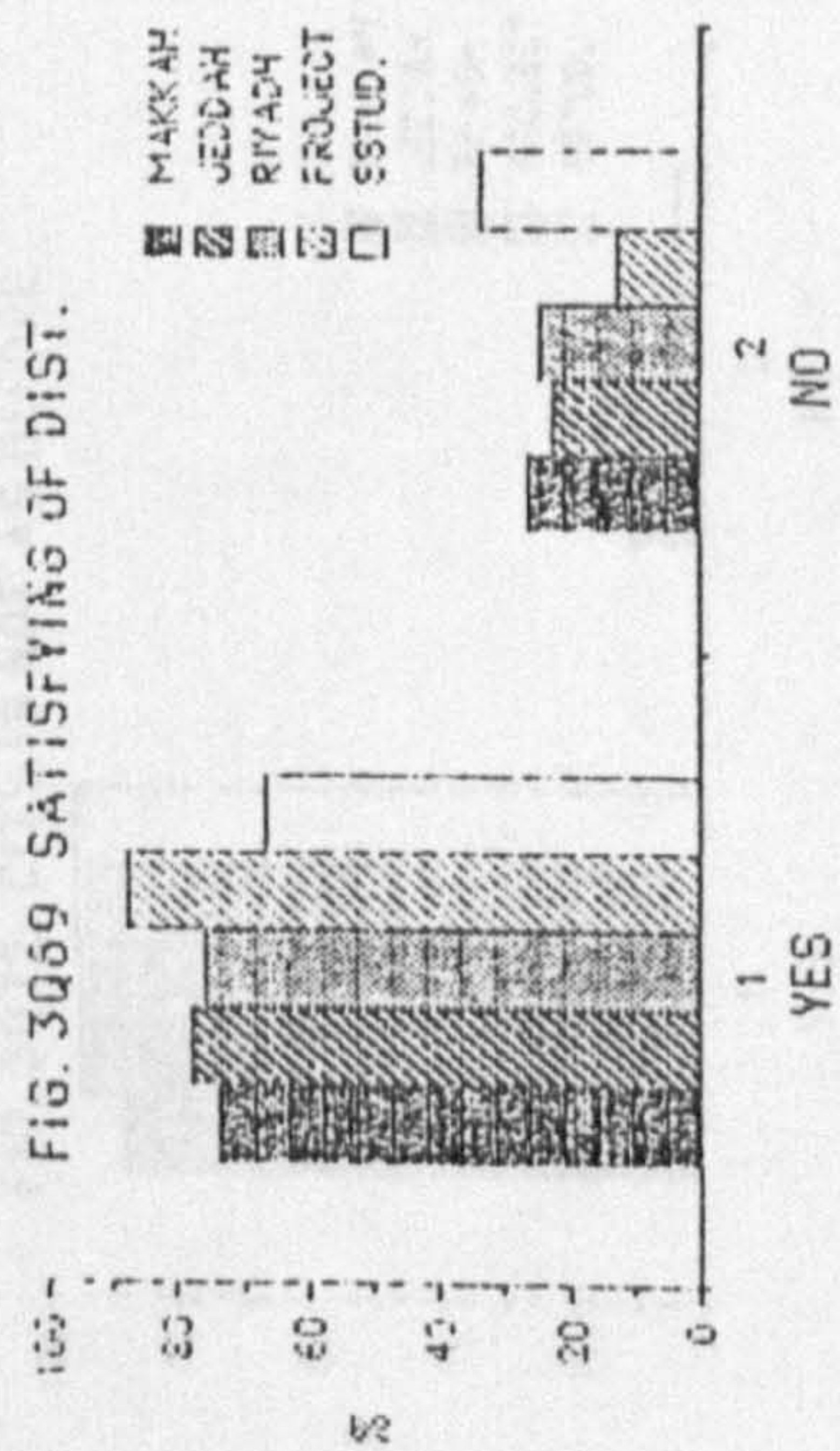


FIG. 1Q70 PREFERENCE OF MOVE.

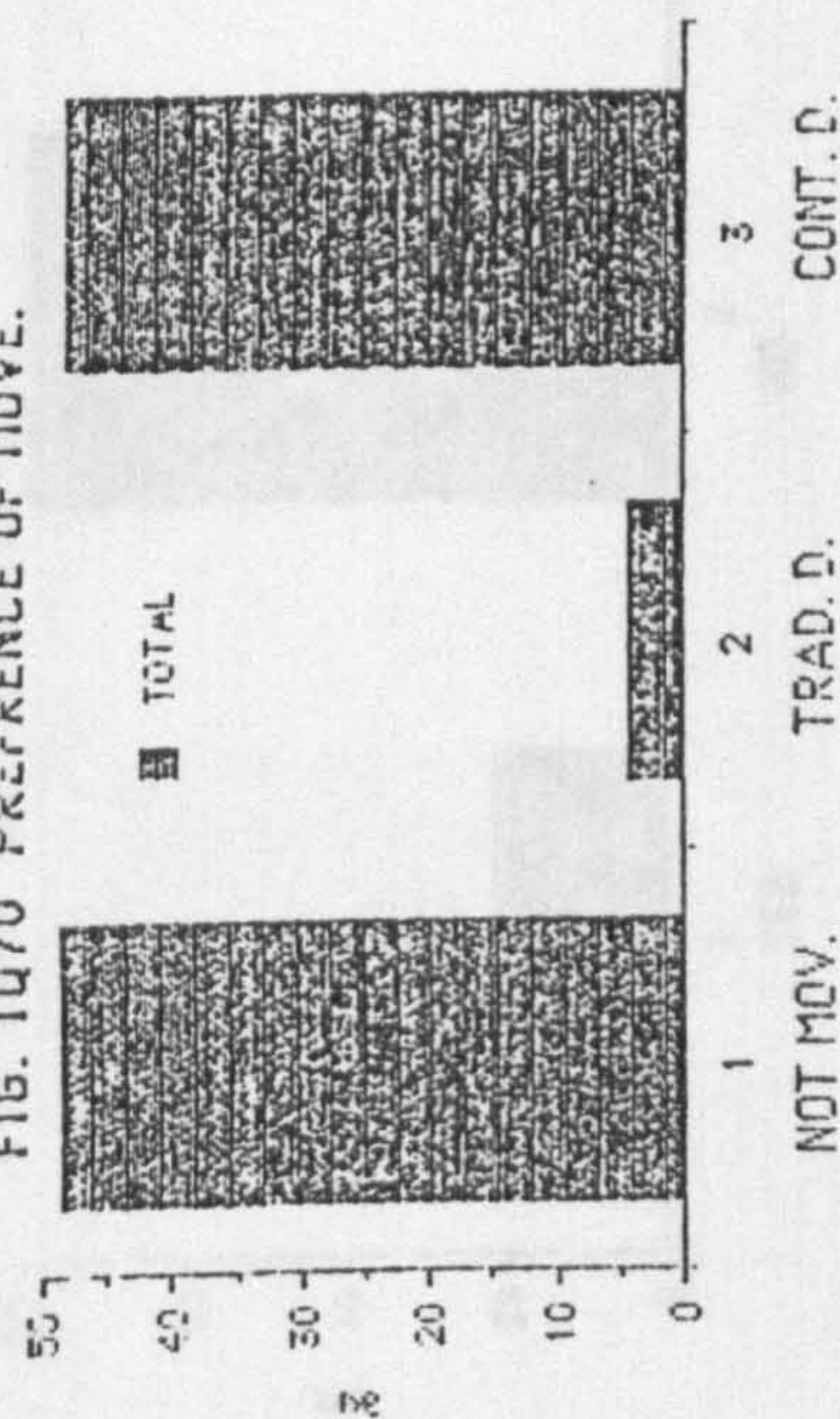


FIG. 2Q70 PREFERENCE OF MOVE.

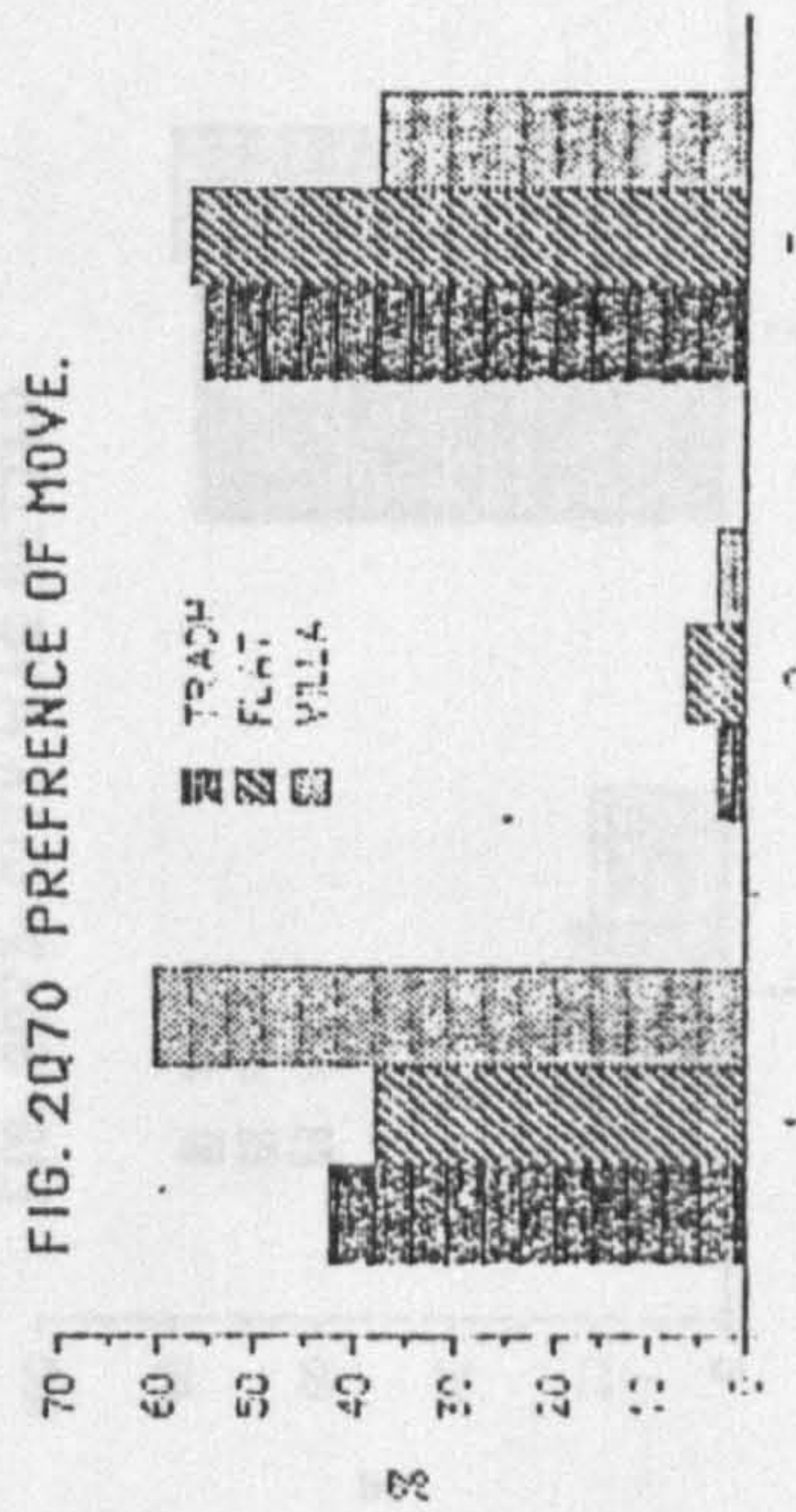
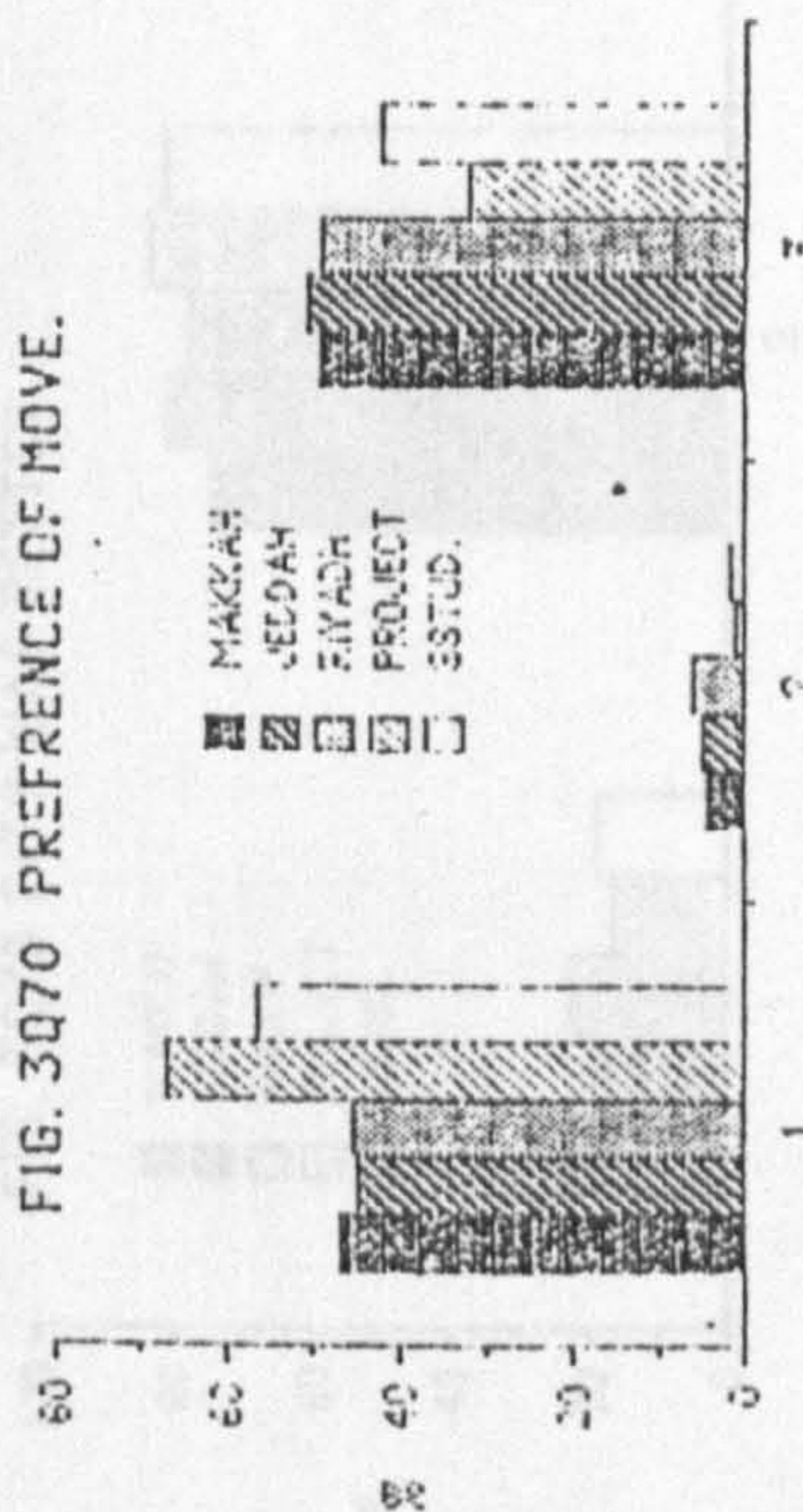


FIG. 3Q70 PREFERENCE OF MOVE.



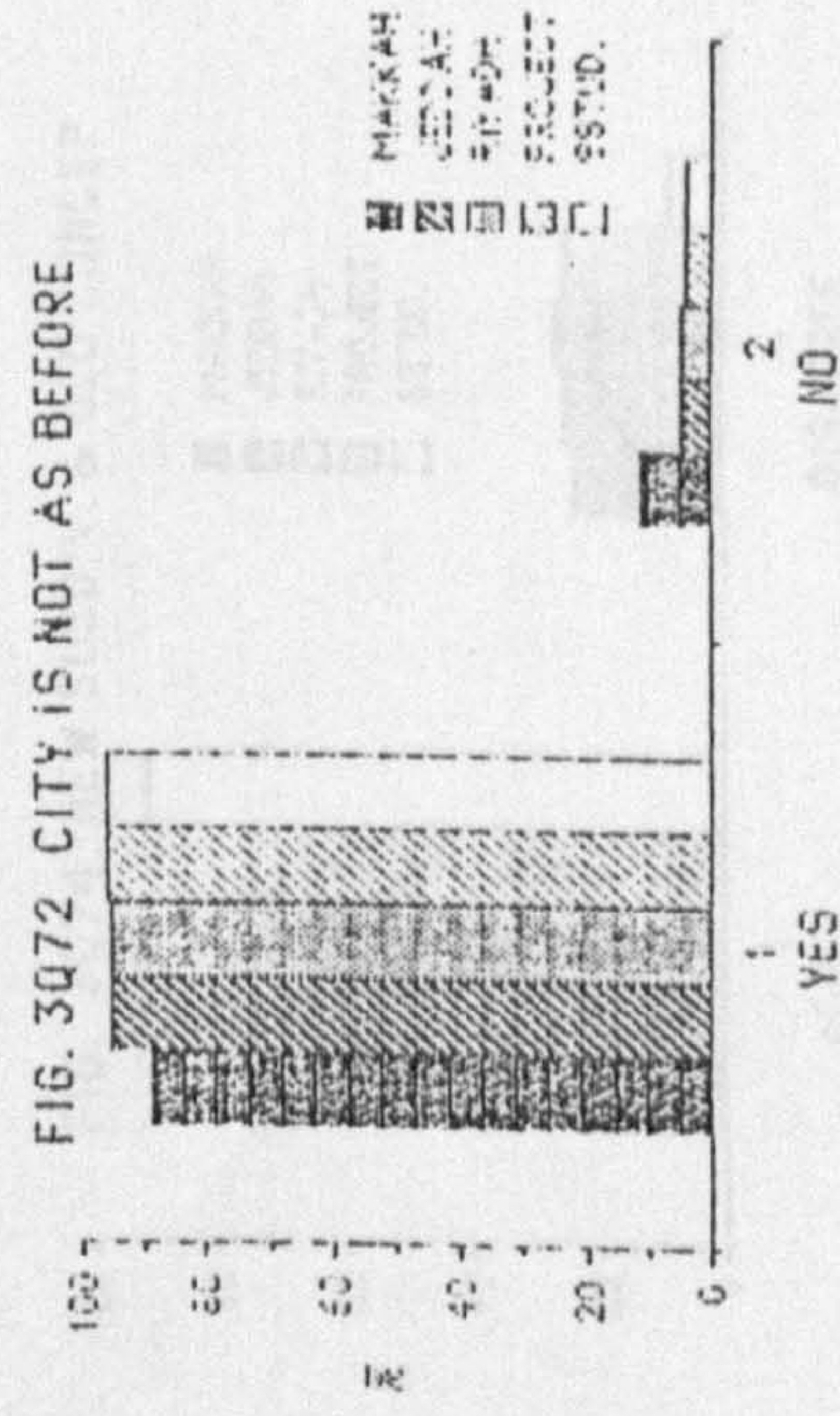
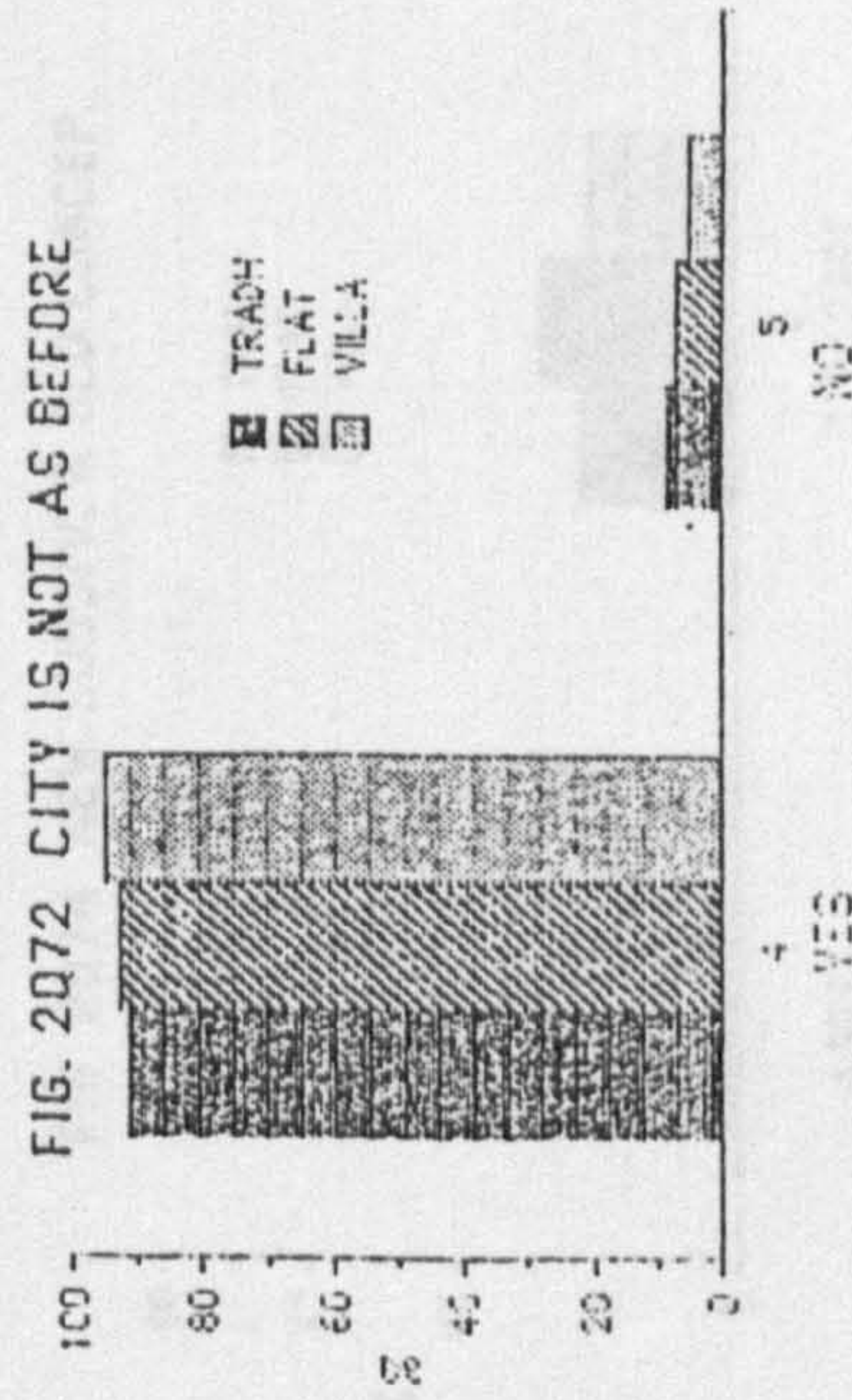
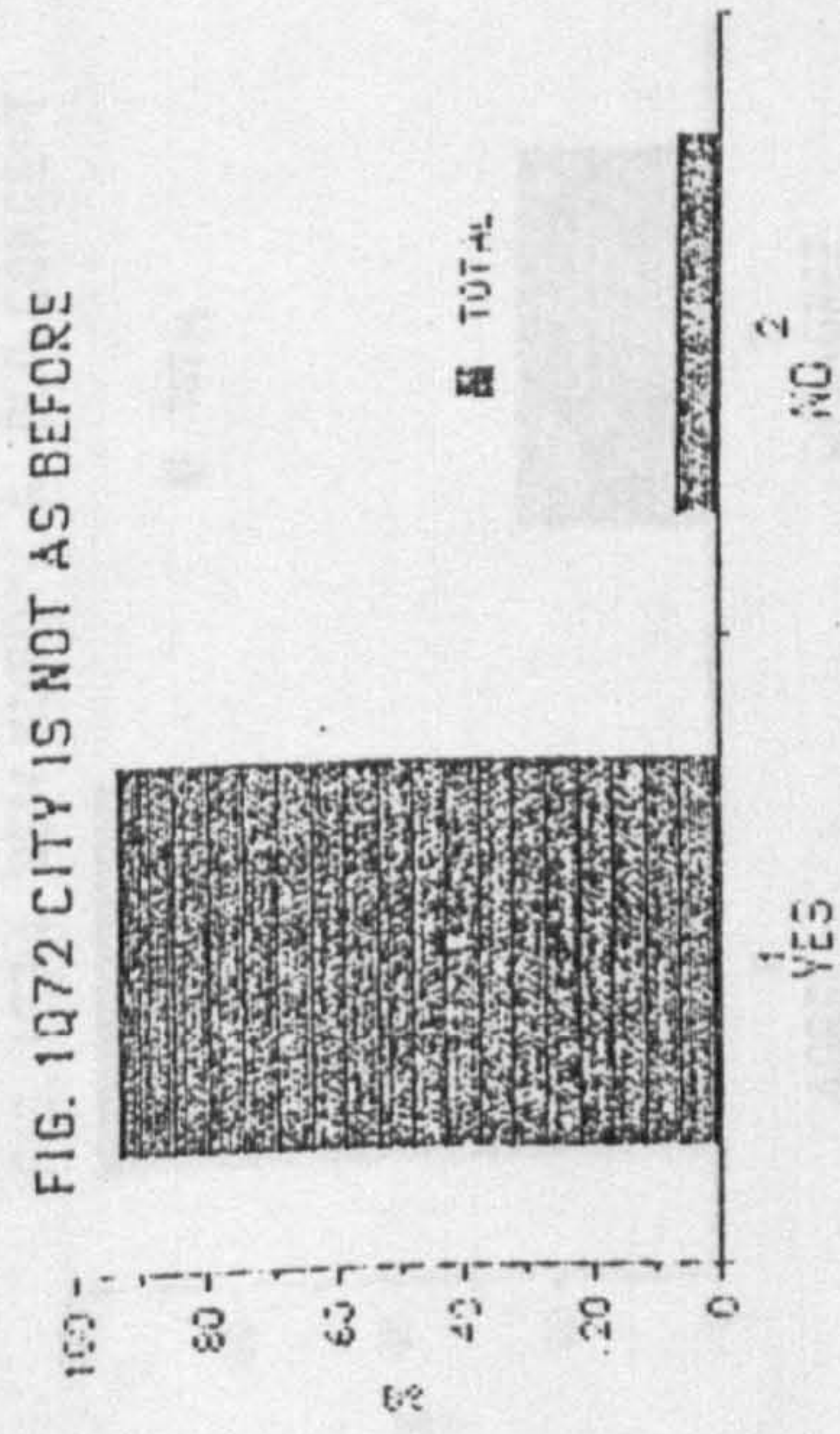
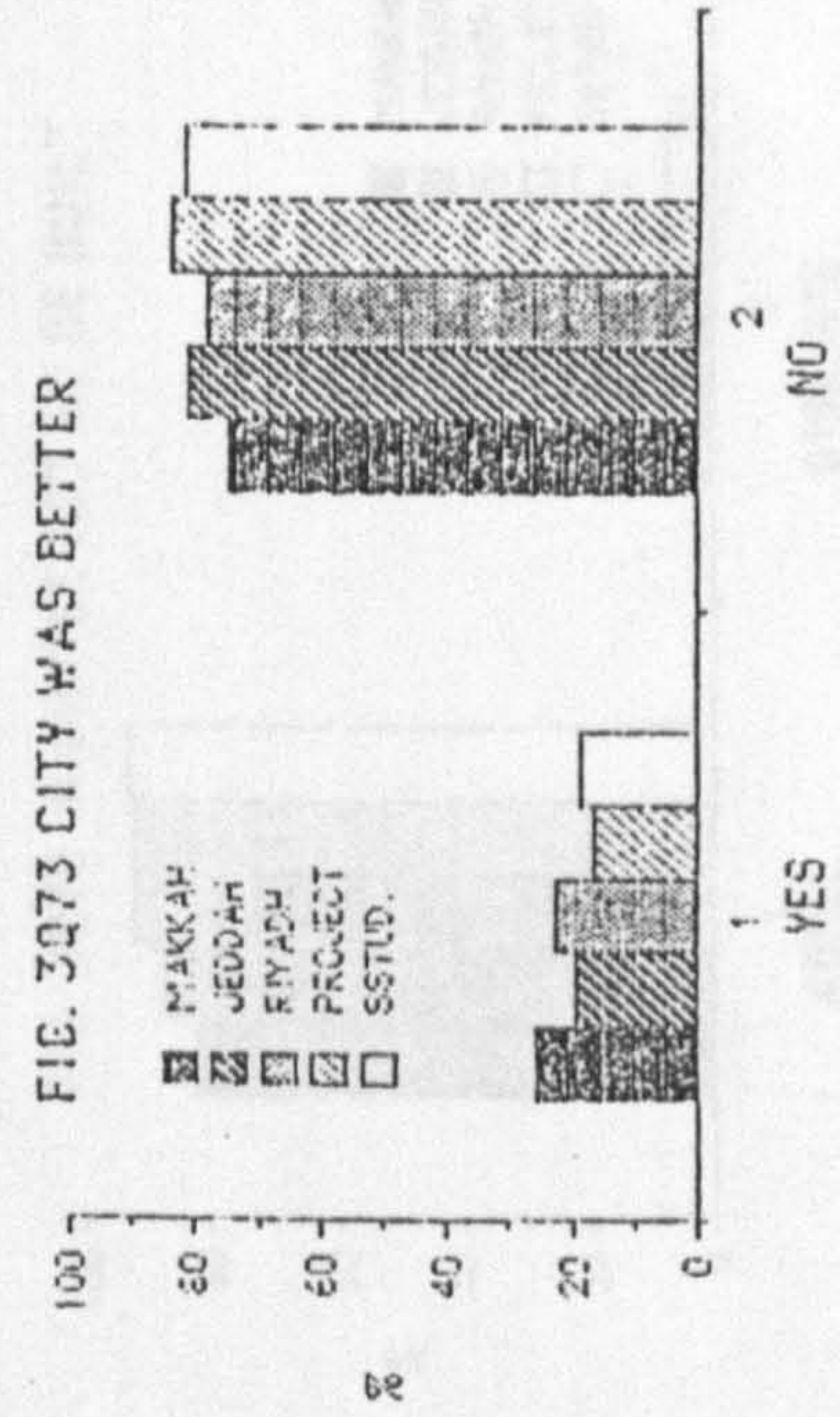
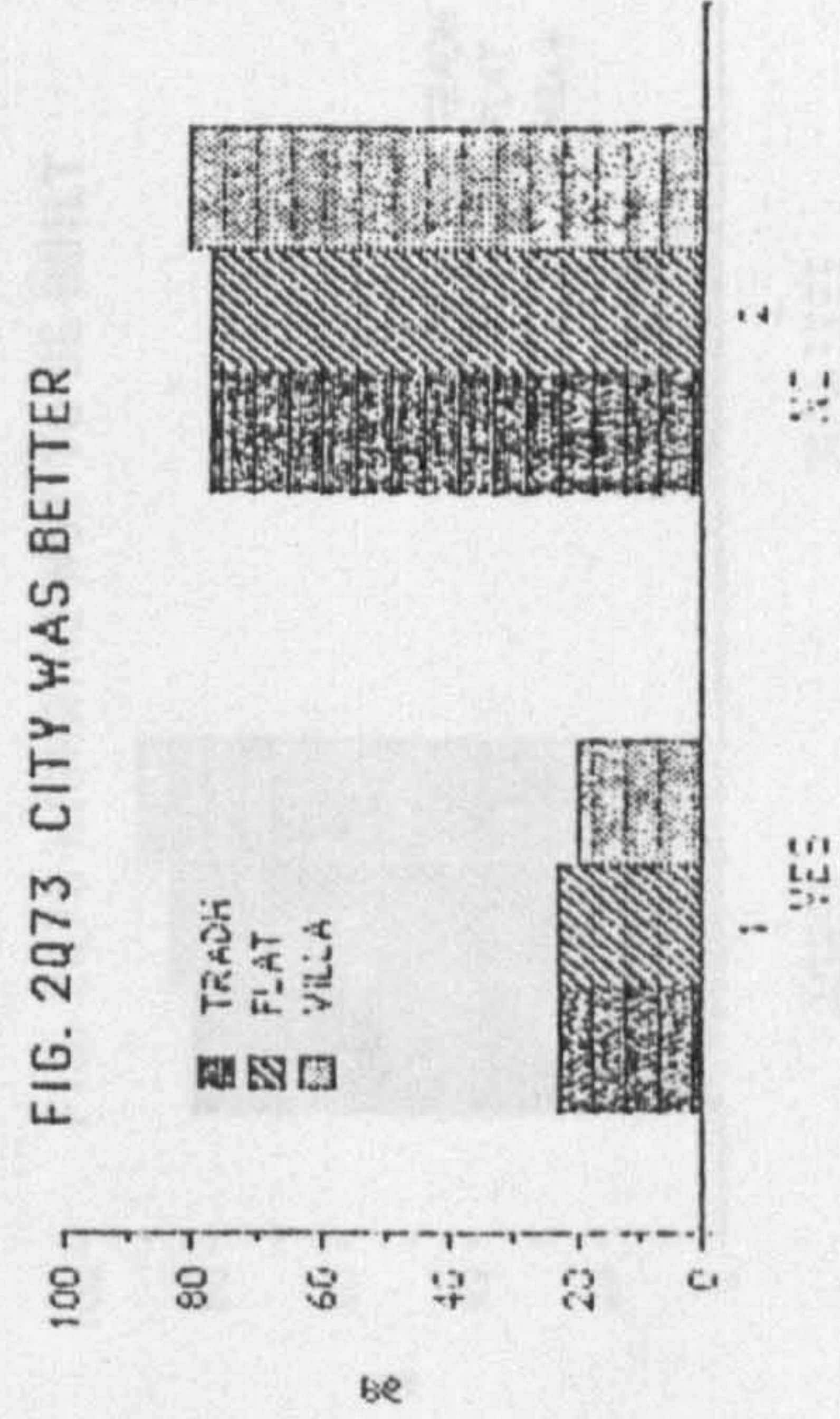
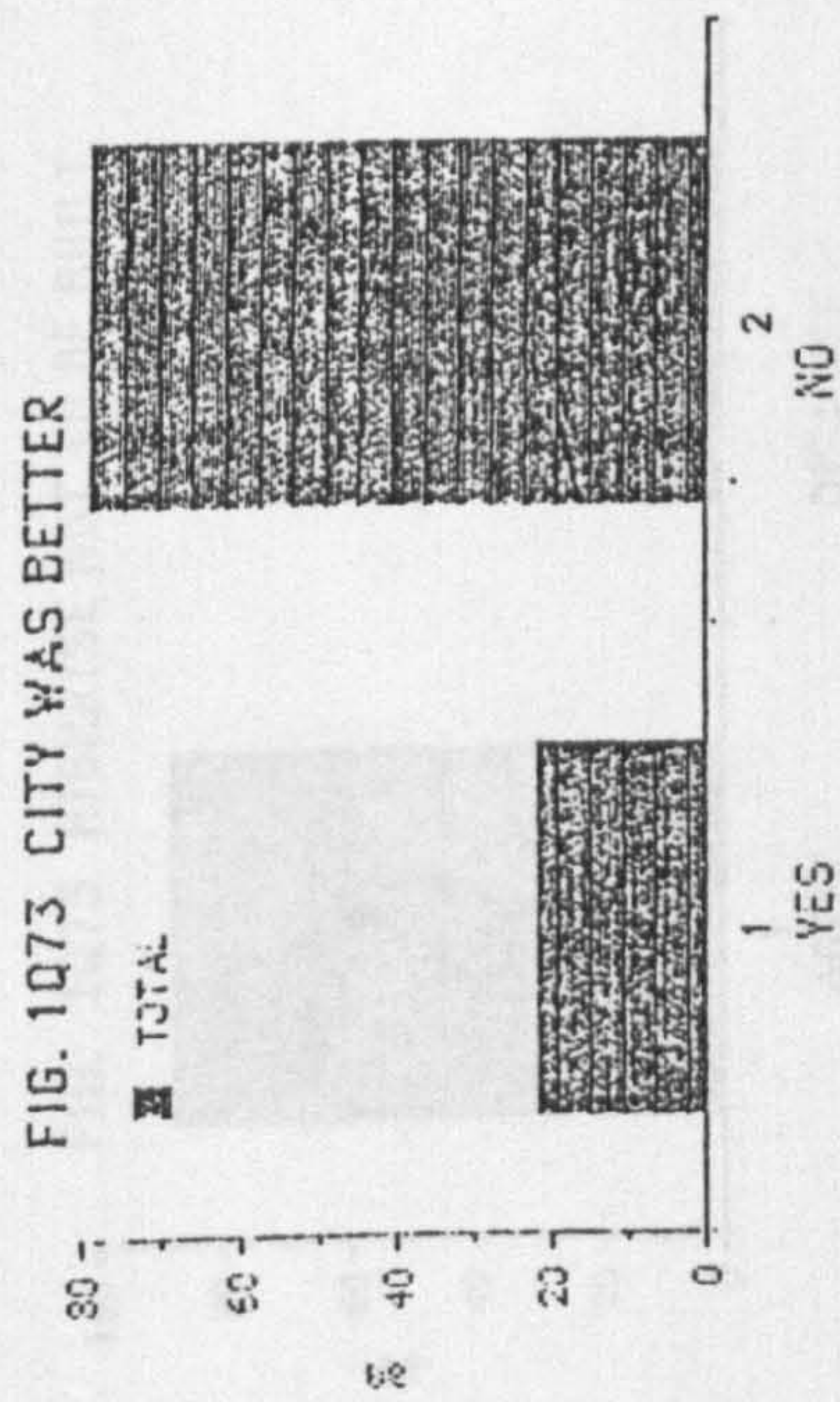


FIG. 1Q74 NEW SUBDIV. & OLD CONCEPT

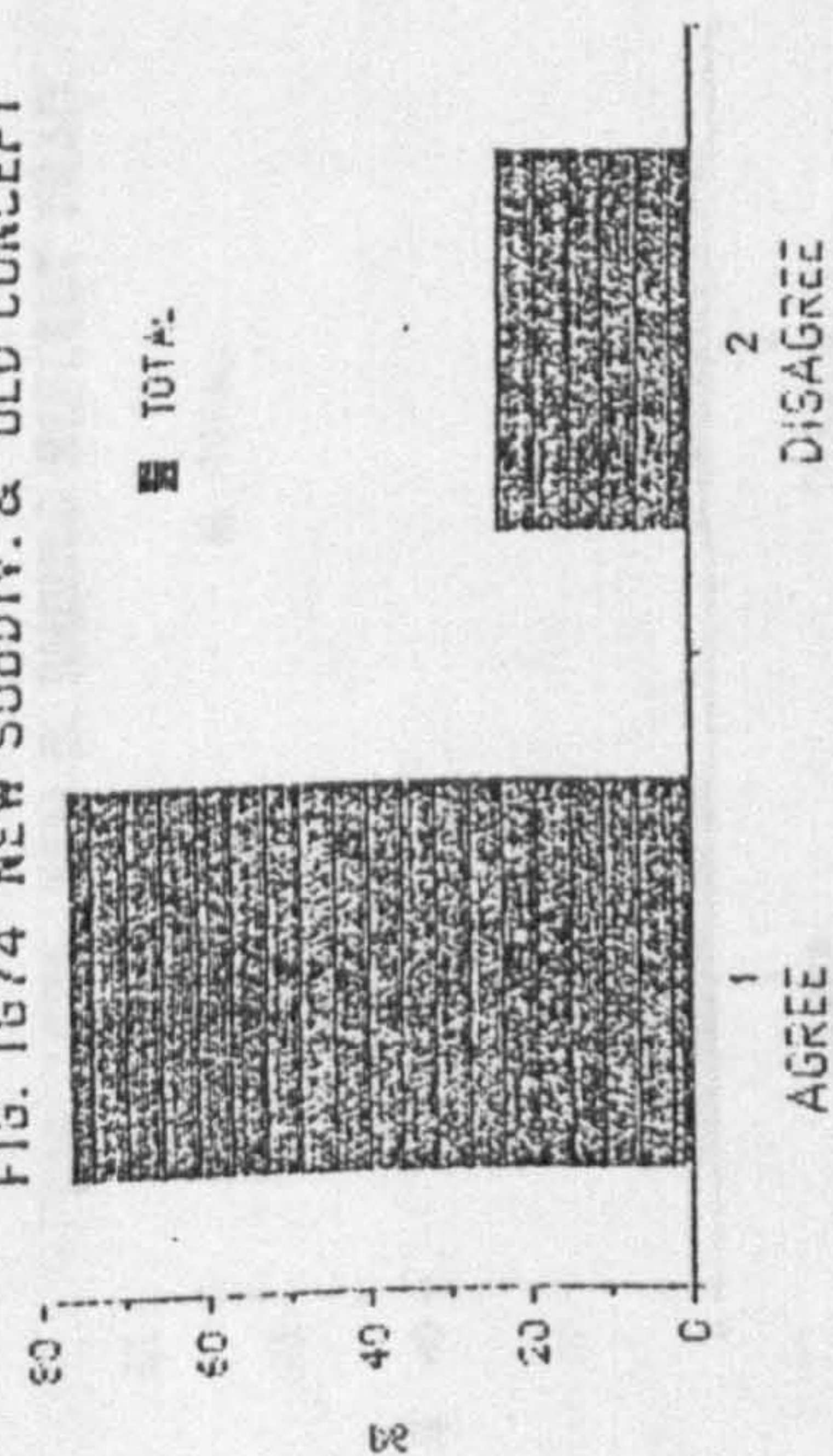


FIG. 2Q74 NEW SUBDIV. & OLD CONCEPT

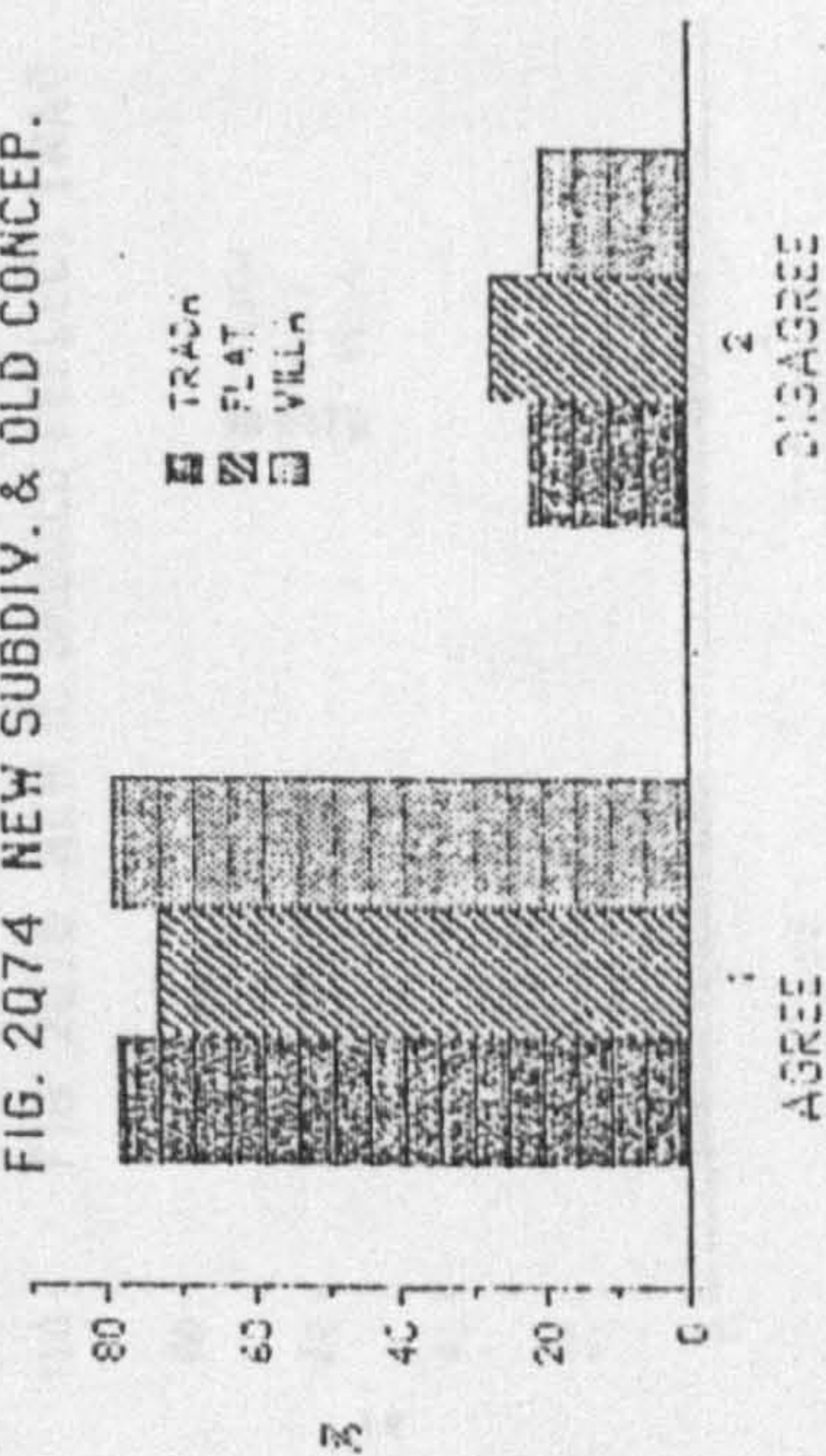


FIG. 3Q74 NEW SUBDIV. & OLD CONCEPT

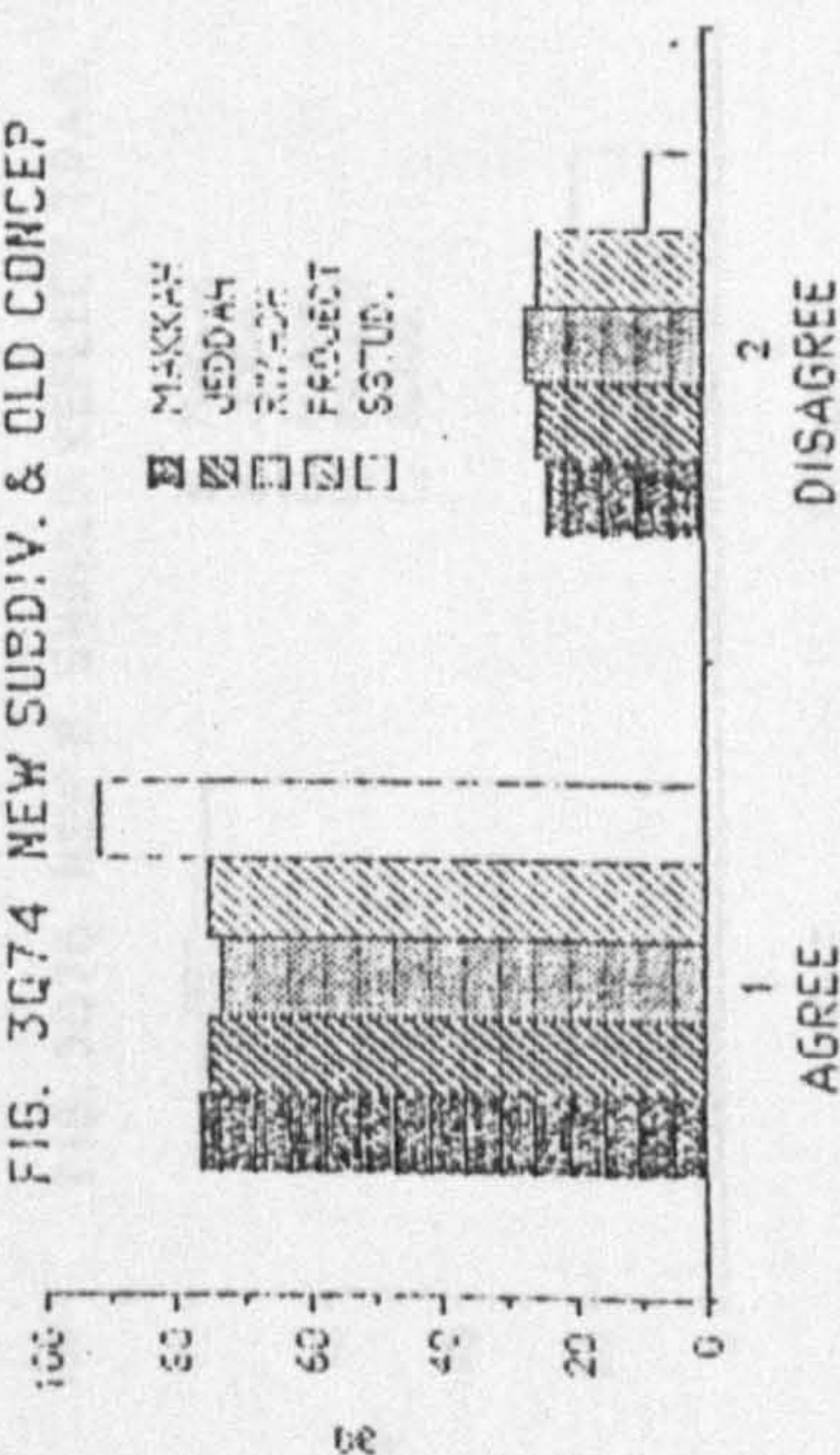


FIG. 1Q75 HIGHRISE NOT TO BE BUILT

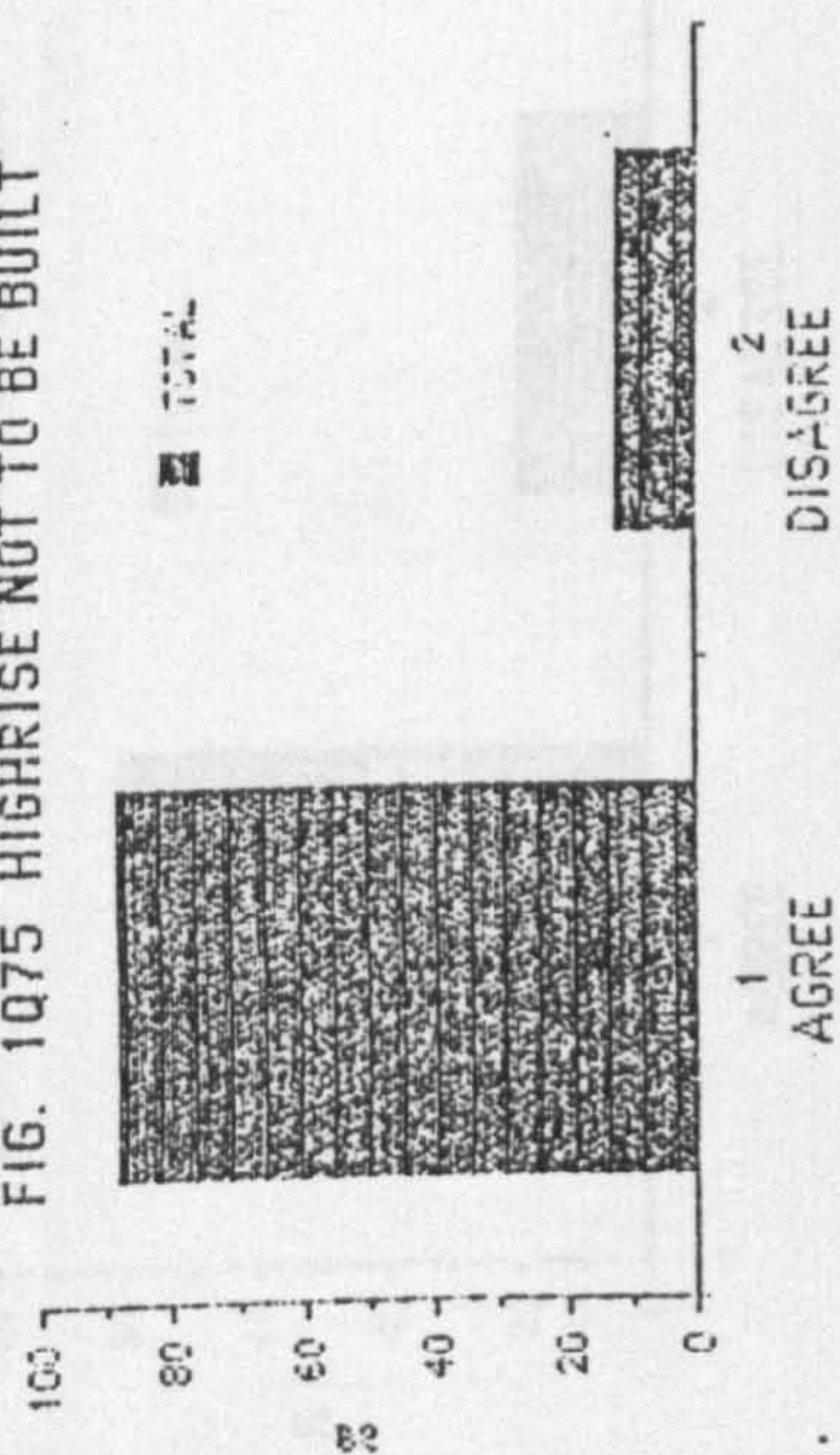


FIG. 2Q75 HIGHRISE NOT TO BE BUILT

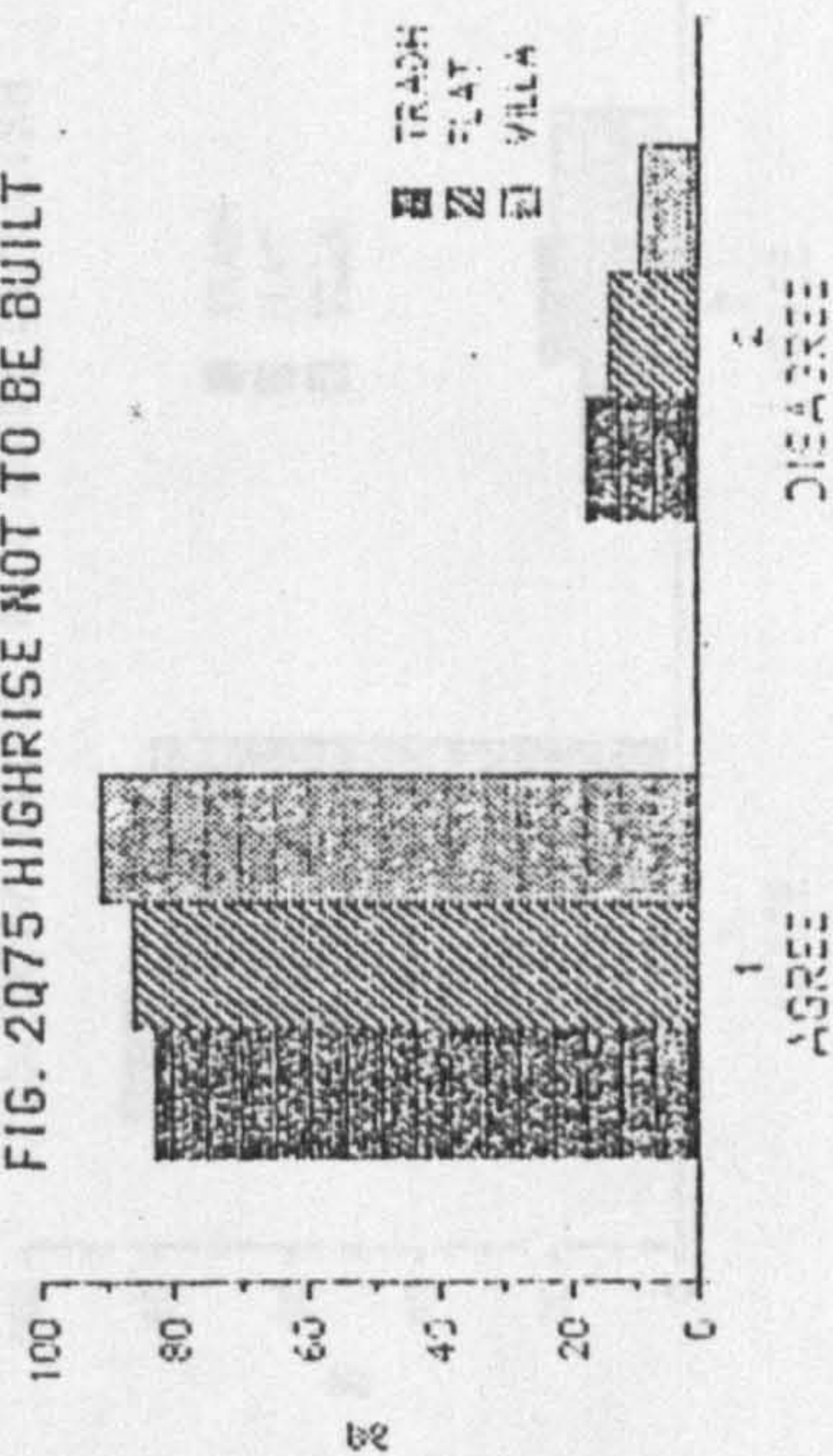


FIG. 3Q75 HIGHRISE NOT TO BE BUILT

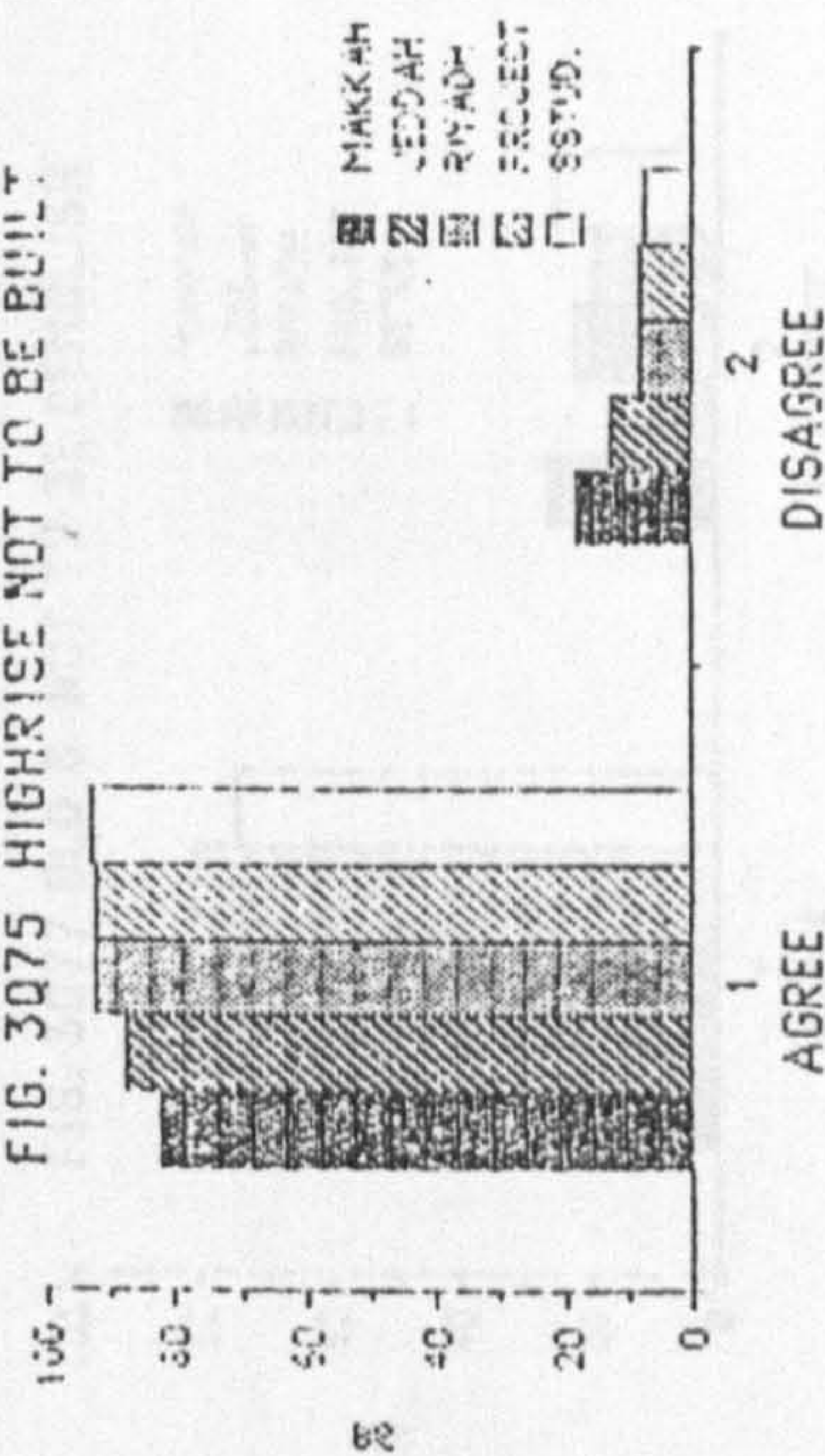


FIG. 1Q76 NEW B. SHOULD REFLECT TRAD.

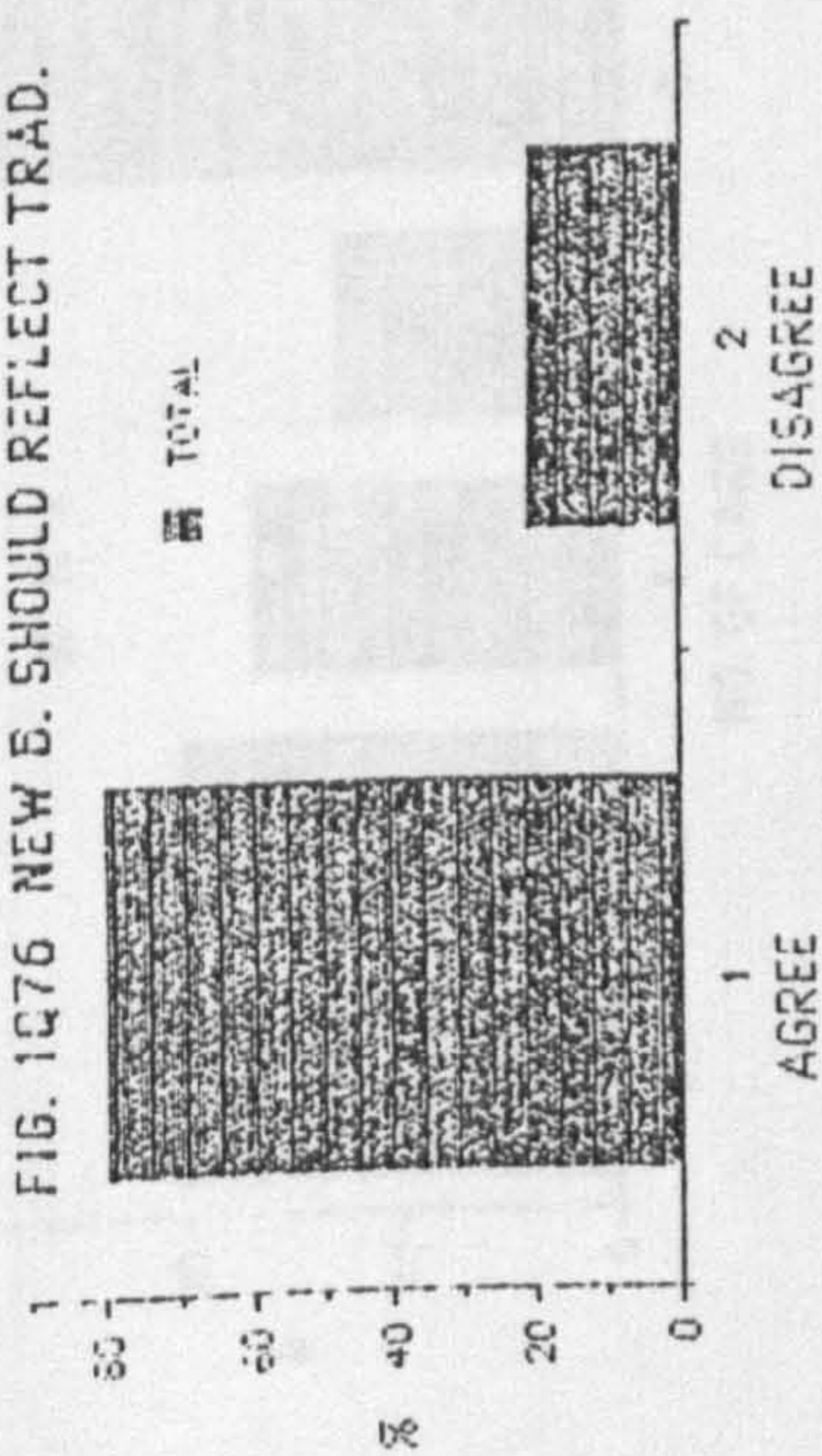


FIG. 2Q76 NEW B. SHOULD REFLECT TRAD.

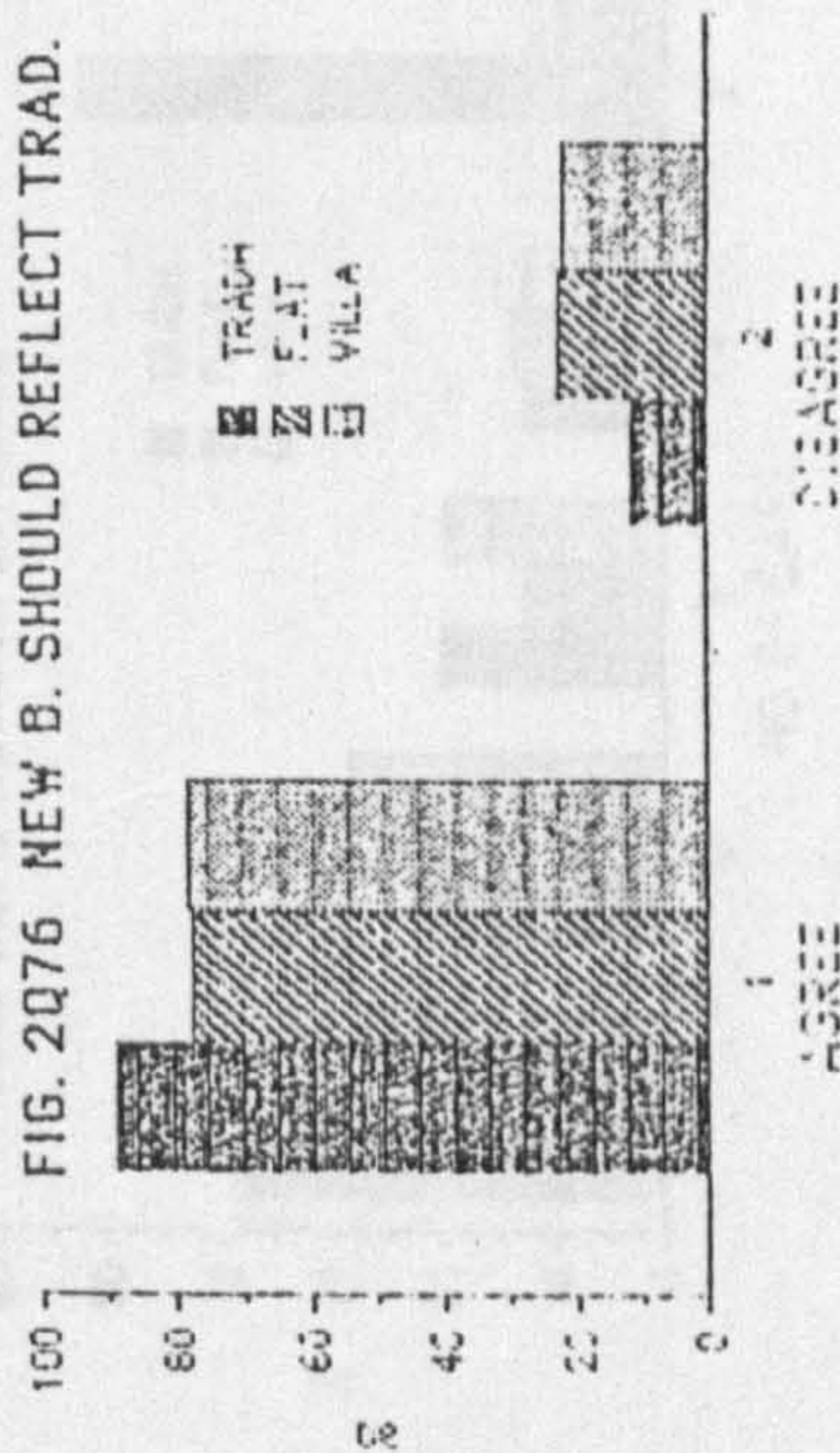


FIG. 3Q76 NEW B. SHOULD REFLECT TRAD.

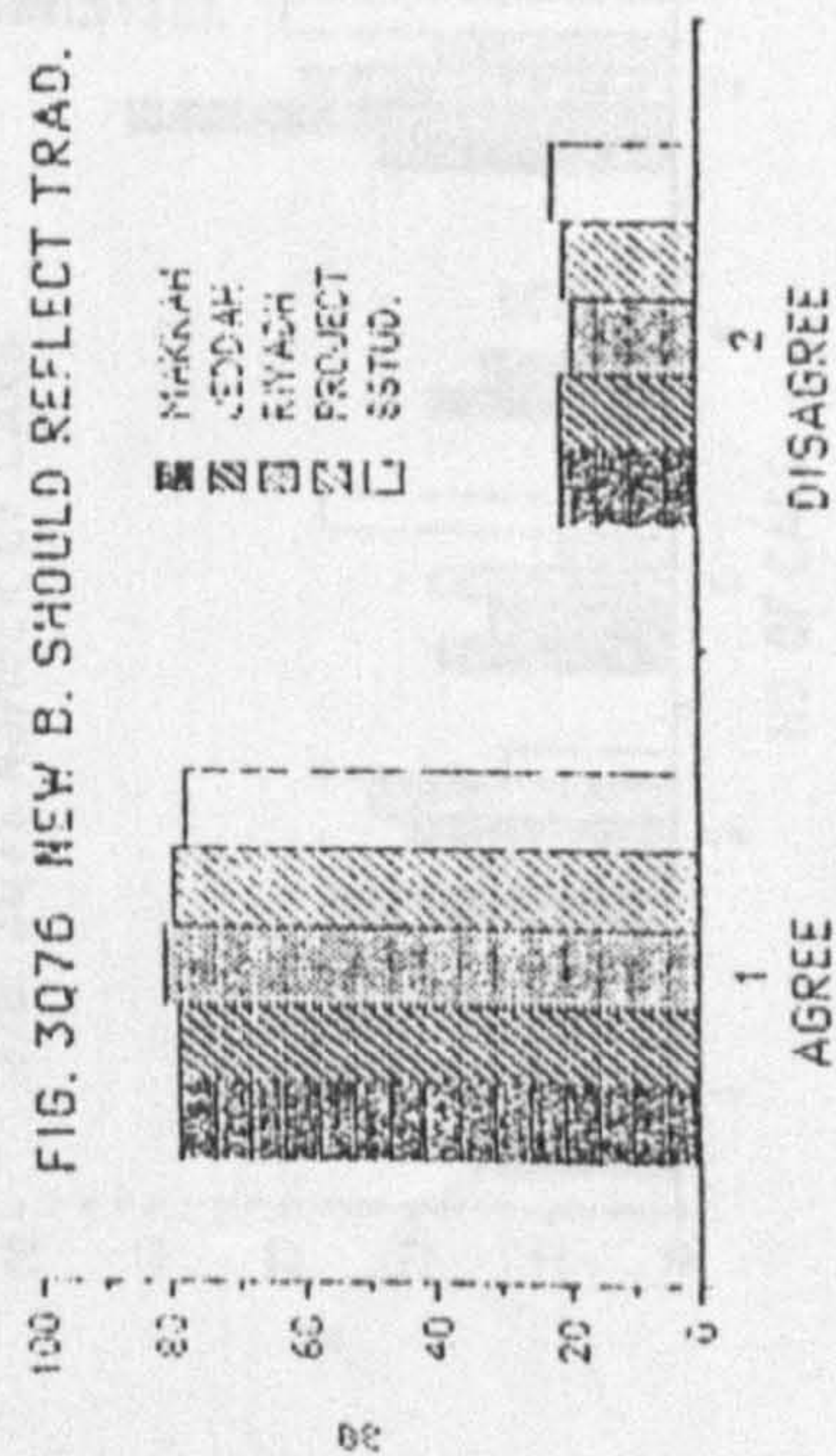


FIG. 1Q77 OLD B. NOT TO BE DEMOLISH.

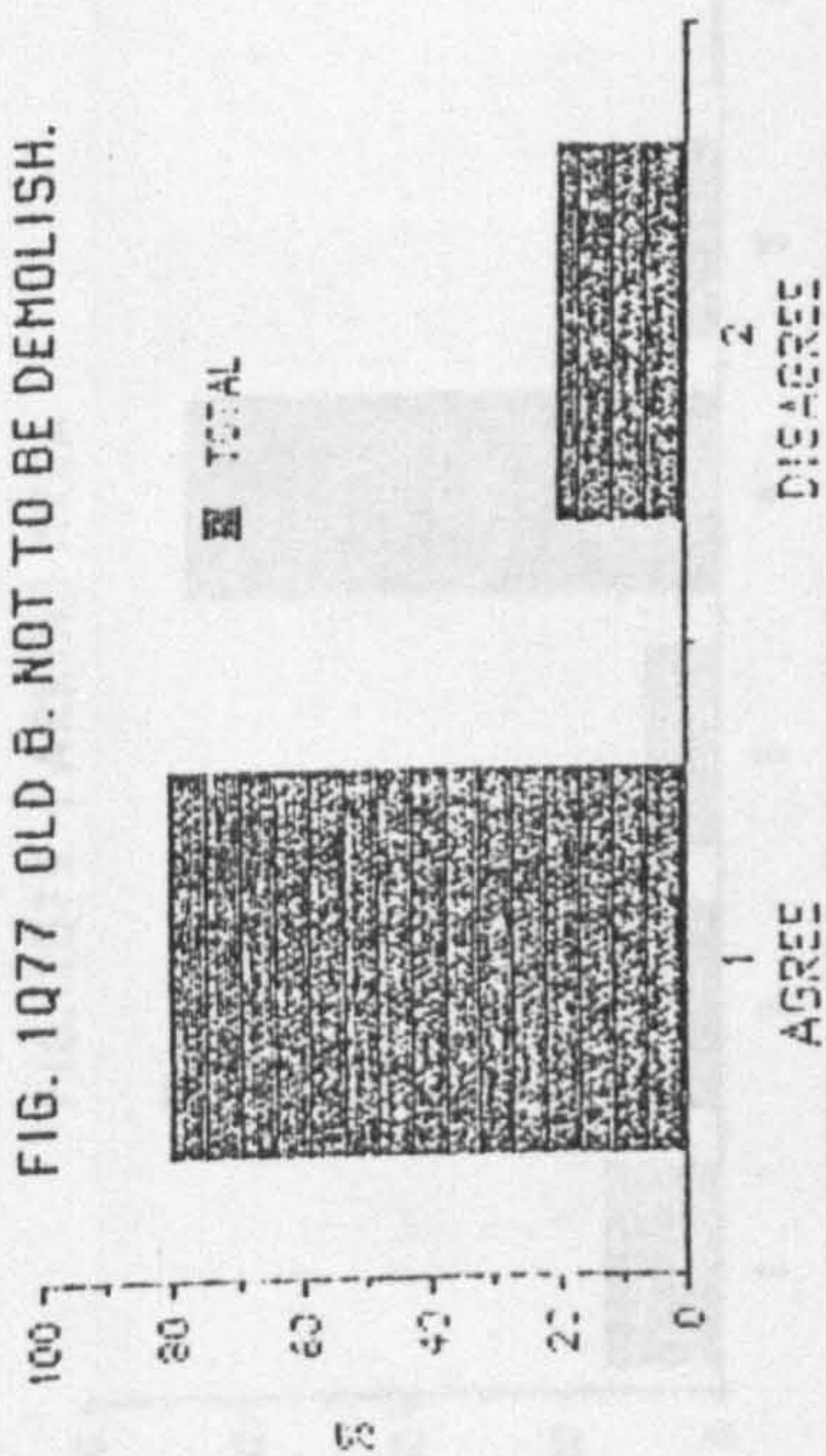


FIG. 2Q77 OLD B. NOT TO BE DEMOLISH

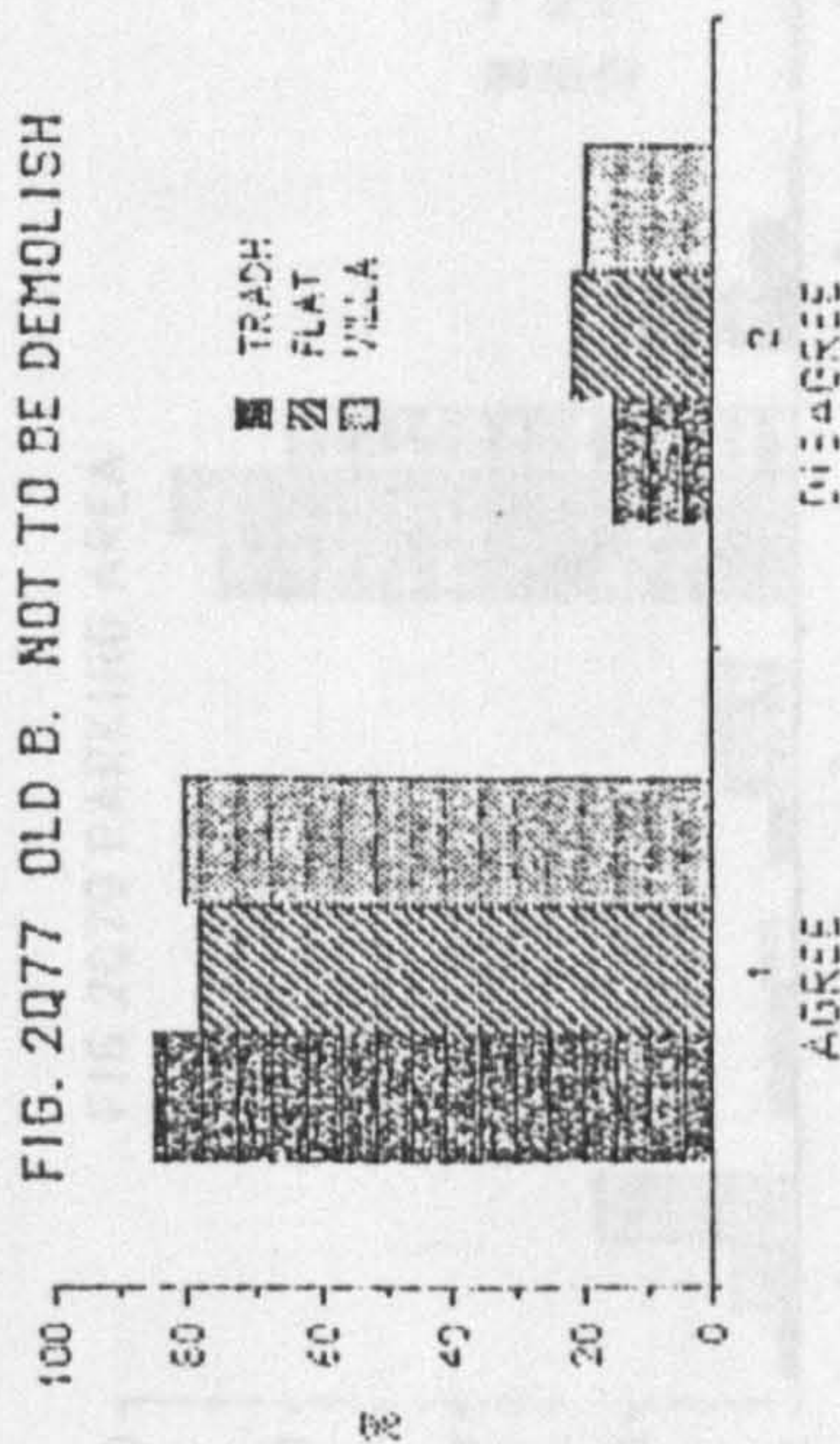


FIG. 3Q77 OLD B. NOT TO BE DEMOLISH

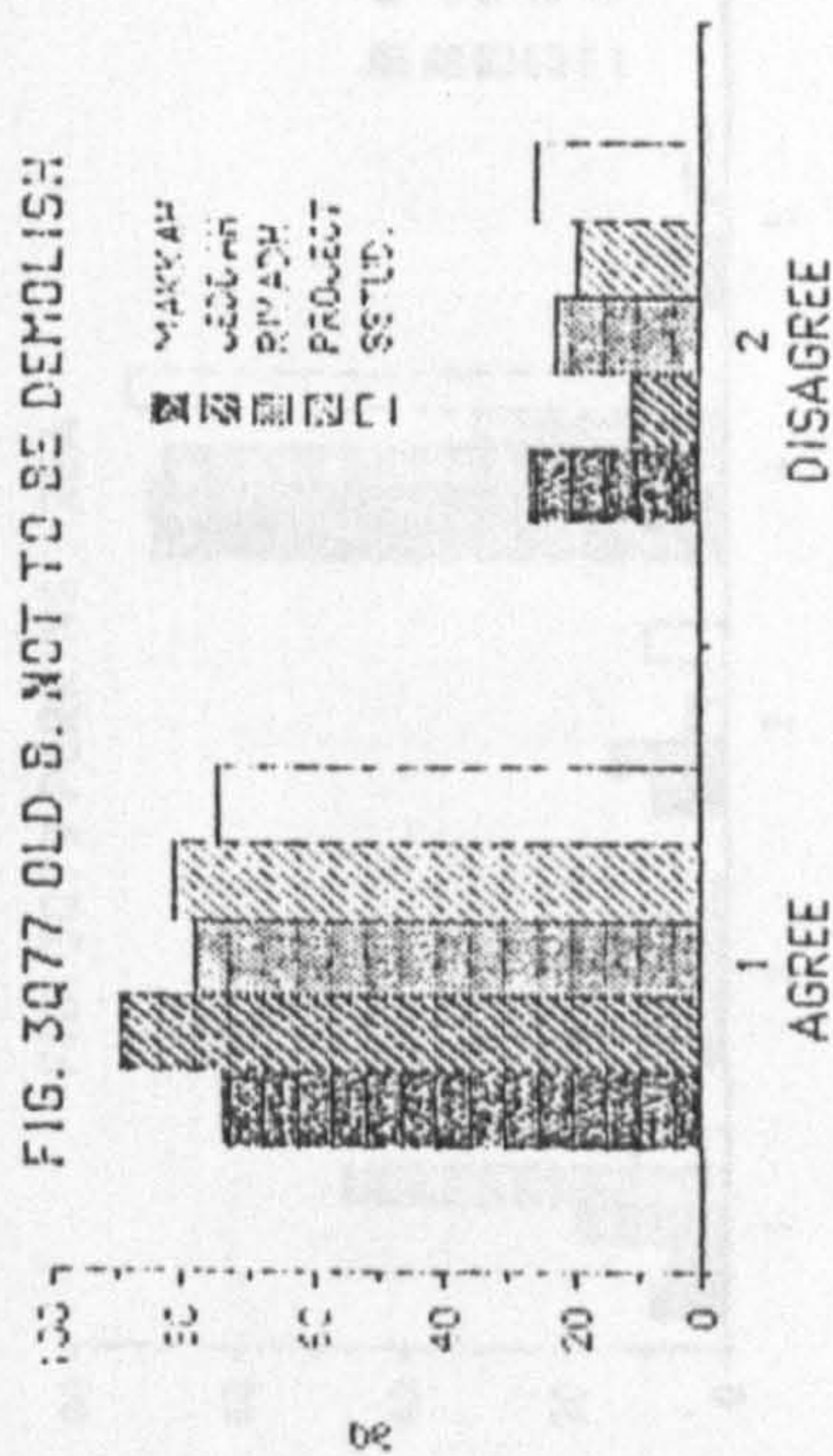


FIG. 1Q76 NUMBER OF CARS

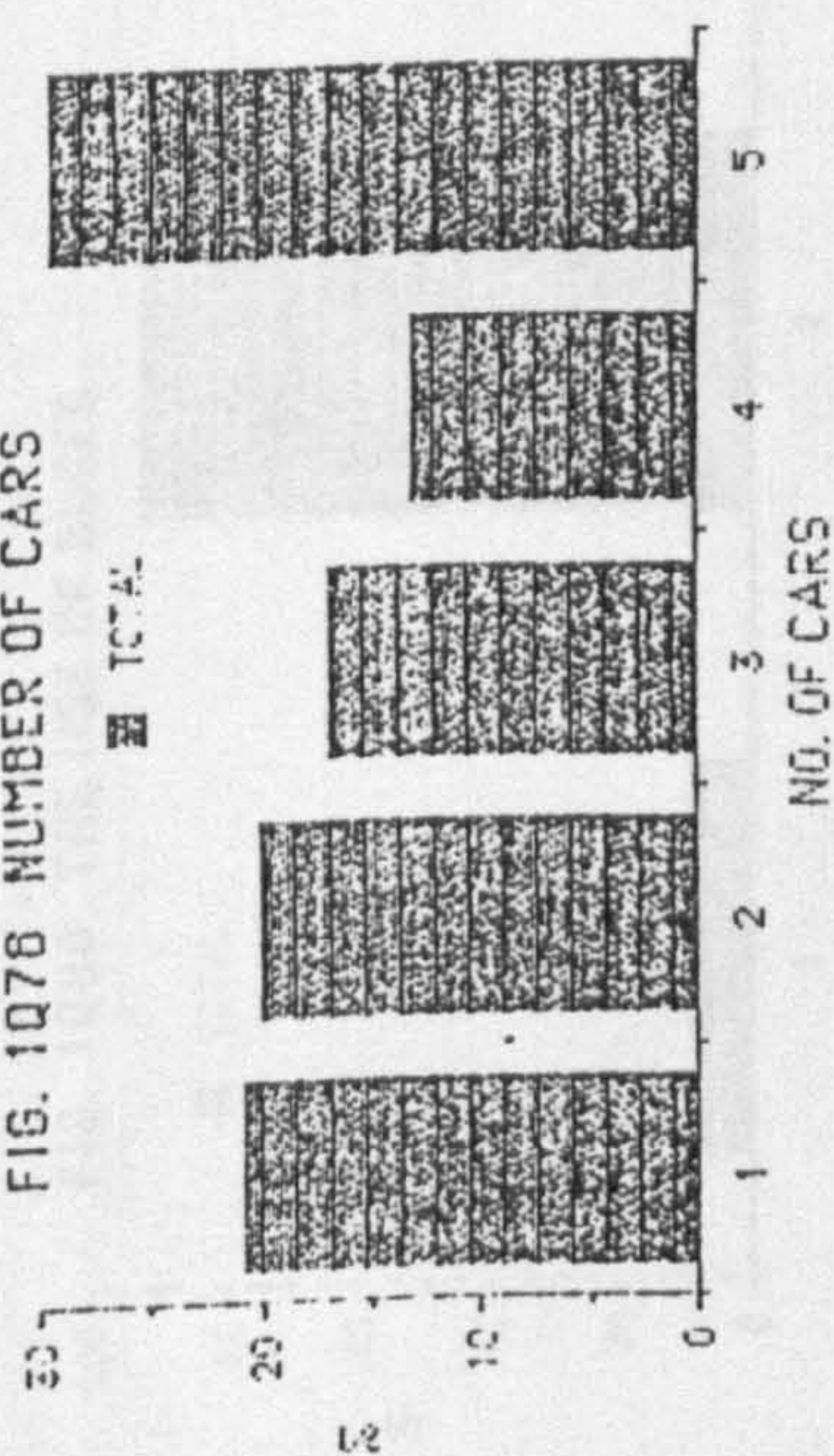


FIG. 2Q7S NUMBER OF CARS

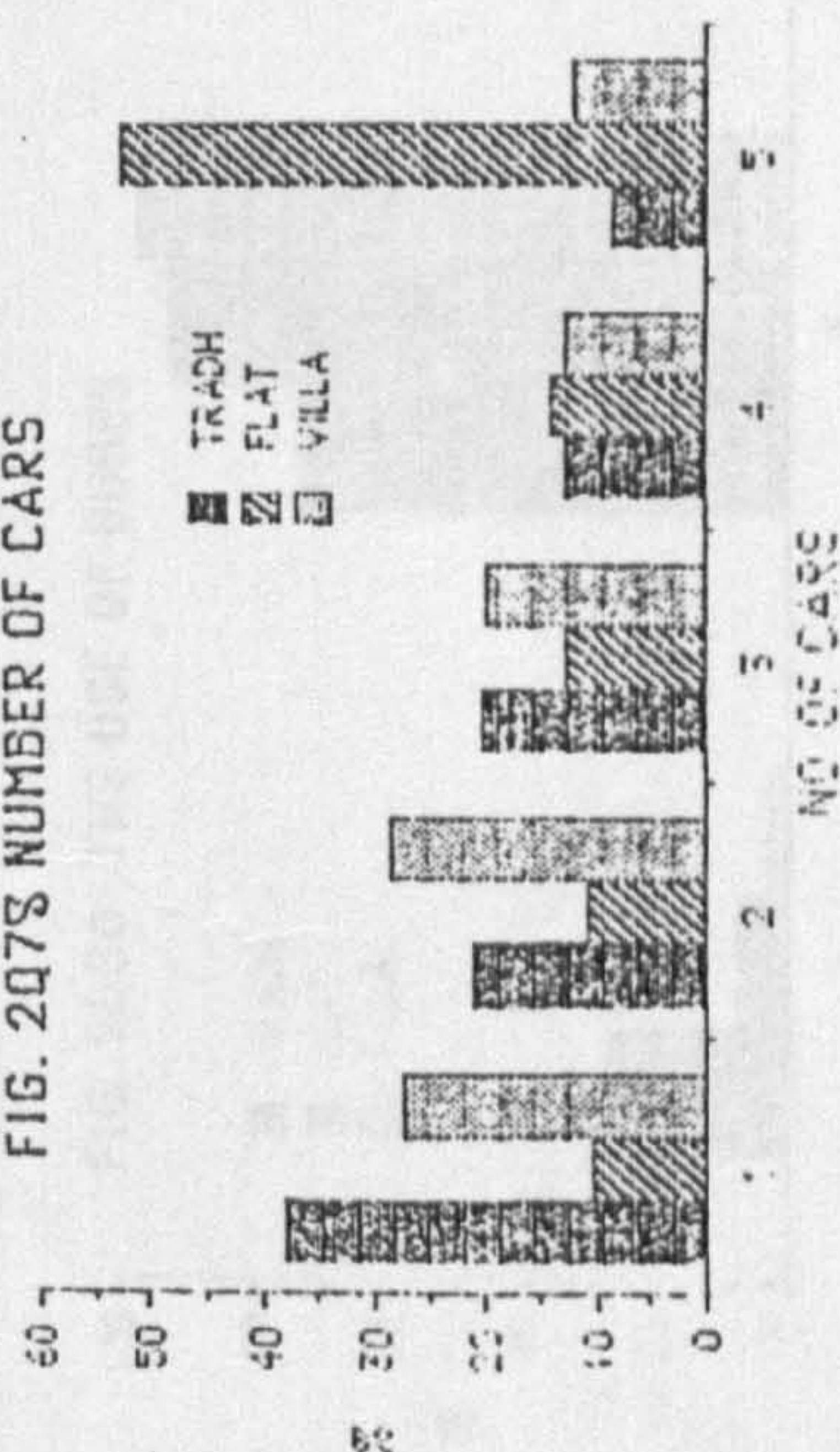


FIG. 3Q7S NUMBER OF CARS

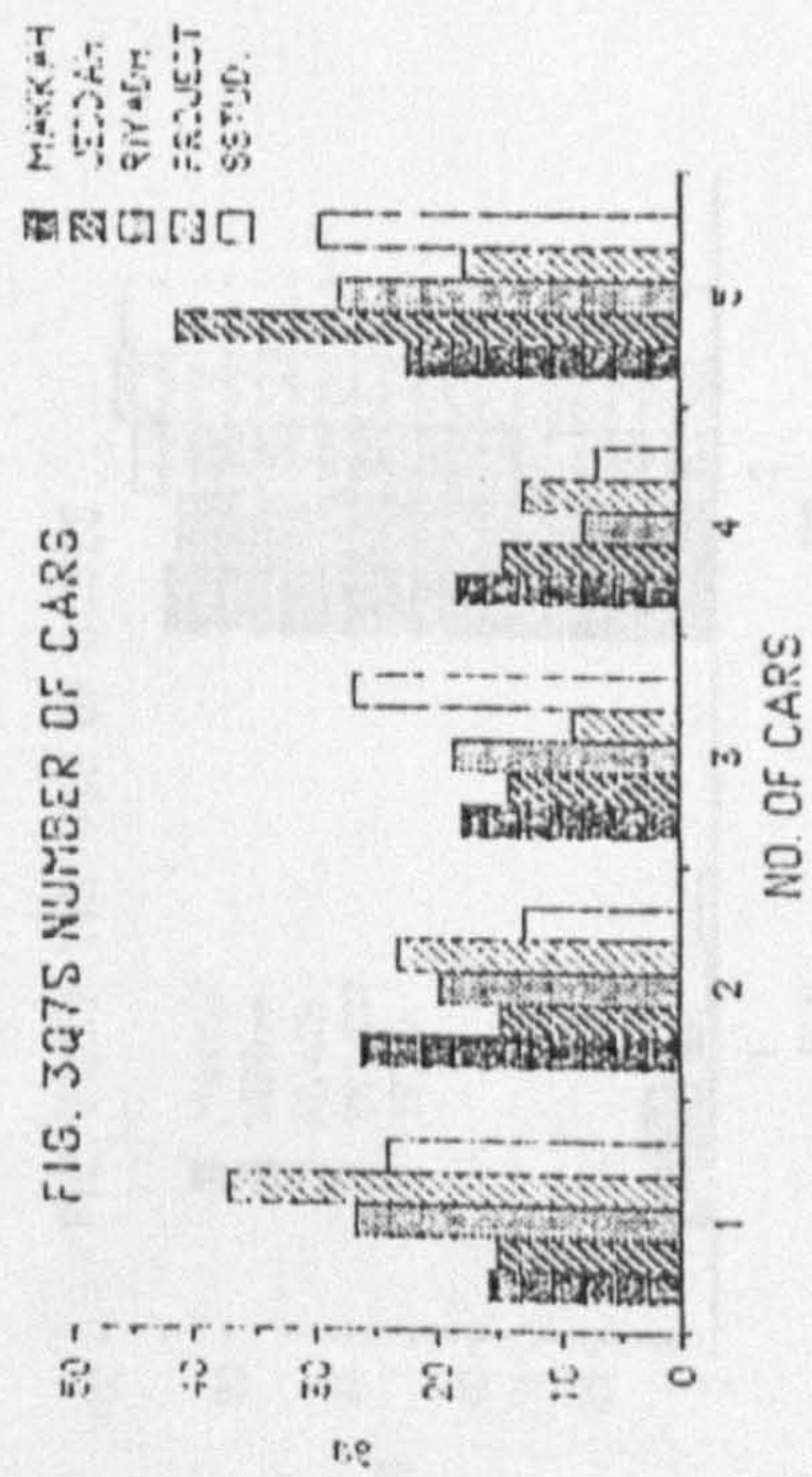


FIG. 1Q79 PARKING AREA

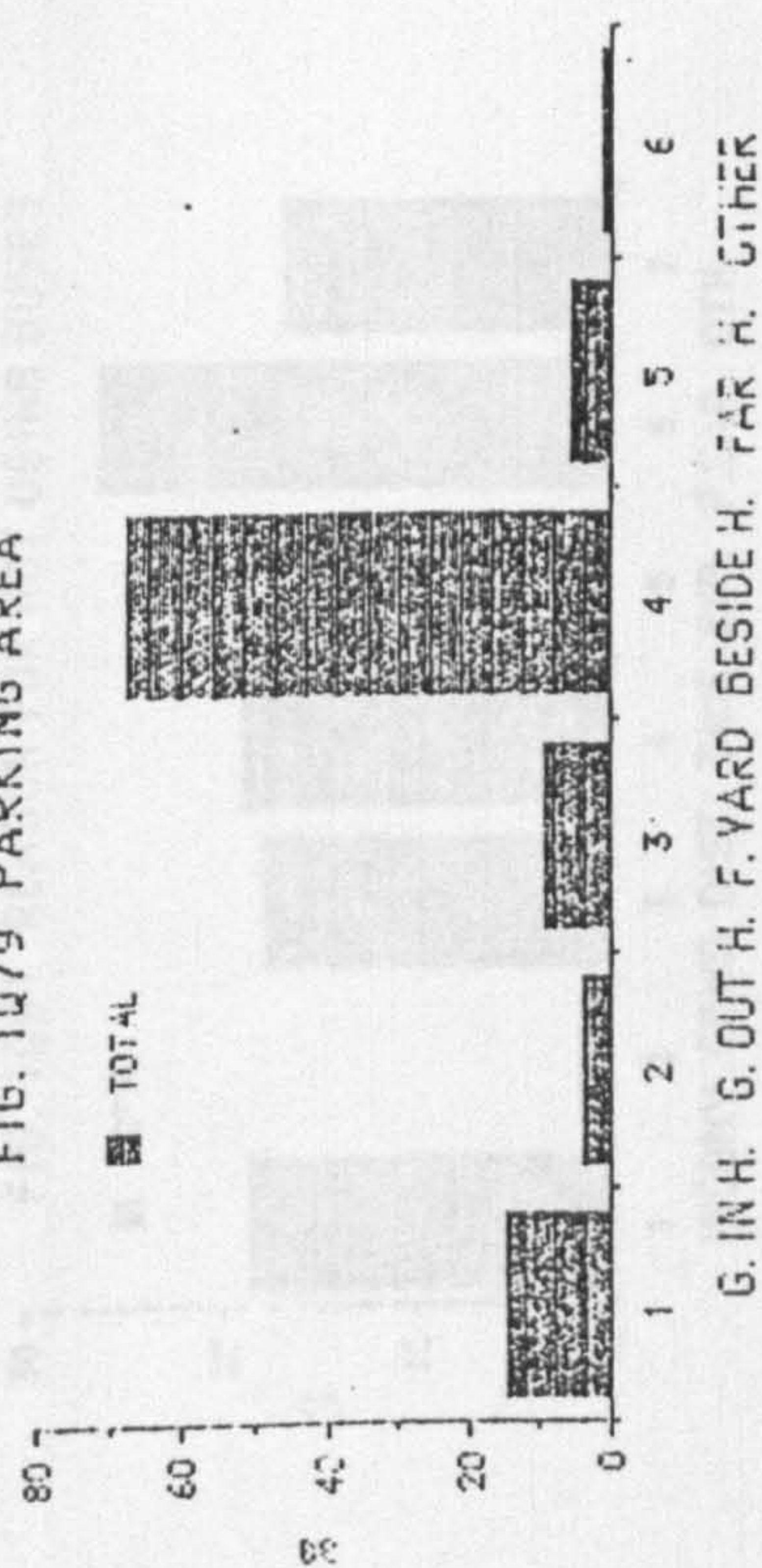


FIG. 2Q79 PARKING AREA

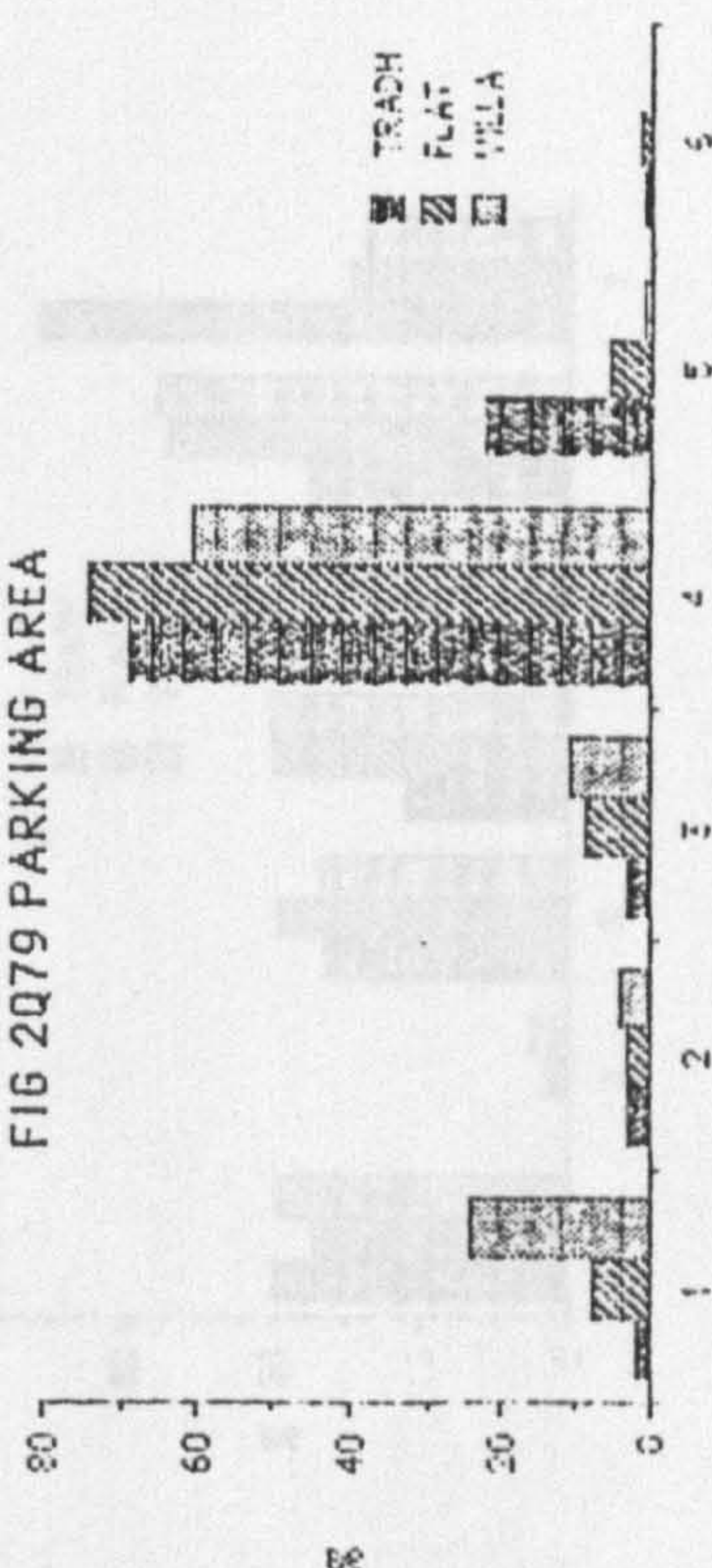


FIG. 3Q79 PARKING AREA

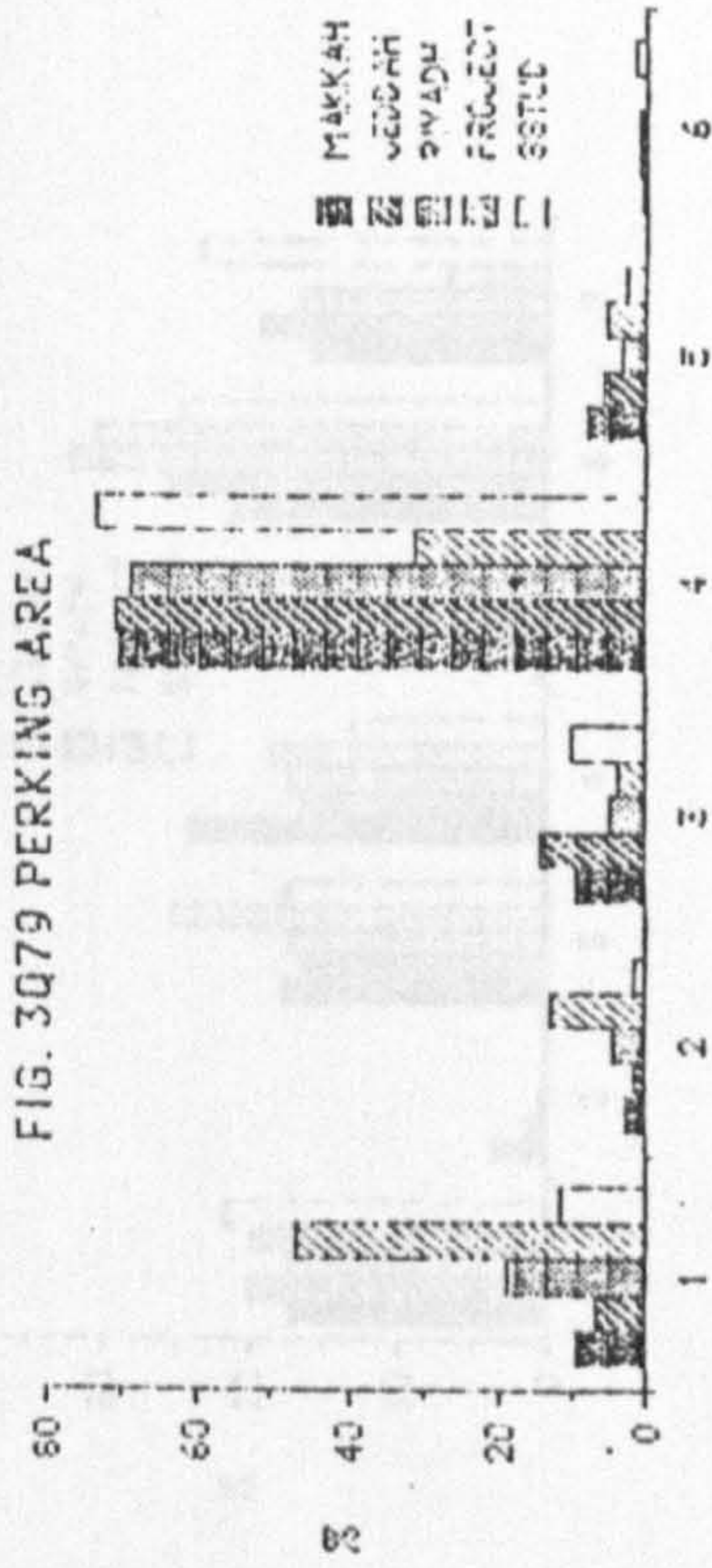


FIG. 1Q80 THE USE OF BUSES

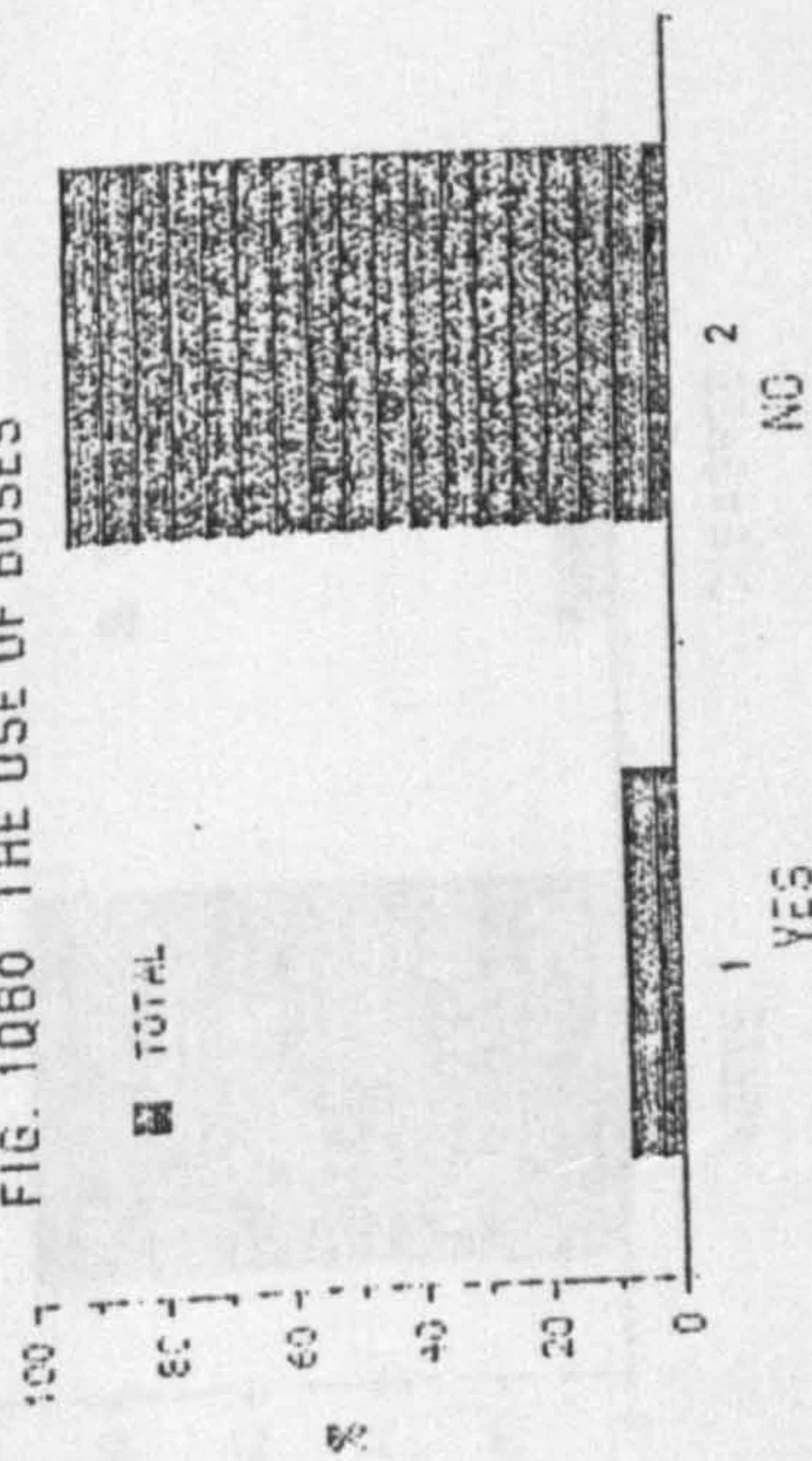


FIG. 2Q80 THE USE OF BUSES

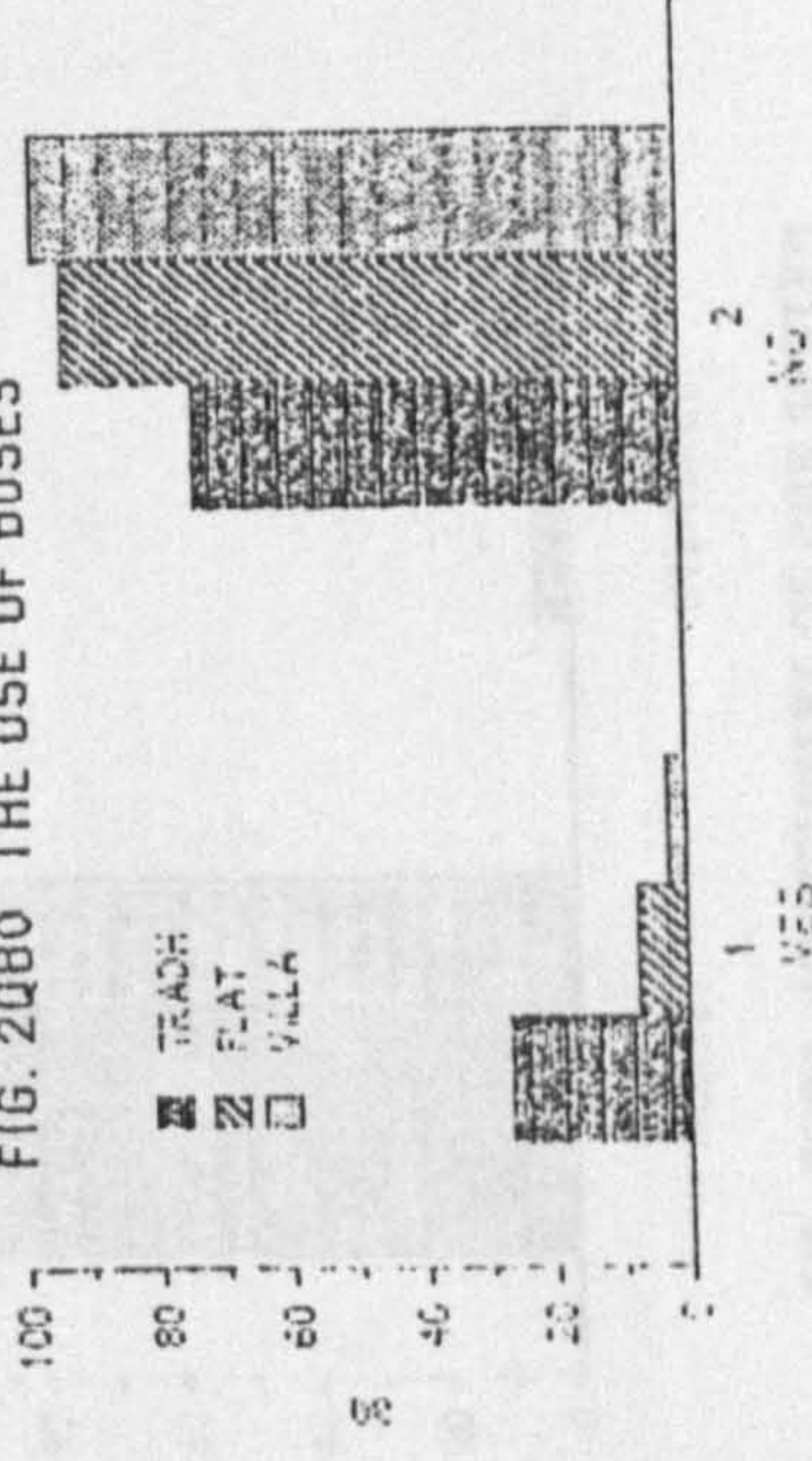


FIG. 3Q80 THE USE OF BUSES

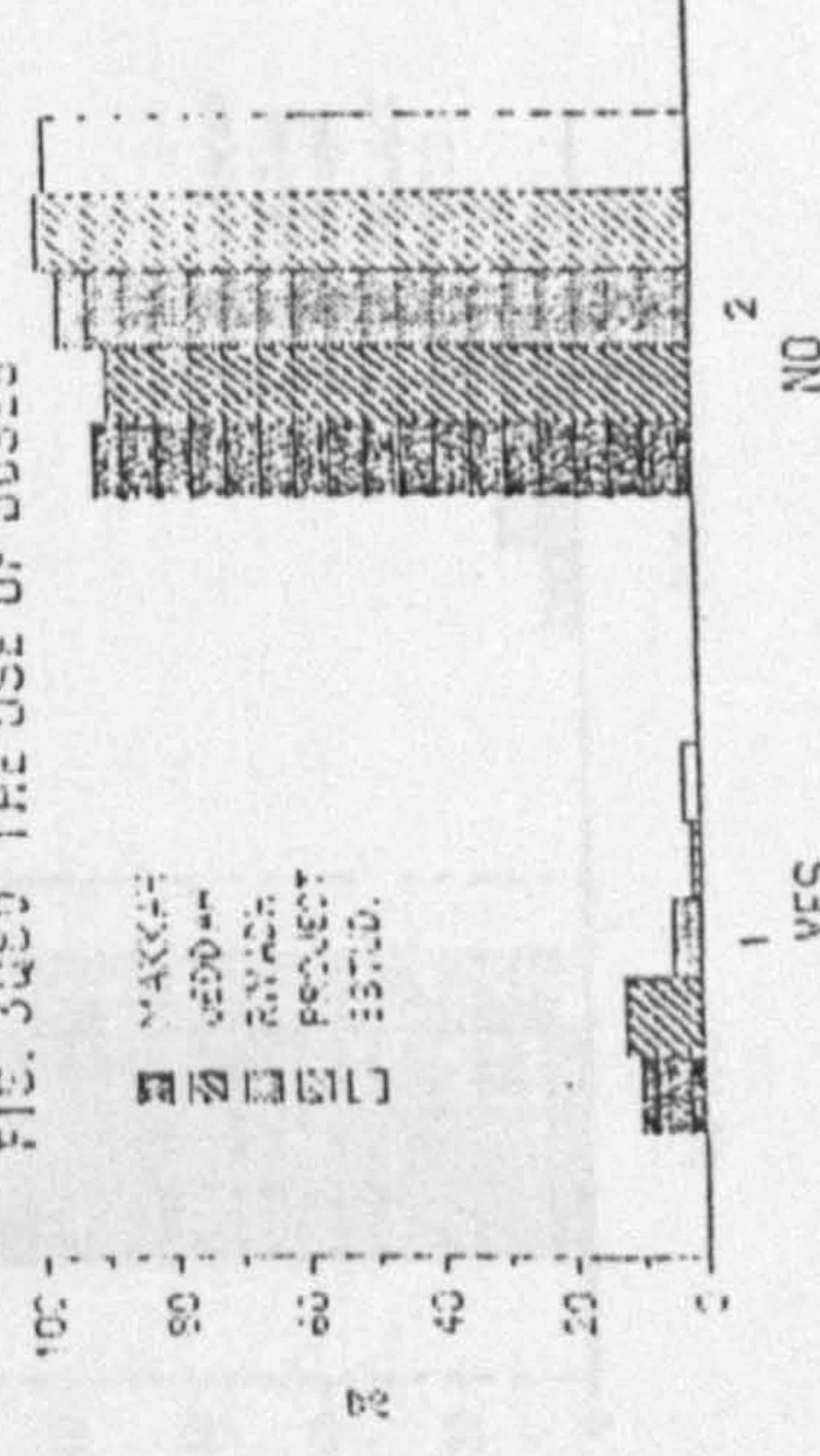


FIG. 1Q81 REASON FOR NOT USING BUSES

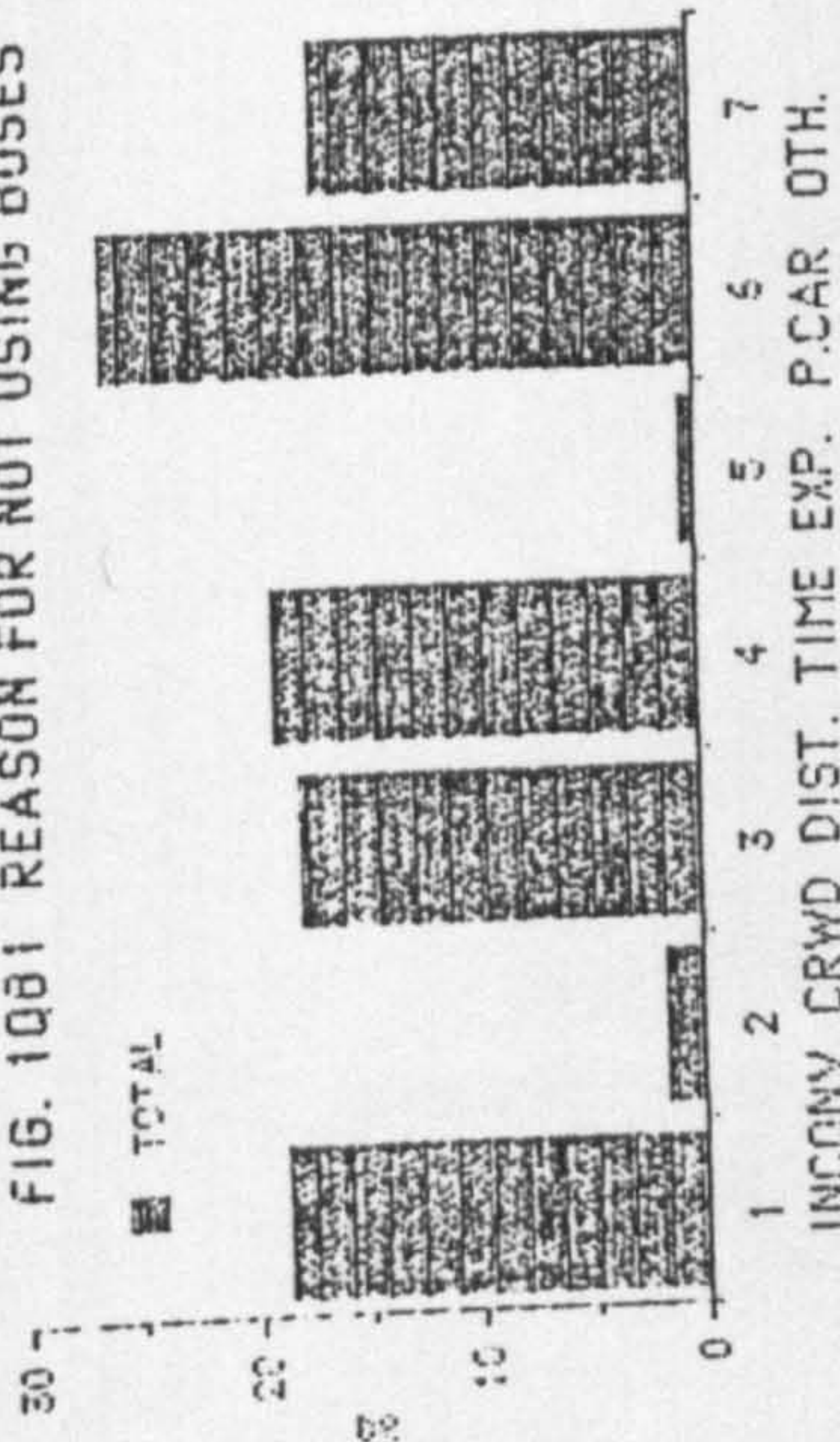


FIG. 2Q81 REASON FOR NOT USING BUSES

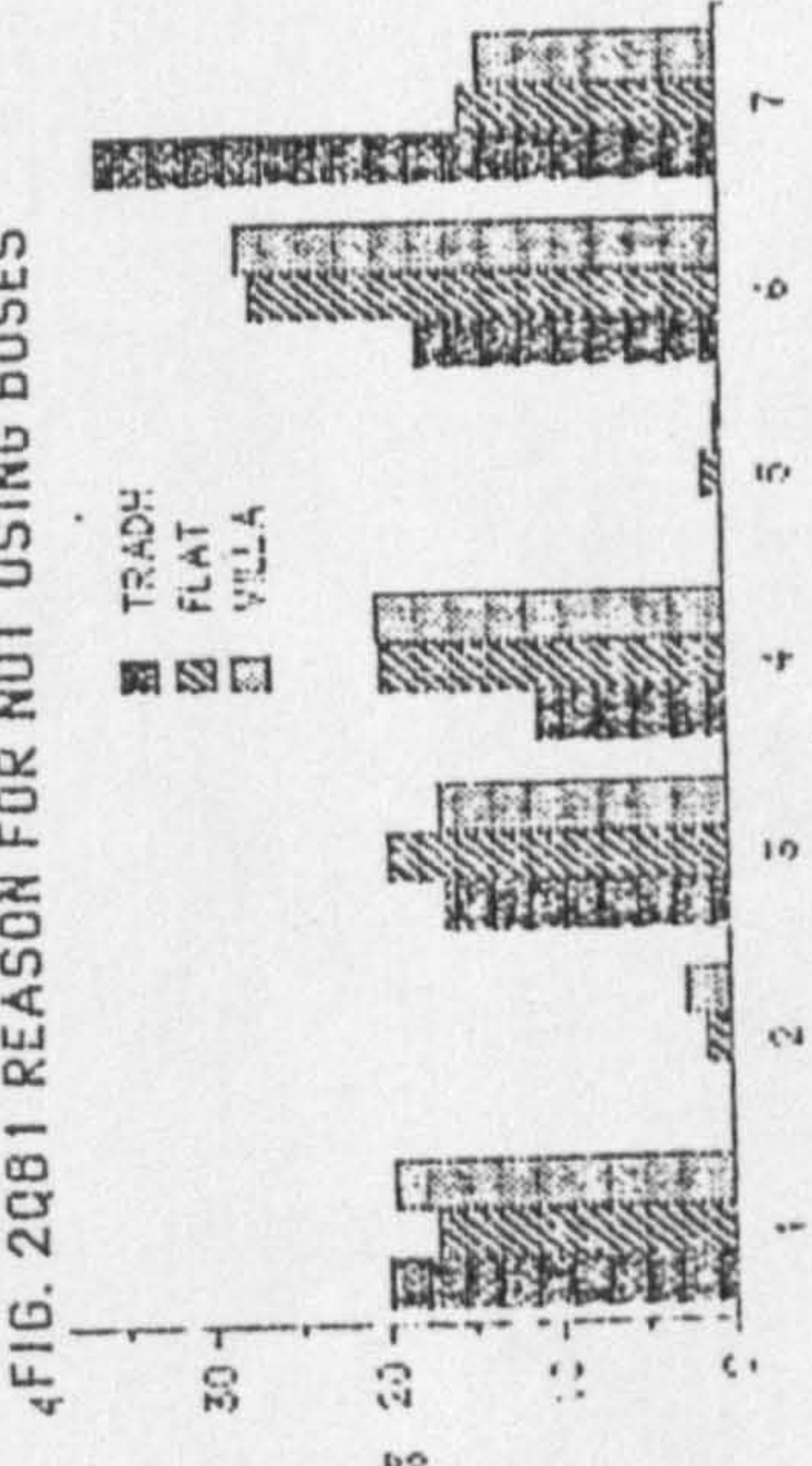


FIG. 3Q81 REASON FOR NOT USING BUSES

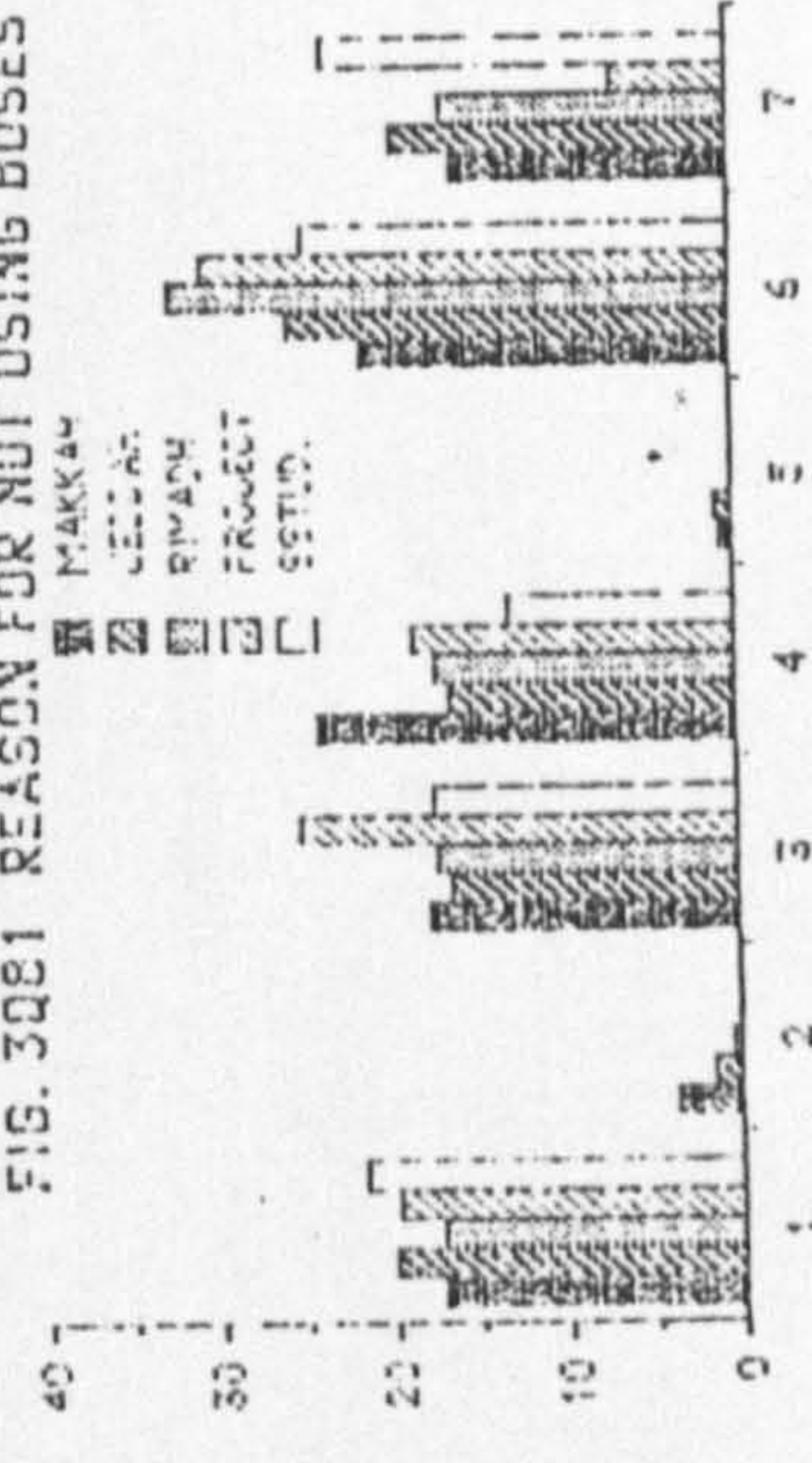


FIG. 1Q82 IMPROVMENT OF BUS SYSTEM

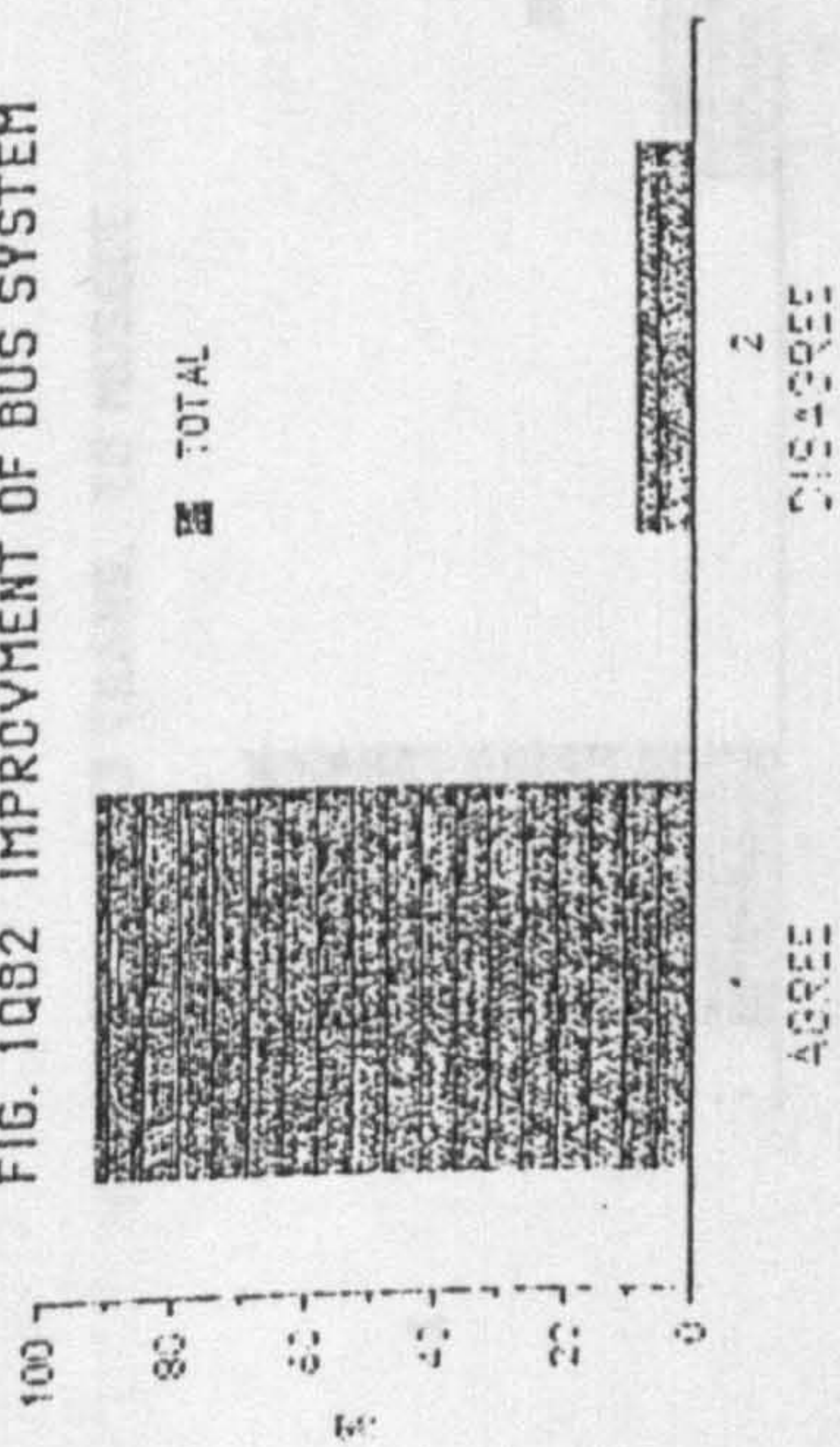


FIG. 2Q82 IMPROVMENT OF BUS SYSTEM

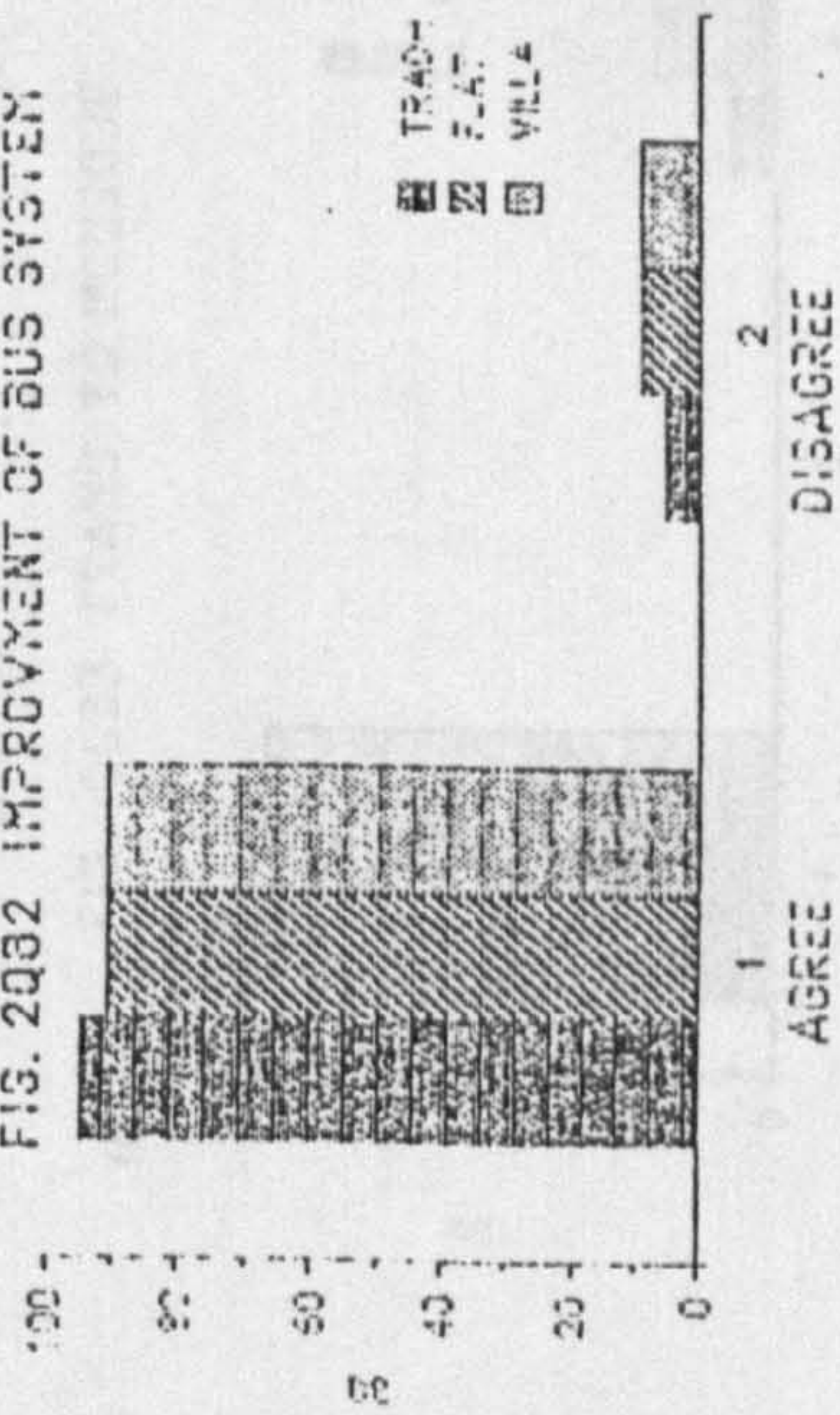


FIG. 3Q82 IMPROVMENT OF BUS SYSTEM

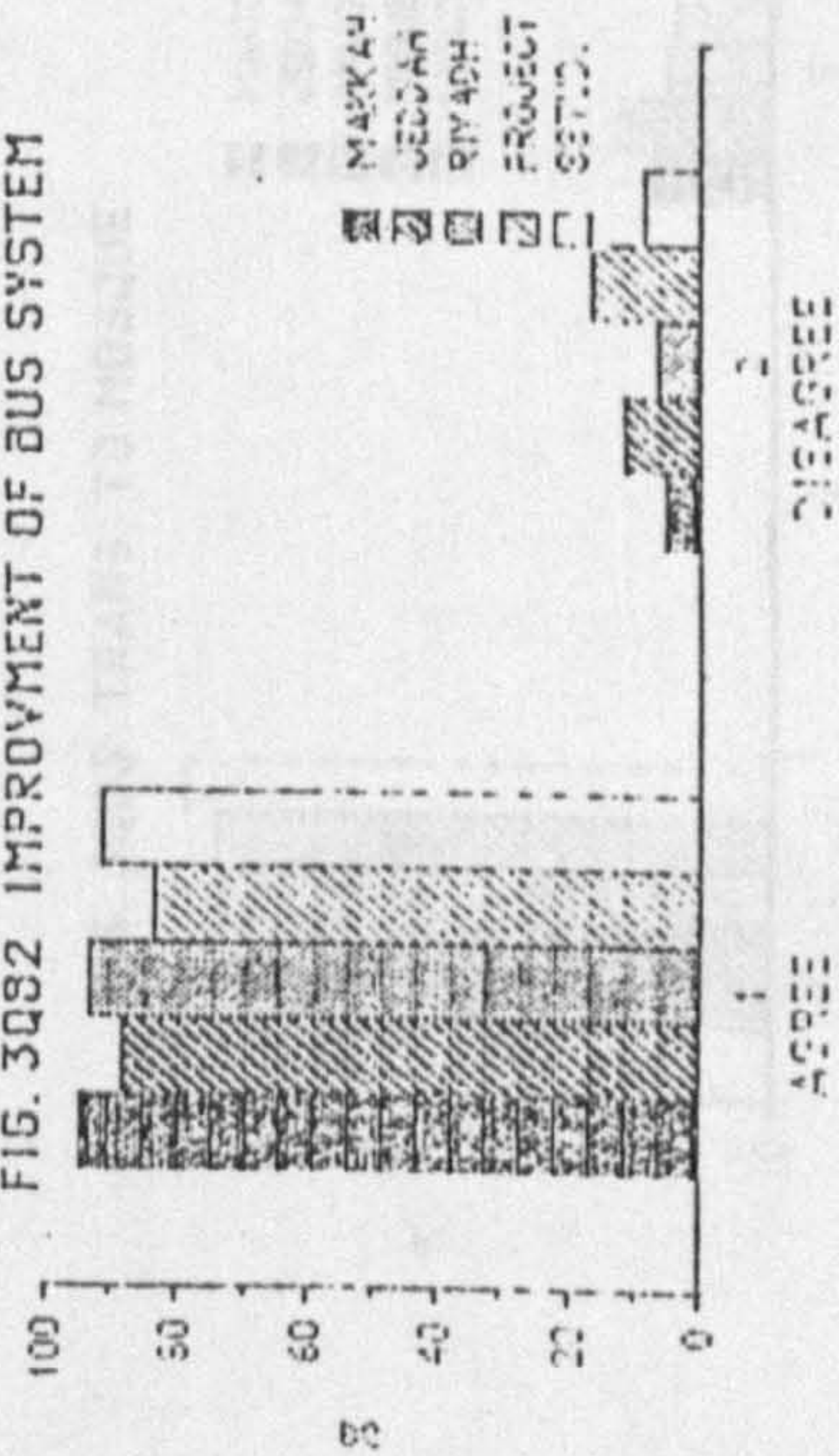


FIG. 1Q83 TRANS. TO MOSQUE

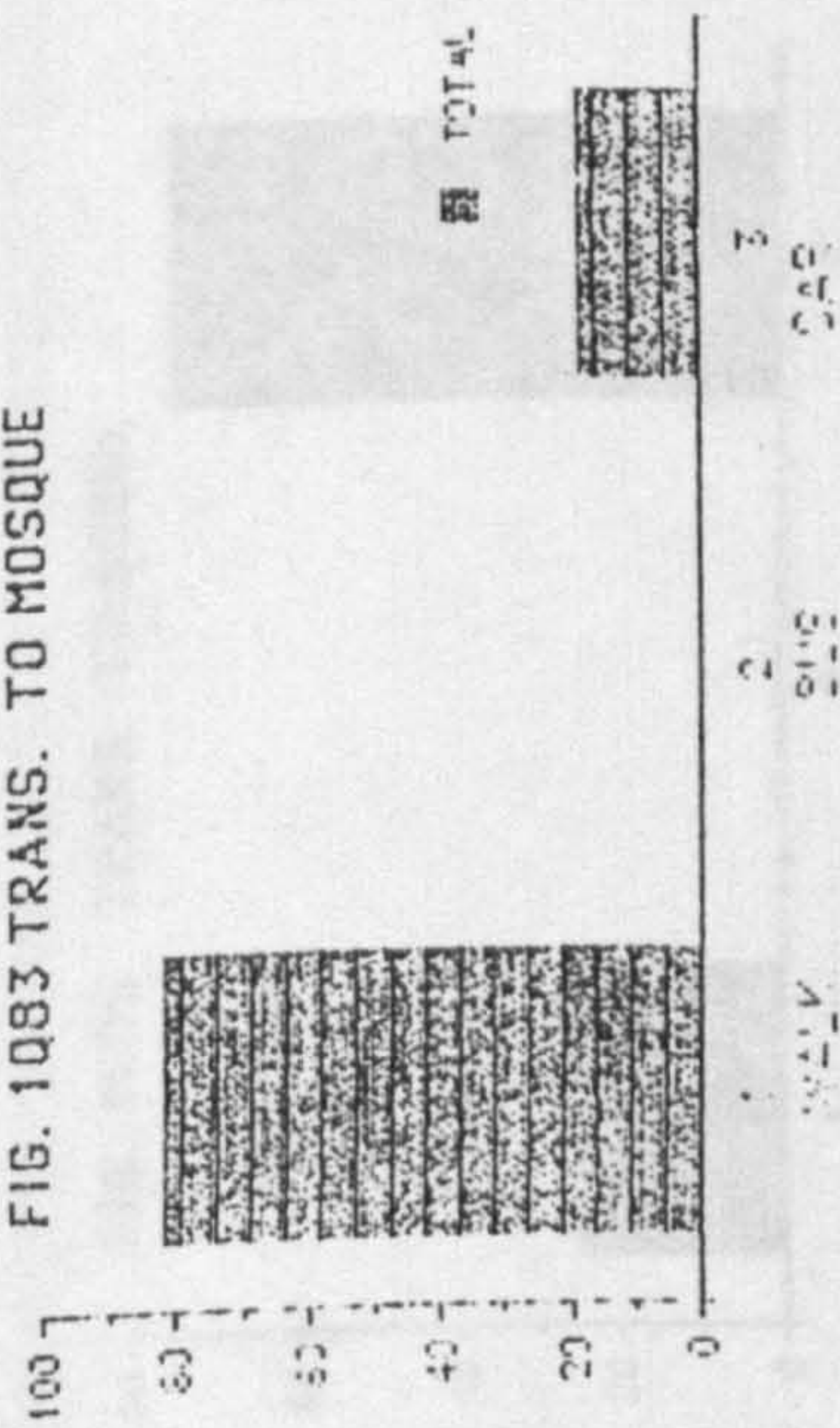


FIG. 2Q83 TRANS. TO MOSQUE

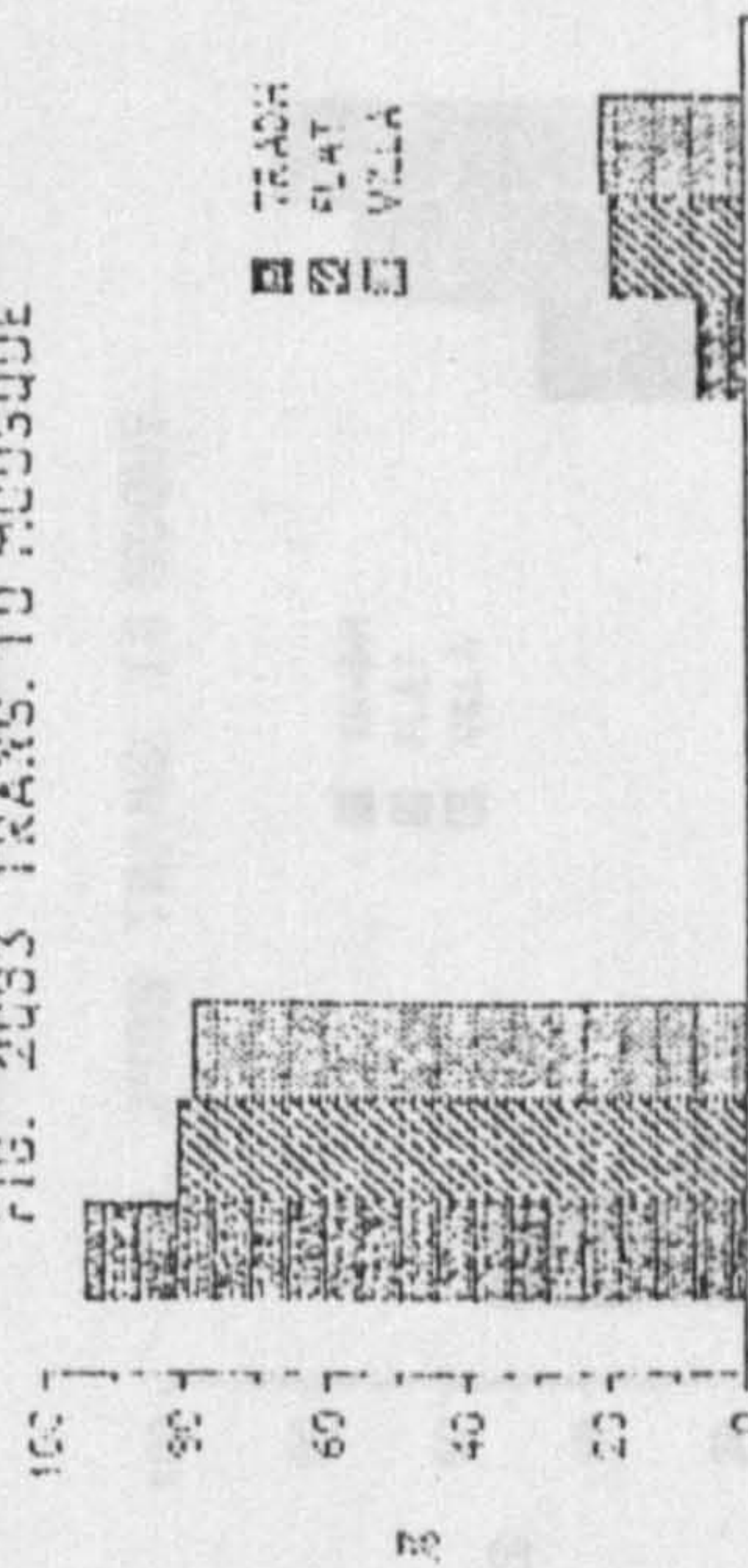


FIG. 3Q83 TRANS. TO MOSQUE

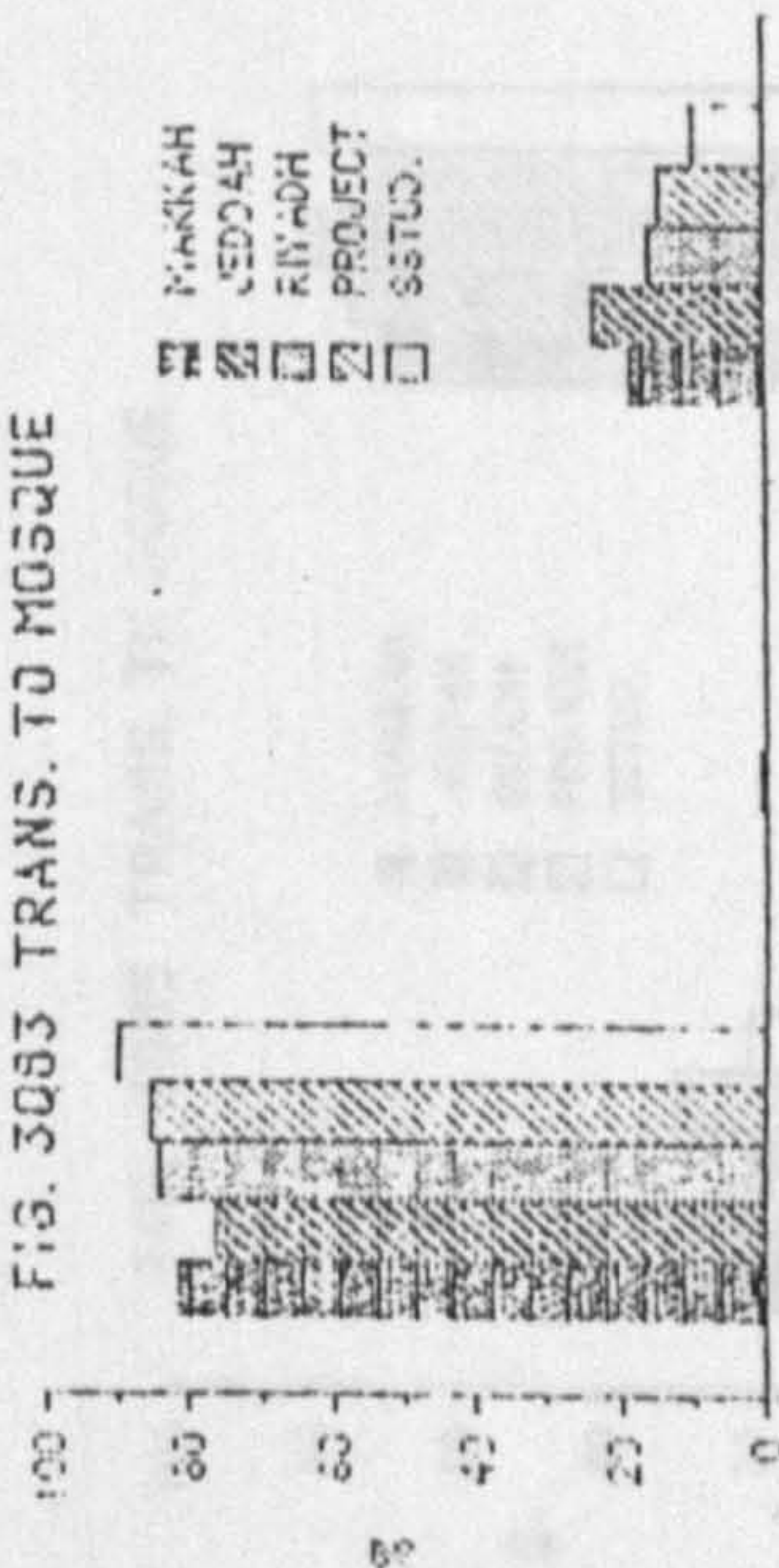


FIG. 1Q84 DISTANCE TO MOSQUE

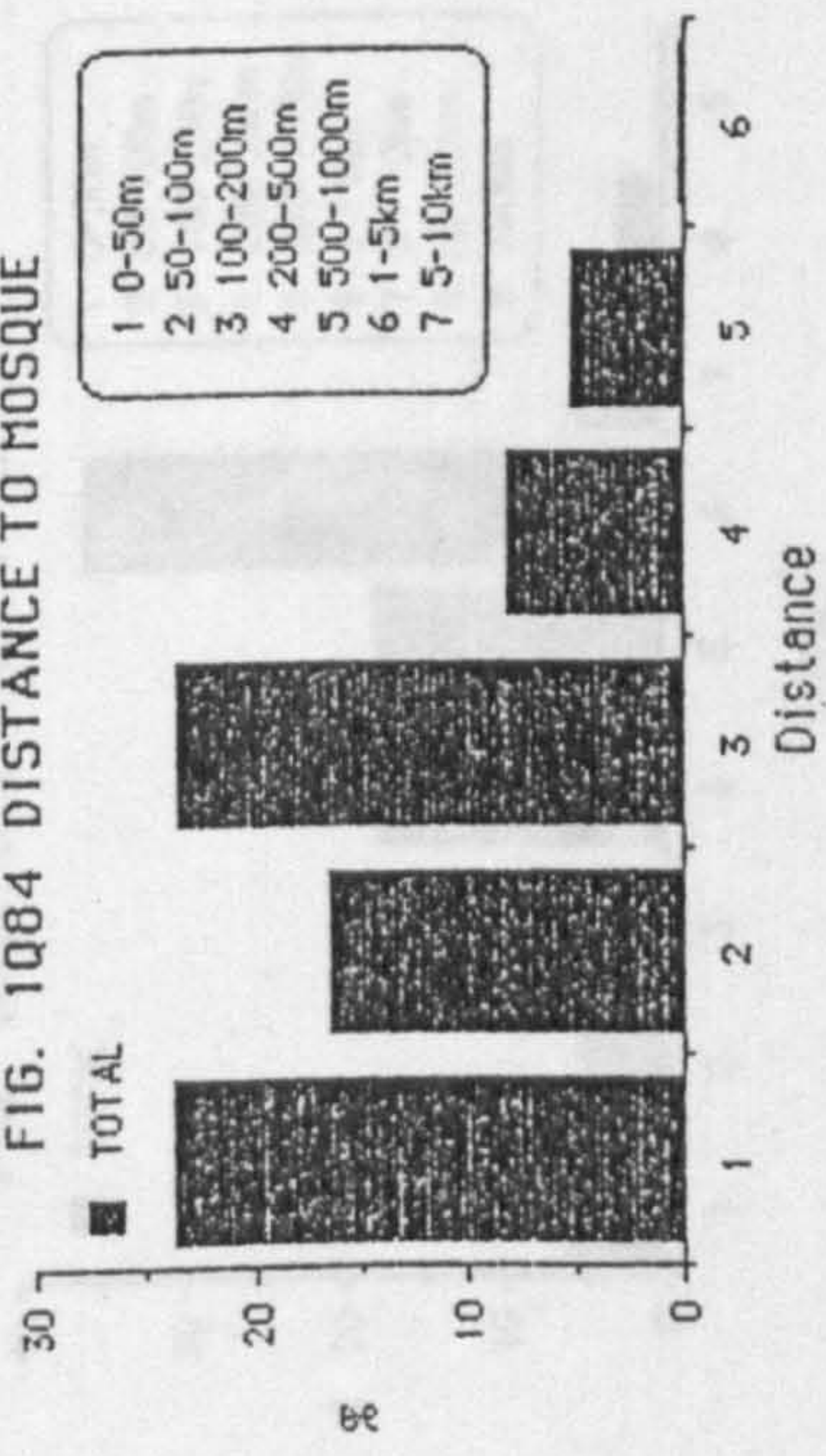


FIG. 2Q84 DISTANCE TO MOSQUE

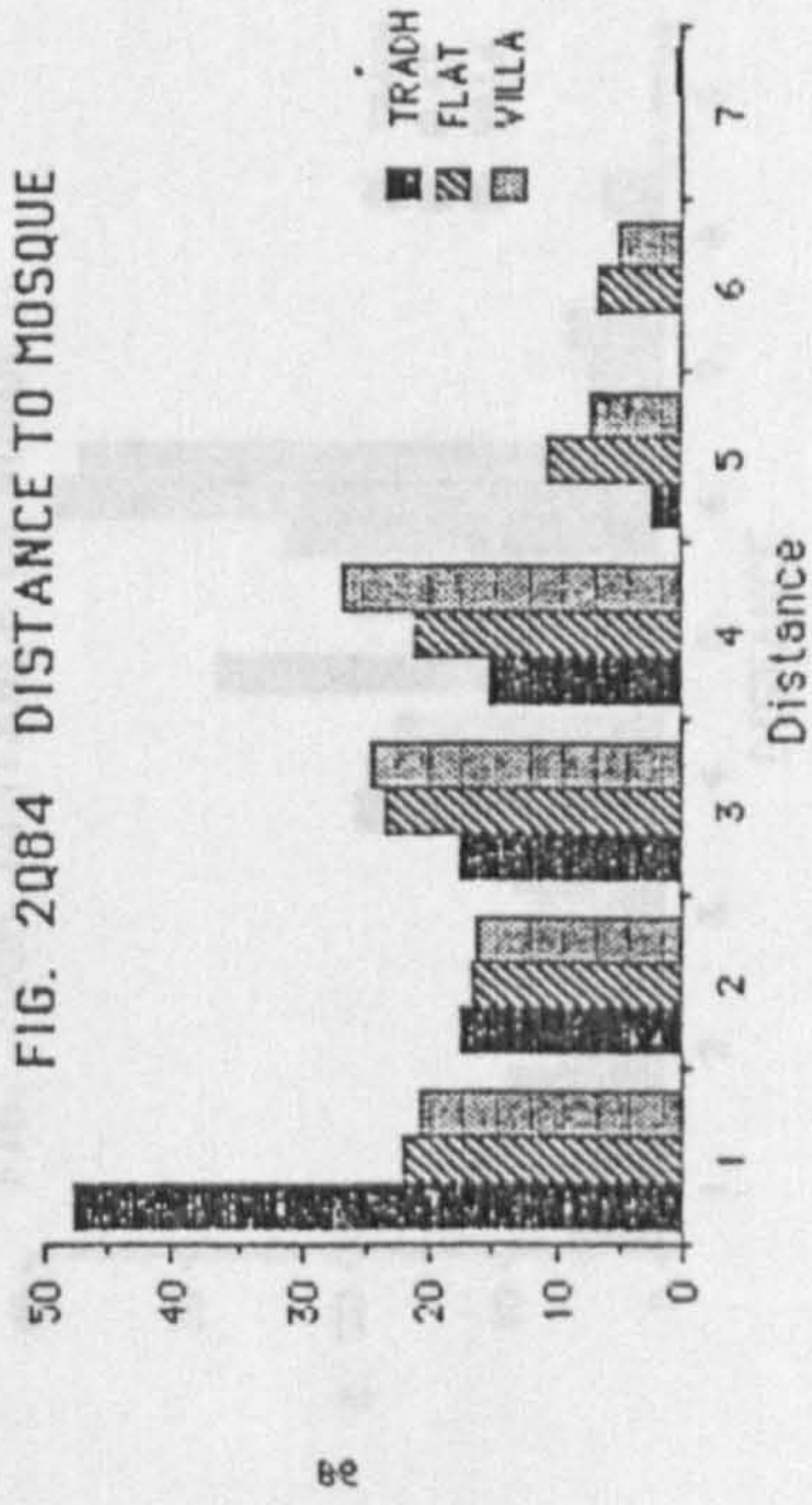


FIG. 3Q84 DISTANCE TO MOSQUE

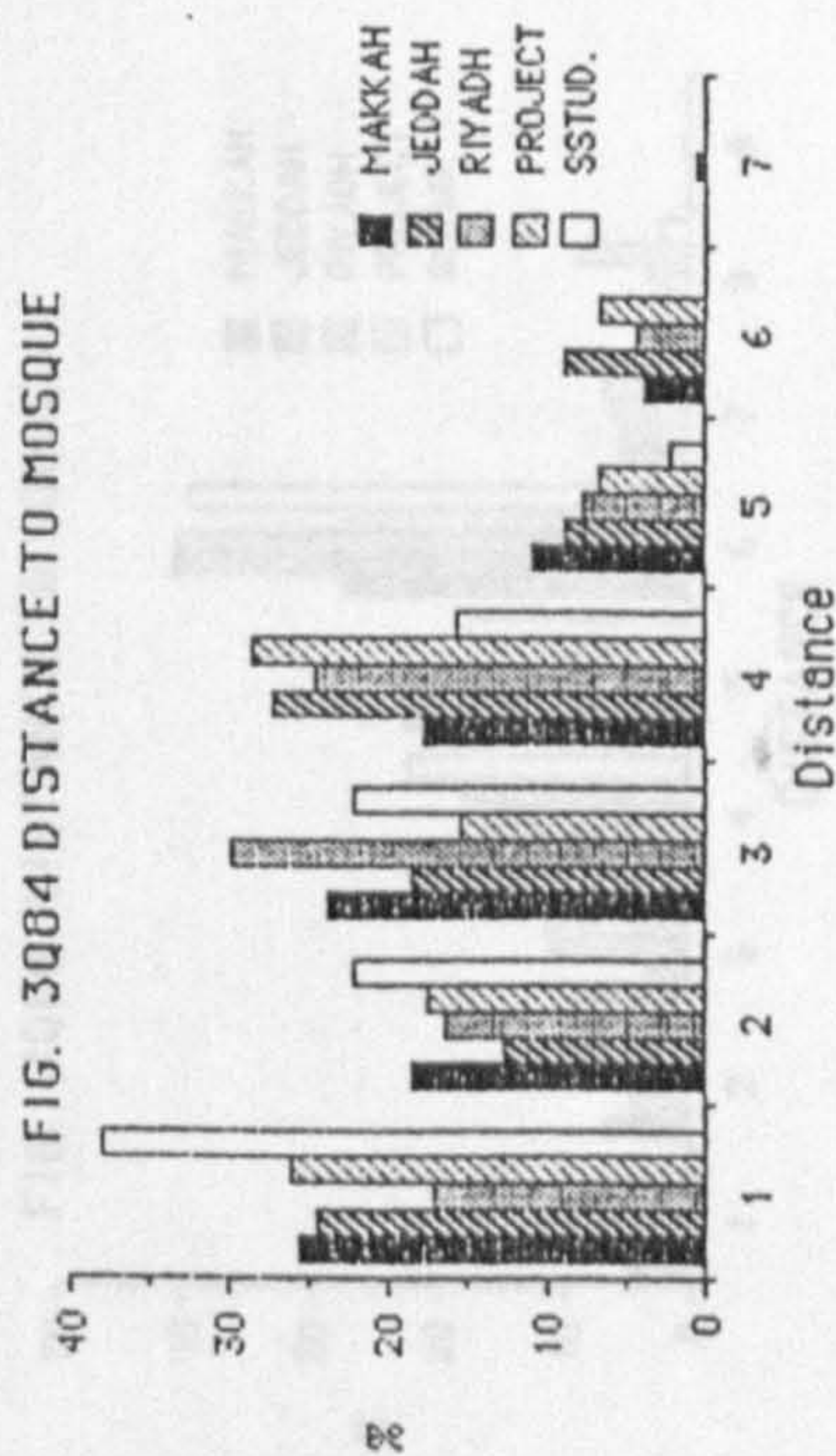


FIG. 1Q85 TRANS. TO SOQUE

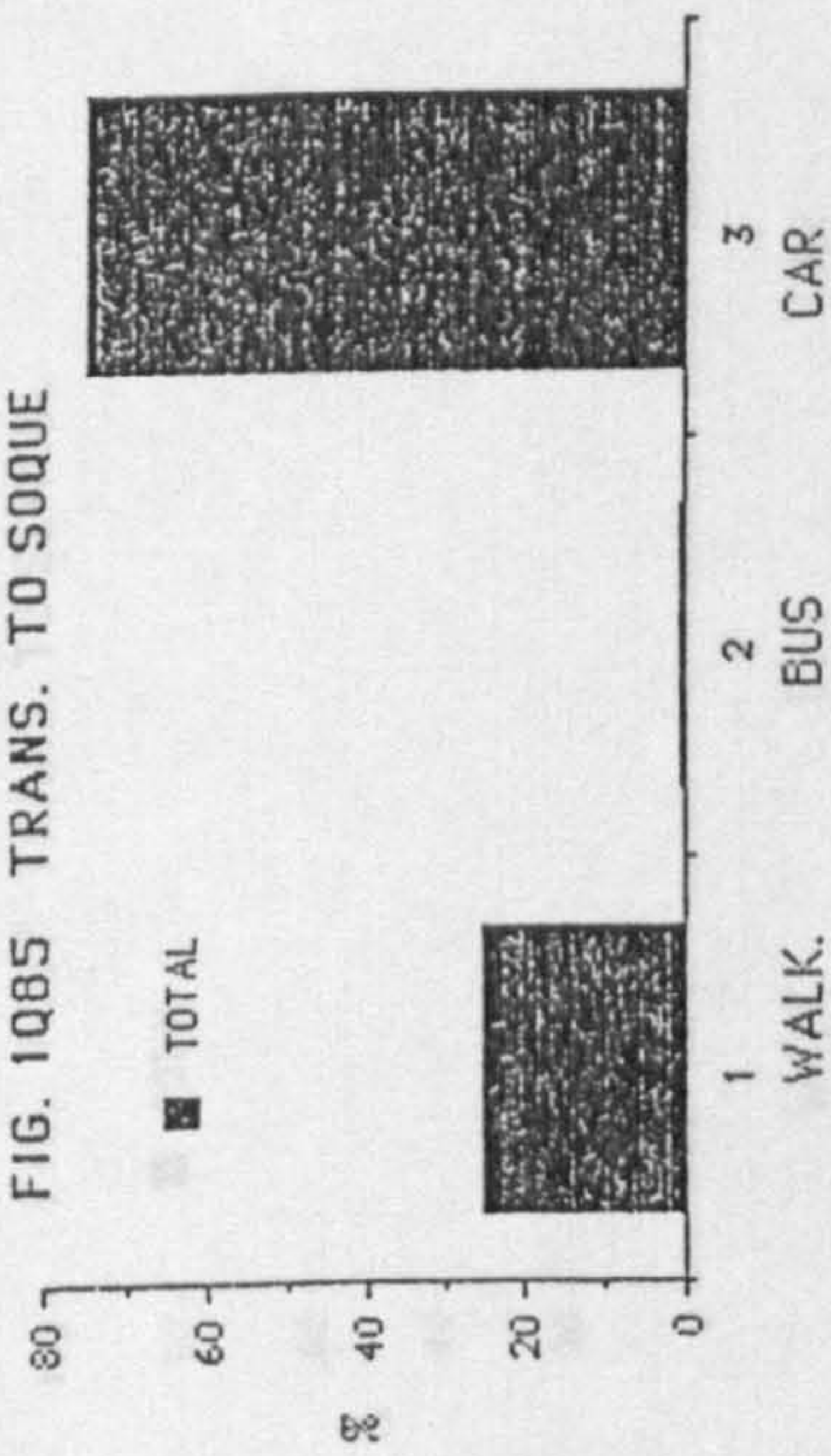


FIG. 2Q85 TRANS. TO SOQUE

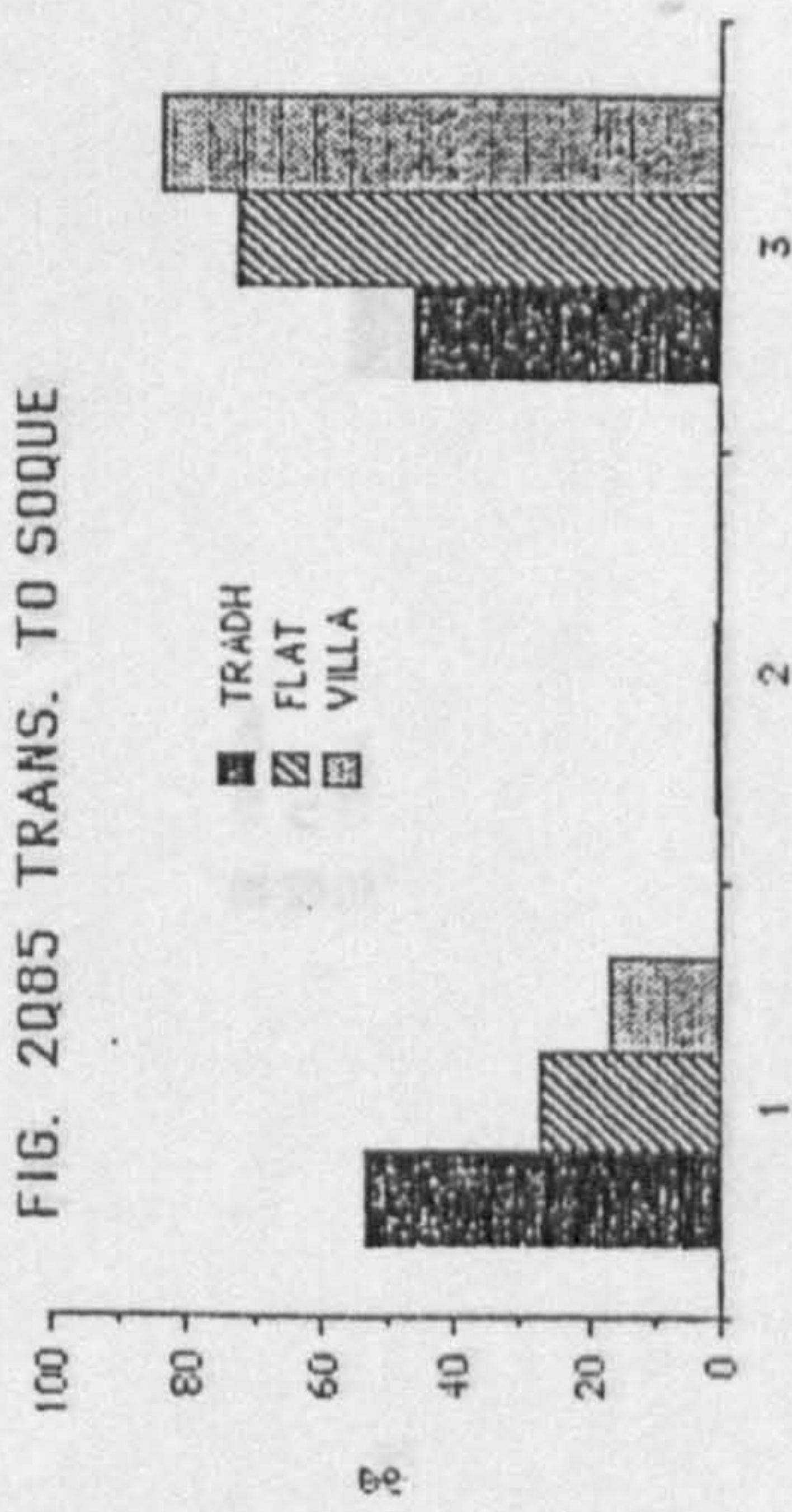


FIG. 3Q85 TRANS. TO SOQUE

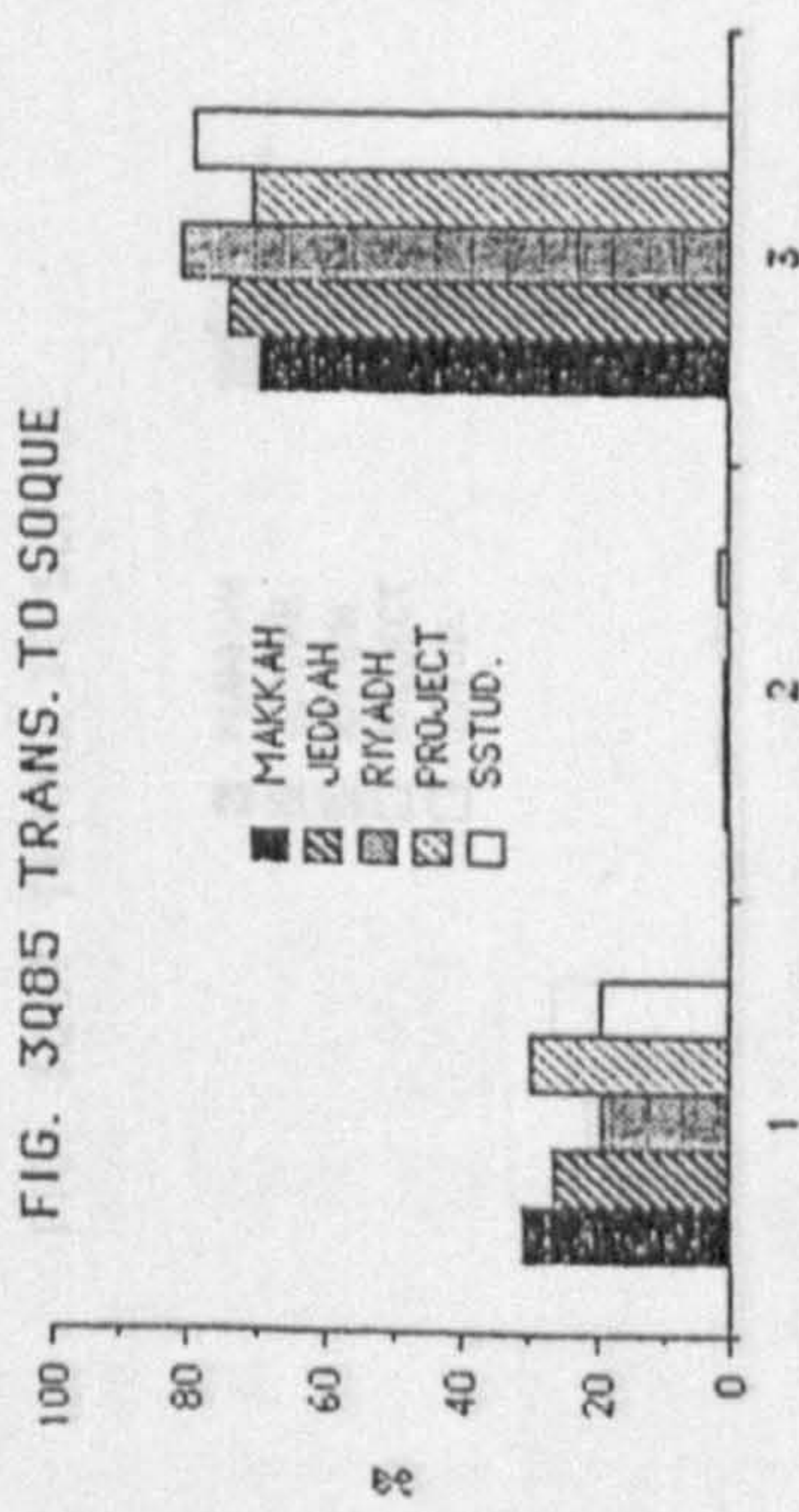


FIG. 1Q86 DISTANCE TO SOQUE

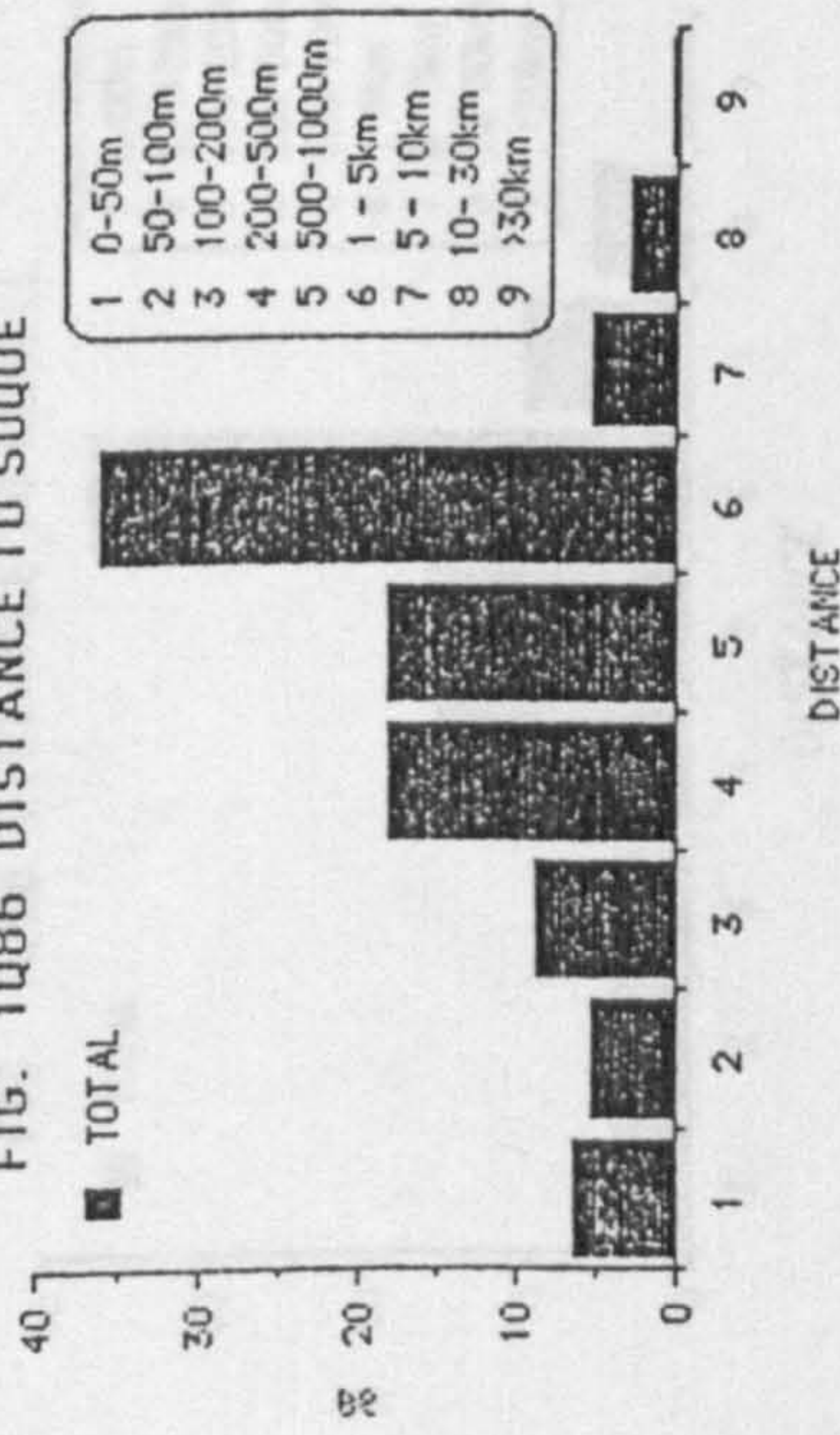


FIG. 2Q86 DISTANCE TO SOQUE

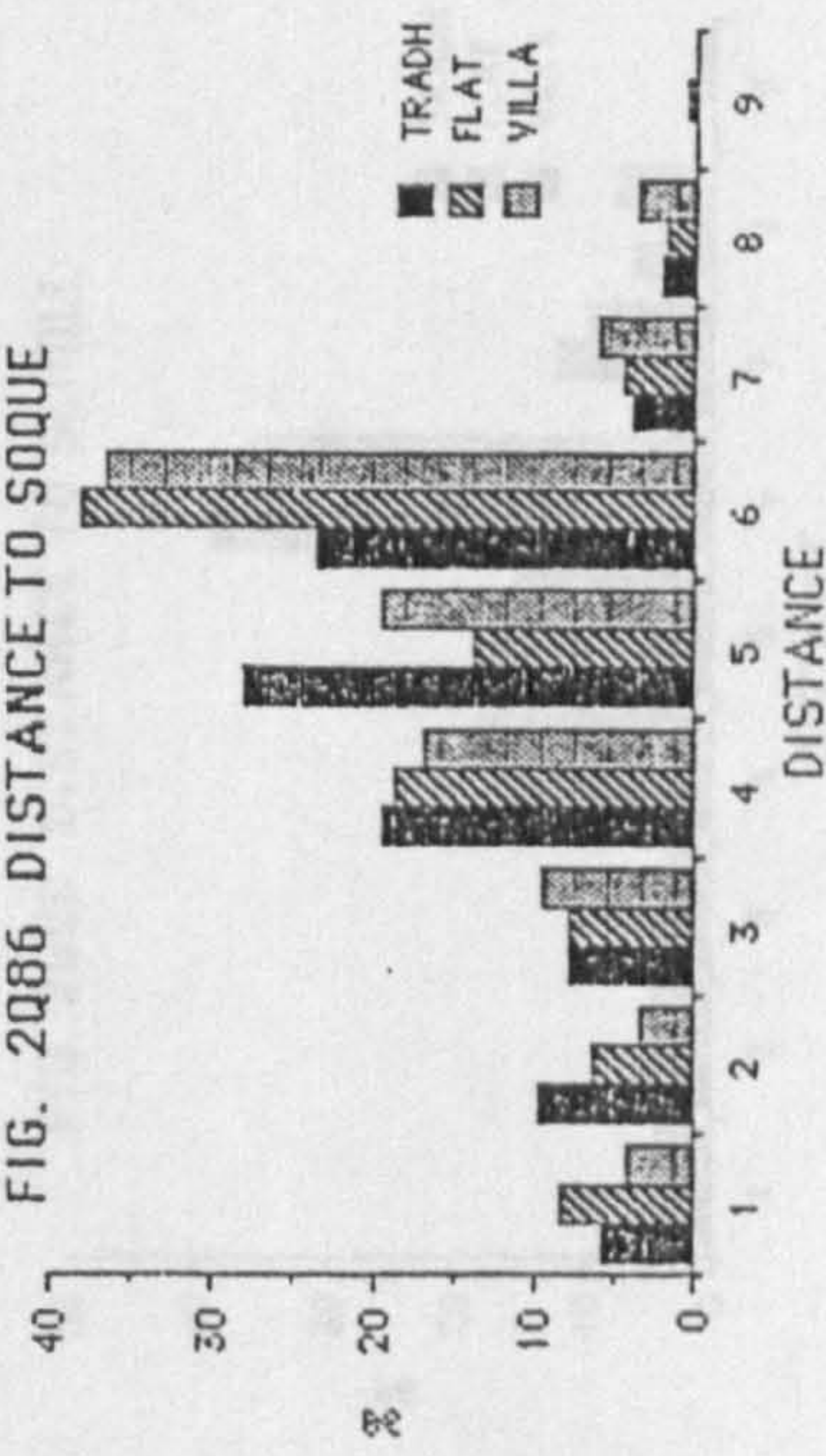


FIG. 3Q86 DISTANCE TO SOQUE

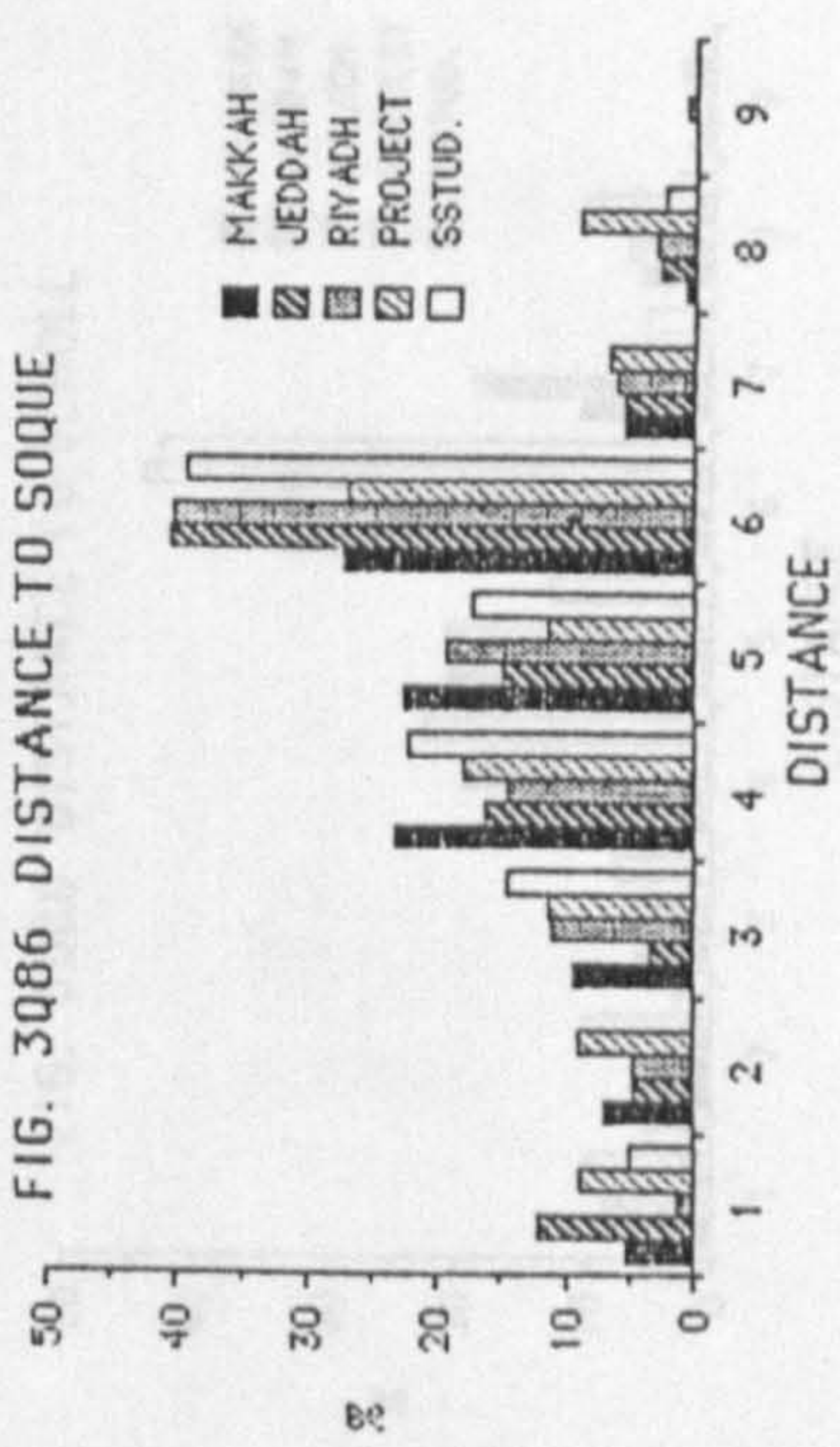


FIG. 1Q87 TRANS. TO SCHOOL

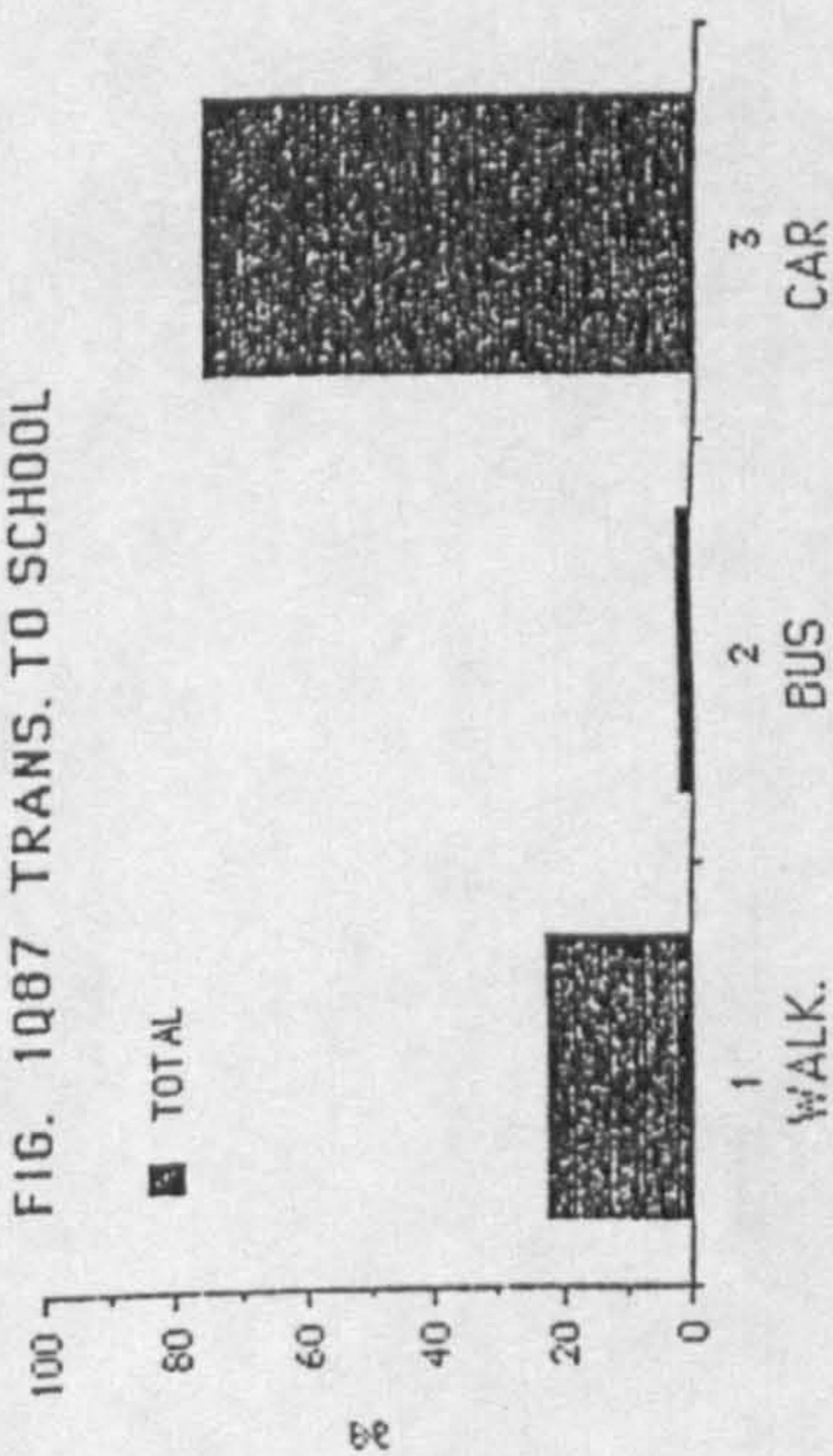


FIG. 2Q87 TRANS. TO SCHOOL

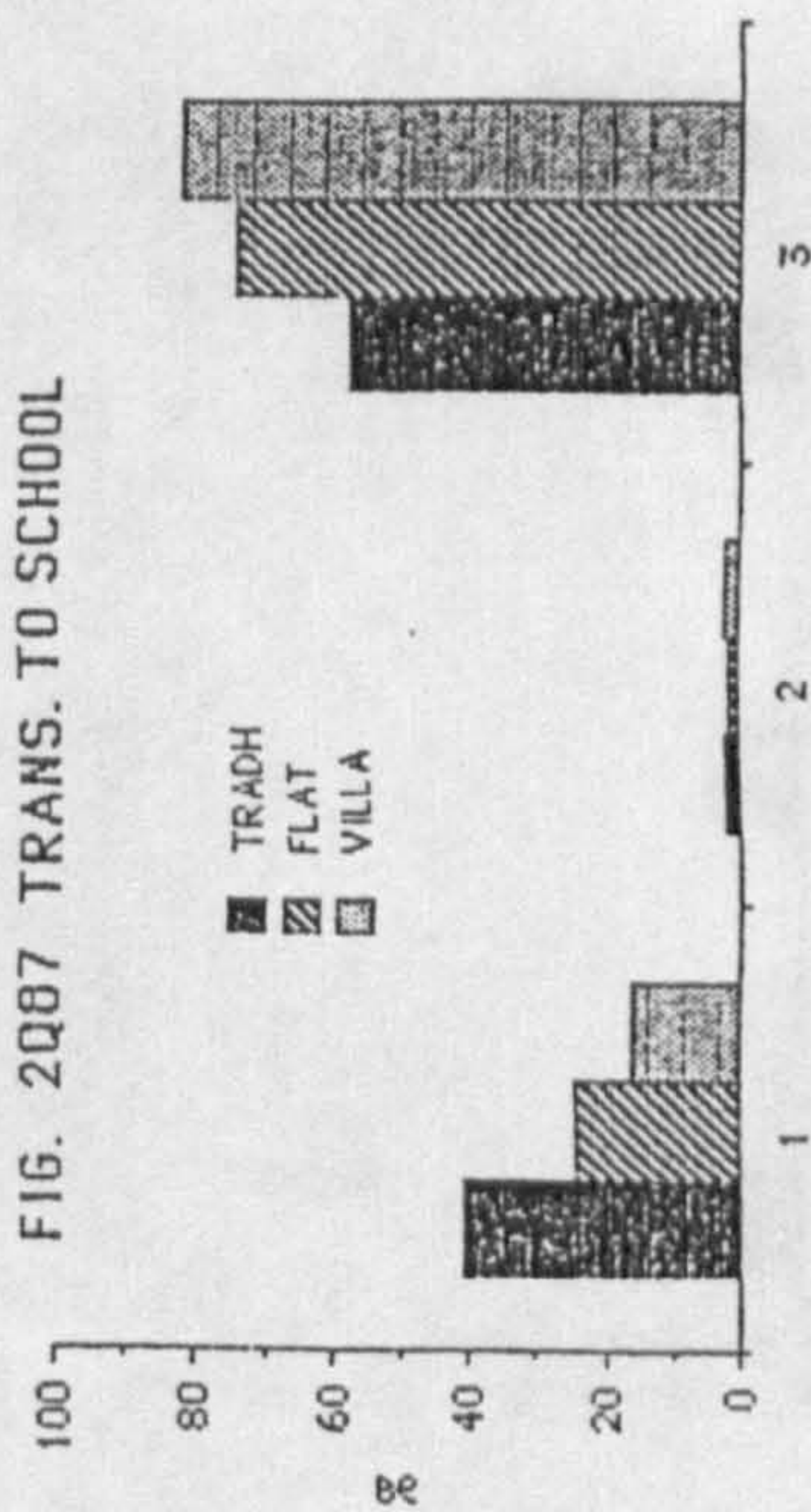


FIG. 3Q87 TRANS. TO SCHOOL

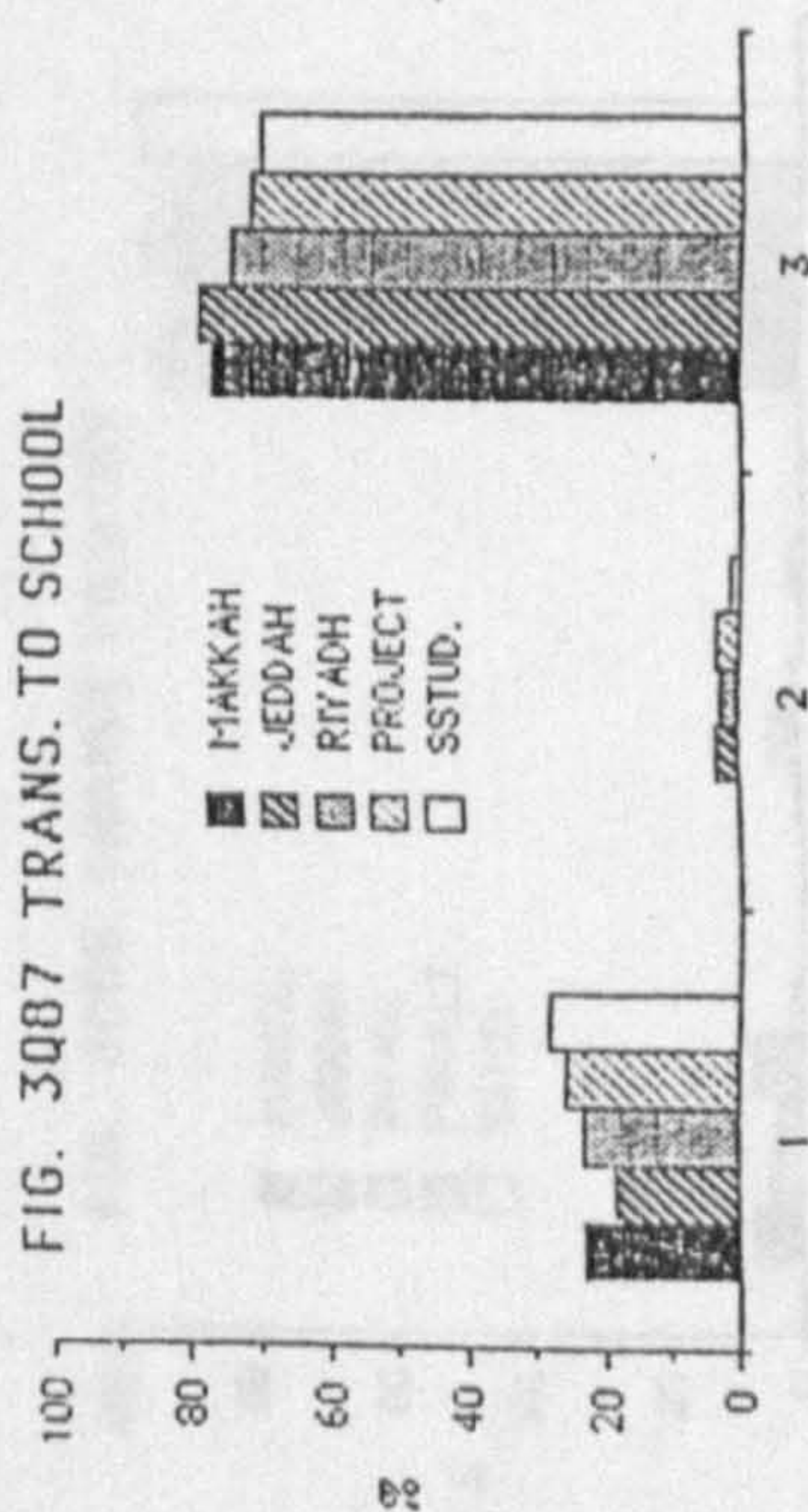


FIG. 1Q88 DISTANCE TO SCHOOL

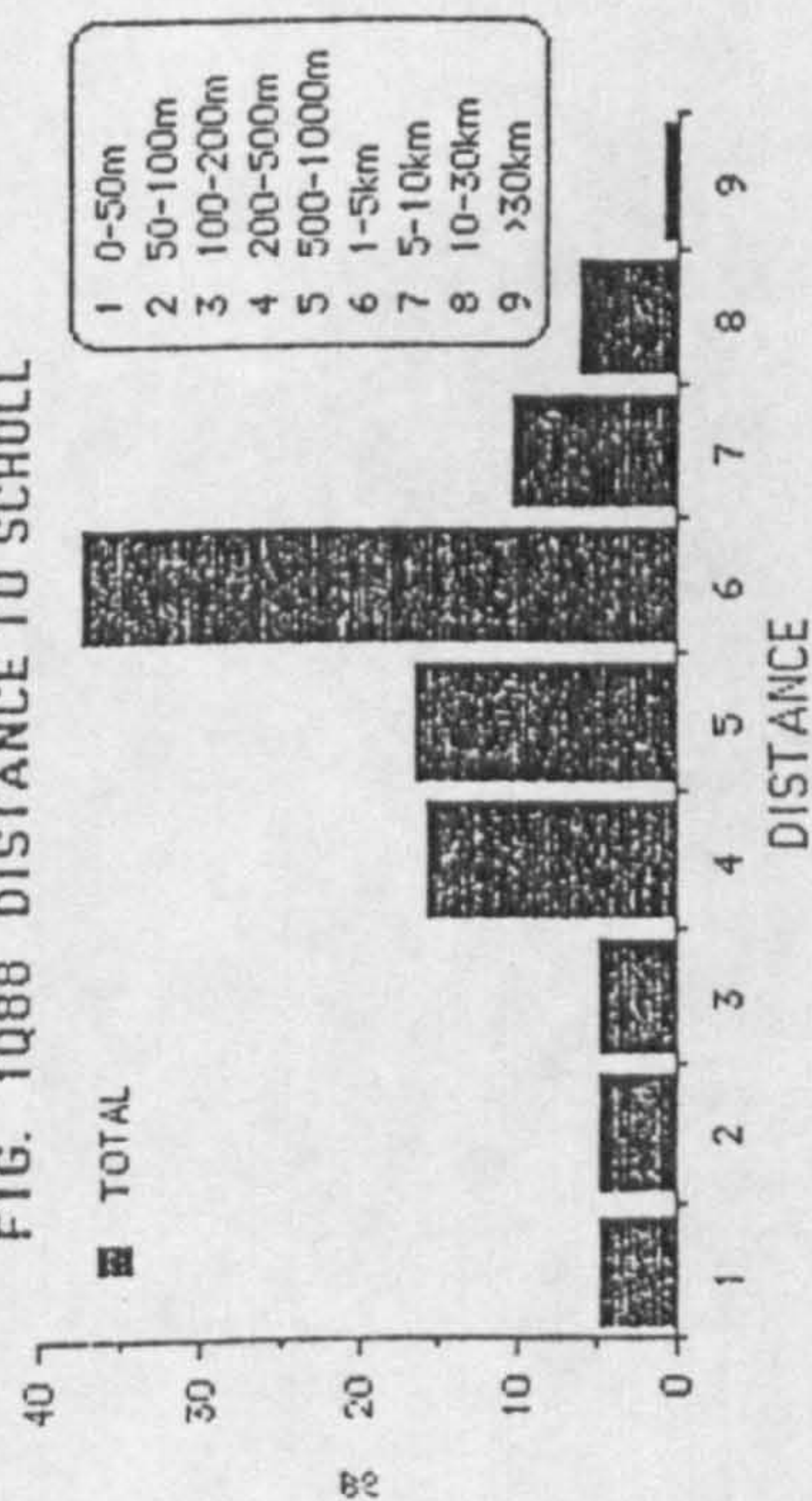


FIG. 2Q88 DISTANCE TO SCHOOL

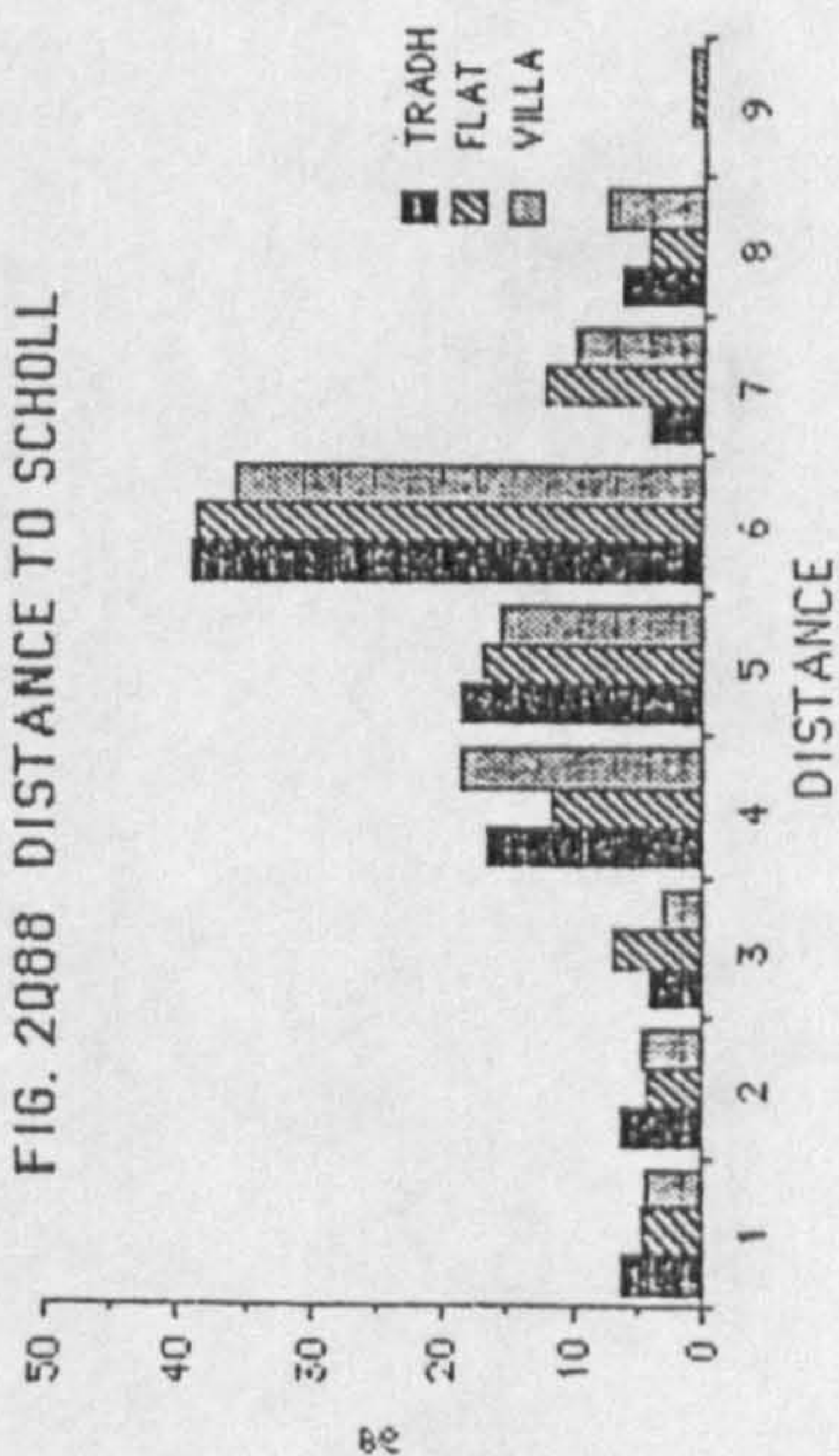


FIG. 3Q88 DISTANCE TO SCHOOL

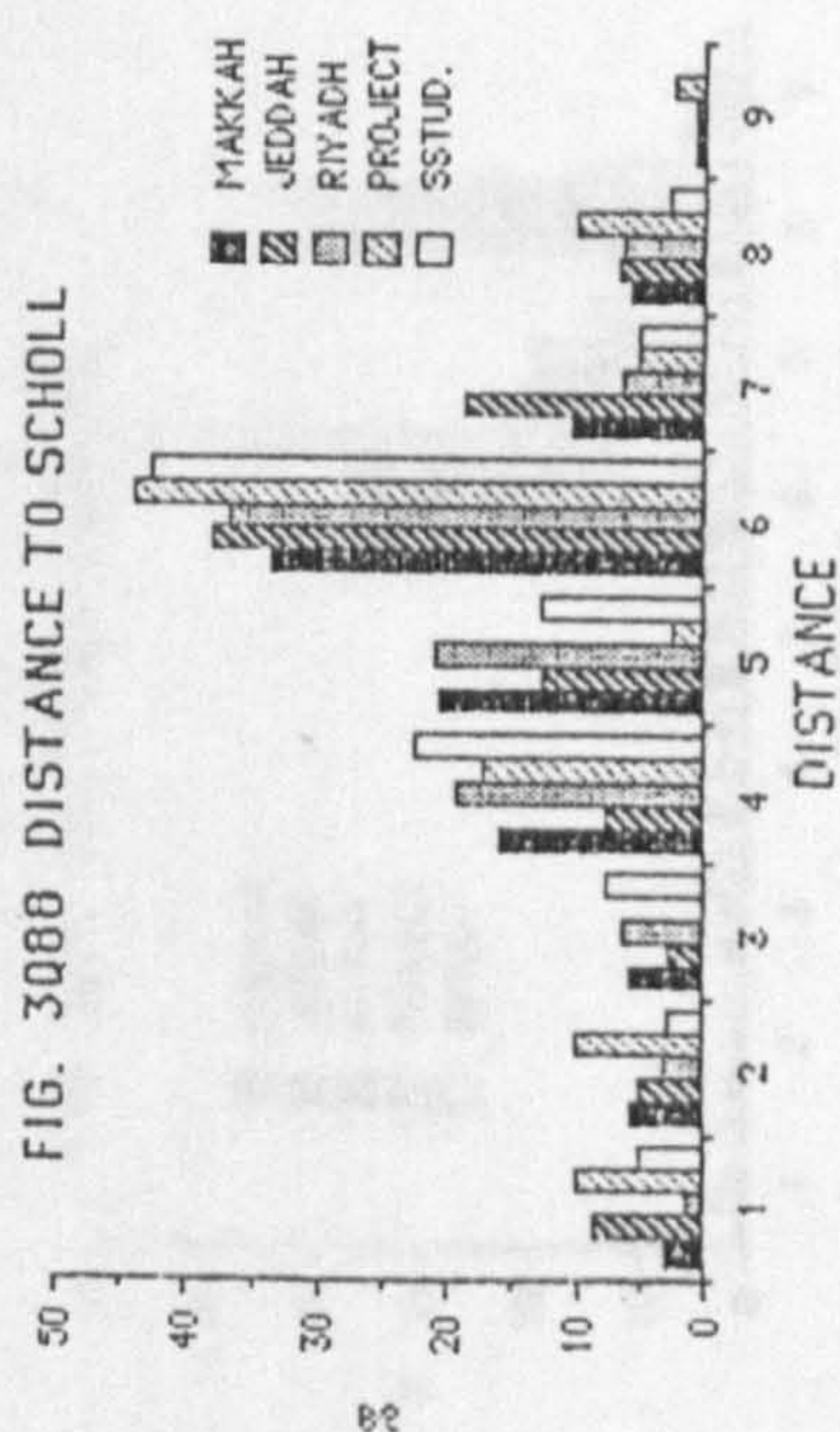


FIG. 1Q89 TRANS. TO WORK

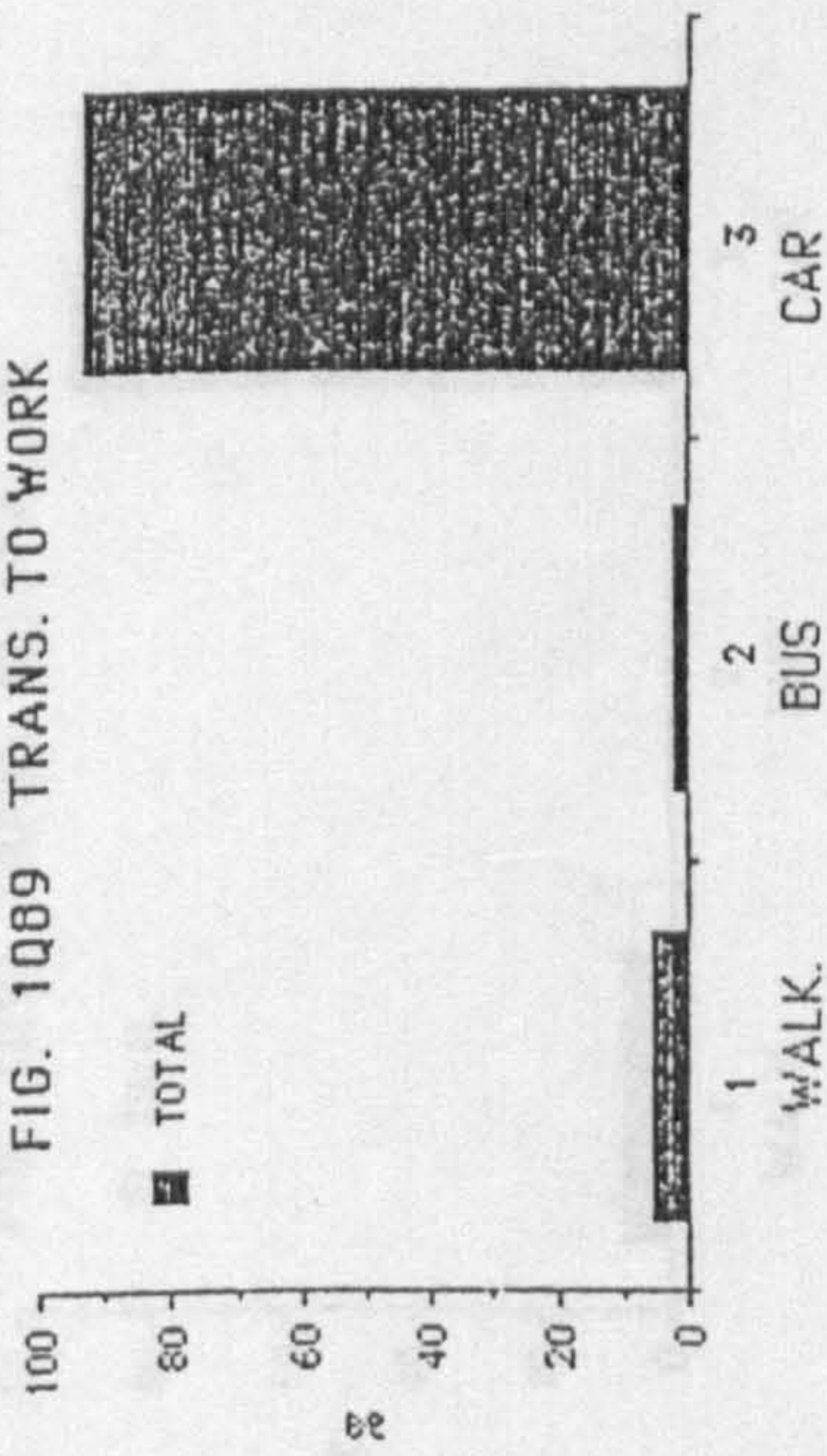


FIG. 2Q89 TRANS. TO WORK

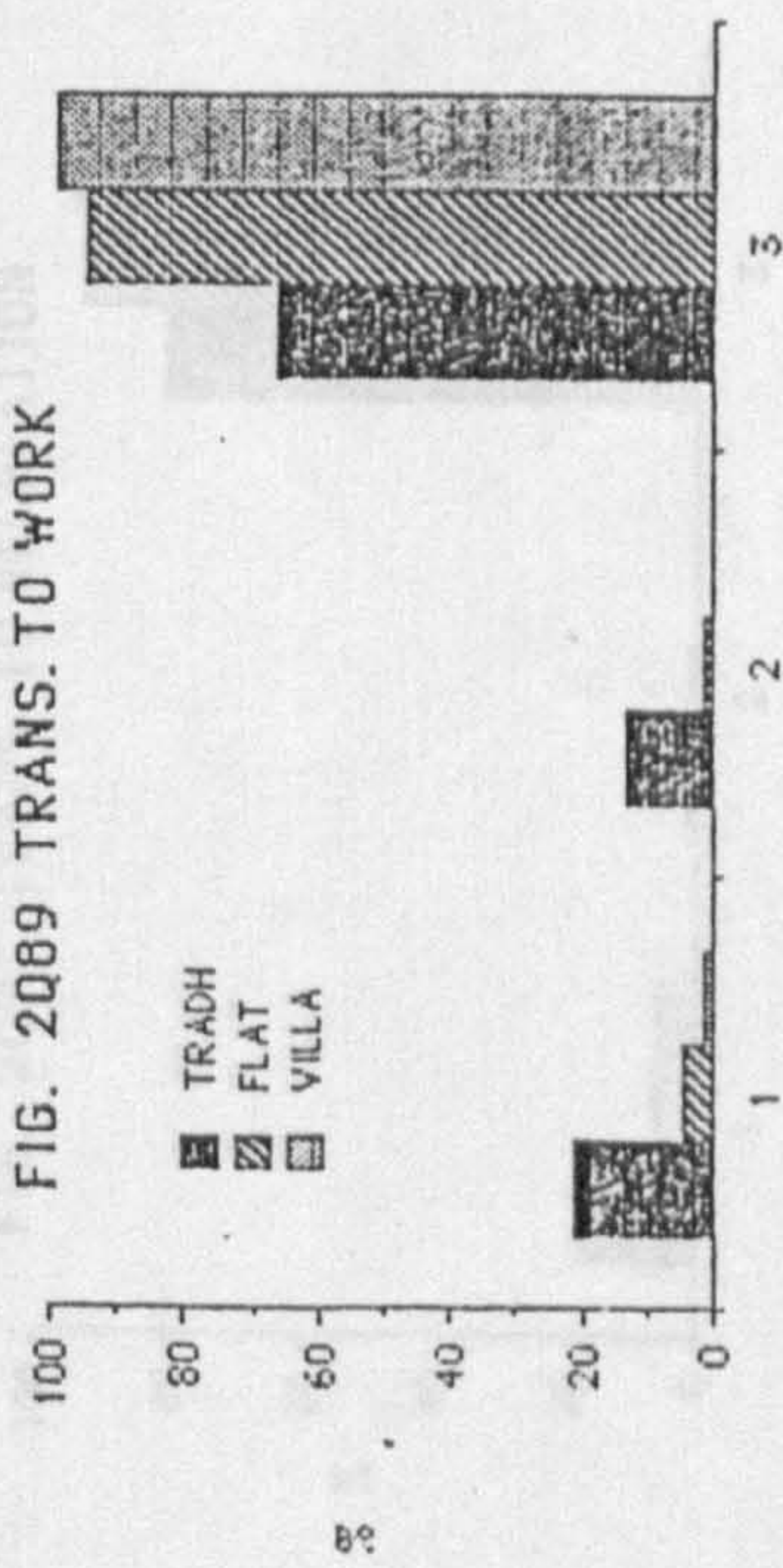


FIG. 3Q89 TRANS. TO WORK

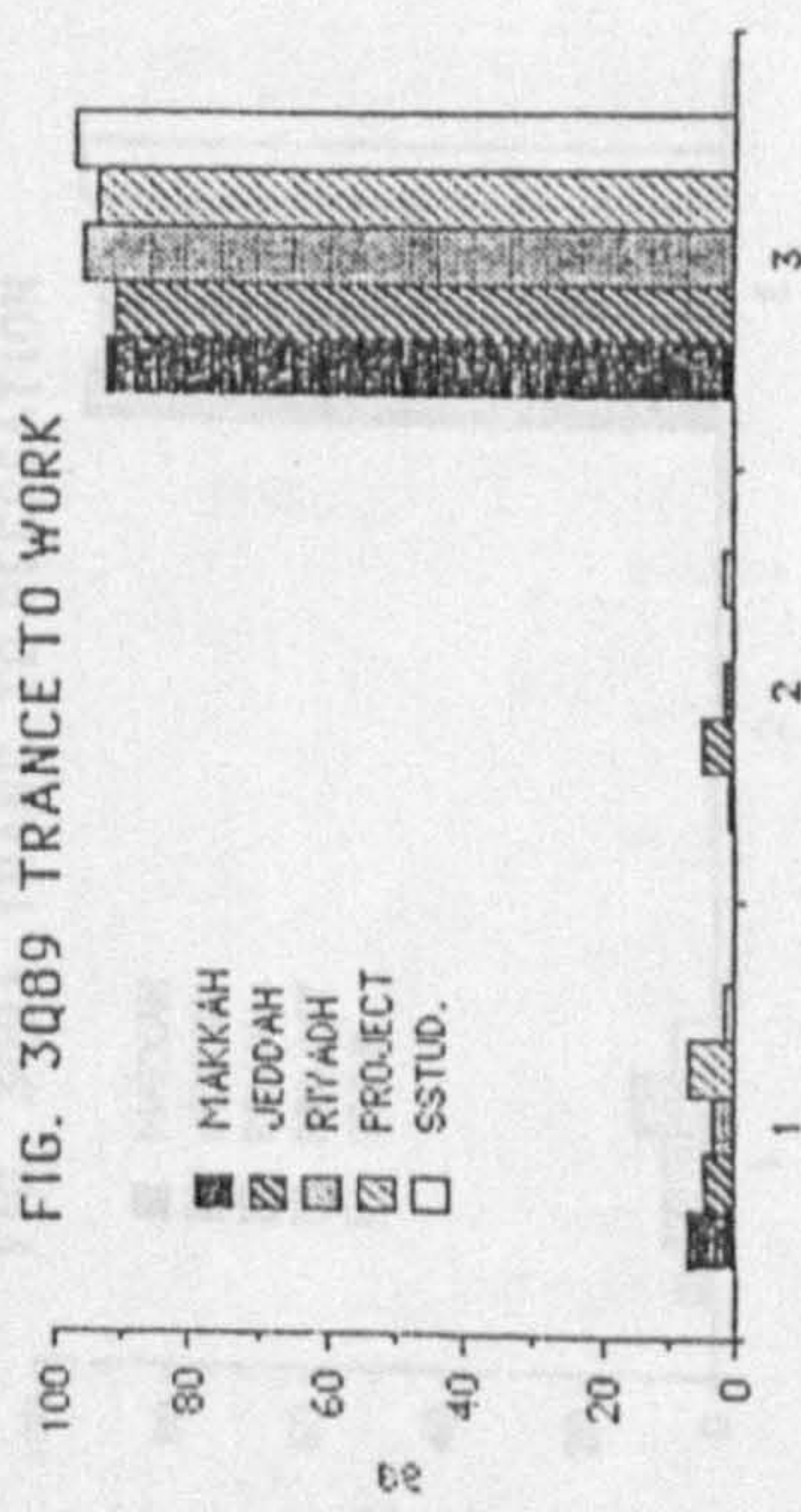


FIG. 1Q90 DISTANCE TO WORK

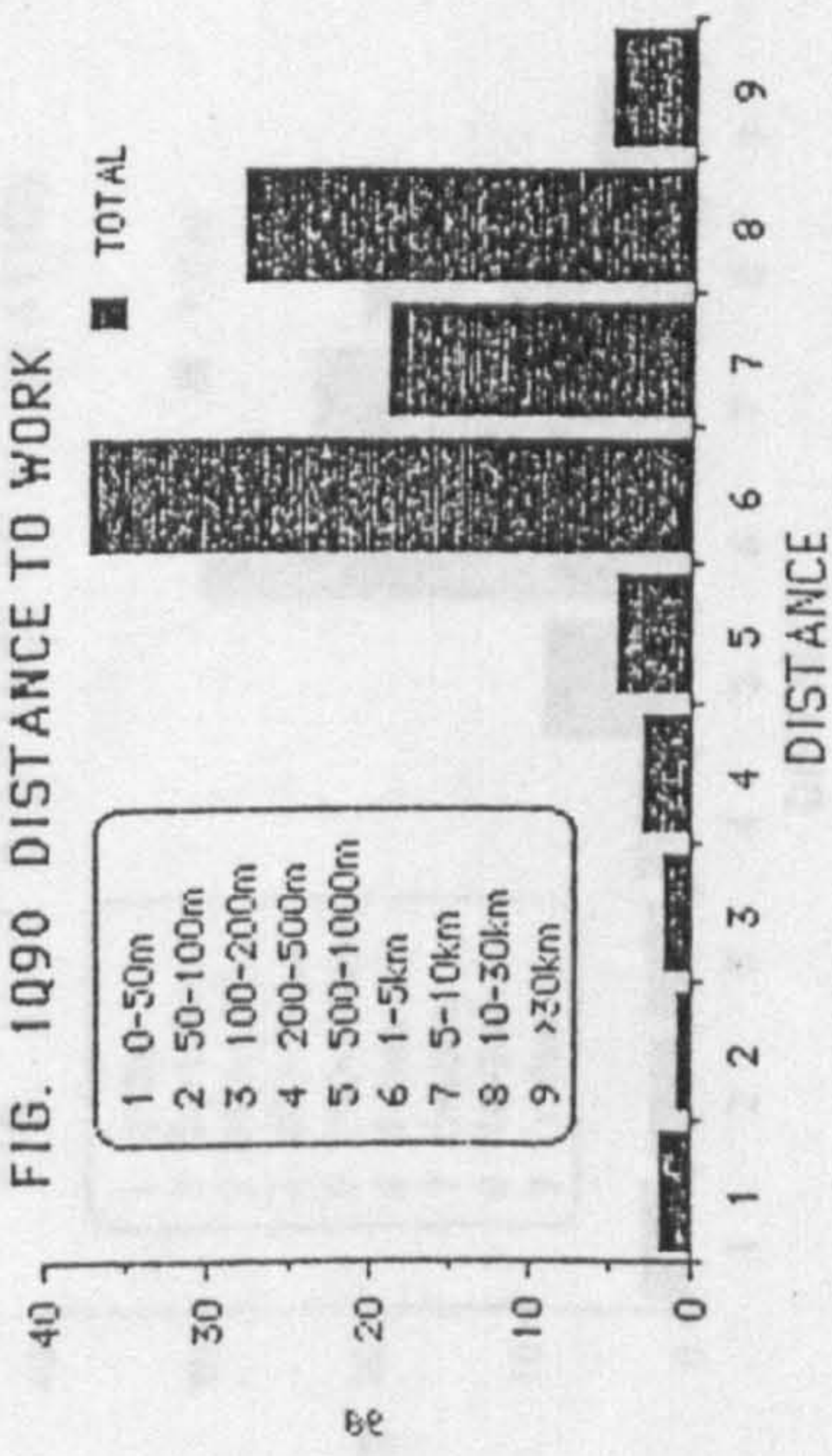


FIG. 2Q90 DISTANCE TO WORK

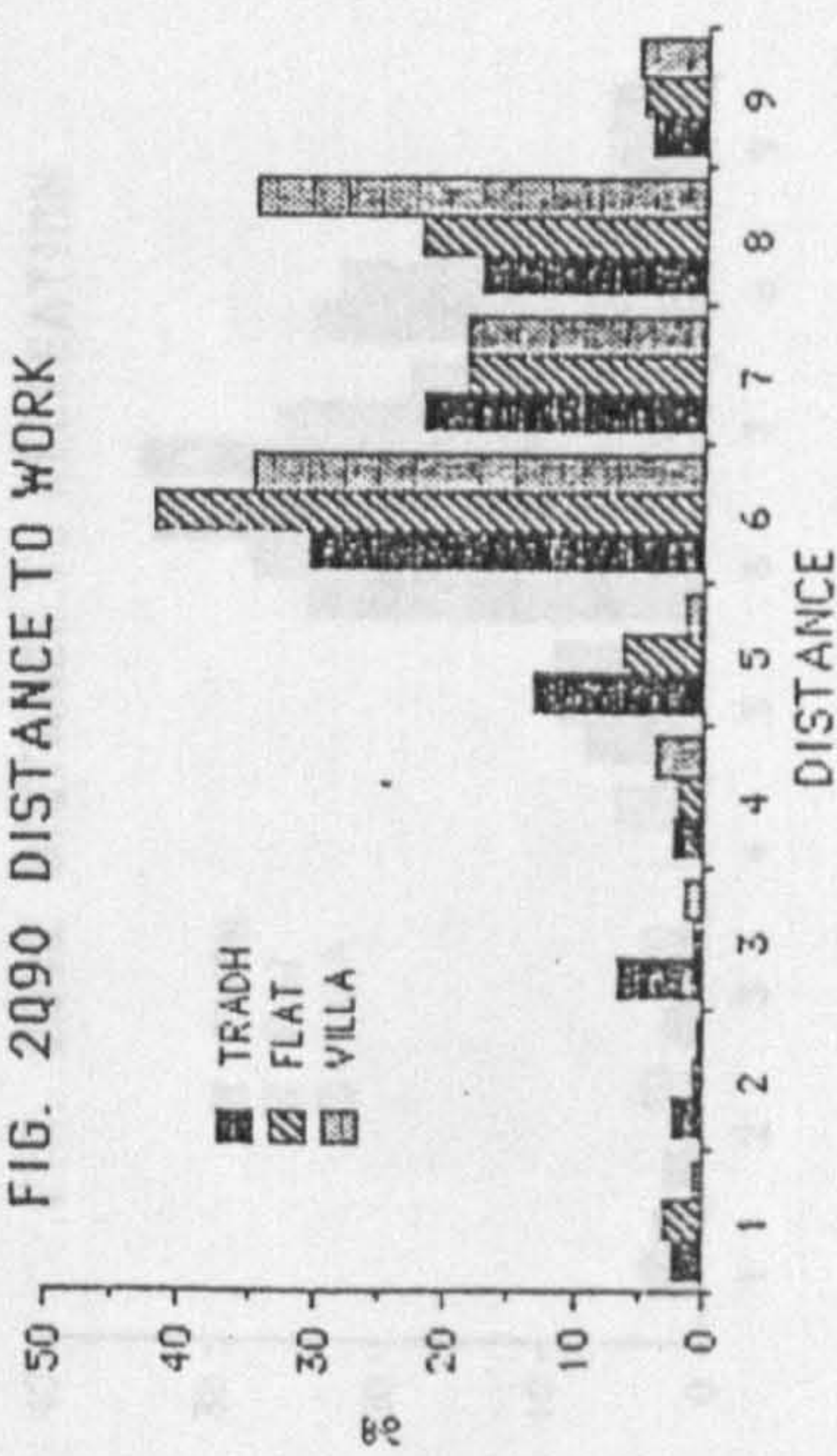


FIG. 3Q90 DISTANCE TO WORK

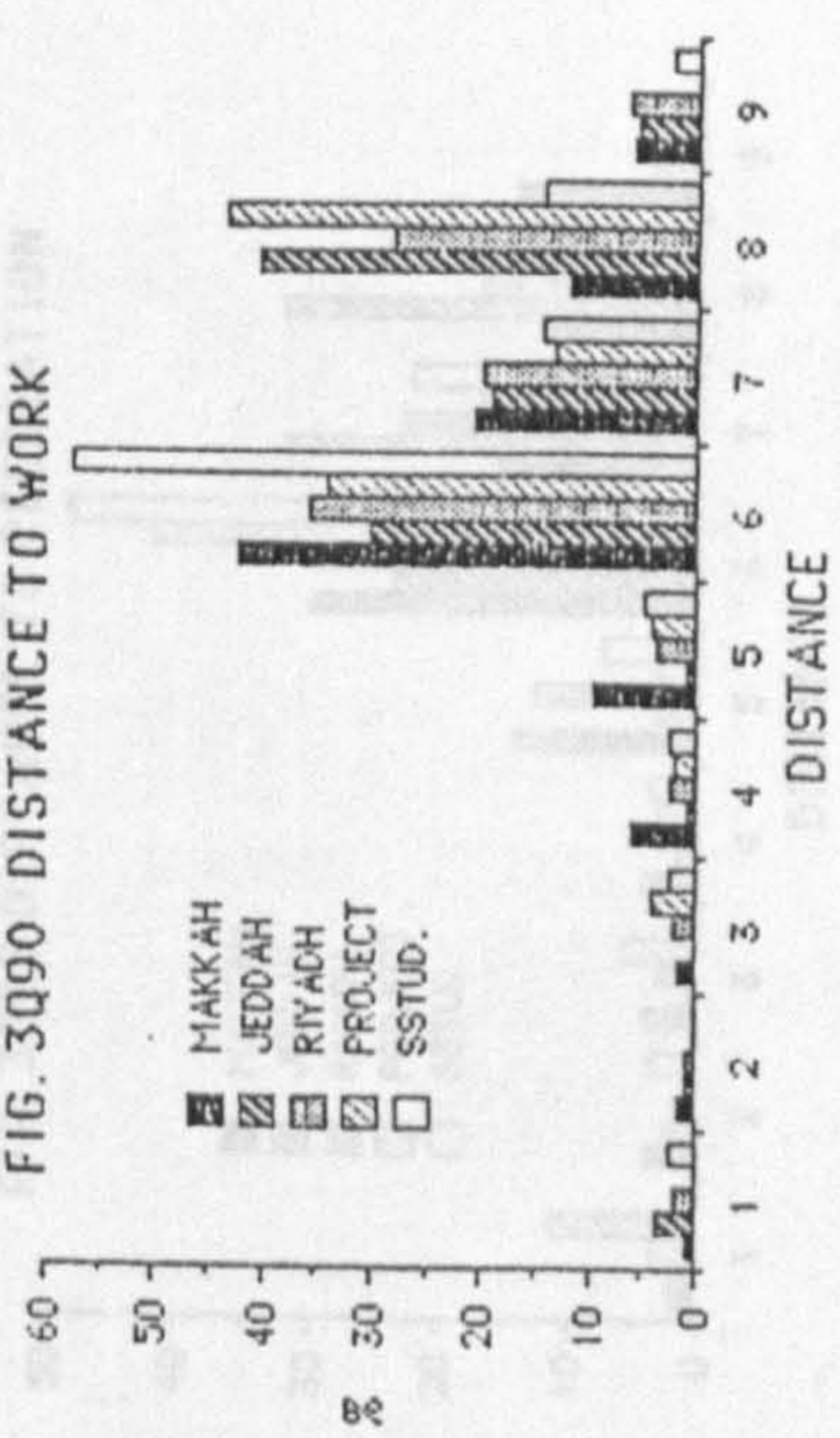


FIG. 1Q91 TRANS. TO RECREATION

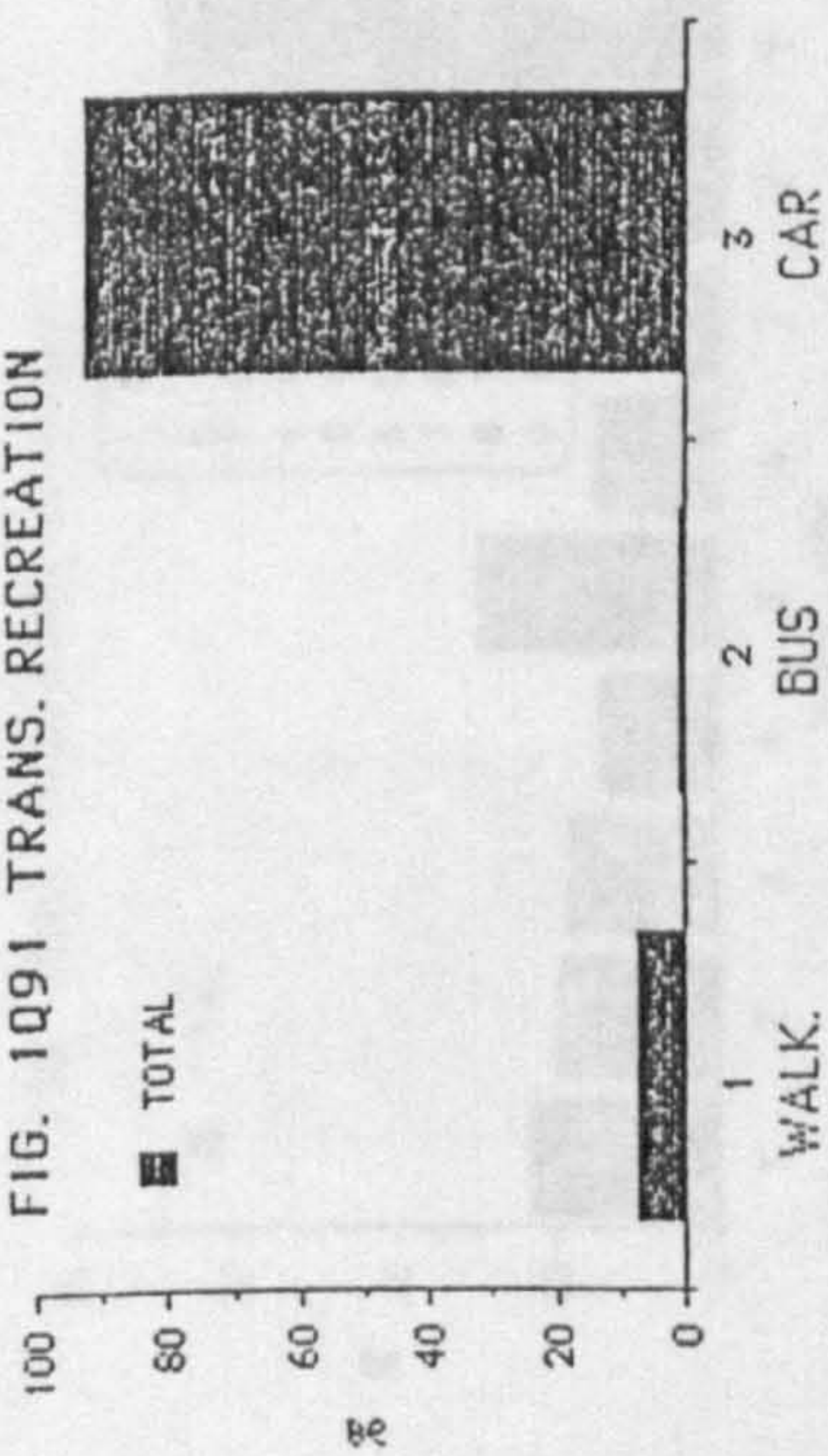


FIG. 1Q92 DISTANCE TO RECREATION

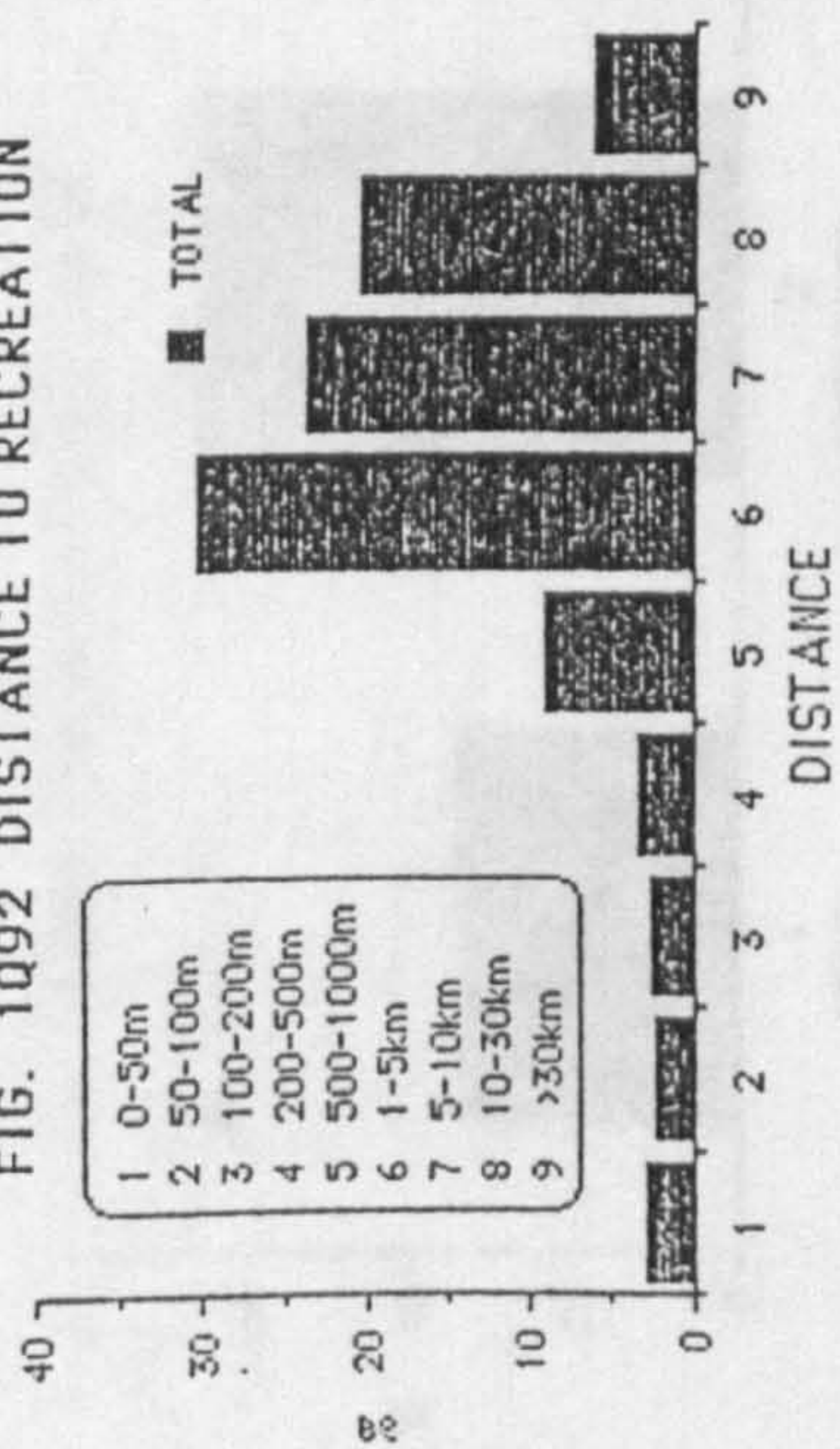


FIG. 2Q91 TRANS. TO RECREATION

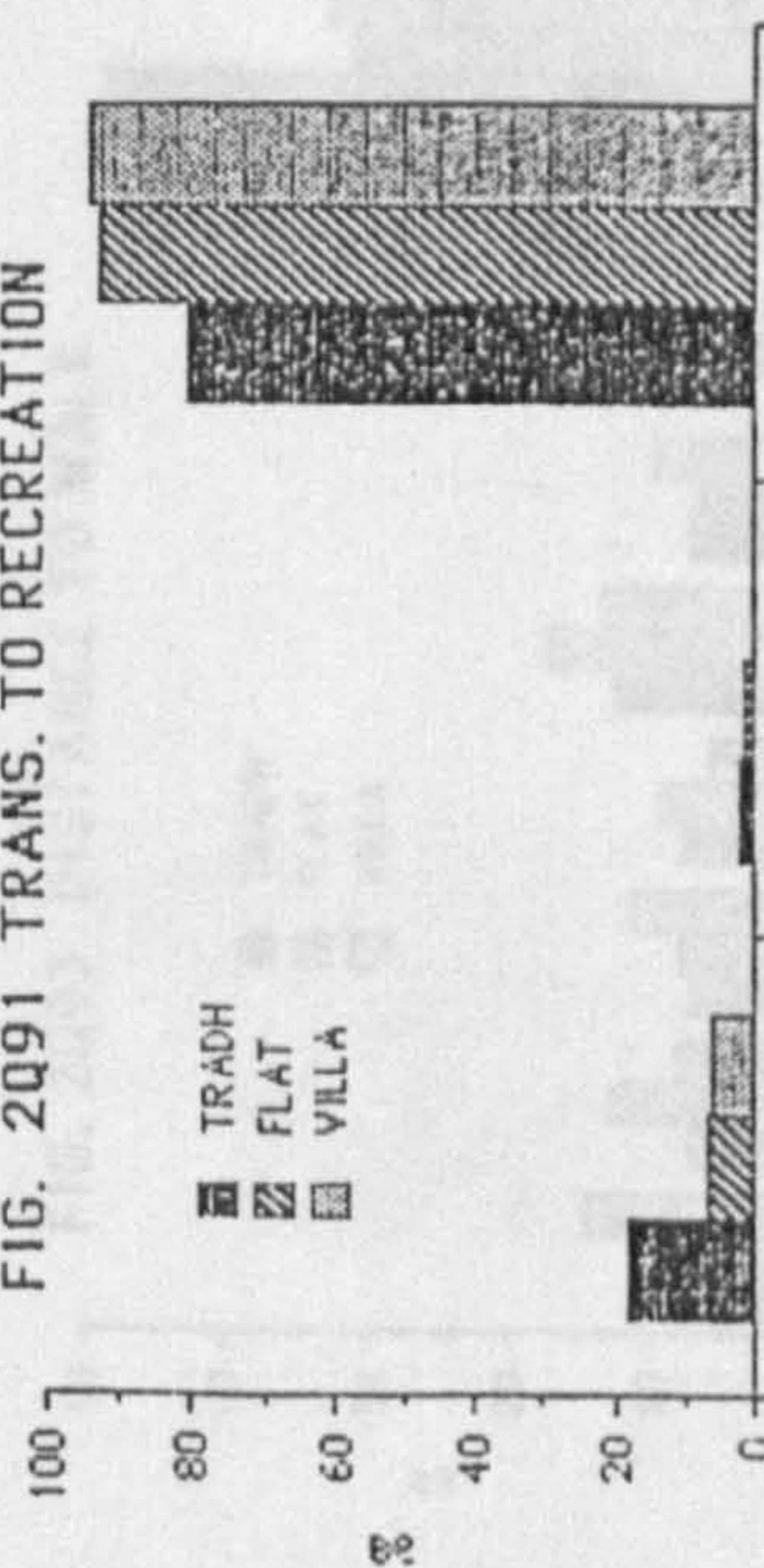


FIG. 2Q92 DISTANCE TO RECREATION

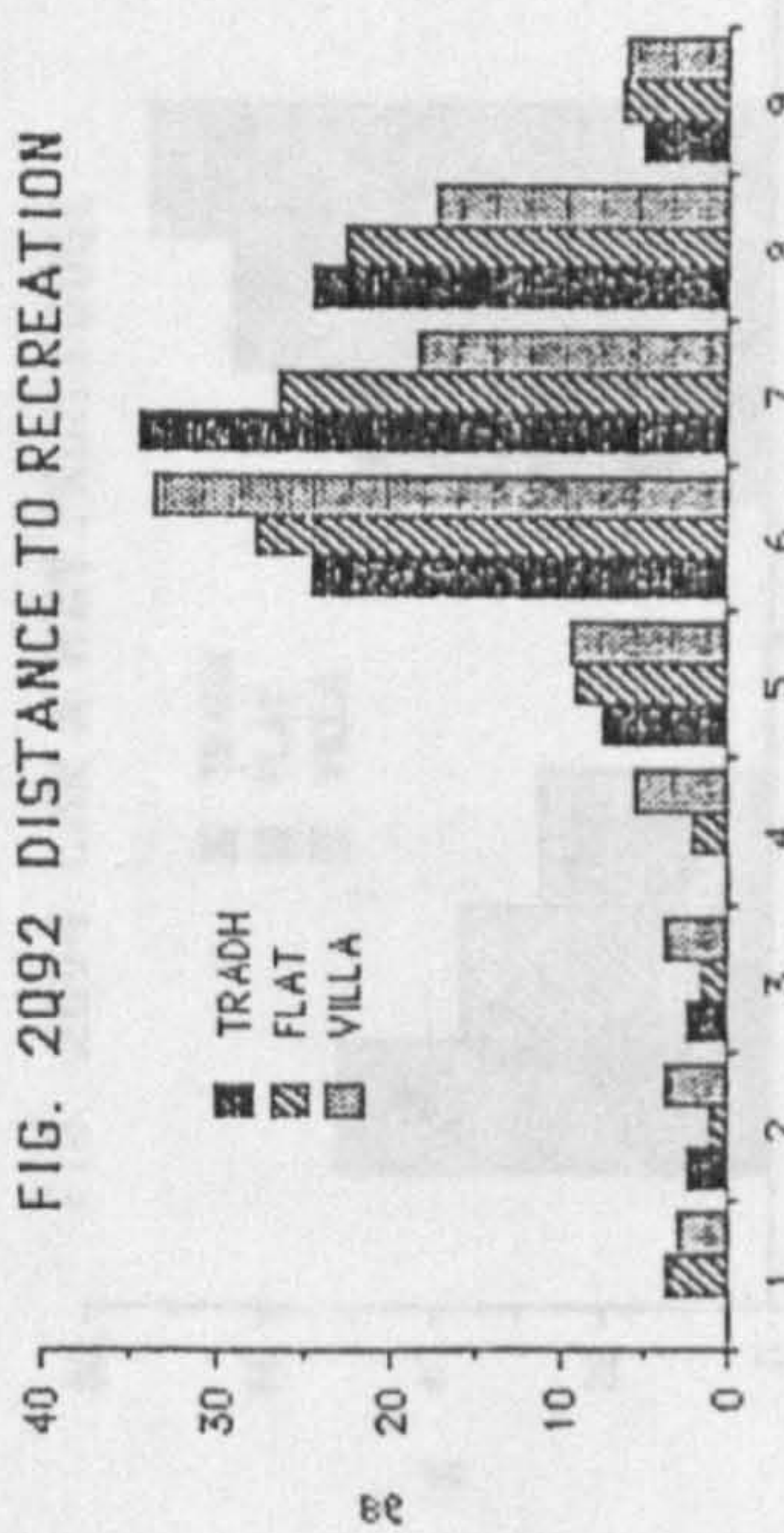


FIG. 3Q91 TRANS. TO RECREATION

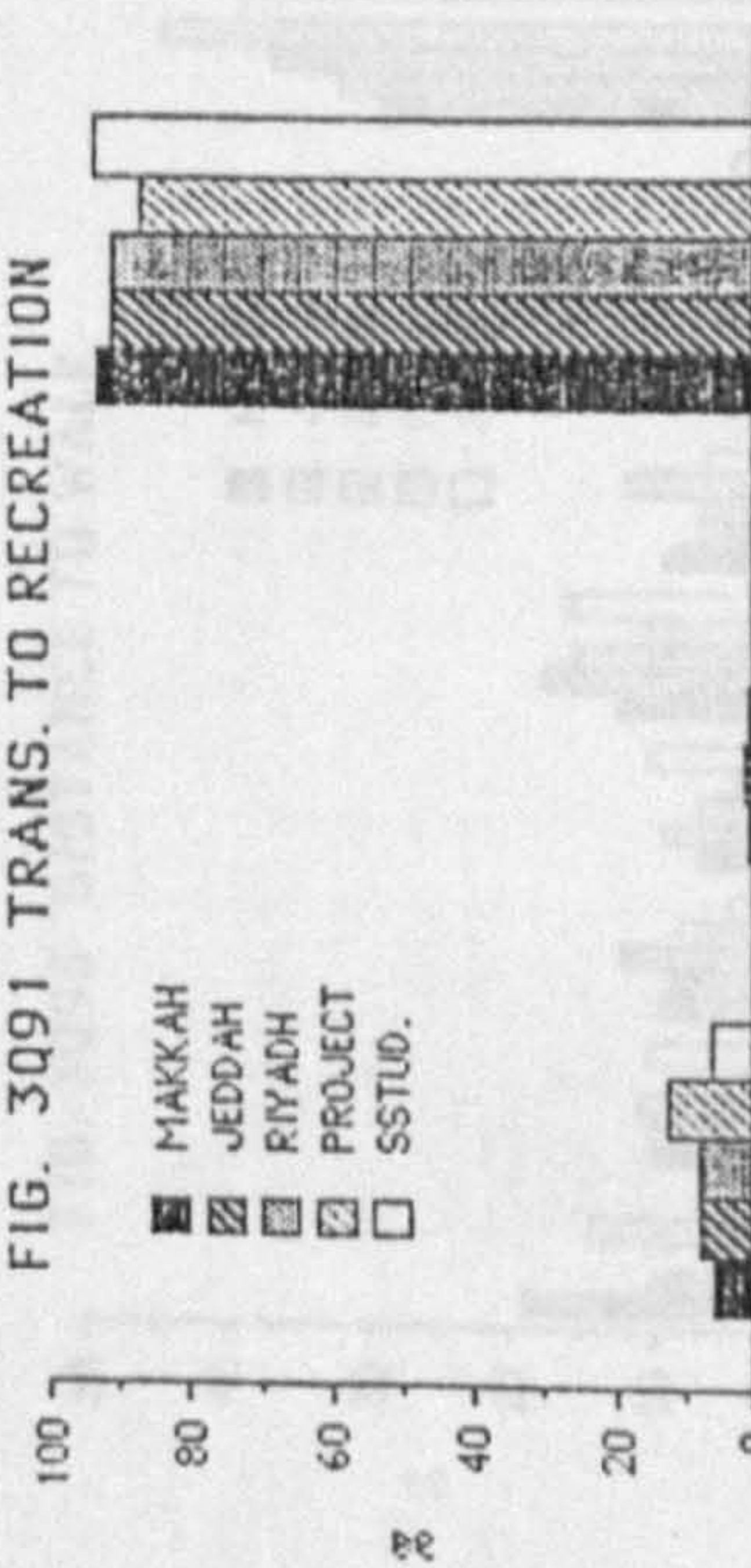


FIG. 3Q92 DISTANCE TO RECREATION

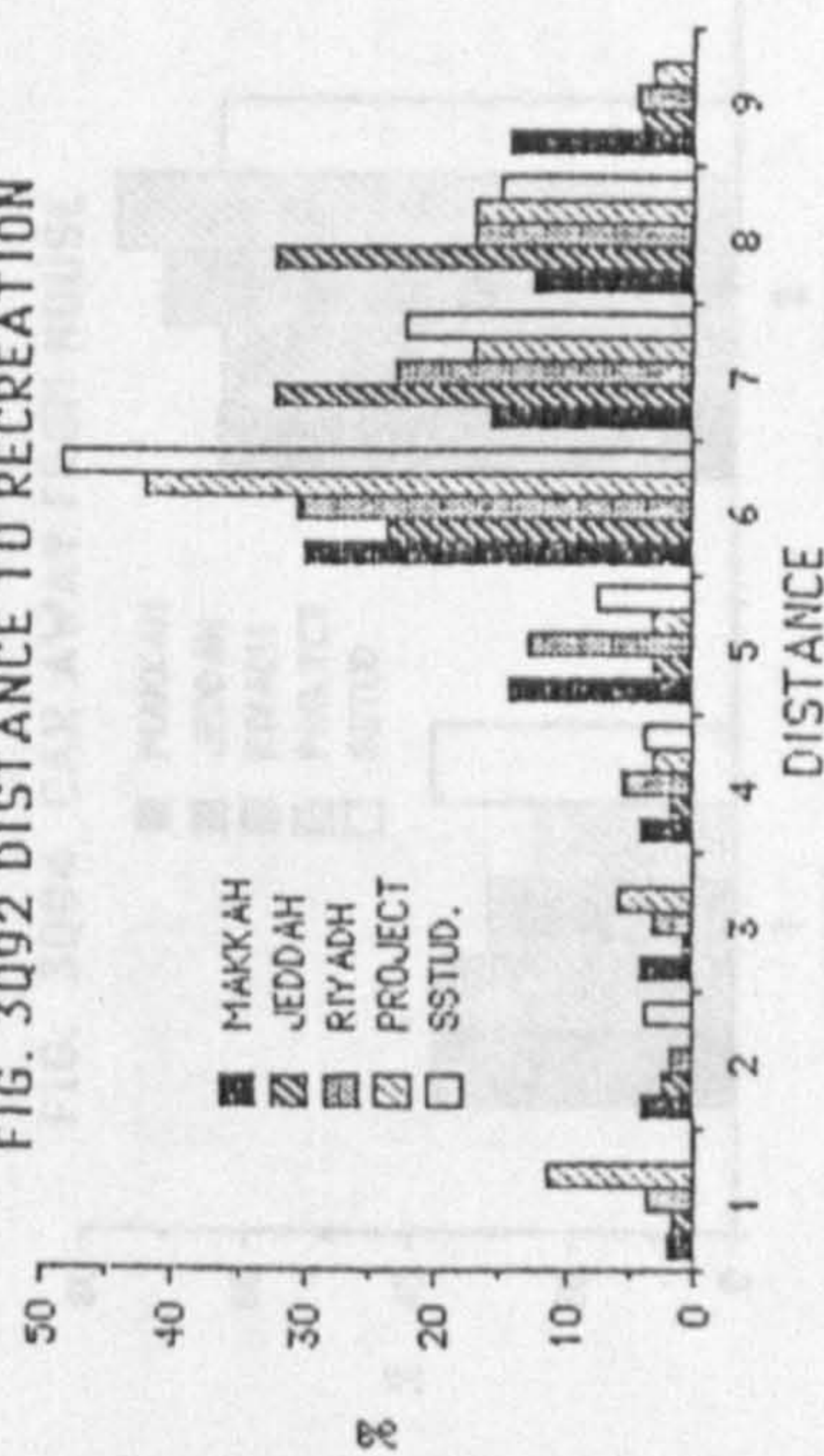


FIG. 1Q93 DISTANCE TO WALK

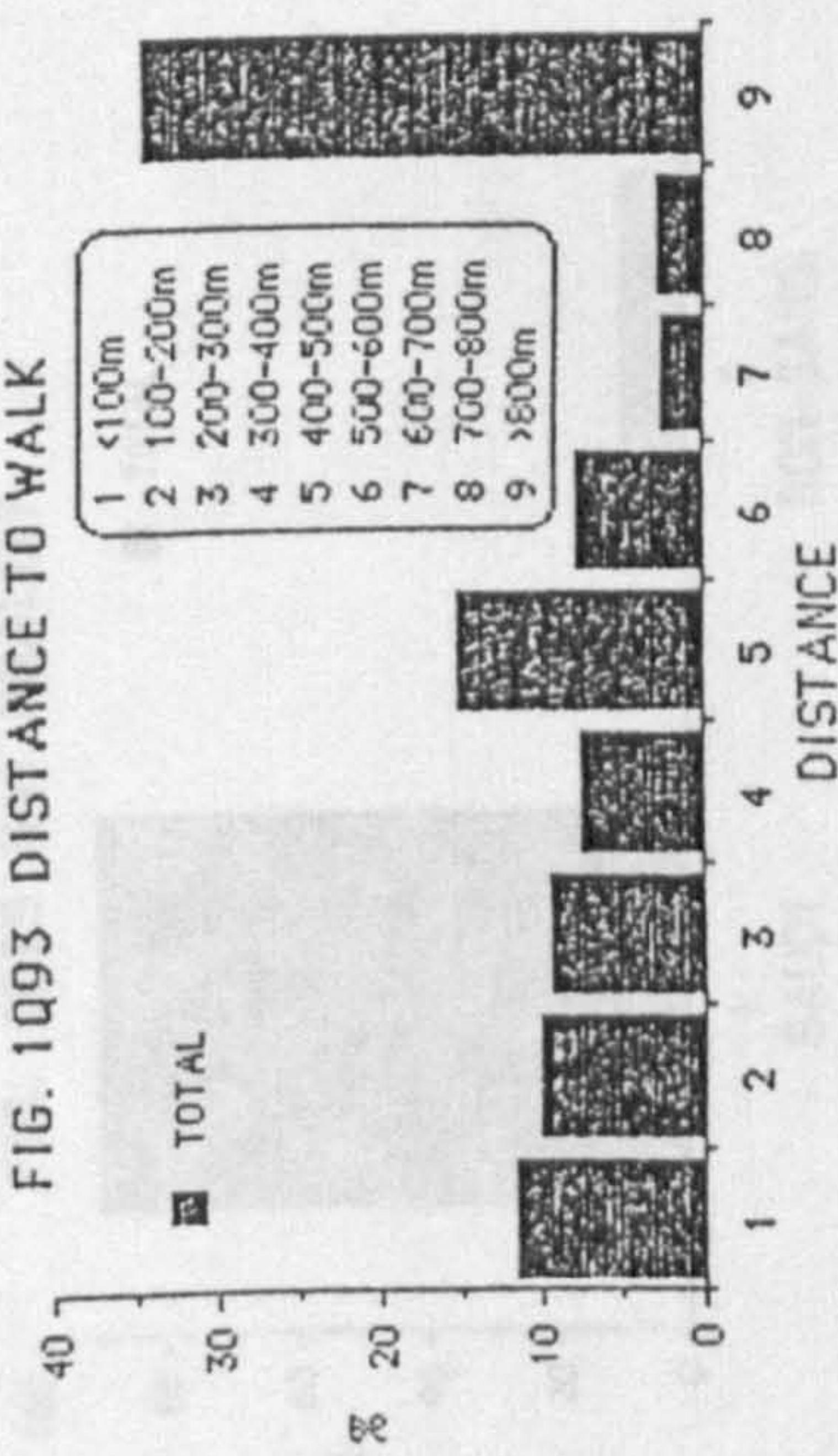


FIG. 2Q93 DISTANCE TO WALK

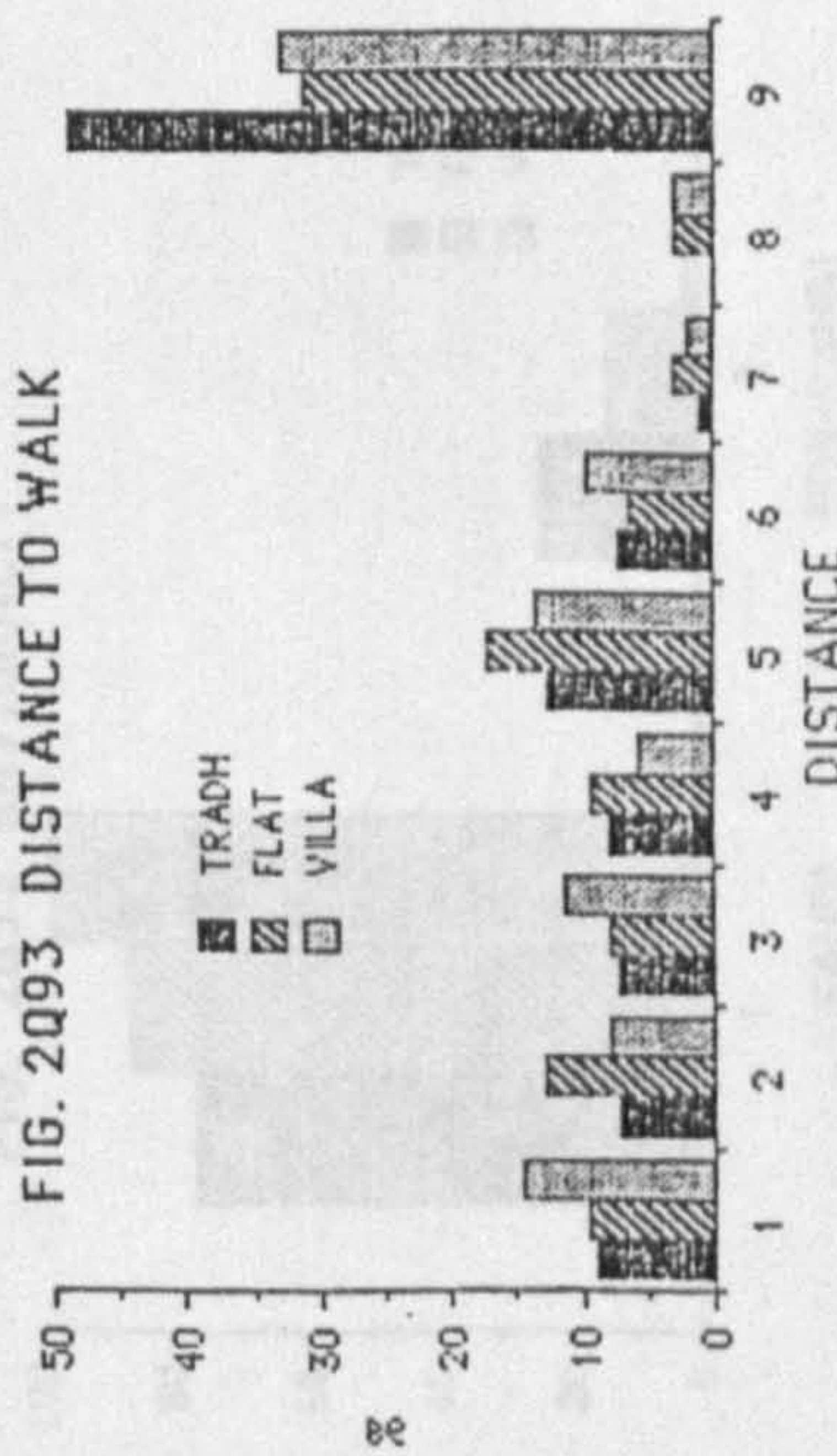


FIG. 3Q93 DISTANCE TO WALK

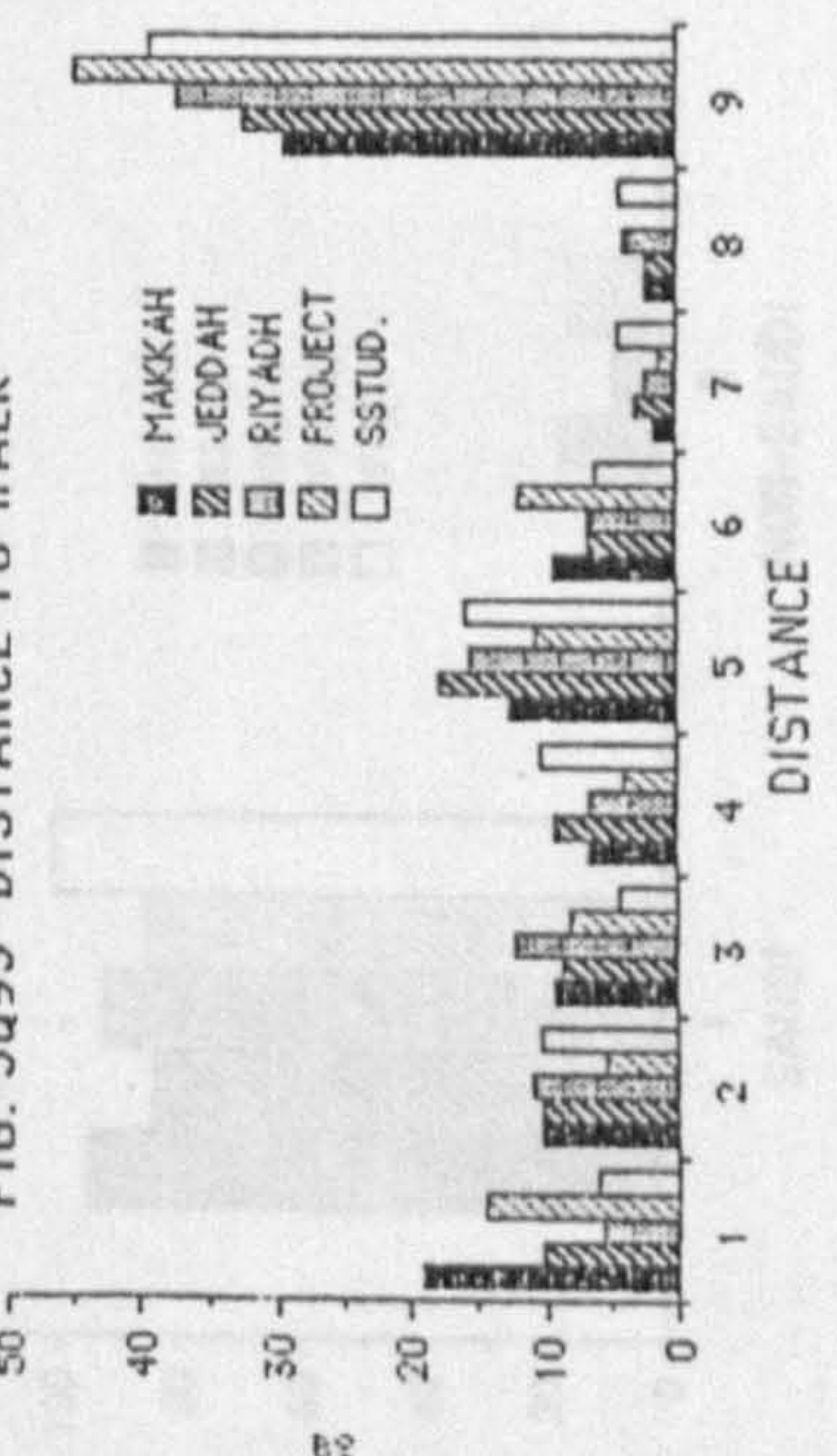


FIG. 1Q94 CAR A WAY FROM HOUSE

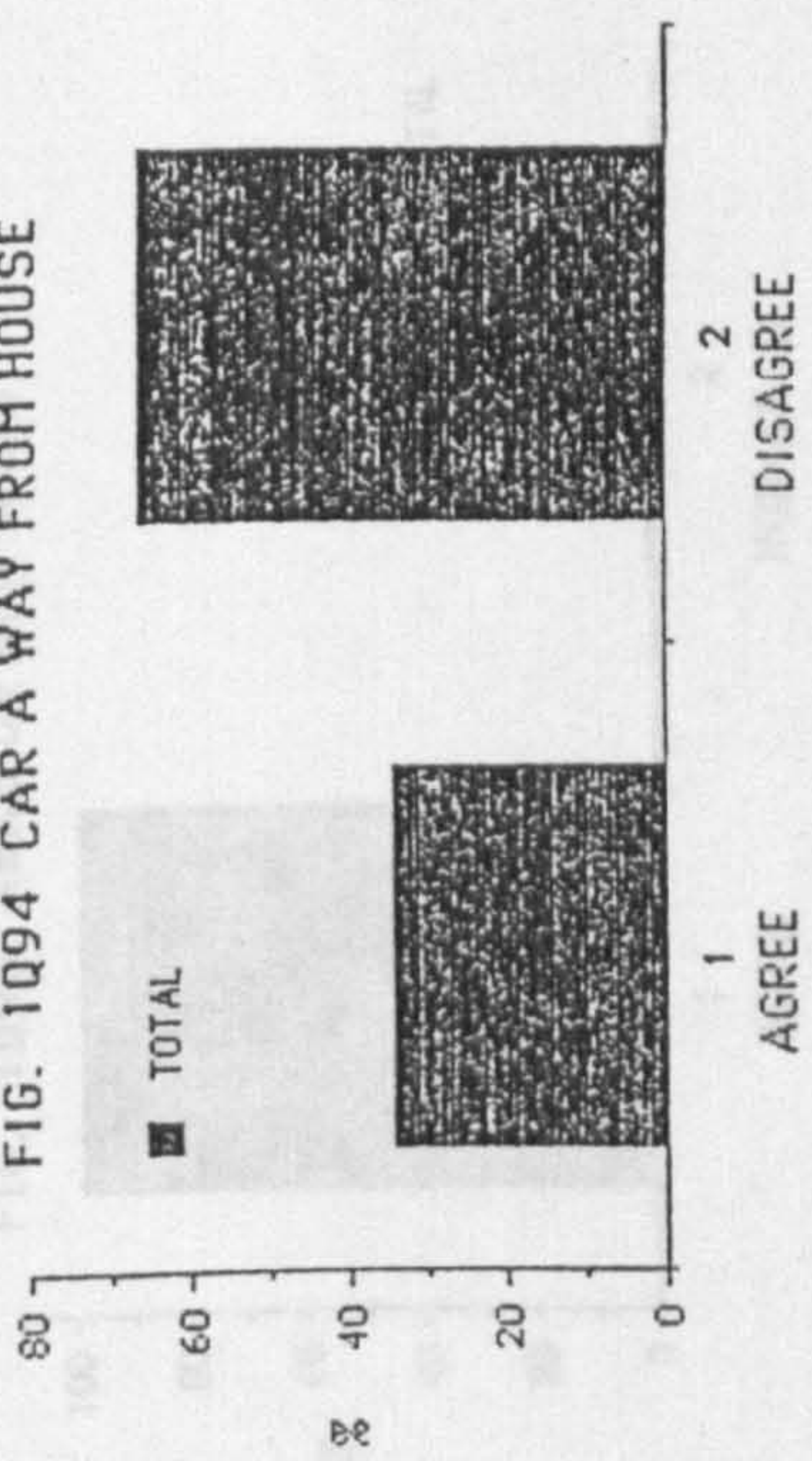


FIG. 2Q94 CAR A WAY FROM HOUSE

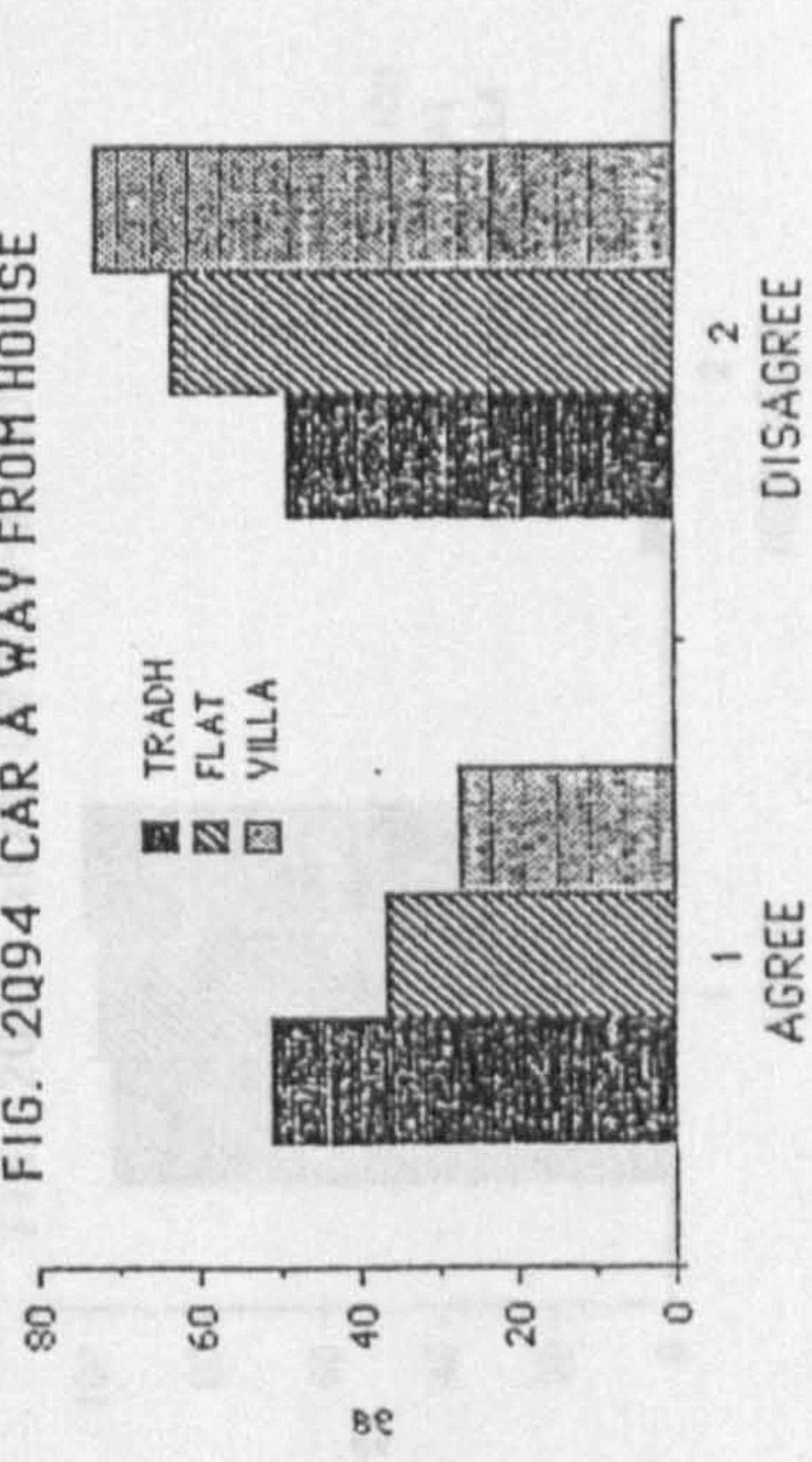


FIG. 3Q94 CAR A WAY FROM HOUSE

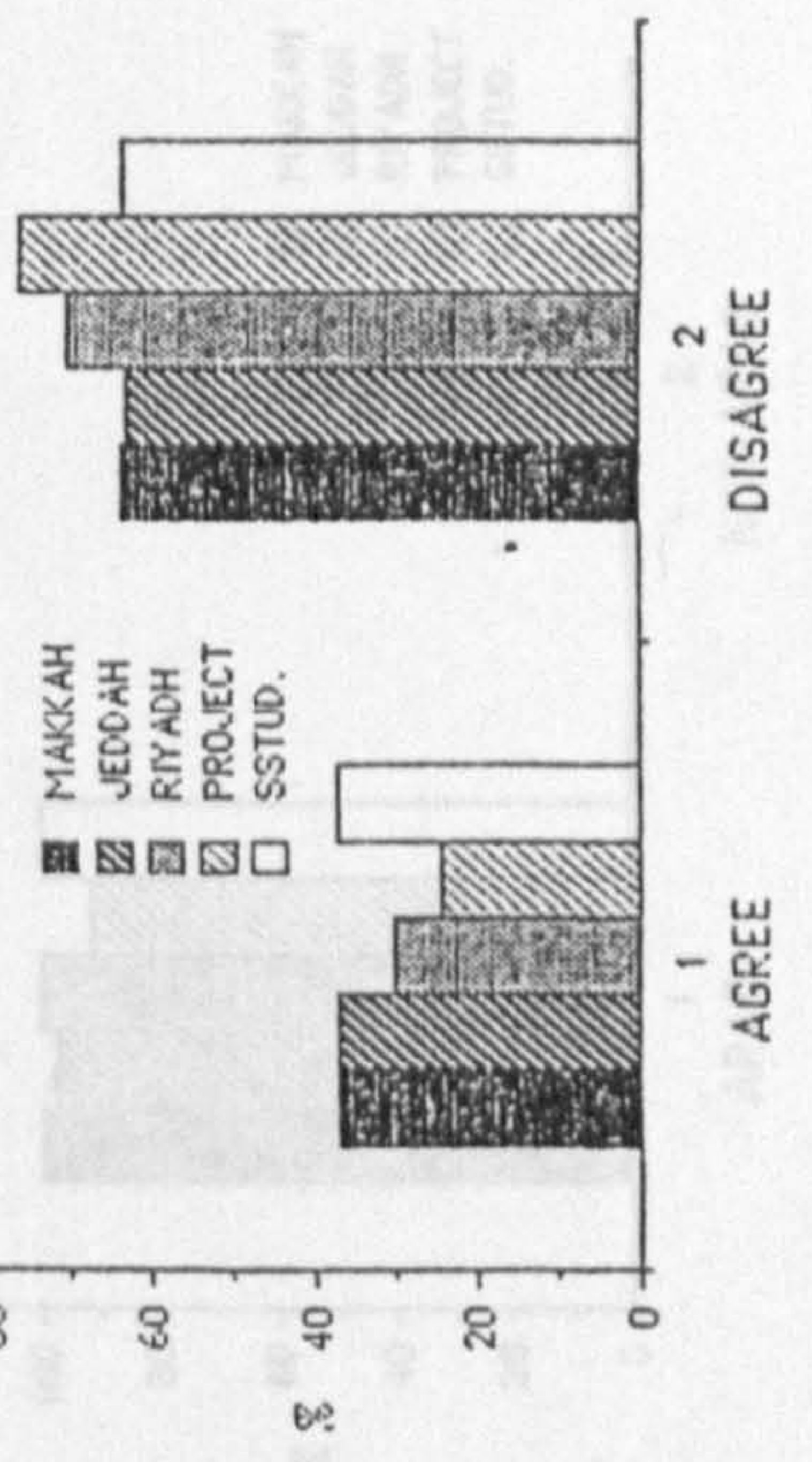


FIG. 1Q95 NATIONALITY

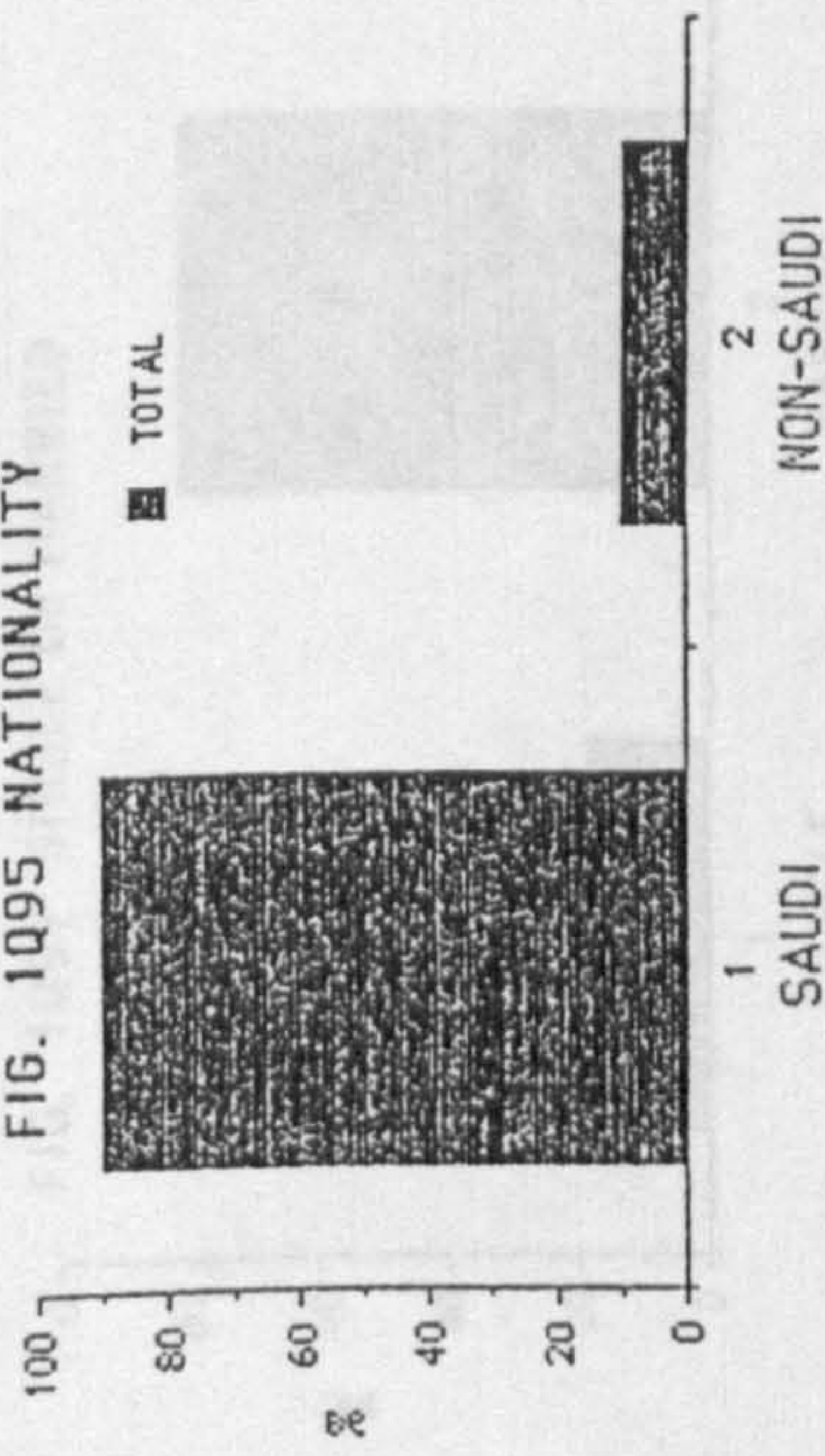


FIG. 2Q95 NATIONALITY

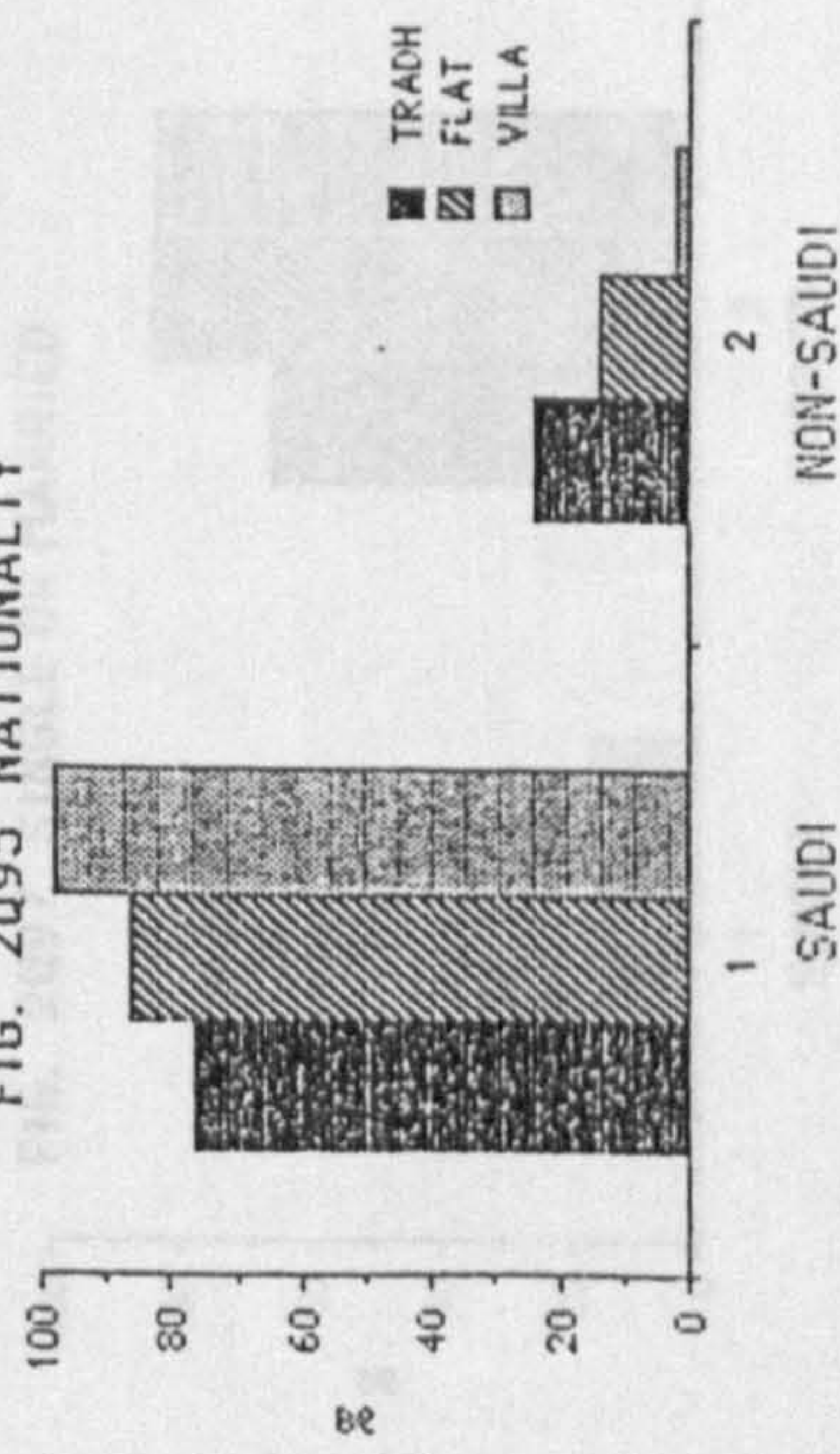


FIG. 3Q95 NATIONALITY

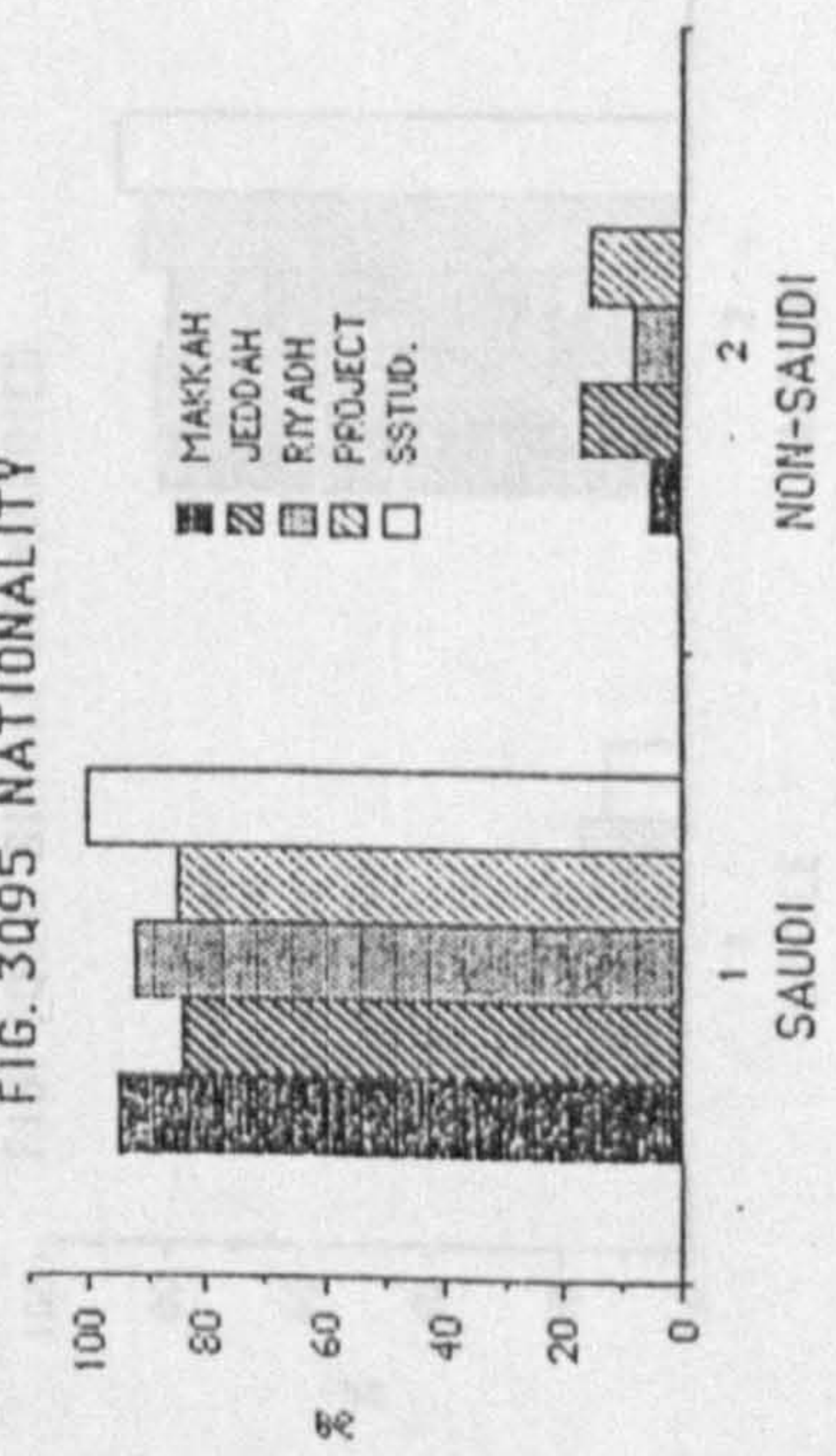


FIG. 1Q96 ARAB OR NON-ARAB

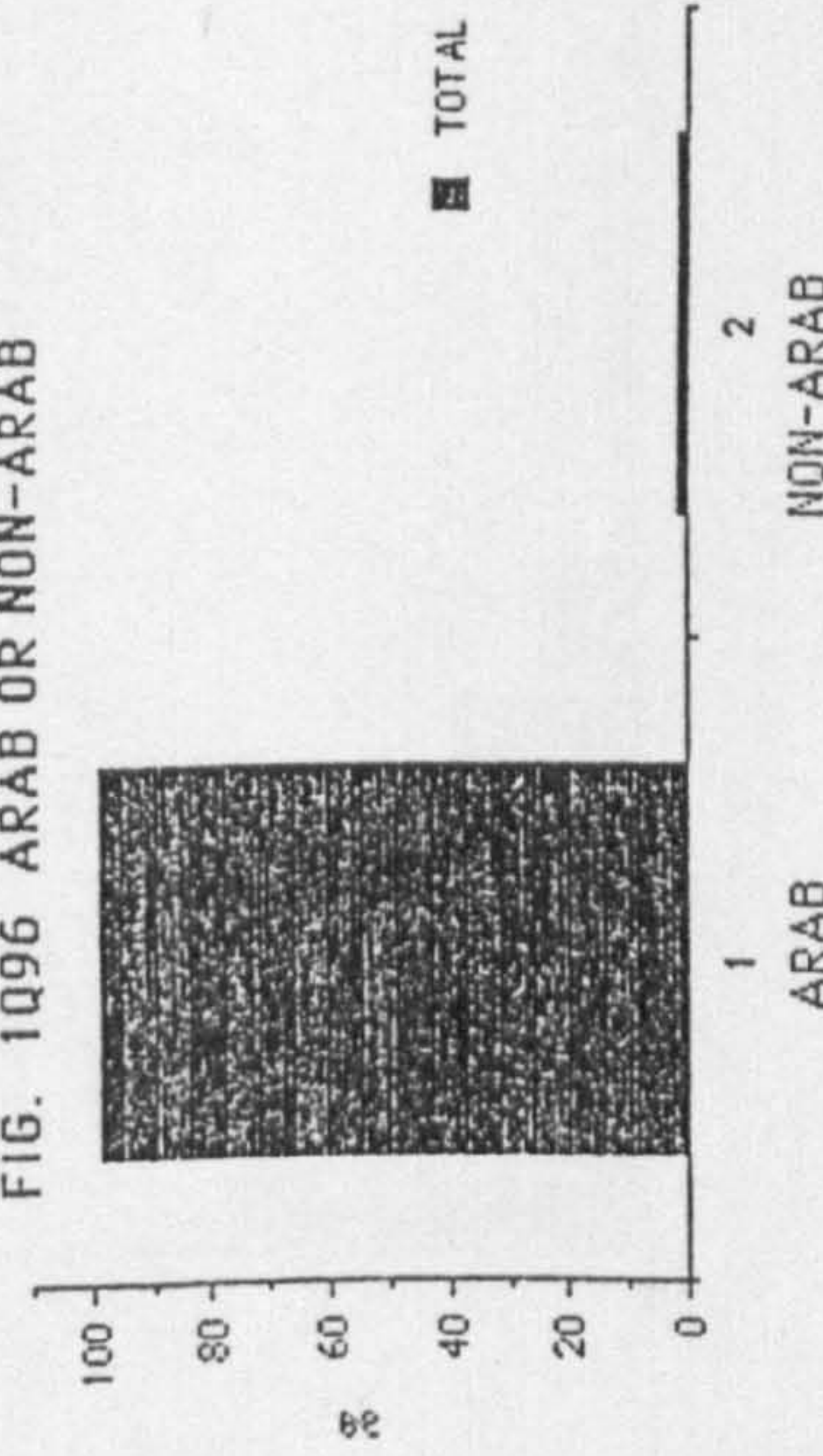


FIG. 2Q96 ARAB OR NON-ARAB

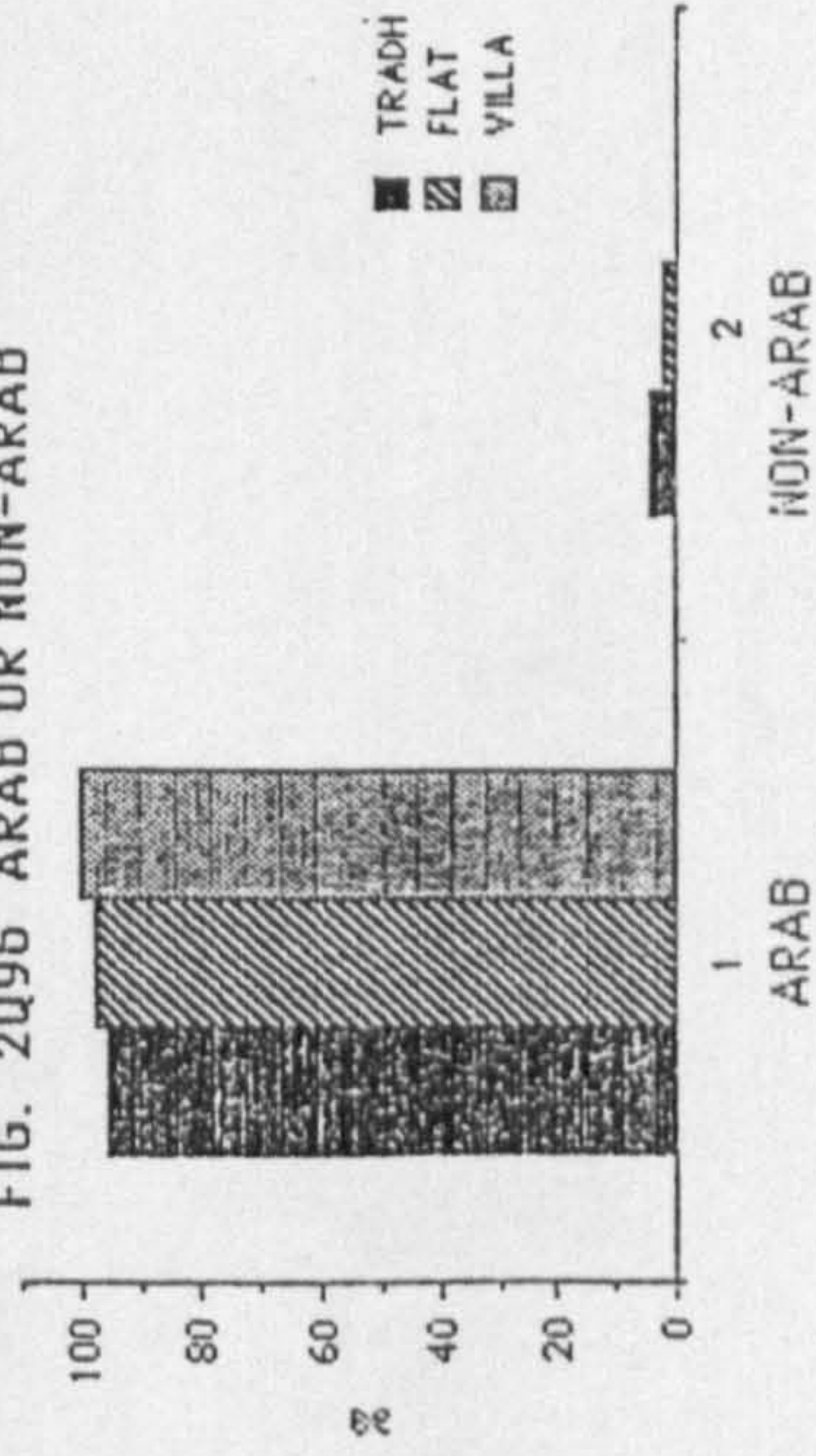


FIG. 3Q96 ARAB OR NON-ARAB

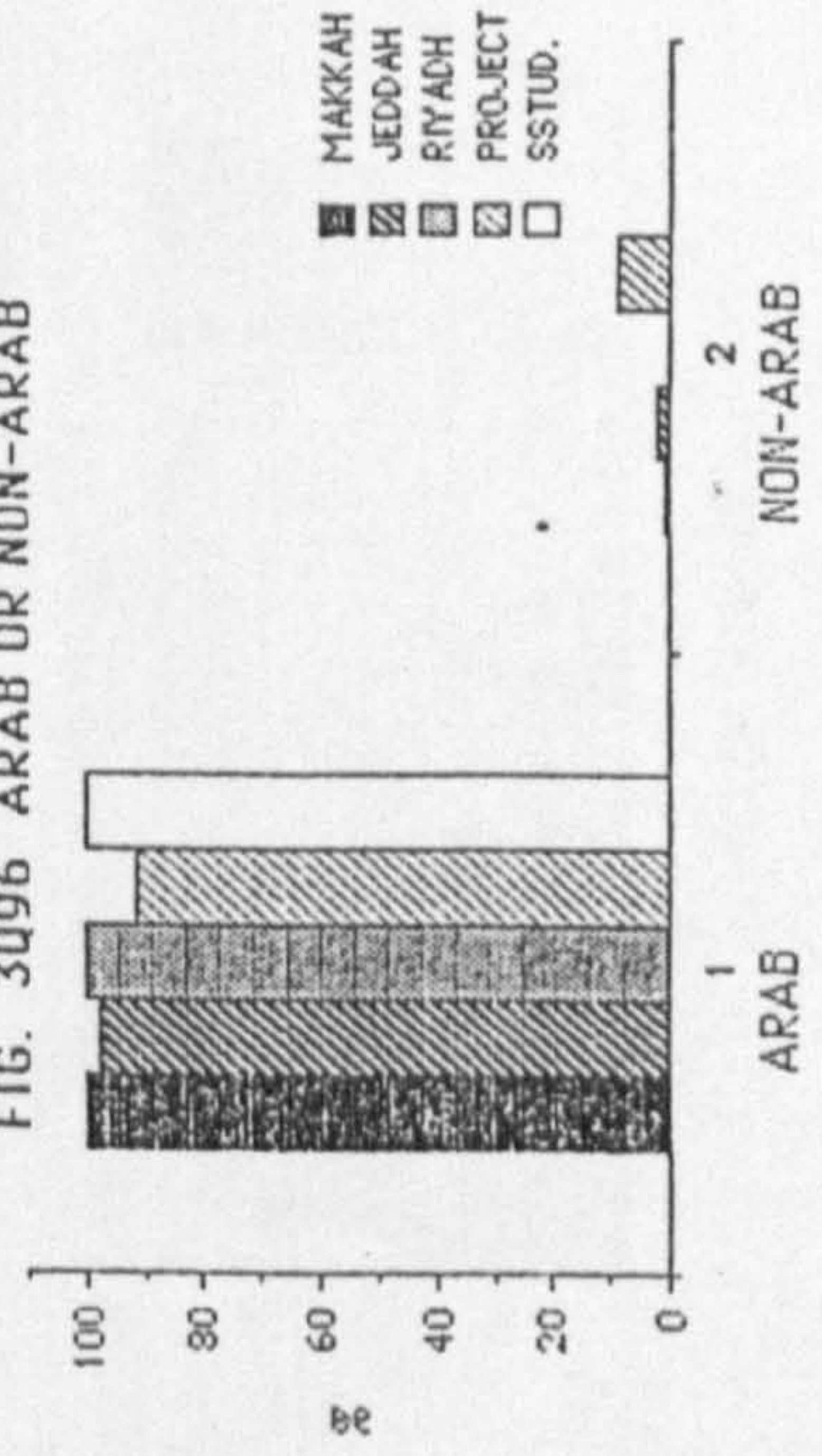


FIG. 1Q97 SINGLE OR MARRIED

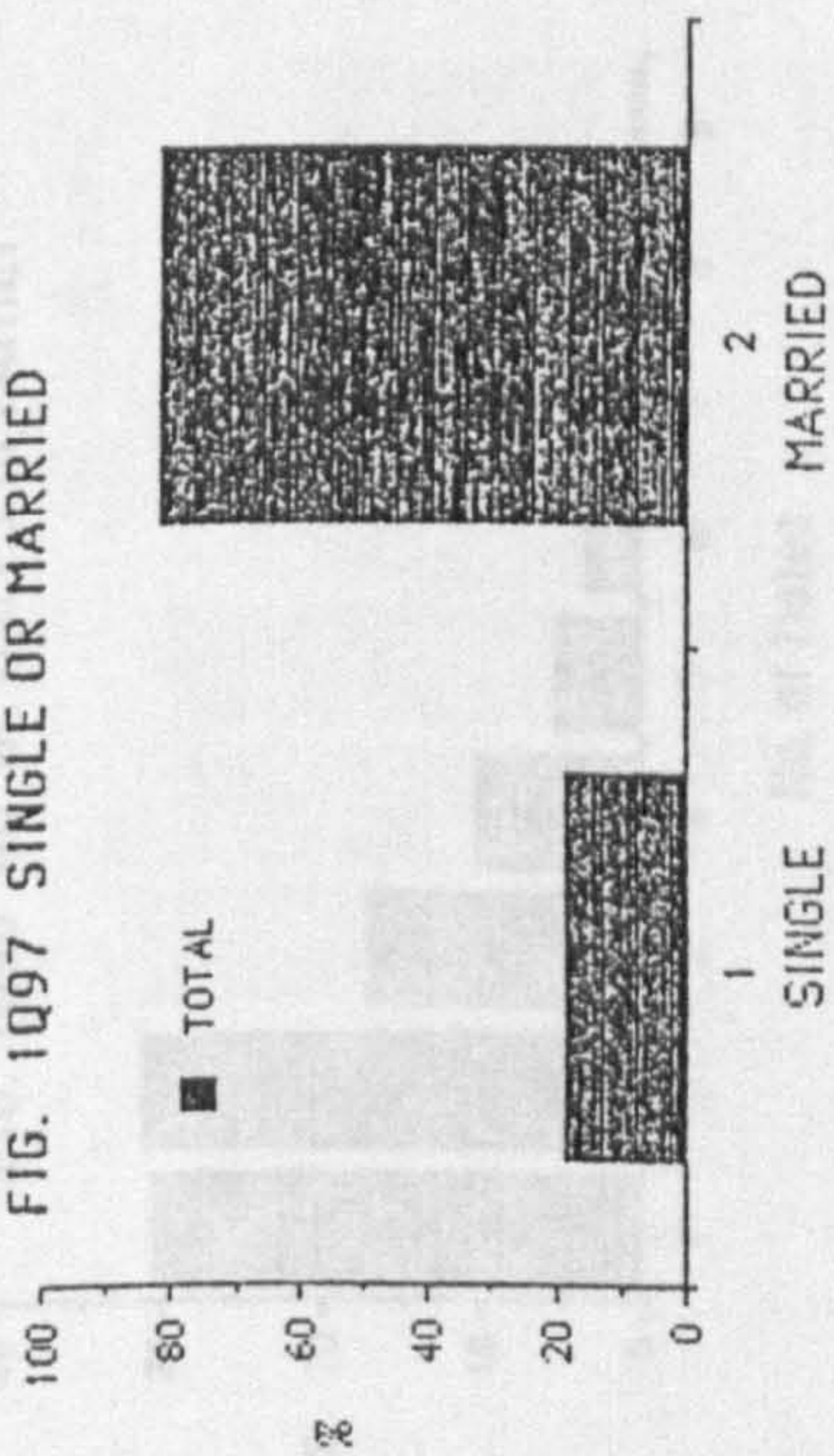


FIG. 2Q97 SINGLE OR MARRIED

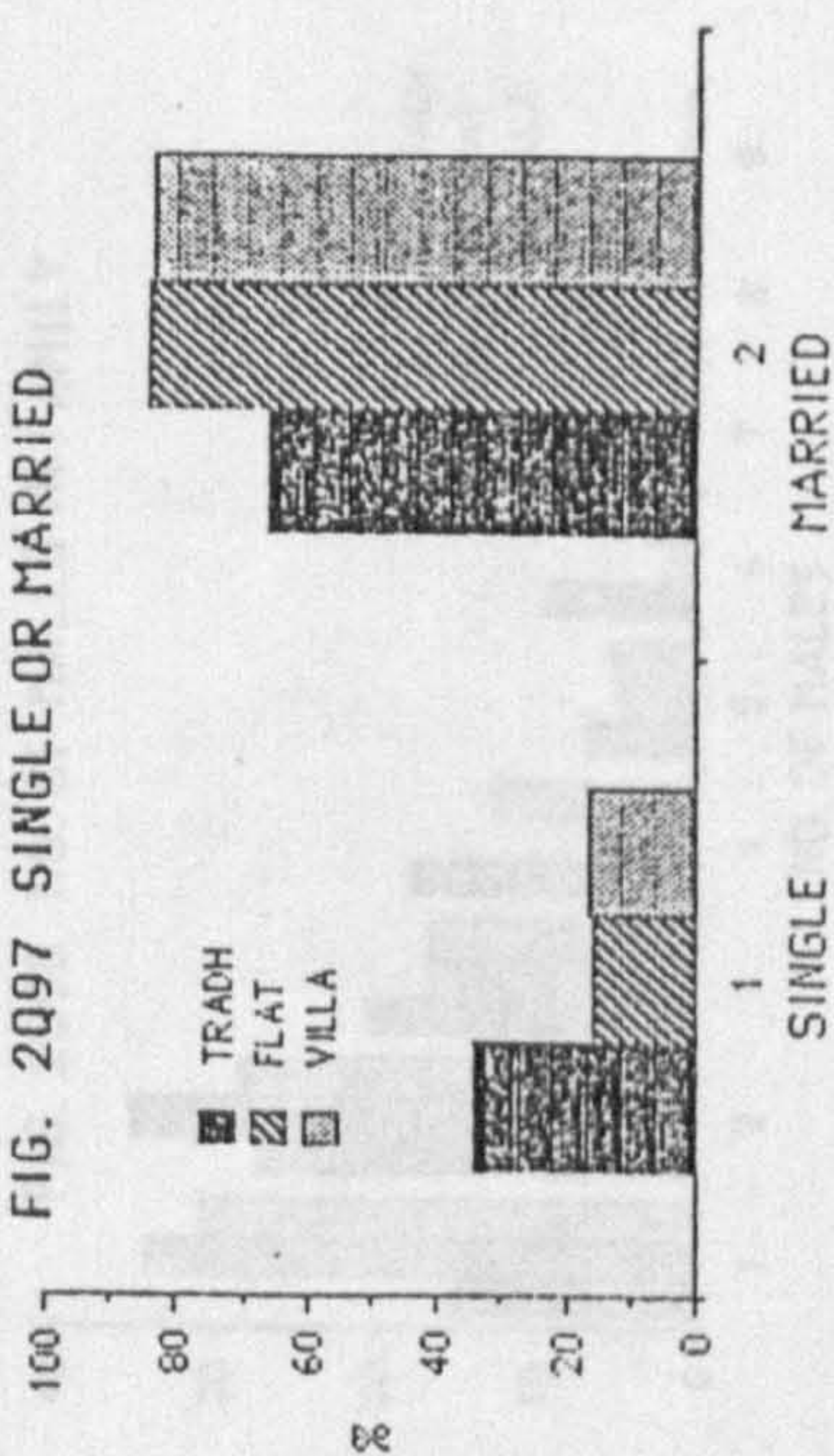


FIG. 3Q97 SINGLE OR MARRIED

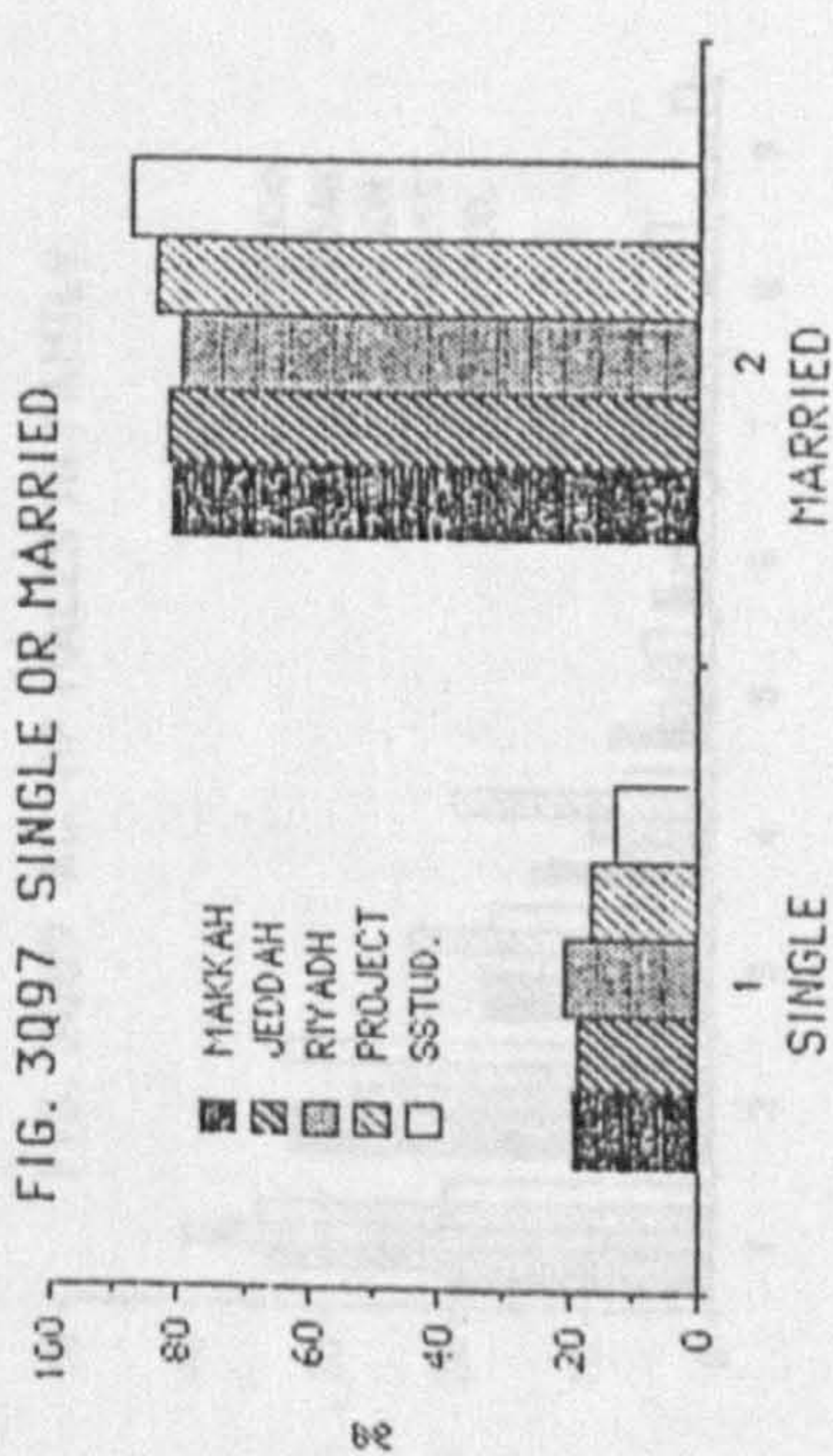


FIG. 1Q99 NO. OF FEMALES IN FAMILY

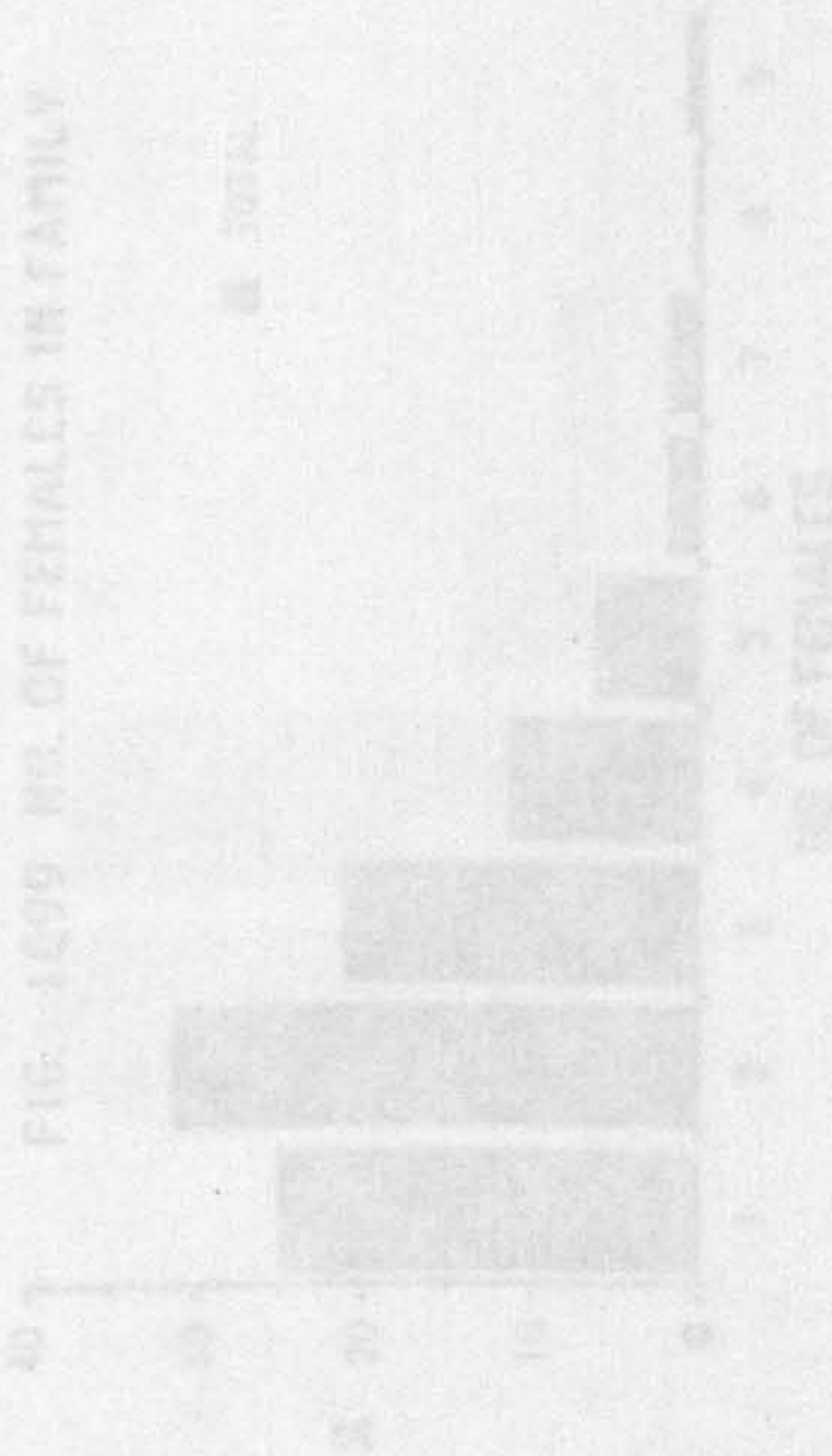


FIG. 2Q99 NO. OF FEMALES IN FAMILY



FIG. 3Q99 NO. OF FEMALES IN FAMILY

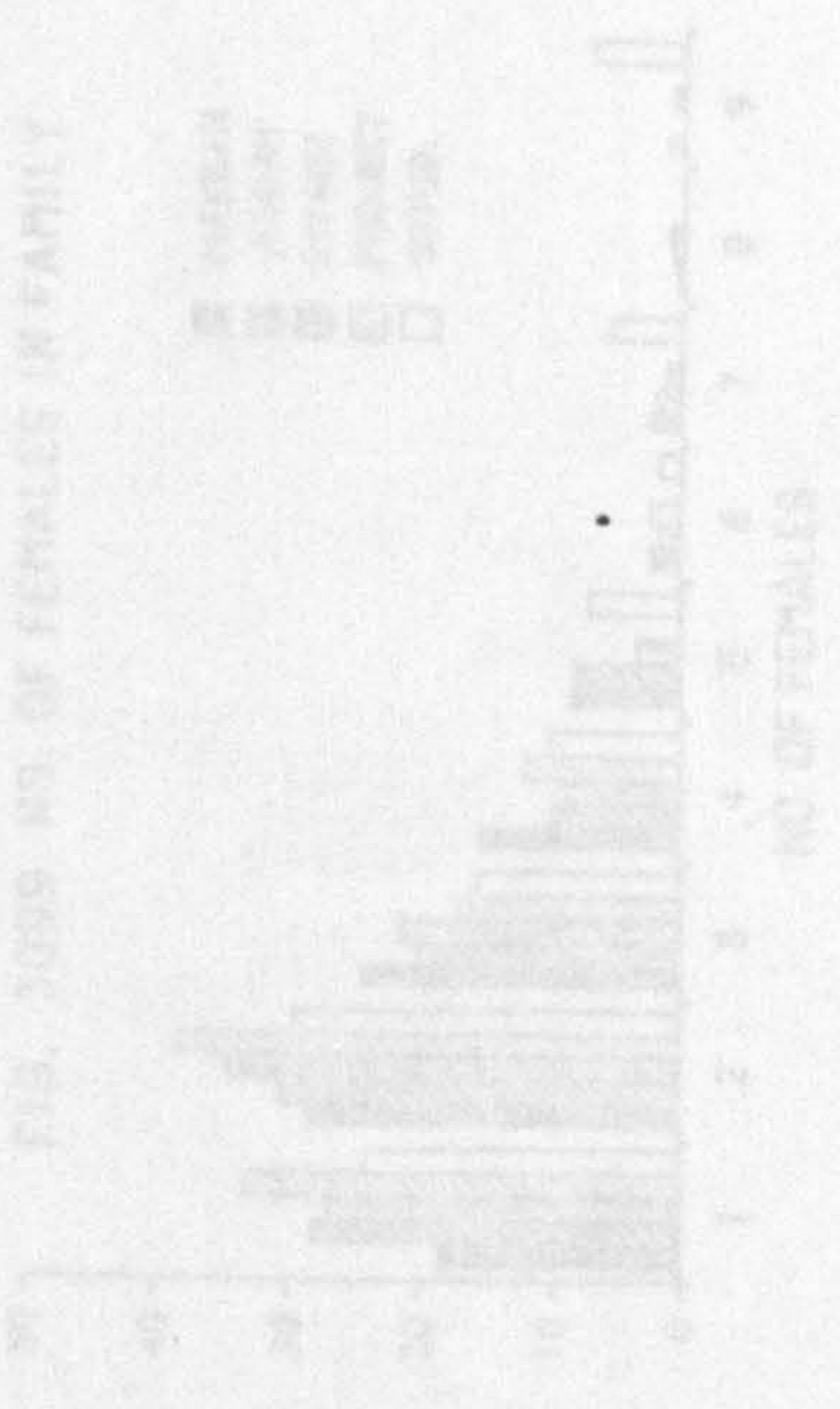


FIG. 1Q98 NO. OF MALES IN FAMILY

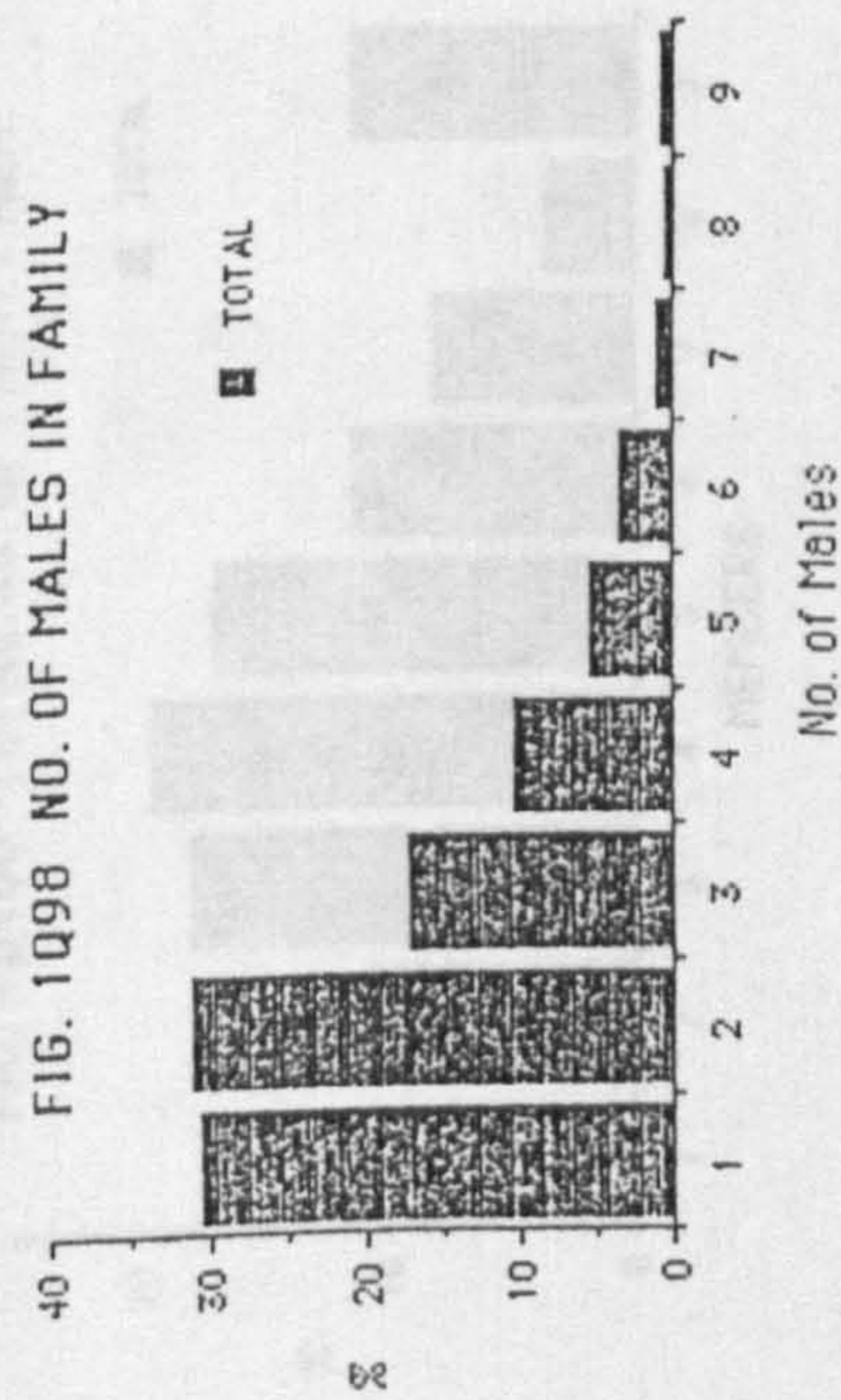


FIG. 2Q98 NO. OF MALES IN FAMILY

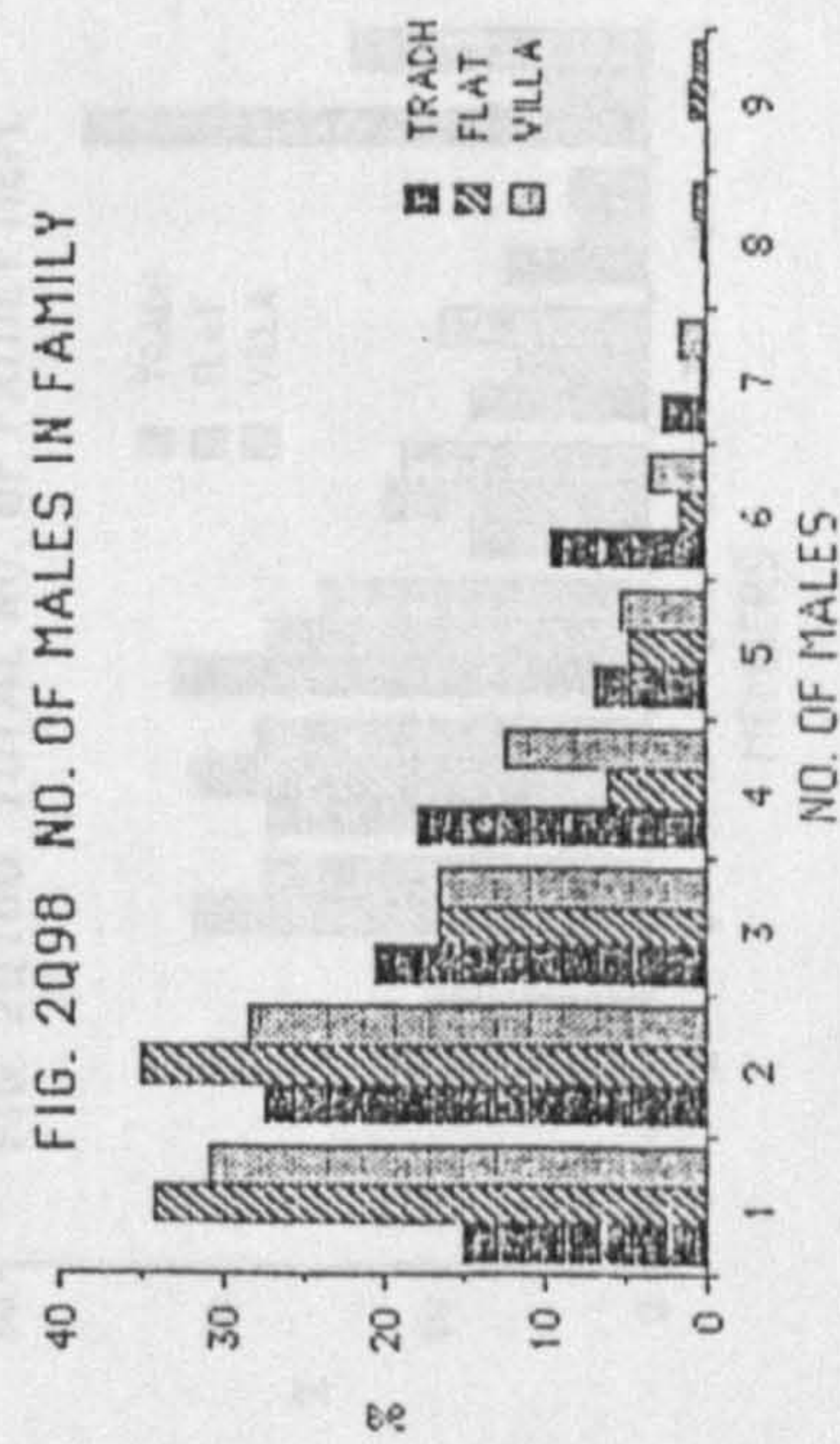


FIG. 3Q89 NO. OF MALES IN FAMILY

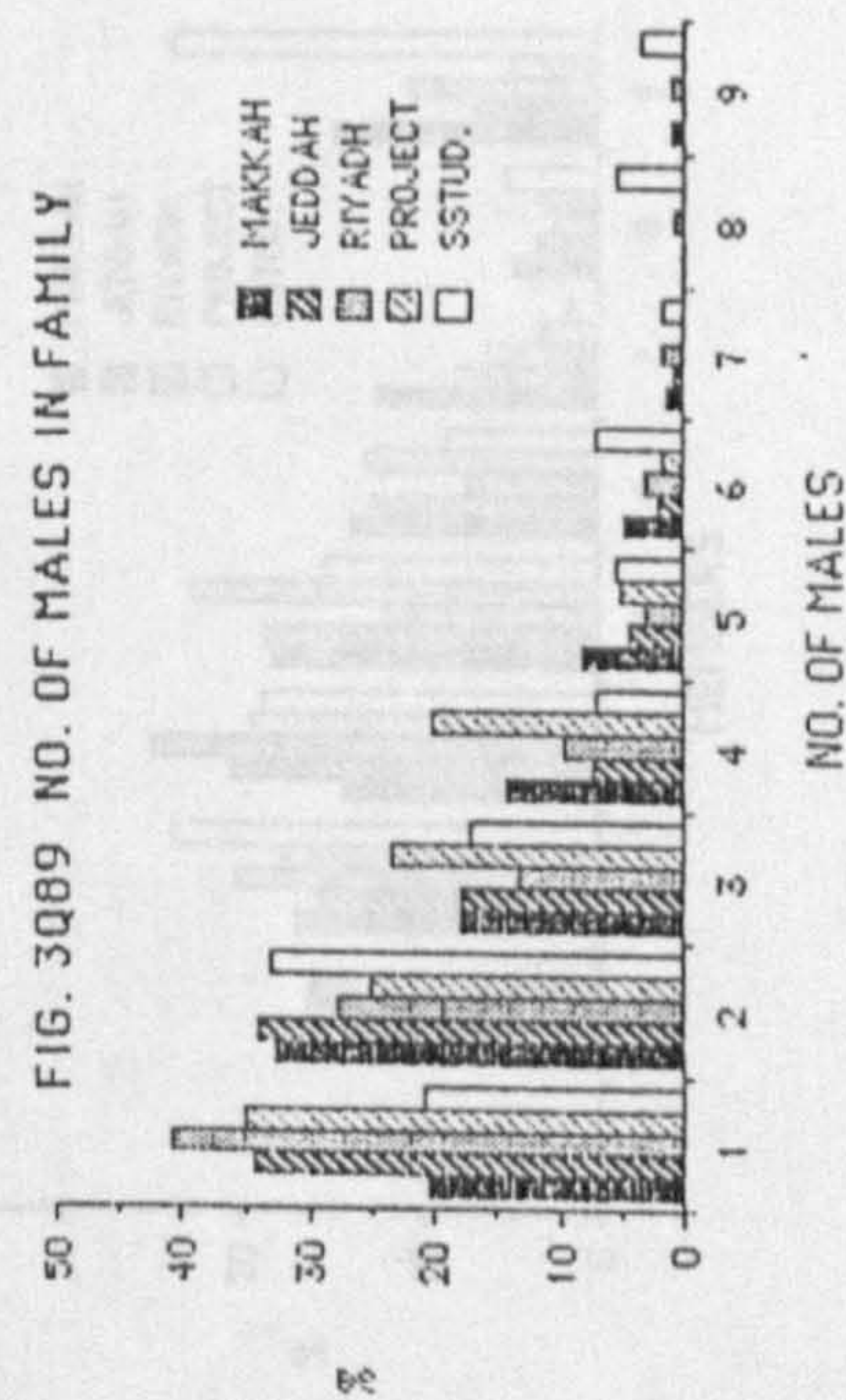


FIG. 1Q99 NO. OF FEMALES IN FAMILY

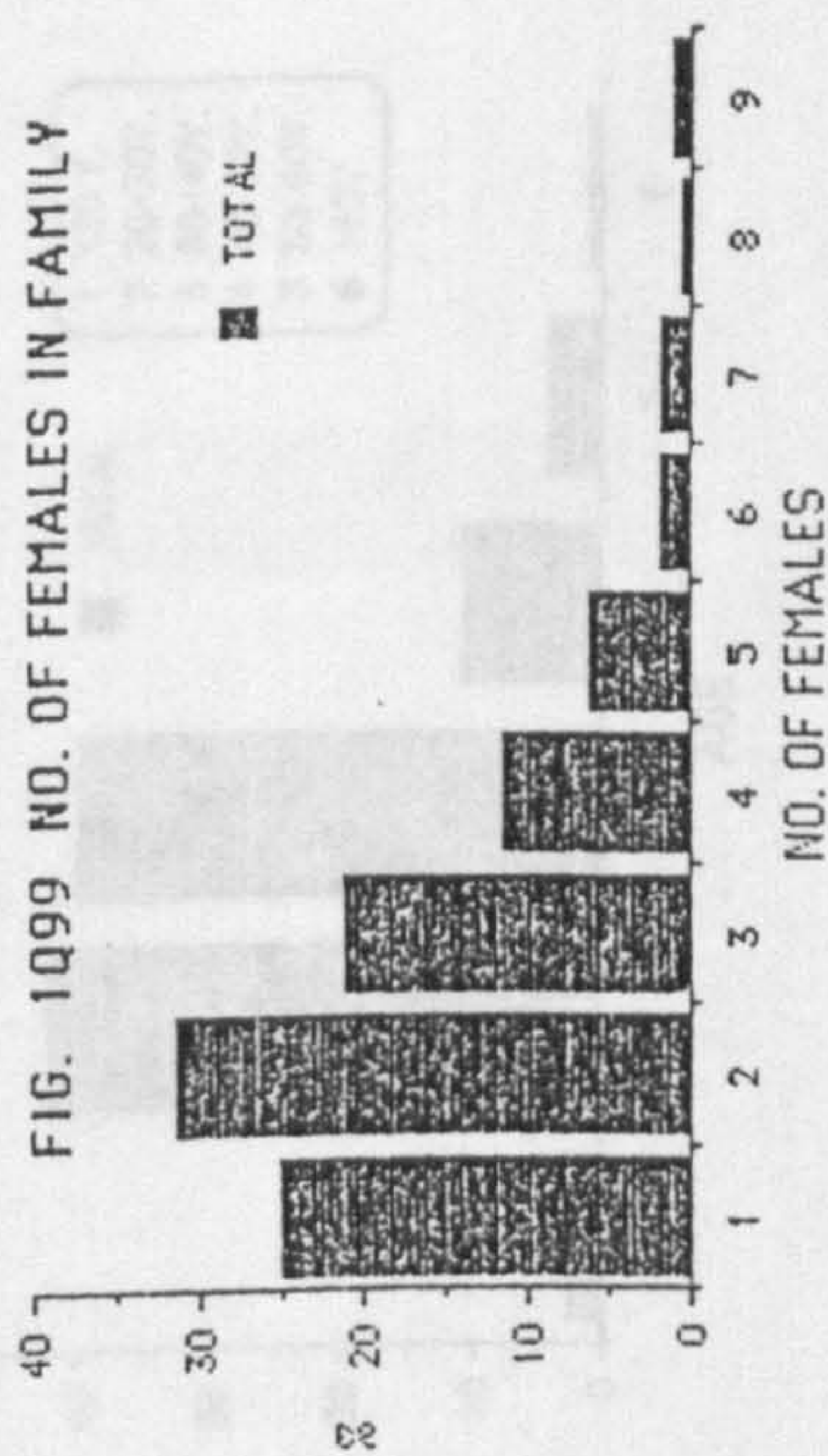


FIG. 2Q99 NO. OF FEMALES IN FAMILY

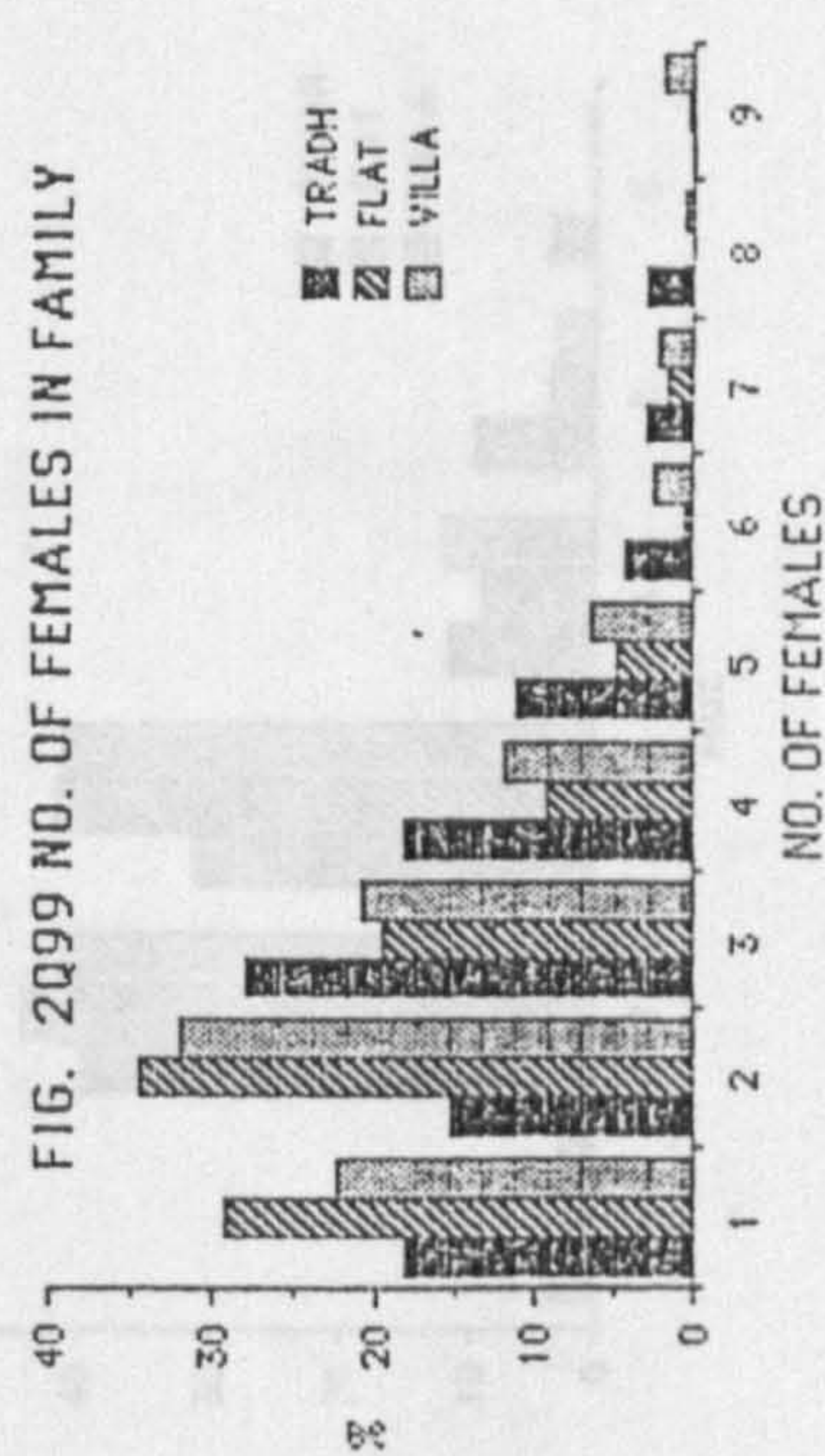


FIG. 3Q99 NO. OF FEMALES IN FAMILY

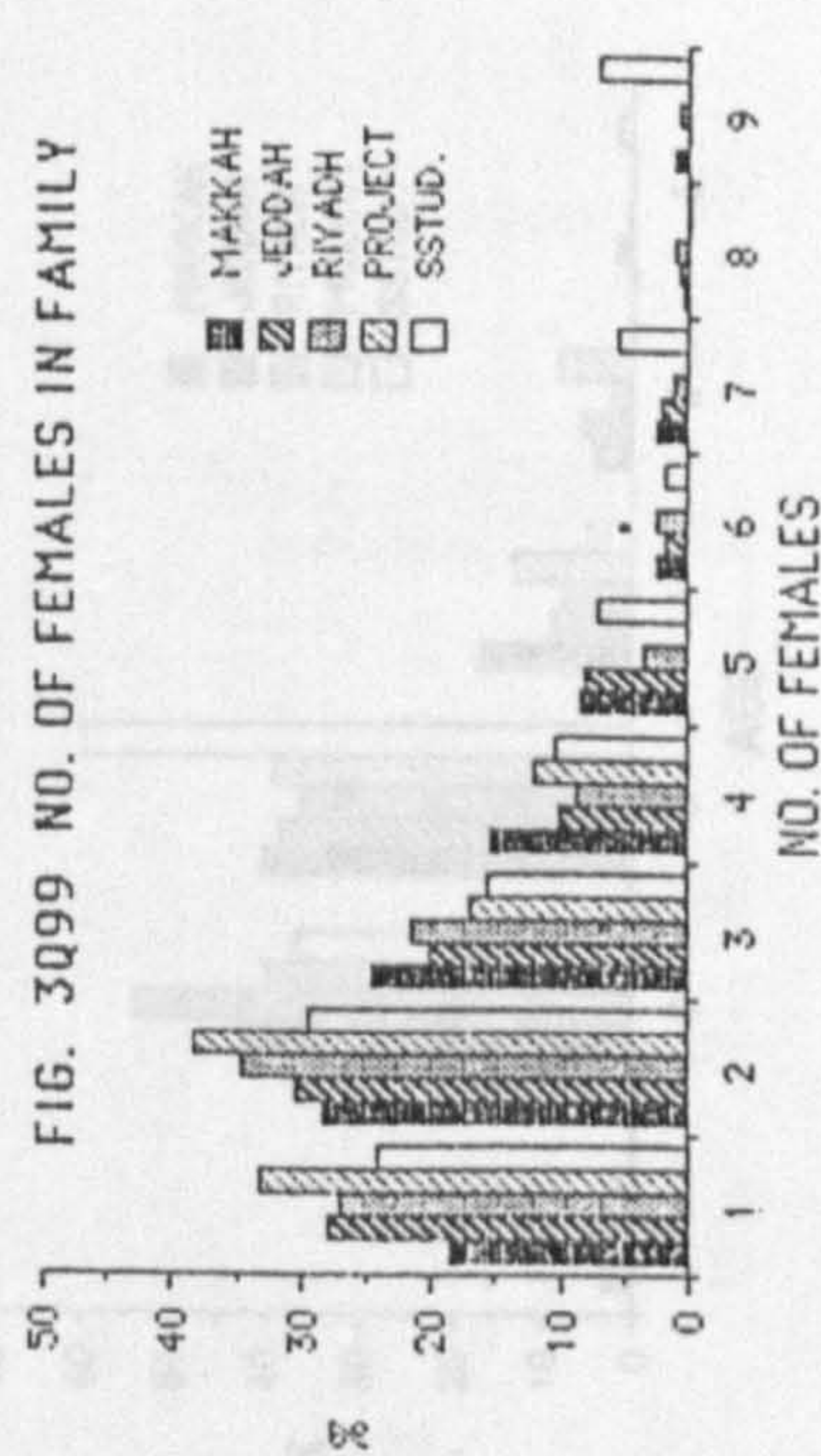


FIG. 1Q100 TOTAL NO. OF FAMILY MEM.

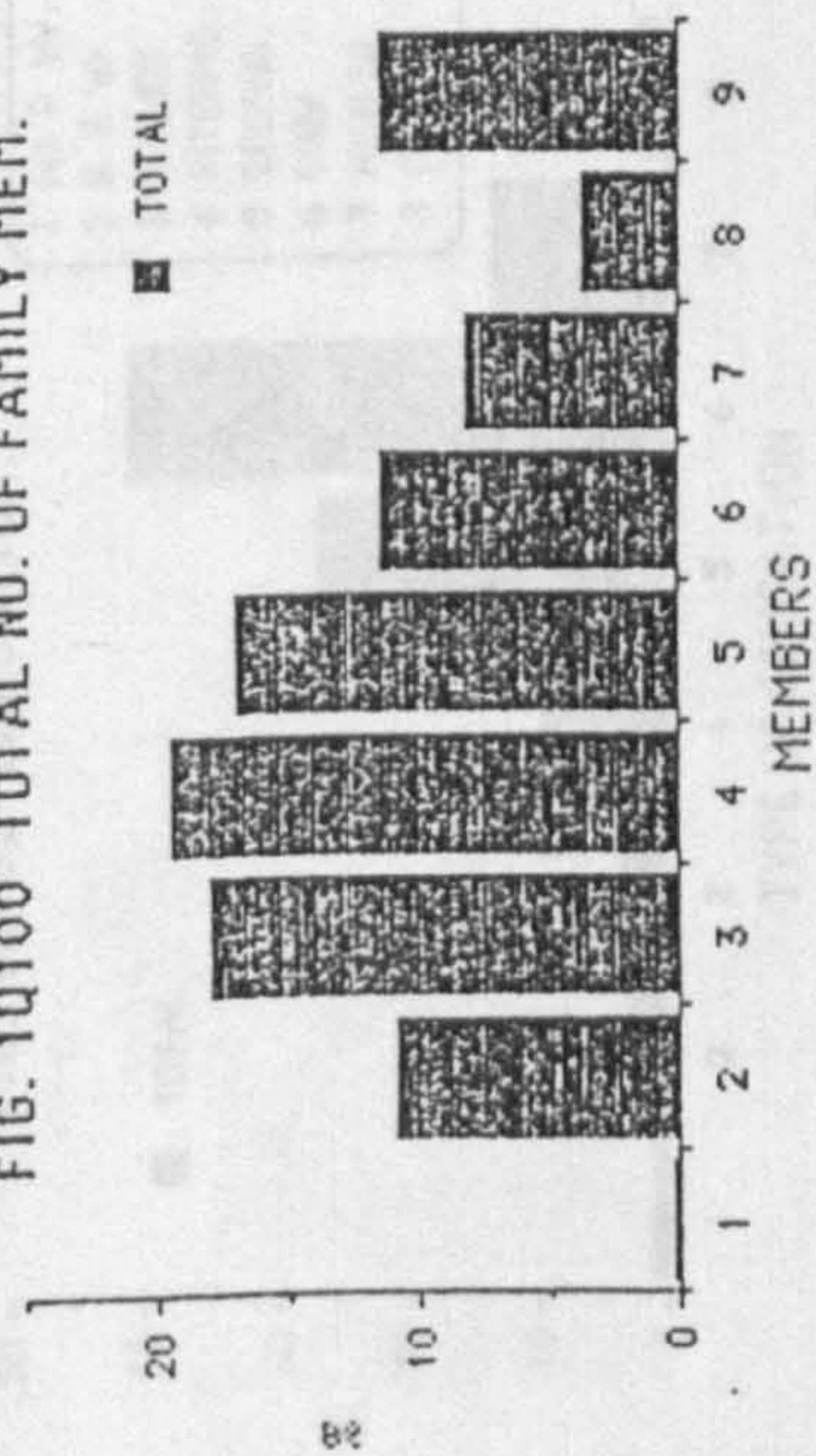


FIG. 1Q101 AGE

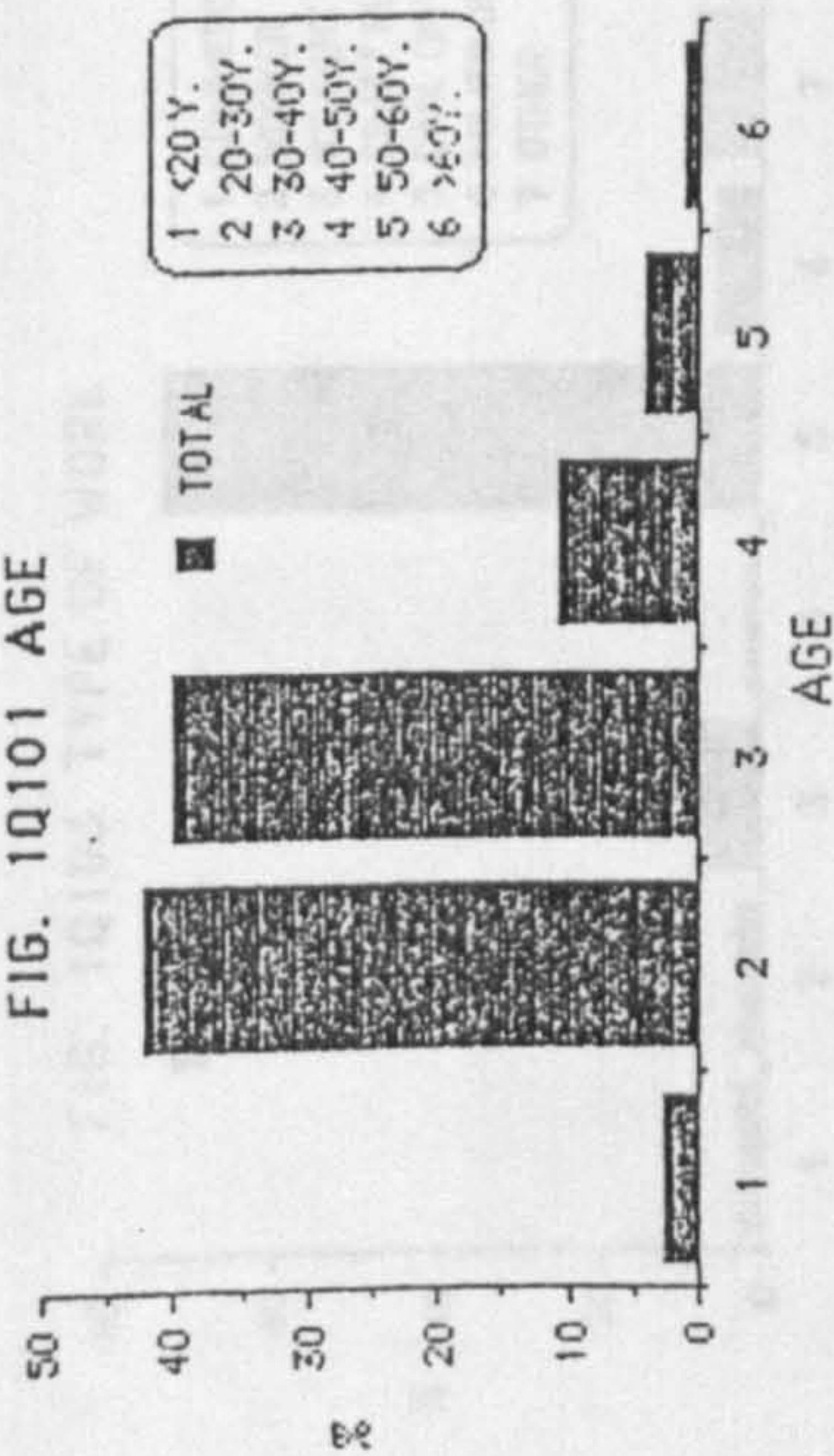


FIG. 2Q100 TOTAL NO. OF FAMILY MEM.

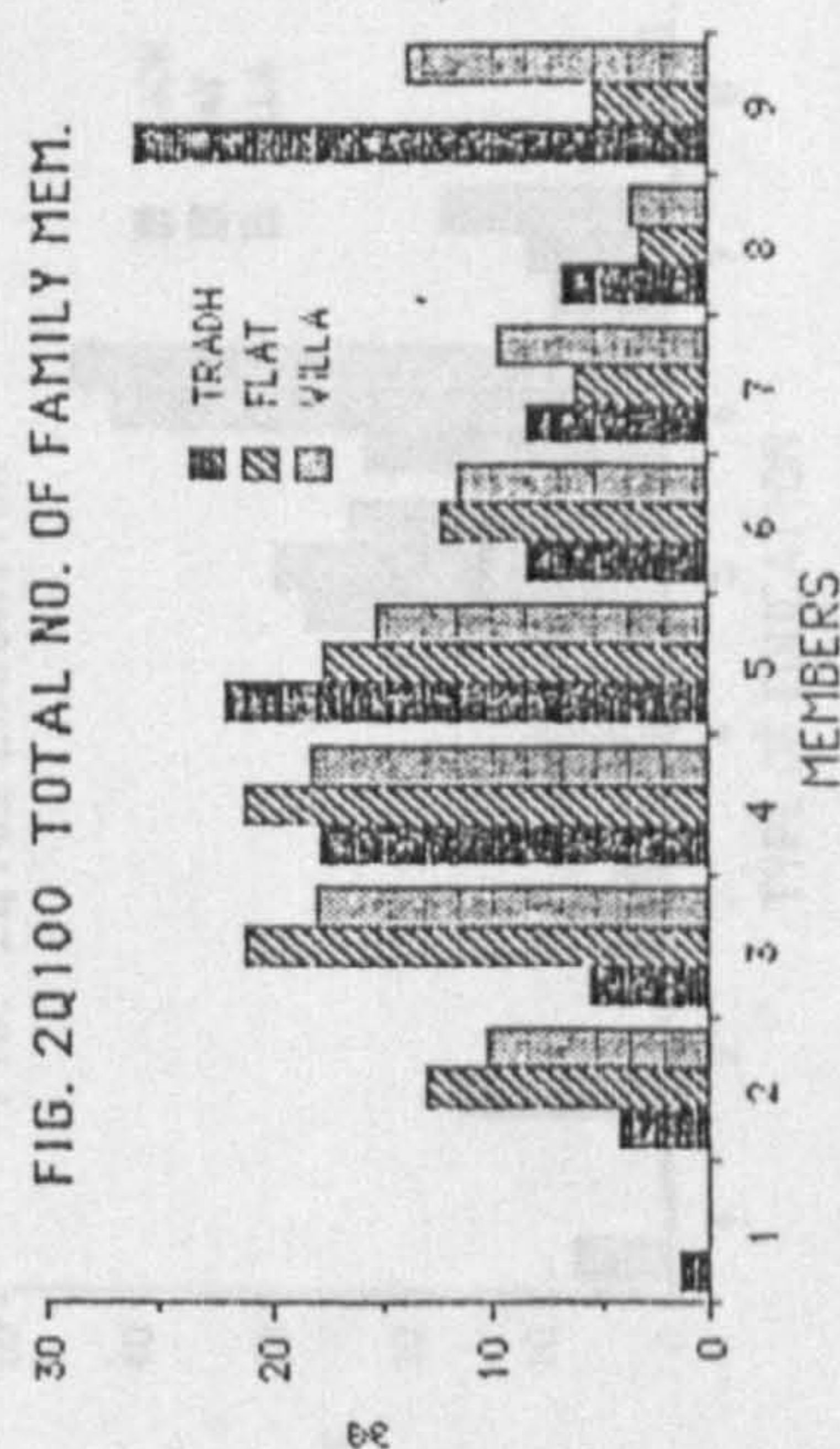


FIG. 2Q101 AGE

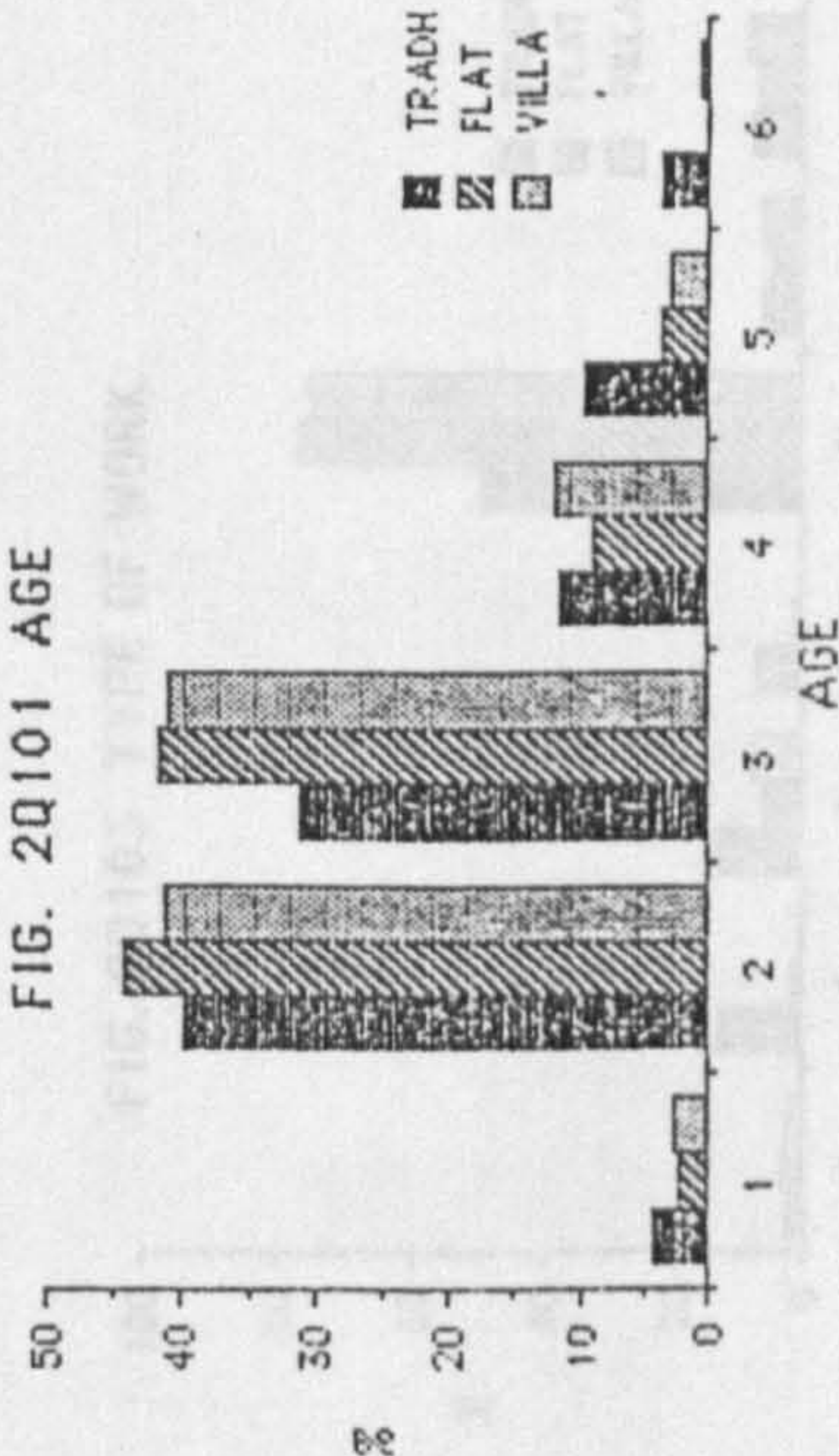


FIG. 3Q100 TOTAL NO. OF FAMILY MEM.

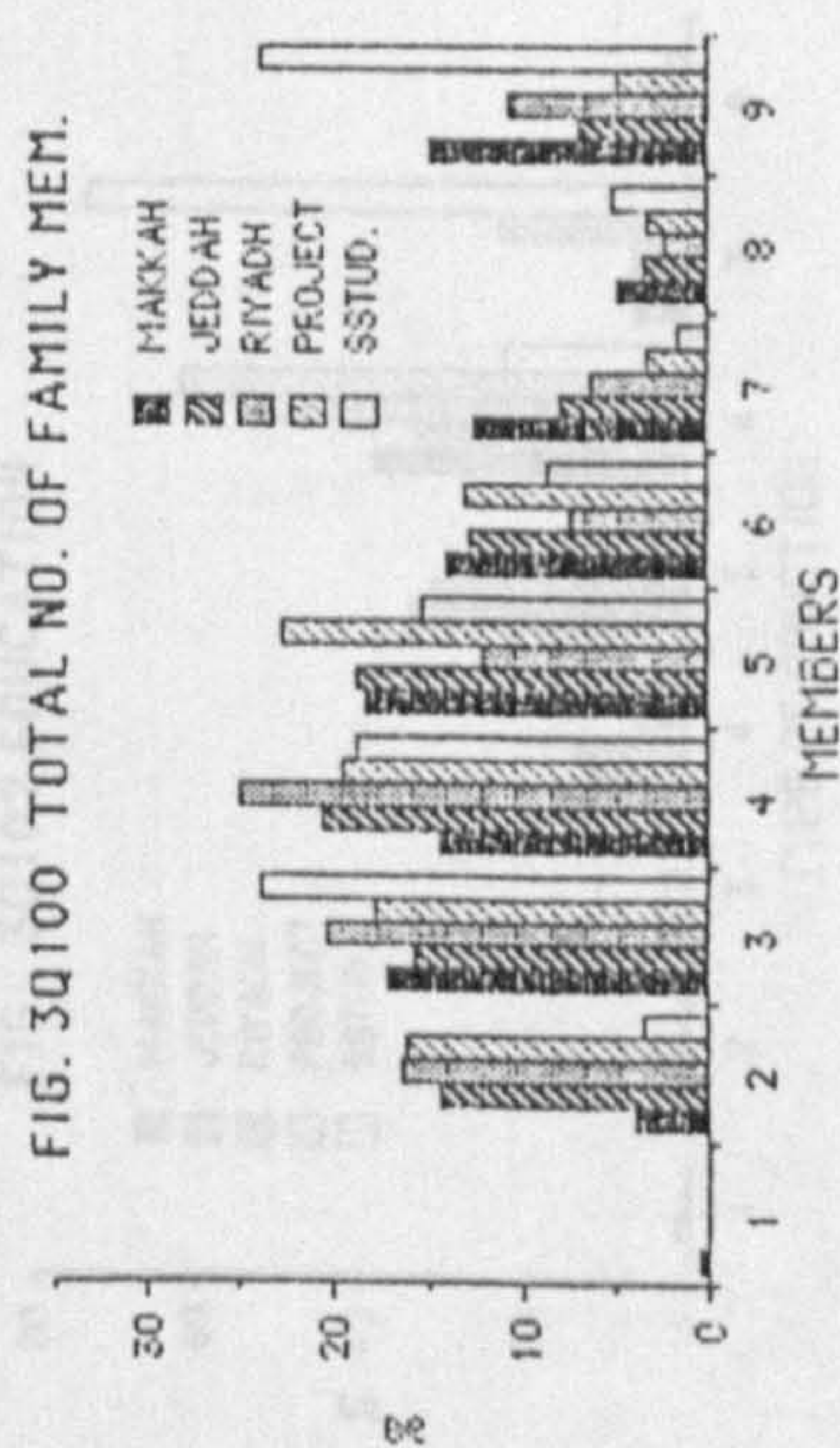


FIG. 3Q101 AGE

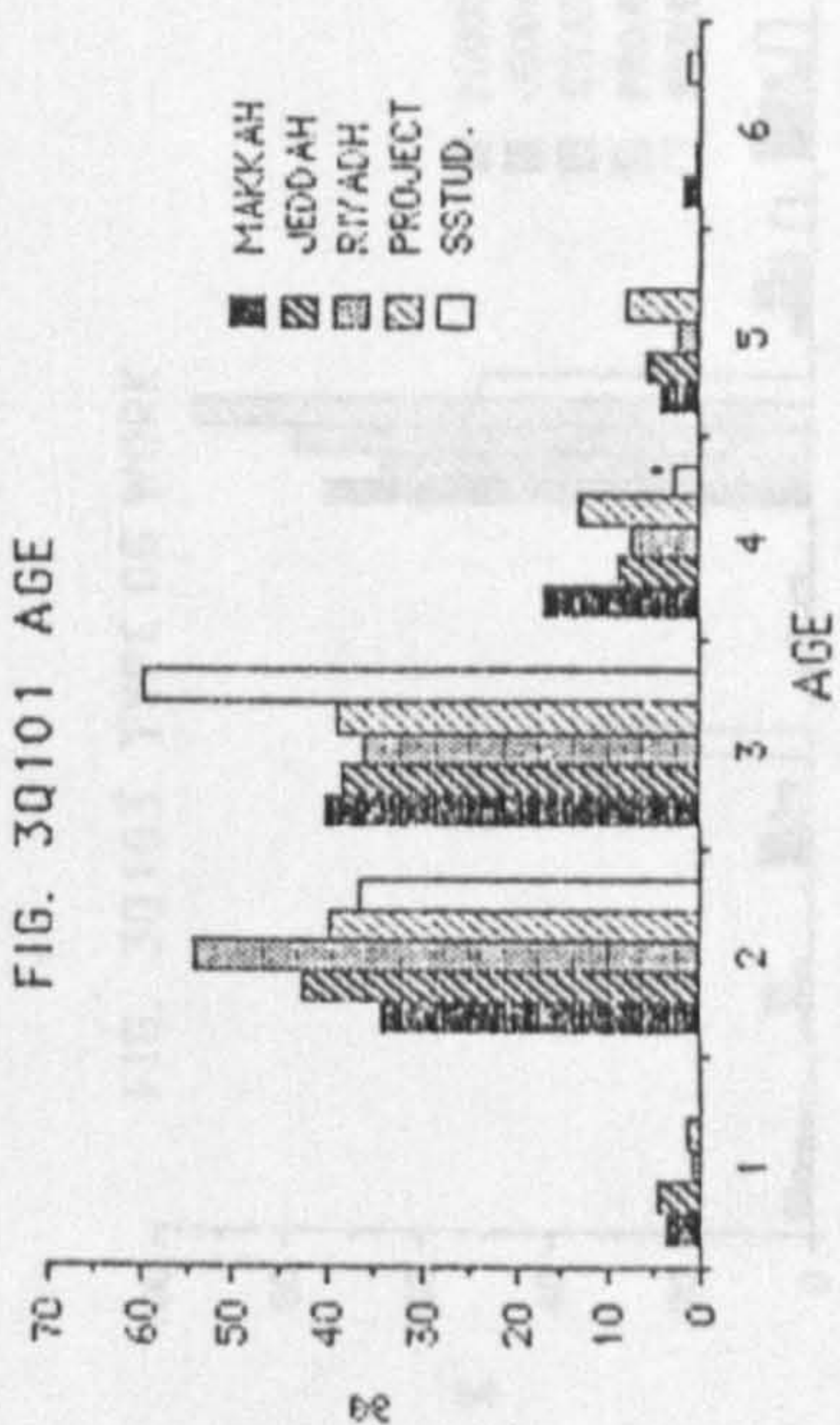


FIG. 1Q102 EDUCATION

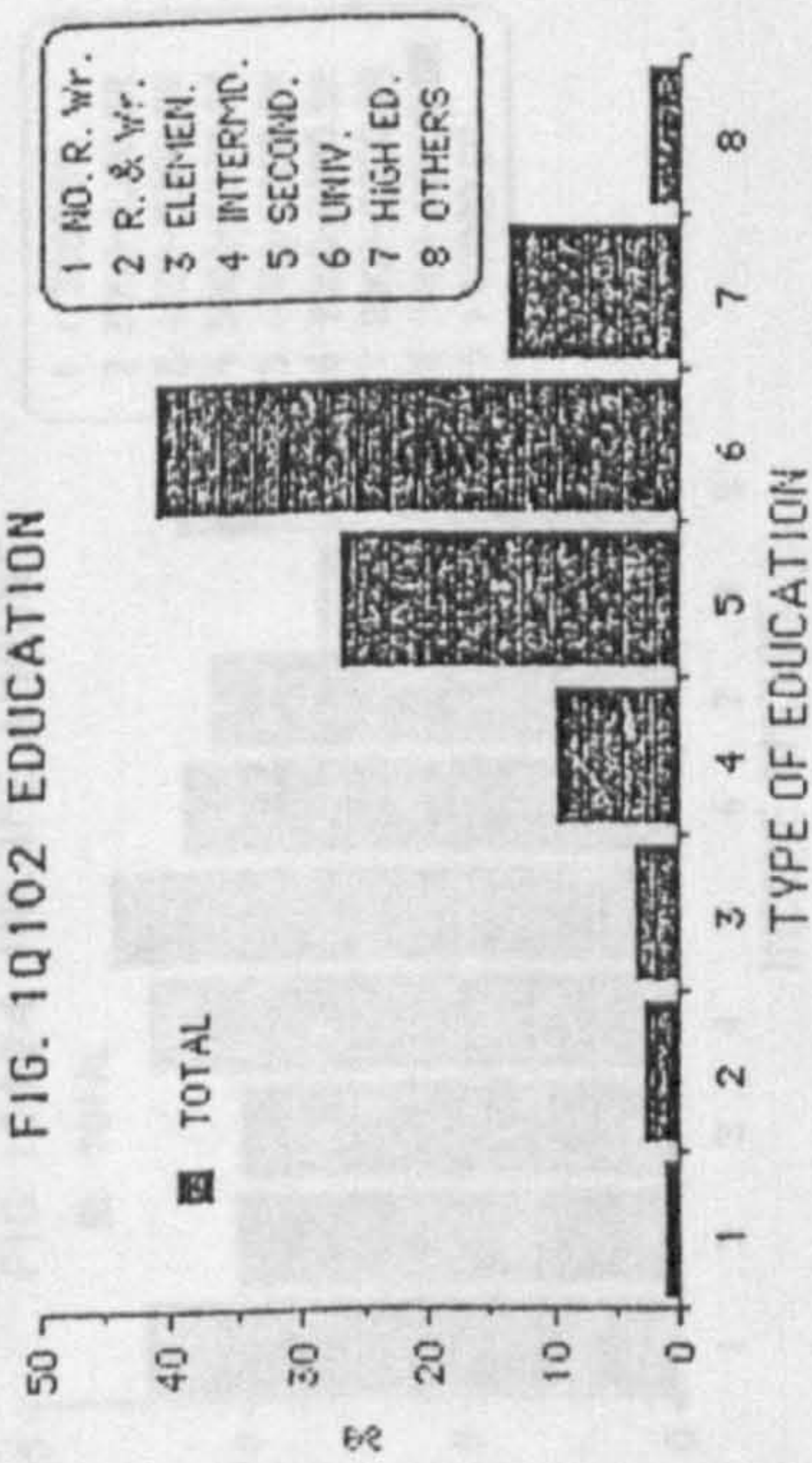


FIG. 1Q103 TYPE OF WORK

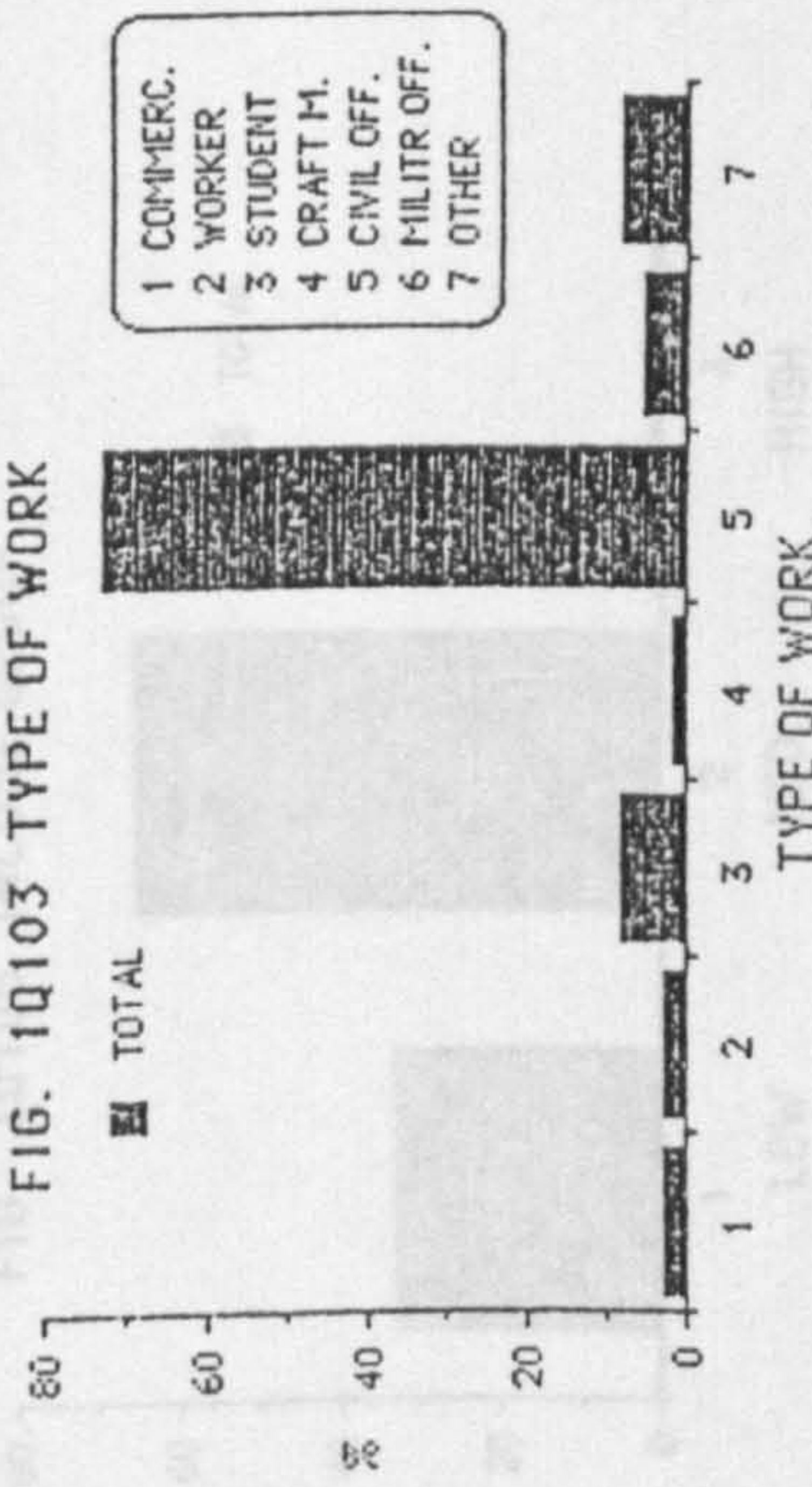


FIG. 2Q102 EDUCATION

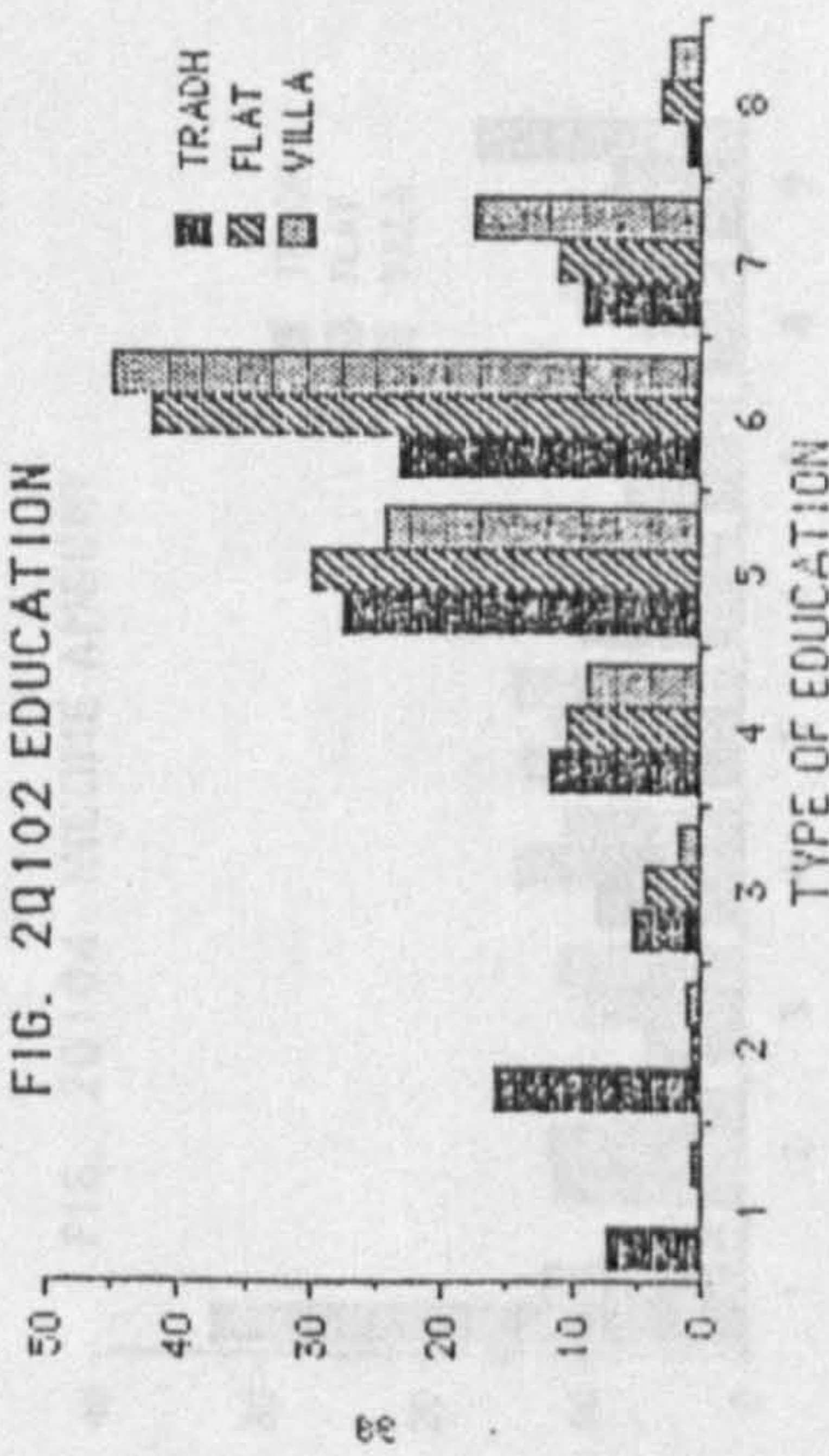


FIG. 2Q103 TYPE OF WORK

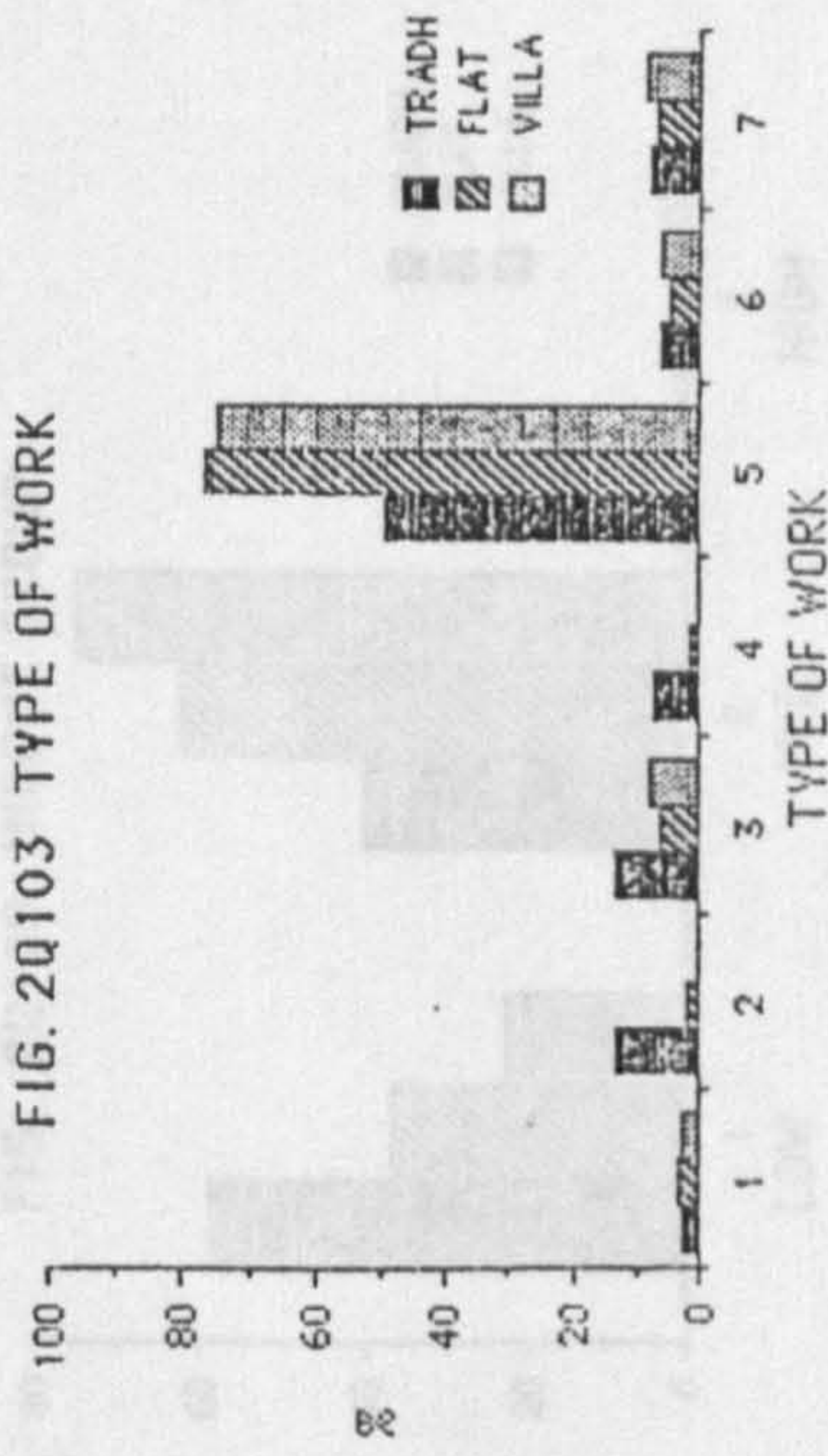


FIG. 3Q102 EDUCATION

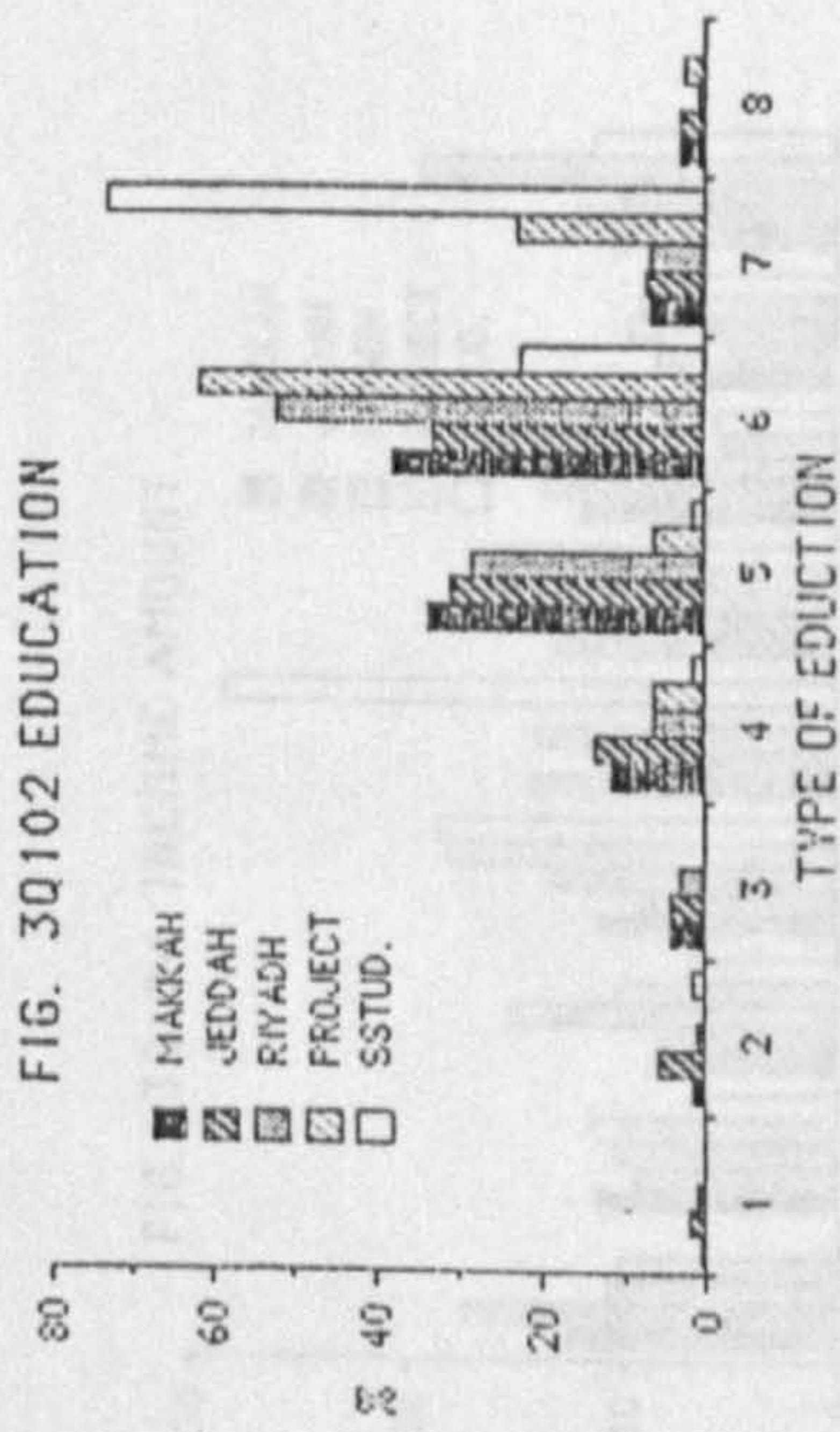


FIG. 3Q103 TYPE OF WORK

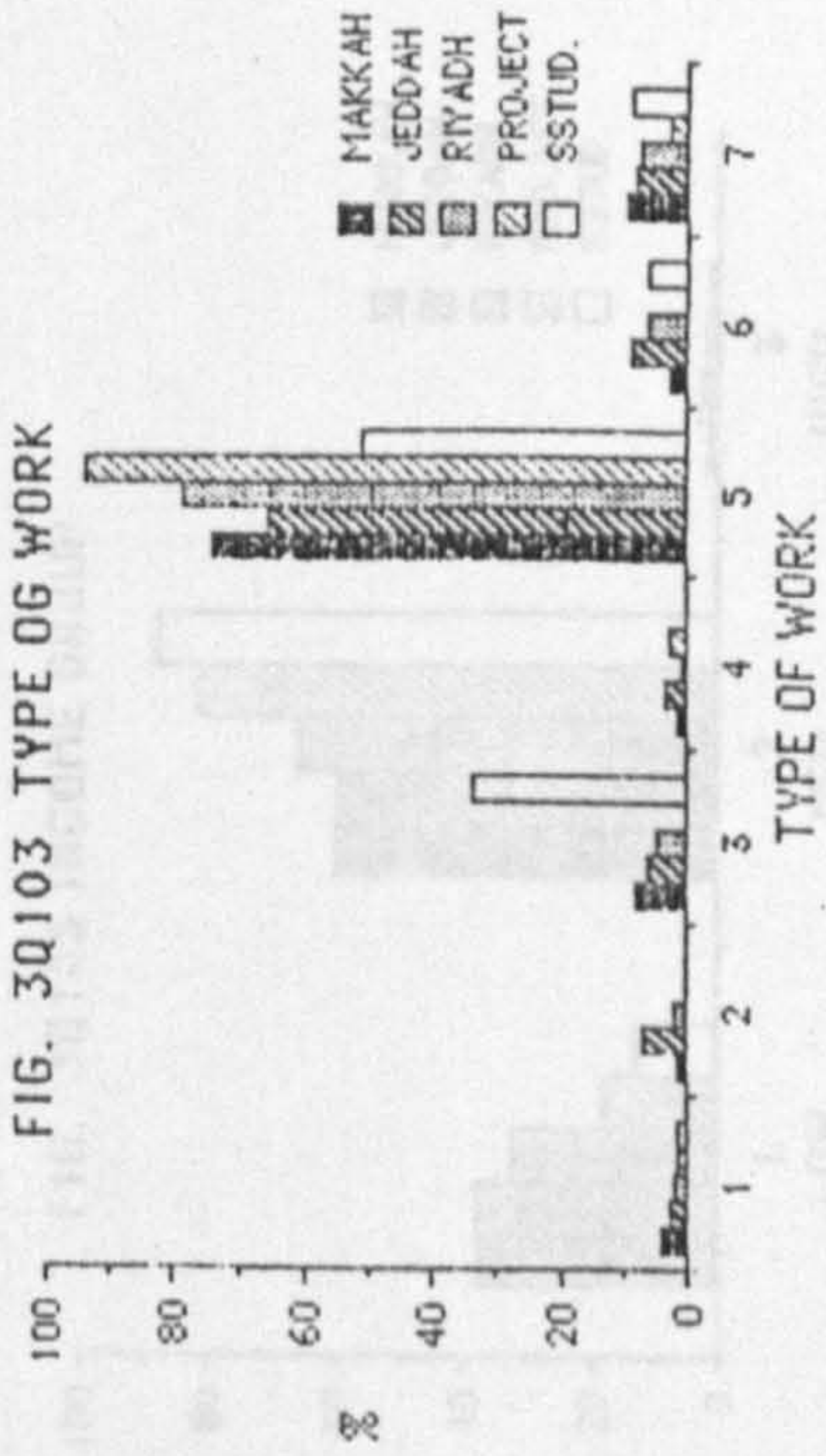


FIG 1Q104 INCOME AMOUNT

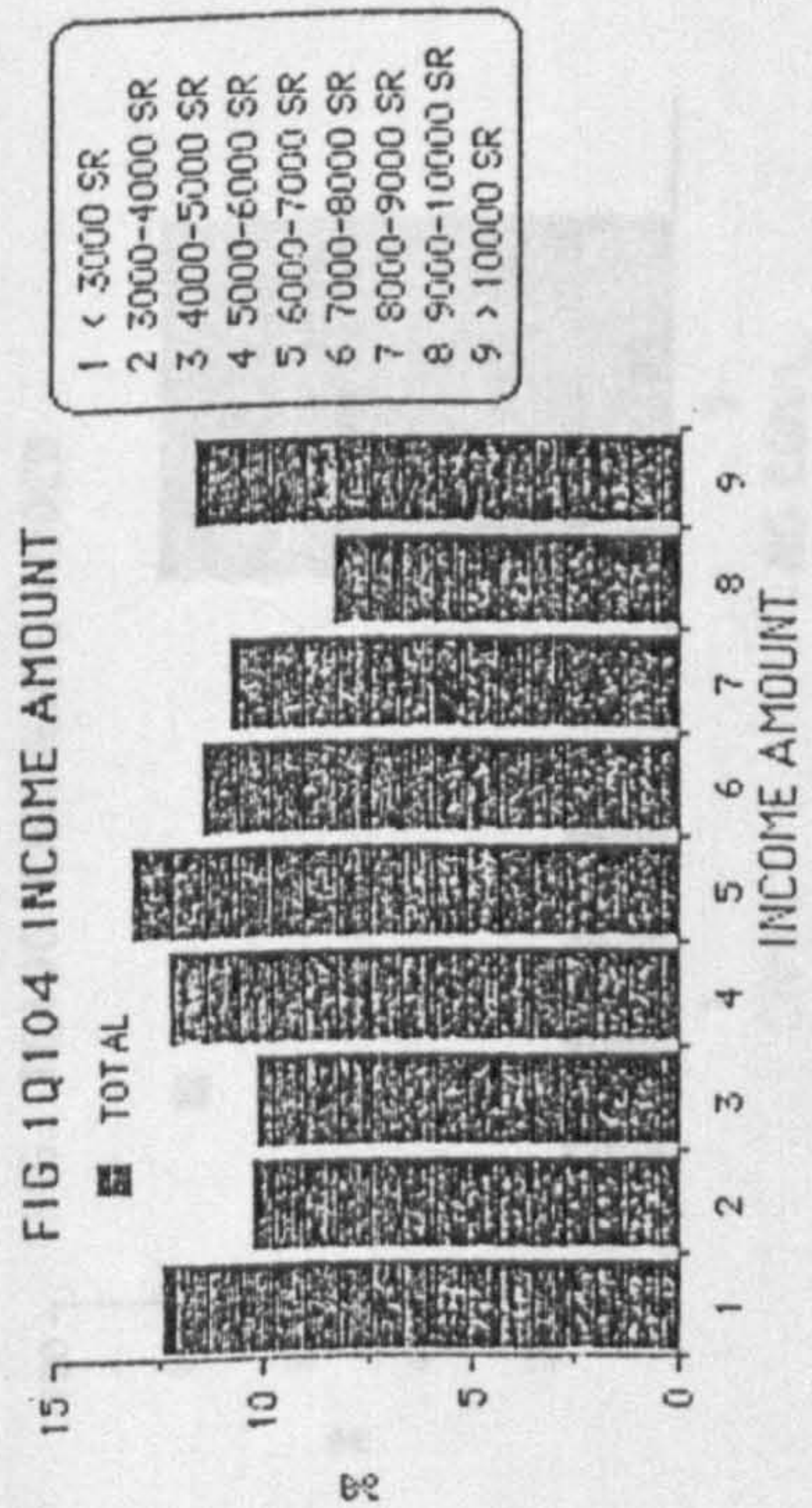


FIG. 1Q105 INCOME GROUP

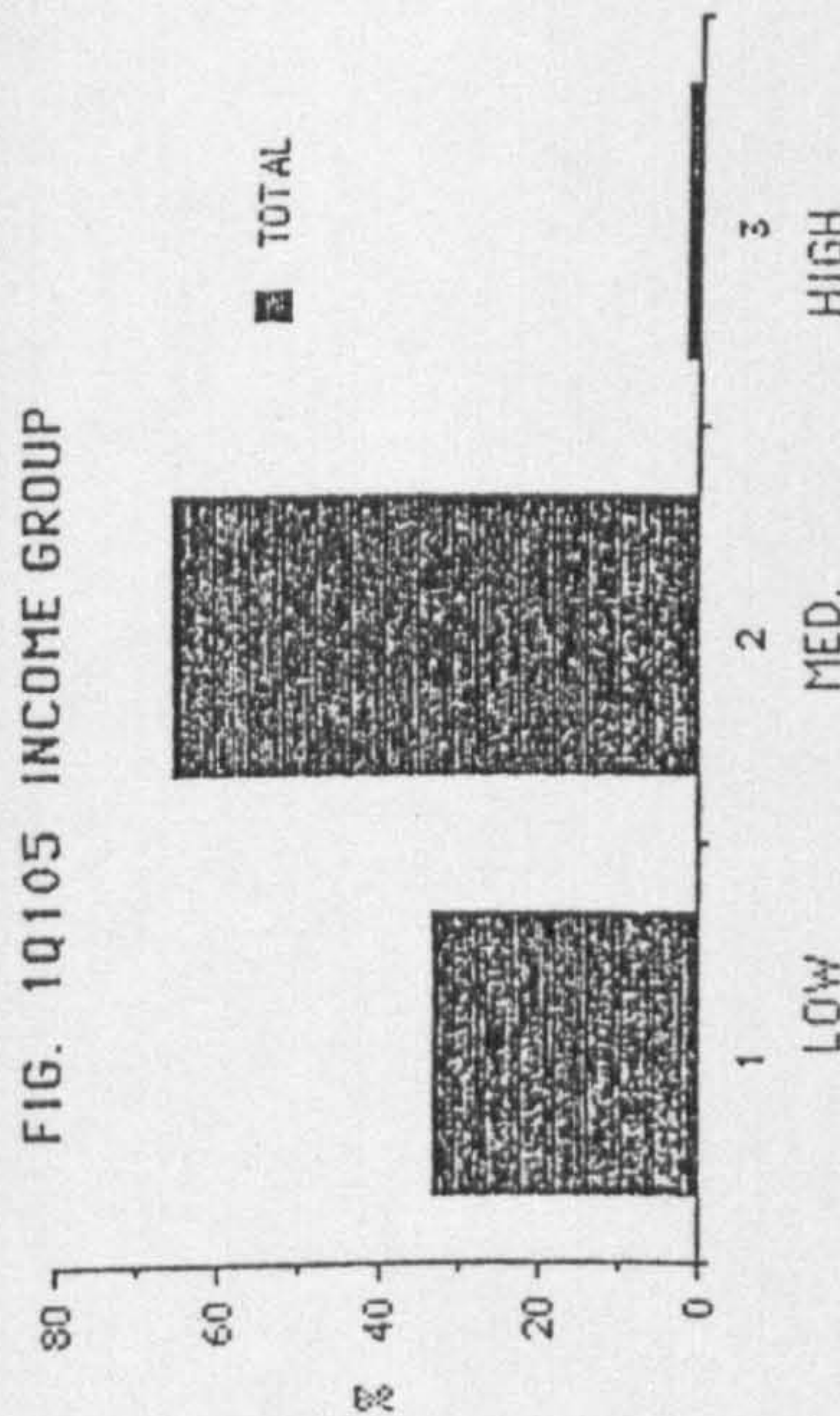


FIG. 2Q104 INCOME AMOUNT

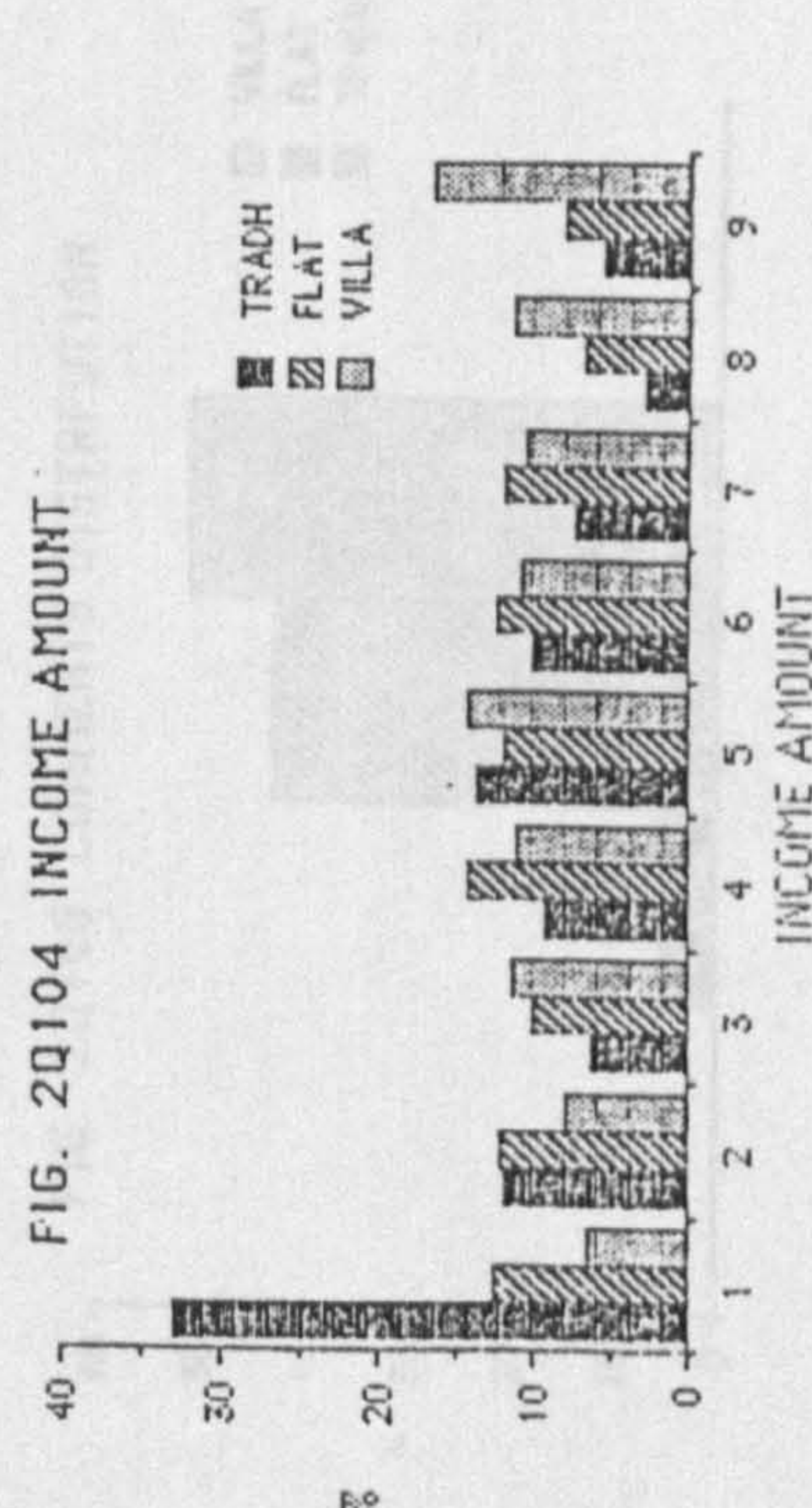


FIG. 2Q105 INCOME GROUP

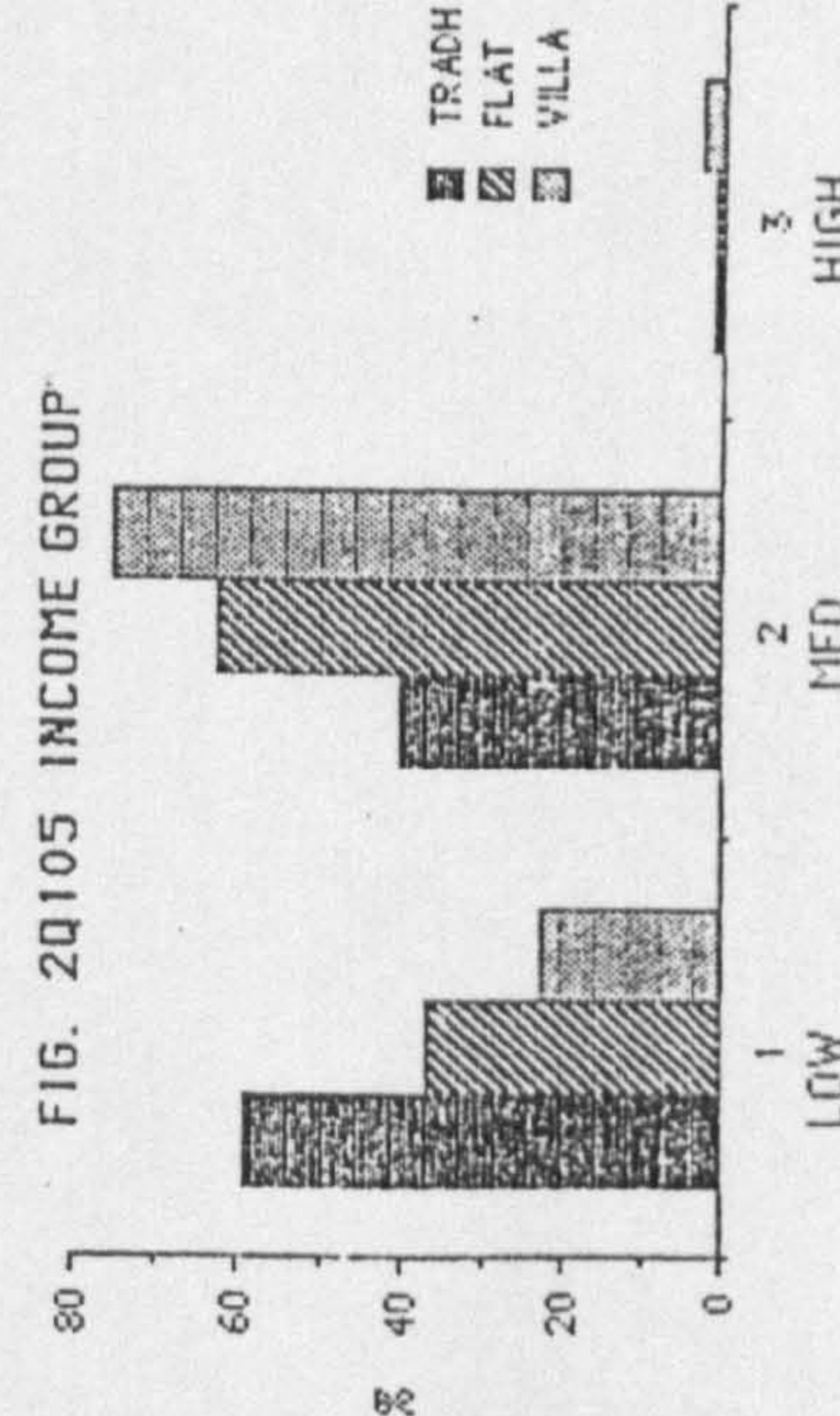


FIG. 3Q104 INCOME AMOUNT

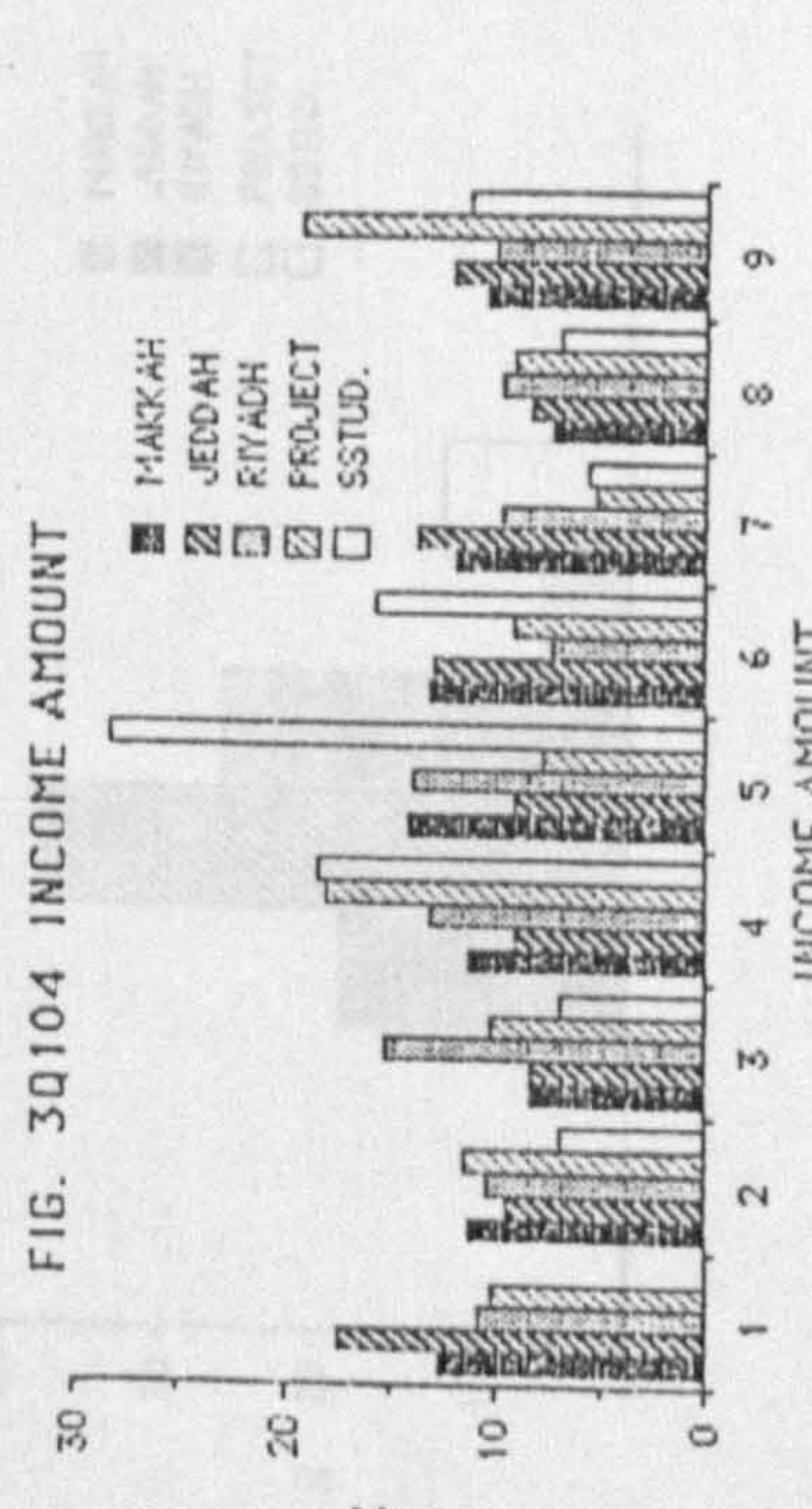


FIG. 3Q105 INCOME GROUP

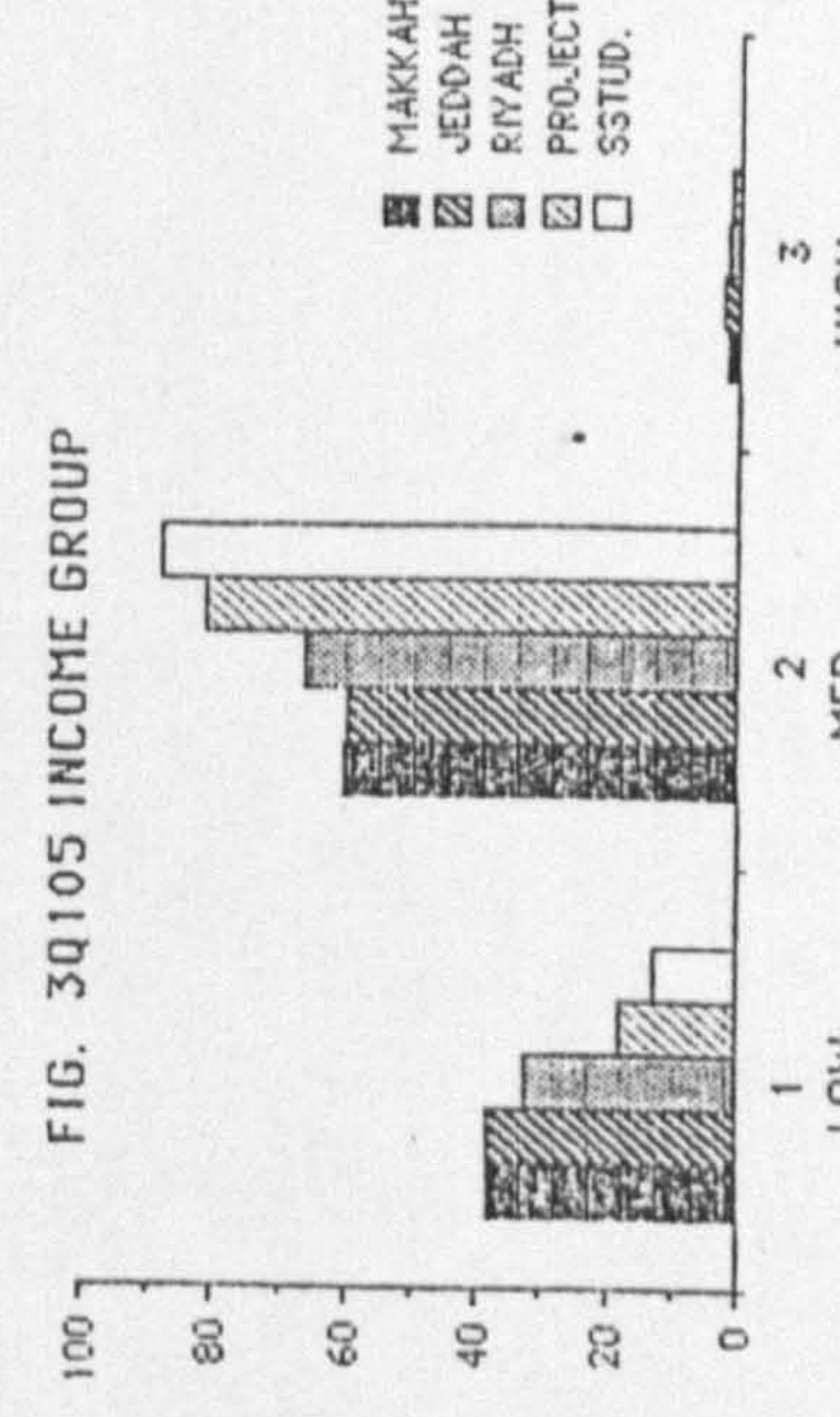


FIG. 1Q106 COMMENTS ADDED

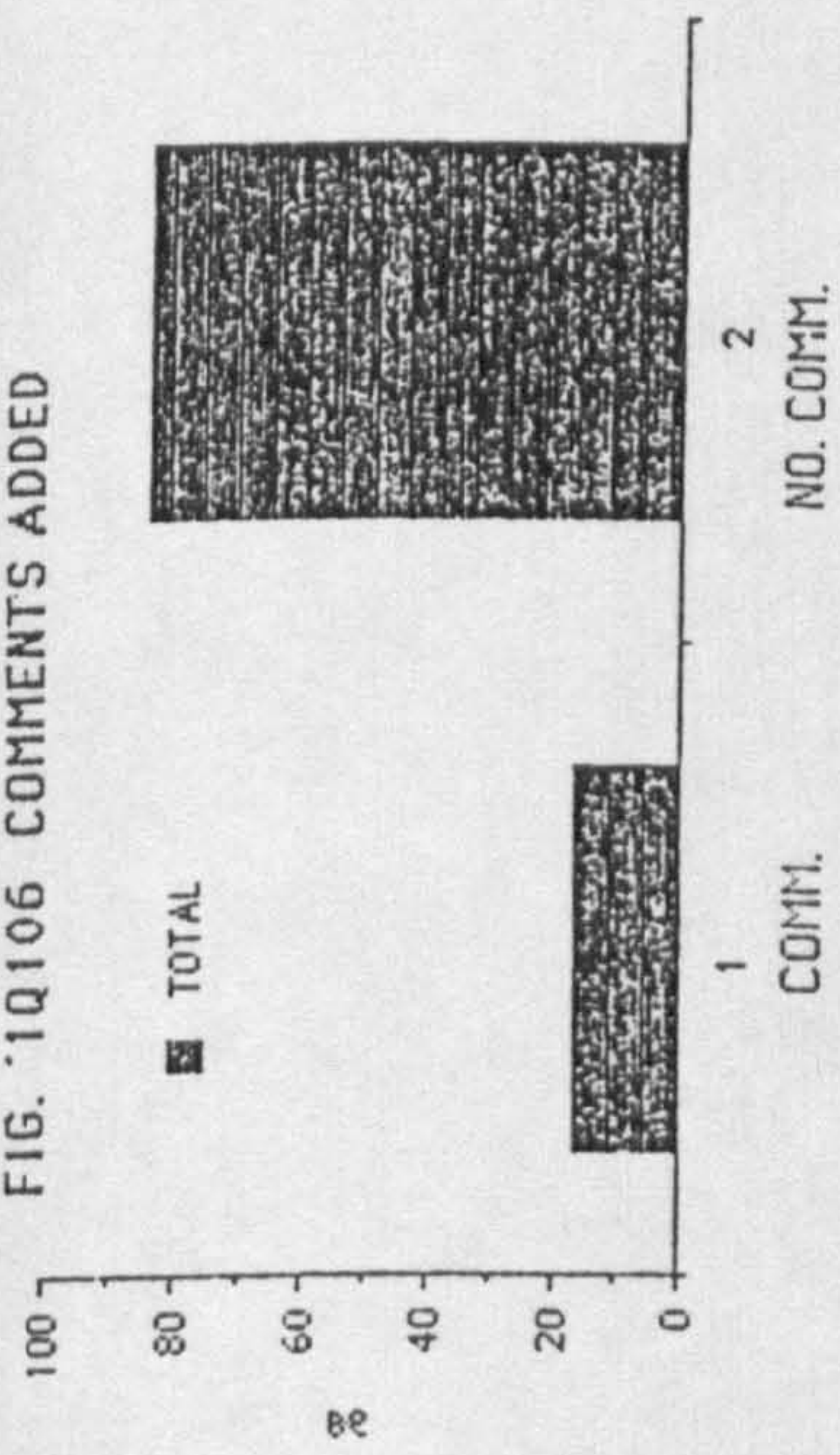


FIG. 2Q106 COMMENTS DISTRPUTION

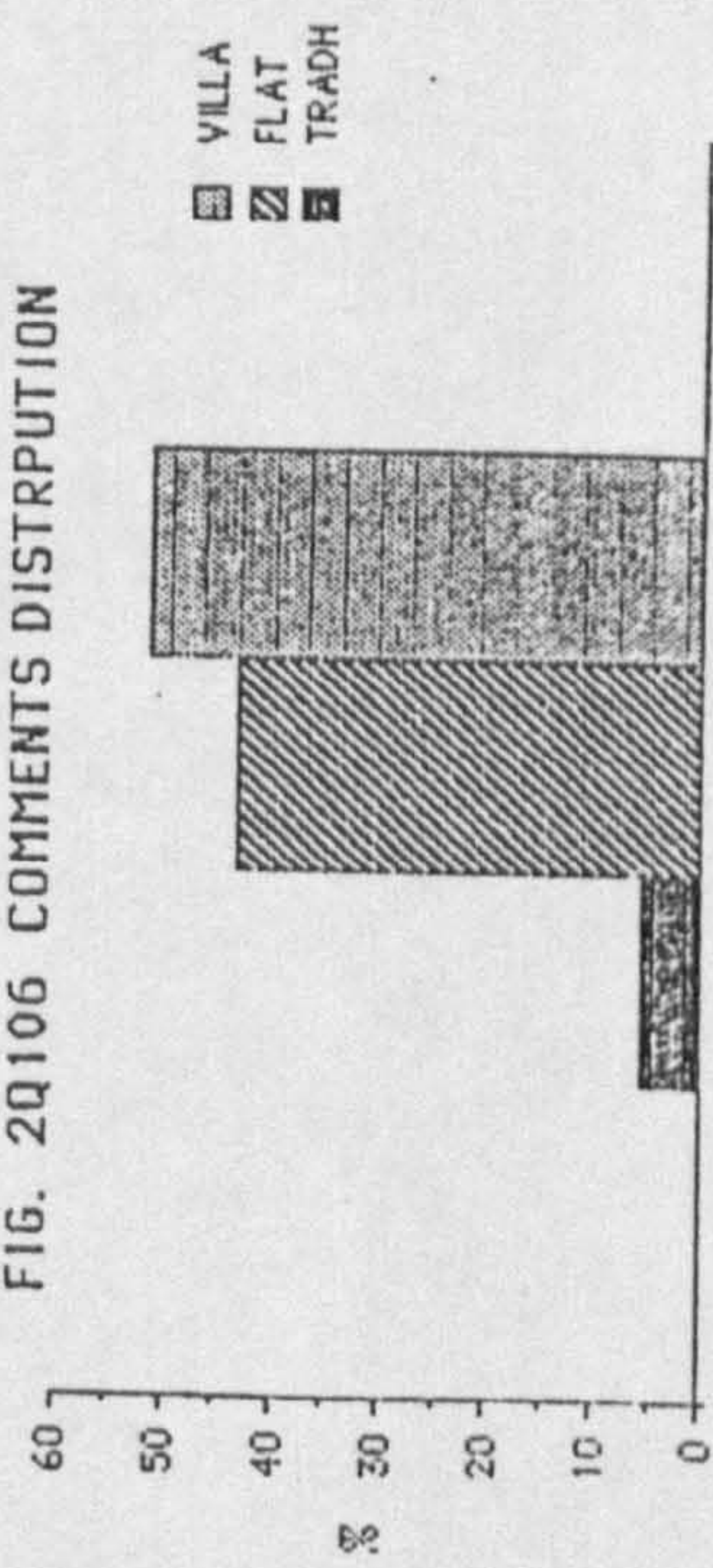
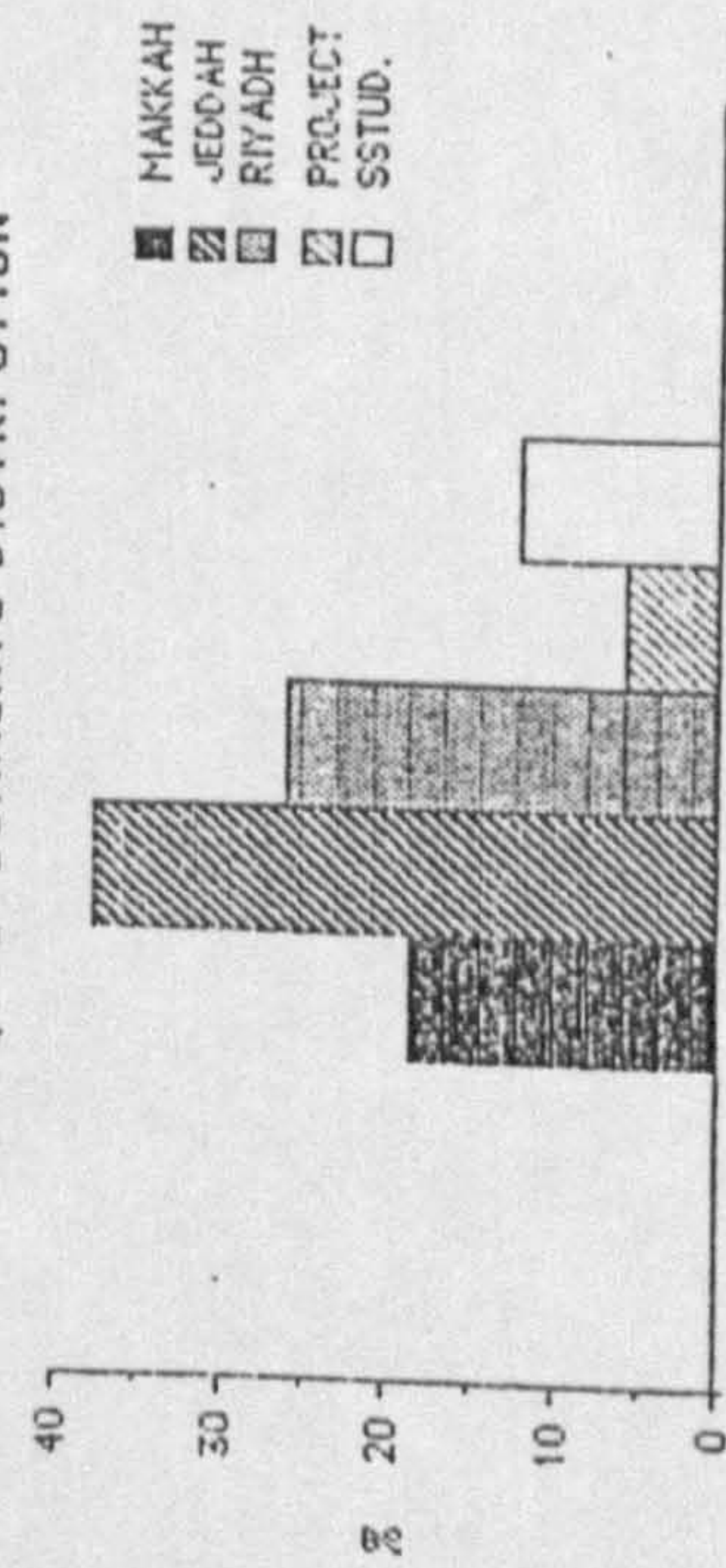


FIG. 3Q106 COMMENTS DISTRPUTION



APPENDIX F

TABLES OF SPECIAL INVESTIGATION

S1 - S37

LIST OF SPECIAL INVESTIGATION TABLES

(S1)	Distribution of houses which function for (housing and commercial) only according to [accommodation type vs. group classification].	(S12)	Distribution of houses which are owned only according to [accommodation type vs. group classification].
(S2)	Distribution of houses which have position on four streets according to only [accommodation type vs. group classification].	(S13)	Distribution of houses which are owned through REDF only according to [accommodation type vs. group classification].
(S3)	Distribution of houses which have four elevations according to [accommodation type vs. group classification].	(S14)	Distribution of houses which have related families only according to: (S14a) Number of families. (S14b) Accommodation type. (S14c) Group classification.
(S4)	Distribution of all responses according to [no. of streets vs. no. of elevations].	(S15)	Distribution of all houses according to [no. of families in house vs. the type of relations between them].
(S5)	Distribution of all responses according to [no. of stories vs. existence of elevator service].	(S16)	Distribution of all responses according to [terrace wall height vs. terrace use].
(S6)	Distribution of all responses according to [no. of stories vs. needs of elevator service].	(S17)	Distribution of responses according to [terrace wall height vs. the way of using terrace].
(S7)	Distribution of all responses according to [no. of traditional toilets vs. no. of western toilets].	(S18)	Distribution of responses according to [terrace wall height vs. the reason of unused terrace].
(S8)	Distribution of all responses according to [previous accommodation vs. reason for moving].	(S19)	Distribution of responses according to [type of relationship among neighbours vs. the change in relation].
(S9)	Distribution of all responses according to [previous accommodation vs. period of living in existing houses].	(S20)	Distribution of responses according to [type of transportation to Mosque vs. distance to Mosque].
(S10)	Distribution of all responses according to [reason for moving vs. (own or rent)].	(S21)	Distribution of responses according to [type of transportation to suqe vs. distance to suqe].
(S11)	Distribution of all responses according to [previous accommodation vs. the way of owning].	(S22)	Distribution of responses according to [type of transportation to schools vs. distance to schools].

- (S23) Distribution of responses according to [type of transportation to works vs. distance to works].
- (S24) Distribution of responses according to [type of transportation to recreational areas vs. distance to recreational area].
- (S25) Distribution of responses of those who drive to Mosques only regarding the distances to Mosques.
- (S26) Distribution of responses of those who drive to Suques only regarding the distances to suques.
- (S27) Distribution of responses of those who walk to Mosques only regarding the distance to Mosques.
- (S28) Distribution of responses of those who walk to suques only regarding the distances to suques.
- (S29) Distribution of responses of those who walk to Mosque only regarding the distances which they agreed to walk without difficulty.
- (S30) Distribution of responses of those who agree to park cars away from houses regarding the distances which they could walk without difficulty.
- (S31) Distribution of responses according to [approving to park car away from house vs. distances of walking without difficulty].
- (S32) Distribution of responses according to [no. of cars vs. place of parking].
- (S33) Distribution of responses according to [income amount vs. income groups].
- (S34) Distribution of responses according to [income group vs. preference of moving].
- (S35) Distribution of responses according to [preference of moving vs. previous accommodation].
- (S36) Distribution of responses according to [preference of moving (district) vs. previous accommodation].
- (S37) Distribution of responses of those who prefer to move to villa only according to:
- (S37a) Agreement about (balconies are useless).
 - (S37b) Agreement about (outside yards are useless).
 - (S37c) Agreement about (inside yard alternatives).
 - (S37d) Satisfying of their houses.
 - (S37e) Type of accommodation.
 - (S37f) Group classification (cities).

(S3)

Distribution of houses which have four elevations according to [accommodation type vs. group classification].

CROSS TABULATION OF
NEU01 TYPE OF ACCOMMODATION
BY NEU071 GROUP CLASSIFICATION
PAGE 1 OF 1

COUNT ROW PCT COL PCT	NEU071										ROW TOTAL
	MAKAM	JEDDAH	RIYADH	PROJECT	ESTUD	4.001	5.001	5.001	5.001	5.001	
1.00	23.6	35.7	23.6	4	1	1	1	1	1	1	16
2.00	36	63	25	3	3	3	3	3	3	3	136
3.00	28.1	19.3	39.9	20	34	20	34	20	34	20	249
COLUMN TOTAL	110	116	106	25	40	25	40	25	40	25	397

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
40.24163 3 0.0000 0.832 5 OF 15 (33.33)
NUMBER OF MISSING OBSERVATIONS = 3

(S4)

Distribution of all responses according to [no. of streets vs. no. of elevations].

ADJACENT STREETS
NO. OF ELEVATIONS
PAGE 1 OF 1

COUNT ROW PCT COL PCT	04										ROW TOTAL
	1	2	3	4	5	6	7	8	9	10	
1	17.3	20.2	15.9	20.5	15.6	15.6	15.6	15.6	15.6	15.6	156
2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	152
3	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	152
4	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	152
5	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	152
6	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	152
7	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	152
8	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	152
9	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	152
10	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	152
COLUMN TOTAL	10.7	23.6	19.6	39.7	42.8	42.8	42.8	42.8	42.8	42.8	428

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
119.01514 9 0.0000 3.841 1 OF 16 (6.25)
NUMBER OF MISSING OBSERVATIONS = 3

(S1) Distribution of houses which function for (housing and commercial) only according to [accommodation type vs. group classification].

CROSS TABULATION OF
NEU01 TYPE OF ACCOMMODATION
BY NEU071 GROUP CLASSIFICATION
PAGE 1 OF 1

COUNT ROW PCT COL PCT	NEU071										ROW TOTAL
	MAKAM	JEDDAH	RIYADH	PROJECT	ESTUD	4.001	5.001	5.001	5.001	5.001	
1.00	40.0	60.0	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
2.00	39.4	31.8	22.7	1.5	4.5	4.5	4.5	4.5	4.5	4.5	66
3.00	47.1	35.3	17.6	16.7	16.7	16.7	16.7	16.7	16.7	16.7	18.3
COLUMN TOTAL	35	33	18	1.1	3	3	3	3	3	3	93

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
6.12563 3 0.6332 0.108 10 OF 15 (66.72)
NUMBER OF MISSING OBSERVATIONS = 0

(S2) Distribution of houses which have position on four streets according to only [accommodation type vs. group classification].

CROSS TABULATION OF
NEU01 TYPE OF ACCOMMODATION
BY NEU071 GROUP CLASSIFICATION
PAGE 1 OF 1

COUNT ROW PCT COL PCT	NEU071										ROW TOTAL
	MAKAM	JEDDAH	RIYADH	PROJECT	ESTUD	4.001	5.001	5.001	5.001	5.001	
1.00	33.3	44.4	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	9
2.00	18.8	37.5	31.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	25.0
3.00	34.4	27.3	9.1	1	27.3	27.3	27.3	27.3	27.3	27.3	11
COLUMN TOTAL	27.3	36.1	19.4	2.8	13.9	13.9	13.9	13.9	13.9	13.9	100.0

CHI-SQUARE 0.7. SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5
6.74653 3 0.5642 0.258 14 OF 15 (93.33)
NUMBER OF MISSING OBSERVATIONS = 0

(S5) Distribution of all responses according to [no. of stories vs. existence of elevator service].

----- C R O S S T A B U L A T I O N O F -----
 94 4th. of stories
 95 5th. of stories
 PAGE 1 OF 1

COUNT	COUNT		TOTAL
	YES	NO	
1	73	100.3	173
2	100.3	1.2	101.5
3	1.2	1.2	2.4
4	1.2	1.2	2.4
5	1.2	1.2	2.4
COLUMN TOTAL	173	101.5	274.5

CHI-SQUARE 9.7. SIGNIFICANCE 0.0003
 394.53003
 NUMBER OF MISSING OBSERVATIONS = 0

(S6) Distribution of all responses according to [no. of stories vs. needs of elevator service].

----- C R O S S T A B U L A T I O N O F -----
 94 4th. of stories
 95 5th. of stories
 PAGE 1 OF 1

COUNT	COUNT		TOTAL
	YES	NO	
1	73	100.3	173
2	100.3	1.2	101.5
3	1.2	1.2	2.4
4	1.2	1.2	2.4
5	1.2	1.2	2.4
COLUMN TOTAL	173	101.5	274.5

CHI-SQUARE 9.7. SIGNIFICANCE 0.0003
 394.53003
 NUMBER OF MISSING OBSERVATIONS = 0

(S7) Distribution of all responses according to [no. of traditional toilets vs. no. of western toilets].

----- C R O S S T A B U L A T I O N O F -----
 94 4th. of stories
 95 5th. of stories
 PAGE 1 OF 2

COUNT	COUNT		TOTAL
	YES	NO	
1	73	100.3	173
2	100.3	1.2	101.5
3	1.2	1.2	2.4
4	1.2	1.2	2.4
5	1.2	1.2	2.4
COLUMN TOTAL	173	101.5	274.5

CHI-SQUARE 9.7. SIGNIFICANCE 0.0003
 394.53003
 NUMBER OF MISSING OBSERVATIONS = 0

(S8) Distribution of all responses according to [previous accommodation vs. reason for moving].

----- C R O S T A B U L A T I O N O F -----
829 PREVIOUS ACCOMM
3Y 830 REASON OF MOVING
----- PAGE 1 OF 1 -----

COUNT		C R O S T A B U L A T I O N O F										ROW TOTAL
ROW PCT	COL PCT	1	2	3	4	5	6	7	8	9	10	
1	11.0	6.3	3.5	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	112
2	33.5	20.7	11.0	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	361
3	84.5	39.5	65.2	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	234
4	12	7	1	23	23	23	23	23	23	23	23	23
5	24.6	17.1	2.4	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1	561
6	5.8	4.1	1.2	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	49
7	7.1	7.7	3.5	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	197
8	15.0	44.8	42.2	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	616
9	11.1	13.3	4.4	32	32	32	32	32	32	32	32	32
10	2.7	3.5	2.4	71.1	71.1	71.1	71.1	71.1	71.1	71.1	71.1	711
11	14	12	4	93	93	93	93	93	93	93	93	93
12	11.4	9.3	3.3	75.6	75.6	75.6	75.6	75.6	75.6	75.6	75.6	756
13	2.1	7.0	4.8	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	194
14	2	2	3	17	17	17	17	17	17	17	17	17
15	9.3	8.3	12.5	70.3	70.3	70.3	70.3	70.3	70.3	70.3	70.3	703
16	1.2	1.2	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	36
17	122	177	53	474	474	474	474	474	474	474	474	474
18	19.1	17.1	9.2	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	526
19	122	177	53	474	474	474	474	474	474	474	474	474
20	19.1	17.1	9.2	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	526

----- C R O S T A B U L A T I O N O F -----
829 PREVIOUS ACCOMM
3Y 830 REASON OF MOVING
----- PAGE 1 OF 1 -----

----- C R O S T A B U L A T I O N O F -----
829 PREVIOUS ACCOMM
3Y 830 REASON OF MOVING
----- PAGE 1 OF 1 -----

----- C R O S T A B U L A T I O N O F -----
829 PREVIOUS ACCOMM
3Y 830 REASON OF MOVING
----- PAGE 1 OF 1 -----

----- C R O S T A B U L A T I O N O F -----
829 PREVIOUS ACCOMM
3Y 830 REASON OF MOVING
----- PAGE 1 OF 1 -----

(S9) Distribution of all responses according to [previous accommodation vs. period of living in existing houses].

----- C R O S T A B U L A T I O N O F -----
832 PERIOD OF LIVING
3Y 839 PREVIOUS ACCOMM
----- PAGE 1 OF 2 -----

COUNT		C R O S T A B U L A T I O N O F										ROW TOTAL
ROW PCT	COL PCT	1	2	3	4	5	6	7	8	9	10	
1	145	18	254	32	48	14	591	591	591	591	591	591
2	24.3	3.3	44.1	5.3	14.0	2.3	60.0	60.0	60.0	60.0	60.0	600
3	43.4	41.9	73.4	69.6	71.0	56.0	56.0	56.0	56.0	56.0	56.0	560
4	115	13	63	12	24	3	237	237	237	237	237	237
5	43.3	6.3	23.7	5.1	10.1	1.3	25.3	25.3	25.3	25.3	25.3	253
6	34.4	34.7	19.7	24.1	19.4	12.7	12.7	12.7	12.7	12.7	12.7	127
7	41	3	12	1	9	1	43	43	43	43	43	43
8	60.3	4.4	14.7	1.5	13.2	5.9	7.1	7.1	7.1	7.1	7.1	71
9	12.3	7.0	2.9	2.2	7.3	14.0	14.0	14.0	14.0	14.0	14.0	140
10	2	3	9	3	3	2	25	25	25	25	25	25
11	32.0	12.0	36.0	12.0	12.0	3.0	2.7	2.7	2.7	2.7	2.7	27
12	2.4	7.0	2.4	2.4	2.4	2.0	2.0	2.0	2.0	2.0	2.0	20
13	16	3	1	1	1	13	13	13	13	13	13	13
14	77.3	16.7	5.3	7.7	7.7	15.4	15.4	15.4	15.4	15.4	15.4	154
15	4.2	7.0	3.3	2.2	2.2	3.0	3.0	3.0	3.0	3.0	3.0	30
16	100.0	1	1	1	1	1	4	4	4	4	4	4
17	1.3	1	1	1	1	1	7	7	7	7	7	7
18	33.5	7.7	30.3	7.7	15.4	2	13	13	13	13	13	13
19	1.5	2.3	1.2	2.2	2.2	3.0	3.0	3.0	3.0	3.0	3.0	30
20	334	43	346	46	124	23	913	913	913	913	913	913
21	36.4	4.7	37.7	5.0	13.5	2.7	103.0	103.0	103.0	103.0	103.0	1030

----- C R O S T A B U L A T I O N O F -----
832 PERIOD OF LIVING
3Y 839 PREVIOUS ACCOMM
----- PAGE 1 OF 2 -----

----- C R O S T A B U L A T I O N O F -----
832 PERIOD OF LIVING
3Y 839 PREVIOUS ACCOMM
----- PAGE 1 OF 2 -----

----- C R O S T A B U L A T I O N O F -----
832 PERIOD OF LIVING
3Y 839 PREVIOUS ACCOMM
----- PAGE 1 OF 2 -----

----- C R O S T A B U L A T I O N O F -----
832 PERIOD OF LIVING
3Y 839 PREVIOUS ACCOMM
----- PAGE 1 OF 2 -----

(S10) Distribution of all responses according to [reason for moving vs. (own or rent)].

330 C 2 0 S S T A B U L A T I O N 0 F
331 REASON OF MOVING
332 OWN OR RENT
PAGE 1 OF 1

COUNT		RENT		TOTAL	
ROW PCT	COL PCT	11	21		
1	107	63	172		
2	63.4	34.6	19.1		
3	25.6	15.3			
4	76	96	172		
5	44.2	55.8	19.1		
6	17.5	20.2			
7	44	39	33		
8	51.0	47.9	9.3		
9	10.1	5.2			
10	177	272	274		
11	41.9	53.4	32.5		
12	48.2	52.3			
13	429	475	921		
14	47.3	52.7	129.0		

CHI-SQUARE 5.7 SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

25.94223 2 0.0000 39.243 NONE
NUMBER OF MISSING OBSERVATIONS = 27

(S11) Distribution of all responses according to [previous accommodation vs. the way of owning].

329 C 2 0 S S T A B U L A T I O N 0 F
330 PREVIOUS ACCOM
331 WAY OF OWNING
PAGE 1 OF 1

COUNT		FAMILY A RENT		OTHER		TOTAL	
ROW PCT	COL PCT	11	21	31	41		
1	53	26	126	19	220		
2	26.1	13.7	64.4	9.6	109.9		
3	53.0	41.5	49.6	4.2			
4	7	2	3	4	16		
5	43.3	12.5	18.3	25.0	3.7		
6	7.0	5.1	1.2	9.3			
7	29	9	72	12	113		
8	17.7	2.9	43.7	19.6	26.2		
9	20.0	21.1	25.5	27.9			
10	2	15	1	1	18		
11	11.1	33.3	5.6	2.3	4.2		
12	2.0	6.0					
13	12	2	29	7	50		
14	24.0	4.7	58.0	16.0	11.6		
15	12.0	5.1	11.6	16.3			
16	6	2	7	1	15		
17	40.0	13.3	46.7		3.3		
18	8.0	5.1	2.3				
19	100	39	250	43	432		
20	25.1	9.0	57.9	18.0	100.0		

CHI-SQUARE 9.7 SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

26.06635 15 0.0173 1.354 11 OF 24 (45.823)
NUMBER OF MISSING OBSERVATIONS = 190

(S12) Distribution of houses which are owned only according to [accommodation type vs. group classification].

330 C 2 0 S S T A B U L A T I O N 0 F
331 TYPE OF ACCOMMODATION
332 GROUP CLASSIFICATION
PAGE 1 OF 1

COUNT		JEDDAH		PROJECT		TOTAL	
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001	
1.00	19	8	4	2	35		
2.00	34.3	22.9	17.1	3.7	15.4		
3.00	22.6	13.8	10.0	10.5			
4.00	19	20	12	4	55		
5.00	34.5	36.4	21.8	7.3	24.2		
6.00	22.6	34.5	20.0	21.1			
7.00	46	30	42	13	137		
8.00	33.6	21.9	30.7	4.4	9.5		
9.00	54.3	51.7	70.0	100.0	46.4		
10.00	84	58	60	19	227		
11.00	37.0	25.6	26.4	2.6	8.4		

CHI-SQUARE 0.7 SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

13.71255 8 0.0896 0.925 5 OF 15 (33.33)
NUMBER OF MISSING OBSERVATIONS = 0

(S13) Distribution of houses which are owned through REDF only according to [accommodation type vs. group classification].

330 C 2 0 S S T A B U L A T I O N 0 F
331 TYPE OF ACCOMMODATION
332 GROUP CLASSIFICATION
PAGE 1 OF 1

COUNT		JEDDAH		PROJECT		TOTAL	
ROW PCT	COL PCT	1.001	2.001	3.001	4.001	5.001	
1.00	4	1					
2.00	80.0	20.0					
3.00	3.3	2.9					
4.00	13	13	7	4	37		
5.00	31.1	35.1	19.9	10.8	27.4		
6.00	27.1	36.2	19.4	30.8			
7.00	31	20	29	9	93		
8.00	33.3	21.5	31.2	4.3	68.9		
9.00	44.6	58.8	80.6	100.0	49.2		
10.00	48	34	36	13	133		
11.00	35.6	25.2	26.7	9.6	100.0		

CHI-SQUARE 0.7 SIGNIFICANCE MIN E.F. CELLS WITH E.F. < 5

10.13589 8 0.2556 0.148 8 OF 15 (53.33)
NUMBER OF MISSING OBSERVATIONS = 0

(S14) Distribution of houses which have related families only according to:

(S14a) Number of families.

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
1	170	51.8	51.8	51.8	51.8
2	56	20.1	20.1	72.0	72.0
3	27	8.2	8.2	80.2	80.2
4	35	10.7	10.7	90.9	90.9
5	30	9.1	9.1	100.0	100.0
TOTAL	328	100.0	100.0		
MEAN	2.052				
MAXIMUM	5.000	1.361	MINIMUM	1.000	
VALID CASES	328	MISSING CASES	0		

(S14b) Accommodation type.

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
12A00	1.00	34	11.0	11.0	11.0
FLAT	2.00	160	30.5	30.5	41.5
VILLA	3.00	192	58.5	58.5	100.0
TOTAL	328	100.0	100.0		
MEAN	2.474				
MAXIMUM	3.000	.466	MINIMUM	1.000	
VALID CASES	328	MISSING CASES	0		

(S14c) Group classification.

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
MAKKAH	1.00	100	30.5	30.5	30.5
JEDDAH	2.00	82	25.0	25.0	55.5
RIYADH	3.00	85	25.9	25.9	81.4
PROJECT	4.00	40	12.2	12.2	93.6
SSTUD	5.00	21	6.4	6.4	100.0
TOTAL	328	100.0	100.0		
MEAN	2.390				
MAXIMUM	5.000	1.217	MINIMUM	1.000	
VALID CASES	328	MISSING CASES	0		

(S15) Distribution of all houses according to [no. of families in house vs. the type of relations between them].

BY	NUM. OF RELATIONS	RELATIONSHIP	PERCENT	VALID PERCENT	CUM PERCENT
235	1	312	93.1	93.1	93.1
236	2	51.7	15.9	15.9	109.0
TOTAL	328	100.0	100.0		
MEAN	1.000				
MAXIMUM	2.000	1.000	MINIMUM	1.000	
VALID CASES	328	MISSING CASES	0		

CHI-SQUARE 0.7 SIGNIFICANCE 0.390603
NUMBER OF MISSING OBSERVATIONS 12
CELLS WITH E.F. < 5 NONE

(S16) Distribution of all responses according to (terrace wall height vs. terrace wsl).

CROSS TABULATION OF									
TERRACE WALL									
TERRACE WSL									
PAGE 1 OF 1									
442									
COUNT									
ROW PCT YES NO ROW									
COL PCT IL TOTAL									
341									
HIGH WALL									
LOW WALL									
COLUMN TOTAL									
423									
TOTAL									
424									
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(S20) Distribution of responses according to (type of transportation to Mosque vs. distance to Mosque).

324 DISTANCE TO MOSQUE
BY 325 TRANS TO MOSQUE

PAGE 1 OF 1

		COUNT		WALKING		CAR		TOTAL	
		COL	ROW	COL	ROW	COL	ROW	COL	ROW
732		1		11		11		31	
0-50M		1		521		2		128	
				25.3		2.3		23.6	
				2.9		1.0		19.4	
50-100M		2		88		1		89	
				93.9		1.1		95.0	
				23.0		1.0		24.0	
100-200M		3		114		13		127	
				39.3		10.2		49.5	
				23.9		12.7		36.6	
200-300M		4		96		32		128	
				74.6		25.4		100.0	
				21.3		31.6		52.9	
300-400M		5		17		27		44	
				33.6		61.4		95.0	
				3.9		26.5		30.4	
4-5K		6		3		25		28	
				10.7		39.3		50.0	
				7		24.5		31.2	
5-10K		7		1		1		2	
				103.0		1.0		104.0	
				1.0		1.0		2.0	
COLUMN TOTAL				441		107		548	
				31.2		13.3		44.5	
CHI-SQUARE		D.F.		SIGNIFICANCE		MIN E.F.		CELLS WITH E.F. < 5	
163.40534		6		0.0000		0.138		2 OF 14 (14.3%)	
NUMBER OF MISSING OBSERVATIONS =				385					

(S21) Distribution of responses according to (type of transportation to suqe vs. distance to suqe).

326 DISTANCE TO SUQE
BY 327 TRANS TO SUQE

PAGE 1 OF 1

326						
	COUNT	WALKING	BUS	CAR	ROW	
	TOT PCT				TOTAL	
	COL PCT					
0-50M	1	23	11	21	31	
		69.7			10	33
		19.7			30.3	6.2
					2.4	
50-100M	2	23				
		92.1			3	28
		19.7			17.9	5.3
					1.2	
100-200M	3	23				
		40.9			13	45
		23.9			39.1	8.7
					6.4	
200-500M	4	36				
		33.3			53	94
		30.3			61.7	17.7
					16.1	
500-1000M	5	6				
		4.4			33	94
		5.1			93.4	17.7
					21.4	
1-5K	6	1	2			
		.5	1.0		139	192
		.7	100.0		93.4	34.2
					46.3	
5-10K	7					
					27	27
					100.0	5.1
					6.6	
10-30K	8					
					15	15
					100.0	2.3
					3.6	
>30K	9					
					1	1
					100.0	.2
					.2	
COLUMN TOTAL		117	2	411		530
TOTAL		22.1	.6	77.5		100.0
CHI-SQUARE	D.F.	SIGNIFICANCE			MIN E.F.	
237.03701	16	0.0000			0.004	
NUMBER OF MISSING OBSERVATIONS = 398						

(S22) Distribution of responses according to (type of transportation to schools vs. distance to schools).

----- C R O S S T A B U L A T I O N O F -----
923 DISTANCE TO SCHOOLS
927 TRANS TO SCHOOLS
----- PAGE 1 OF 1 -----

	COUNT					ROW TOTAL
	ROW PCT	WALKING	BUS	CAR	31	
323	COL PCT	11	21	31		
0-50M	1	11		9	20	4.3
		55.0		45.0		
		12.5		2.5		
50-100M	2	12		10	22	4.7
		54.5		45.5		
		13.4		2.7		
100-200M	3	17		5	22	4.7
		77.3		22.7		
		19.5		1.4		
200-500M	4	25	1	46	72	15.5
		54.7	1.4	63.9		
		23.4	10.0	12.5		
500-1000M	5	16	2	59	77	16.5
		20.3	2.6	76.6		
		13.2	23.0	16.0		
1-5K	6	5	6	142	173	37.1
		2.9	3.3	93.6		
		5.7	43.0	44.0		
5-10K	7	1	1	43	47	10.1
		2.1	2.1	95.7		
		1.1	12.0	12.2		
10-30K	8			29	29	6.2
				100.0		
				7.9		
>30K	9	1		3	4	.9
		25.0		75.0		
		1.1		.3		
COLUMN TOTAL	33	13.9	2.1	348	466	100.0
CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F. < 5		
142.30723	16	0.0000	0.036	14 OF 27 (51.92)		
NUMBER OF MISSING OBSERVATIONS = 442						

(S23) Distribution of responses according to (type of transportation to works vs. distance to works).

----- C R O S S T A B U L A T I O N O F -----
929 DISTANCE TO WORK
939 TRANS TO WORK
----- PAGE 1 OF 1 -----

	COUNT					ROW TOTAL
	ROW PCT	WALKING	BUS	CAR	31	
390	COL PCT	11	21	31		
0-50M	1	4		6	10	1.8
		40.0		60.0		
		21.1		1.1		
50-100M	2	3		1	4	.7
		75.0		25.0		
		15.3		.2		
100-200M	3	3		5	8	1.5
		37.5		62.5		
		15.8		1.0		
200-500M	4	2		13	15	2.8
		13.3		86.7		
		10.5		2.5		
500-1000M	5	3		21	24	4.4
		12.5		87.5		
		15.3		4.0		
1-5K	6	3	1	173	202	37.2
		1.5	.5	93.0		
		15.3	50.0	37.9		
5-10K	7	1	1	120	122	22.5
		1.0	1.0	98.0		
		5.3	50.0	19.2		
10-30K	8			150	150	27.6
				100.0		
				23.7		
>30K	9			28	28	5.2
				100.0		
				5.4		
COLUMN TOTAL	19	2	222	563	100.0	
	3.5	.4	93.1			
CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F. < 5		
159.12372	16	0.0000	0.015	17 OF 27 (63.02)		
NUMBER OF MISSING OBSERVATIONS = 335						

750
DISTANCE TO HOUSE

(S24) Distribution of responses according to [type of transportation to recreational area] vs. distance to recreational area].

[illegible]

COUNT		WALKING		RUS		CAR		RDR	
ROW	PCT	COL	PCT	ROW	PCT	COL	PCT	ROW	PCT
372		1	3	1	3	1	3	13	
			41.5				35.5	1.0	
			28.6				1.3		
		2	3	1	3	1	3	10	
			30.0				20.5	2.3	
			25.6				5		
		3	5	1	5	1	5	11	
			45.5				54.5	2.6	
			17.9				1.5		
		4	3	1	3	1	3	15	
			20.0				50.0	3.5	
			15.7				3.9		
		5	3	1	3	1	3	38	
			7.9				92.1	5.9	
			10.7				2.3		
		6	1	1	1	1	1	123	
			100.0				100.0	29.9	
			32.1						
		7	1	1	1	1	1	100	
			100.0				92.0	23.5	
			24.3						
		8	1	1	1	1	1	87	
			93.9				20.5		
			3.6				21.6		
		9	1	1	1	1	1	26	
			100.0				100.0	6.1	
			6.5						
		COLUMN	23	1	377			423	
		TOTAL	6.5	2	91.2			102.0	

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5.2.1.3 MIA 57732

Year	1990-1991	1991-1992	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	2033-2034	2034-2035	2035-2036	2036-2037	2037-2038	2038-2039	2039-2040	2040-2041	2041-2042	2042-2043	2043-2044	2044-2045	2045-2046	2046-2047	2047-2048	2048-2049	2049-2050	2050-2051	2051-2052	2052-2053	2053-2054	2054-2055	2055-2056	2056-2057	2057-2058	2058-2059	2059-2060	2060-2061	2061-2062	2062-2063	2063-2064	2064-2065	2065-2066	2066-2067	2067-2068	2068-2069	2069-2070	2070-2071	2071-2072	2072-2073	2073-2074	2074-2075	2075-2076	2076-2077	2077-2078	2078-2079	2079-2080	2080-2081	2081-2082	2082-2083	2083-2084	2084-2085	2085-2086	2086-2087	2087-2088	2088-2089	2089-2090	2090-2091	2091-2092	2092-2093	2093-2094	2094-2095	2095-2096	2096-2097	2097-2098	2098-2099	2099-2100	2100-2101	2101-2102	2102-2103	2103-2104	2104-2105	2105-2106	2106-2107	2107-2108	2108-2109	2109-2110	2110-2111	2111-2112	2112-2113	2113-2114	2114-2115	2115-2116	2116-2117	2117-2118	2118-2119	2119-2120	2120-2121	2121-2122	2122-2123	2123-2124	2124-2125	2125-2126	2126-2127	2127-2128	2128-2129	2129-2130	2130-2131	2131-2132	2132-2133	2133-2134	2134-2135	2135-2136	2136-2137	2137-2138	2138-2139	2139-2140	2140-2141	2141-2142	2142-2143	2143-2144	2144-2145	2145-2146	2146-2147	2147-2148	2148-2149	2149-2150	2150-2151	2151-2152	2152-2153	2153-2154	2154-2155	2155-2156	2156-2157	2157-2158	2158-2159	2159-2160	2160-2161	2161-2162	2162-2163	2163-2164	2164-2165	2165-2166	2166-2167	2167-2168	2168-2169	2169-2170	2170-2171	2171-2172	2172-2173	2173-2174	2174-2175	2175-2176	2176-2177	2177-2178	2178-2179	2179-2180	2180-2181	2181-2182	2182-2183	2183-2184	2184-2185	2185-2186	2186-2187	2187-2188	2188-2189	2189-2190	2190-2191	2191-2192	2192-2193	2193-2194	2194-2195	2195-2196	2196-2197	2197-2198	2198-2199	2199-2200	2200-2201	2201-2202	2202-2203	2203-2204	2204-2205	2205-2206	2206-2207	2207-2208	2208-2209	2209-2210	2210-2211	2211-2212	2212-2213	2213-2214	2214-2215	2215-2216	2216-2217	2217-2218	2218-2219	2219-2220	2220-2221	2221-2222	2222-2223	2223-2224	2224-2225	2225-2226	2226-2227	2227-2228	2228-2229	2229-2230	2230-2231	2231-2232	2232-2233	2233-2234	2234-2235	2235-2236	2236-2237	2237-2238	2238-2239	2239-2240	2240-2241	2241-2242	2242-2243	2243-2244	2244-2245	2245-2246	2246-2247	2247-2248	2248-2249	2249-2250	2250-2251	2251-2252	2252-2253	2253-2254	2254-2255	2255-2256	2256-2257	2257-2258	2258-2259	2259-2260	2260-2261	2261-2262</
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635 • 2601742363 561214 10 63LWAK

750
DISTANCE TO HOUSE

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM. PERCENT
0-50K	1	3	3.2	3.0	5.0
50-100K	2	1	1.1	1.7	6.7
100-200K	3	7	7.4	11.7	18.3
200-500K	4	15	14.0	23.0	43.3
500-1000K	5	17	13.1	28.3	71.7
1-5K	6	16	17.0	26.7	98.3
5-10K	7	1	1.1	1.7	100.0
	0	31	31.2	MISSING	
	TOTAL	91	100.0	100.0	
MEAN	4,367				1.000
MAXIMUM	7,000	1.333	MINIMUM		
MISSING CASES	40	MISSING CASES	34		

(526) Distribution of responses of those who drive to Super only regarding the distances to Super.

930
DISTANCE TO SUE

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUS PERCENT
0-50K	1	7	1.9	3.1	3.1
50-100K	2	2	.6	.9	4.0
100-200K	3	13	3.6	5.8	9.8
200-300K	4	39	8.1	12.9	22.7
300-1000K	5	50	13.9	22.2	44.9
1-5K	6	103	28.7	45.8	90.7
5-10K	7	11	3.1	4.9	95.6
10-10K	8	9	2.3	4.0	99.4
>10K	9	1	.3	.4	100.0
	136	37.3	MISSING		
TOTAL		359	100.0	100.0	
MEAN	5.23				1.000
MAXIMUM	9.000				
STD DEV	1.396		MINIMUM		
MISSING CASES	136				
VALID CASES	223				

(S27) Distribution of responses of those who walk to Mosques only regarding the distance to Mosques.

INFORMATION ON DISTANCE TO NEAREST 750

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
0-50M	1	78	17.5	29.7	29.7
50-100M	2	44	11.5	19.5	49.2
100-200M	3	57	14.2	24.2	73.5
200-500M	4	50	12.5	27.2	94.5
500-1000M	5	12	3.0	5.1	99.6
1-5K	6	1	.2	.4	100.0
	0	145	41.1	MISSING	
TOTAL		401	100.0	100.0	
MEAN	2.338				
STD DEV	1.276				1.000
MINIMUM			MINIMUM		
MAXIMUM	6.000				
VALID CASES	236				
MISSING CASES	165				

(S28) Distribution of responses of those who walk to suqs only regarding the distances to suqs.

836 DISTANCE TO SUQ

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
0-50M	1	12	9.6	19.7	19.7
50-100M	2	14	11.2	23.0	42.4
100-200M	3	12	9.6	19.7	62.3
200-300M	4	21	16.8	34.4	96.7
300-400M	5	2	1.6	3.3	100.0
400-500M	6	4	3.2	51.2	MISSING
TOTAL		125	100.0	100.0	
MEAN	2.787				
STD DEV	5.000				
MAXIMUM		1.213			1.000
VALID CASES	61	MISSING CASES	64		

(S29) Distribution of responses of those who walk to Mosque only regarding the distances which they agreed to walk without difficulty.

893 DISTANCE TO WALK

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
<100M	1	45	11.2	11.3	11.3
100-200M	2	46	11.5	11.5	22.8
200-300M	3	31	7.7	7.8	30.4
300-400M	4	21	5.2	5.3	35.8
400-500M	5	60	15.0	15.0	50.9
500-600M	6	34	8.3	8.3	59.4
600-700M	7	7	1.7	1.8	61.2
700-800M	8	9	2.2	2.3	63.4
>800M	9	146	36.4	36.8	100.0
TOTAL		401	100.0	100.0	
MEAN	5.447				
STD DEV	9.000				
MAXIMUM		3.004			1.000
VALID CASES	399	MISSING CASES	2		

(S30) Distribution of responses of those who agree to park cars away from houses regarding the distances which they could walk without difficulty.

893 DISTANCE TO WALK

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
<100M	1	14	8.4	8.4	8.4
100-200M	2	13	10.3	10.3	19.3
200-300M	3	12	7.2	7.2	26.5
300-400M	4	12	7.2	7.2	33.7
400-500M	5	19	11.4	11.4	45.2
500-600M	6	11	6.4	6.4	51.8
600-700M	7	4	2.4	2.4	54.2
700-800M	8	4	2.4	2.4	56.6
>800M	9	72	43.4	43.4	100.0
TOTAL		164	100.0	100.0	
MEAN	6.042				
STD DEV	9.630				
MAXIMUM		2.994			1.000
VALID CASES	164	MISSING CASES	0		

(S31) Distribution of responses according to [approving to park car away from house vs. distances of walking without difficulty].

BY 893 DISTANCE TO WALK
BY 894 CAR A WAY FROM HOUSE

PAGE 1 OF 1

893	COUNT ROW PCT COL PCT	YES	NO	ROW TOTAL
894				
1	30	78	102	
2	27.5	22.2	11.7	
3	9.5	12.9		
4	30	62	92	
5	32.6	67.4	10.0	
6	9.5	10.3		
7	27	58	35	
8	31.8	63.2	9.2	
9	8.5	9.6		
10	17	49	63	
11	27.9	72.1	7.4	
12	6.0	3.1		
13	45	93	133	
14	32.4	67.4	15.0	
15	14.2	15.2		
16	21	30	71	
17	29.4	70.4	7.7	
18	4.3	3.3		
19	11	10	21	
20	52.4	27.6	2.3	
21	3.5	1.2		
22	7	17	24	
23	29.2	79.8	2.6	
24	2.2	2.8		
25	127	137	314	
26	40.4	59.6	34.1	
27	42.3	31.0		
COLUMN TOTAL	317	604	221	
	34.4	65.6	100.0	

CHI-SQUARE	0.1	SIGNIFICANCE	NIM S.F.	CELLS WITH E.F.C. 5
15.05343	0.1	0.1073	7.228	NONE
NUMBER OF MISSING OBSERVATIONS = 7				

(S32) Distribution fo responses according to {no. of cars vs. place of parking}.

[illegible]

(S32) Distribution fo responses according to {no. of cars vs. place of parking}.

C R O S S T A B U L A T I O N O F													
SUM OF CARS BY 079		COUNT		GAS IN		FRONT Y		SIDE N		PAR FM		GIM	
072	079	ROW PCT	COL PCT	11	21	31	41	51	61	ROW	COL	TOTAL	TOTAL
1	40	13	8	112	15	1	139						
21.2	6.9	4.2	59.3	7.9	5	20.3							
30.5	40.6	9.8	18.5	30.6	12.5								
2	32	4	24	109	11	1	131						
17.7	2.2	13.3	60.2	6.1	6	20.0							
24.6	12.5	29.3	13.0	22.4	12.5								
3	20	2	8	113	9		152						
12.2	1.3	5.3	74.3	5.9		15.2							
15.3	5.3	9.8	12.7	13.4									
4	13	2	13	87	3	1	119						
10.9	1.7	10.9	73.1	2.3	3	13.1							
9.9	6.3	15.9	14.4	6.1	12.5								
5	26	11	29	132	11	5	256						
9.3	4.1	10.9	69.2	4.1	1.9	20.3							
19.8	34.4	35.4	13.4	22.4	42.5								
COLUMN	131	32	82	603	49	8	907						
TOTAL	16.4	3.3	9.8	66.7	5.4	9	163.0						

[illegible]

30.00932	20	0.0002	1.030	6 67	30 (20.01)
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CMI-30428 3.f. SIGNIFICANCE MAY E.F. CELLS WITH E.F. 3

	217.30143	15	0.0330	1.418	9 07	27 (33.33)
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51 - ENOLTAZEEC ENIT-51K 10 23W444

[illegible]

1 401 3304 1003 30001 5216 4E
 16 0011776215502 000000000000 753

CH-32042C	9.7-	SIGNIFICANCE	MIN E.C.	CELLS WITH E.C.< 5
46.94795	2	0.0003	0.440	3 OF 15 (20.0%)

[illegible]

1 401 3304 1003 30001 5216 4E
 16 0011776215502 000000000000 753

CH-32042C	9.7-	SIGNIFICANCE	MIN E.C.	CELLS WITH E.C.< 5
46.94795	2	0.0003	0.440	3 OF 15 (20.0%)

(S36) Distribution of responses according to (preference of moving (district) vs. previous accommodation).

022 PREVIOUS ACCOMMODATION OF
37 370 REFERENCE OF MOVING 23
PAGE 1 OF 1

COUNT	EXISTING	TRANSITION		TOTAL
		1	2	
1	131	17	106	334
2	45.2	5.1	49.7	36.6
3	34.2	43.3	37.9	
4	13	2	23	43
5	20.2	4.7	55.1	4.7
6	5.9	5.1	6.4	
7	180	13	193	346
8	52.0	3.3	45.2	37.7
9	40.3	33.3	34.9	
10	22	2	22	44
11	47.3	4.3	47.3	5.0
12	5.0	5.1	5.0	
13	45	3	53	124
14	54.8	2.4	42.7	13.5
15	15.4	7.7	12.1	
16	7	2	16	23
17	23.0	2.0	54.0	2.7
18	1.6	5.1	3.7	
19	441	39	433	918
20	43.0	4.2	47.7	100.0

CHI-SQUARE 8.7. SIGNIFICANCE 1111 8.7. CELLS WITH 2.7. < 5

16.32026 10 0.0003 1.002 3 OF 18 (16.7%)
NUMBER OF MISSING OBSERVATIONS = 13

(S37) Distribution of responses of those who prefer to move to villa only according to:

(S37a) Agreement about (balconies are useless).

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	193	62.9	66.8	66.8
NO	2	96	31.3	33.2	100.0
	0	18	5.9	MISSING	
VALID CASES	TOTAL	307	100.0	100.0	
	MISSING CASES	13			

(S37b) Agreement about (outside yards are useless).

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	172	56.0	56.8	56.8
NO	2	131	42.7	43.2	100.0
	0	4	1.3	MISSING	
VALID CASES	TOTAL	307	100.0	100.0	
	MISSING CASES	0			

(S37c) Agreement about (inside yard alternatives).

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	242	85.3	85.9	85.9
NO	2	43	14.0	14.1	100.0
	0	2	.7	MISSING	
VALID CASES	TOTAL	307	100.0	100.0	
	MISSING CASES	2			

(S37d) Satisfying of their houses.

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	197	64.2	64.2	64.2
NO	2	110	35.8	35.8	100.0
VALID CASES	TOTAL	307	100.0	100.0	
	MISSING CASES	0			

(S37e) Type of accommodation.

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
TRASH	1.00	25	8.1	8.1	8.1
FLAT	2.00	158	51.5	51.5	59.6
VILLA	3.00	124	40.4	40.4	100.0
VALID CASES	TOTAL	307	100.0	100.0	
	MISSING CASES	0			

(S37f) Group classification (cities).

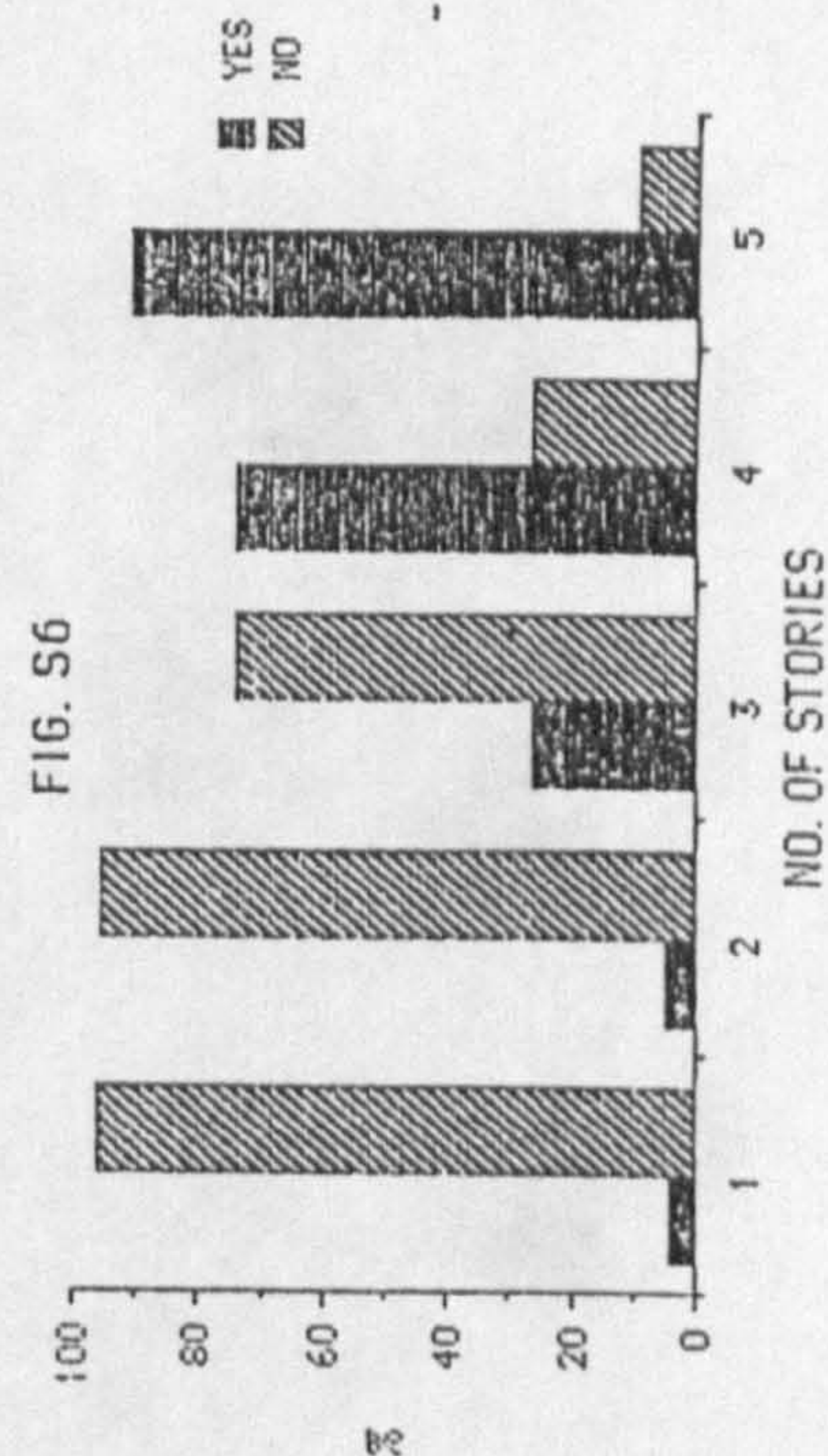
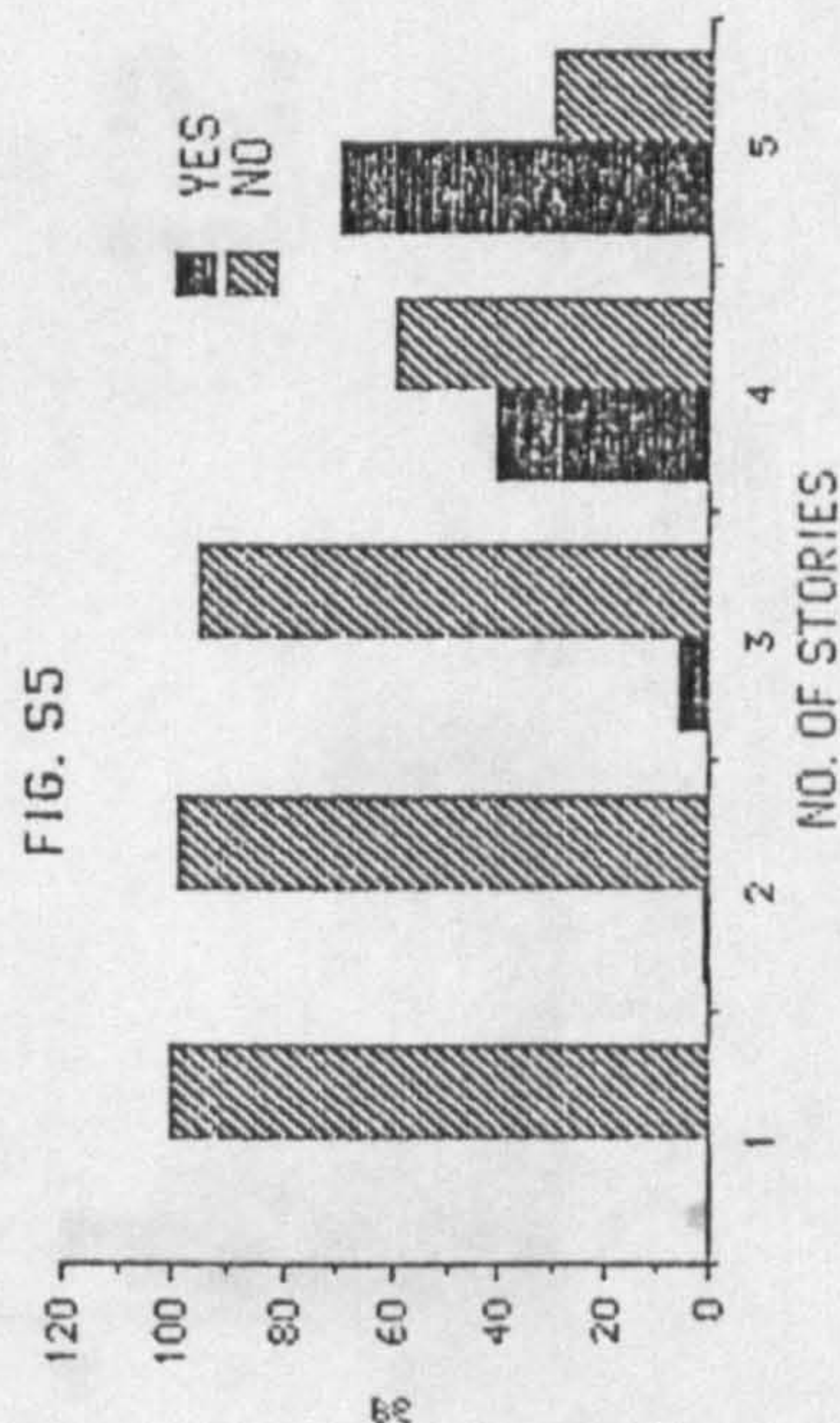
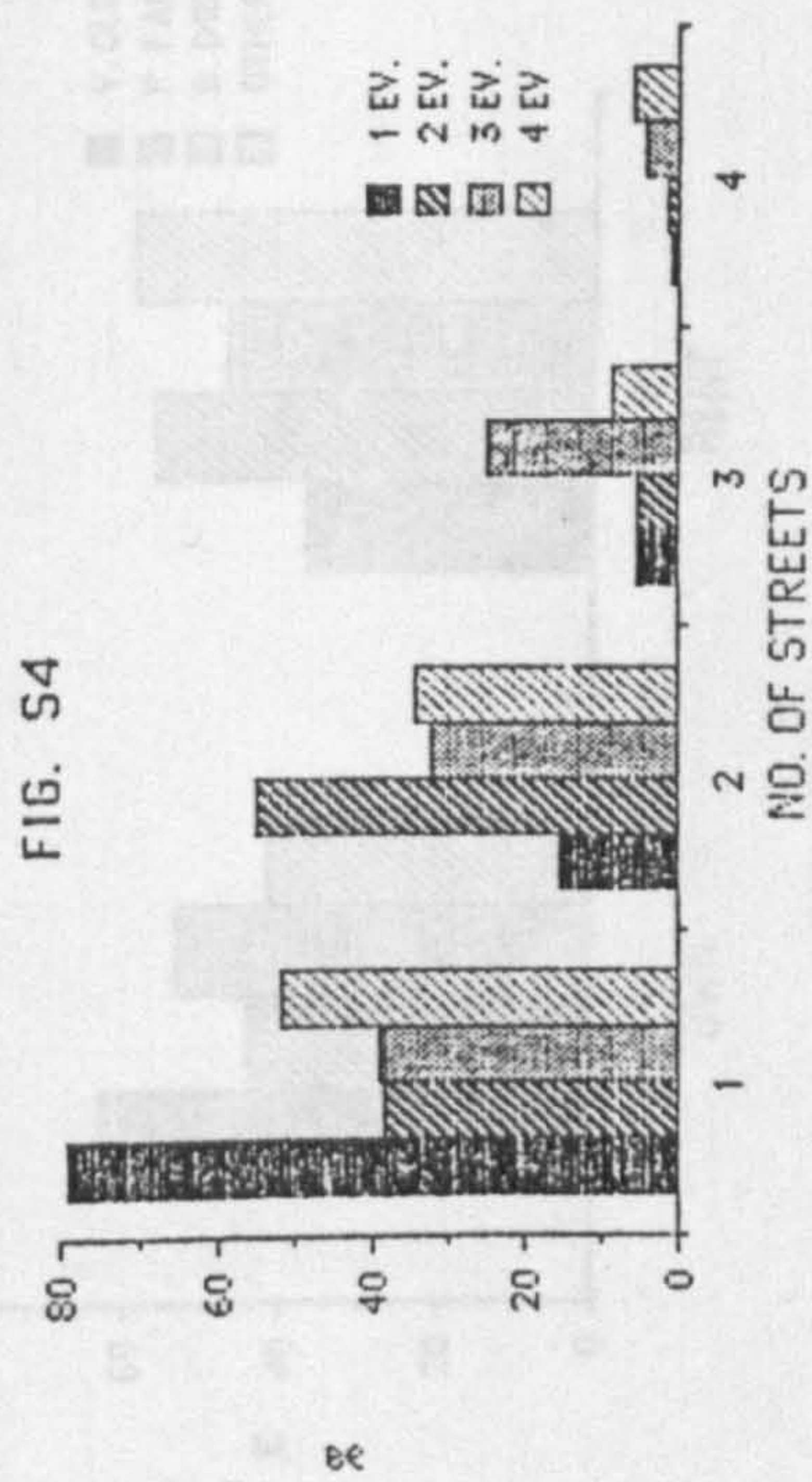
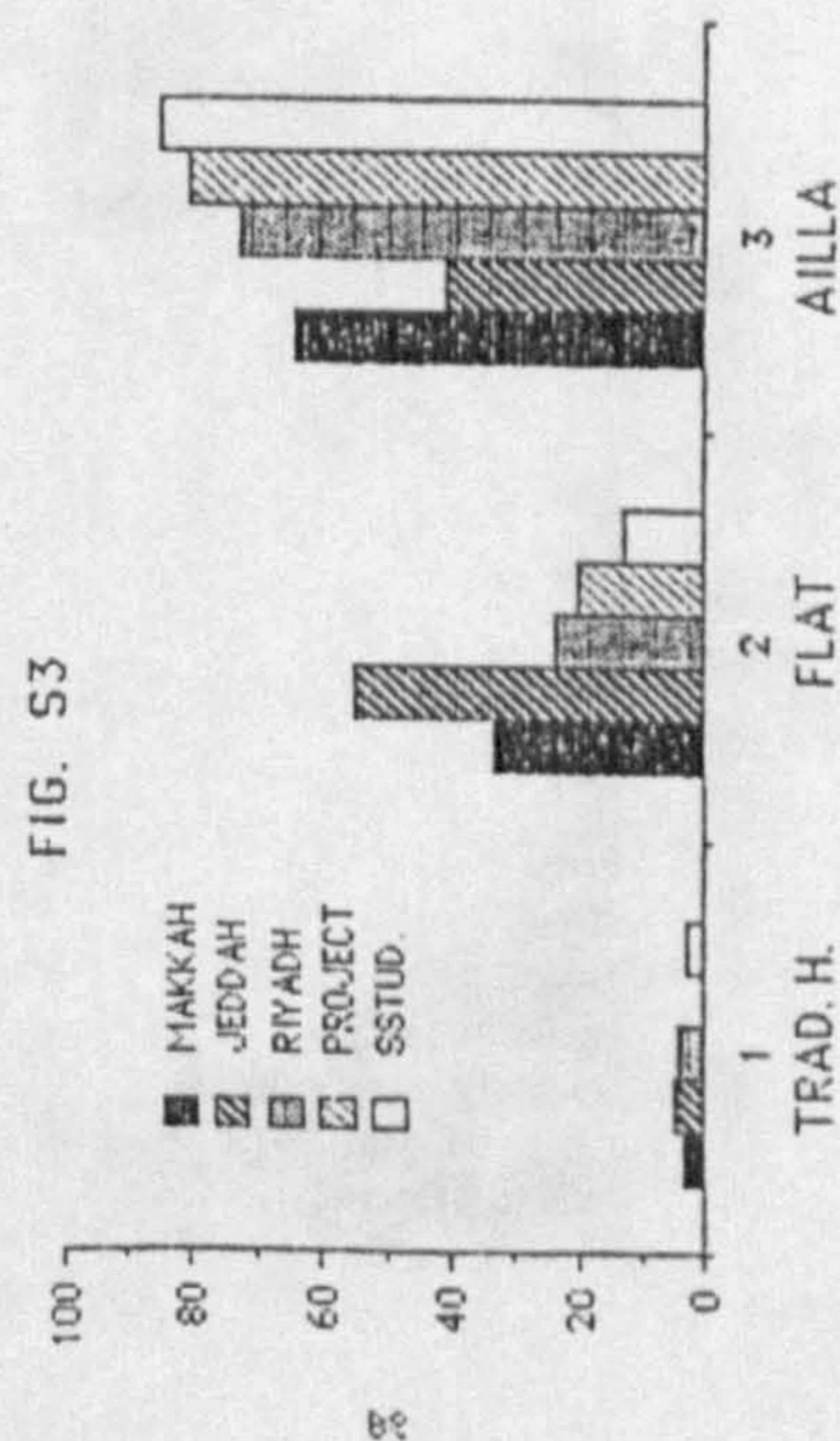
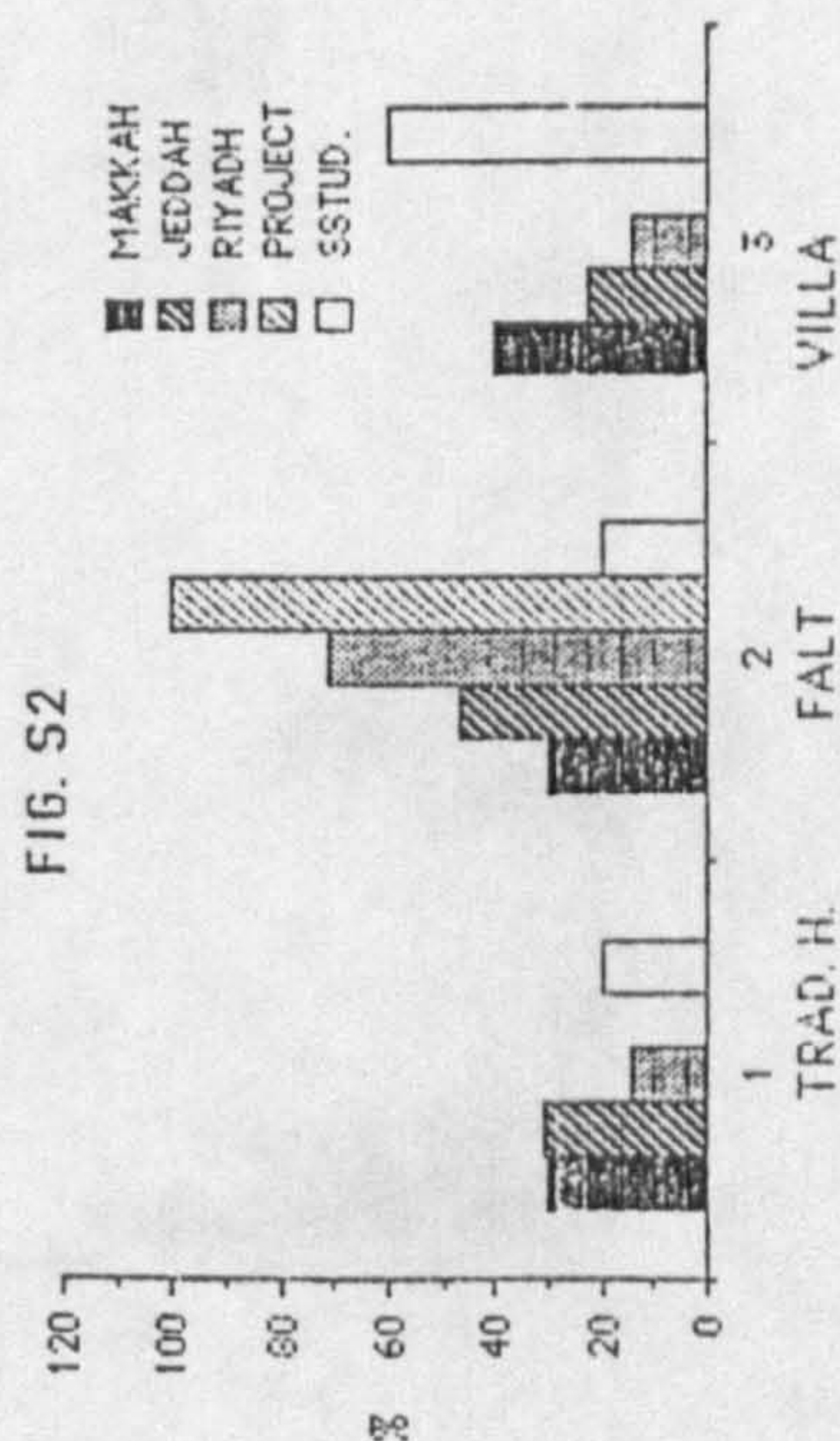
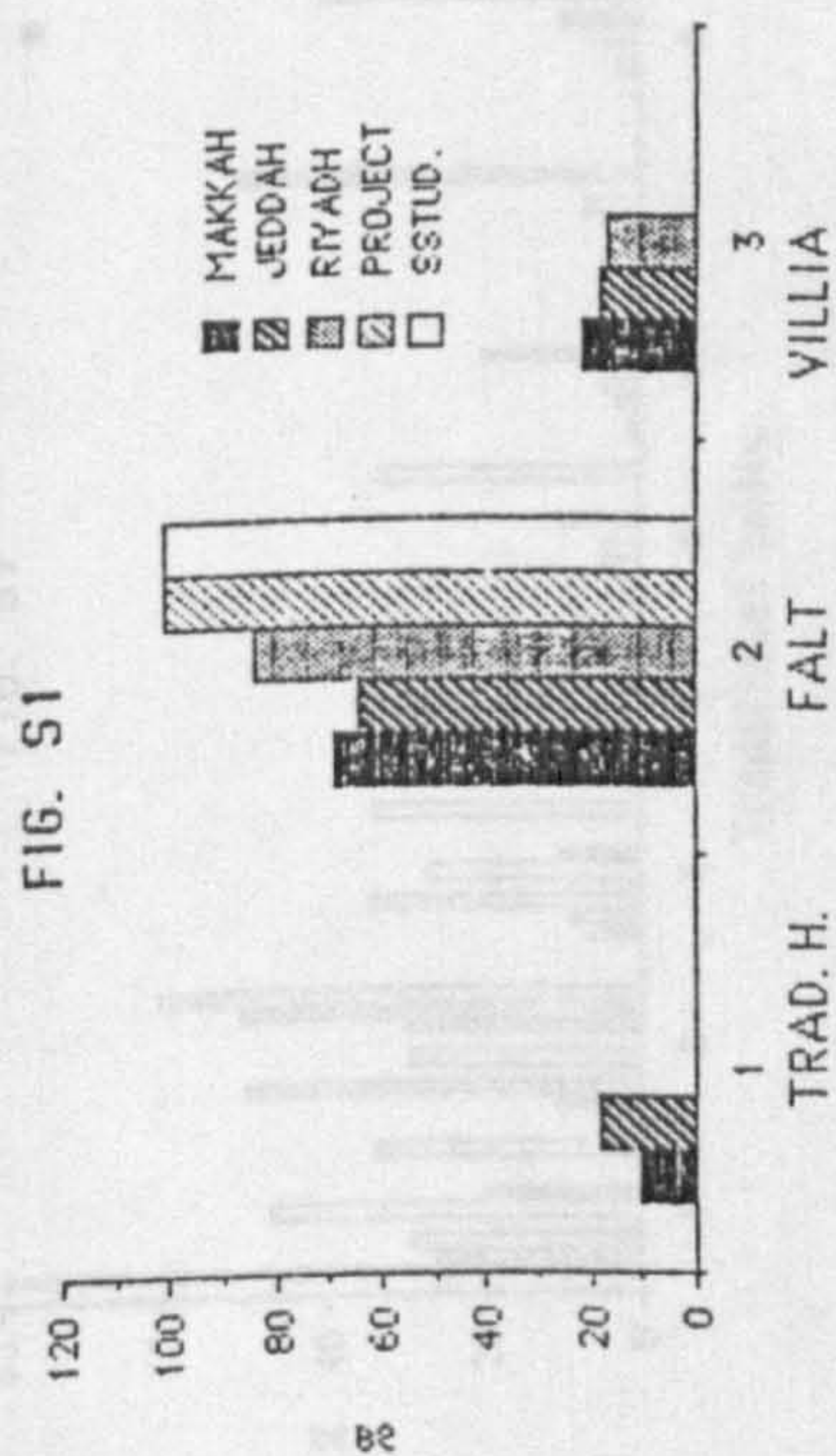
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
MAKKAH	1.00	89	29.0	29.0	29.0
JEDDAH	2.00	98	31.9	31.9	60.9
RIYADH	3.00	80	26.1	26.1	87.0
PROJECT	4.00	26	8.5	8.5	95.4
SYSTEM	5.00	14	4.6	4.6	100.0
VALID CASES	TOTAL	307	100.0	100.0	
	MISSING CASES	0			

APPENDIX G

GRAPHS OF

SPECIAL INVESTIGATIONS

FIG S1 - FIG S37



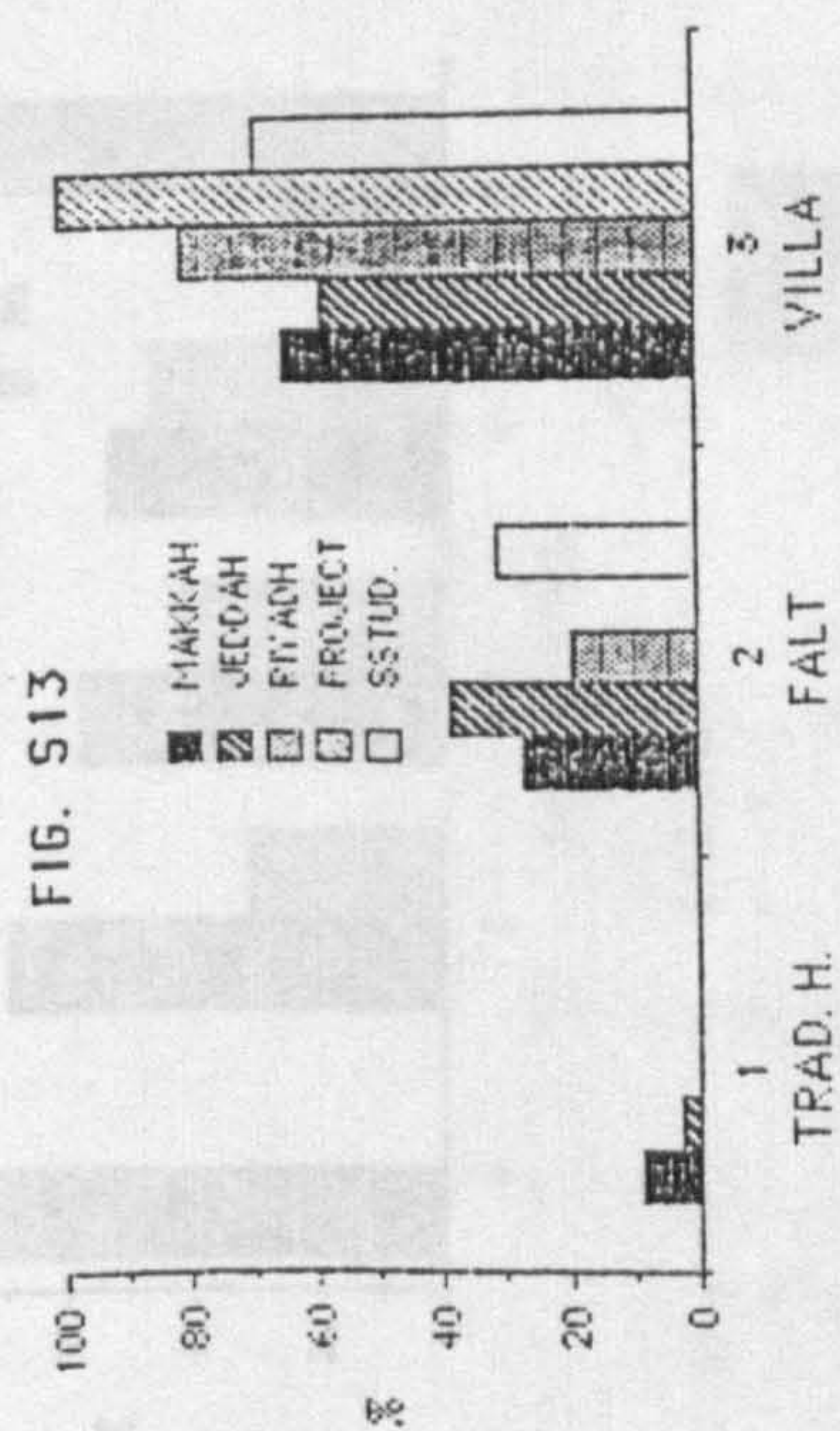
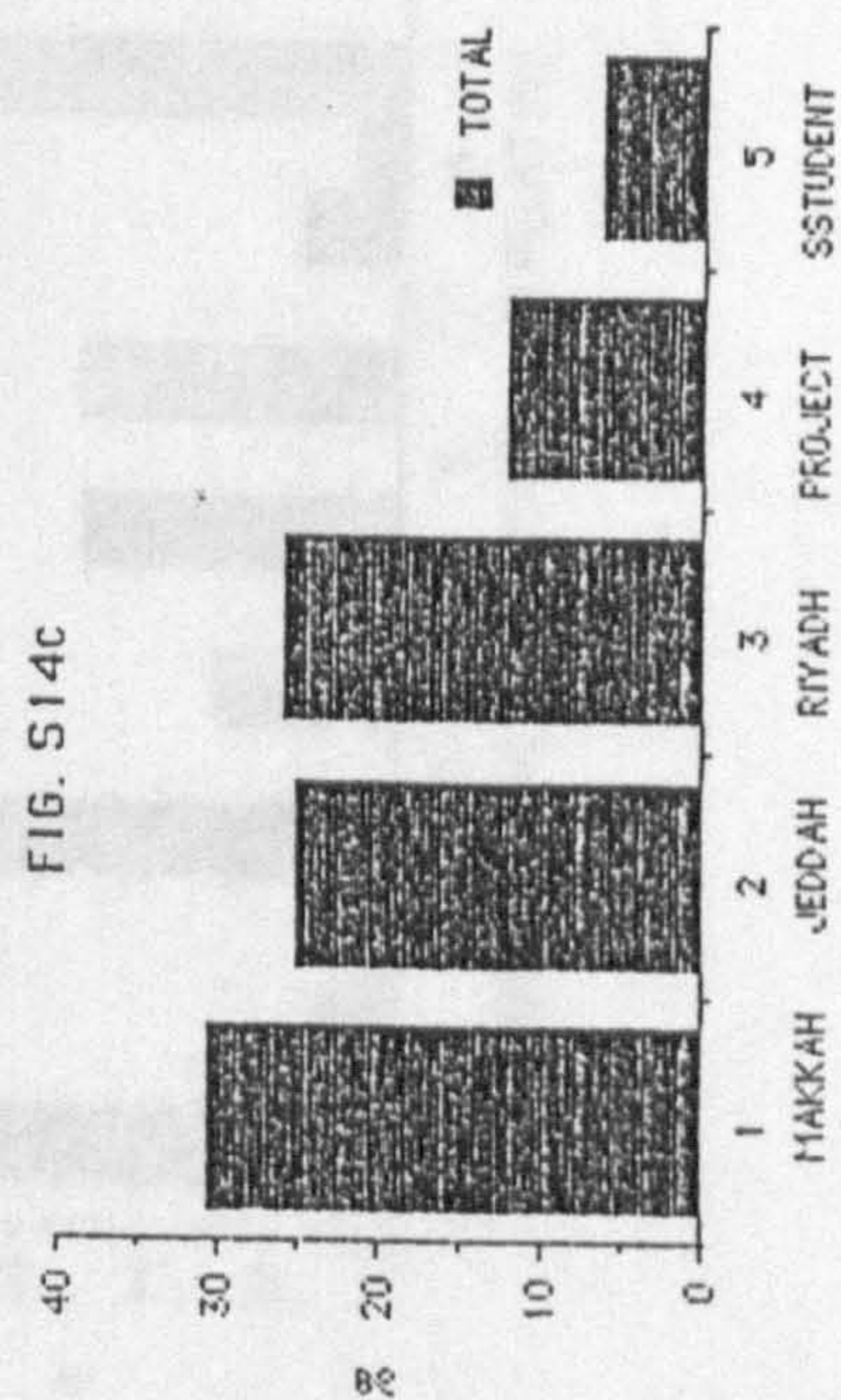
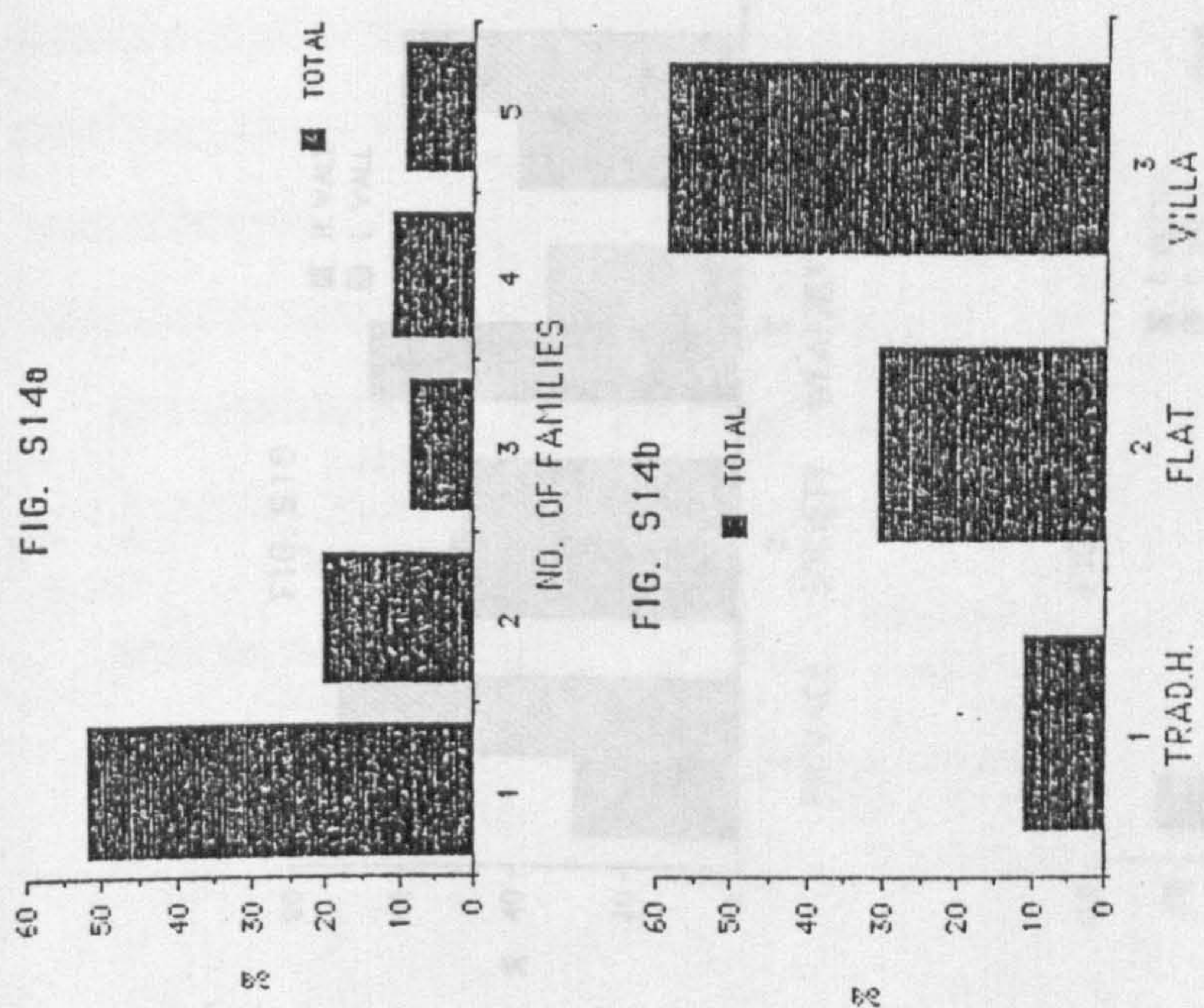


FIG. S15

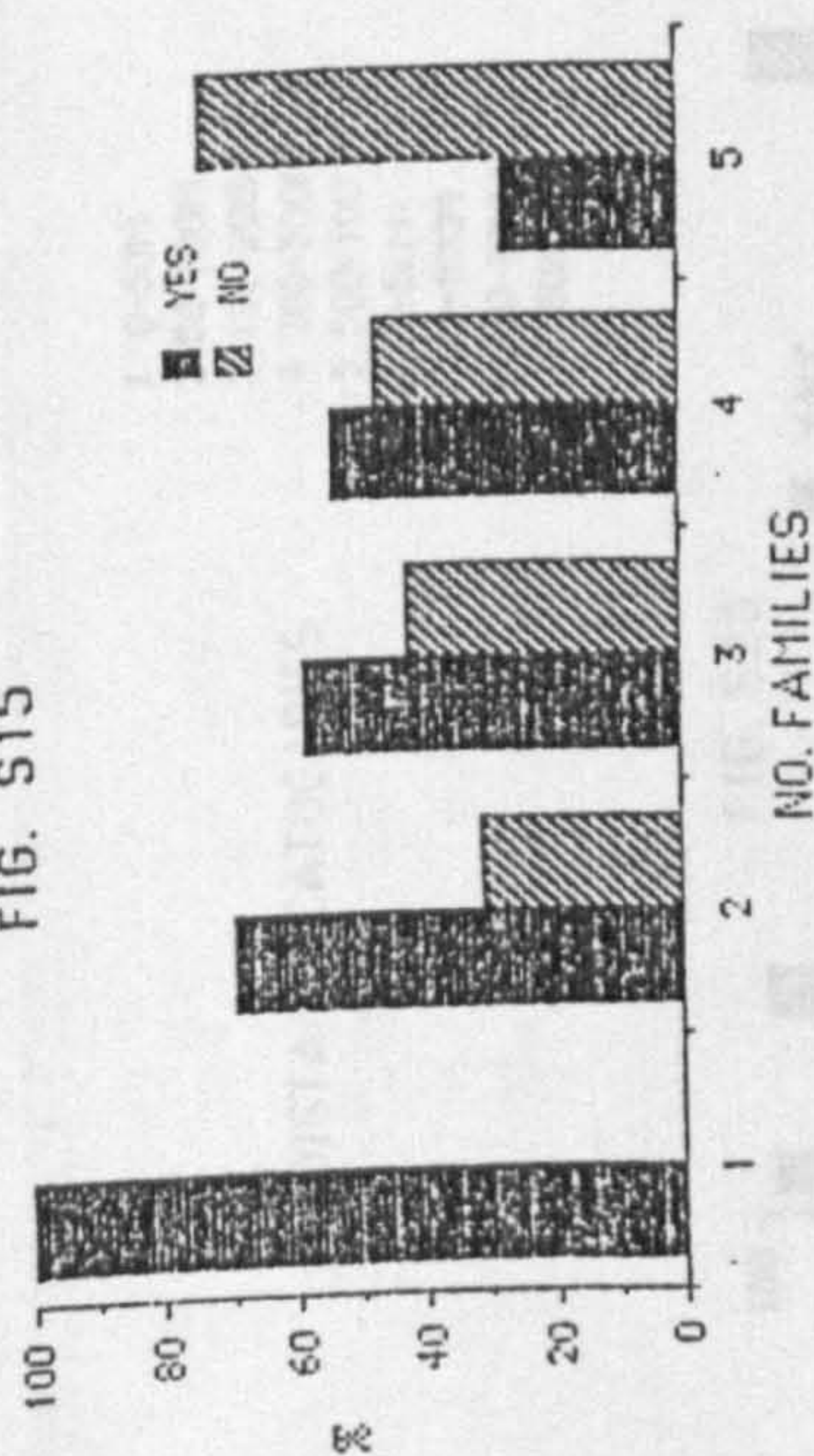


FIG. S16

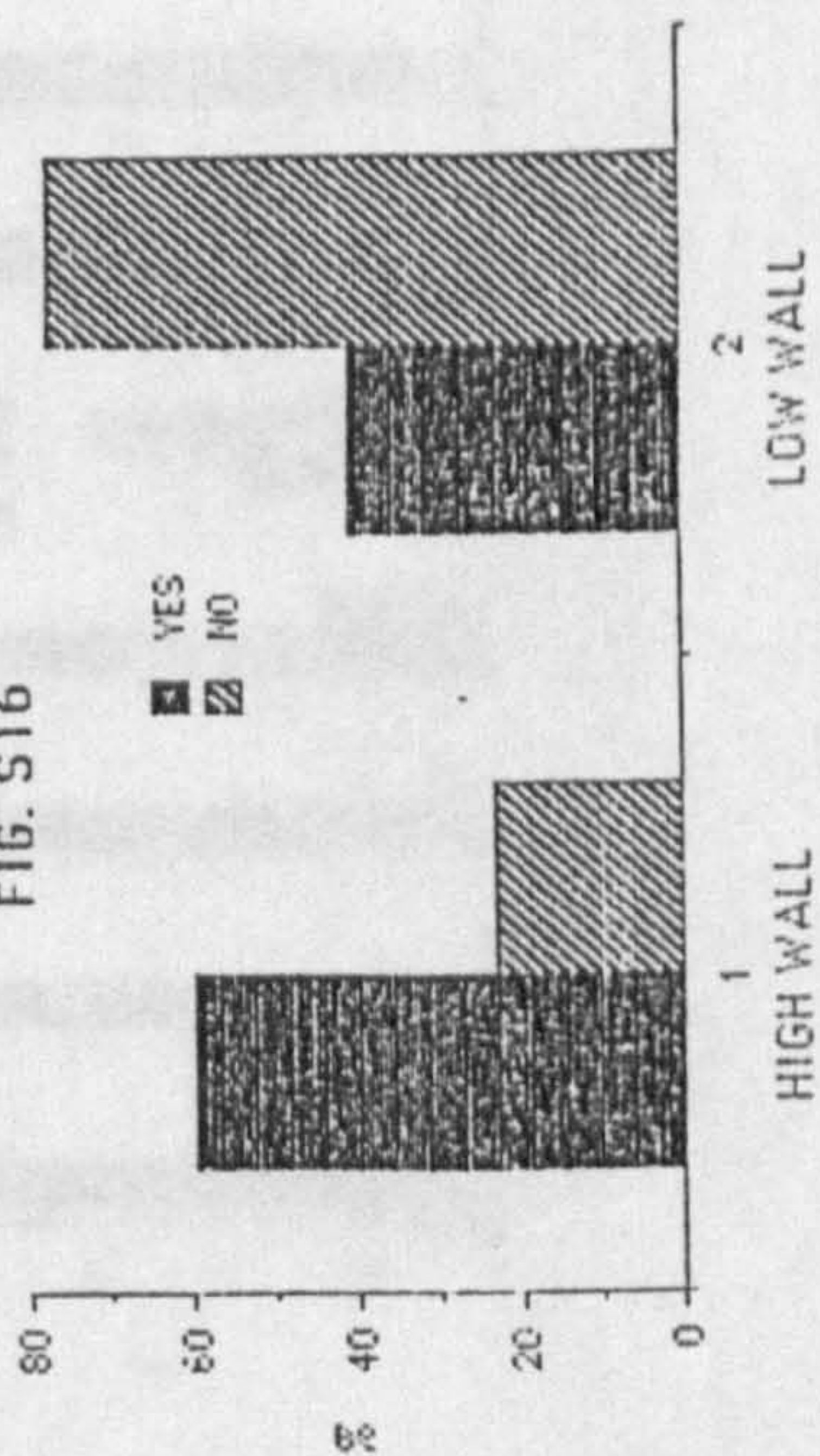


FIG. S17

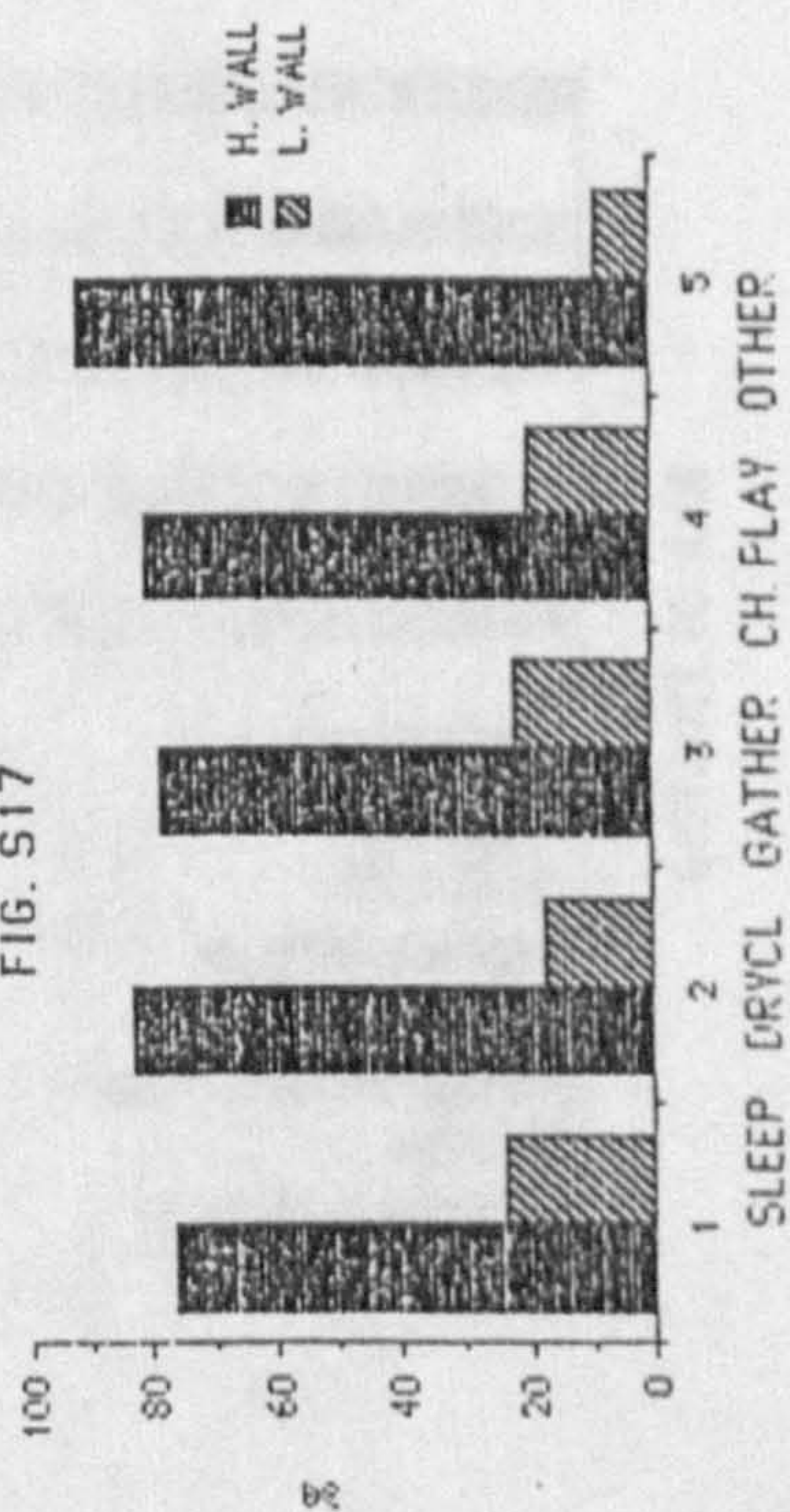


FIG. S18

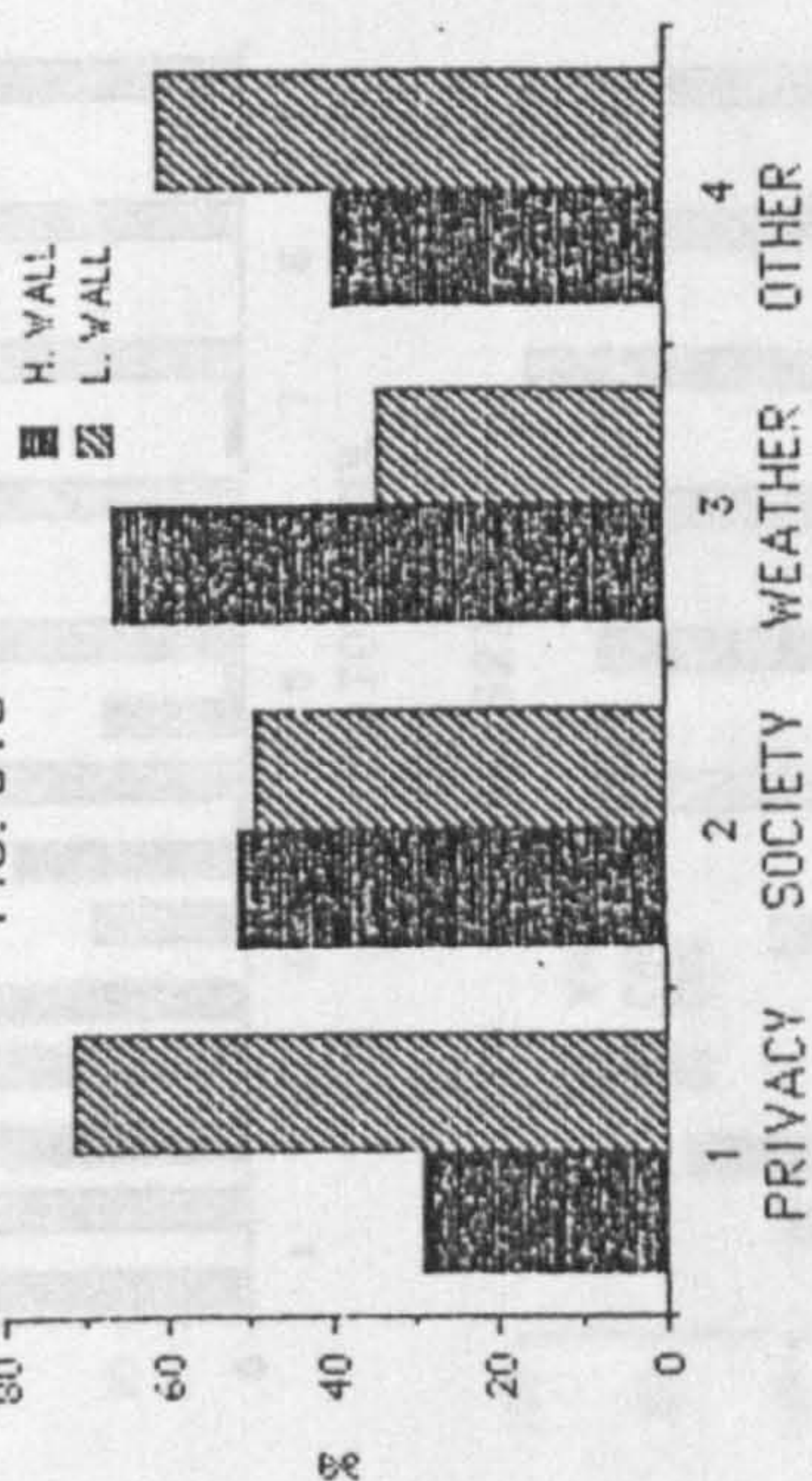
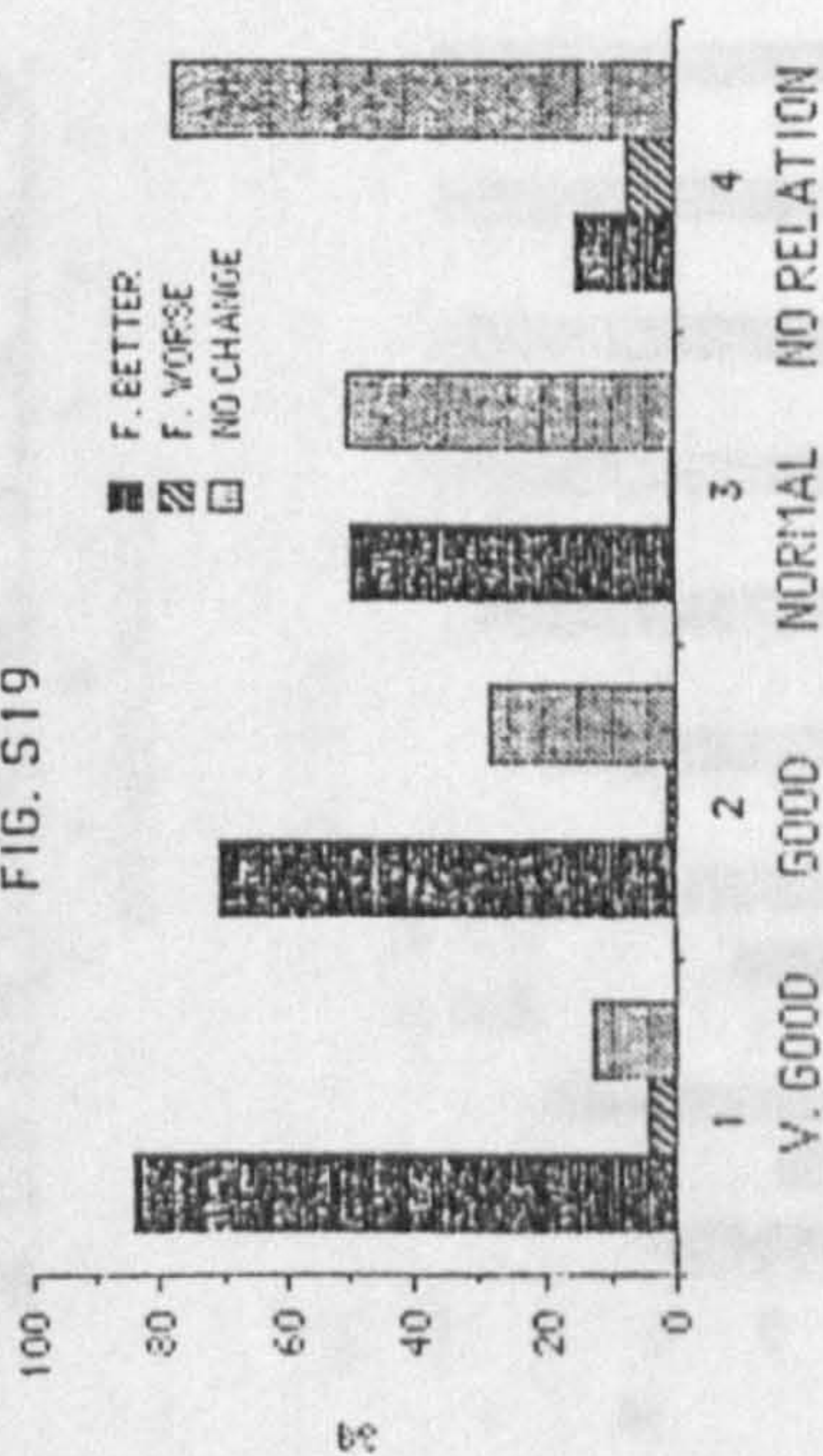
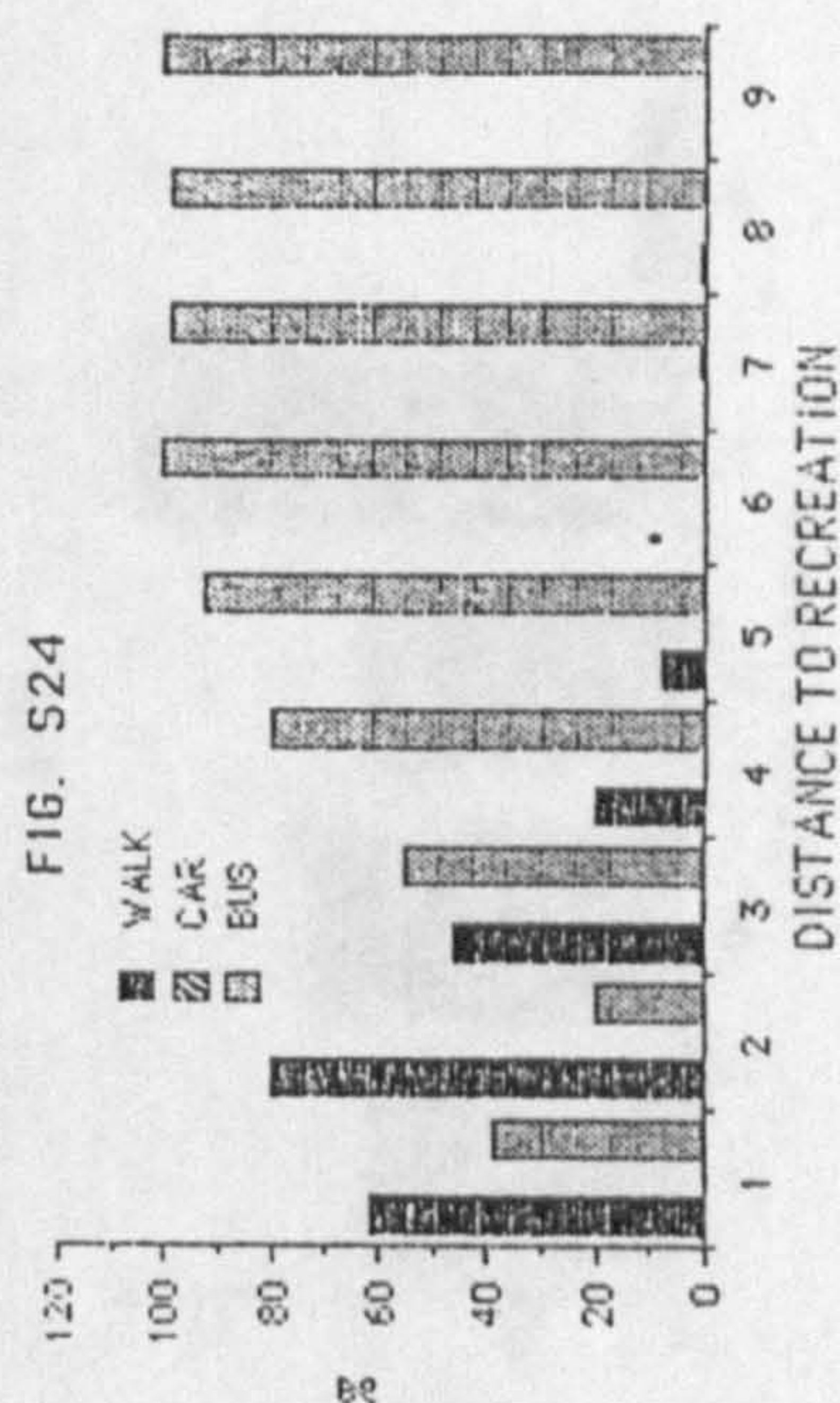
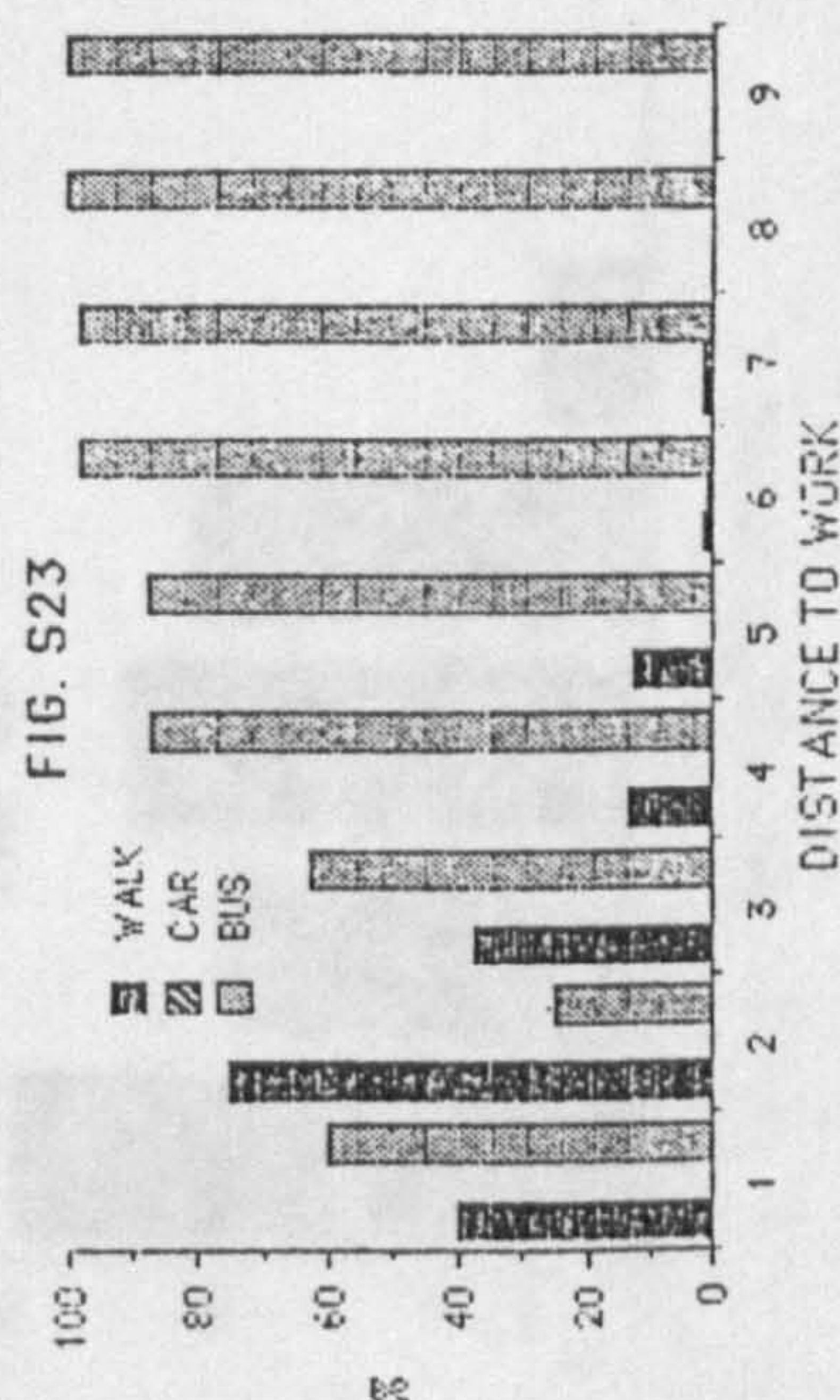
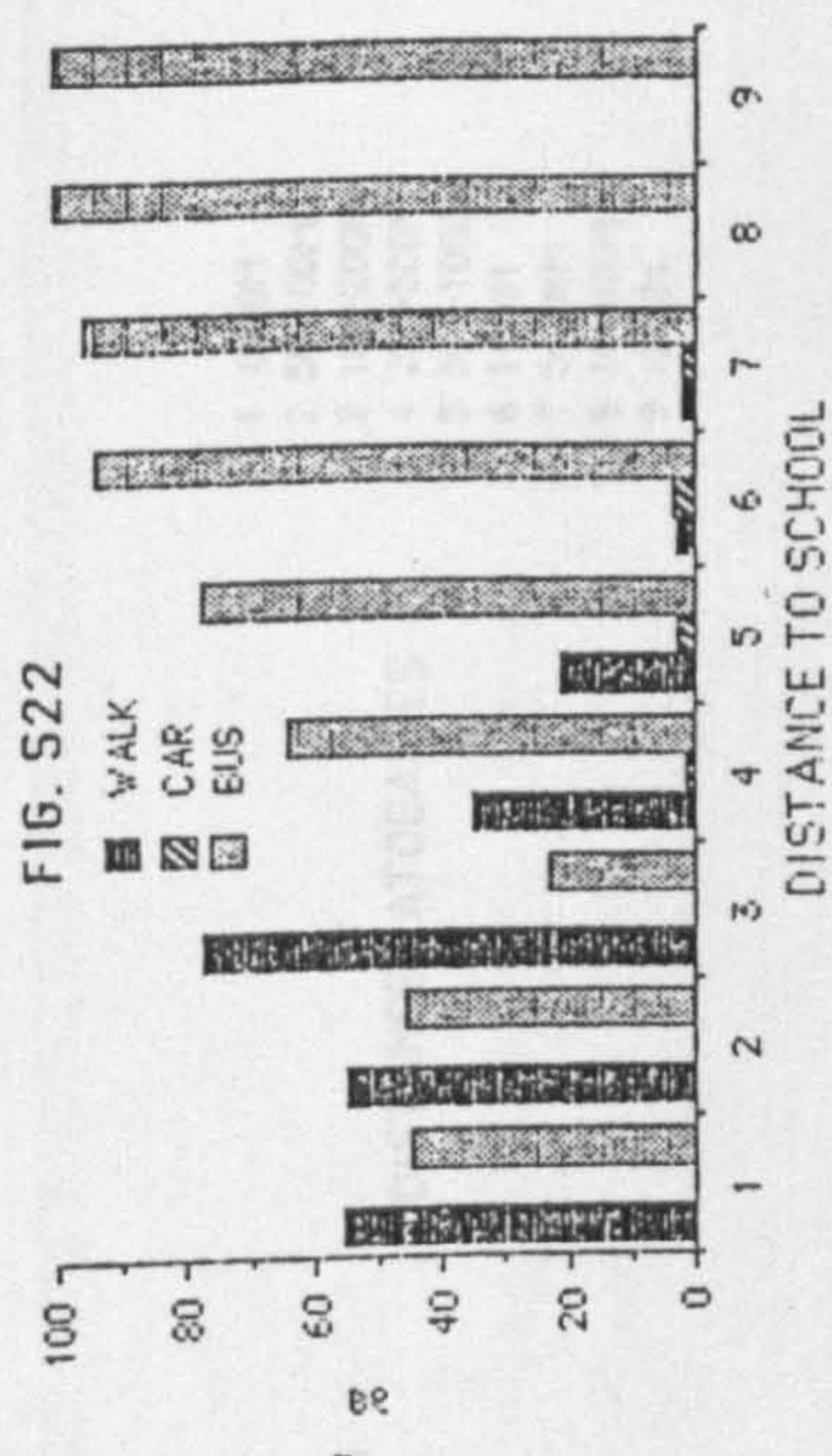
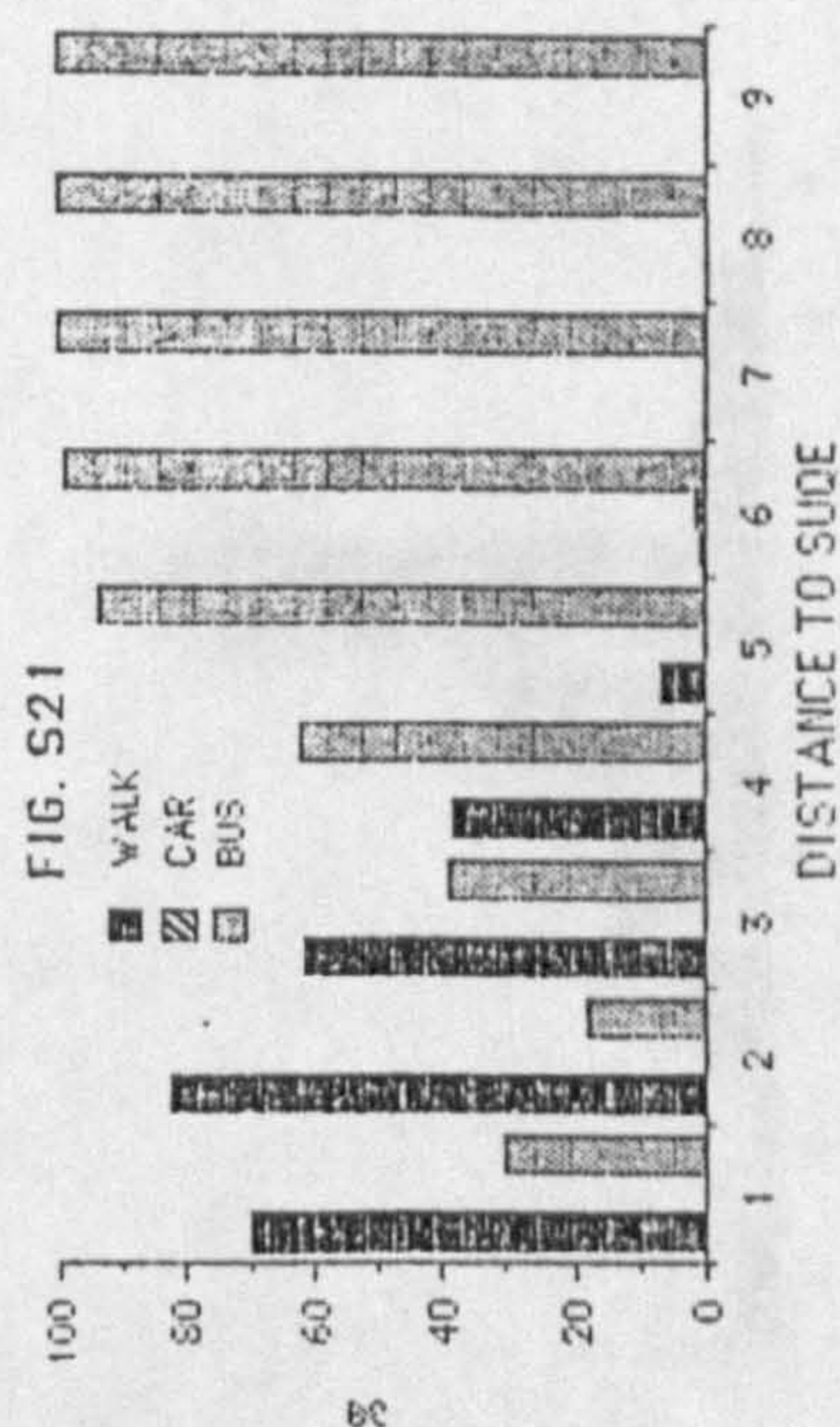
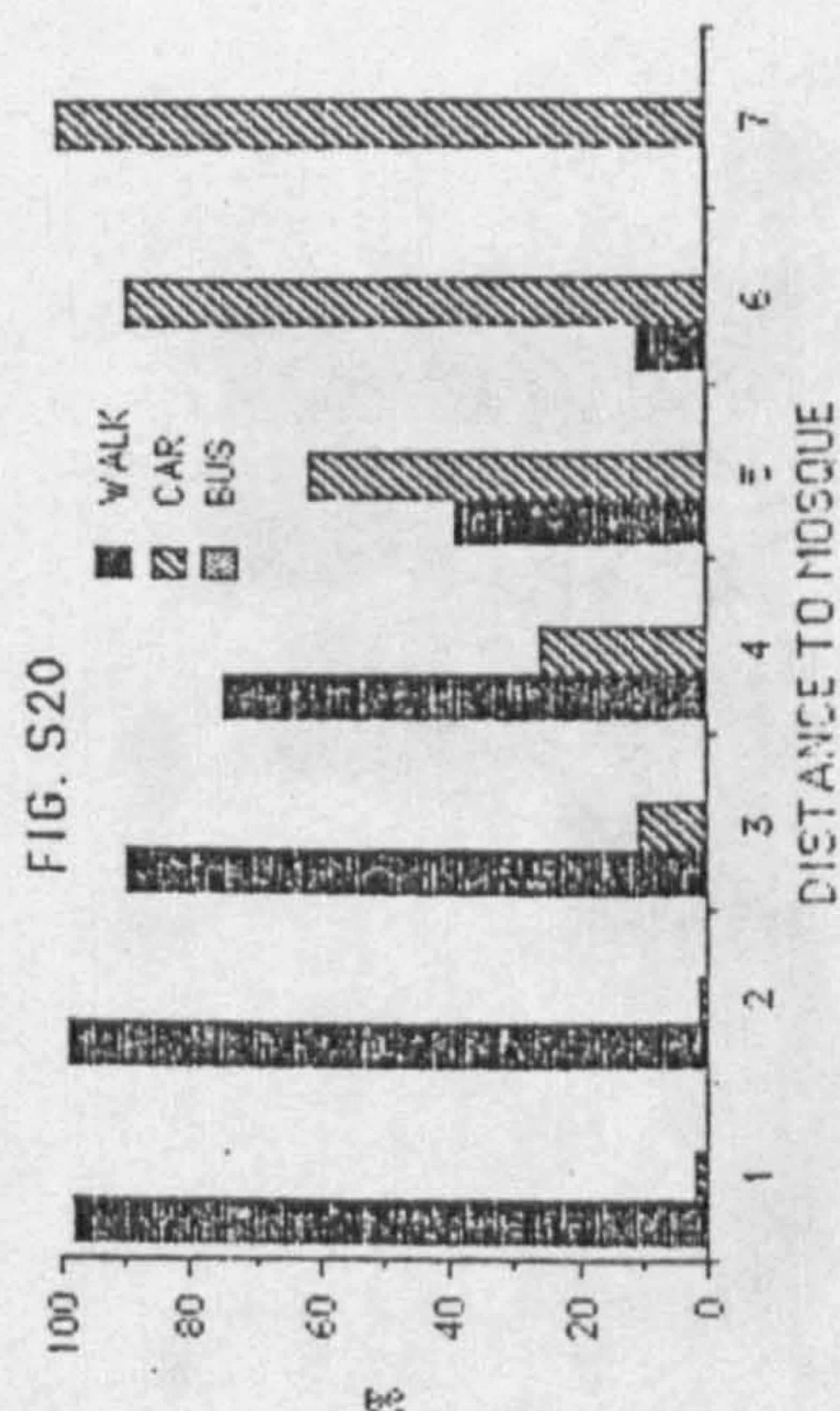


FIG. S19



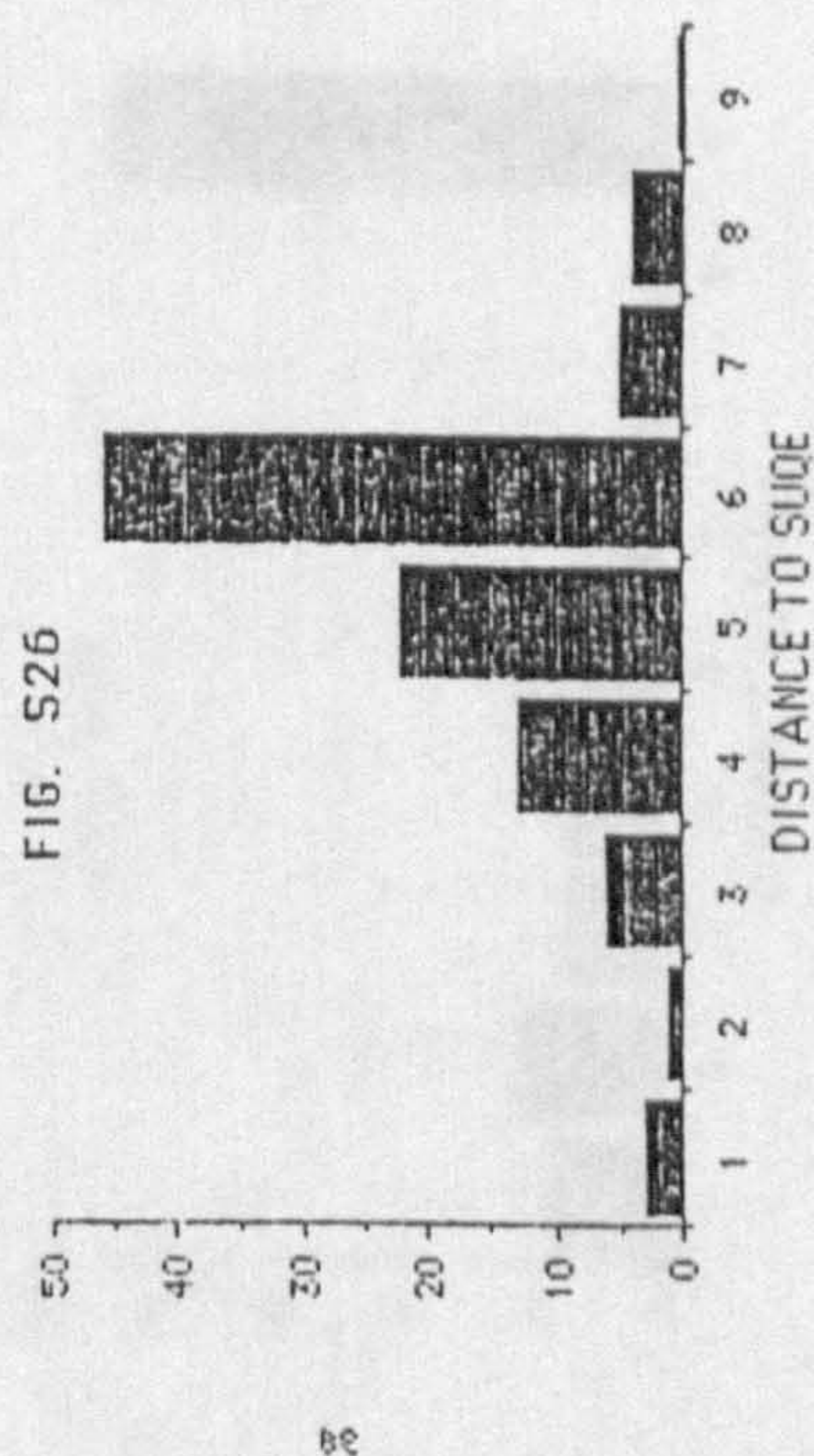
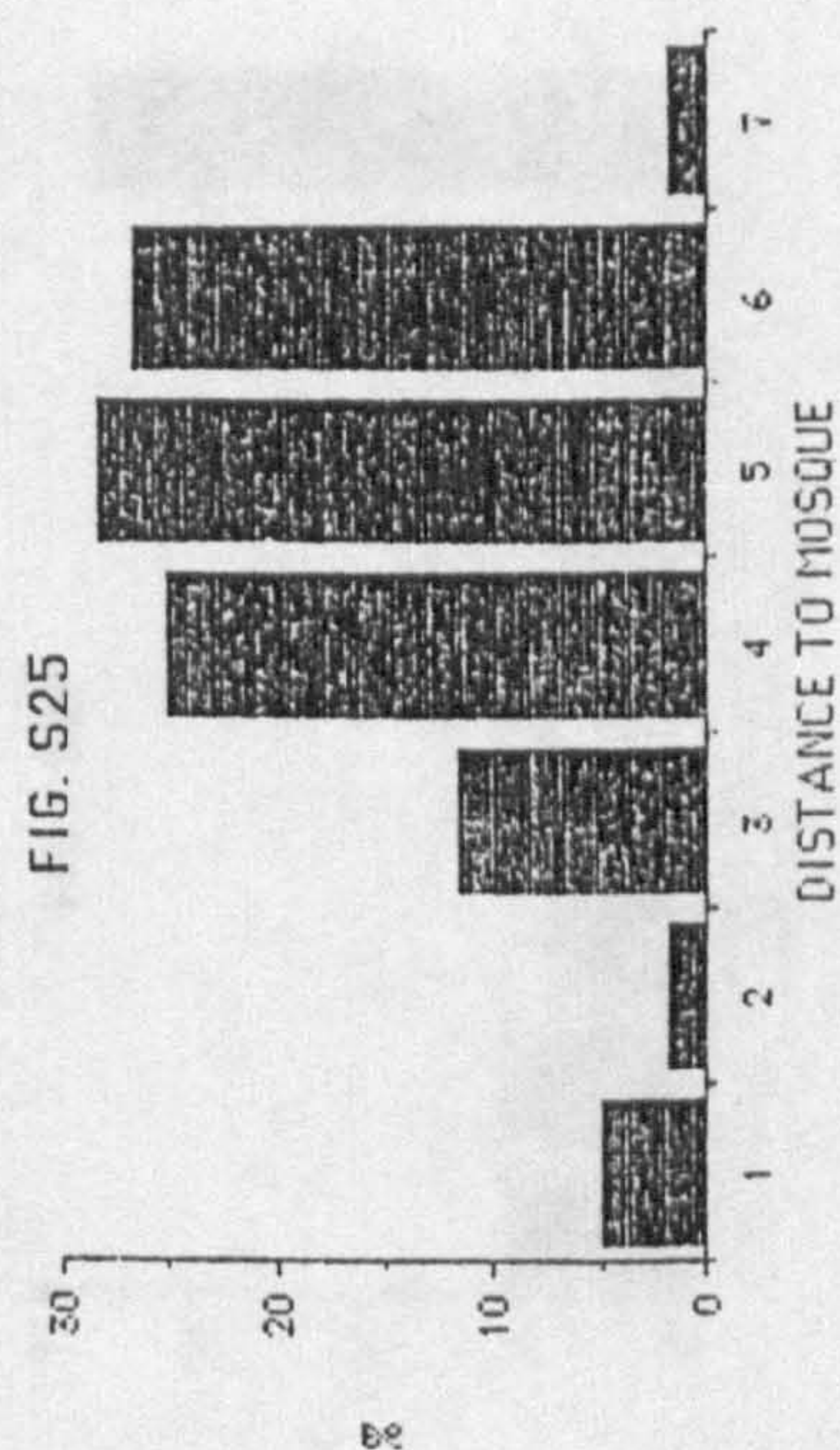
- 1 0-50M
- 2 50-100M
- 3 100-200M
- 4 200-500M
- 5 500-1000M
- 6 1-5KM
- 7 5-10KM
- 8 10-30KM
- 9 >30KM

DISTANCE CATEGORIES



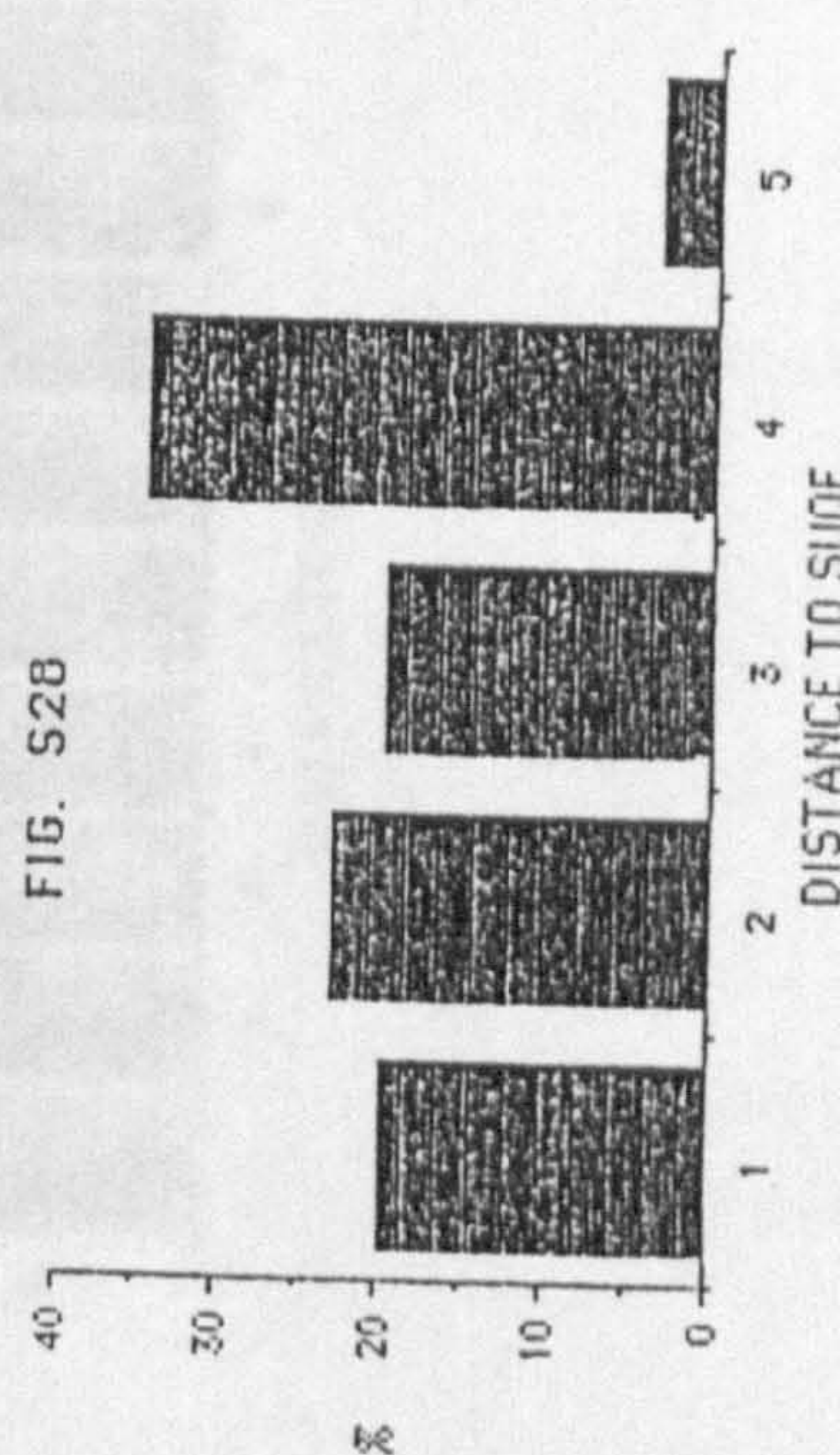
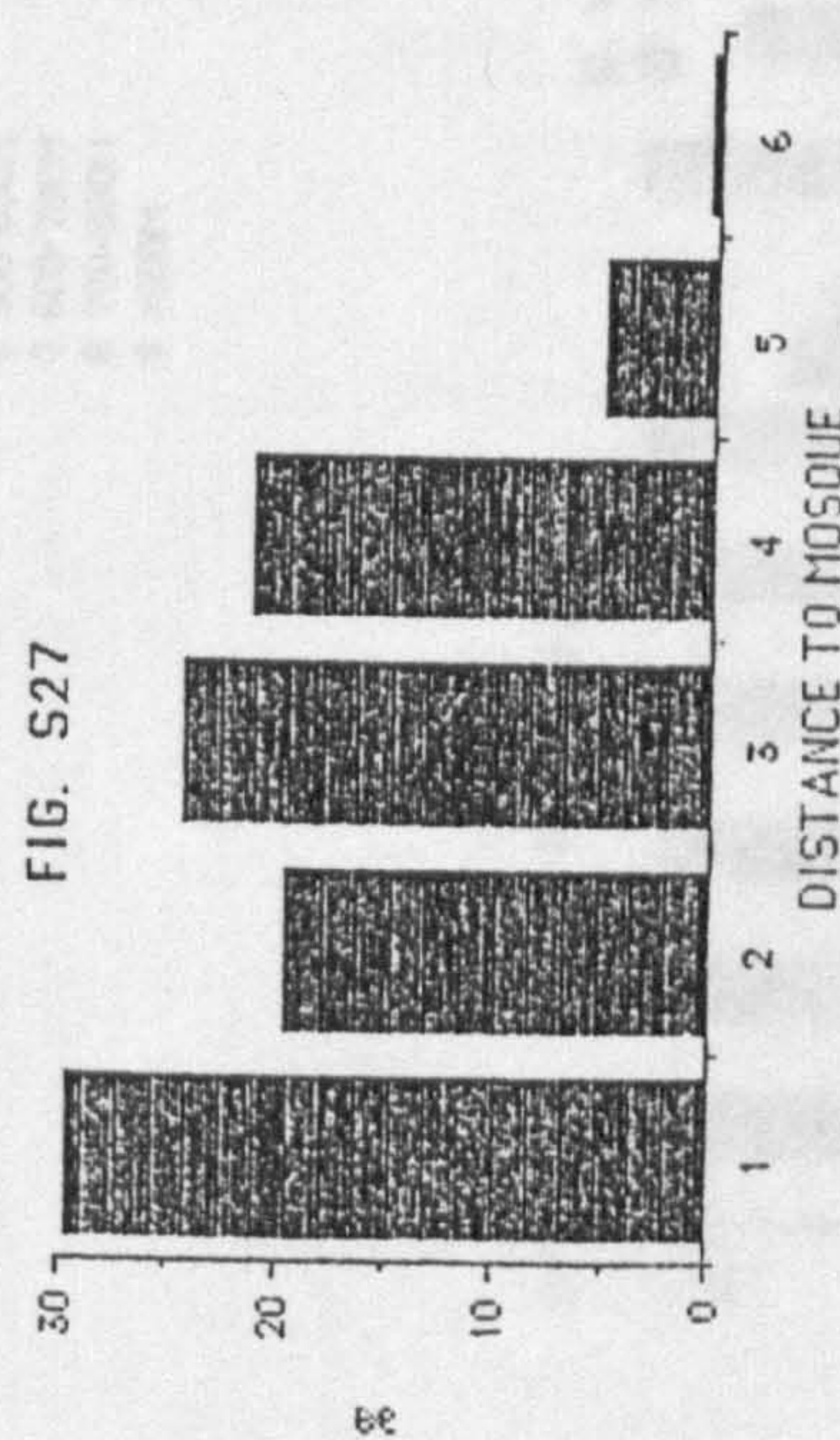
- 1 0-50M
- 2 50-100M
- 3 100-200M
- 4 200-500M
- 5 500-1000M
- 6 1-5KM
- 7 5-10KM
- 8 10-30KM
- 9 >30KM

DISTANCE CATEGORIES



- 1 0-50M
- 2 50-100M
- 3 100-200M
- 4 200-500M
- 5 500-1000M
- 6 1-5KM
- 7 5-10KM
- 8 10-30KM
- 9 >30KM

DISTANCE CATEGORIES



- 1 <100M
- 2 100-200M
- 3 200-300M
- 4 300-400M
- 5 400-500M
- 6 500-600M
- 7 600-700M
- 8 700-800M
- 9 >800M

DISTANCE CATEGORIES

FIG. S29

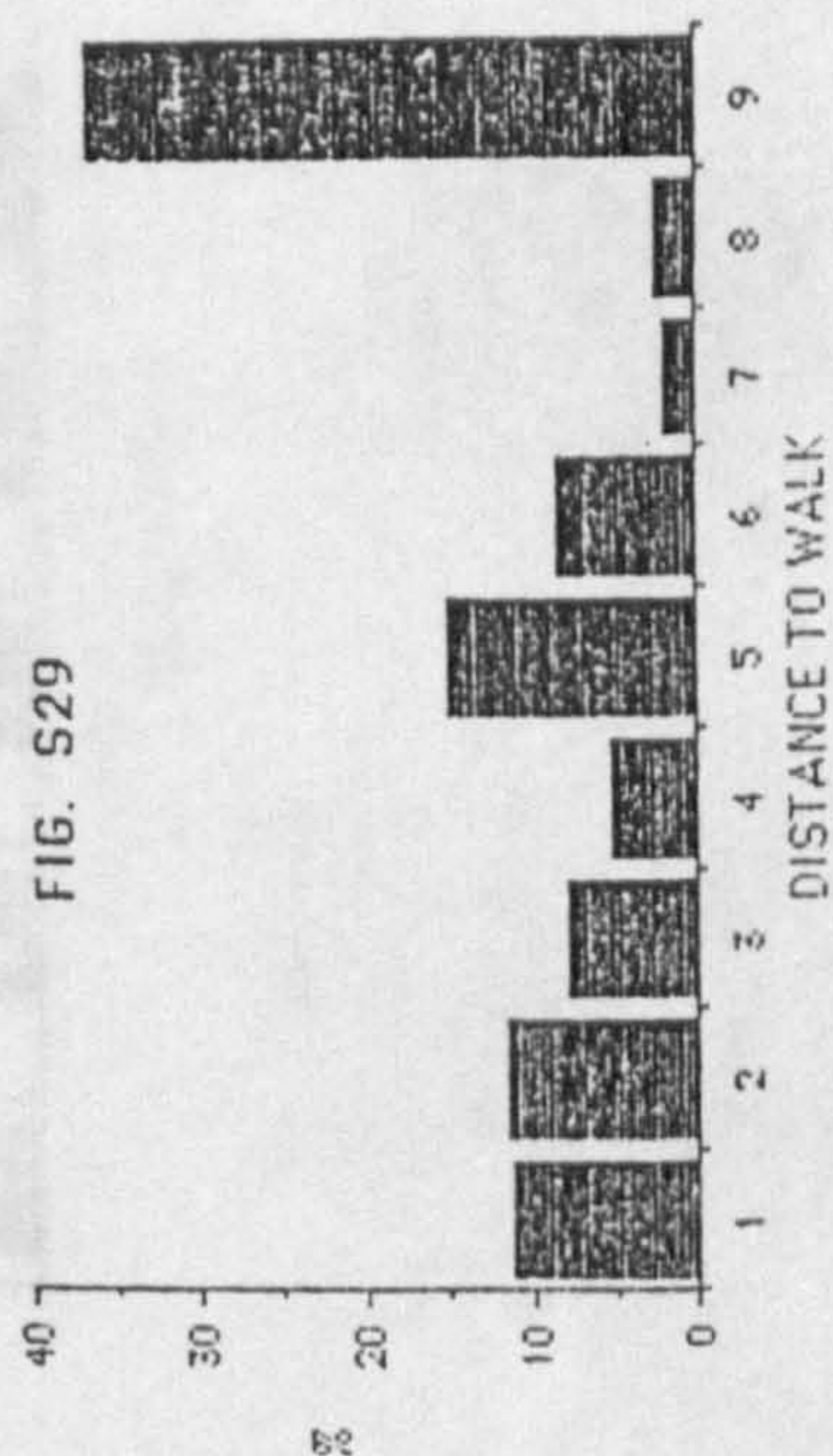


FIG. S30

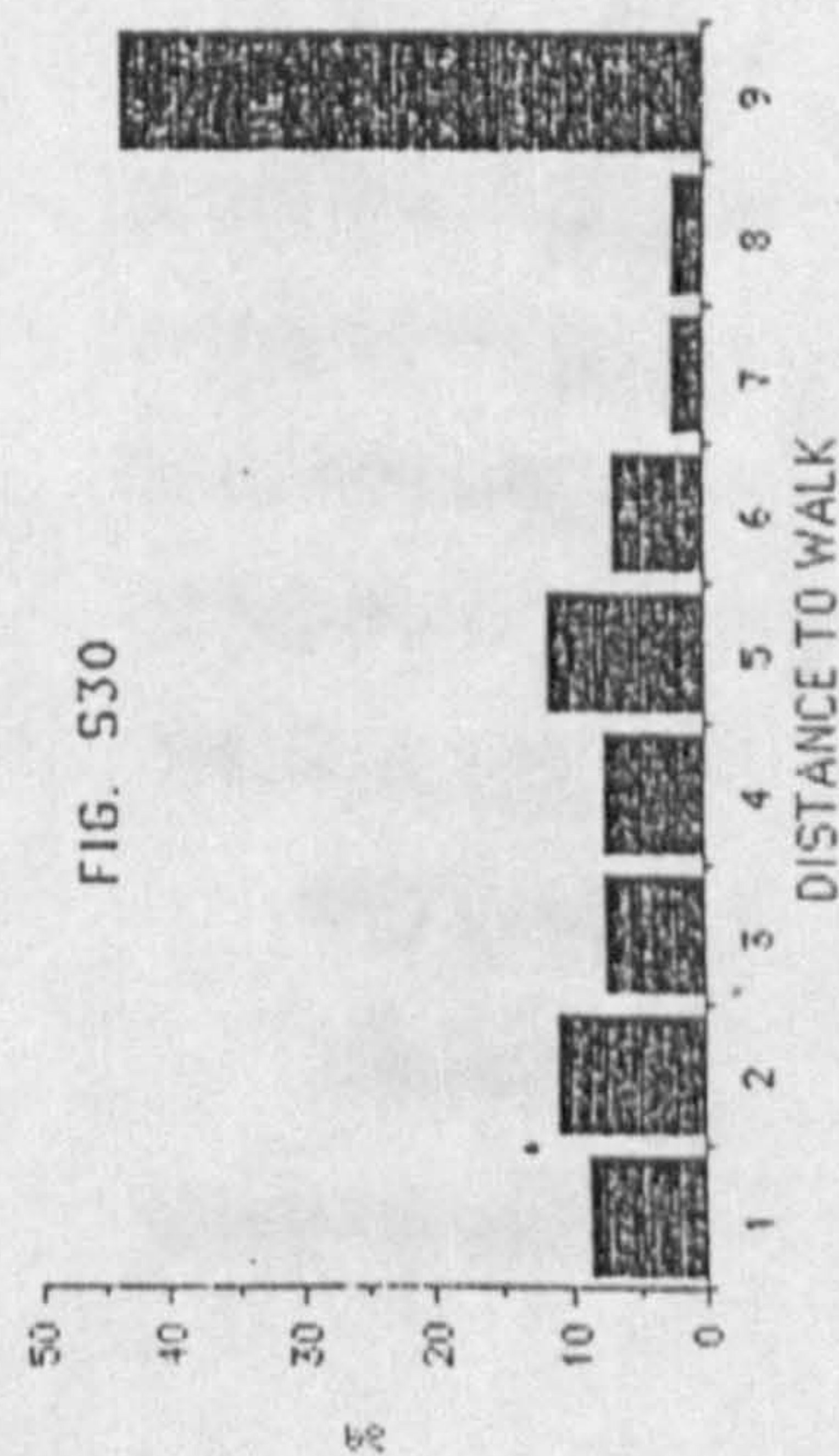
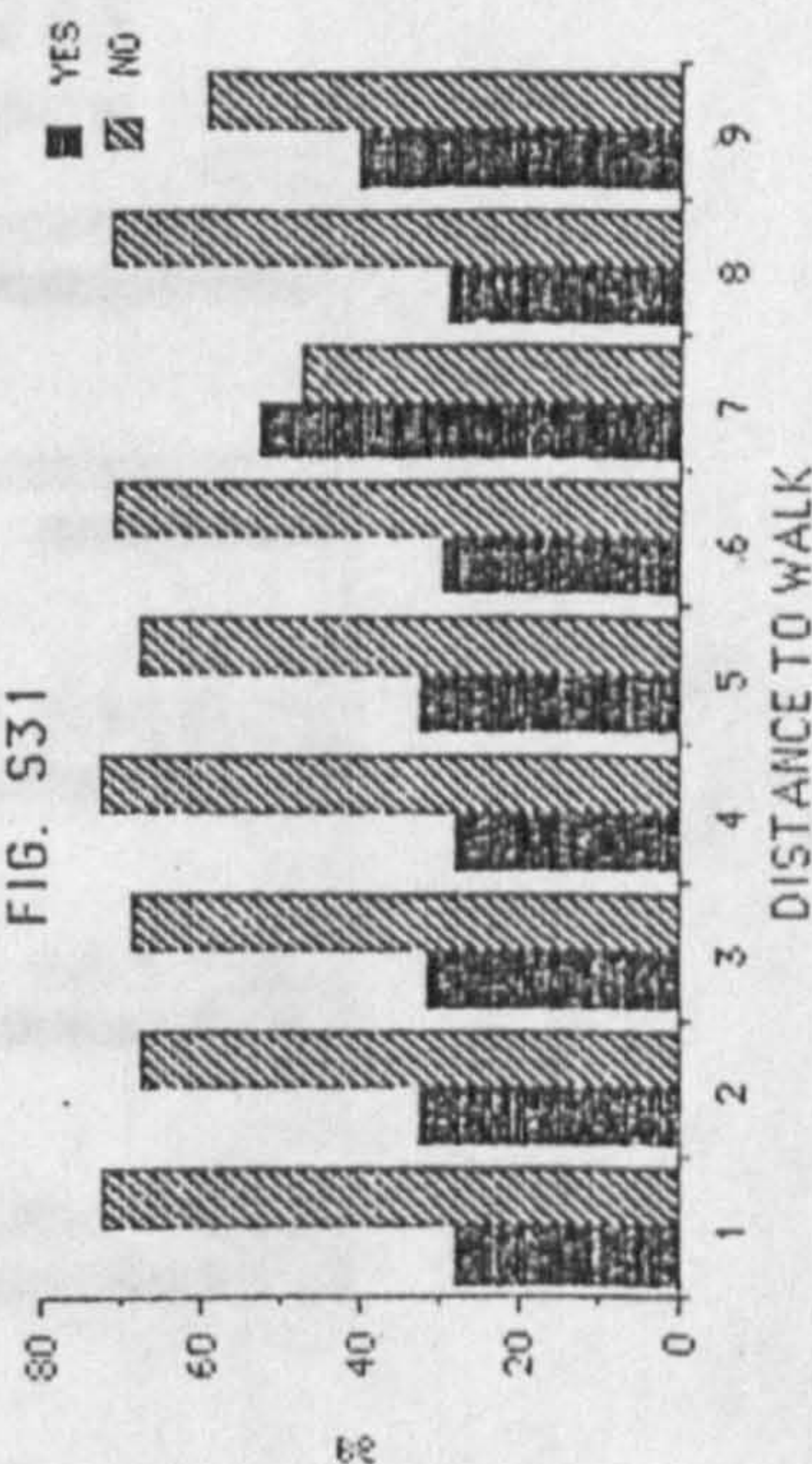
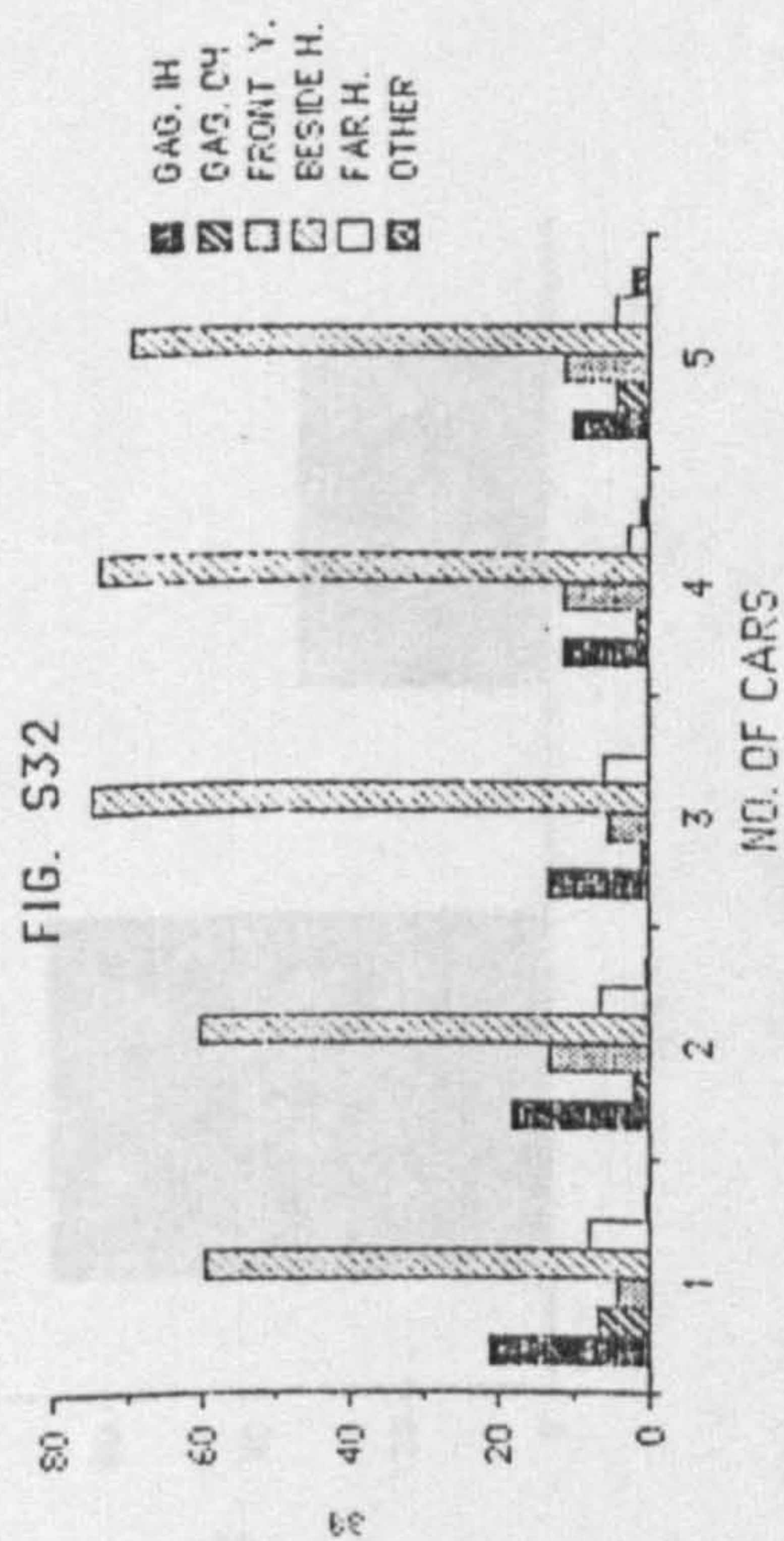
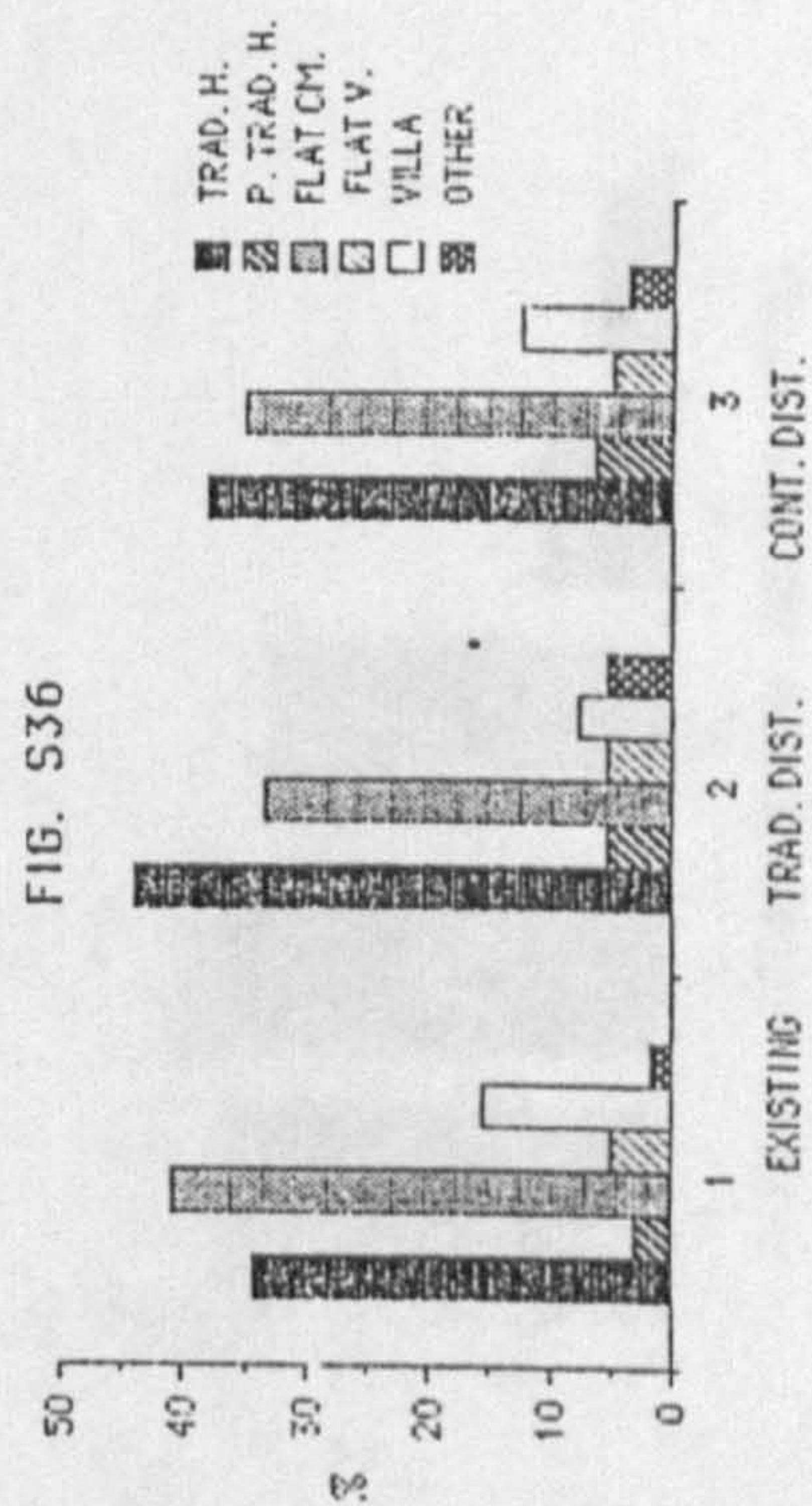
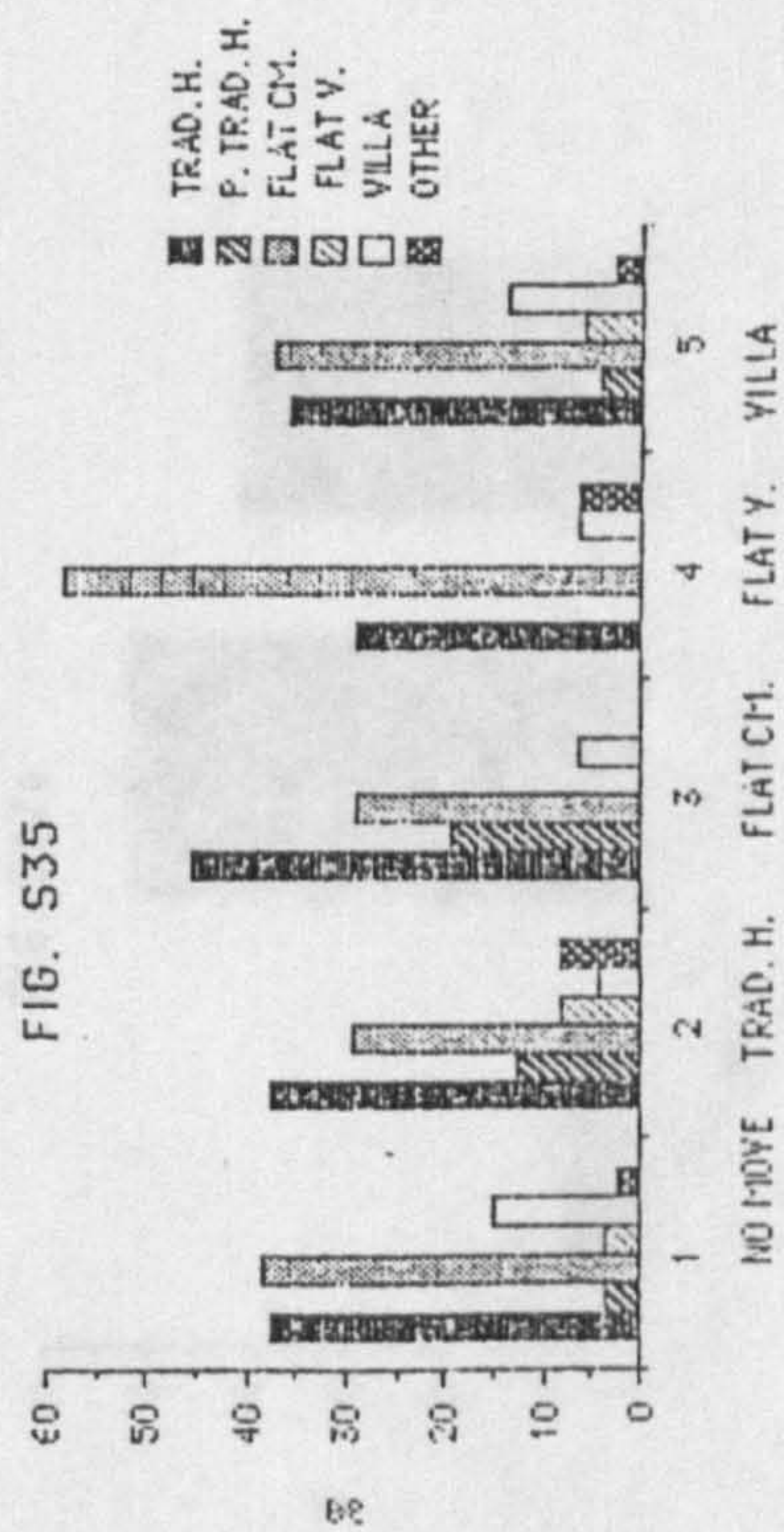
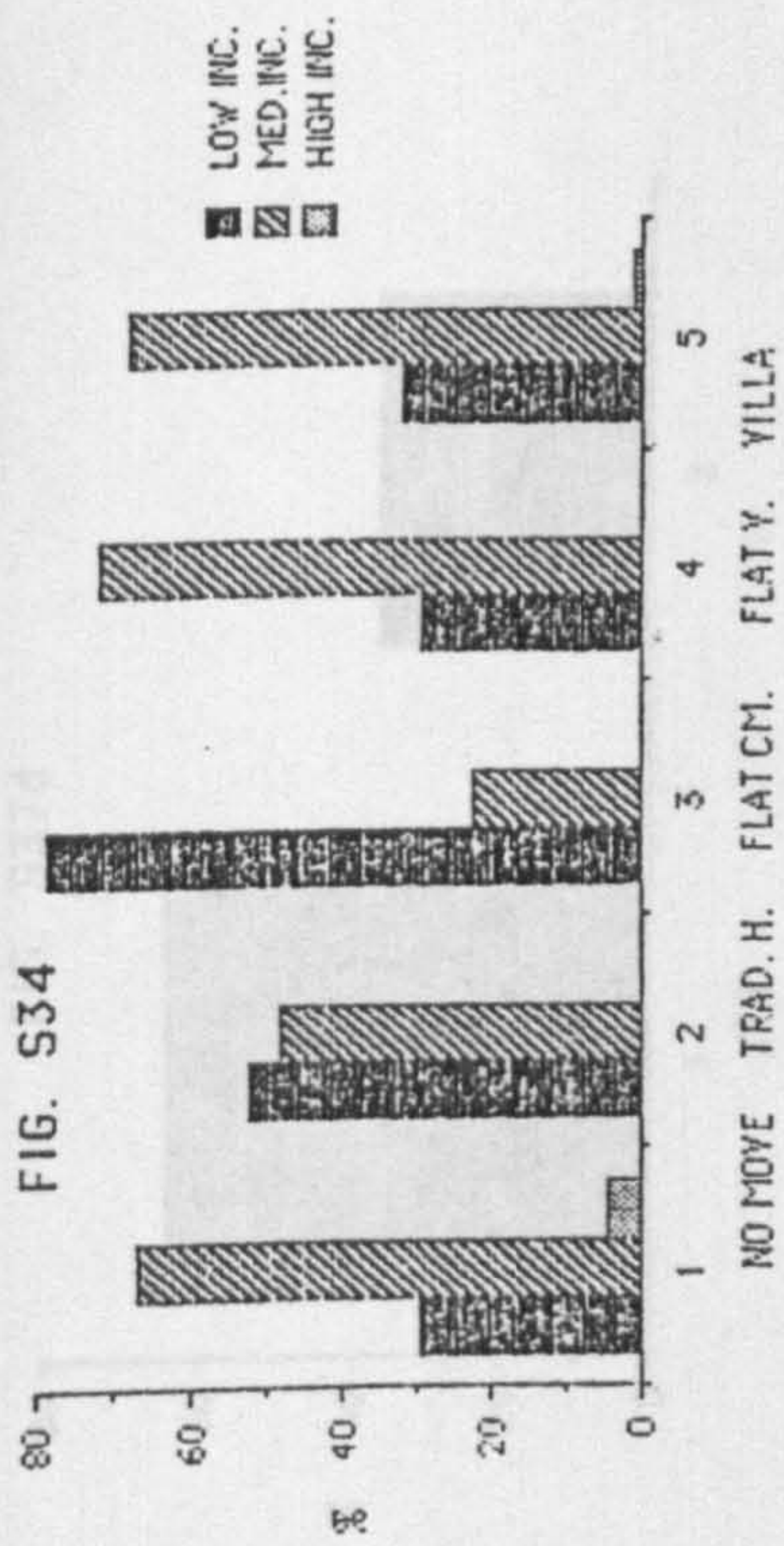


FIG. S31





INCOME AMOUNT

1 >2000SR
2 2000-4000SR
3 4000-5000SR
4 5000-6000SR
5 6000-7000SR
6 7000-8000SR
7 8000-9000SR
8 9000-10000SR
9 >10000SR



FIG. S37a

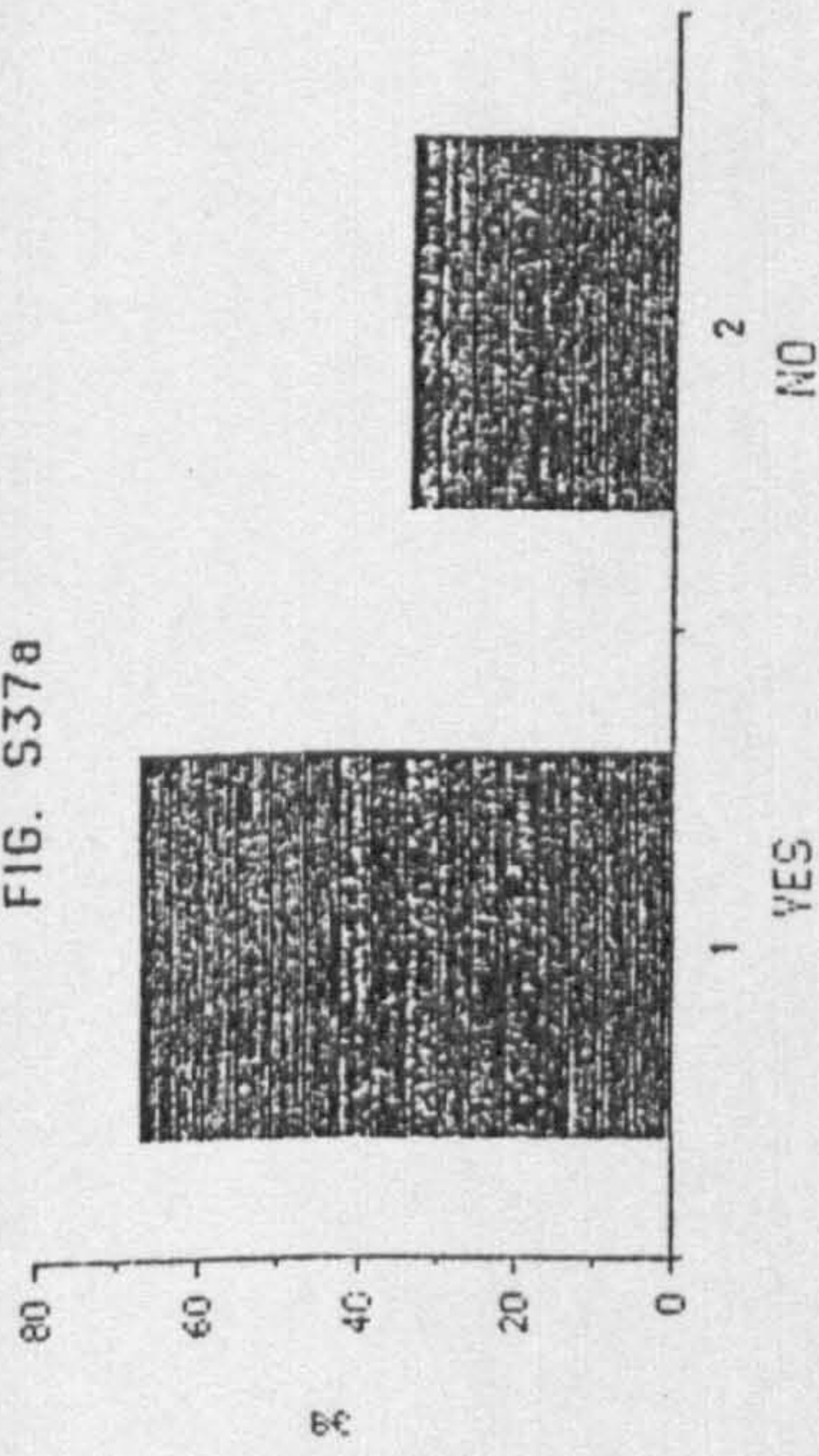


FIG. S37b

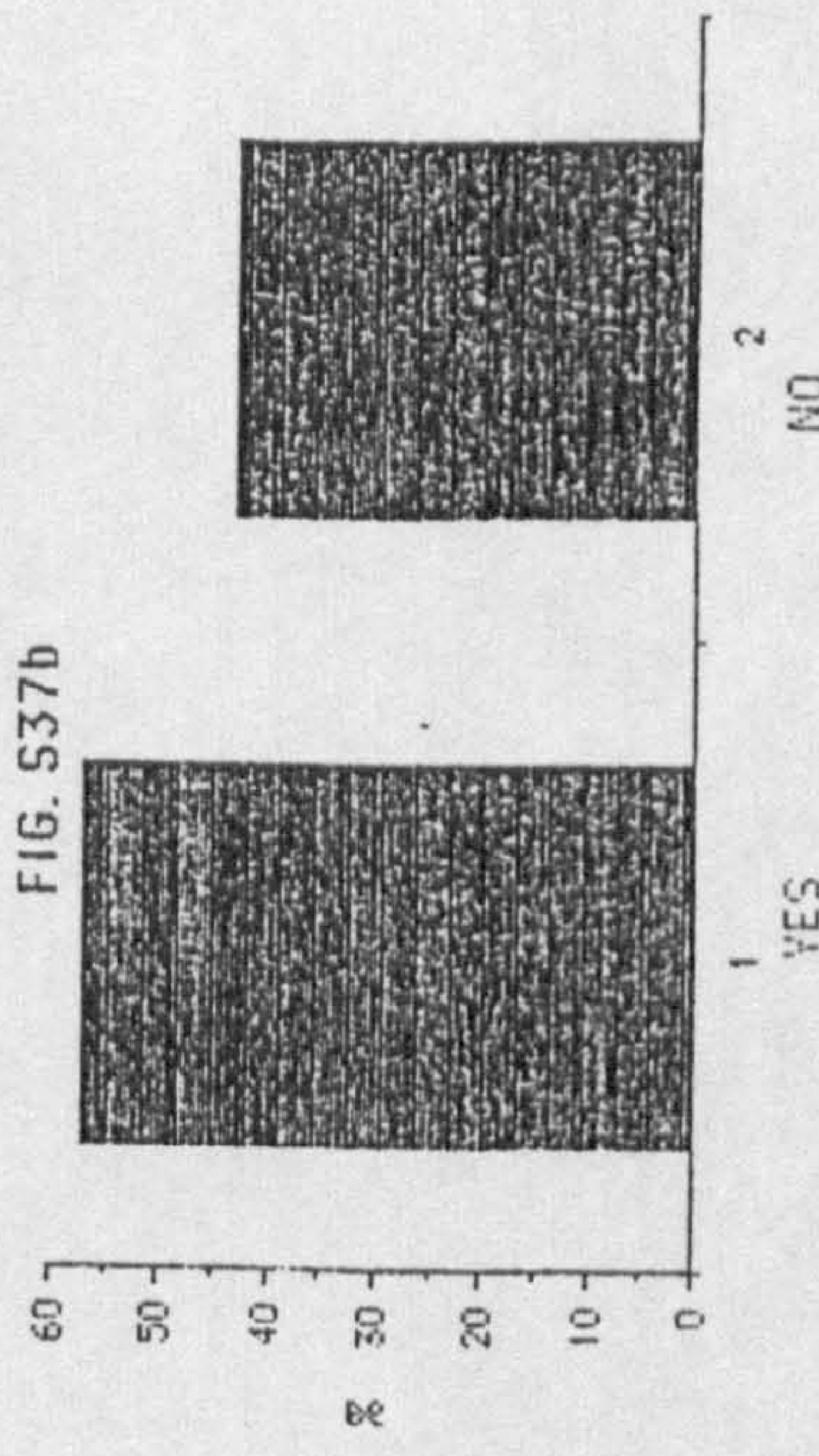


FIG. S37c

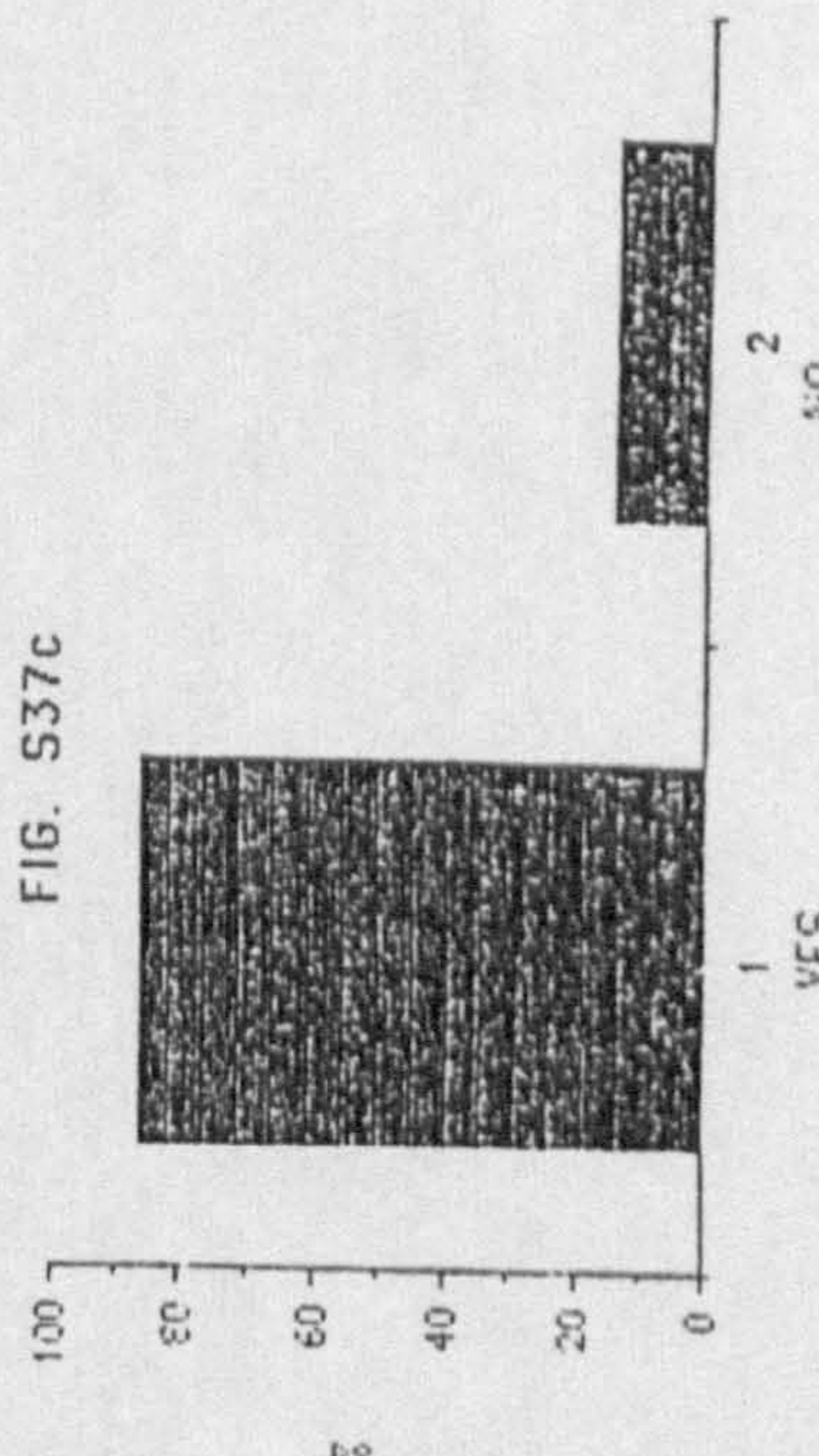


FIG. S37d

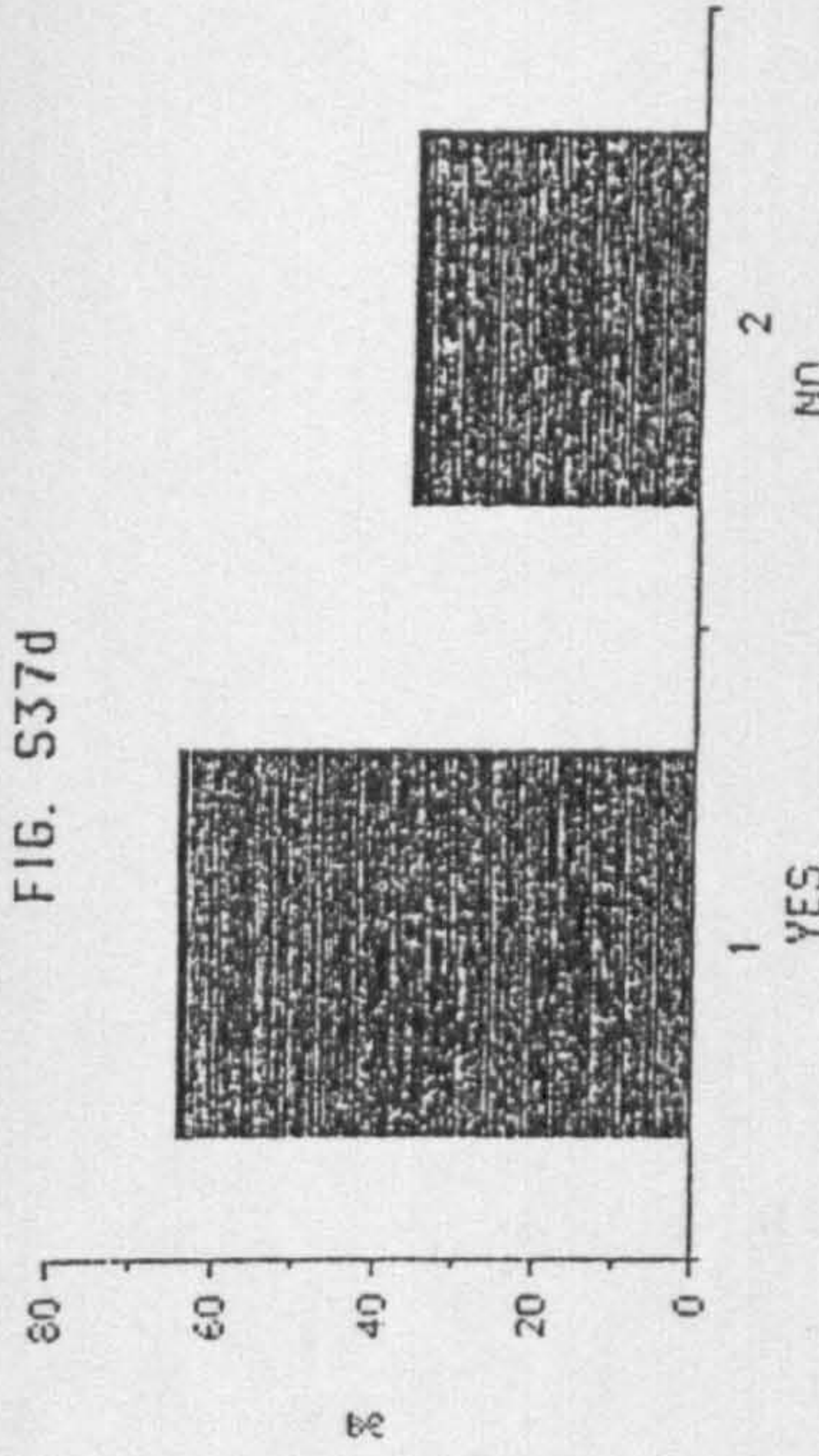


FIG. S37e

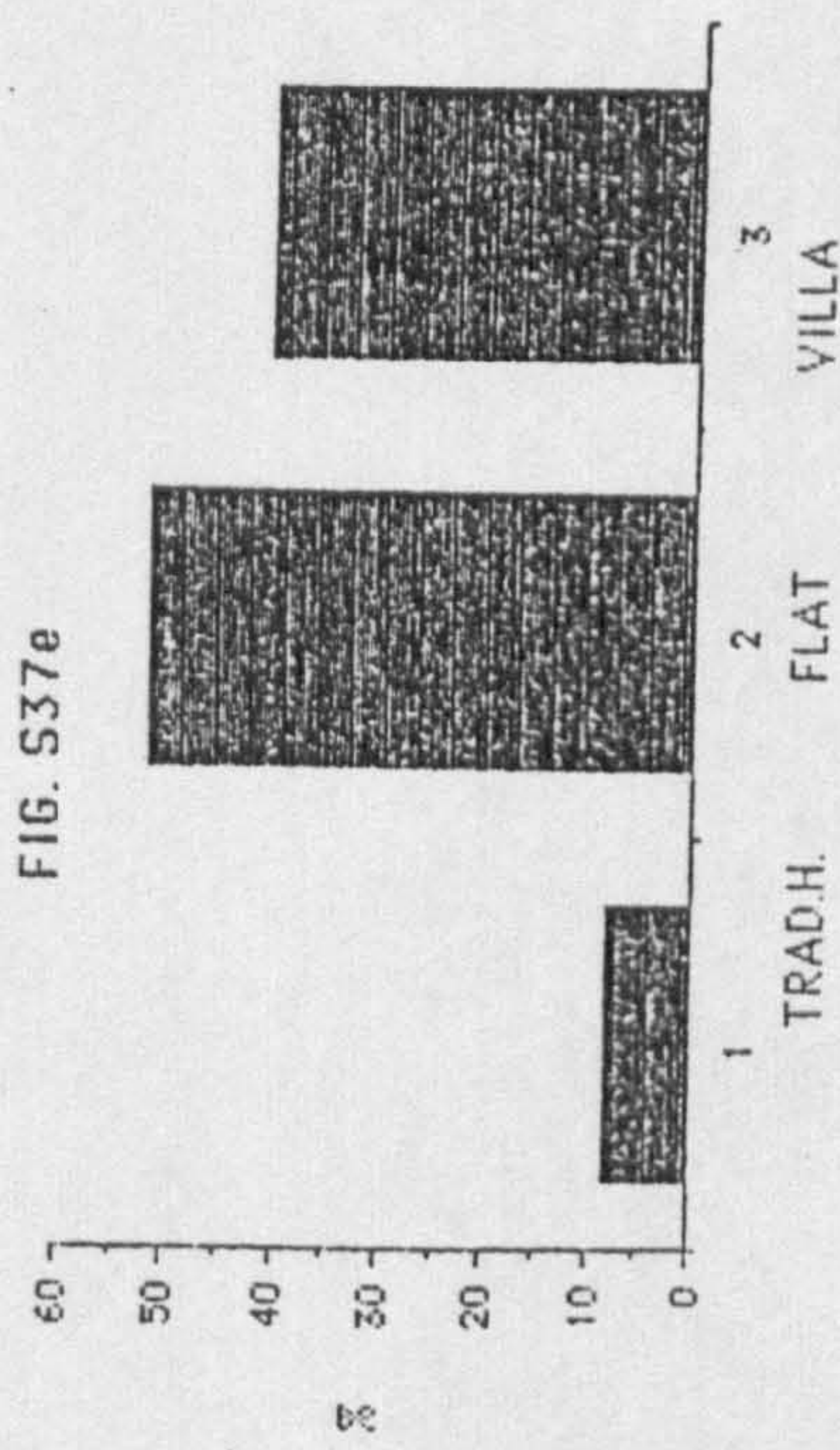
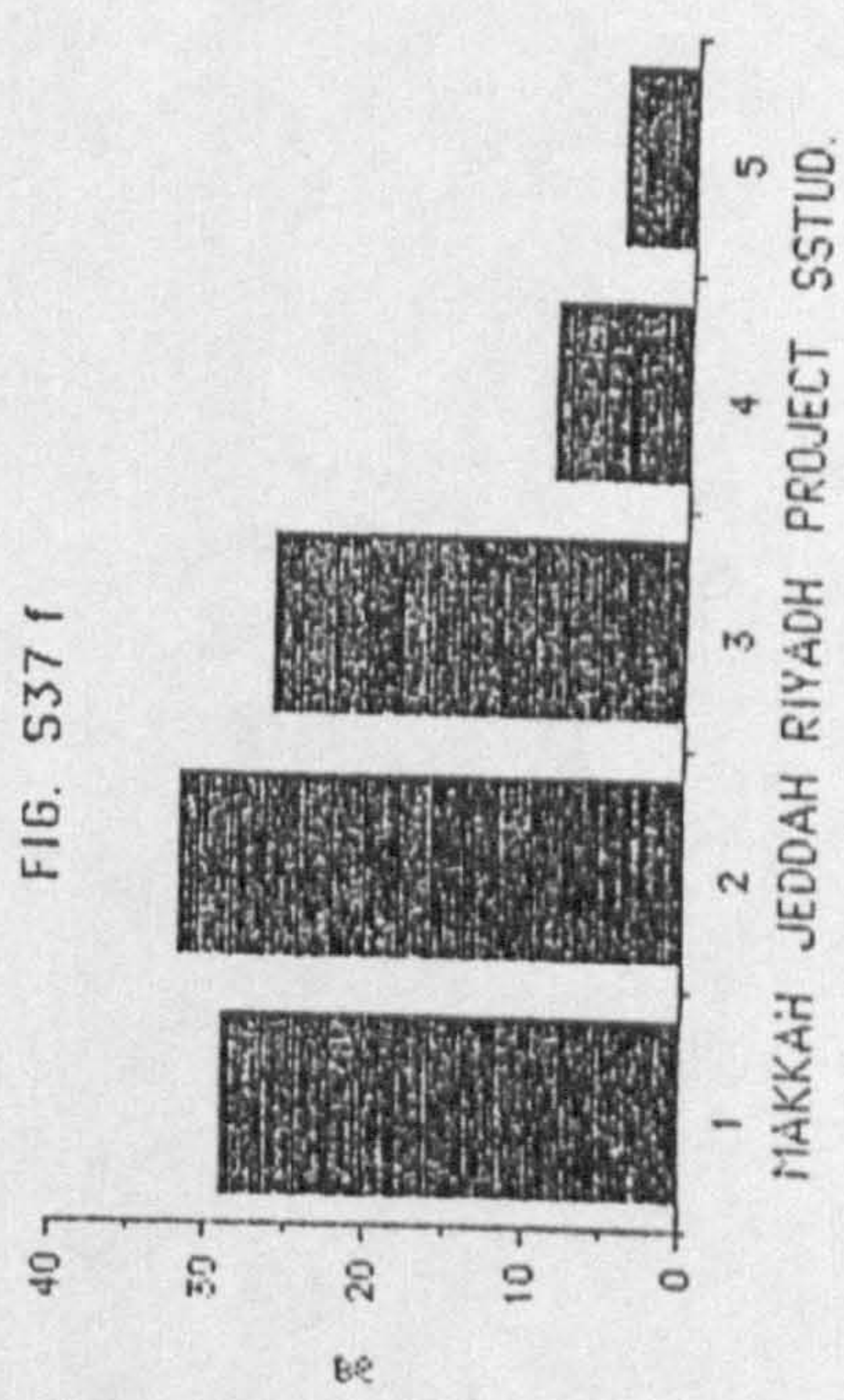


FIG. S37f



MAKKAH JEDDAH RIYADH PROJECT SSTUD.

APPENDIX H

HOUSE DESIGN CONCEPTS (USE OF COURTYARDS)

House Design Concept

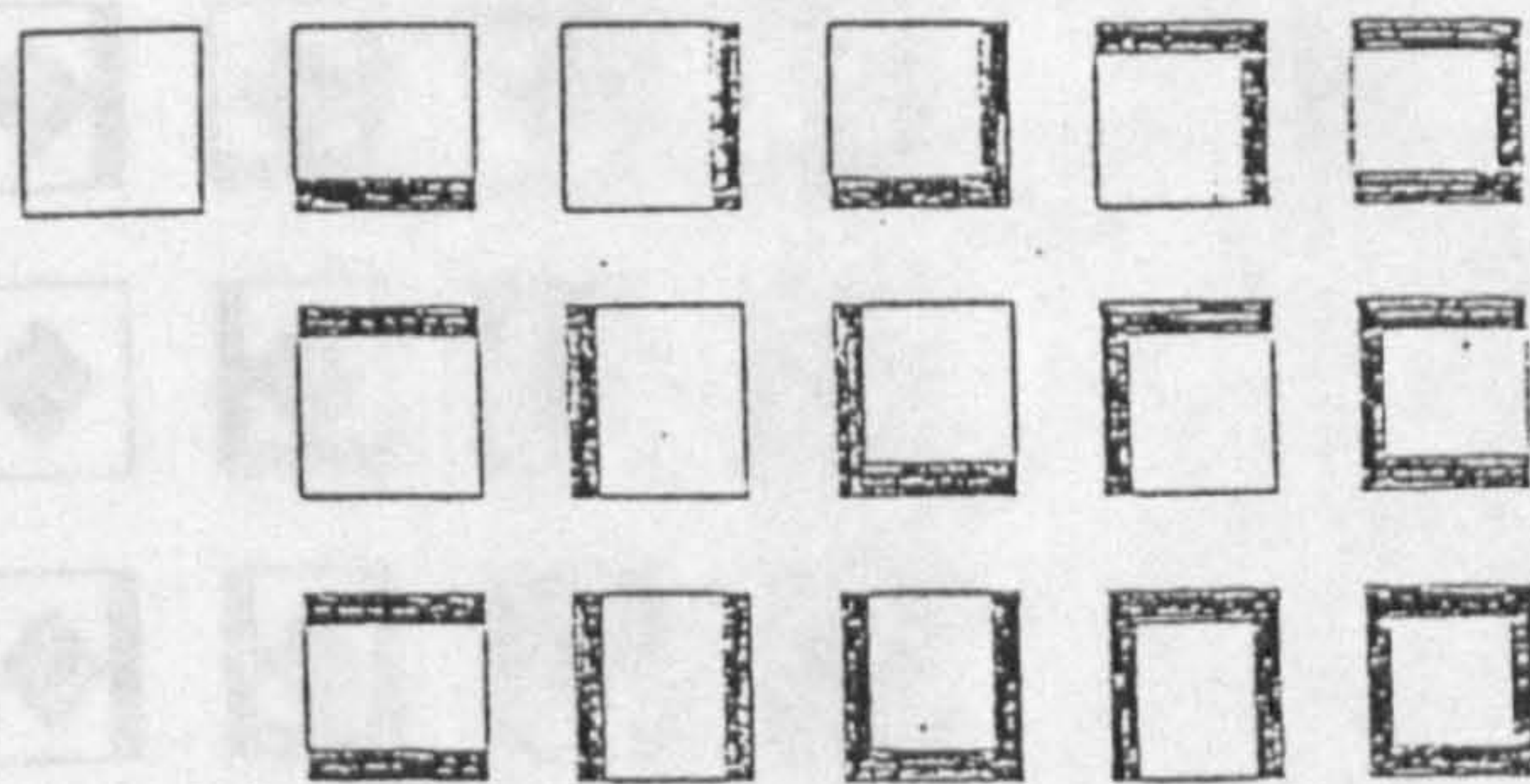
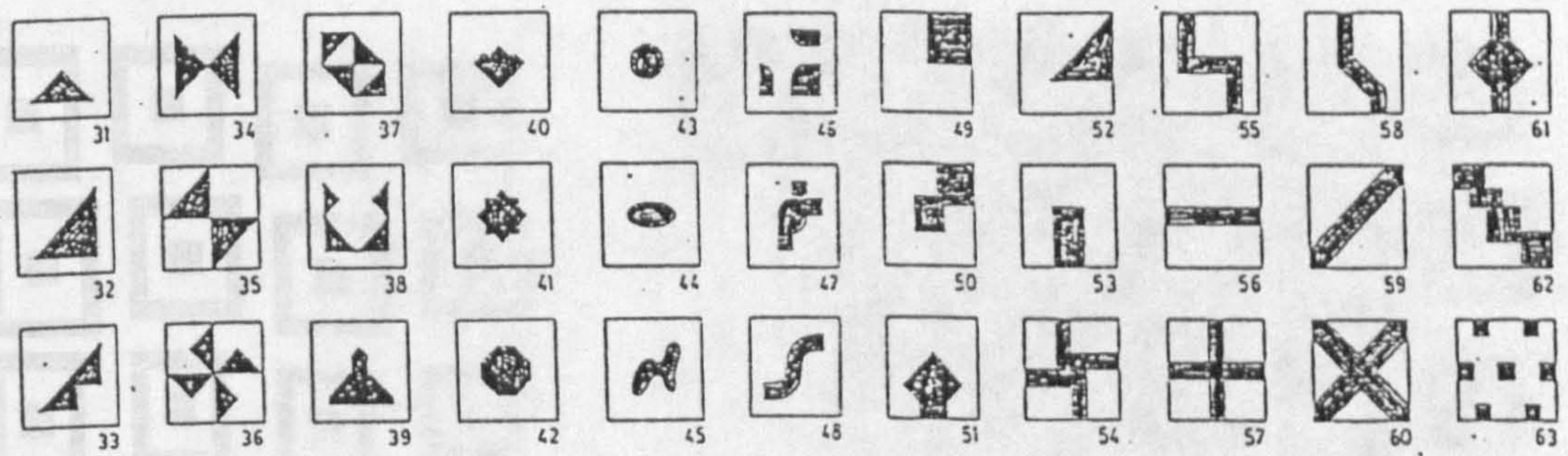
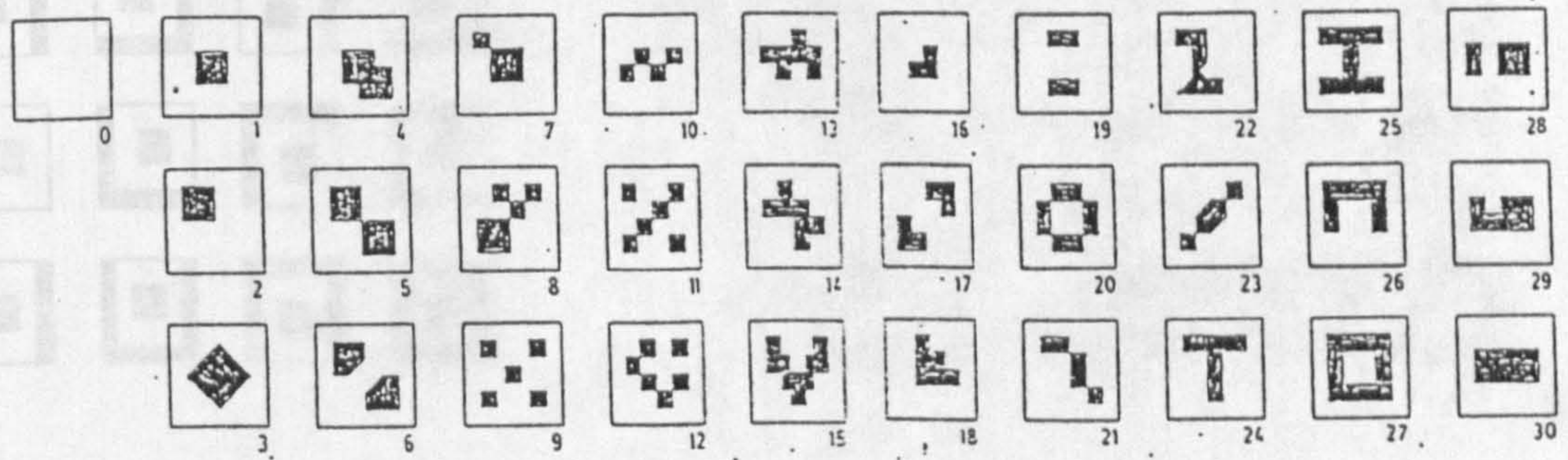
These concepts were developed to provide the basic alternative of courtyard houses.

- A basic square lot of 30 x 30 was taken.
- 63 main schemes were introduced at the beginning.
- Each scheme then was subject to the following:
 - * - Front yard only.
 - Back yard only.
 - Front and back yards.
 - * - Right side yard only.
 - Left side yard only.
 - Right and left side yards.
 - * - Front and right yards.
 - Front and left yards.
 - Front and right and left yards.
 - * - Back and right yards.
 - Back and left yards.
 - Back and right and left yards.
 - * - Front and back and right yards.
 - Front and back and left yards.
 - Front and back and right and left yards.

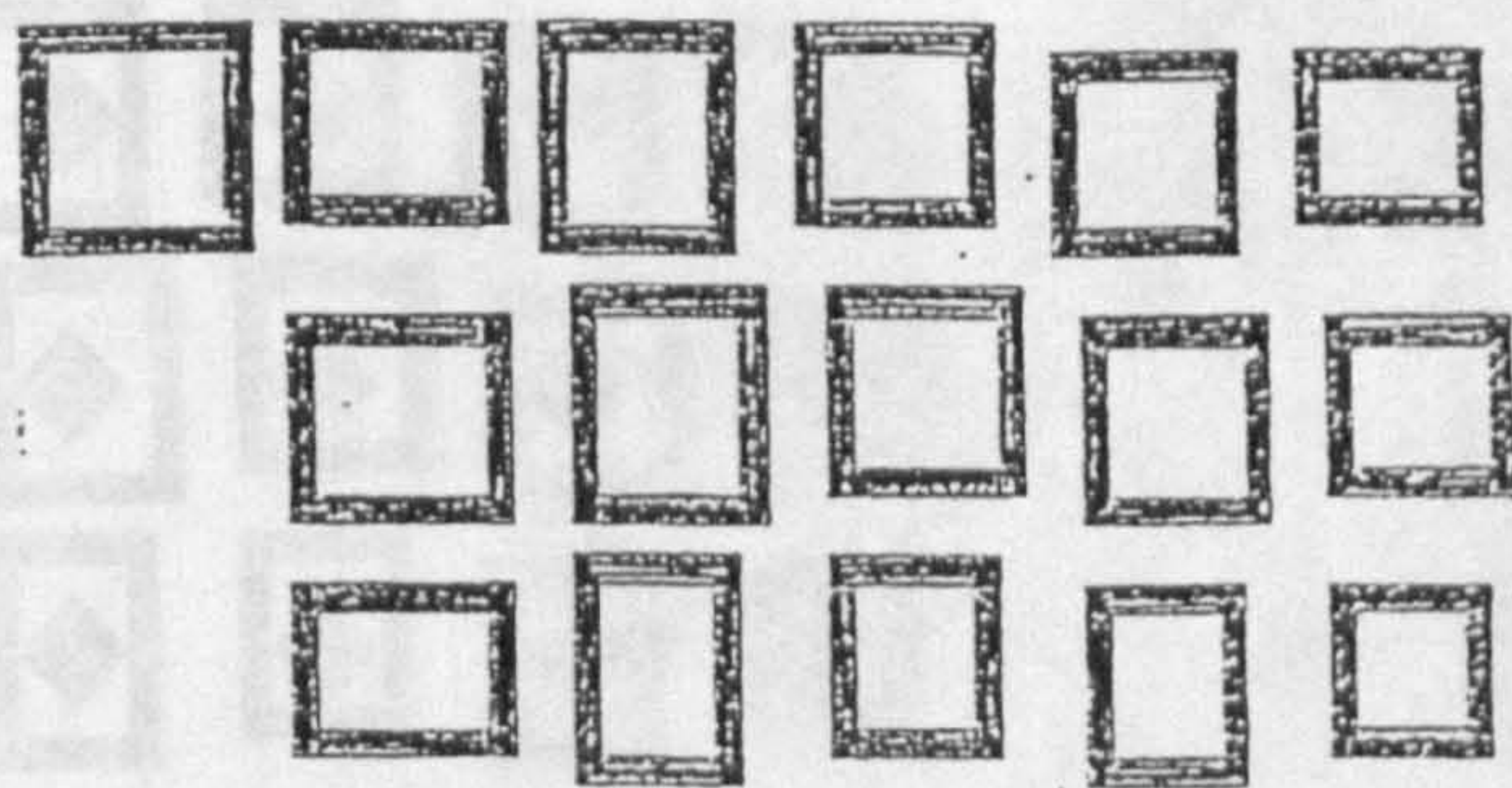
Then, to all the above schemes a yard was provided to establish the villa concept to all of them.

As a result of this (1956) concepts were drawn.

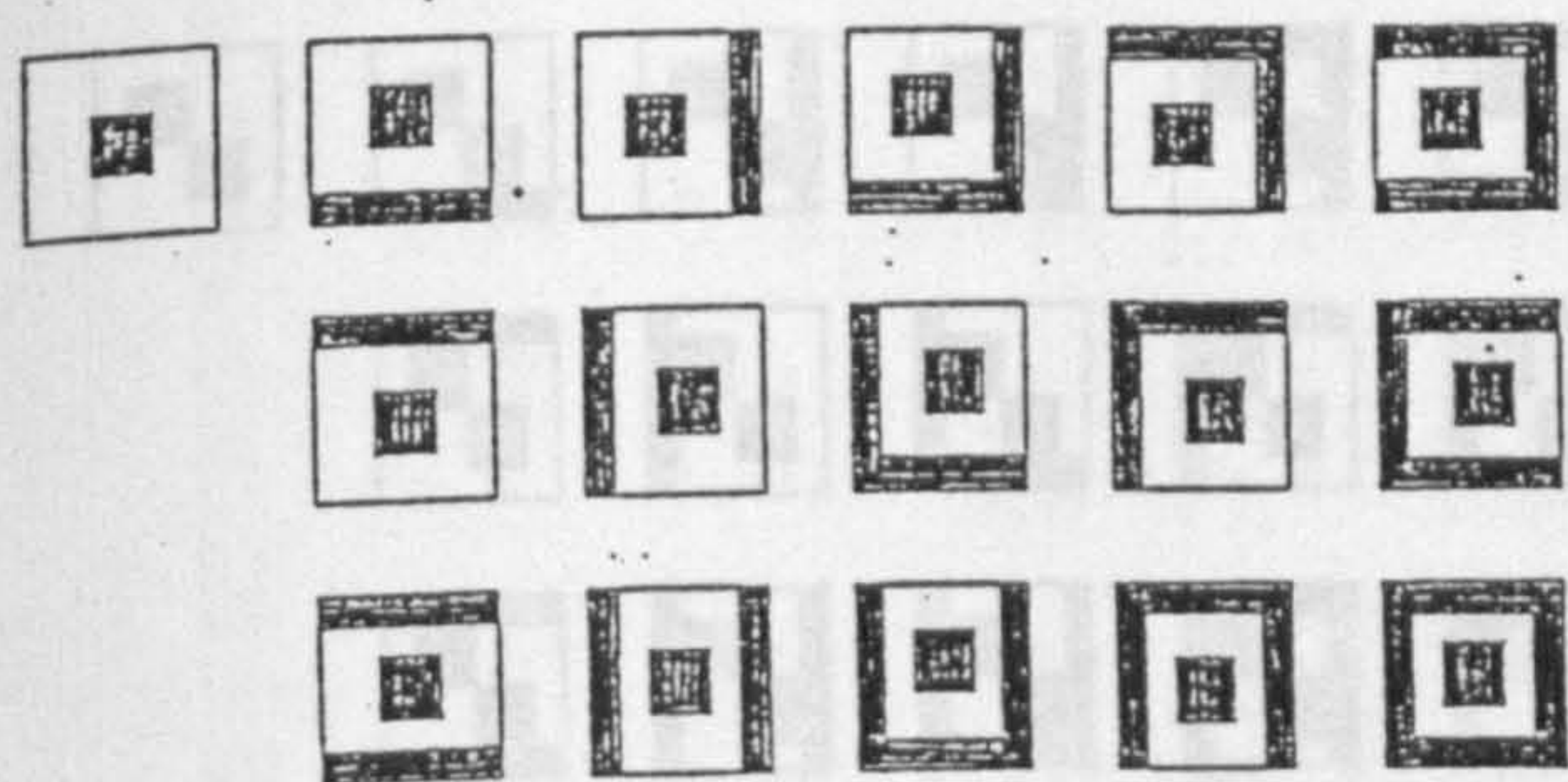
Note: In each square lot, the building structure is the white part and the open yards is the shaded park (dark).



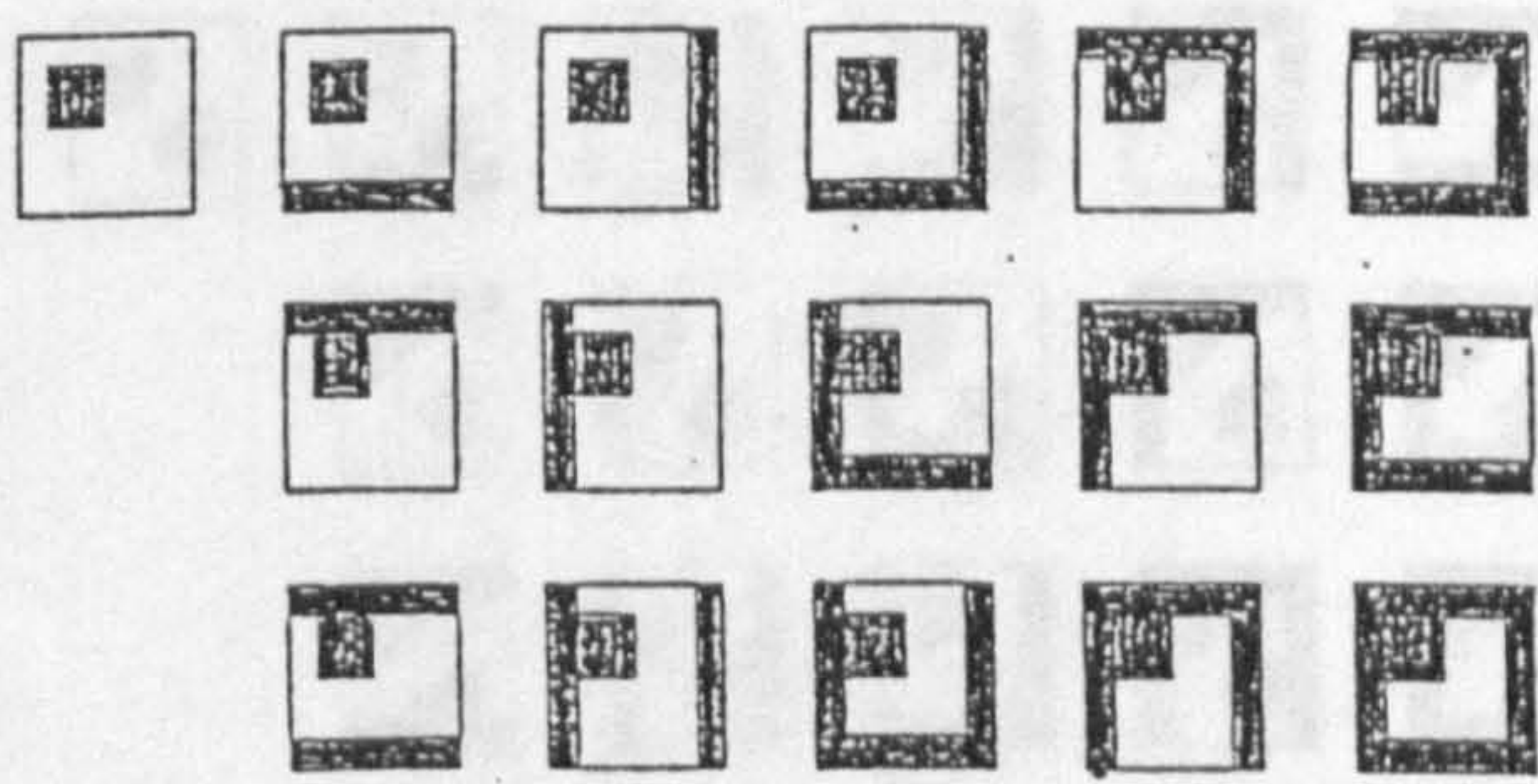
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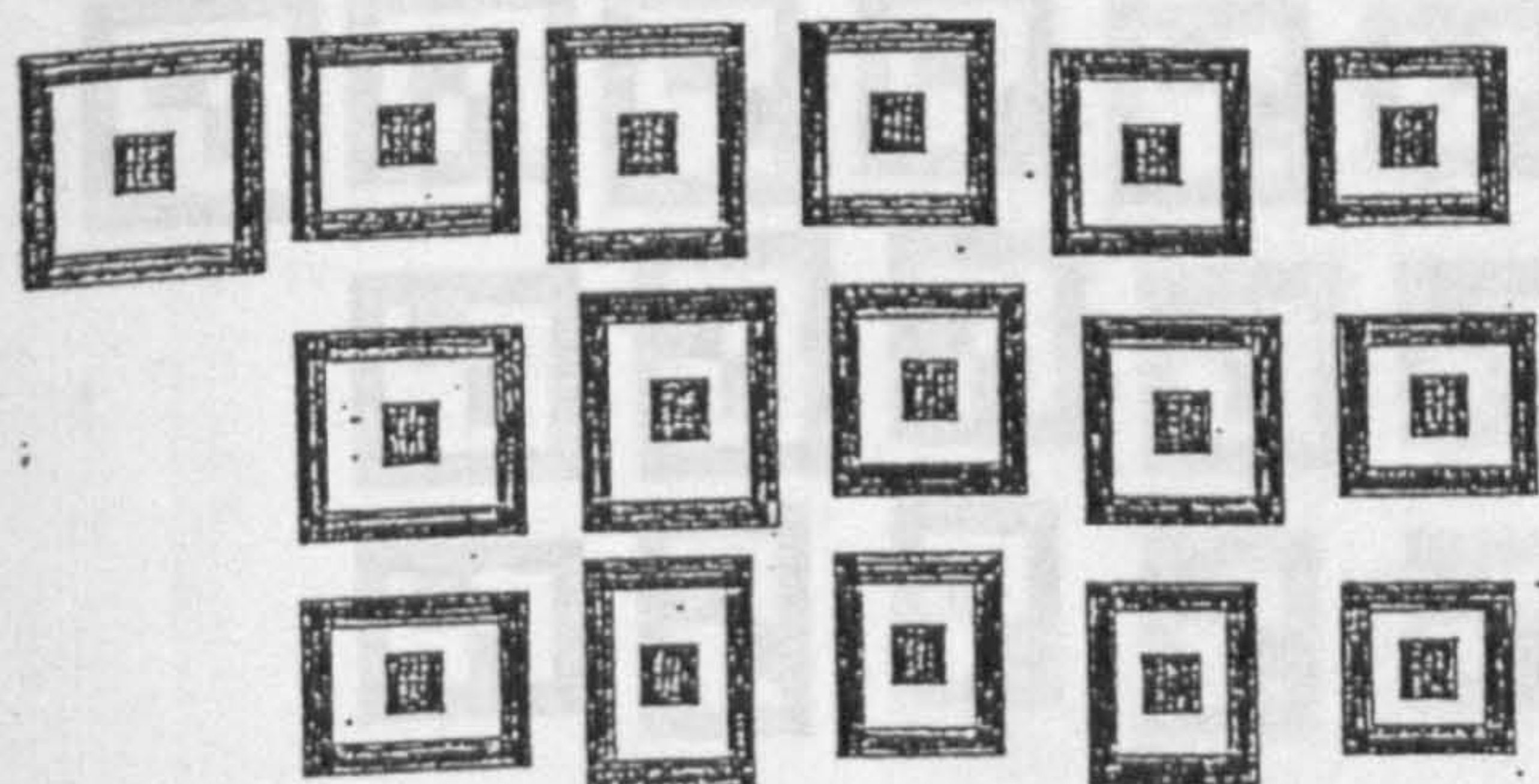
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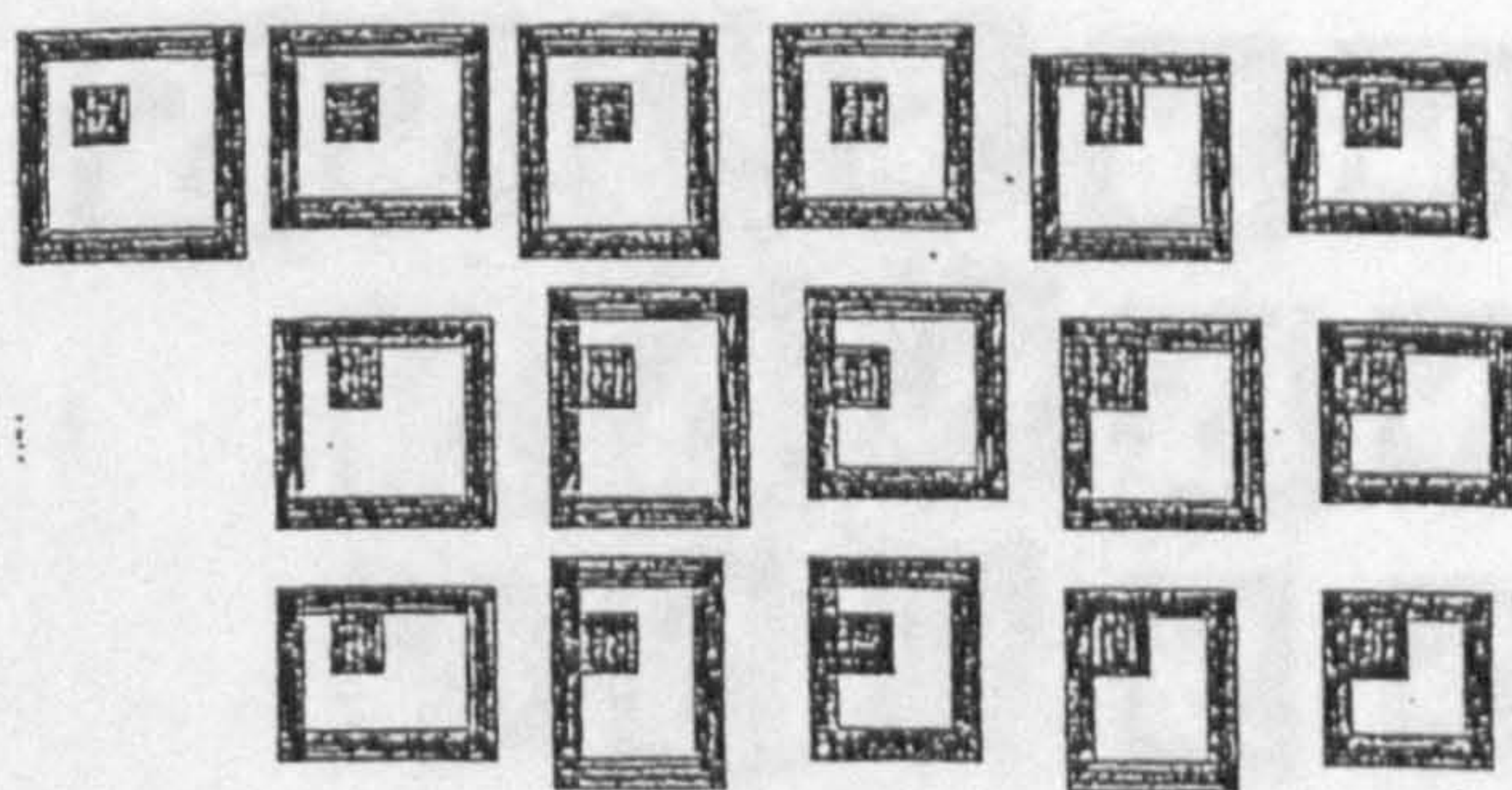
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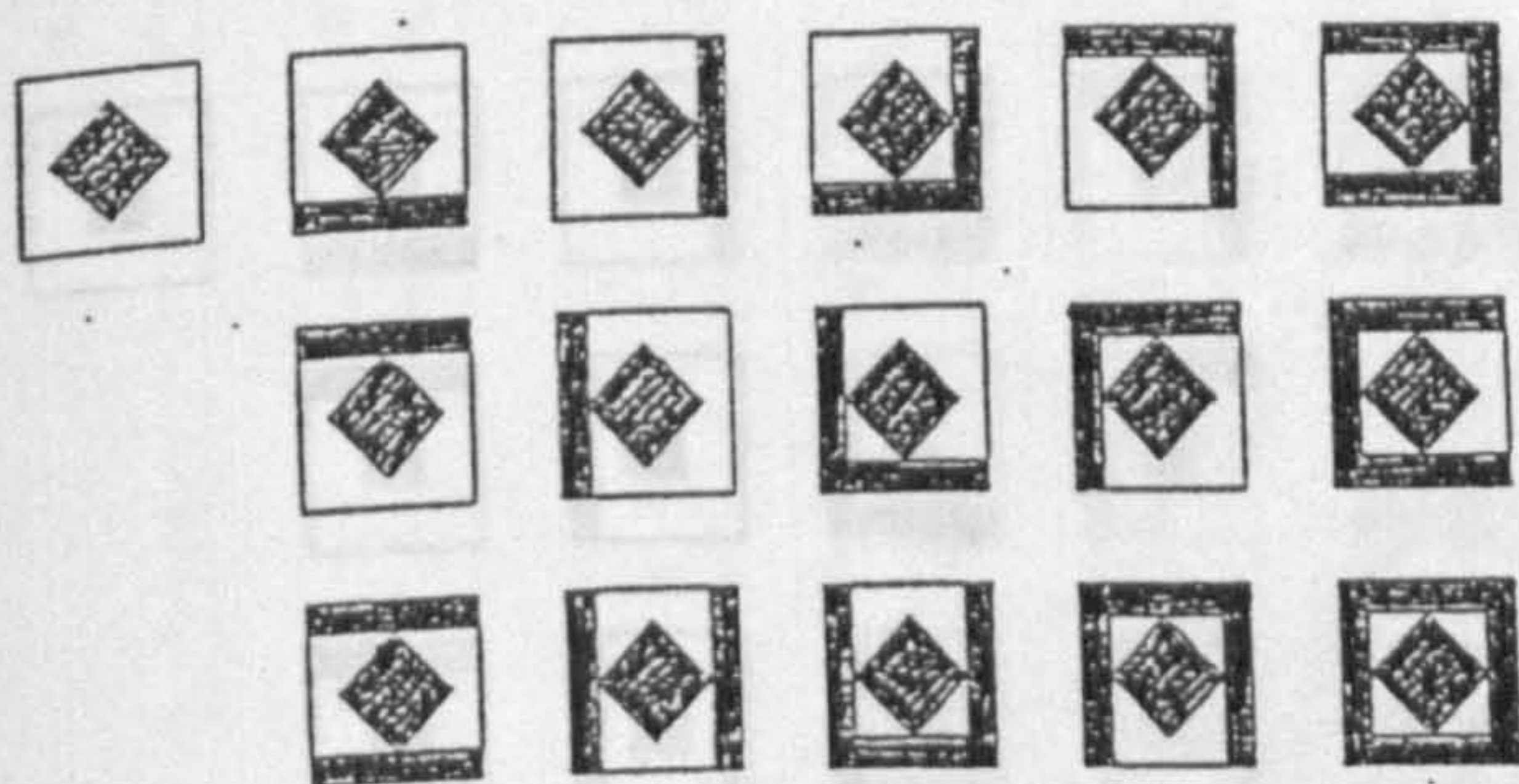
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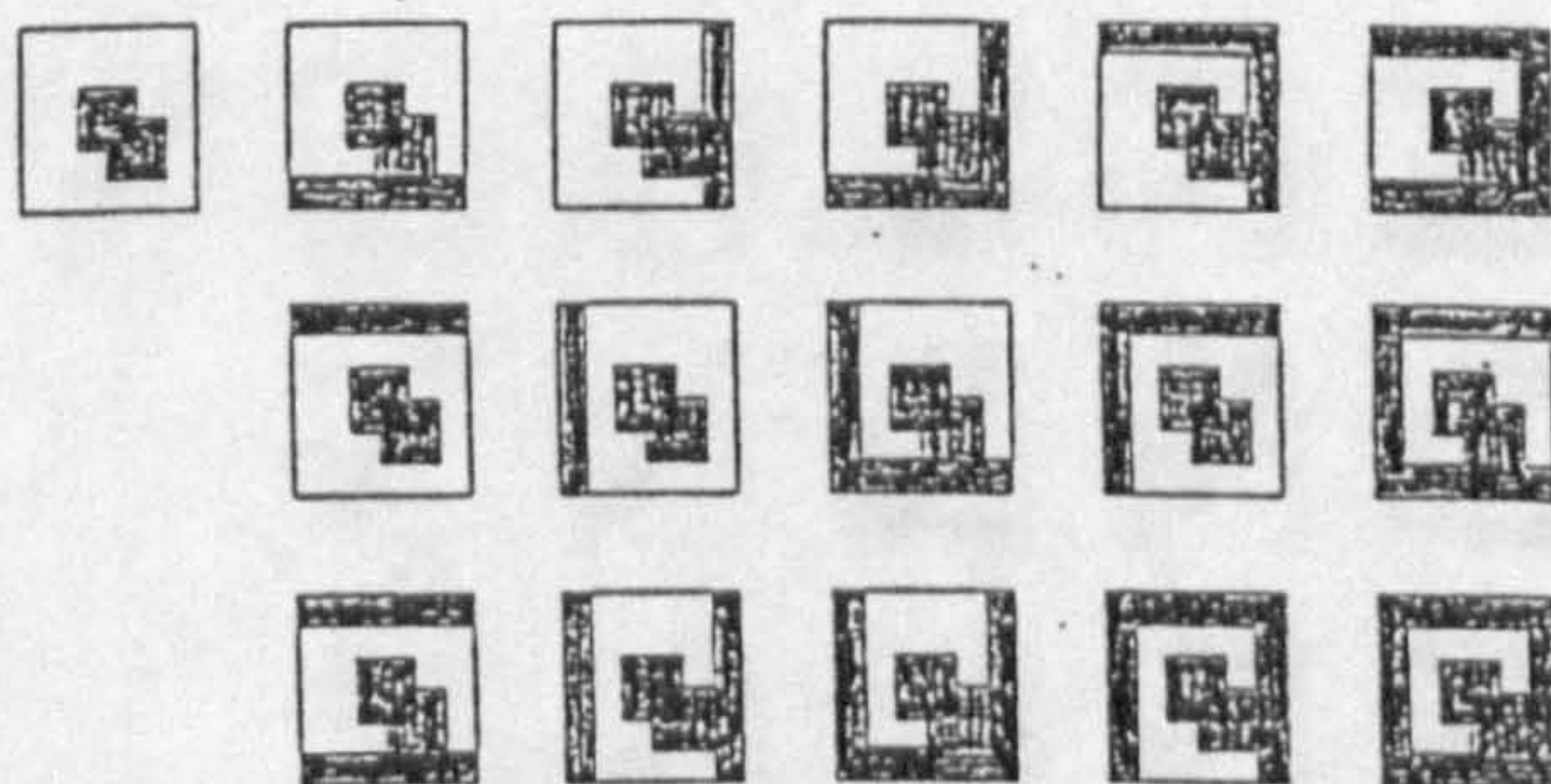
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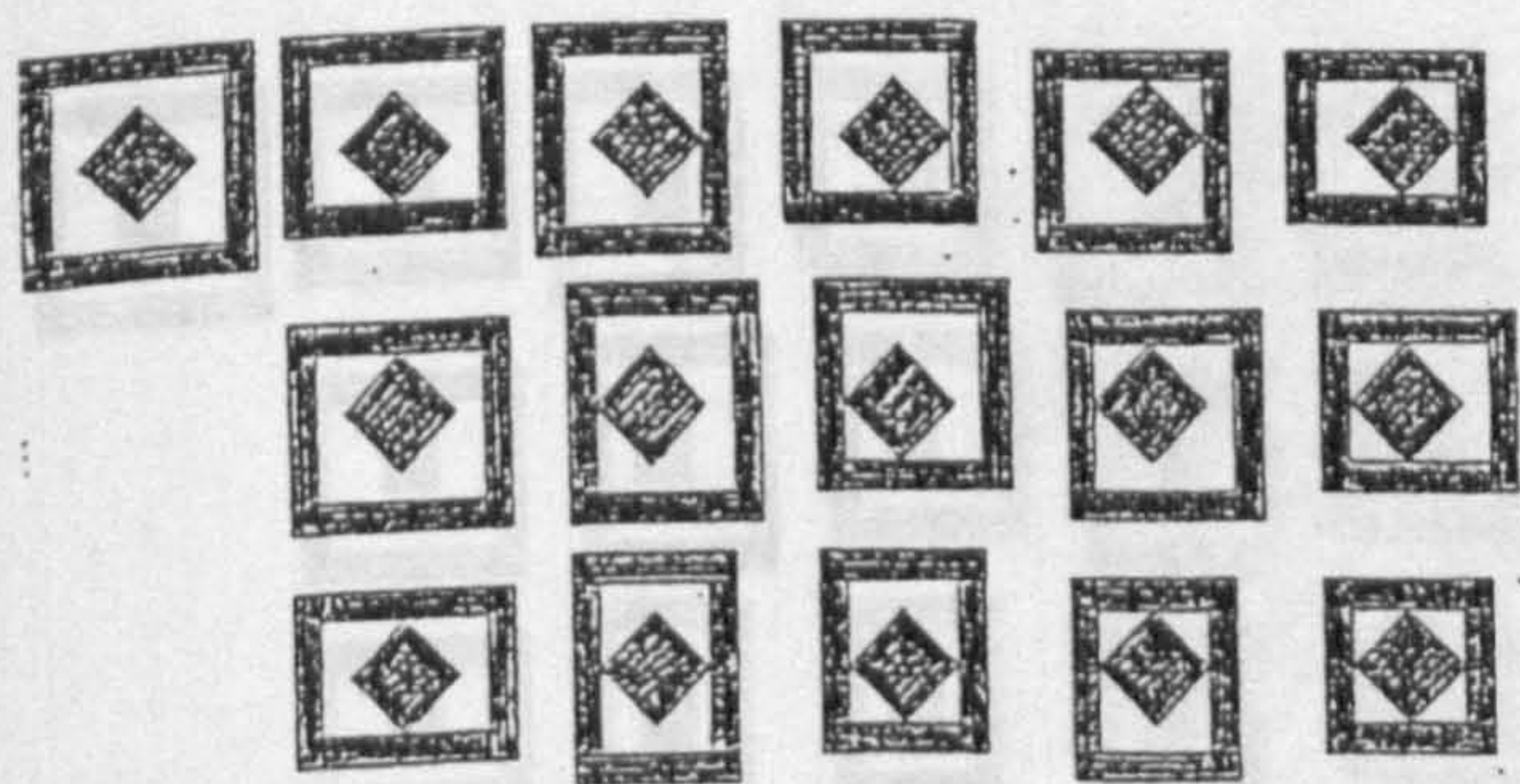
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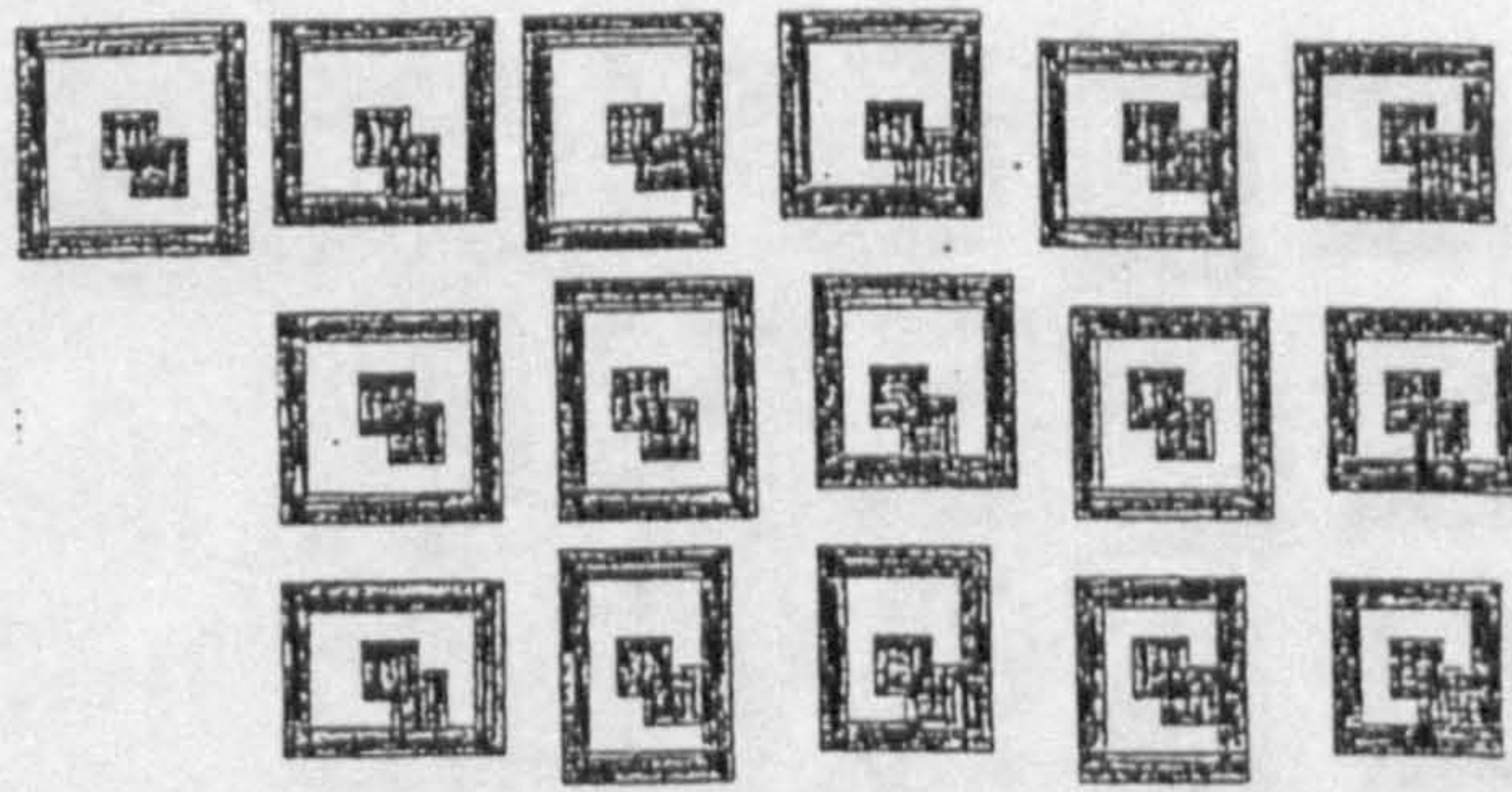
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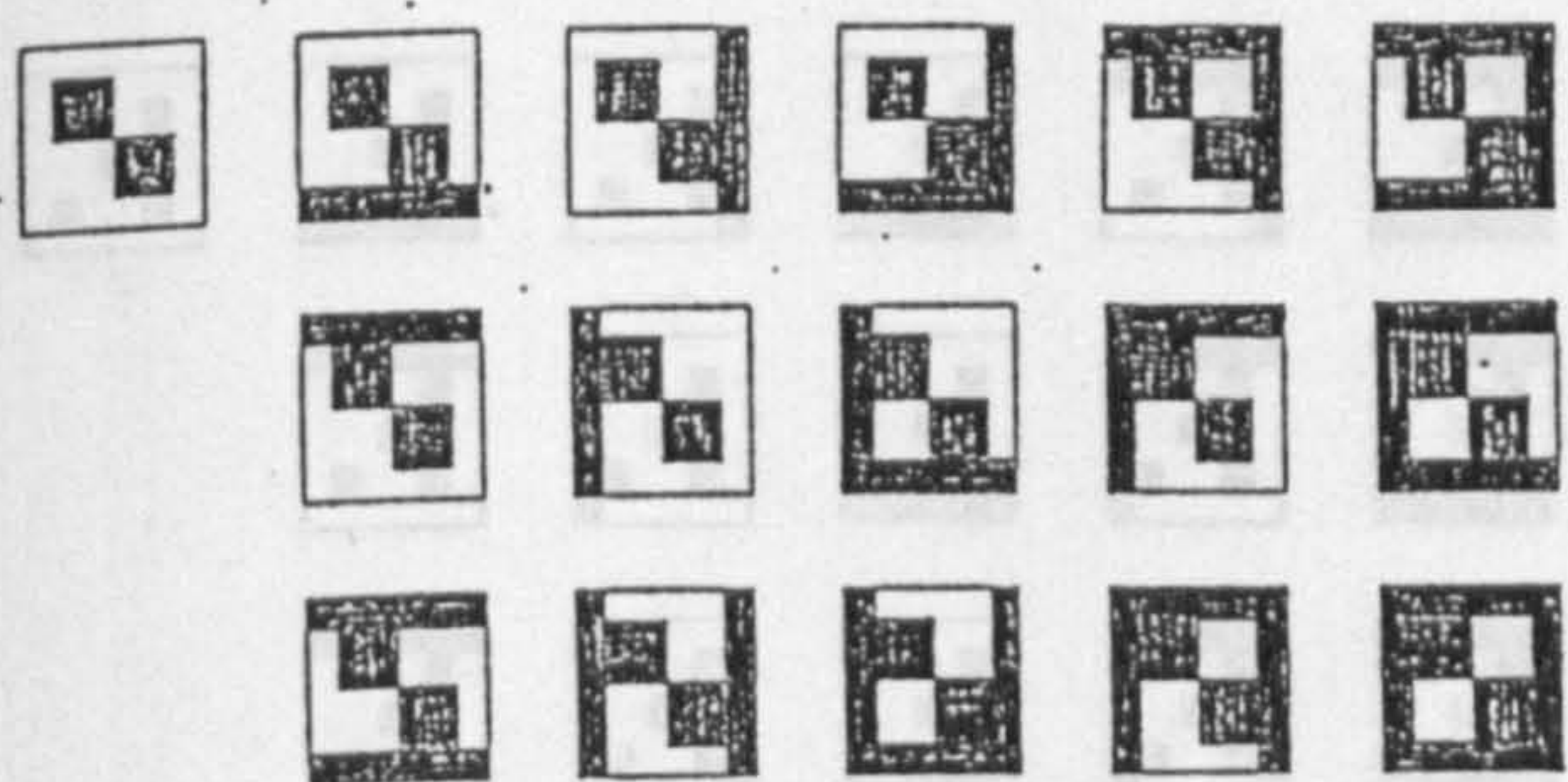
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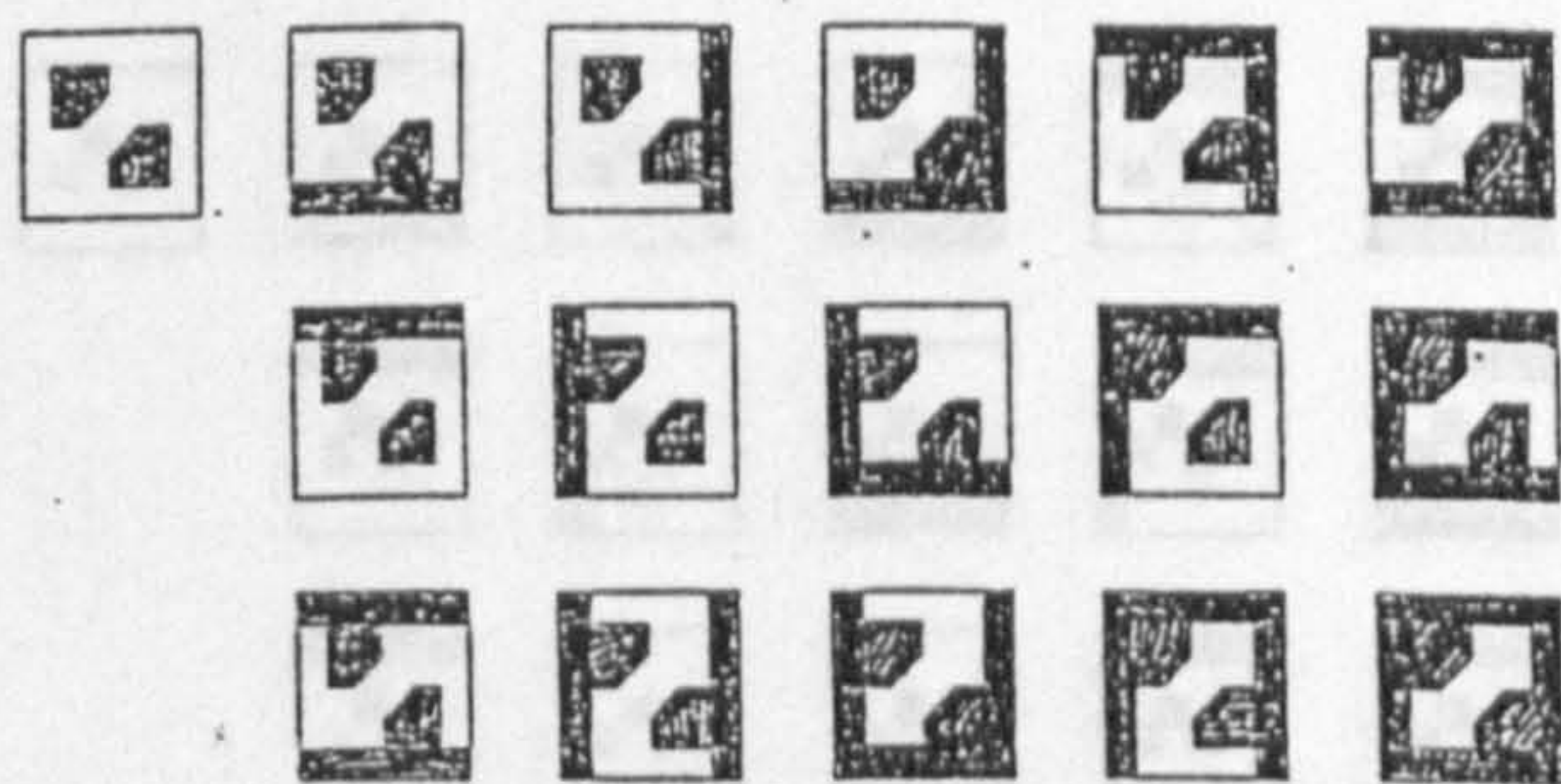
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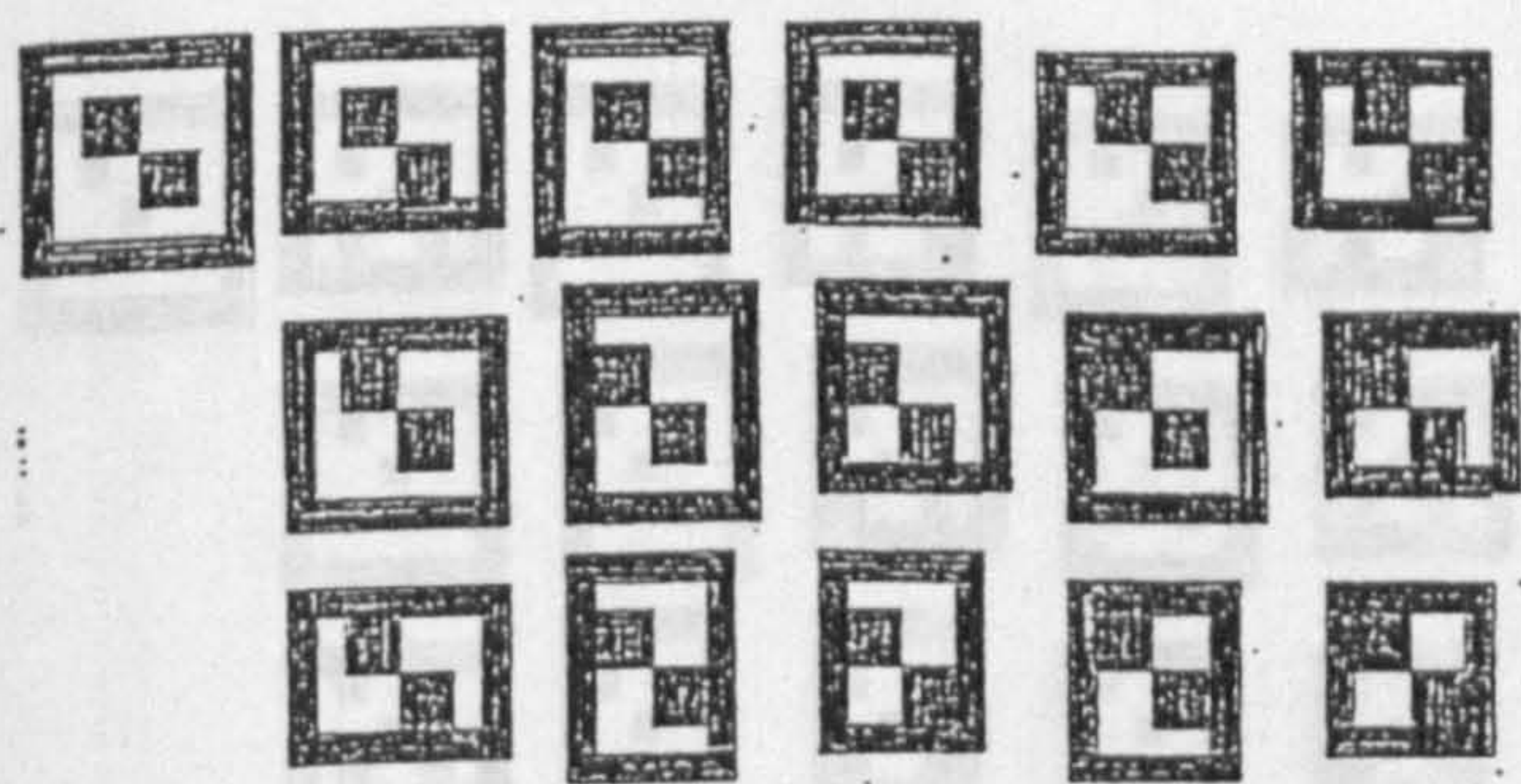
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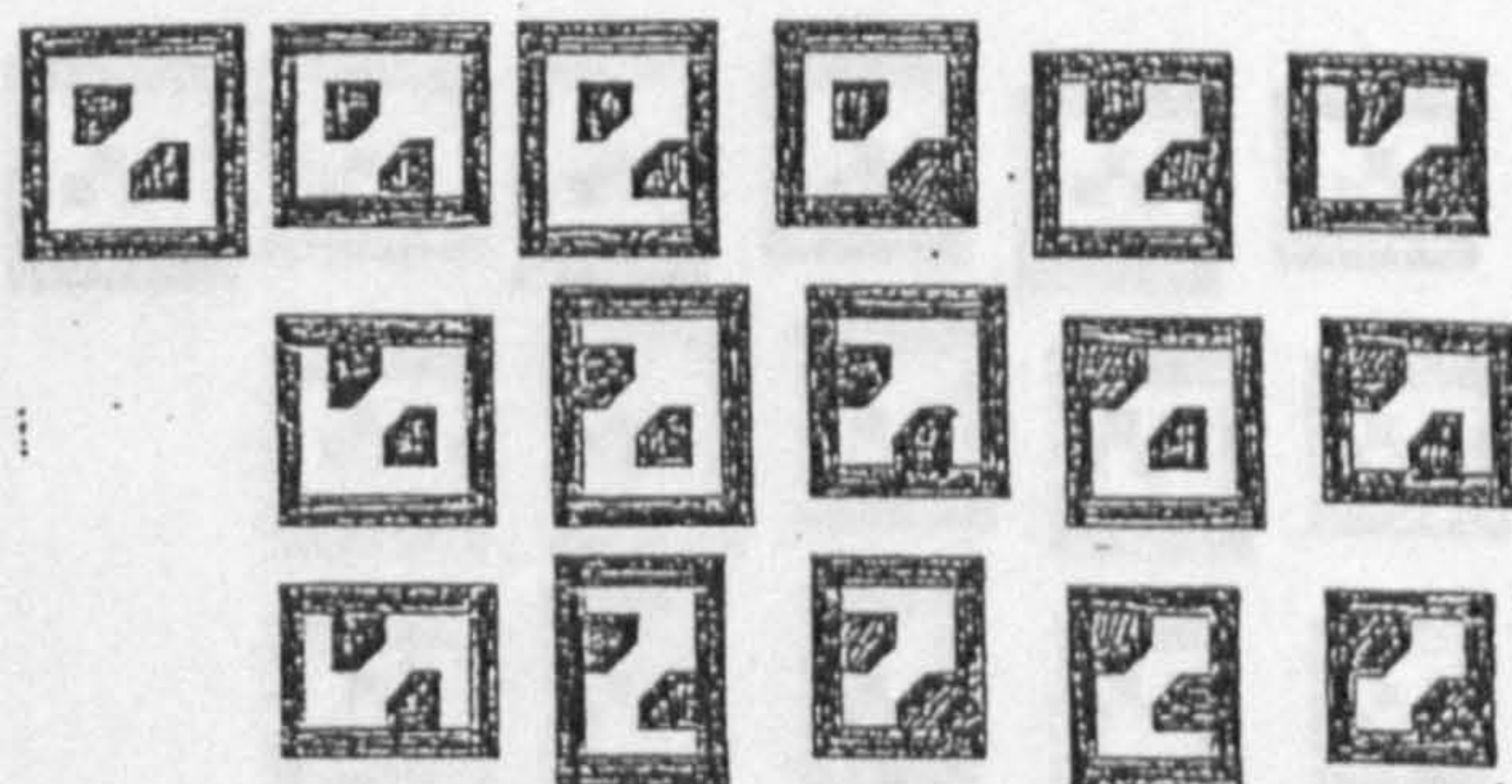
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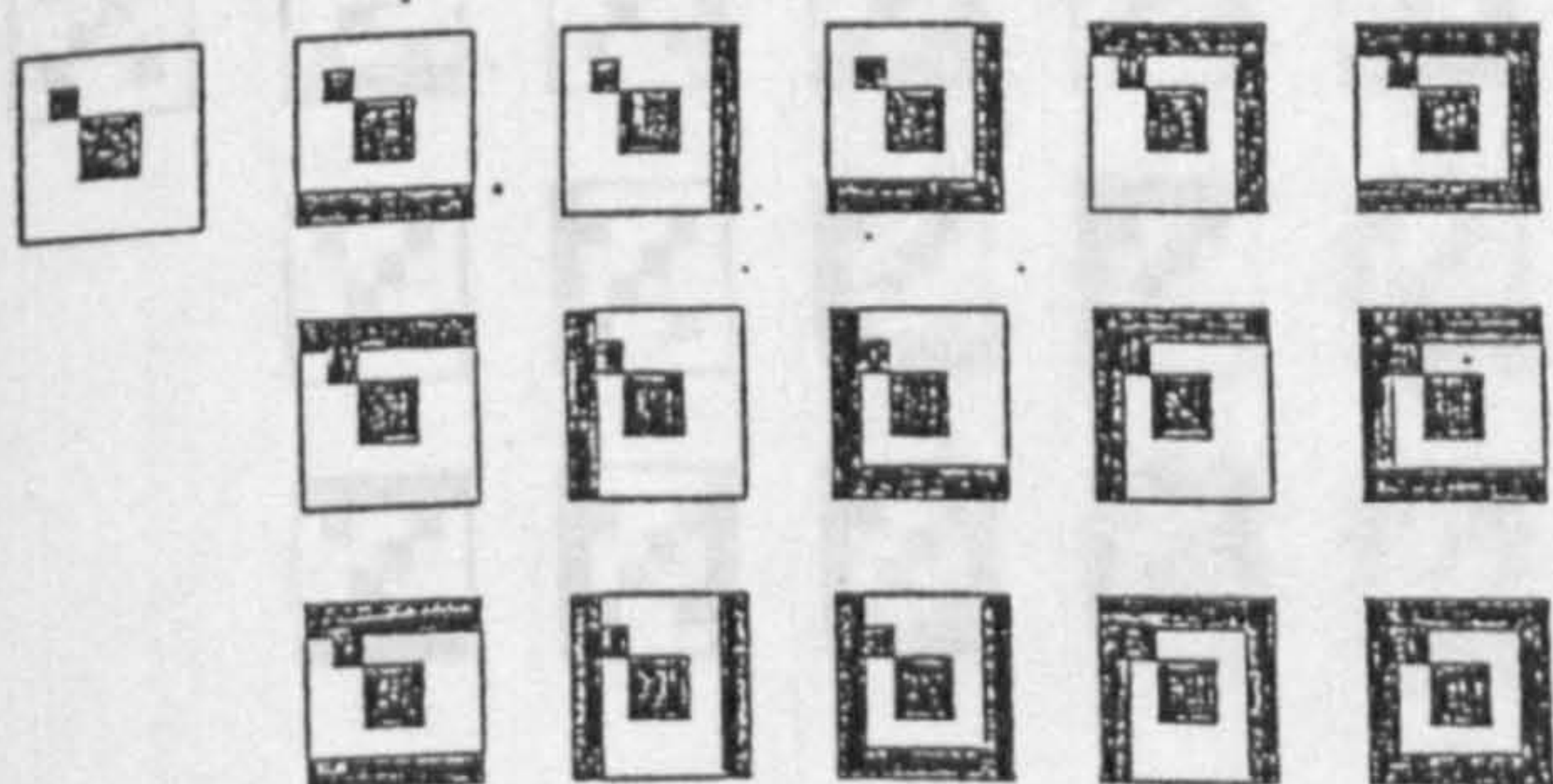
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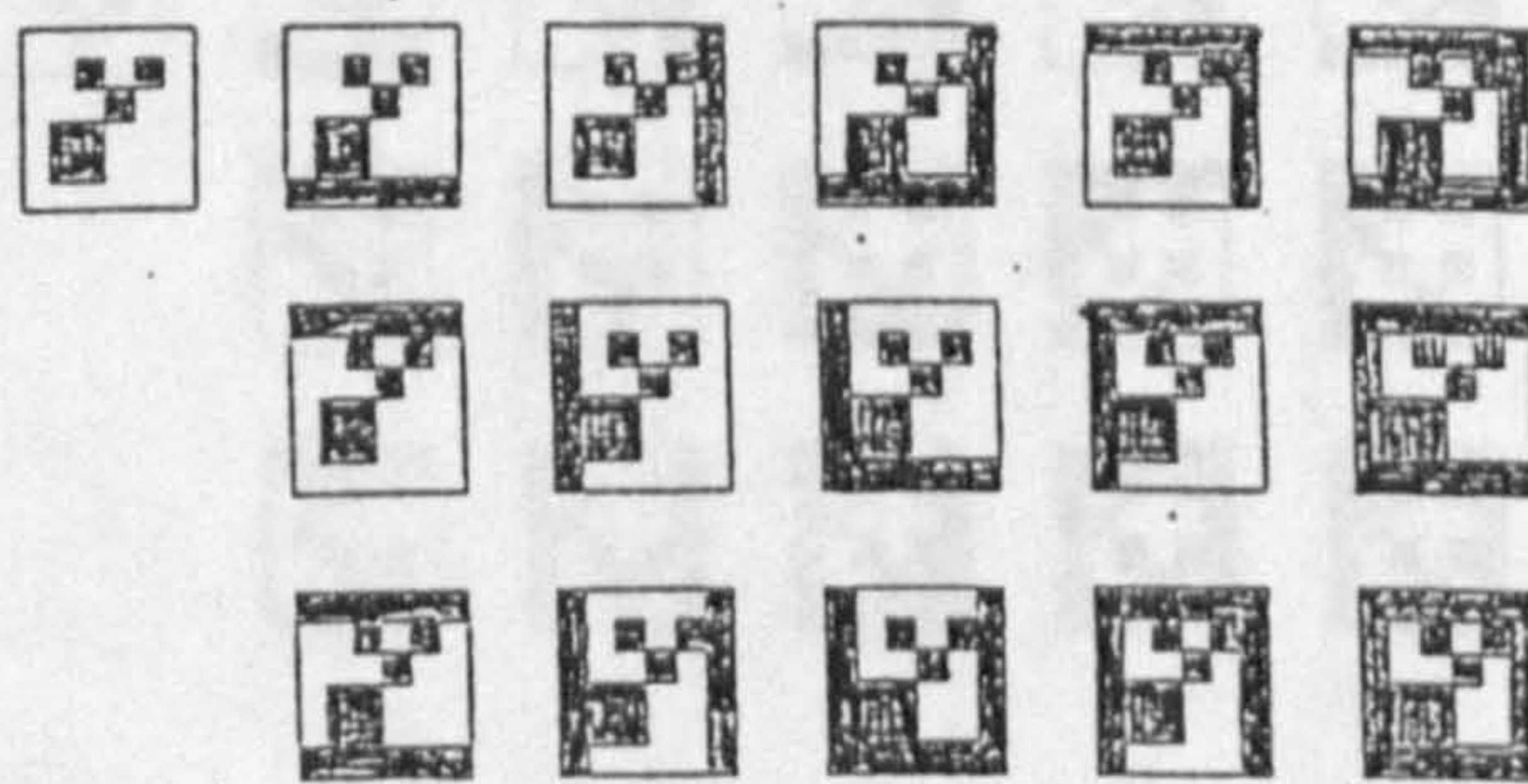
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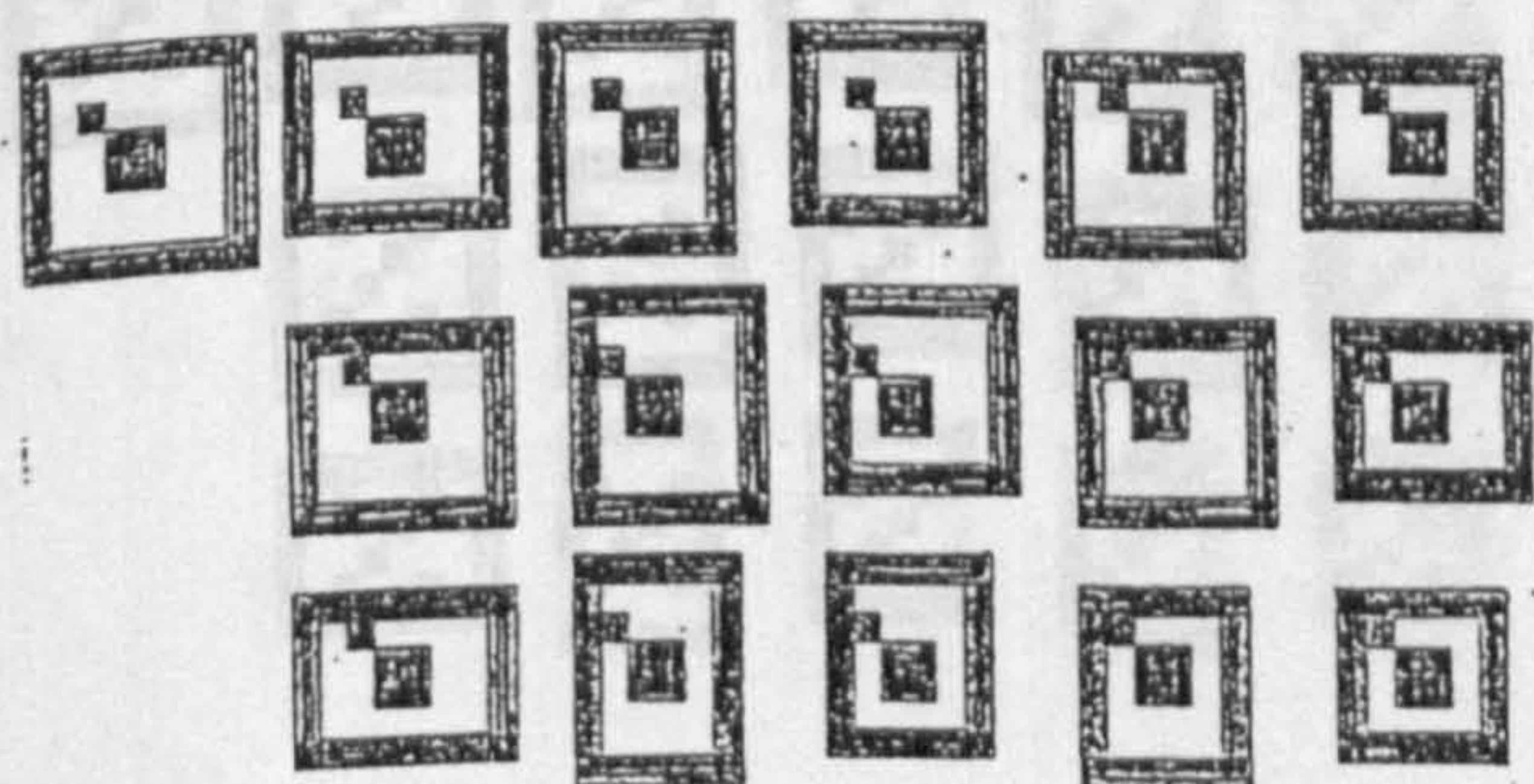
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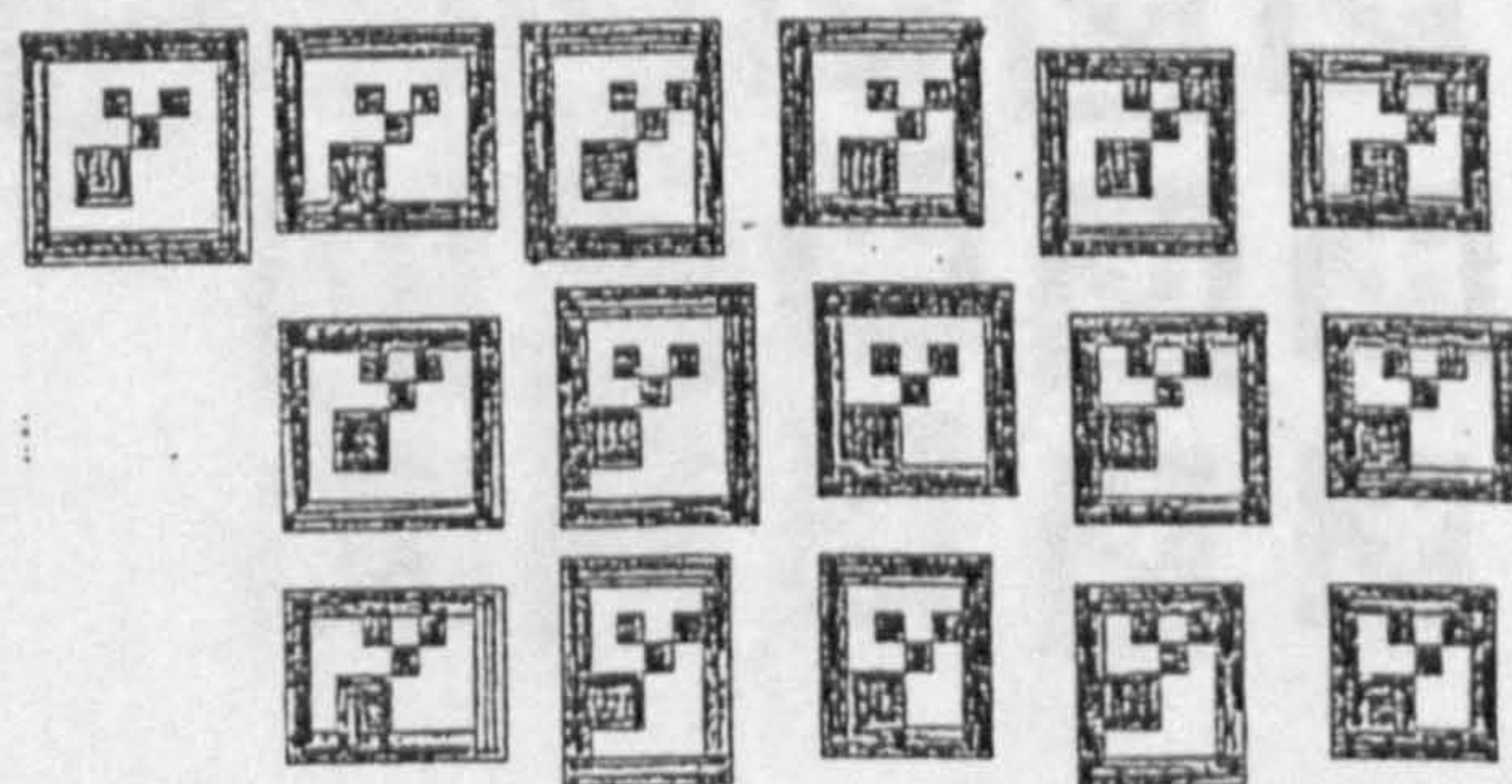
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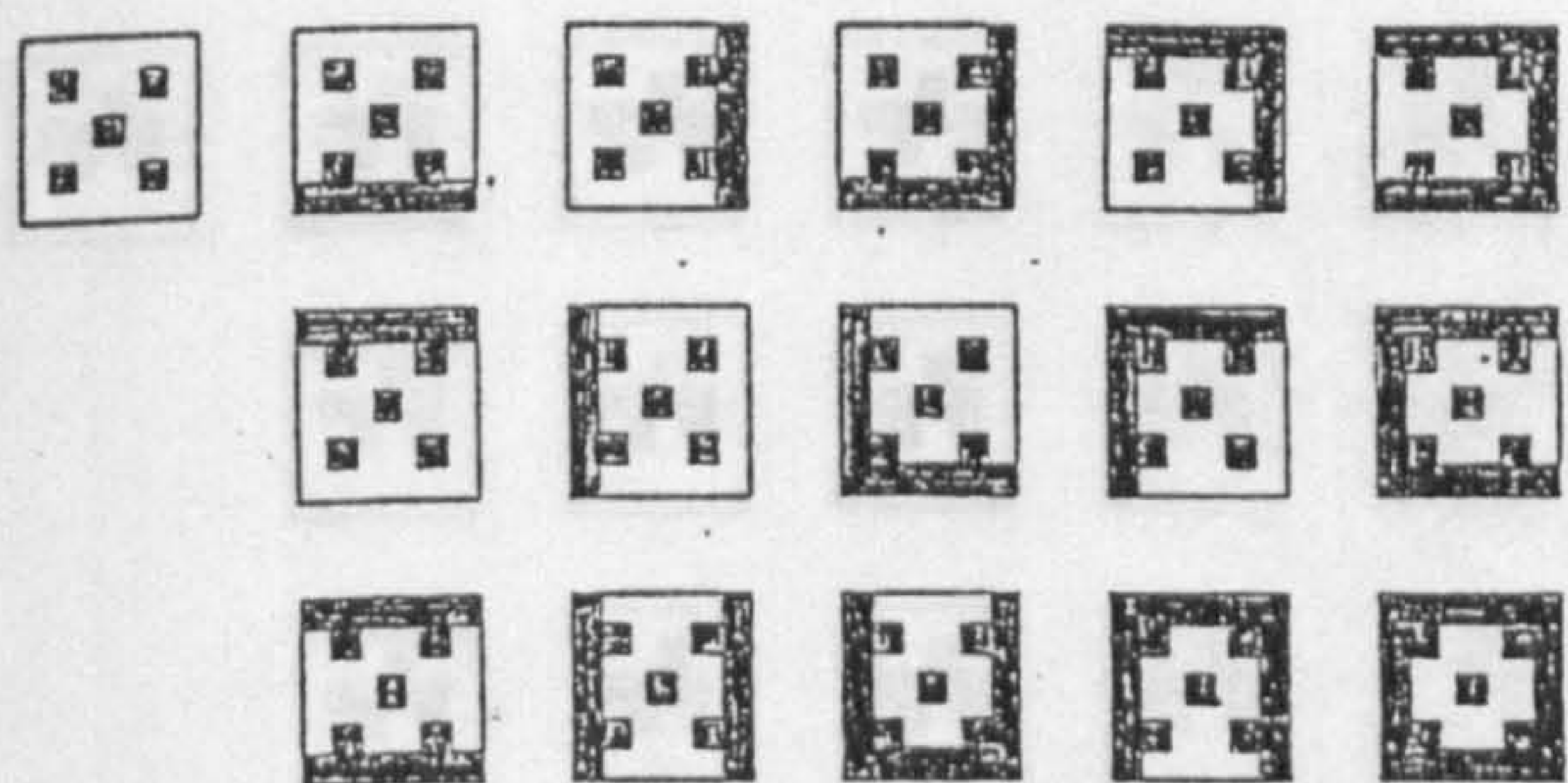
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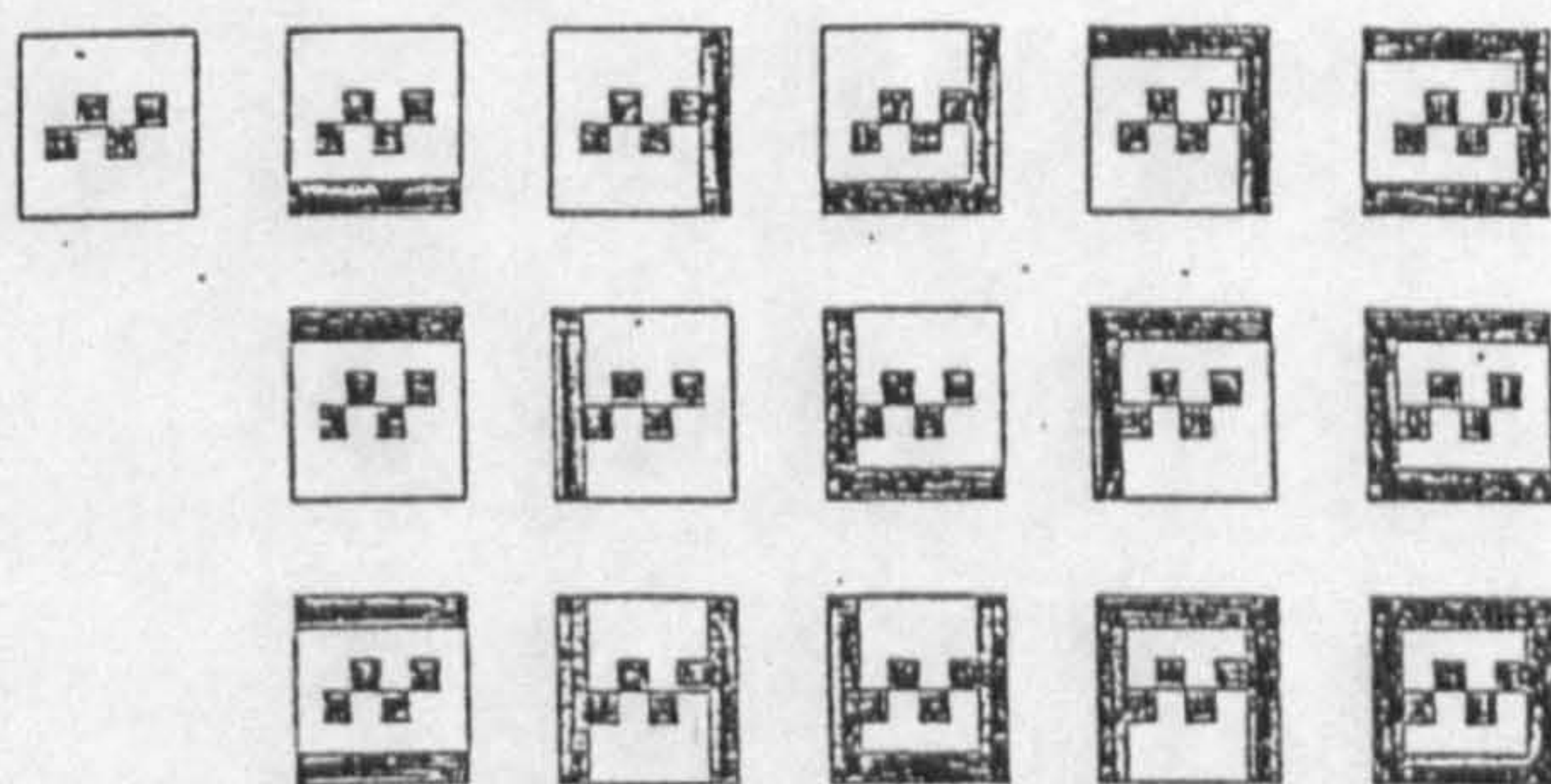
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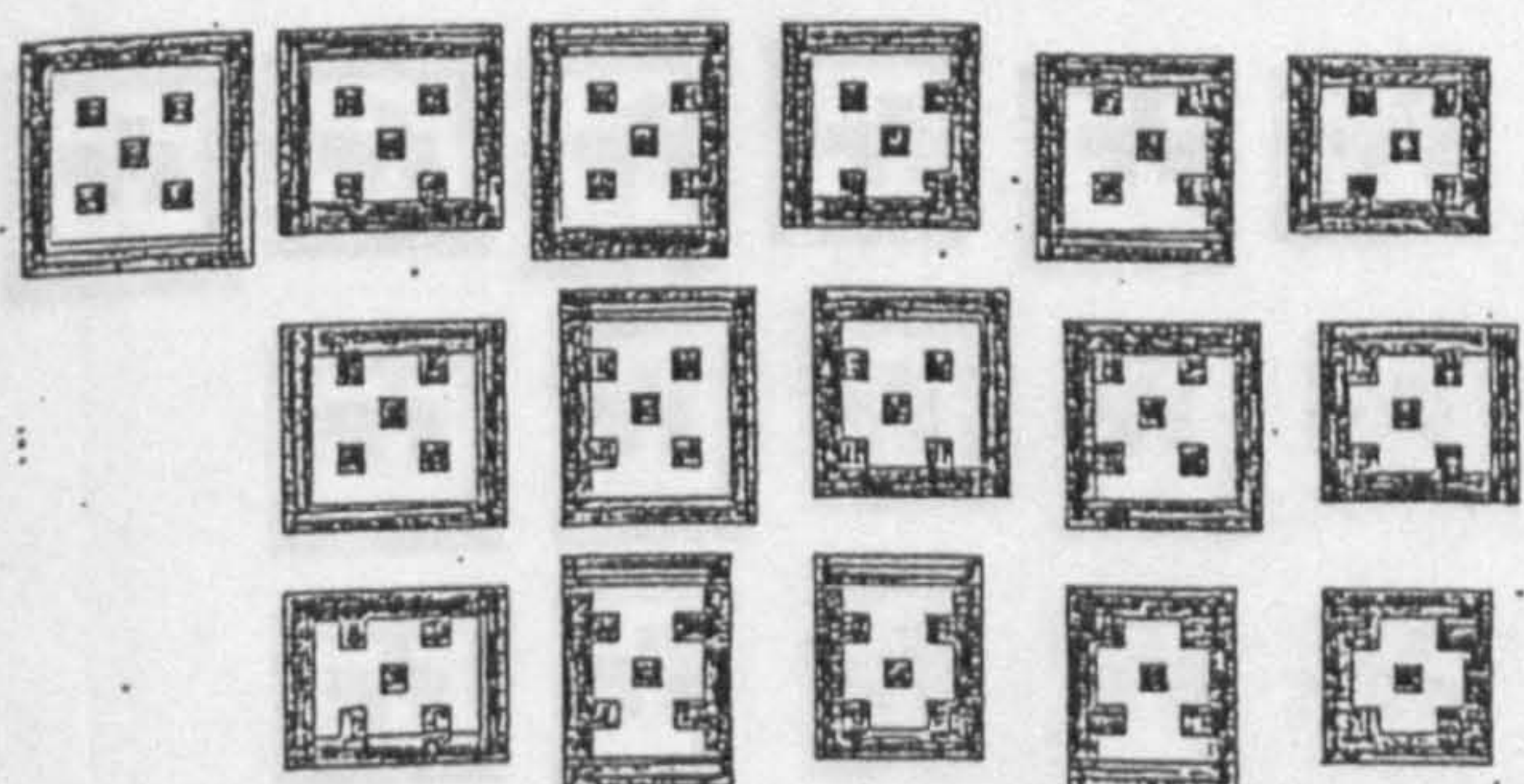
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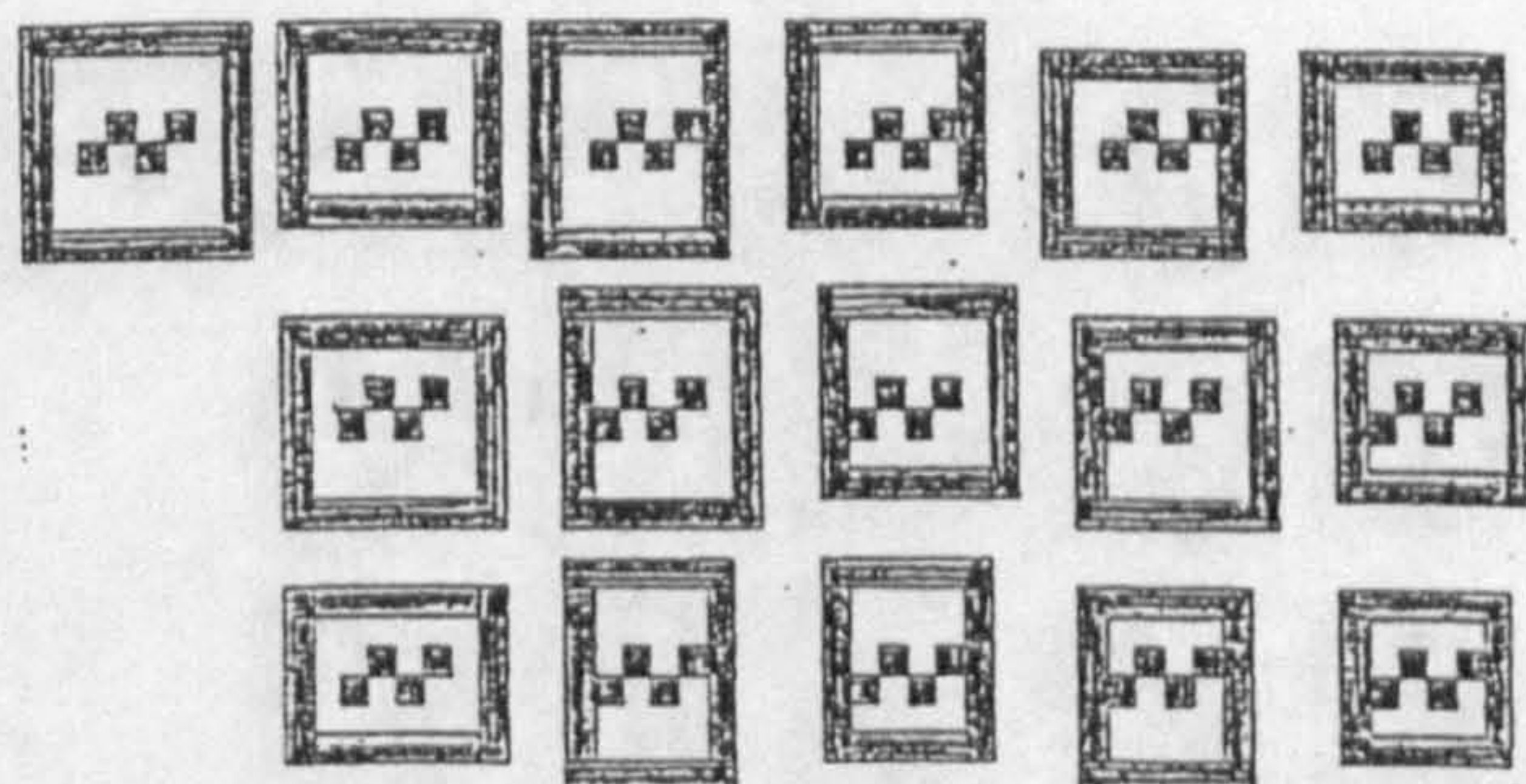
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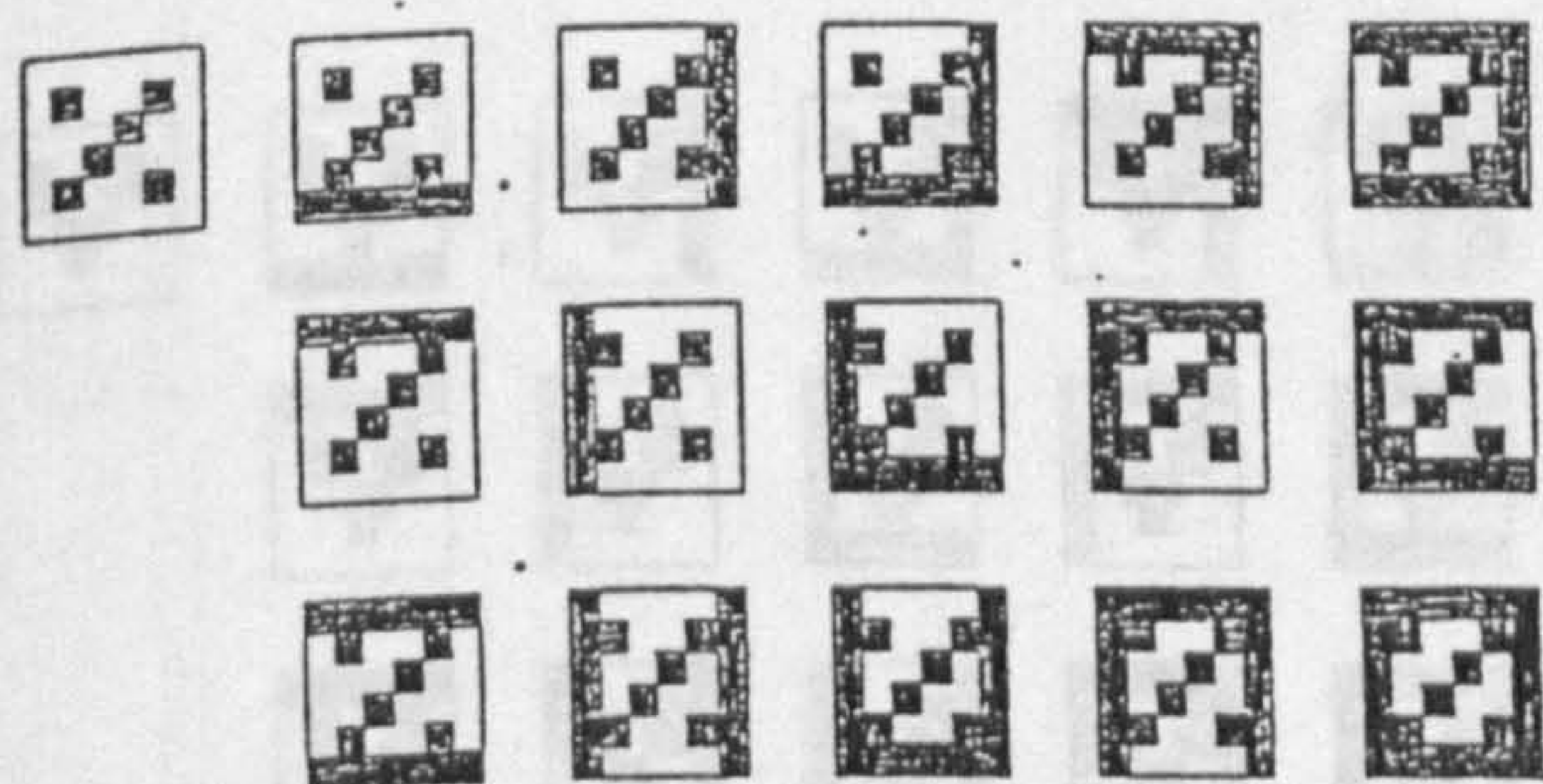
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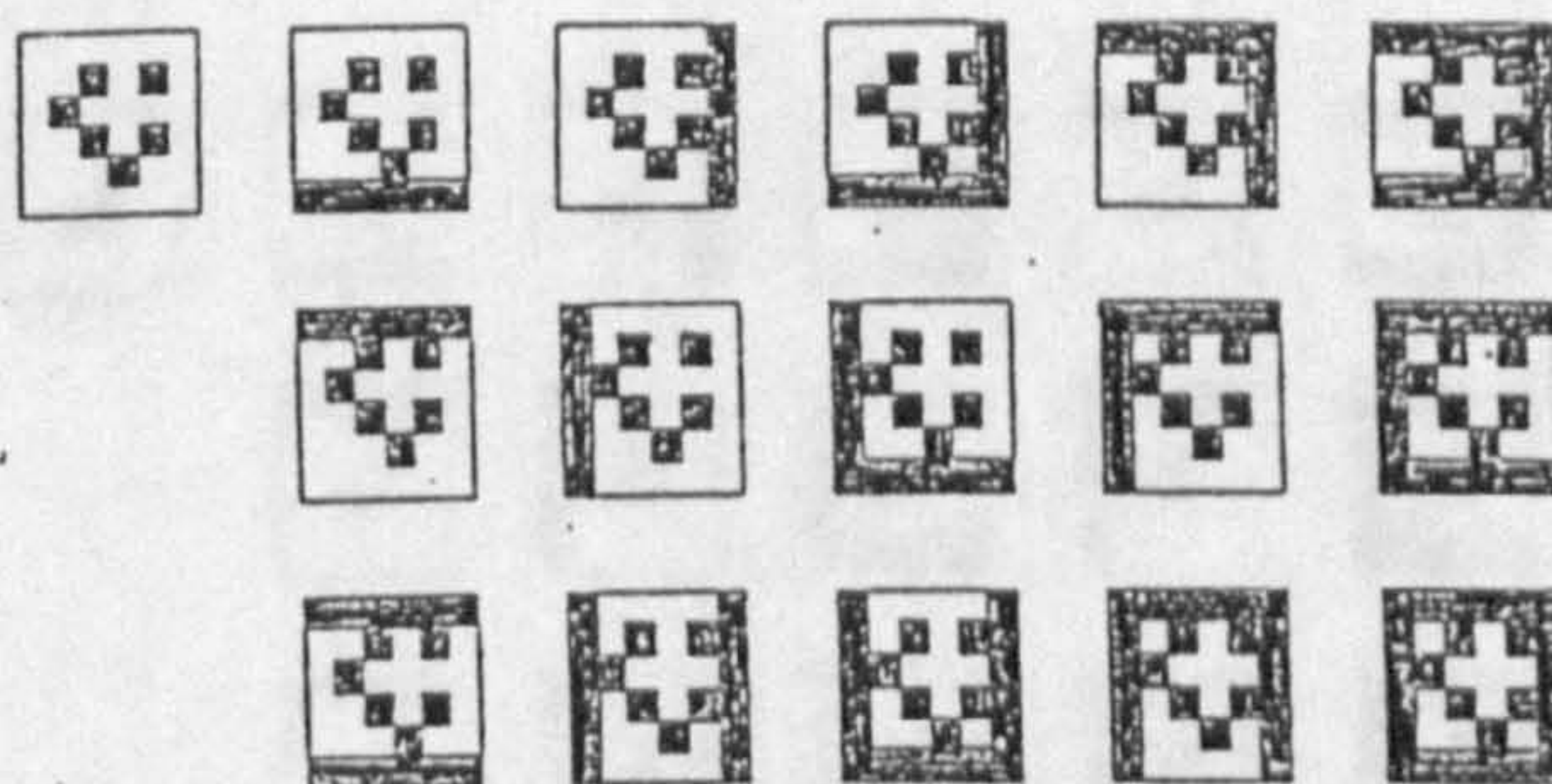
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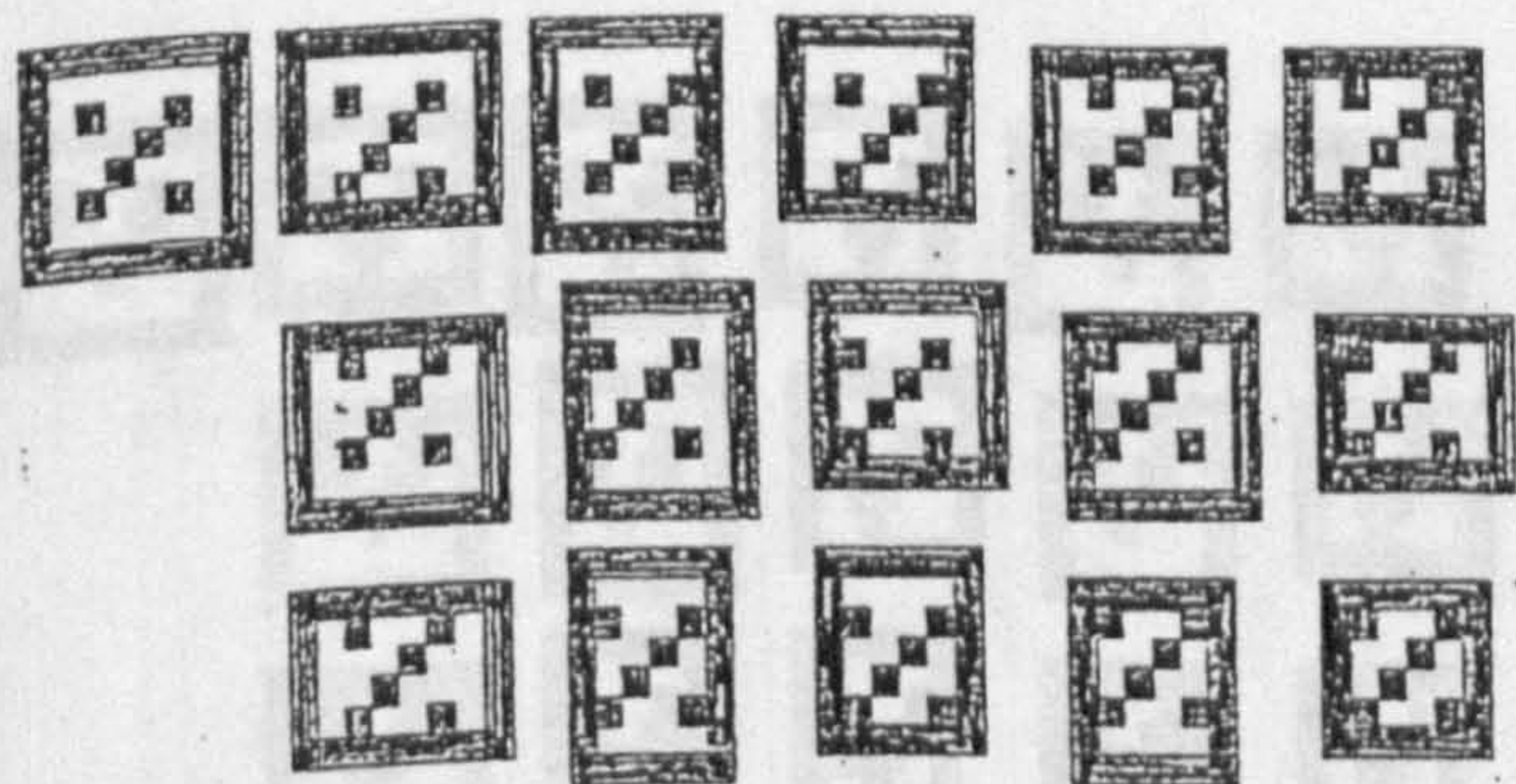
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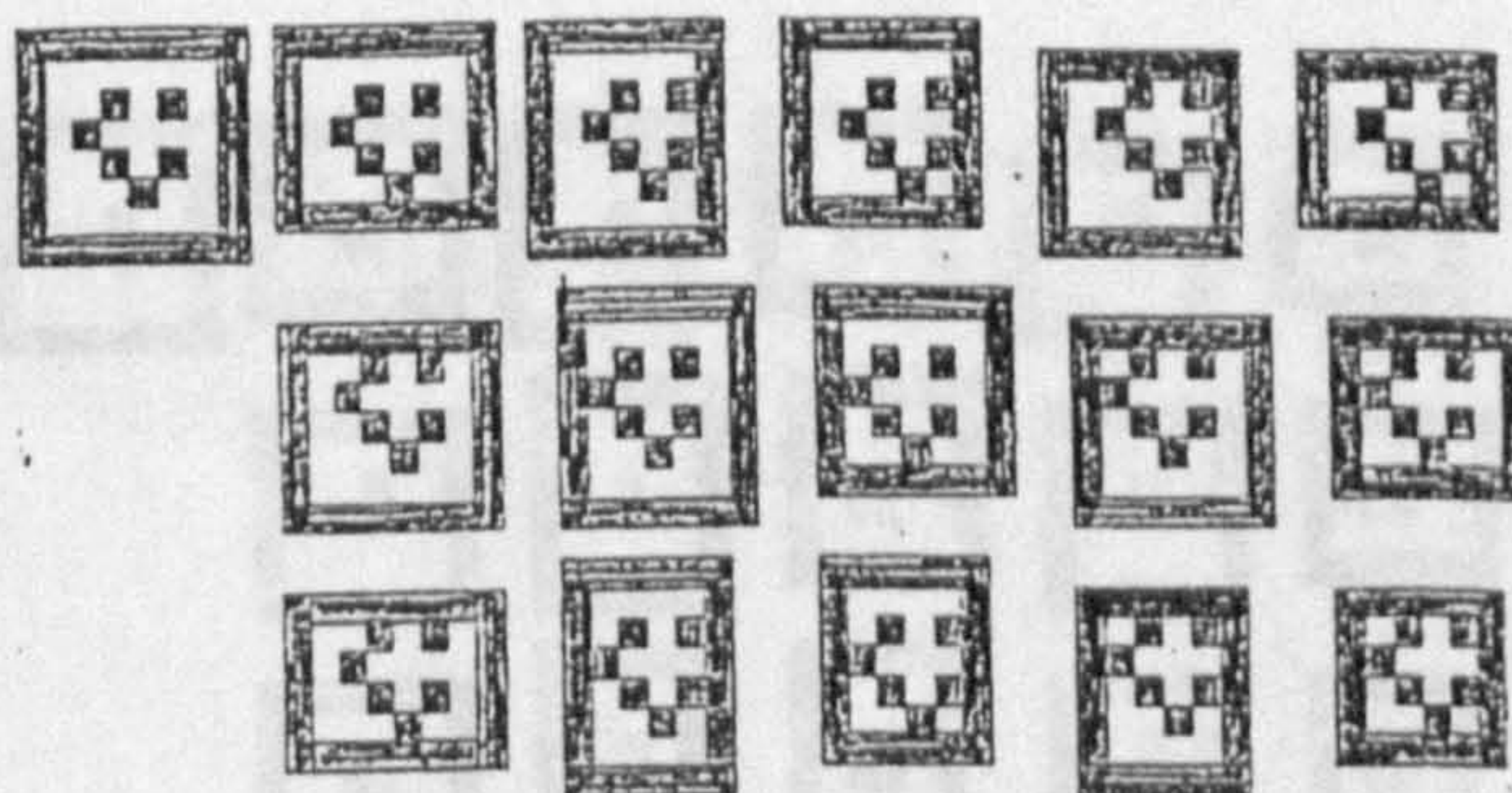
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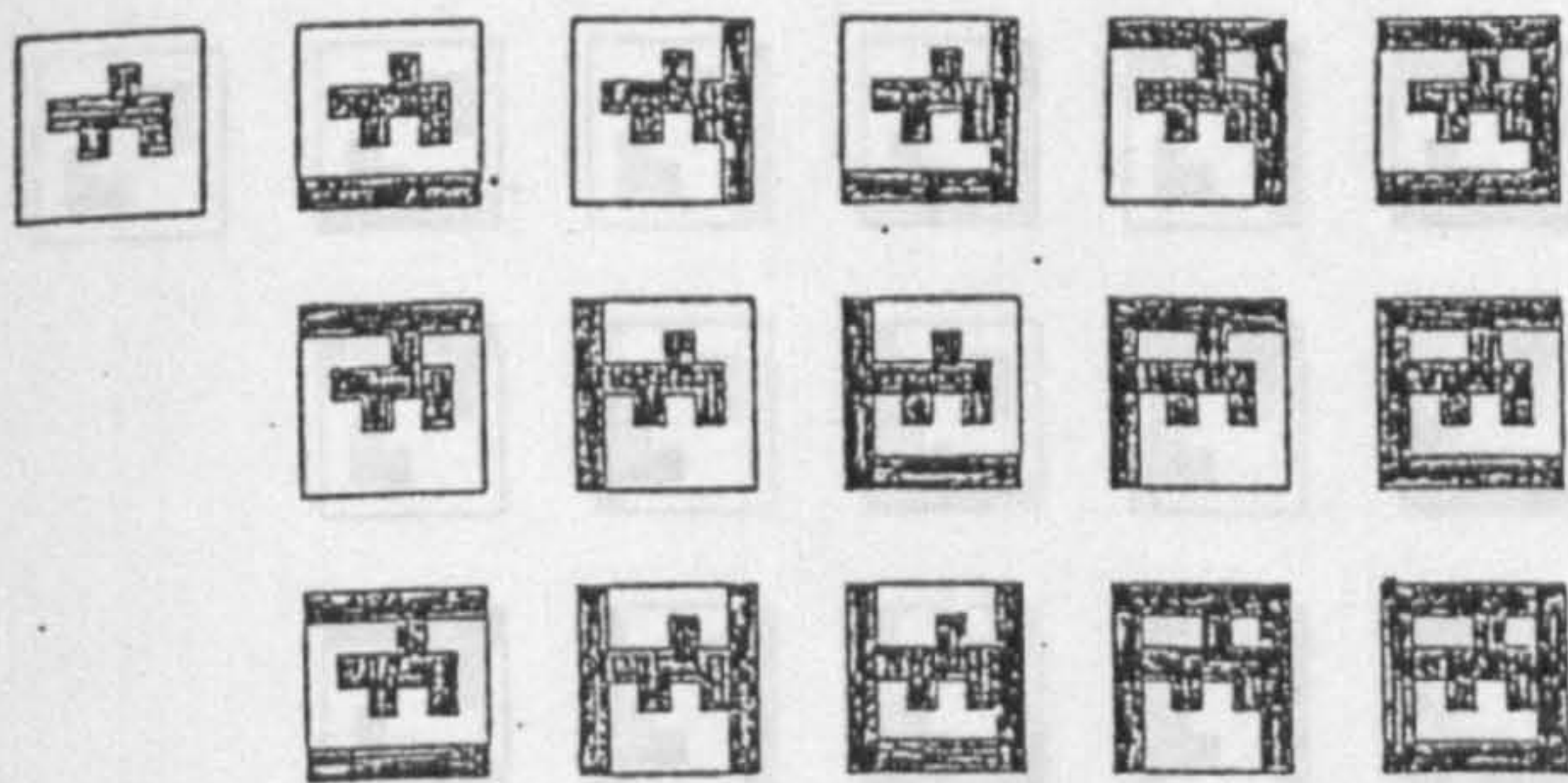
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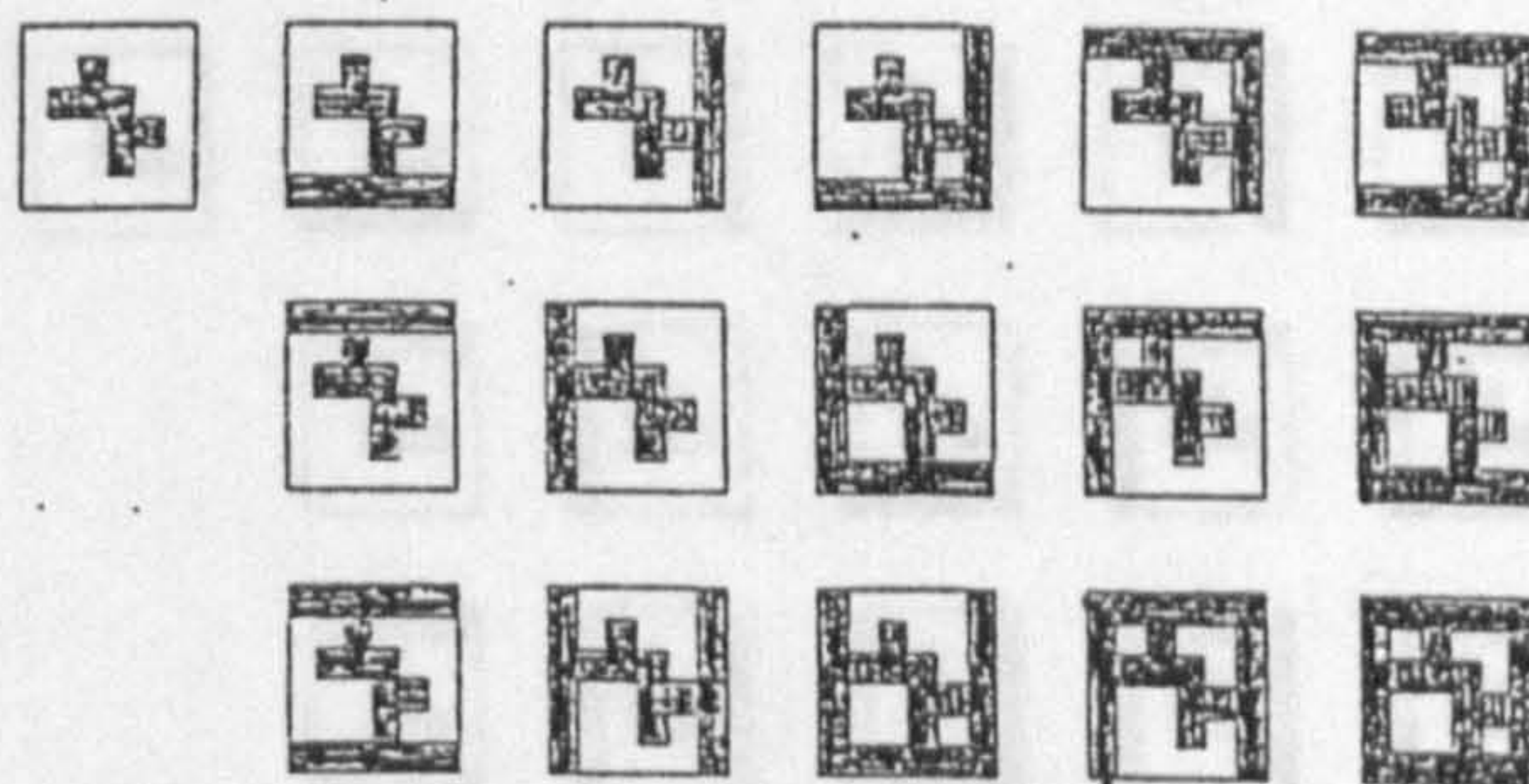
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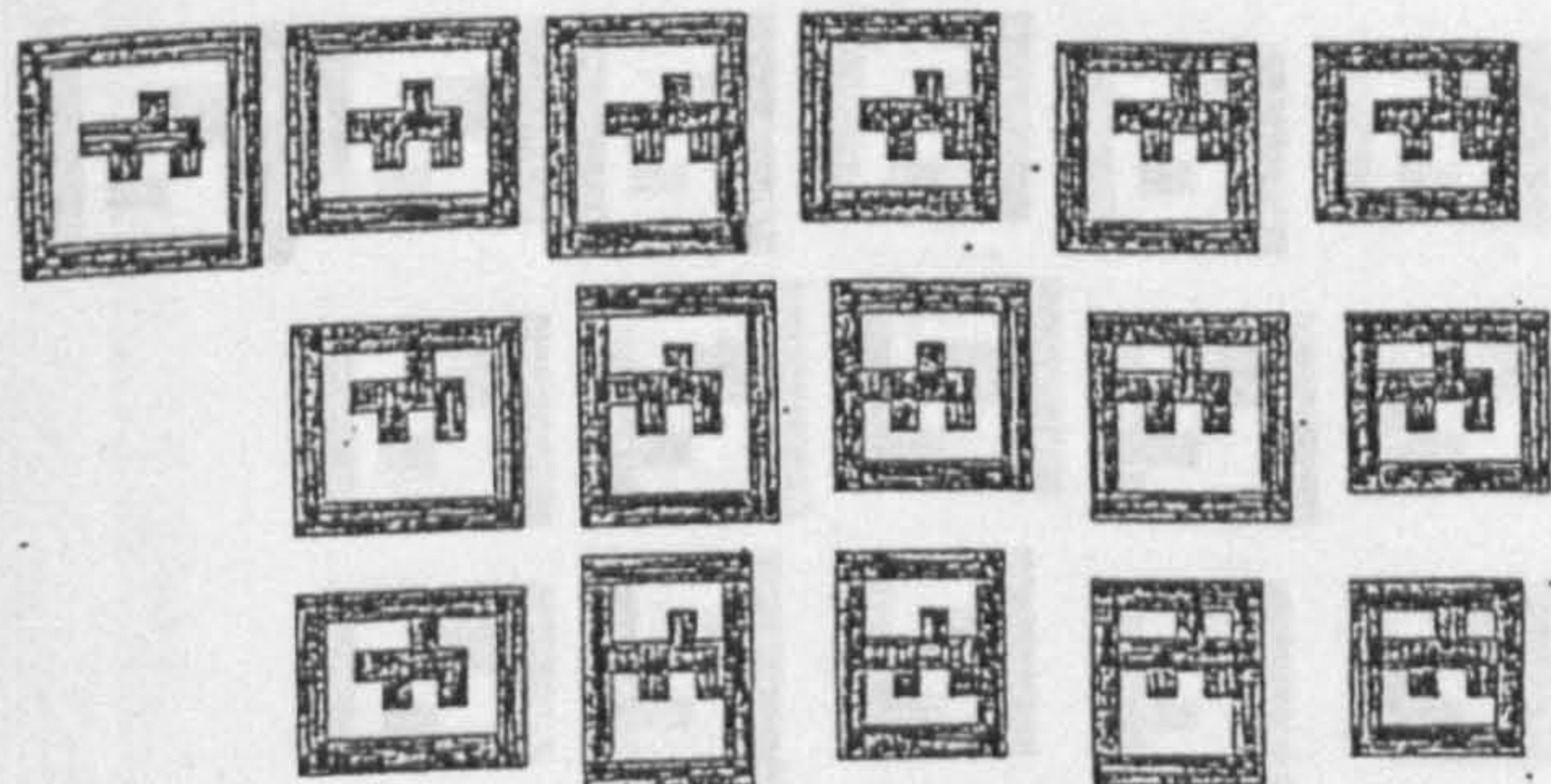
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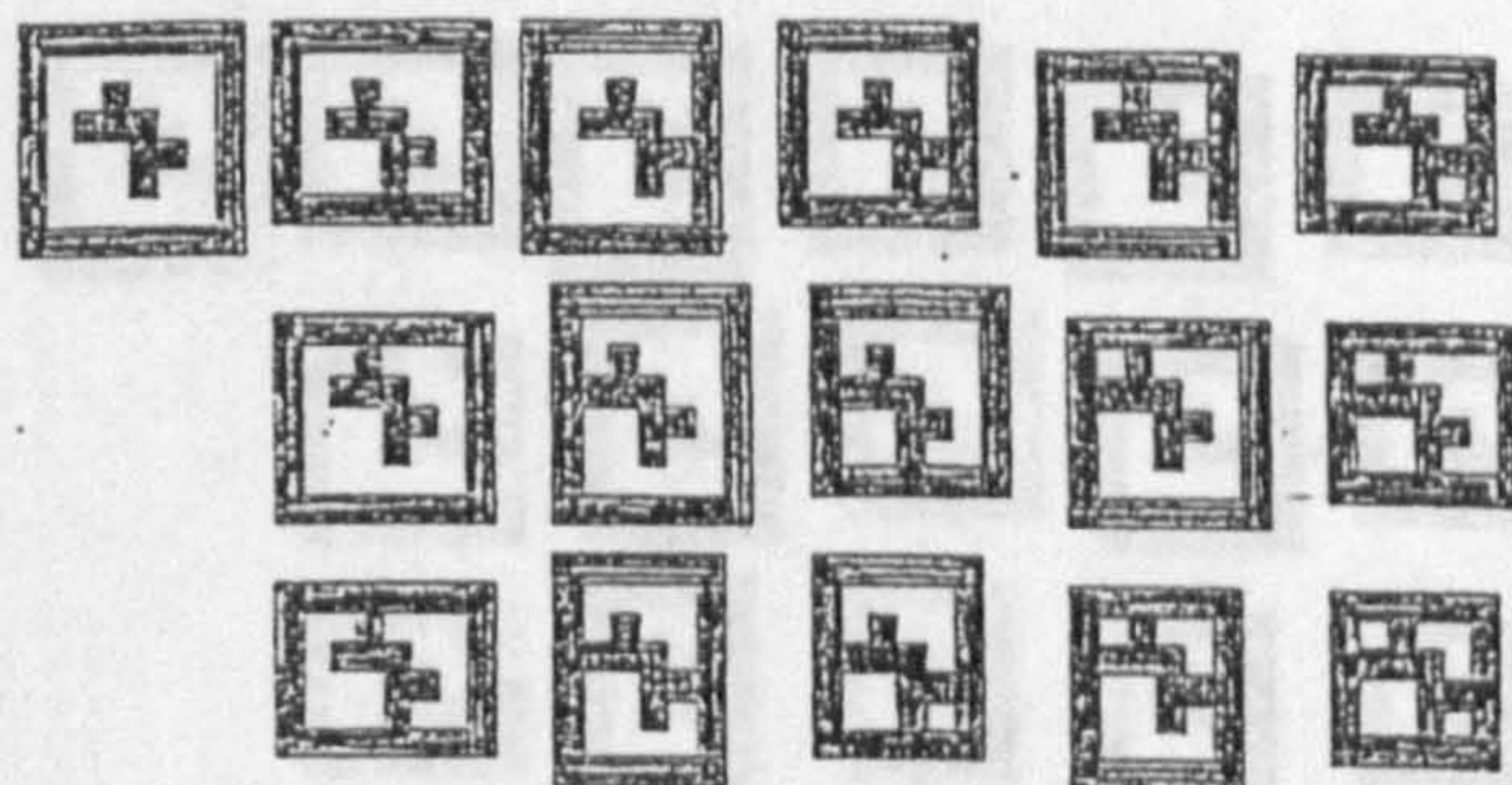
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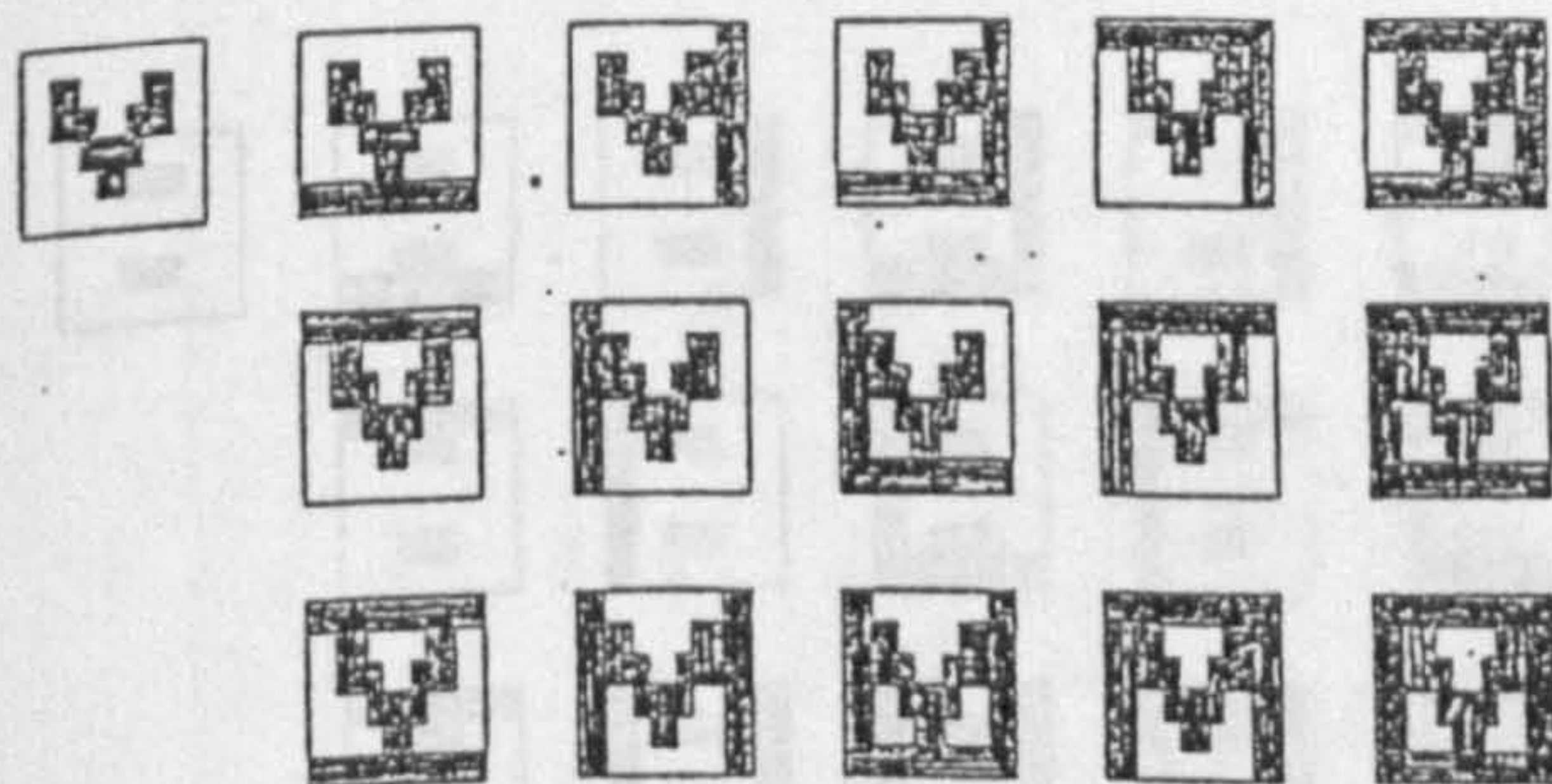
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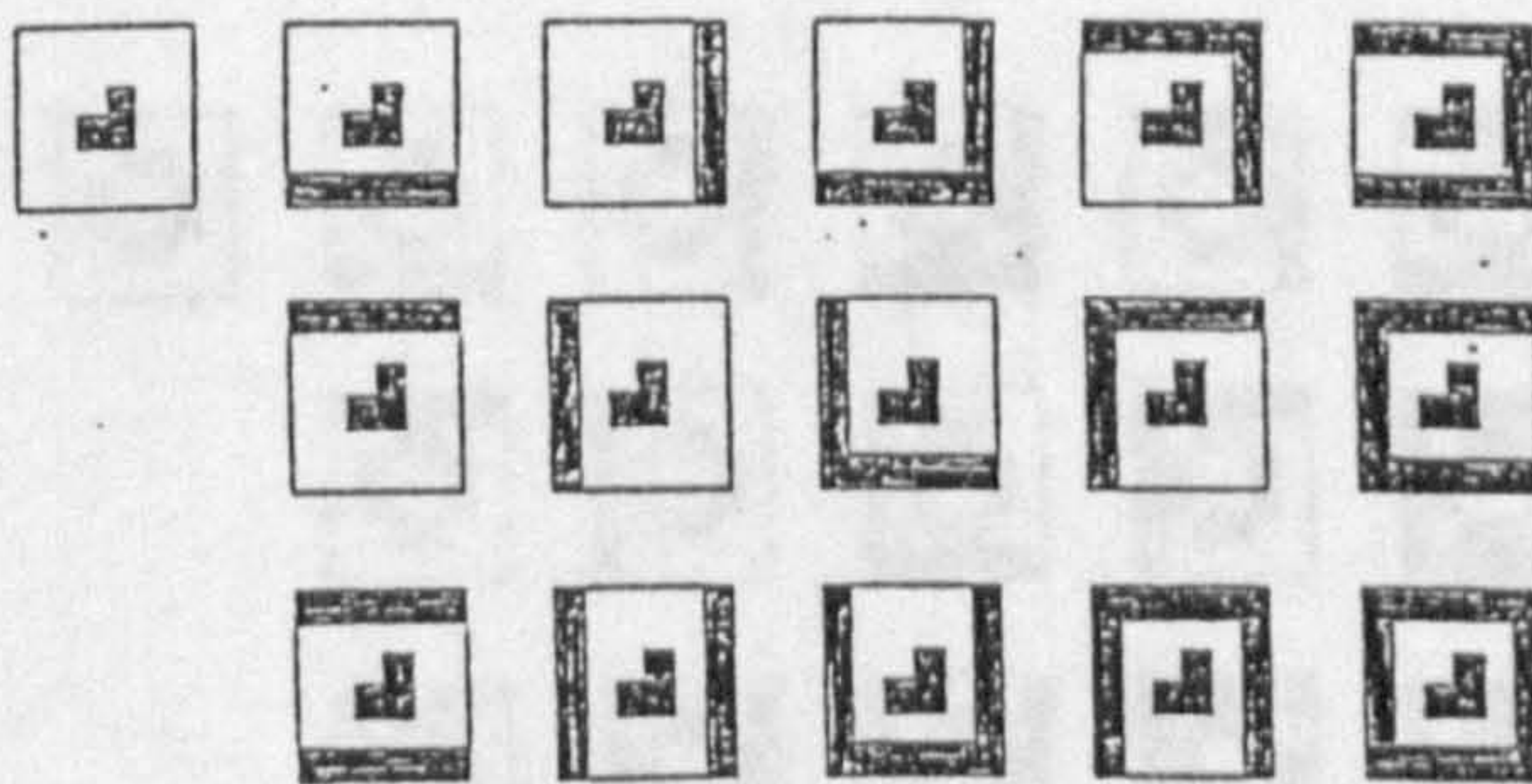
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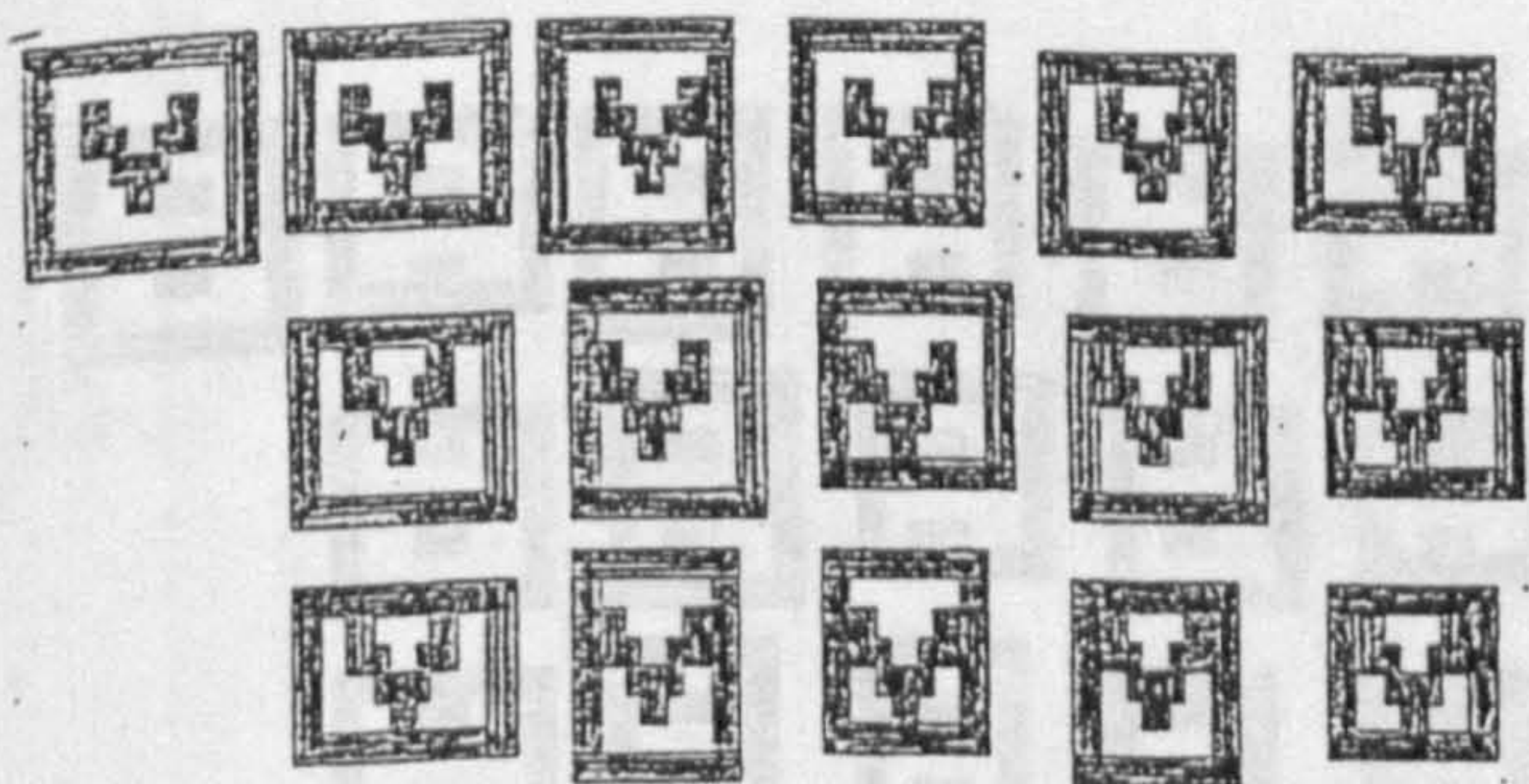
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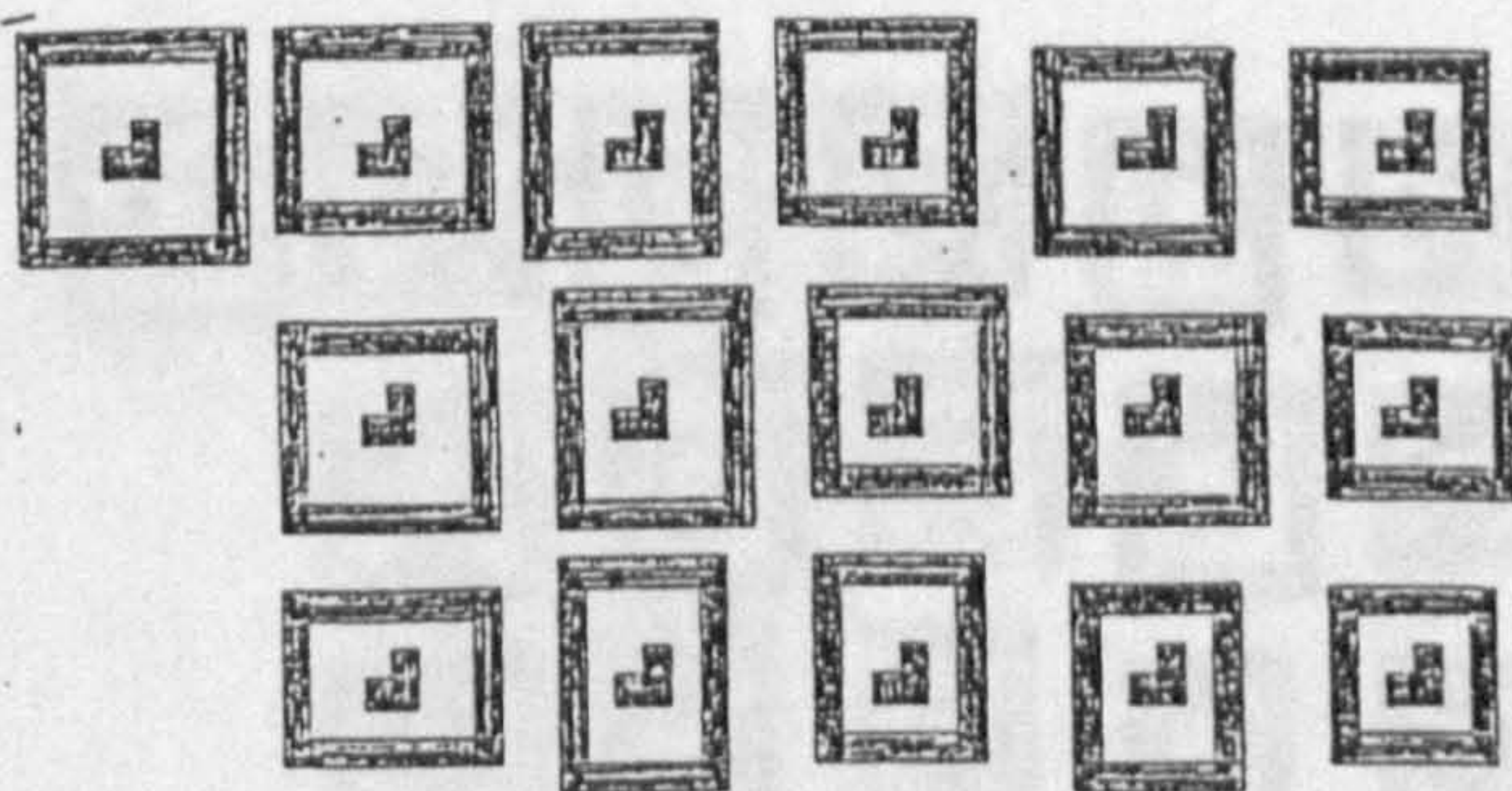
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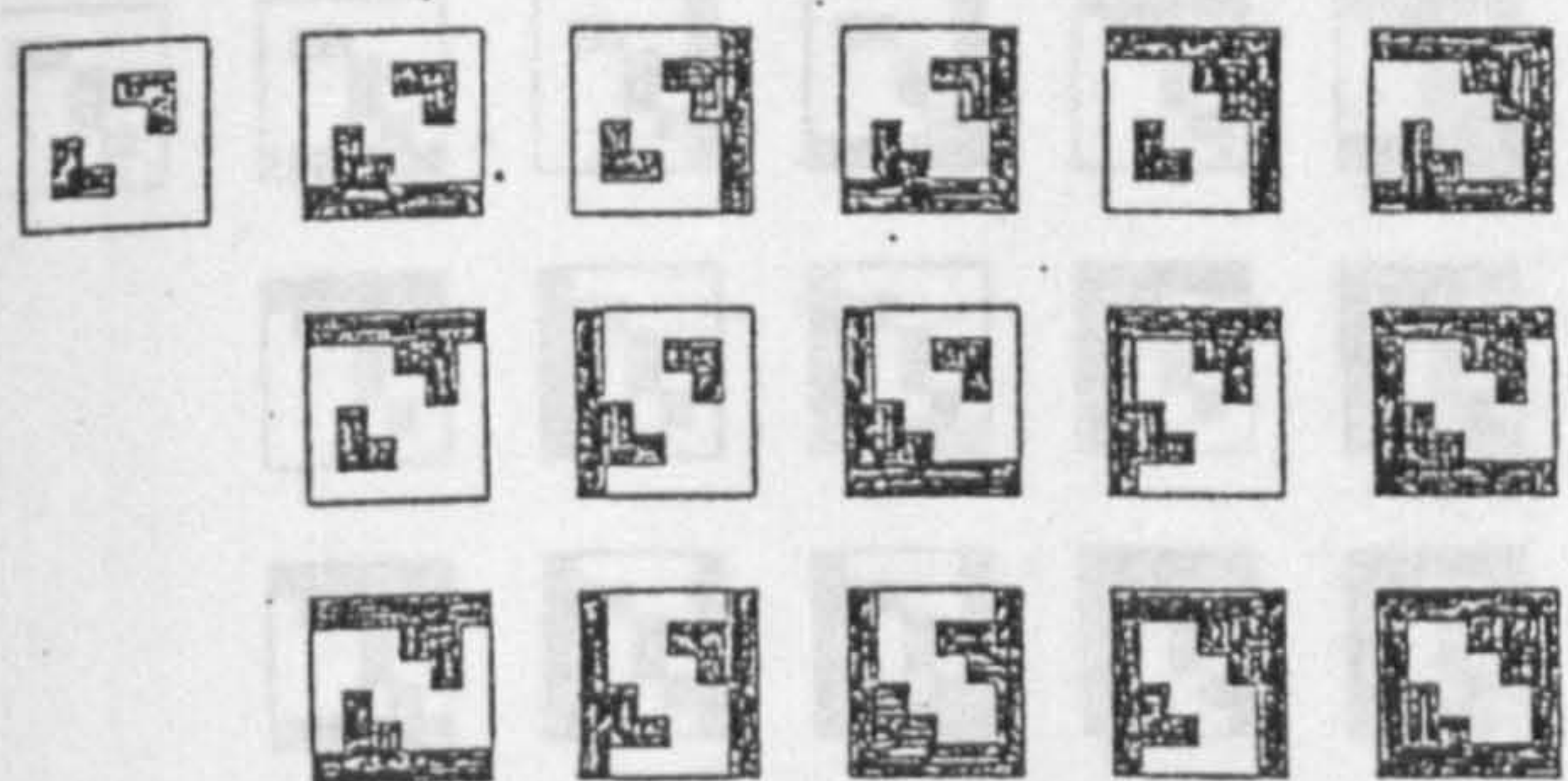
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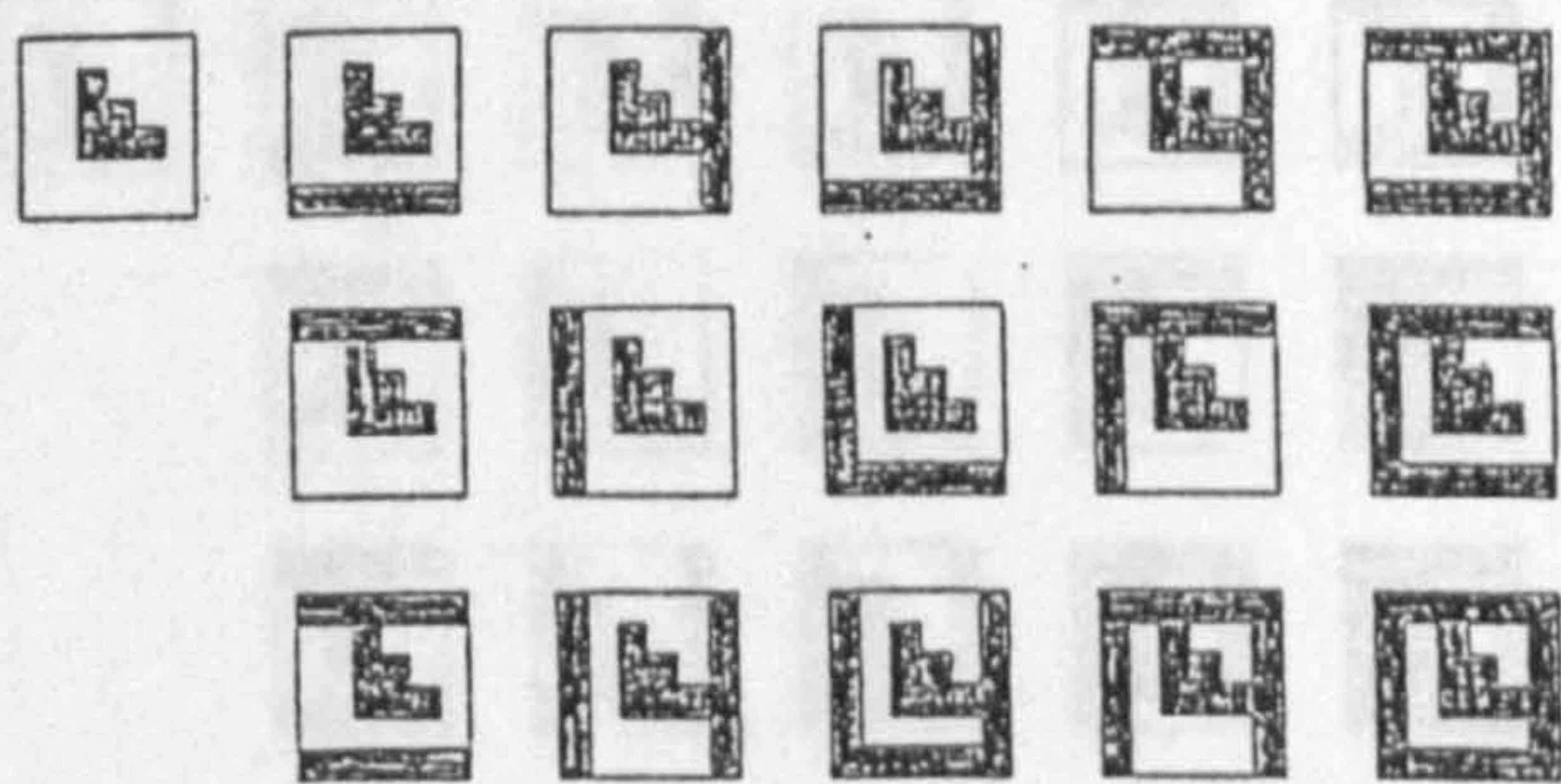
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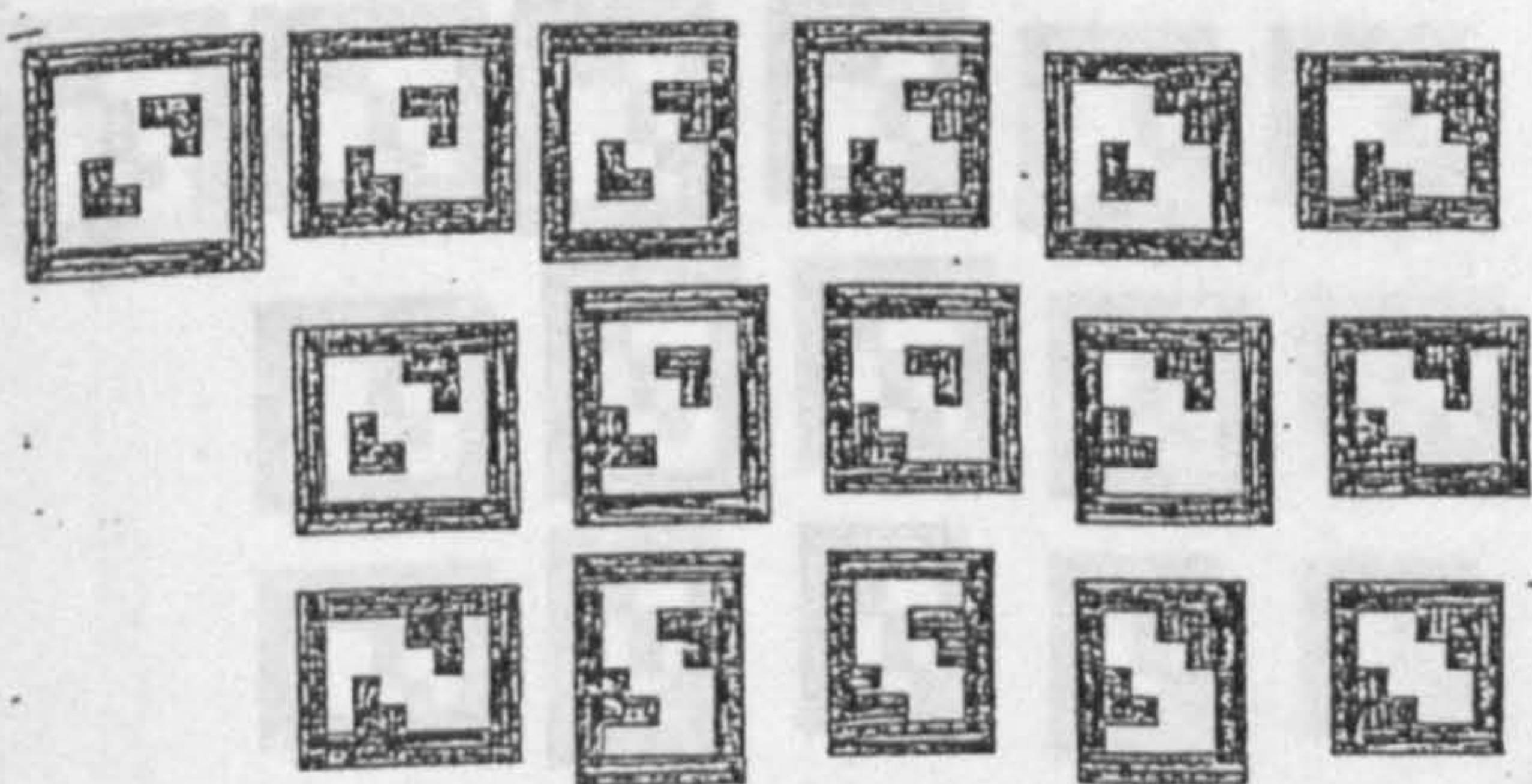
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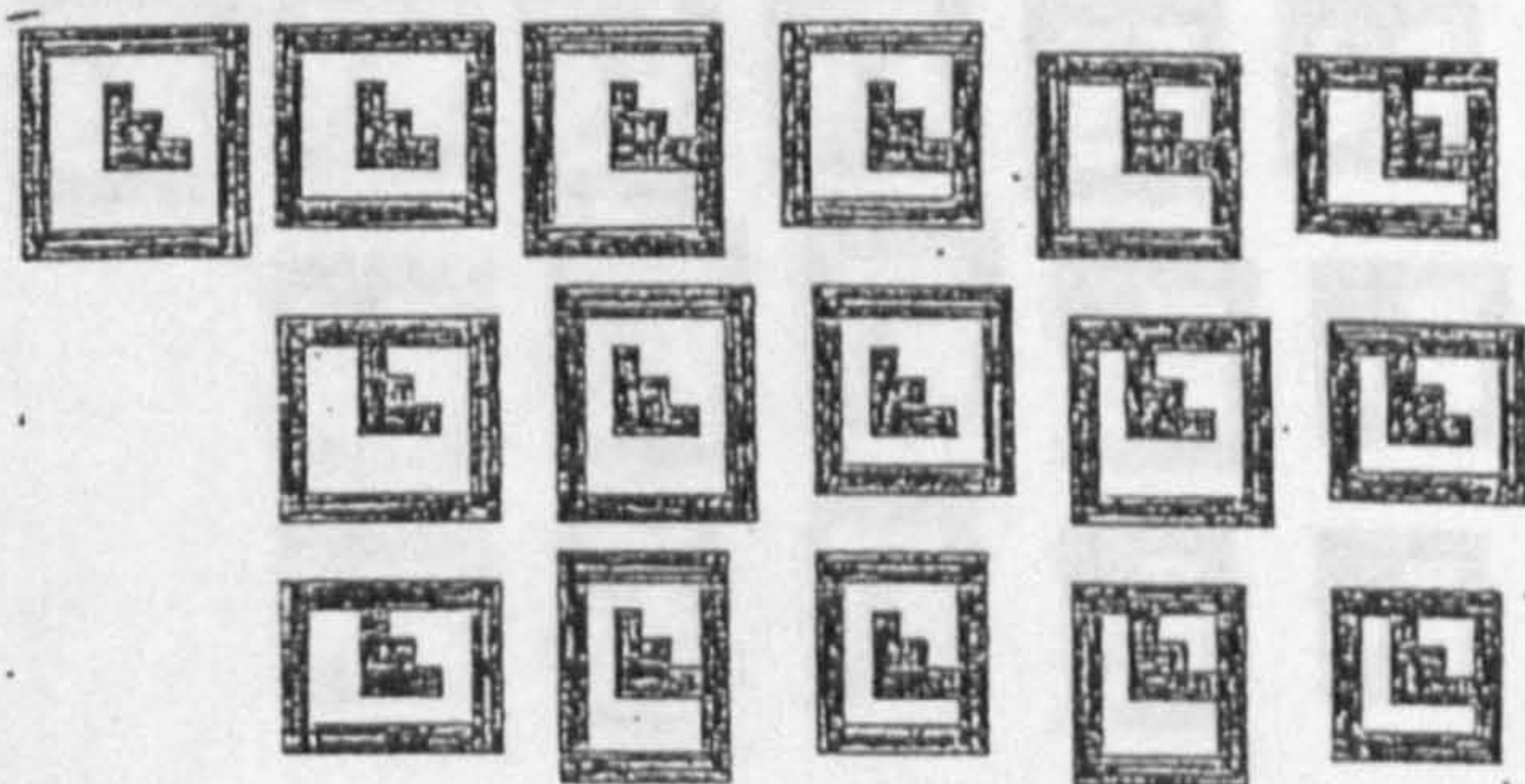
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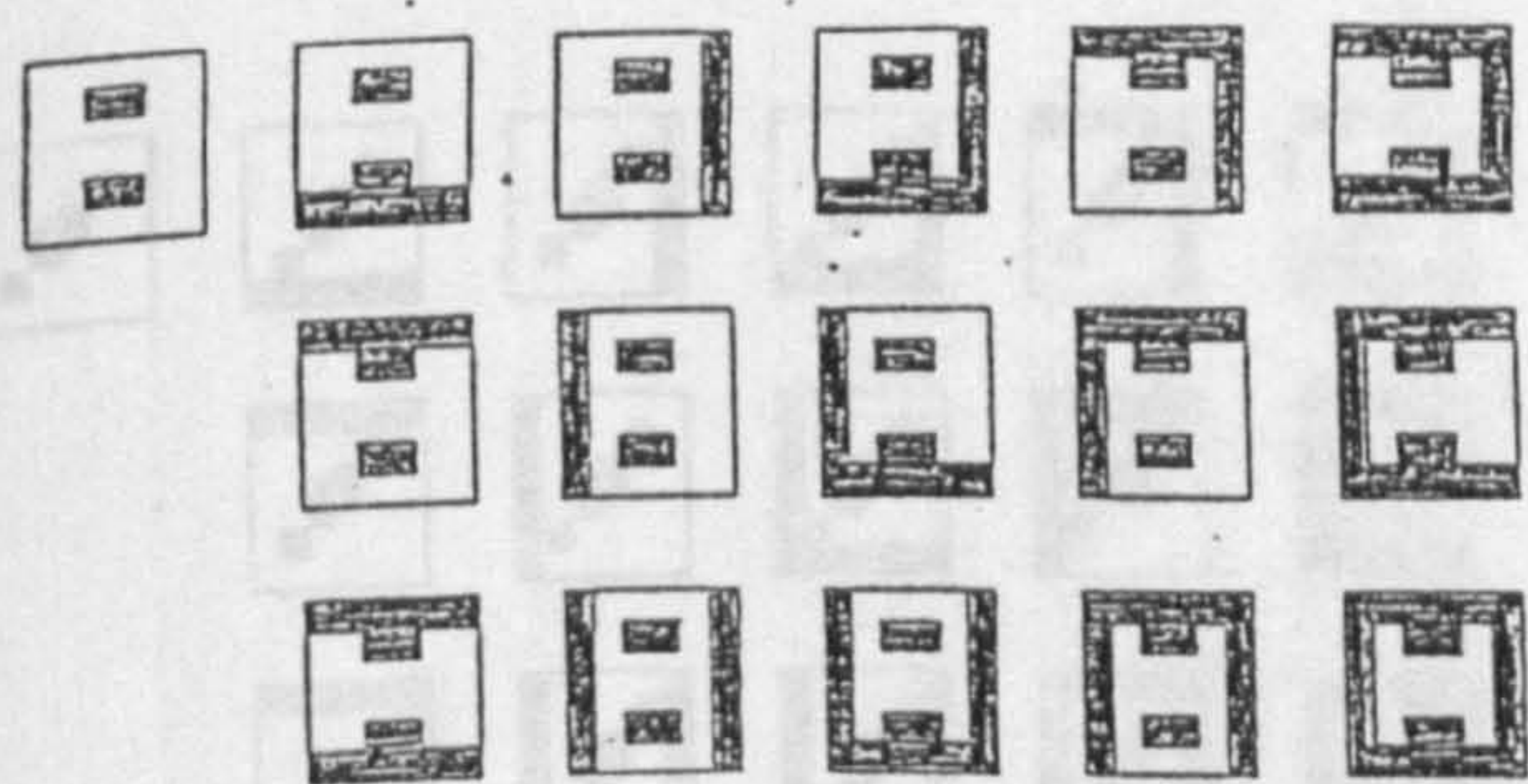
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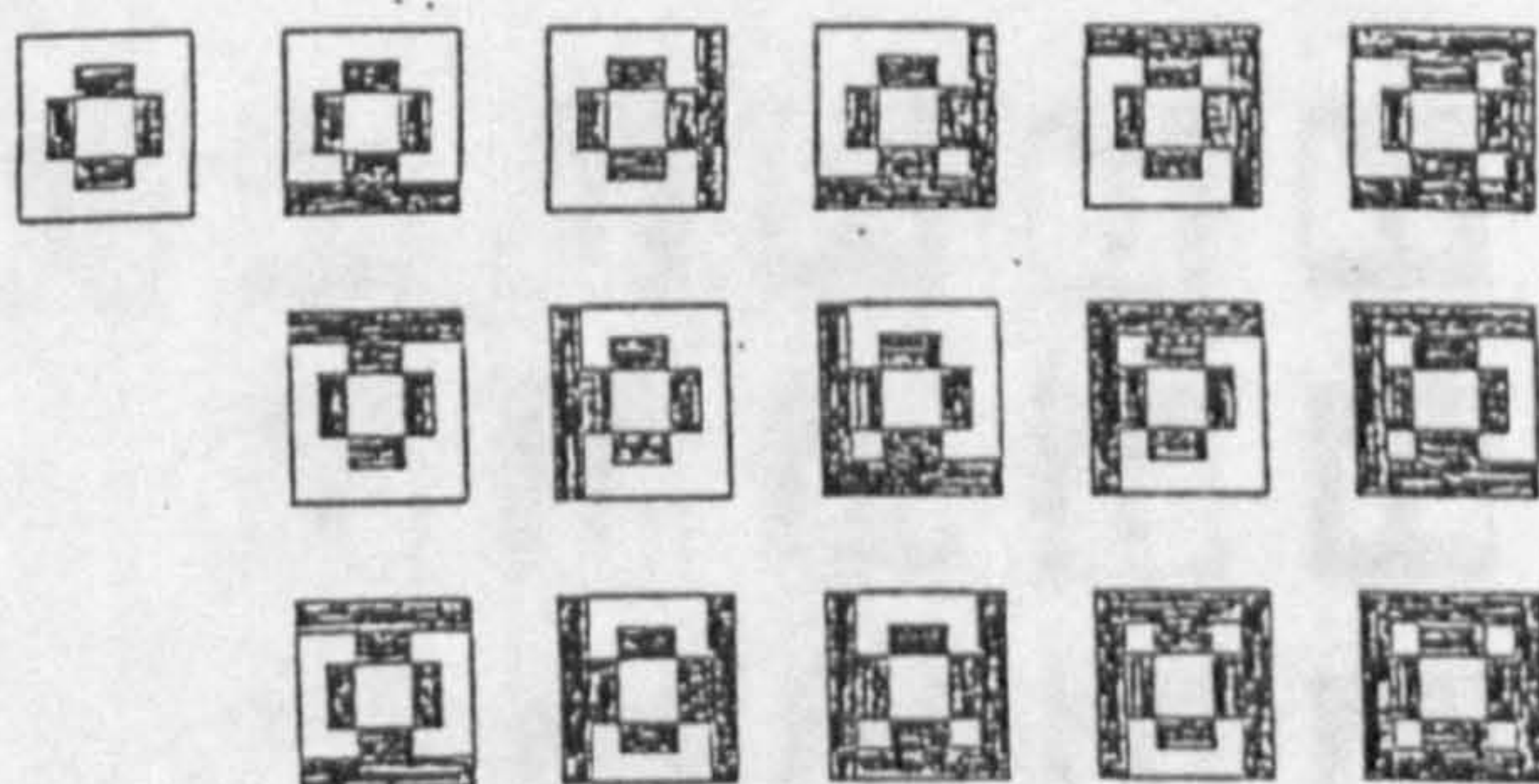
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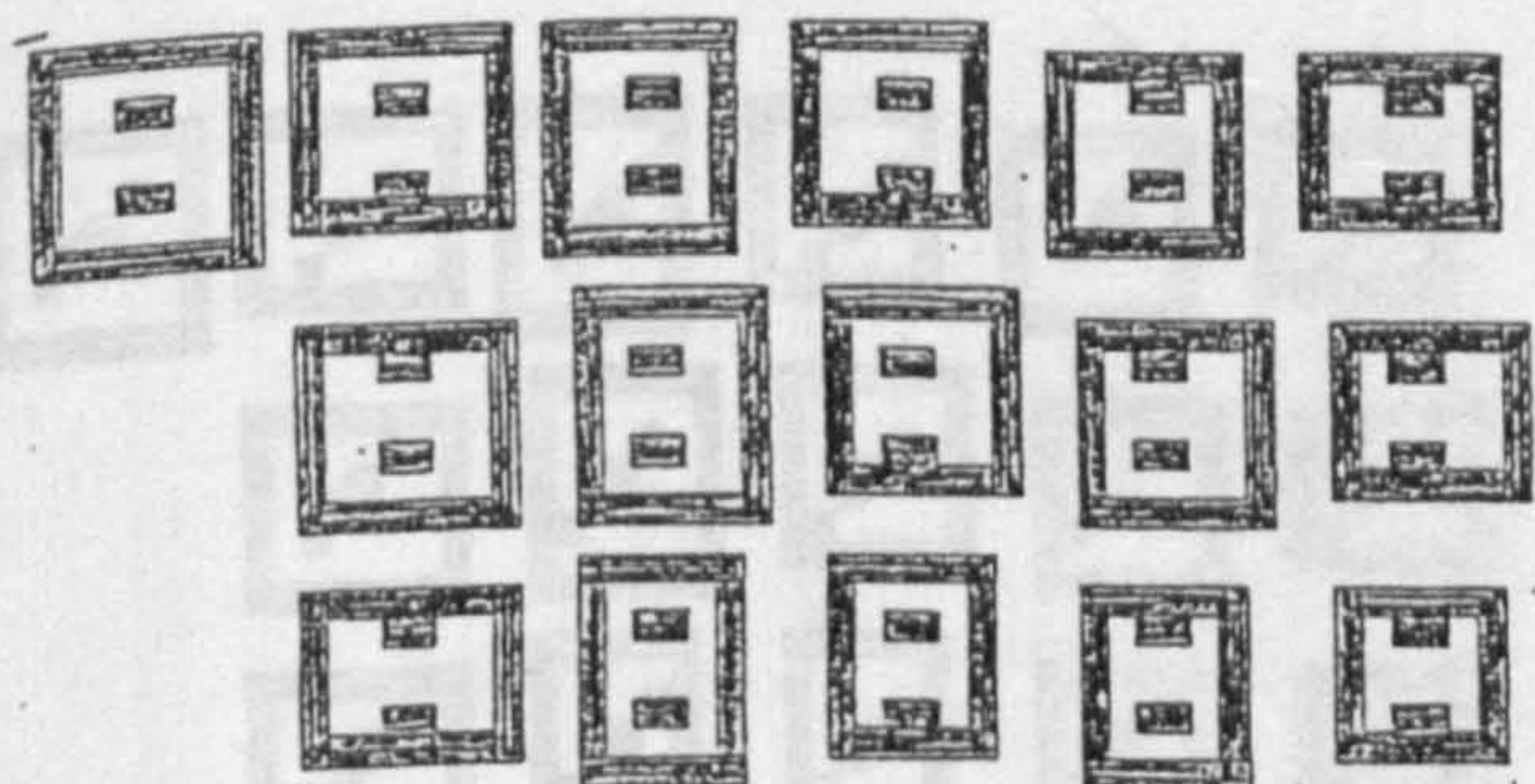
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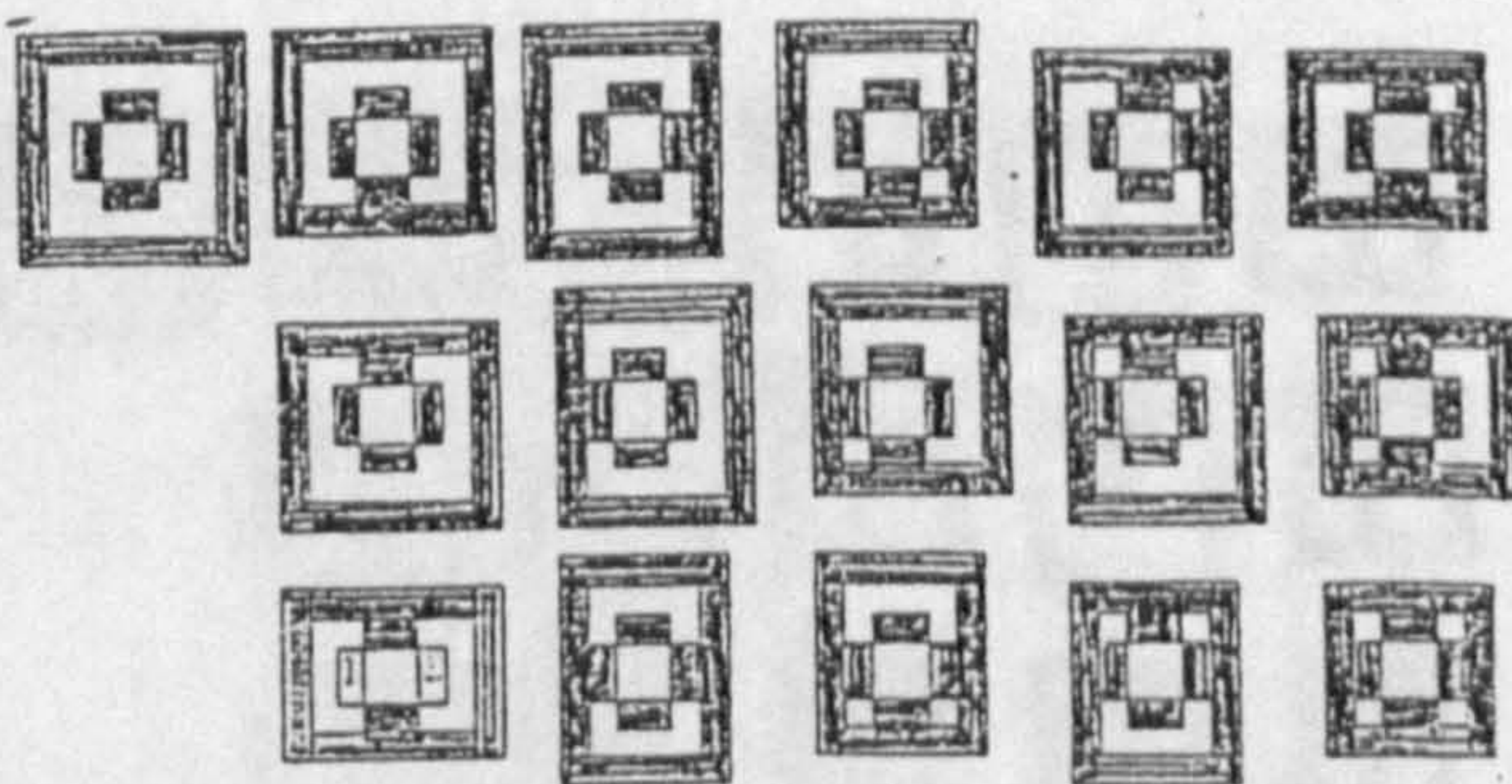
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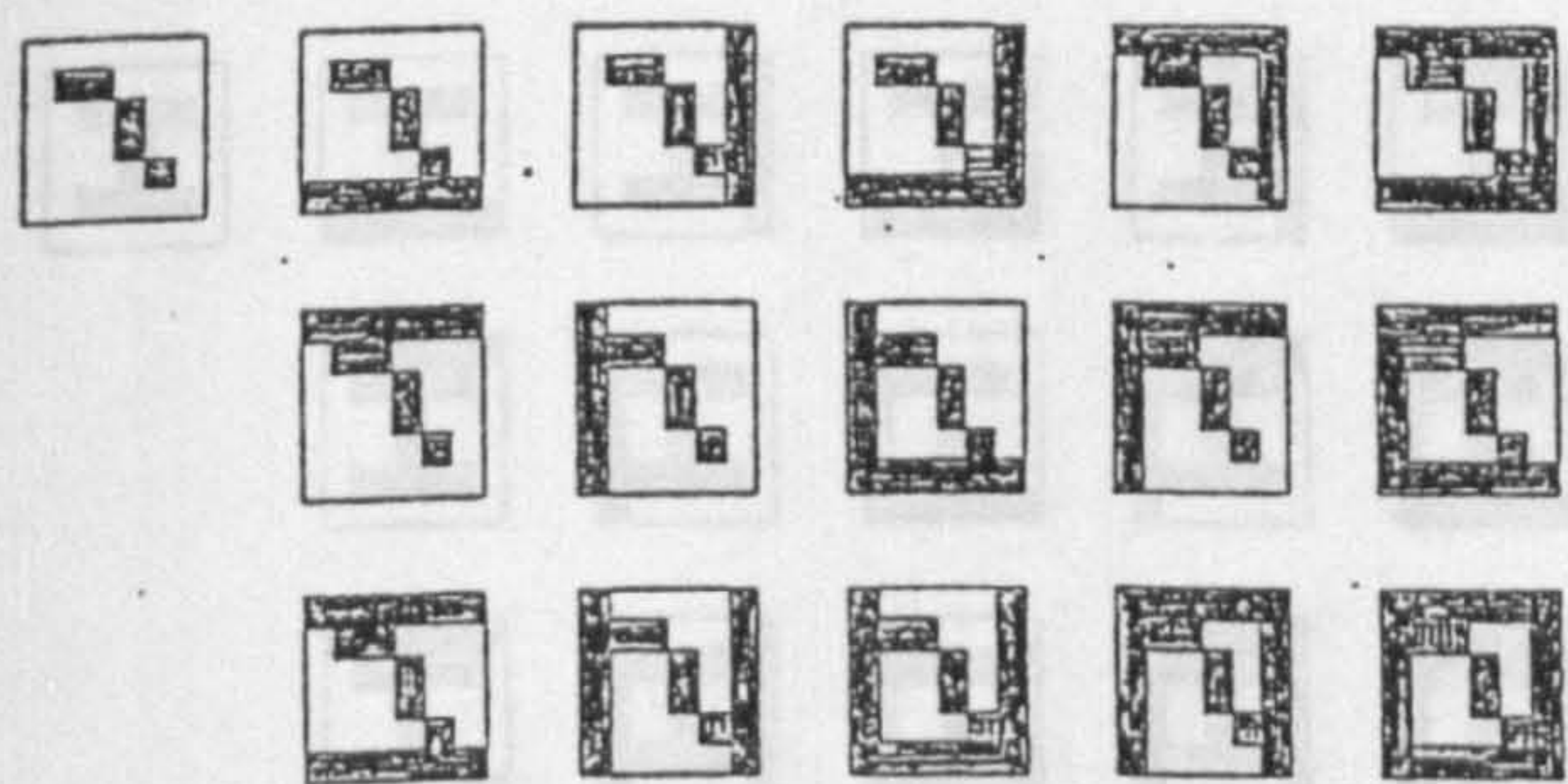
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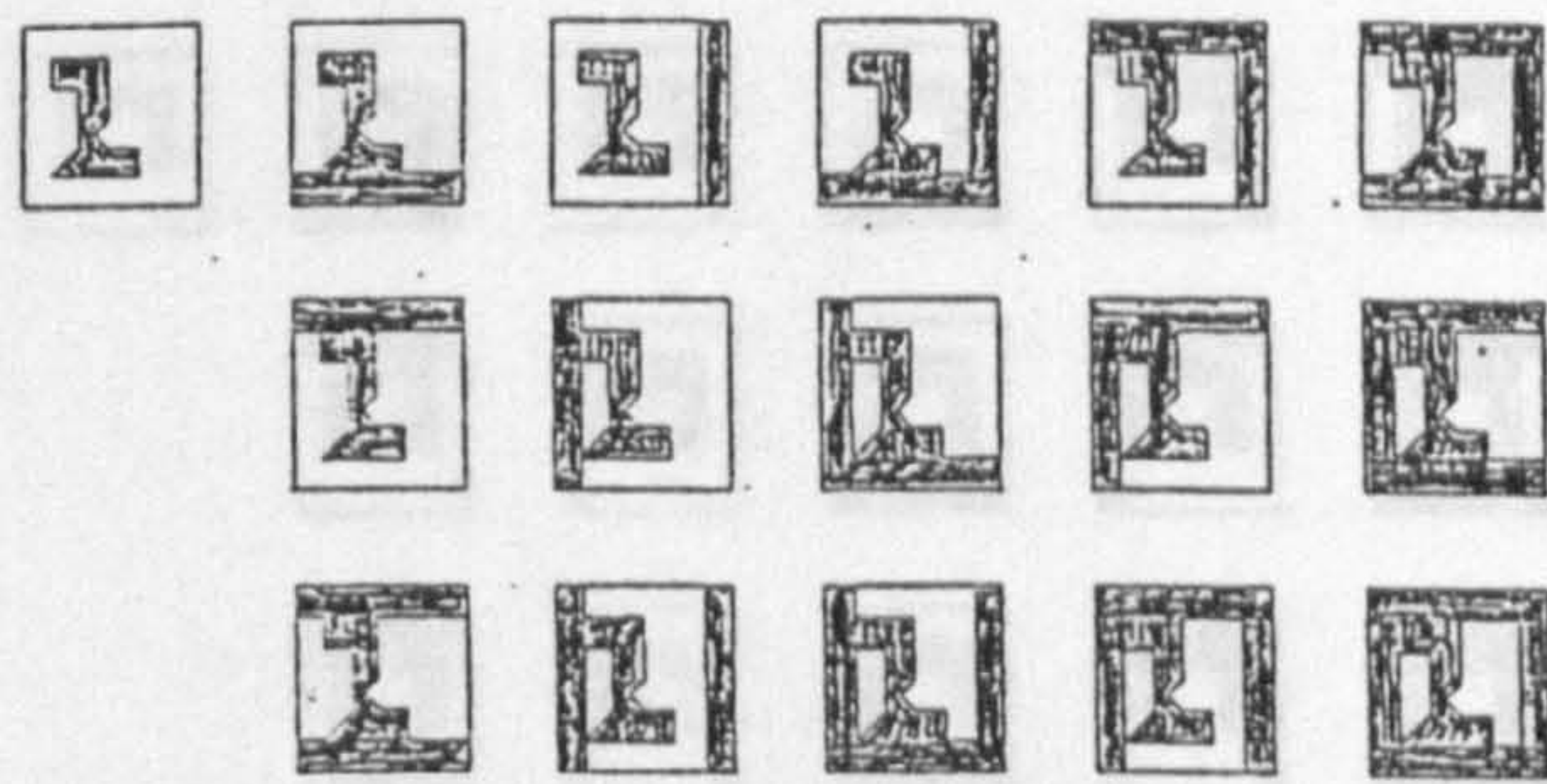
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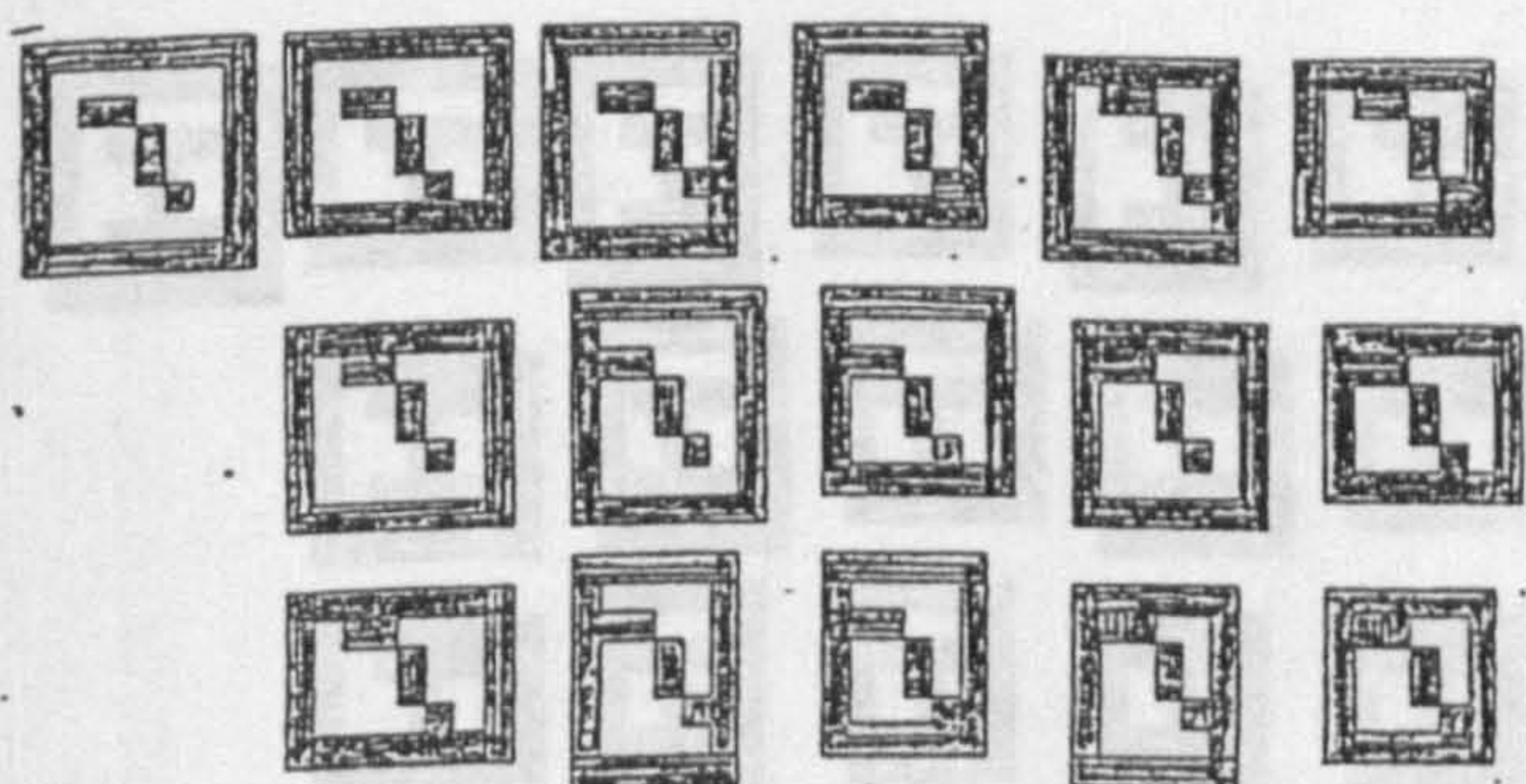
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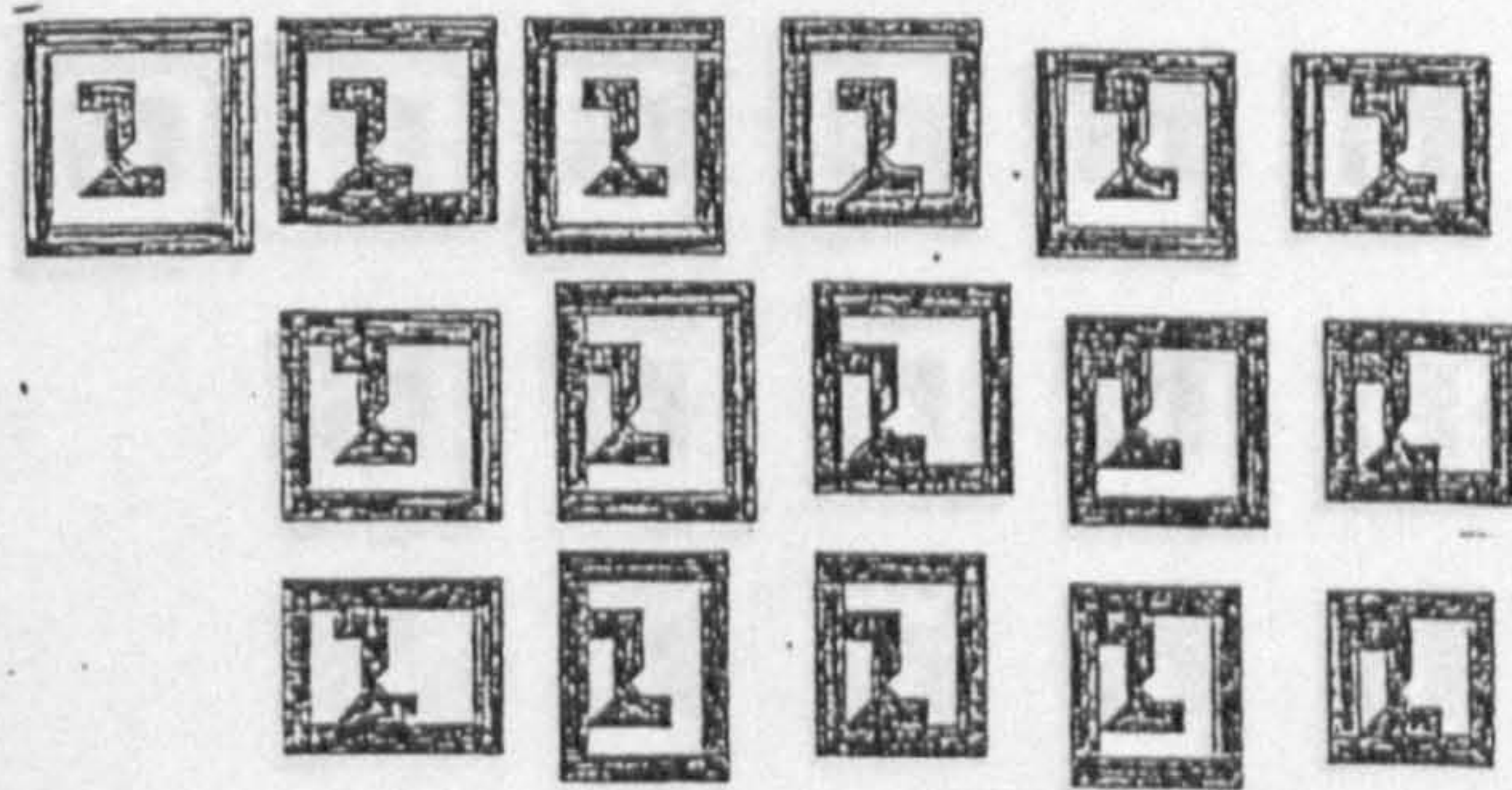
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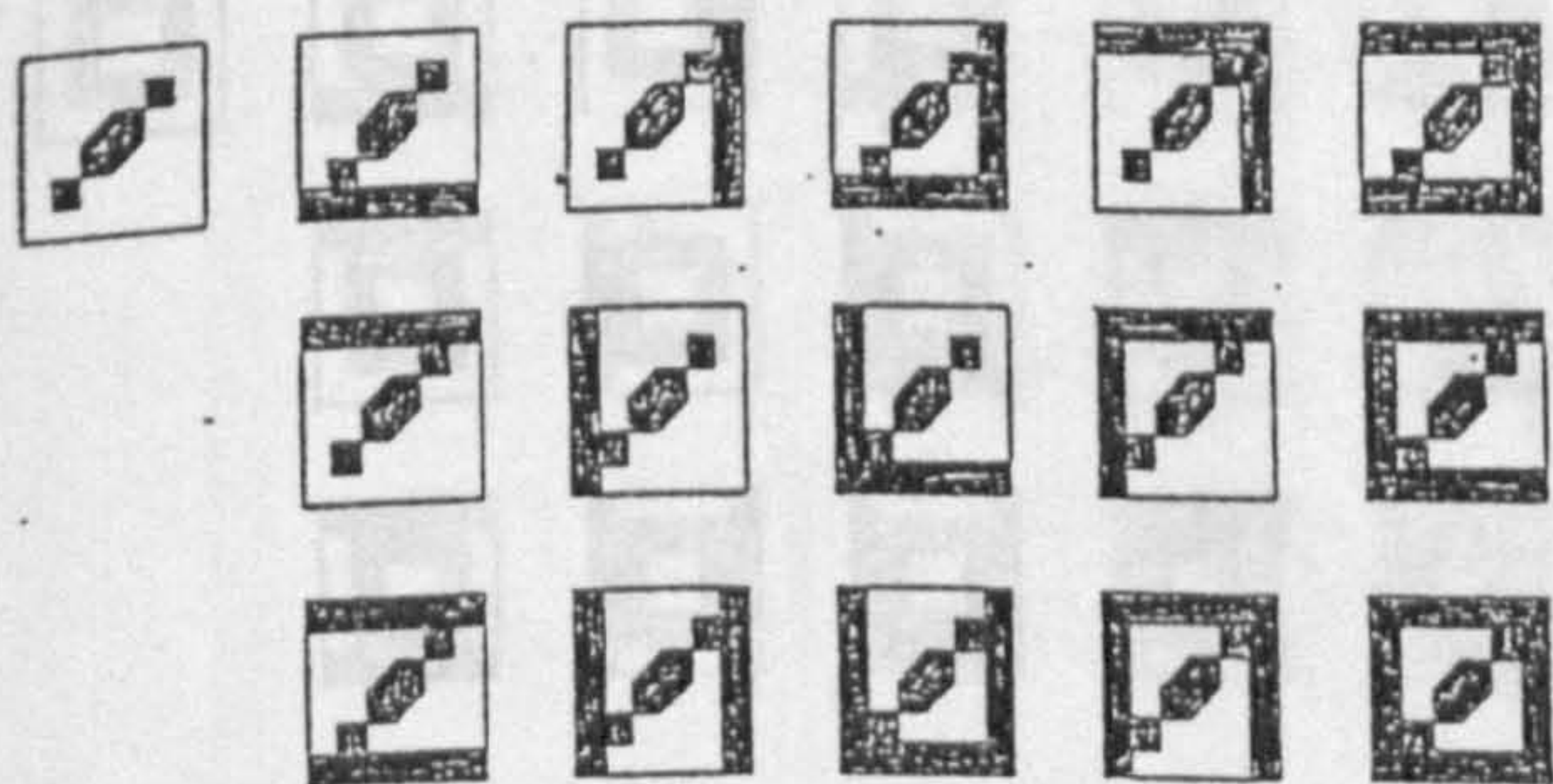
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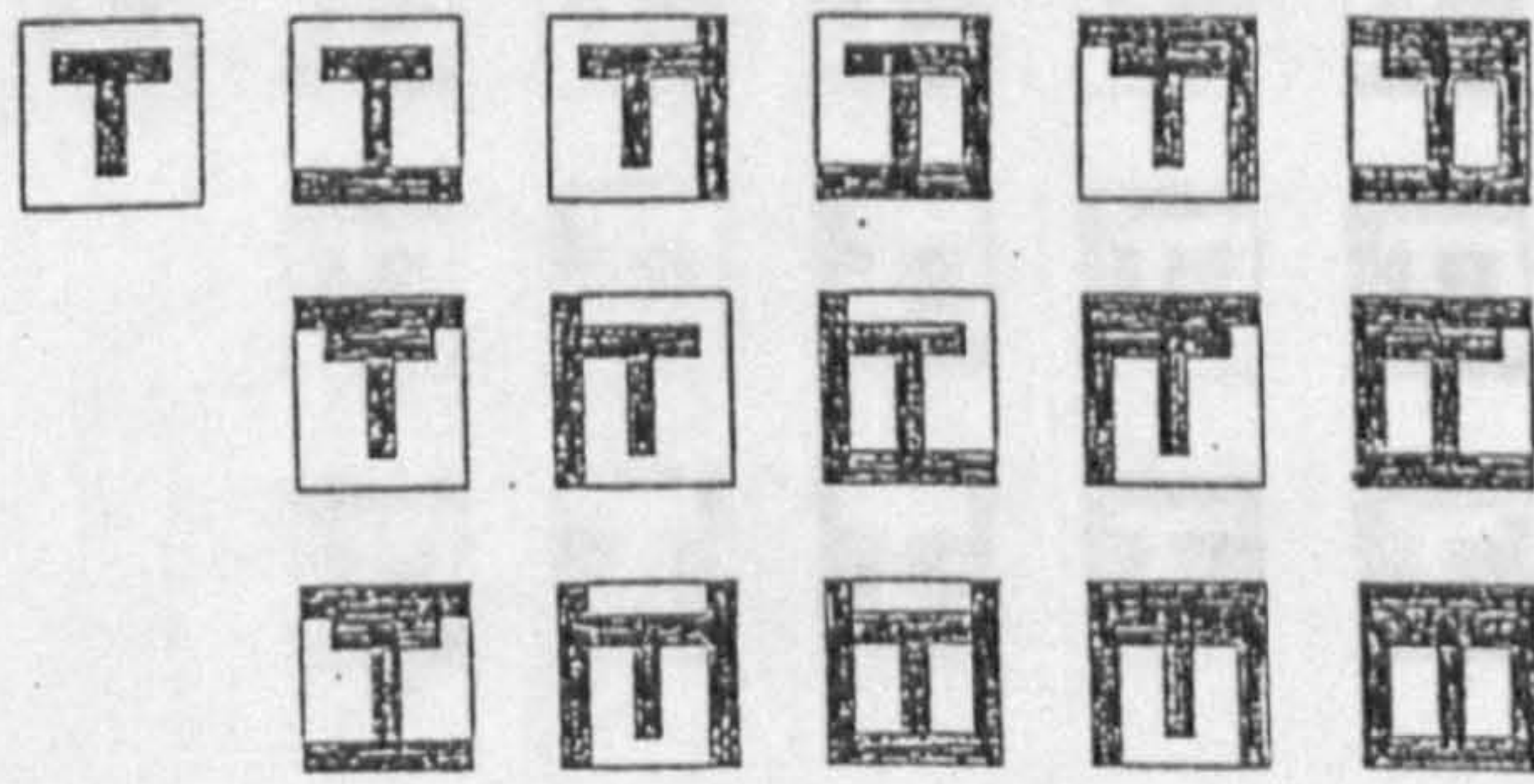
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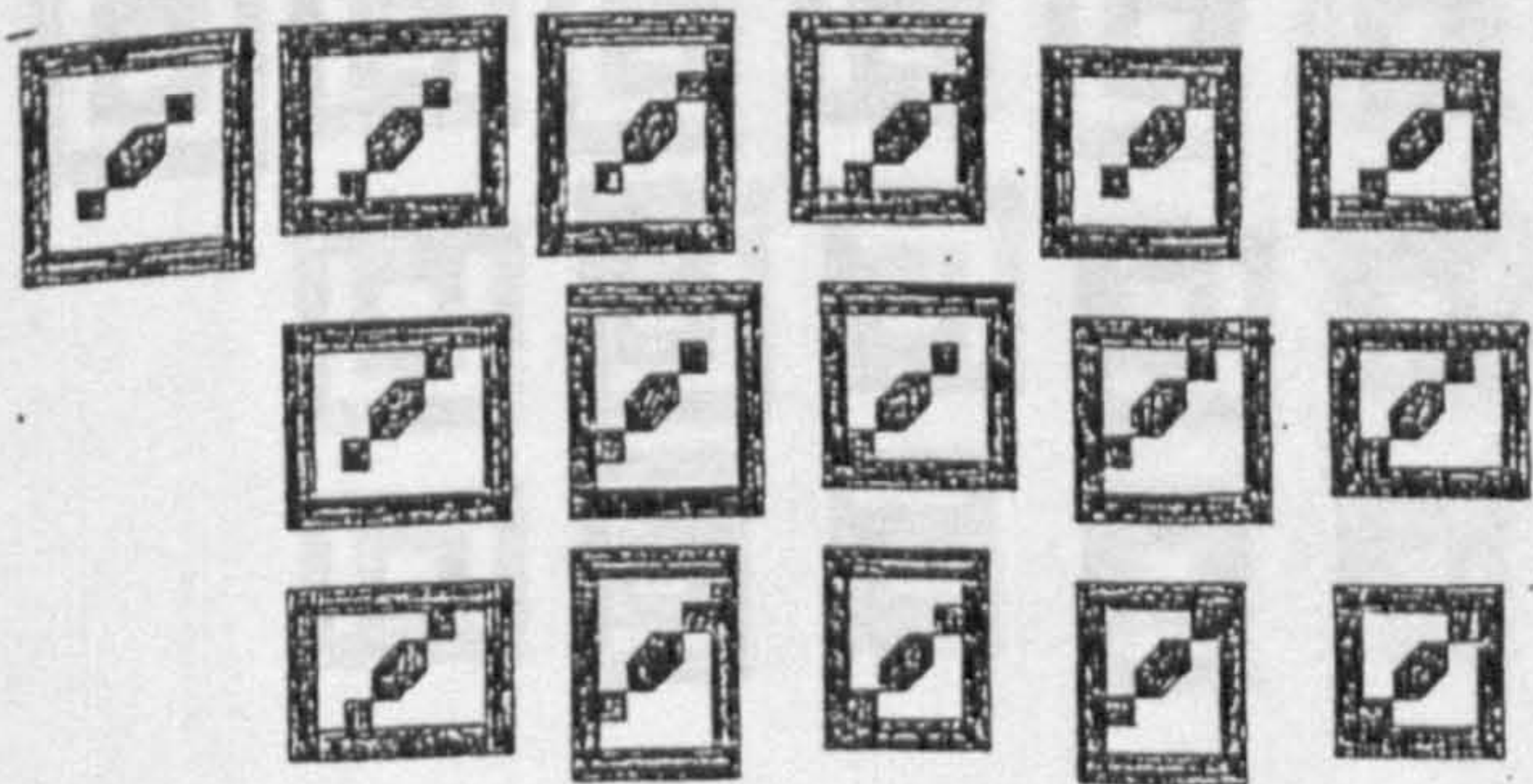
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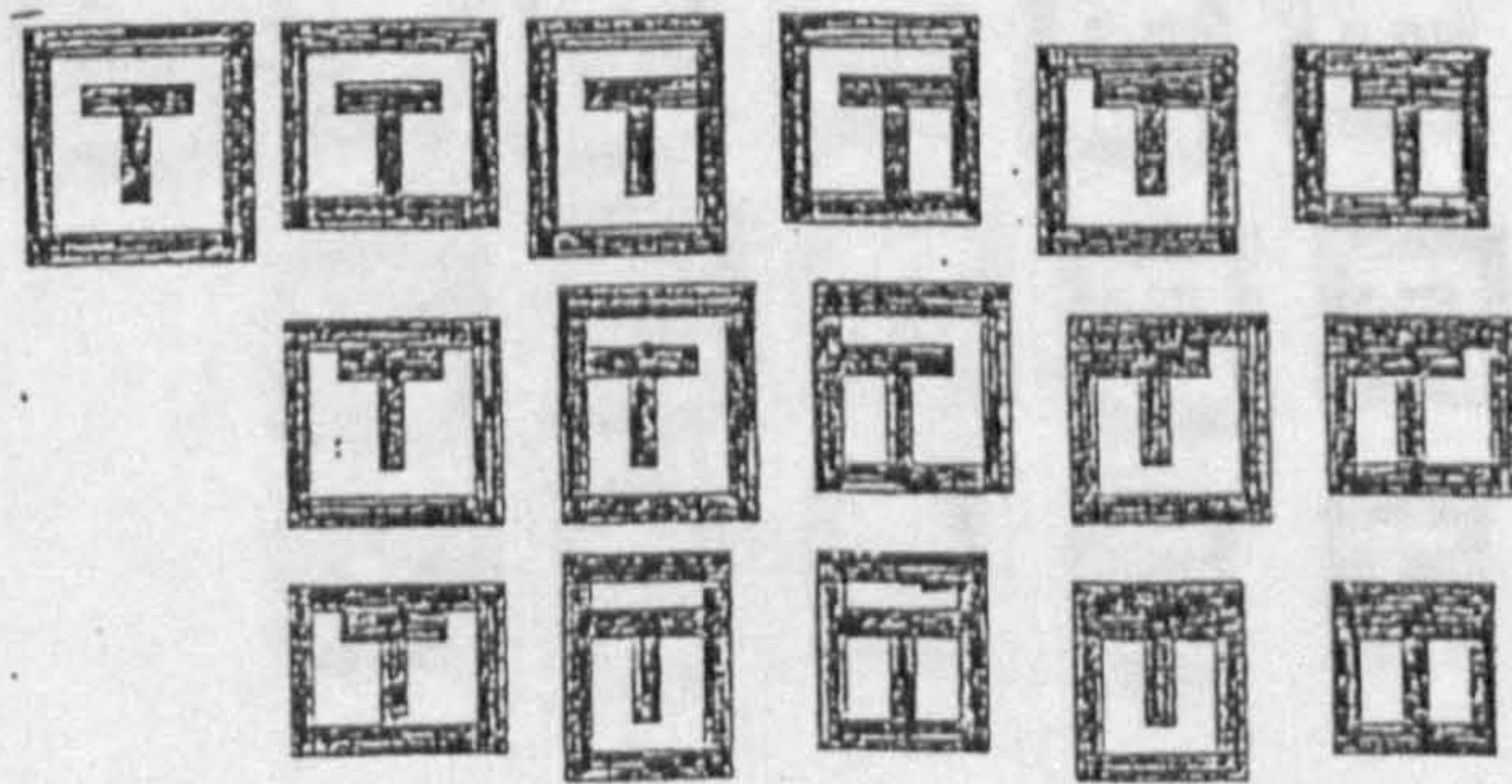
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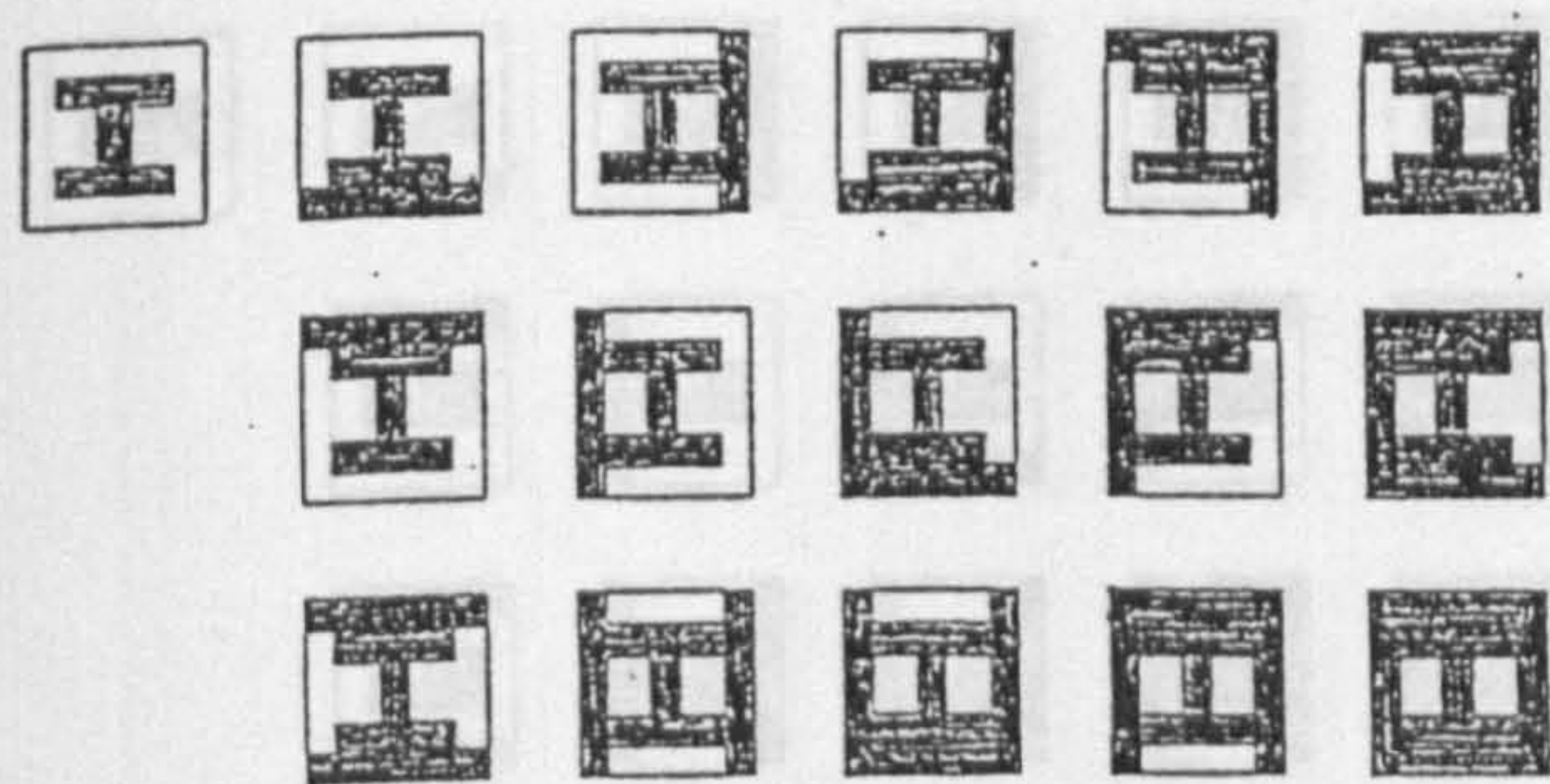
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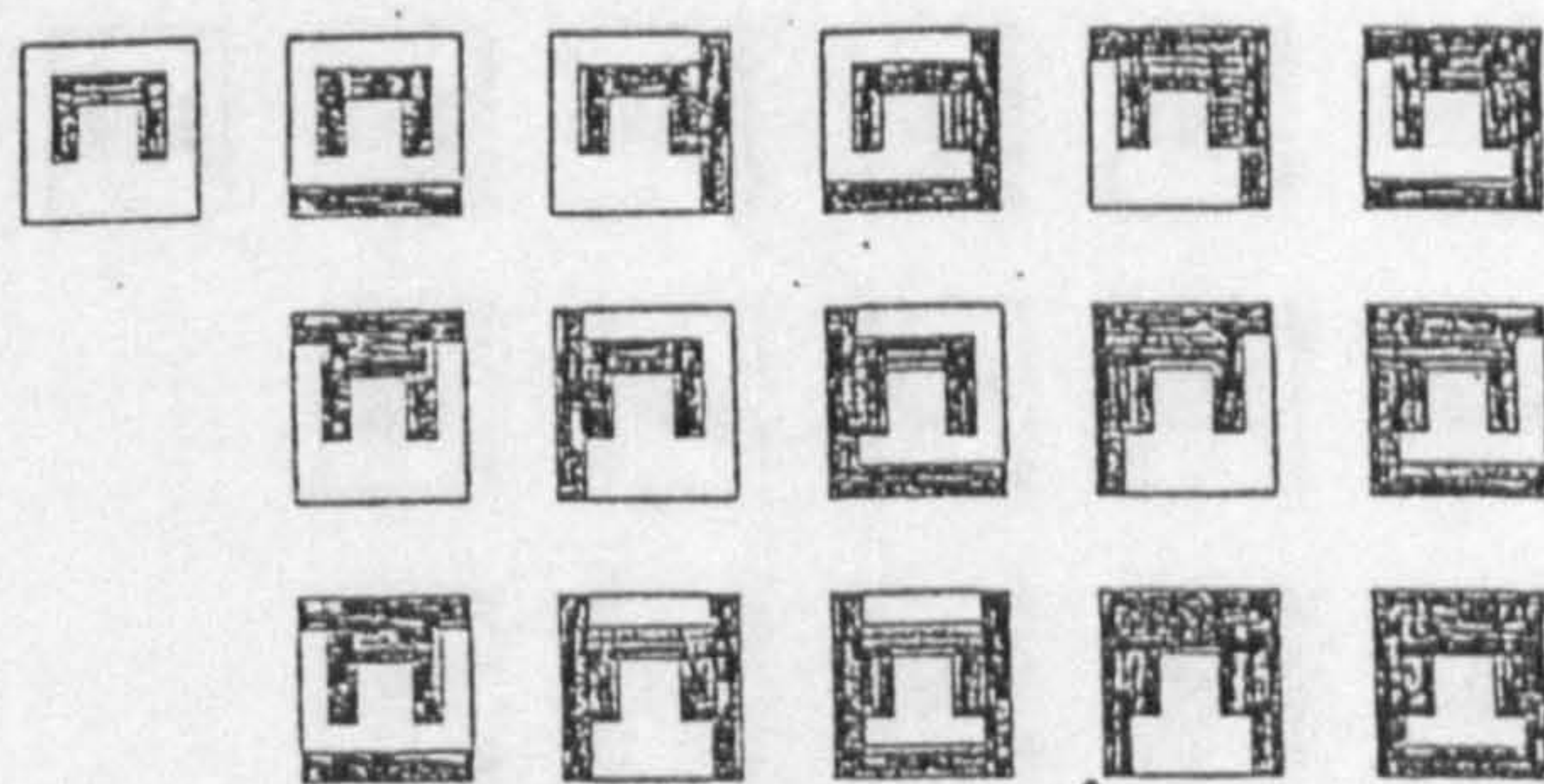
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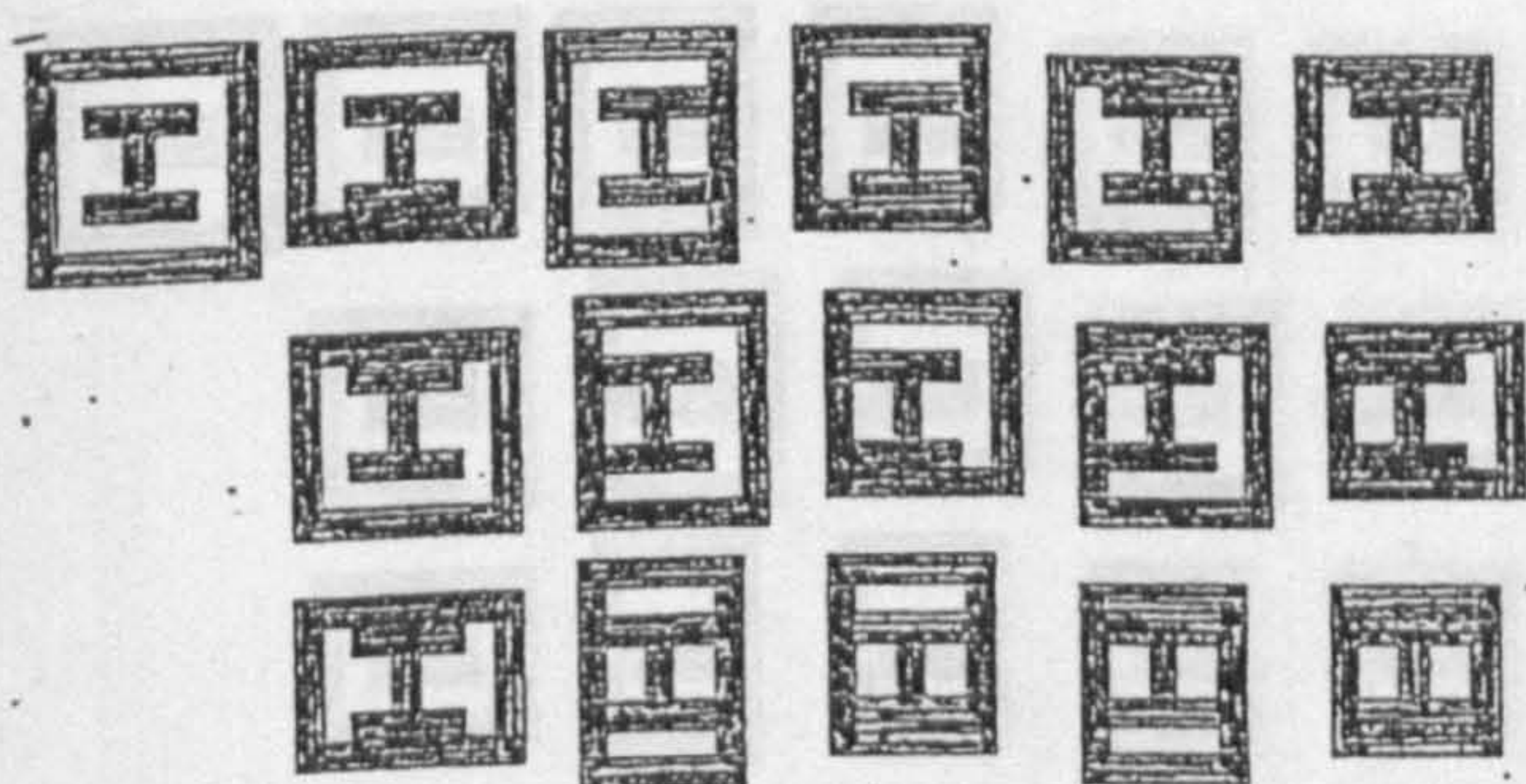
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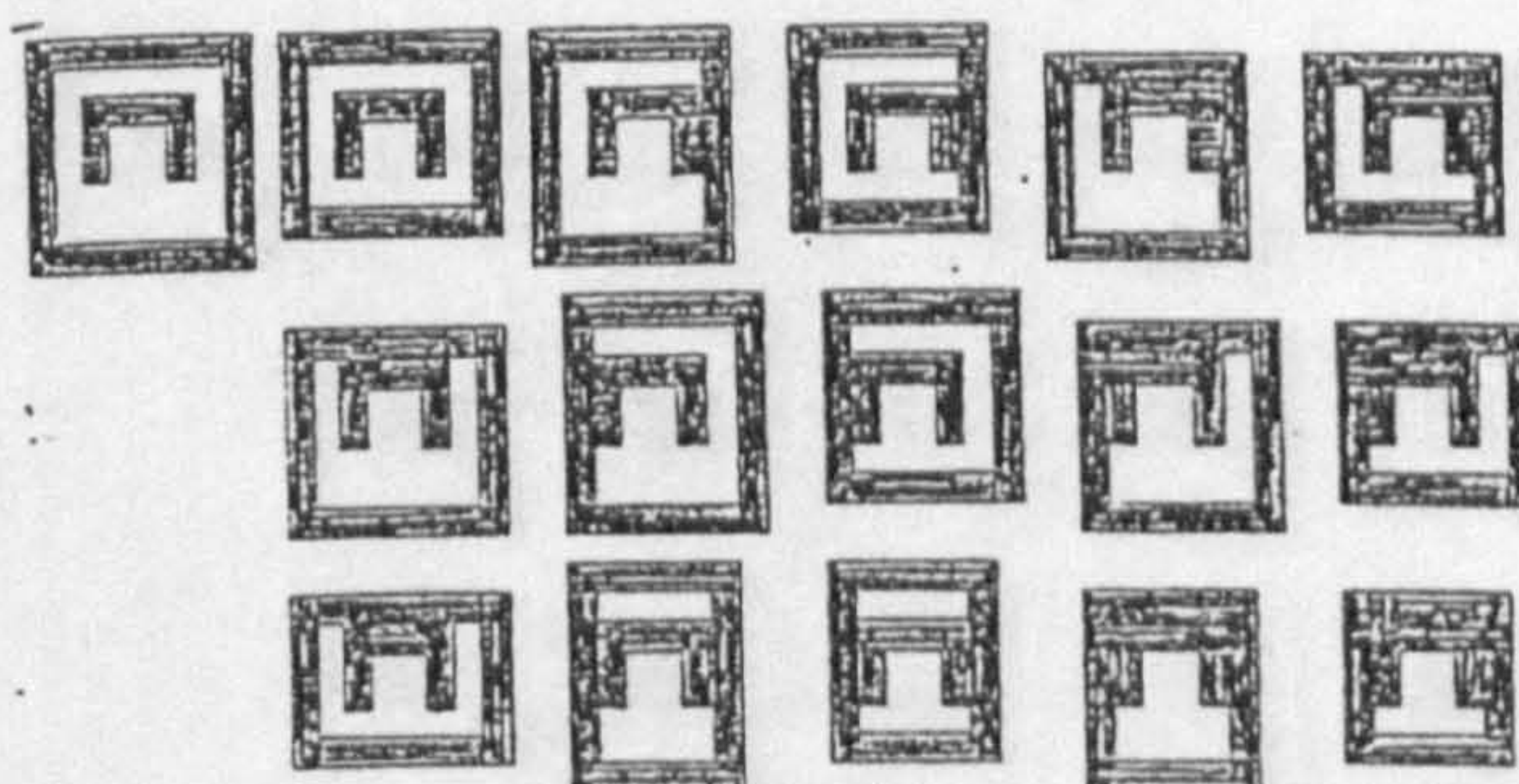
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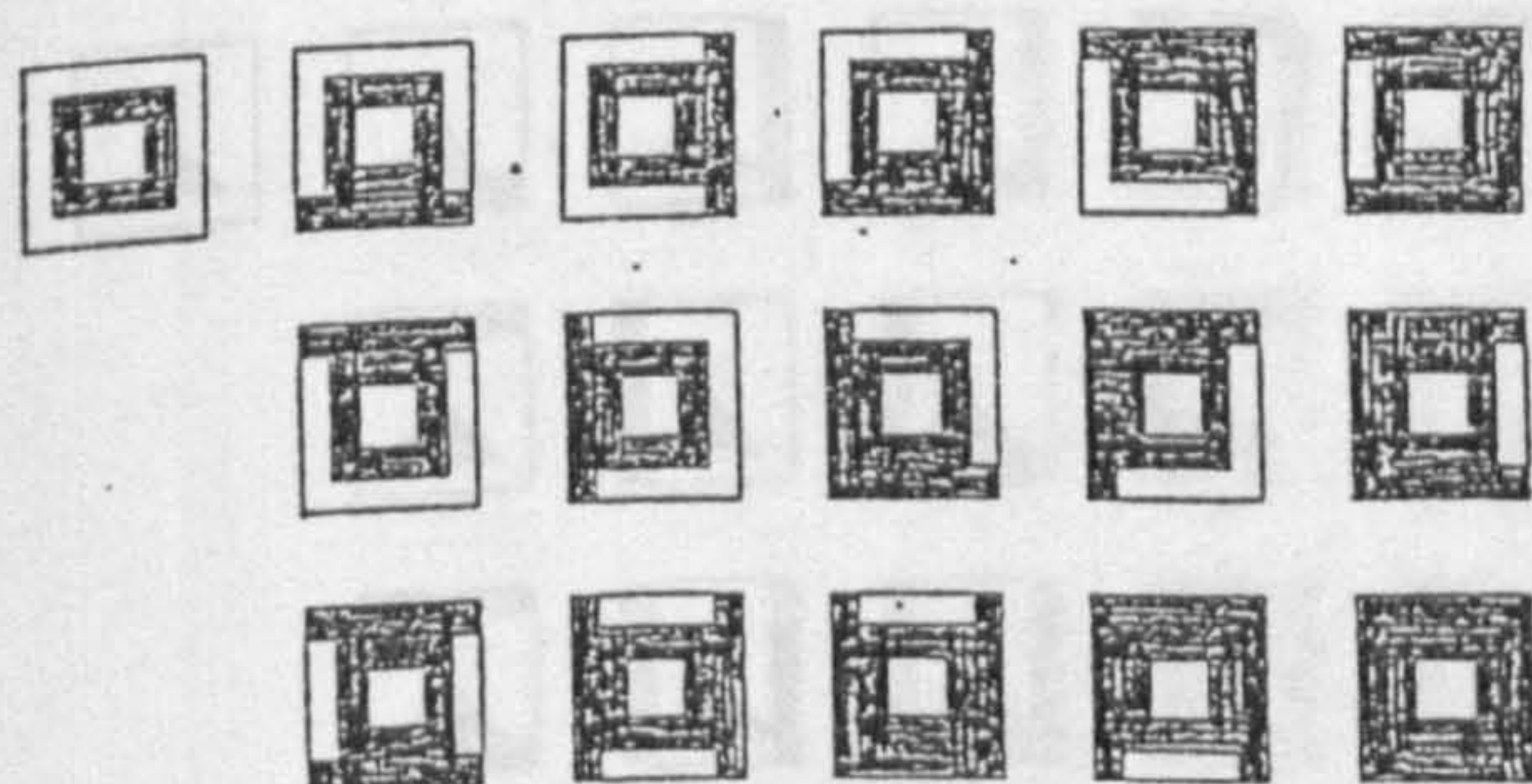
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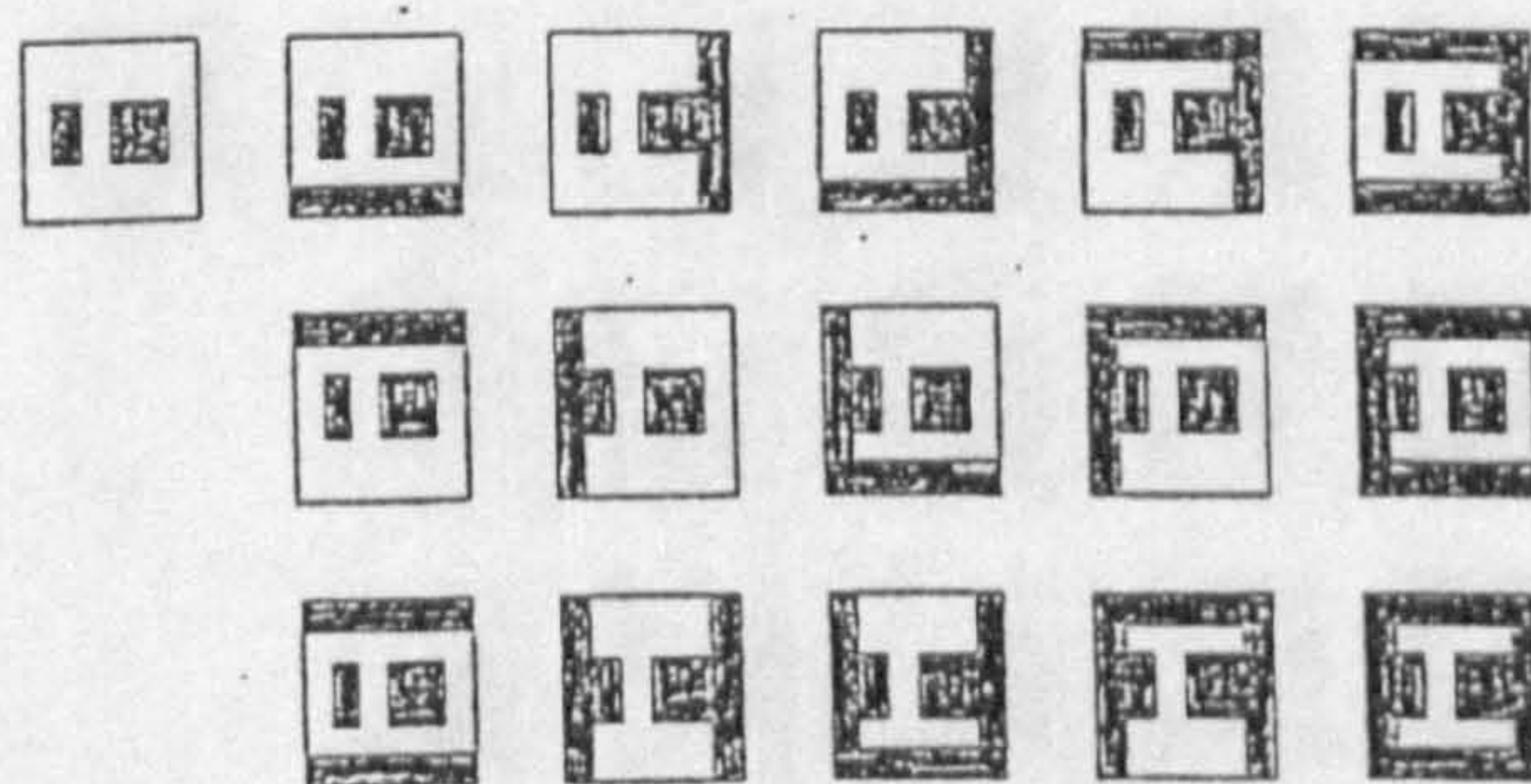
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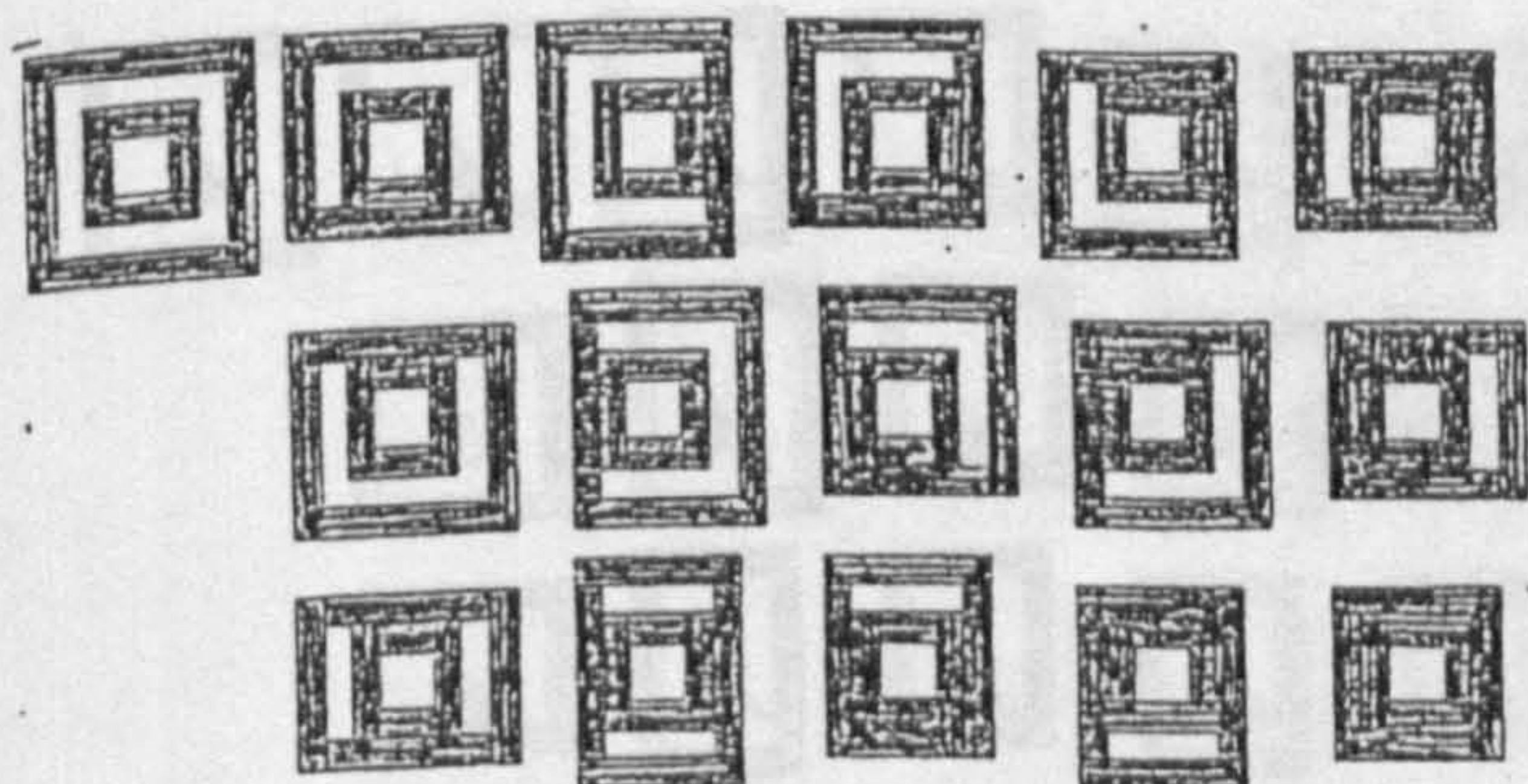
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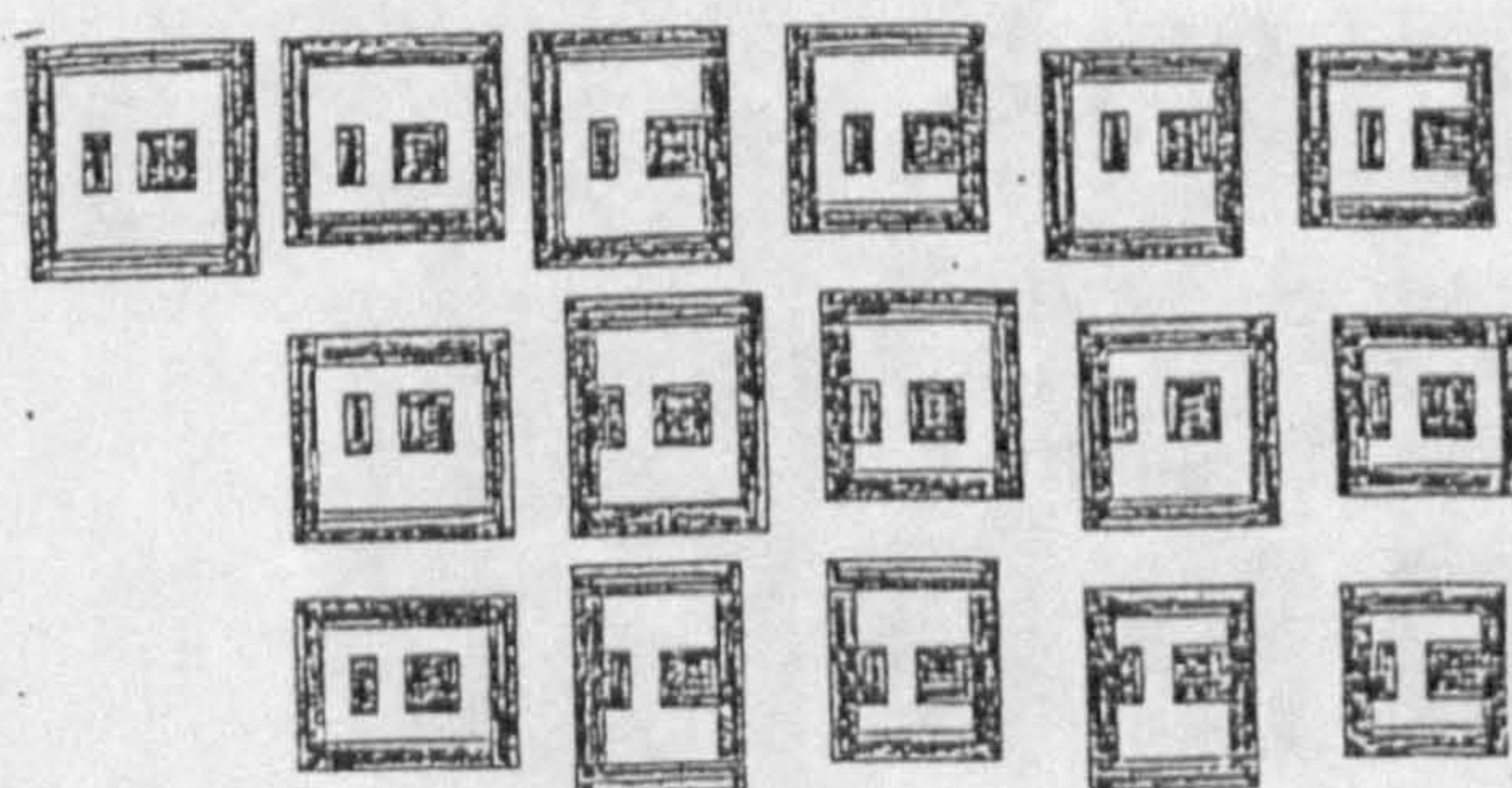
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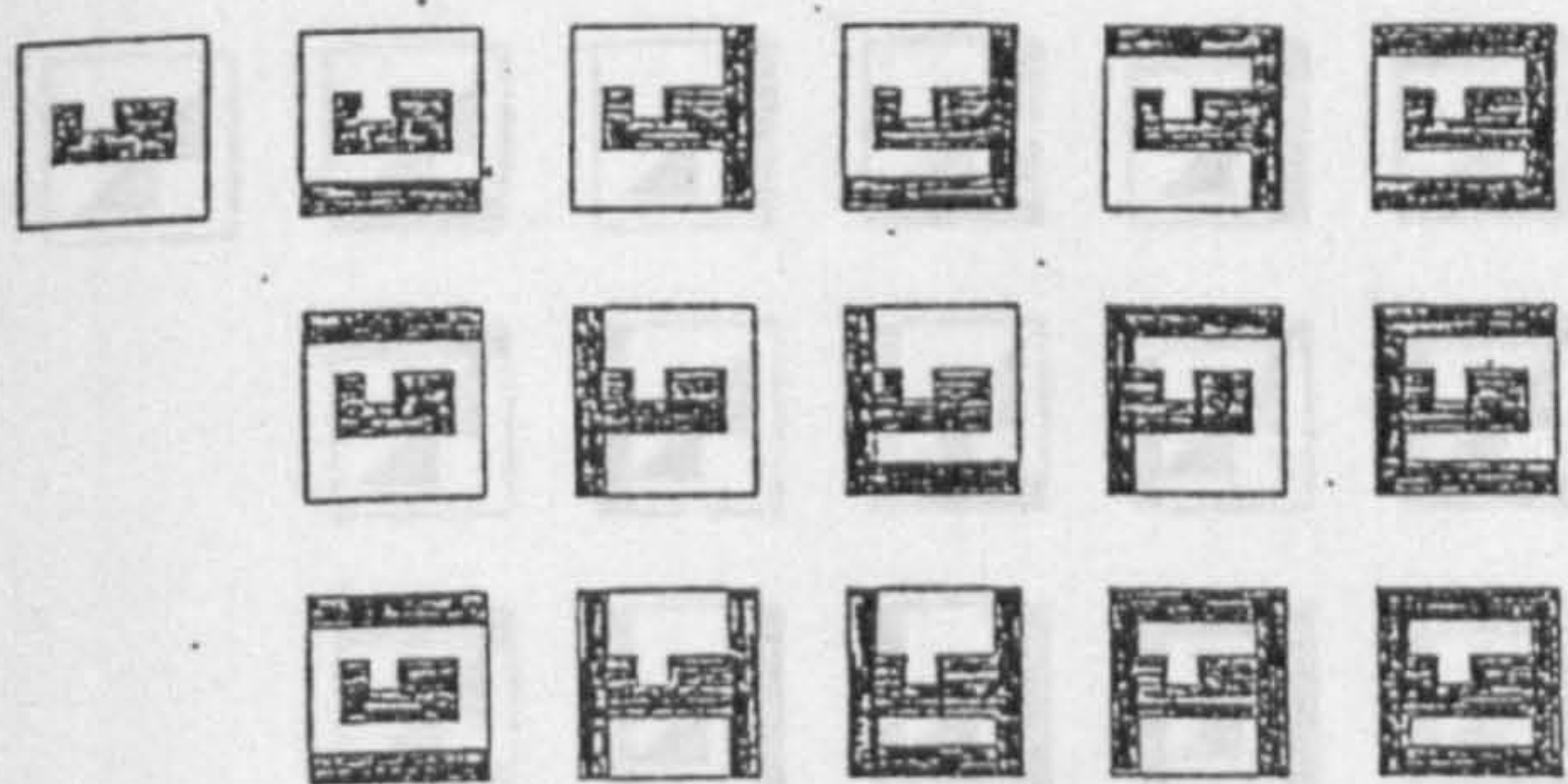
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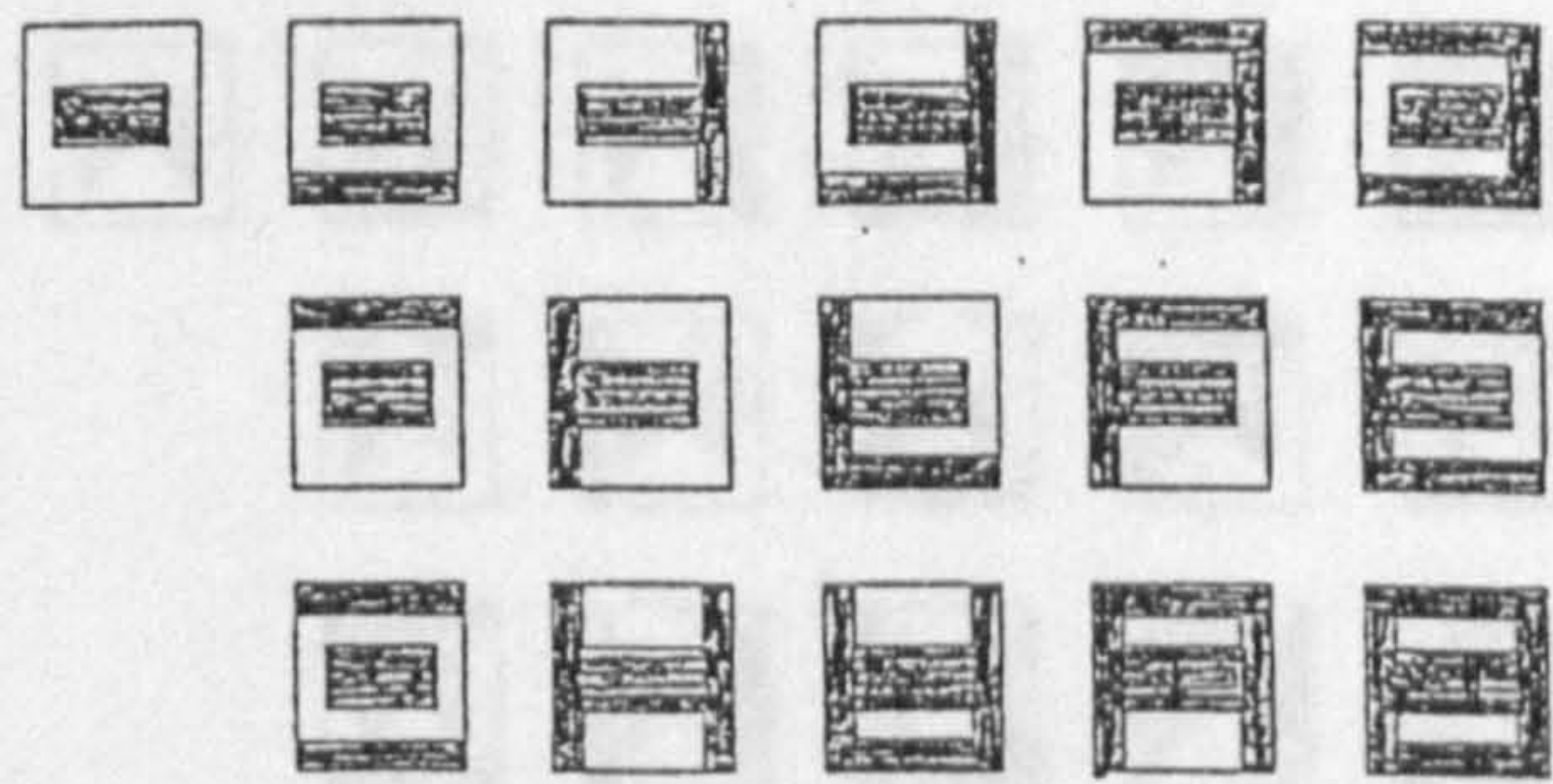
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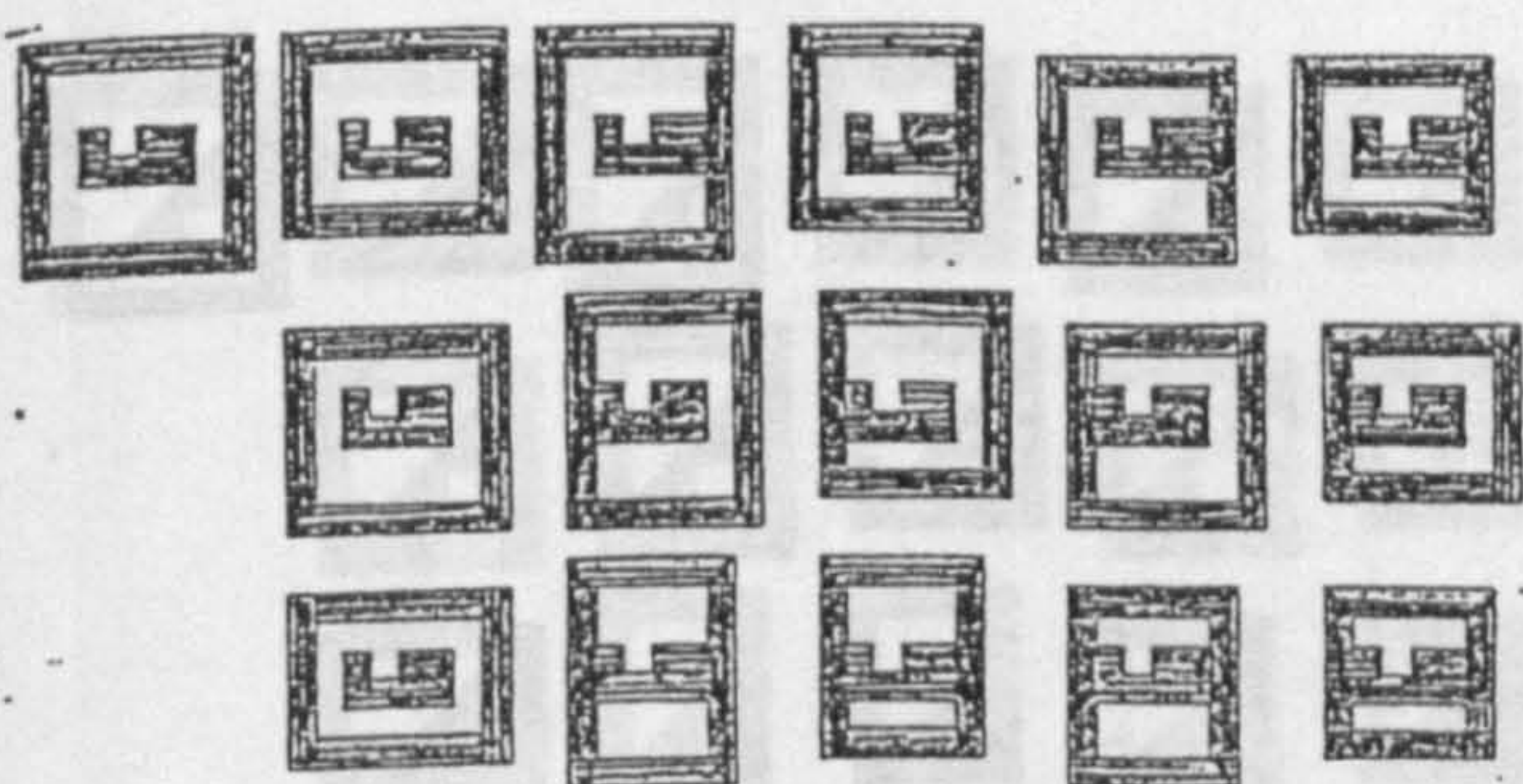
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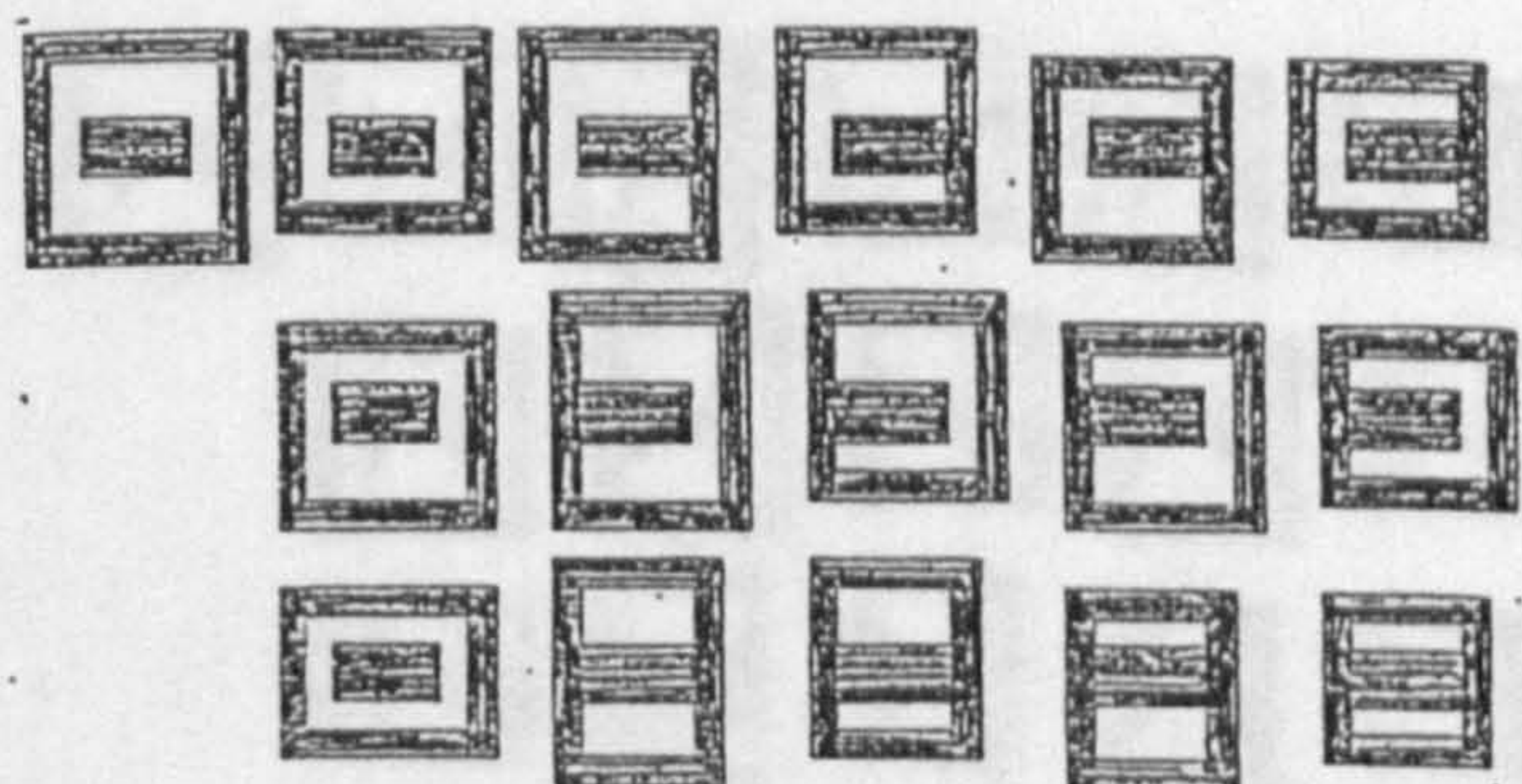
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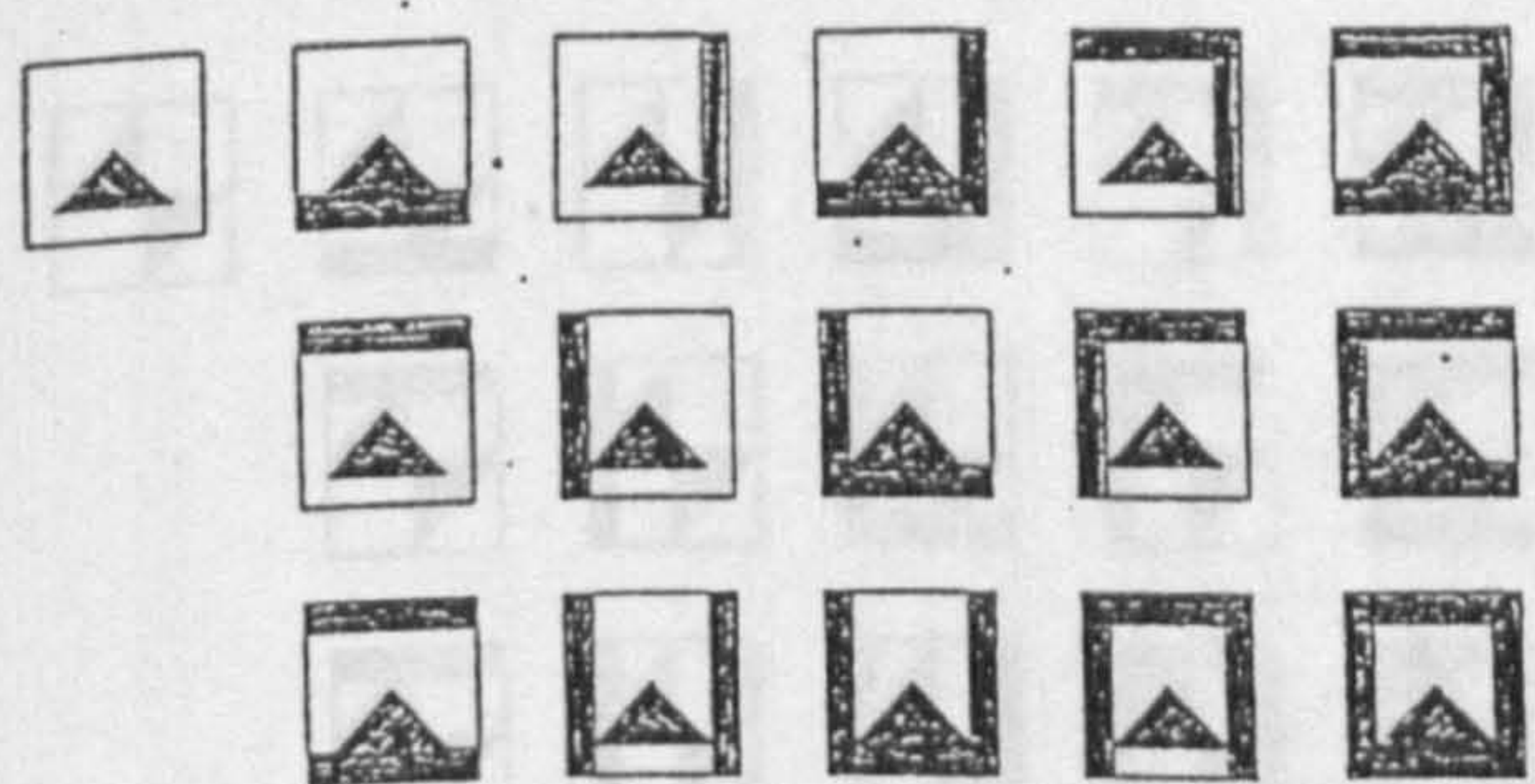
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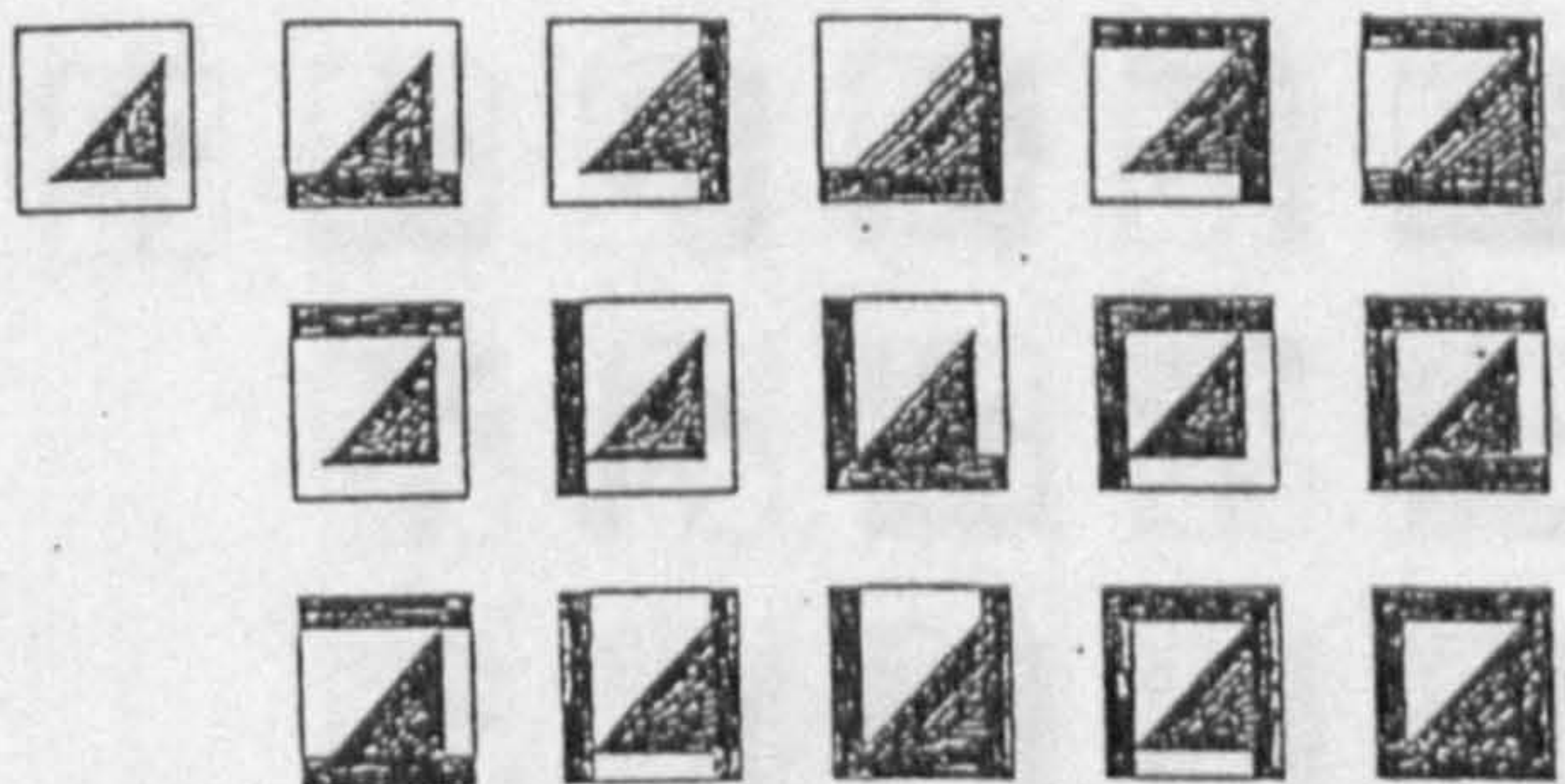
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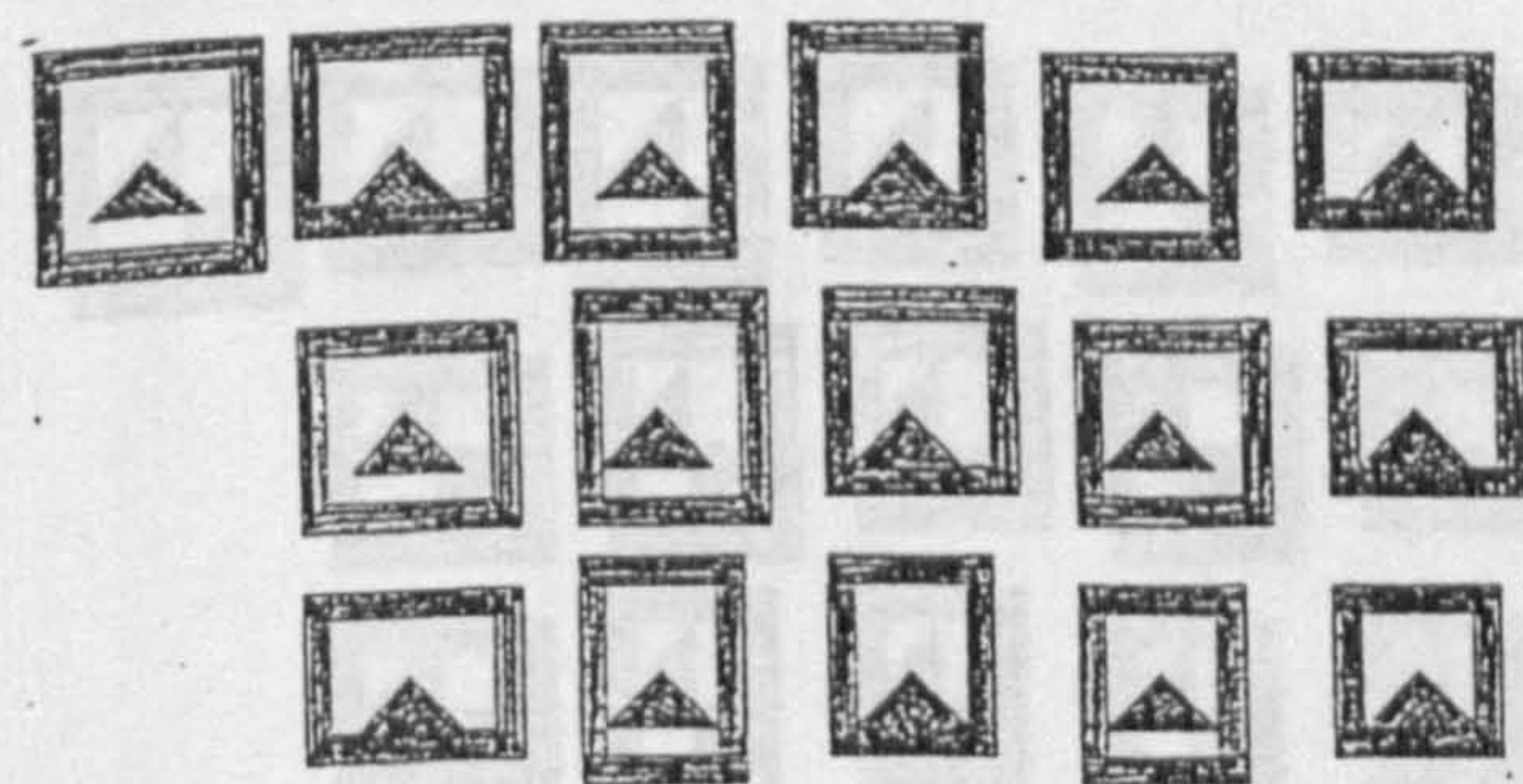
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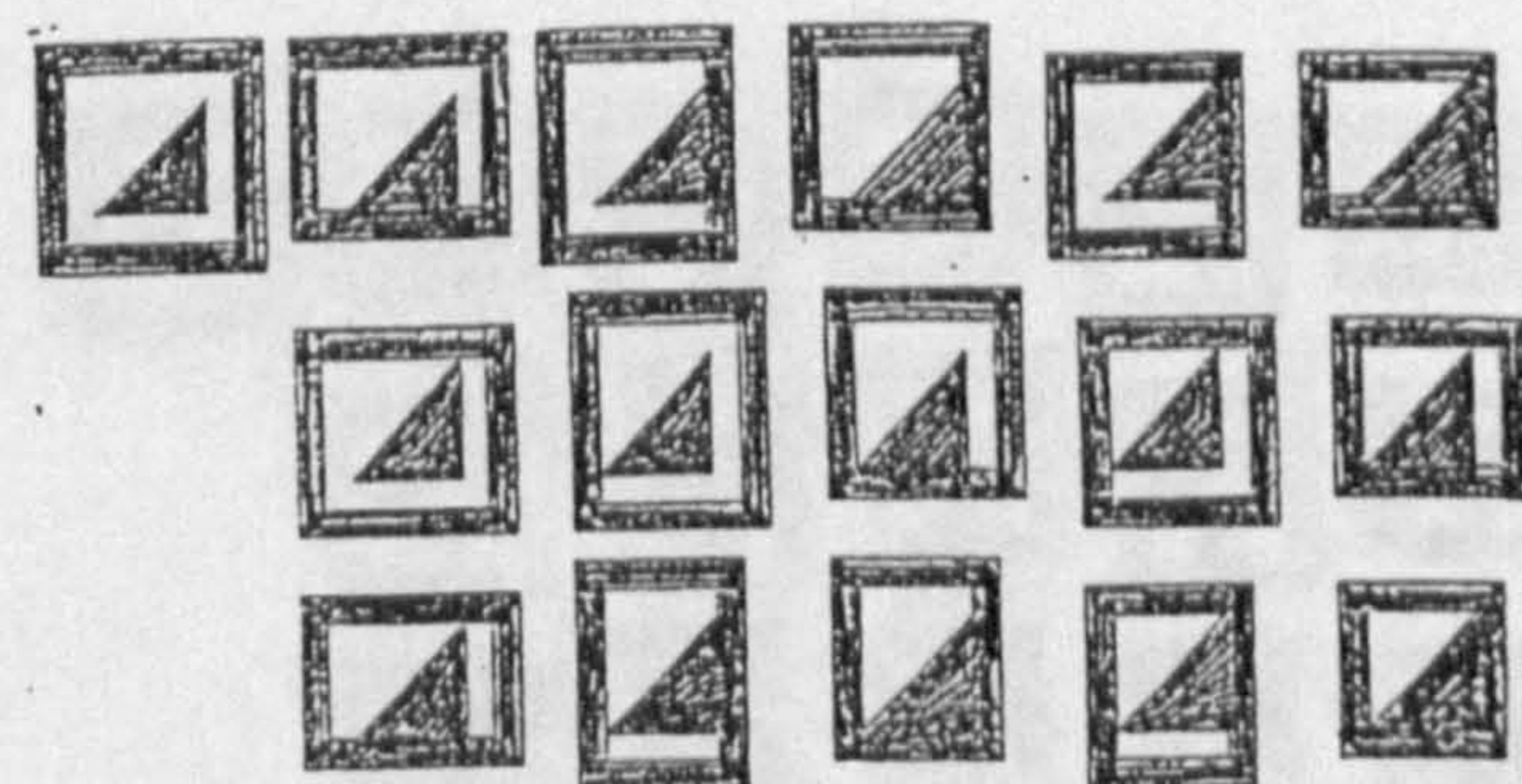
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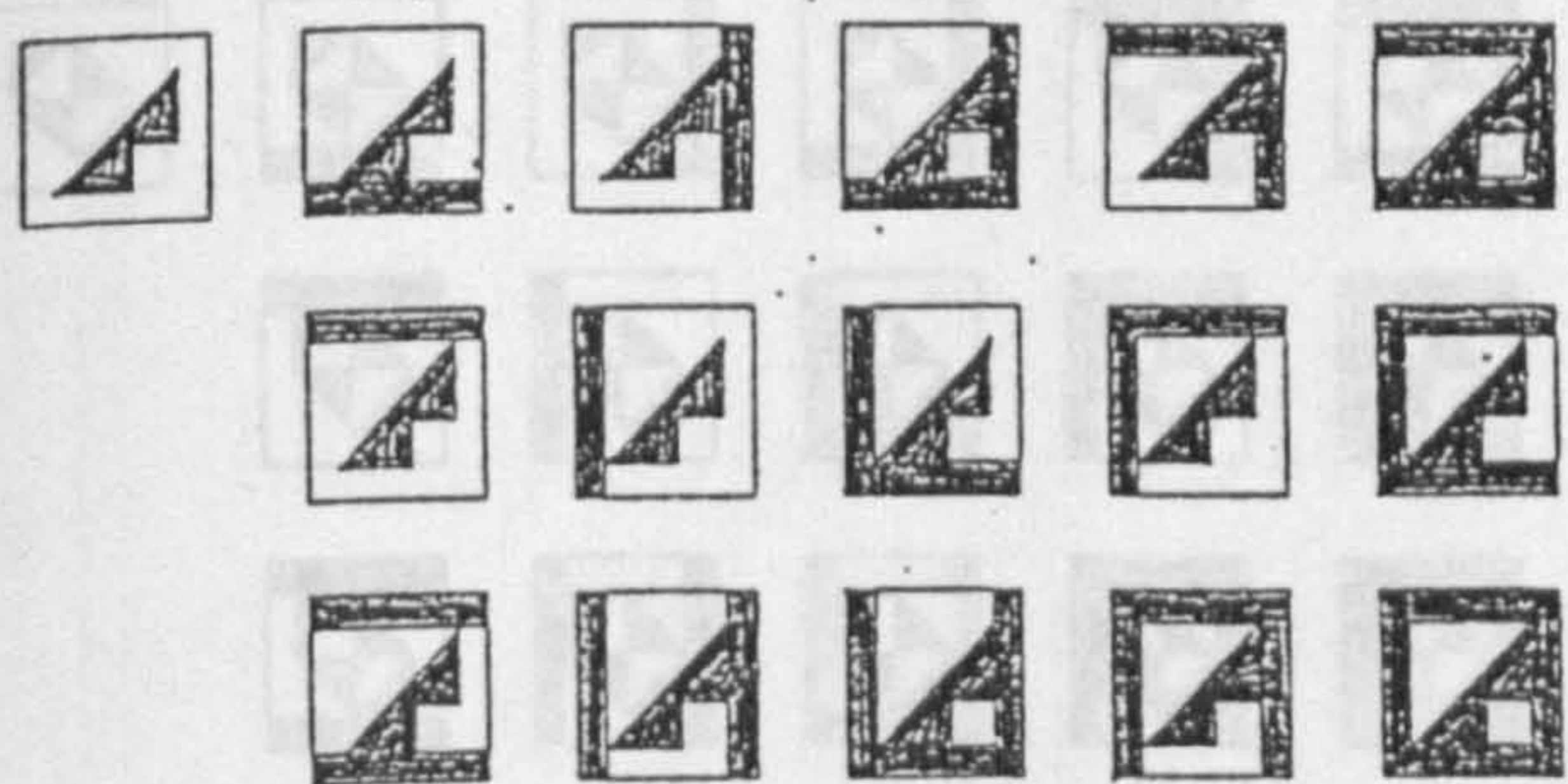
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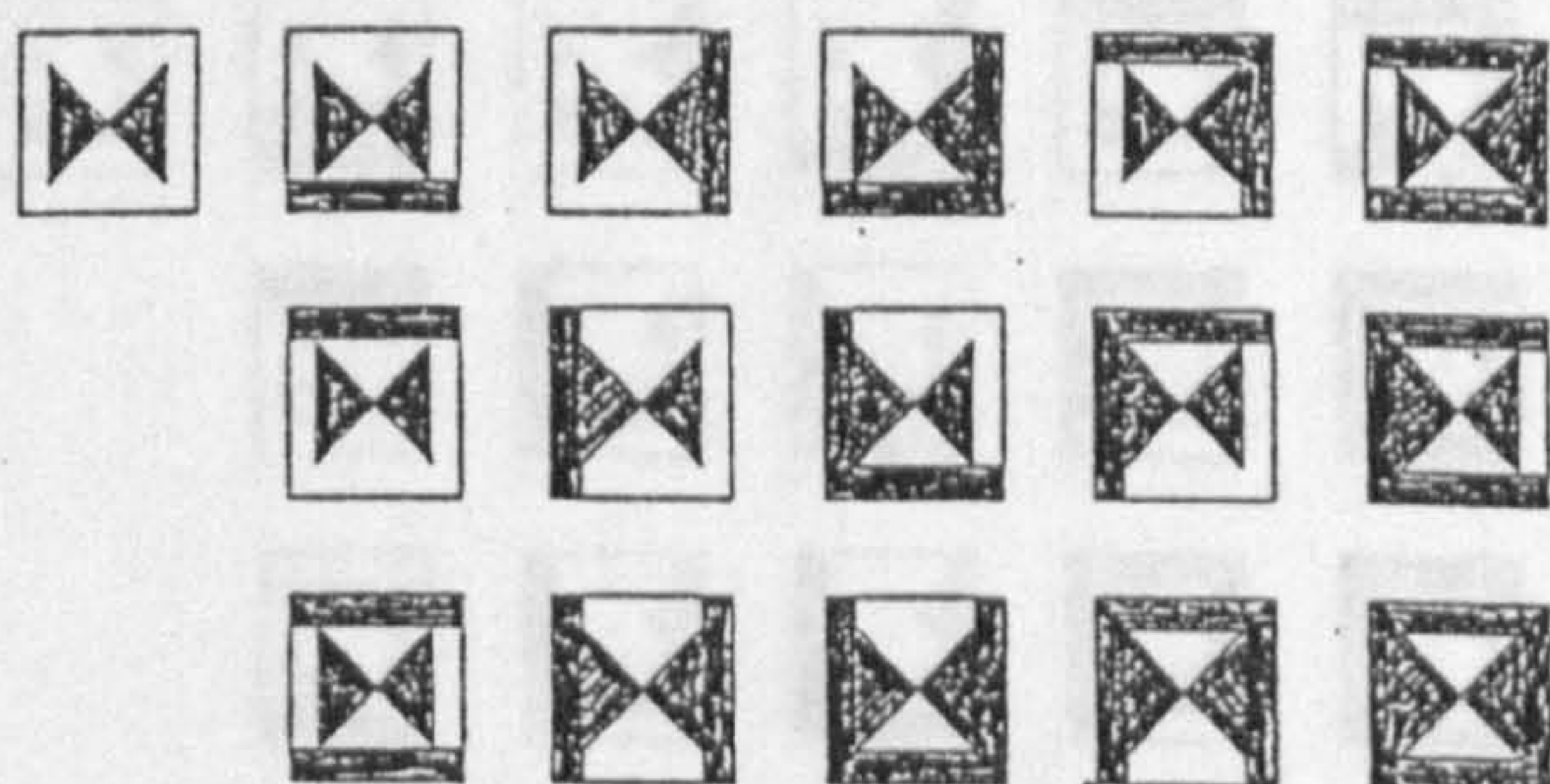
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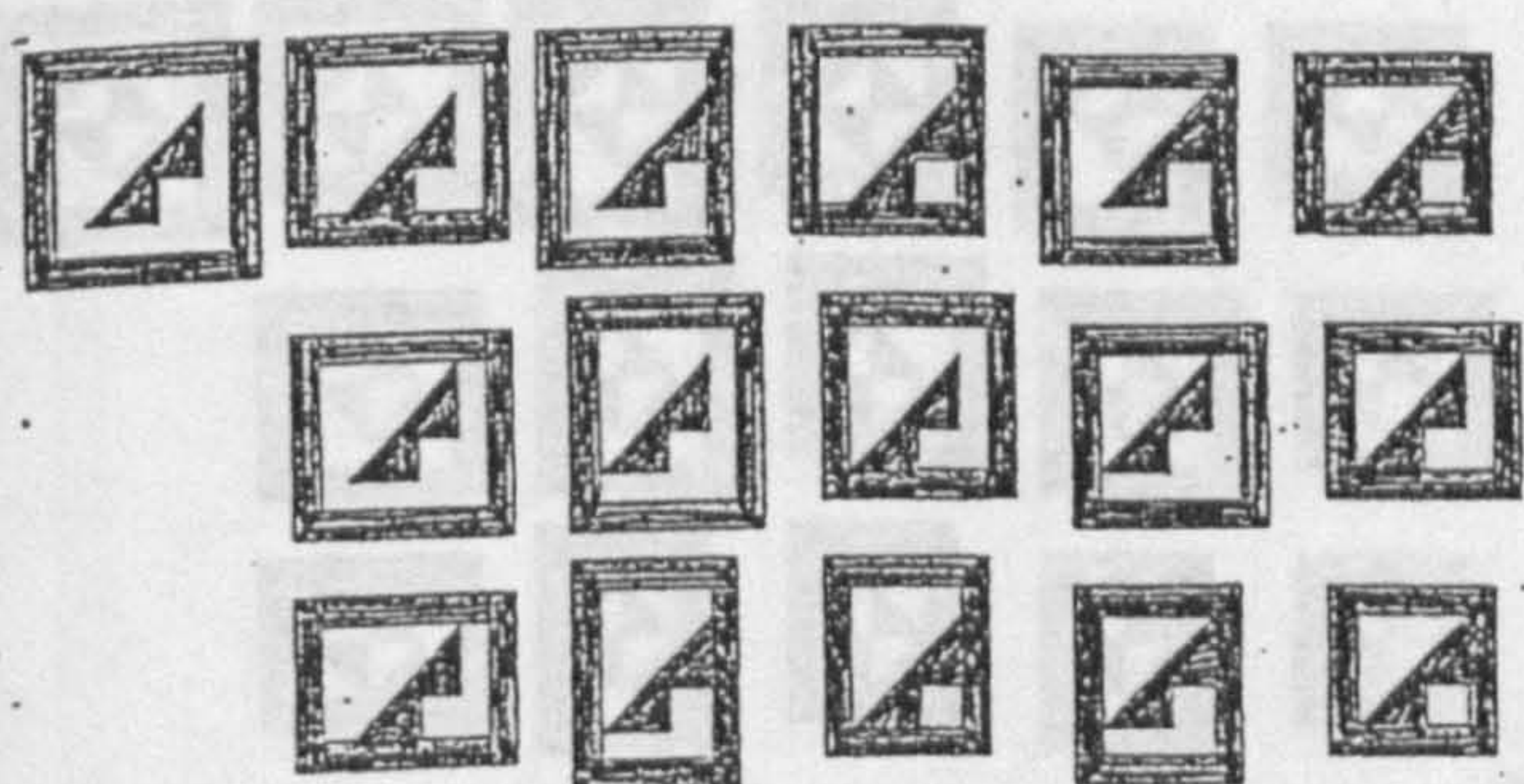
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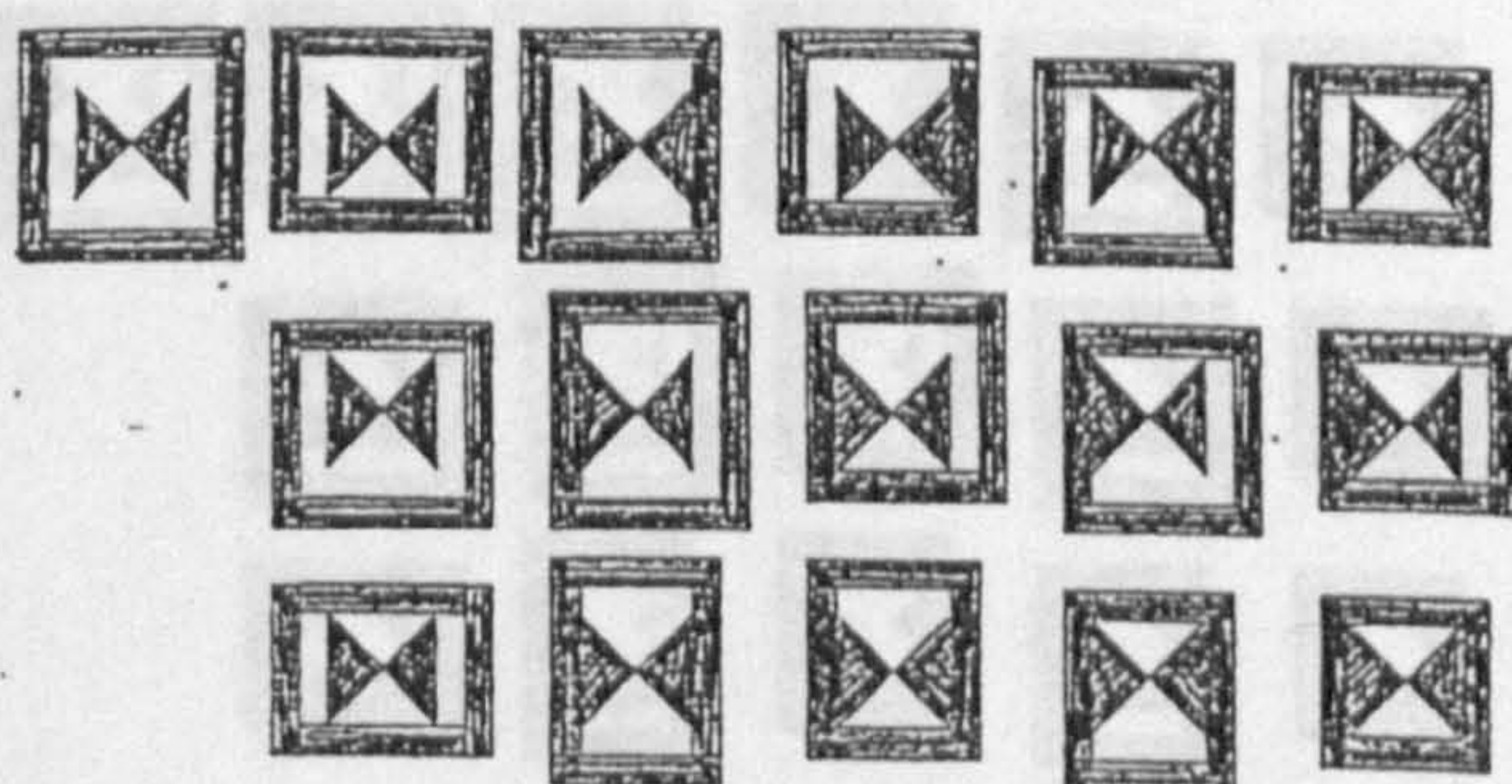
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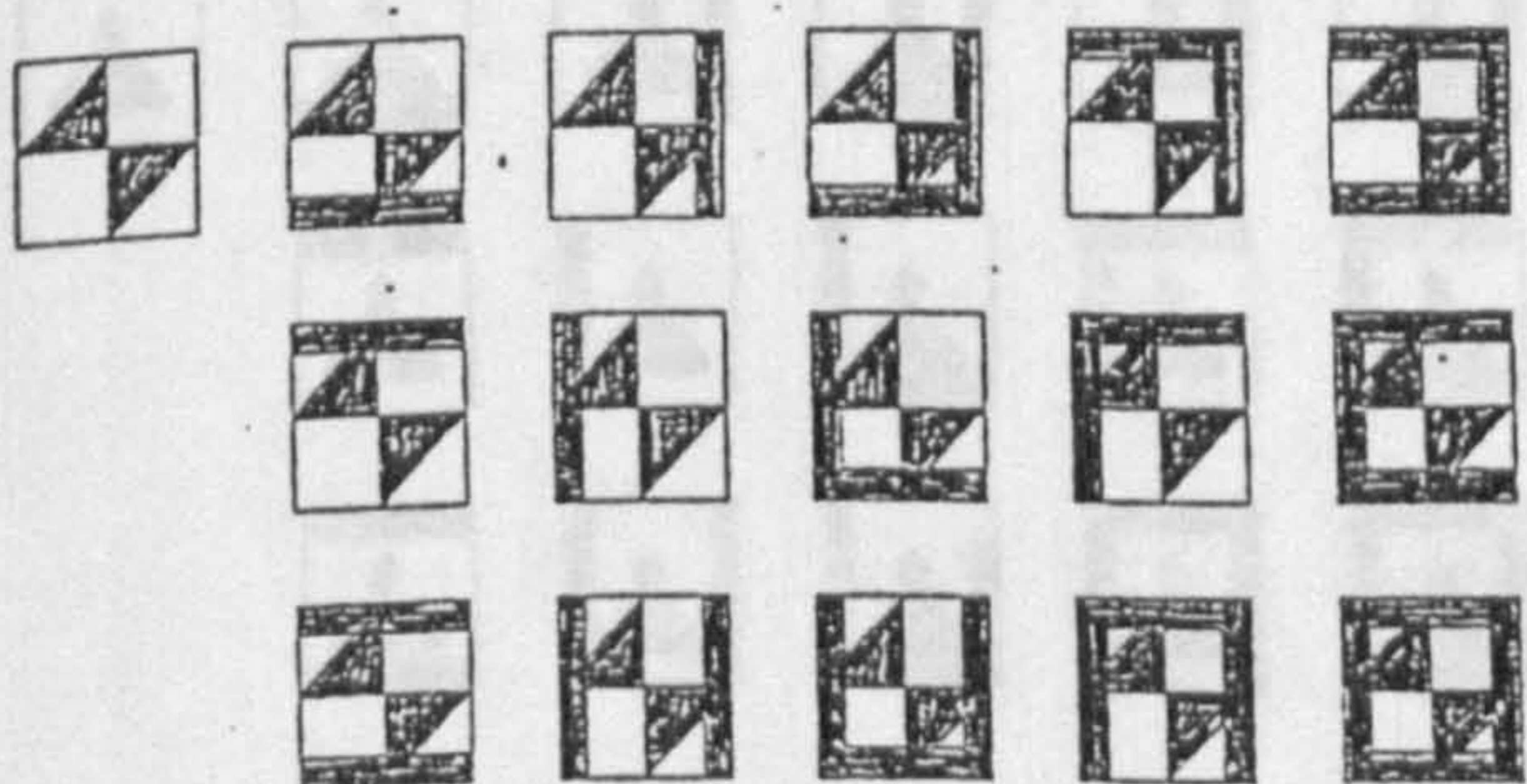
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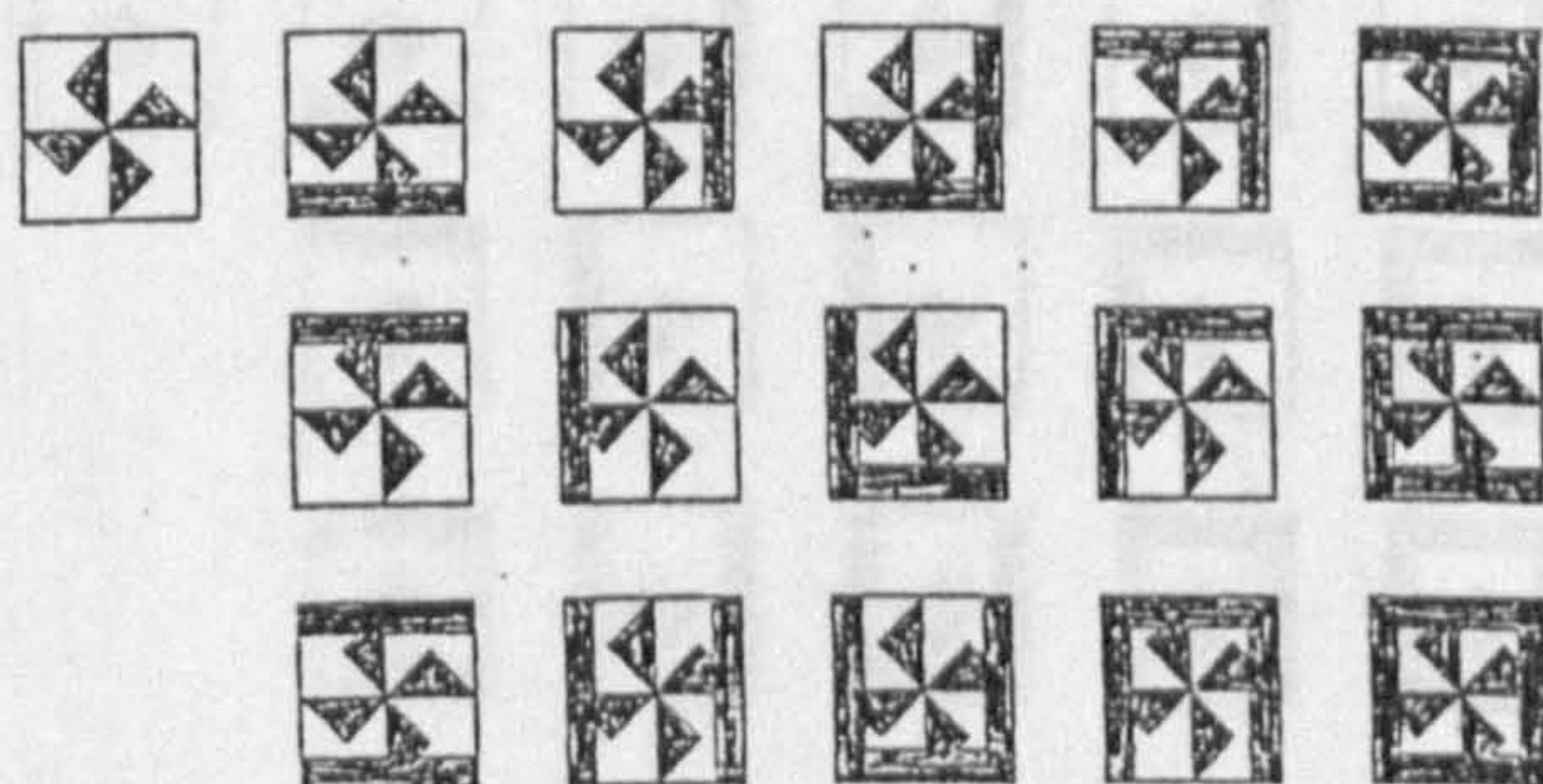
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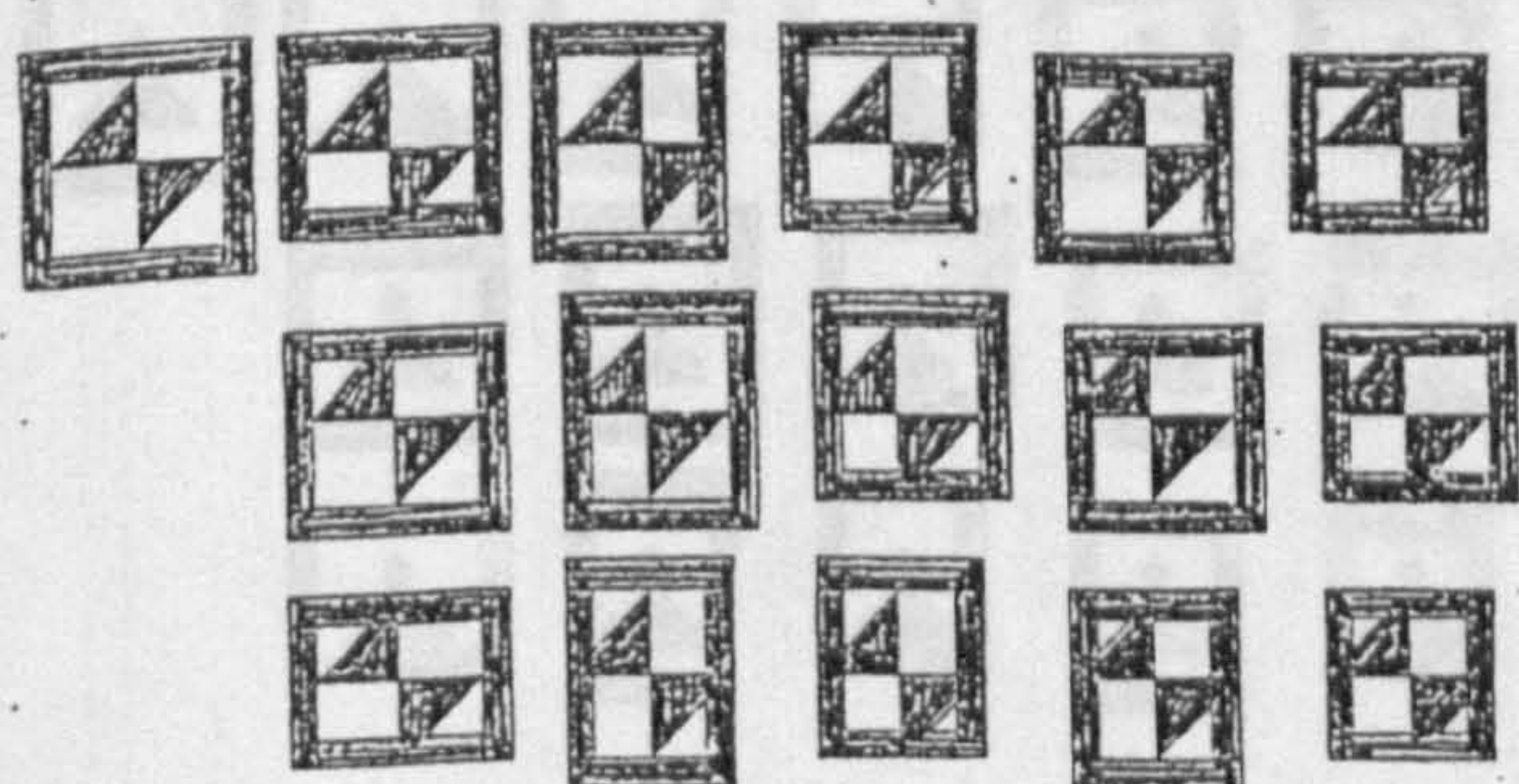
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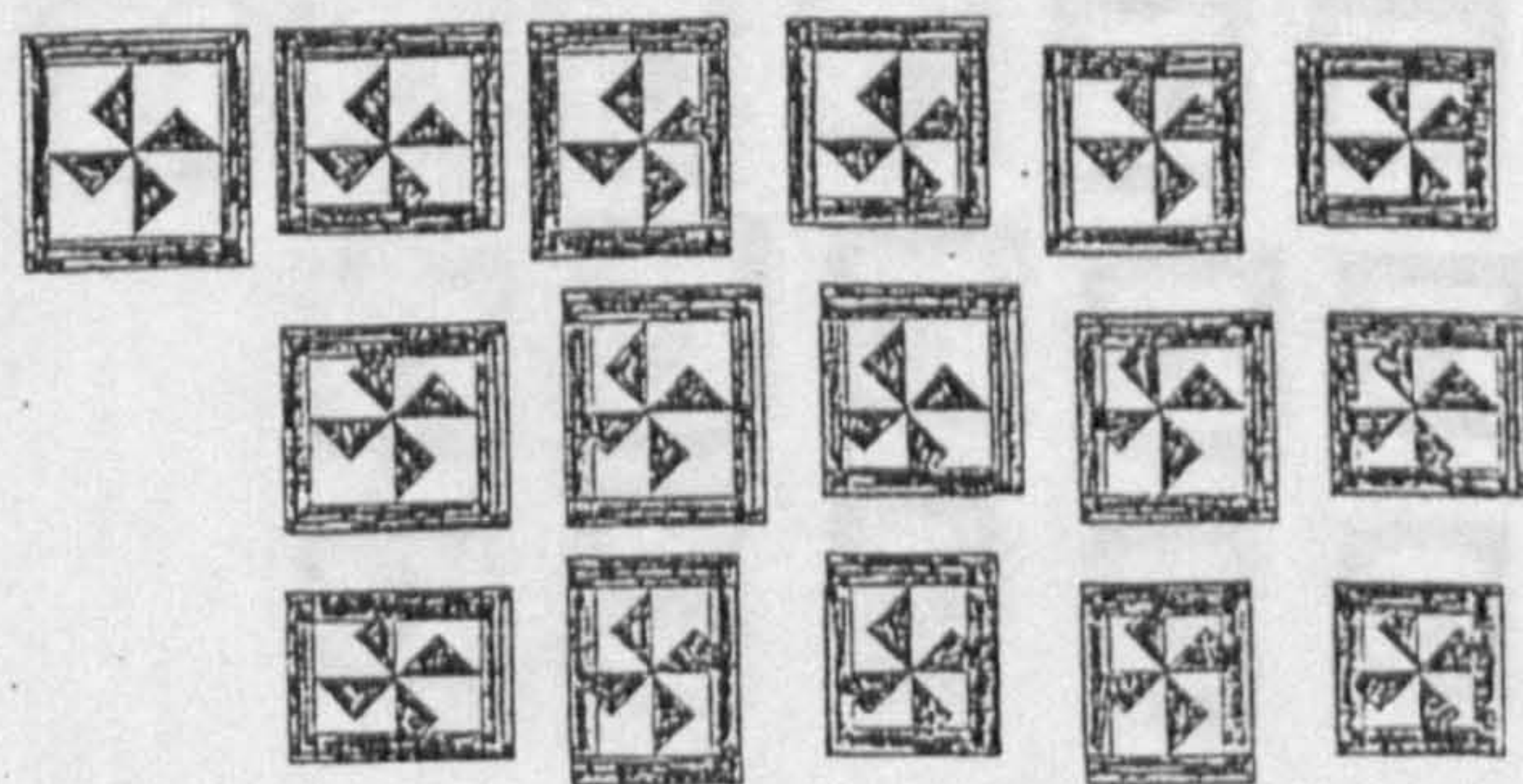
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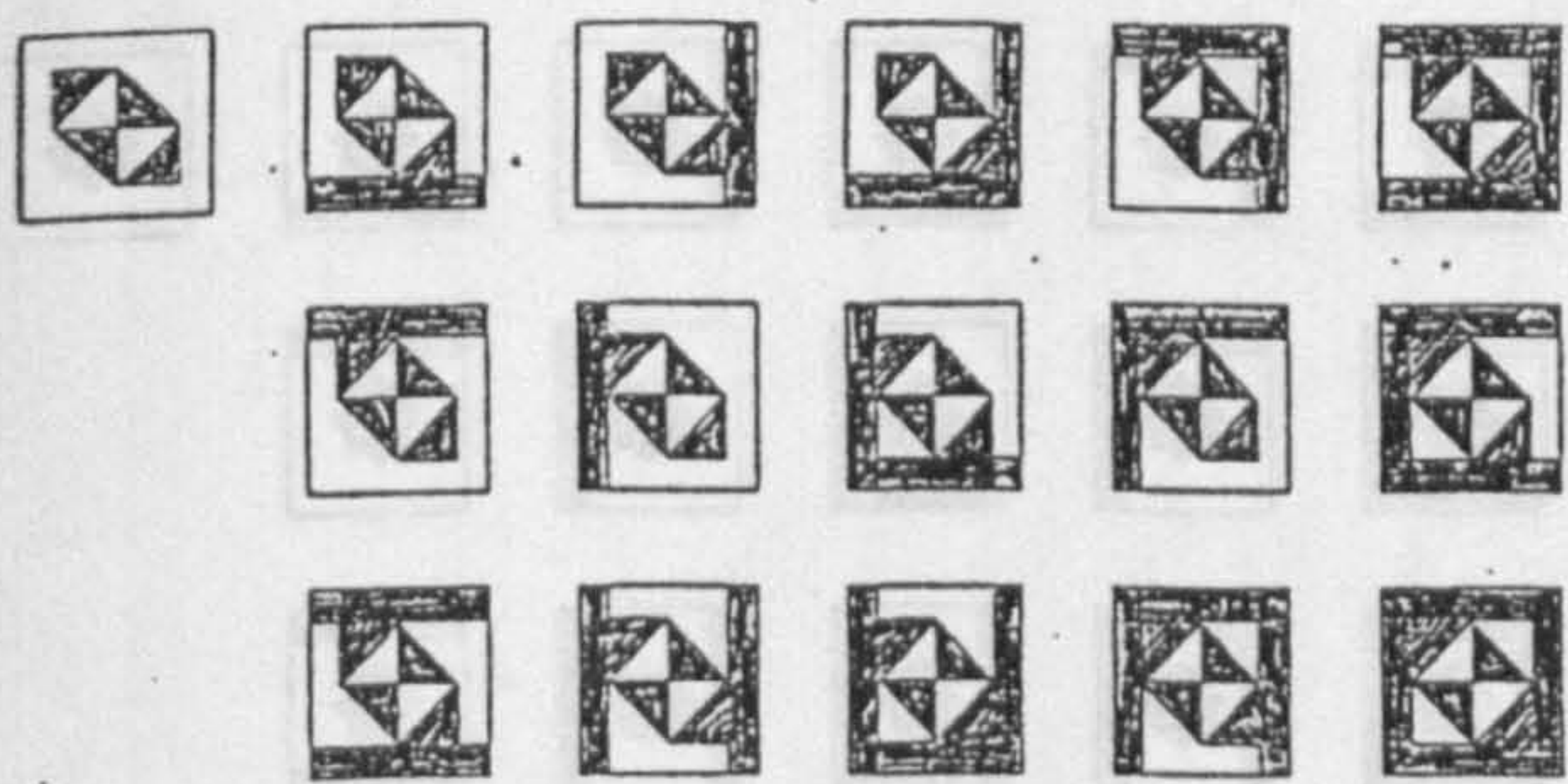
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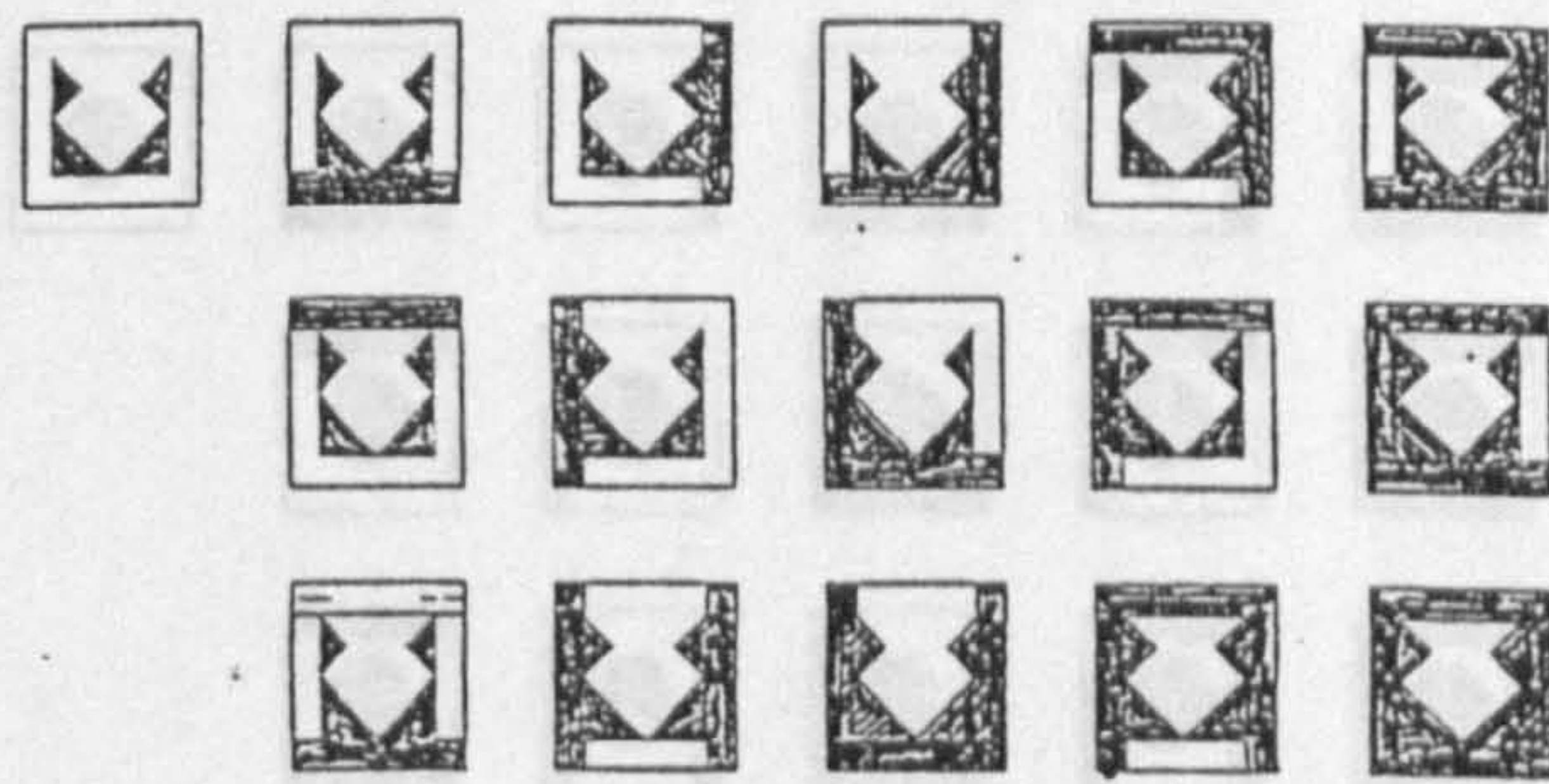
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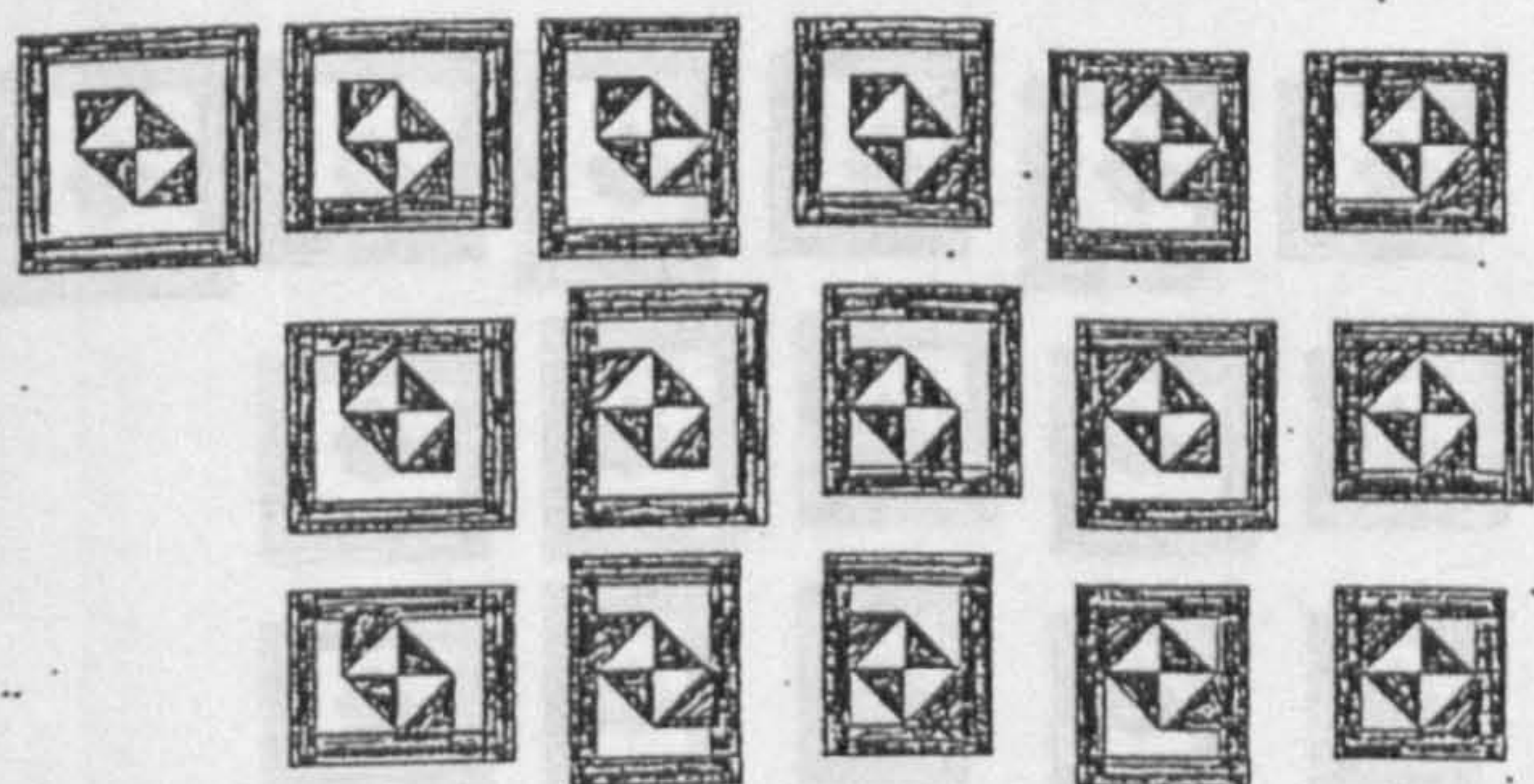
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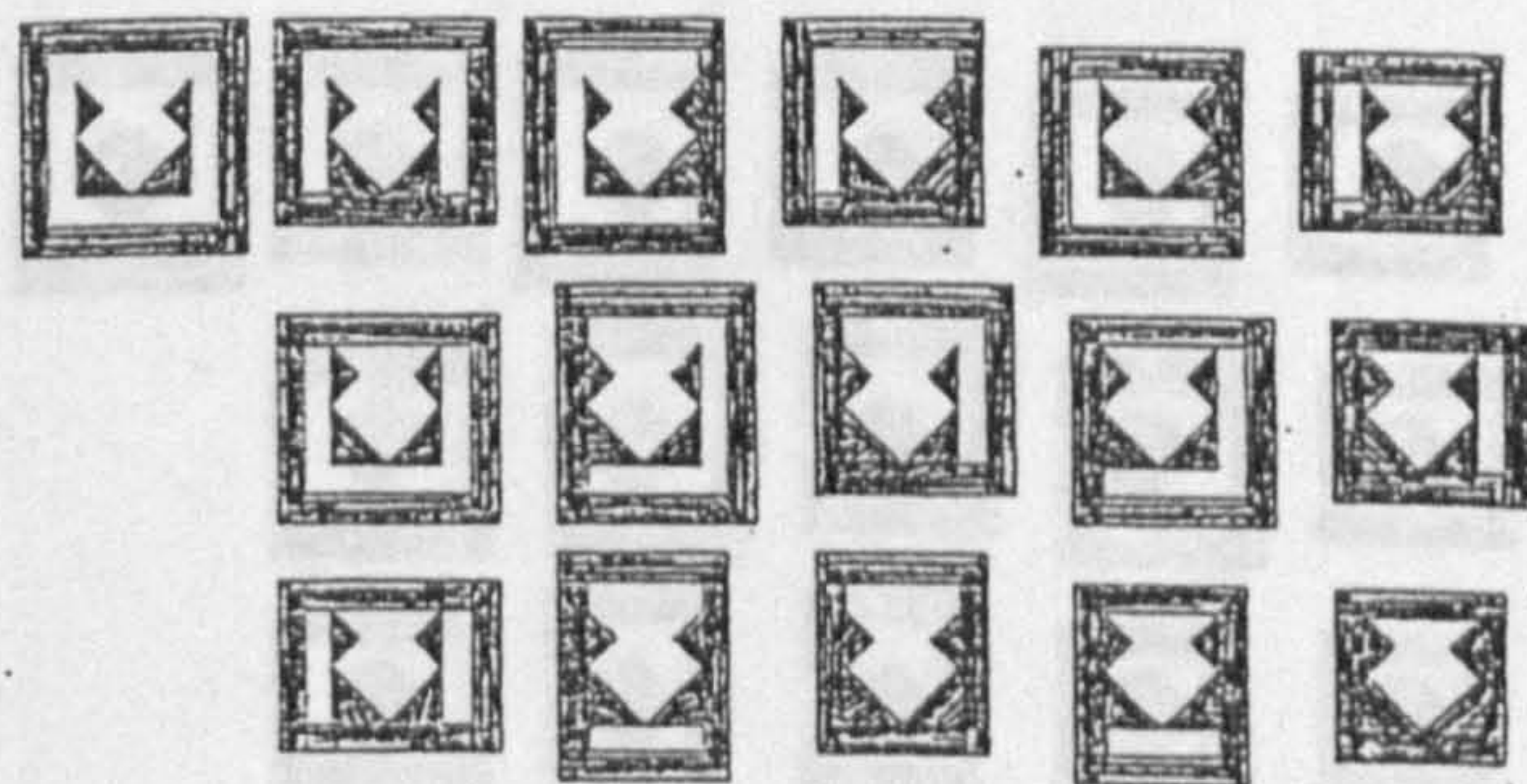
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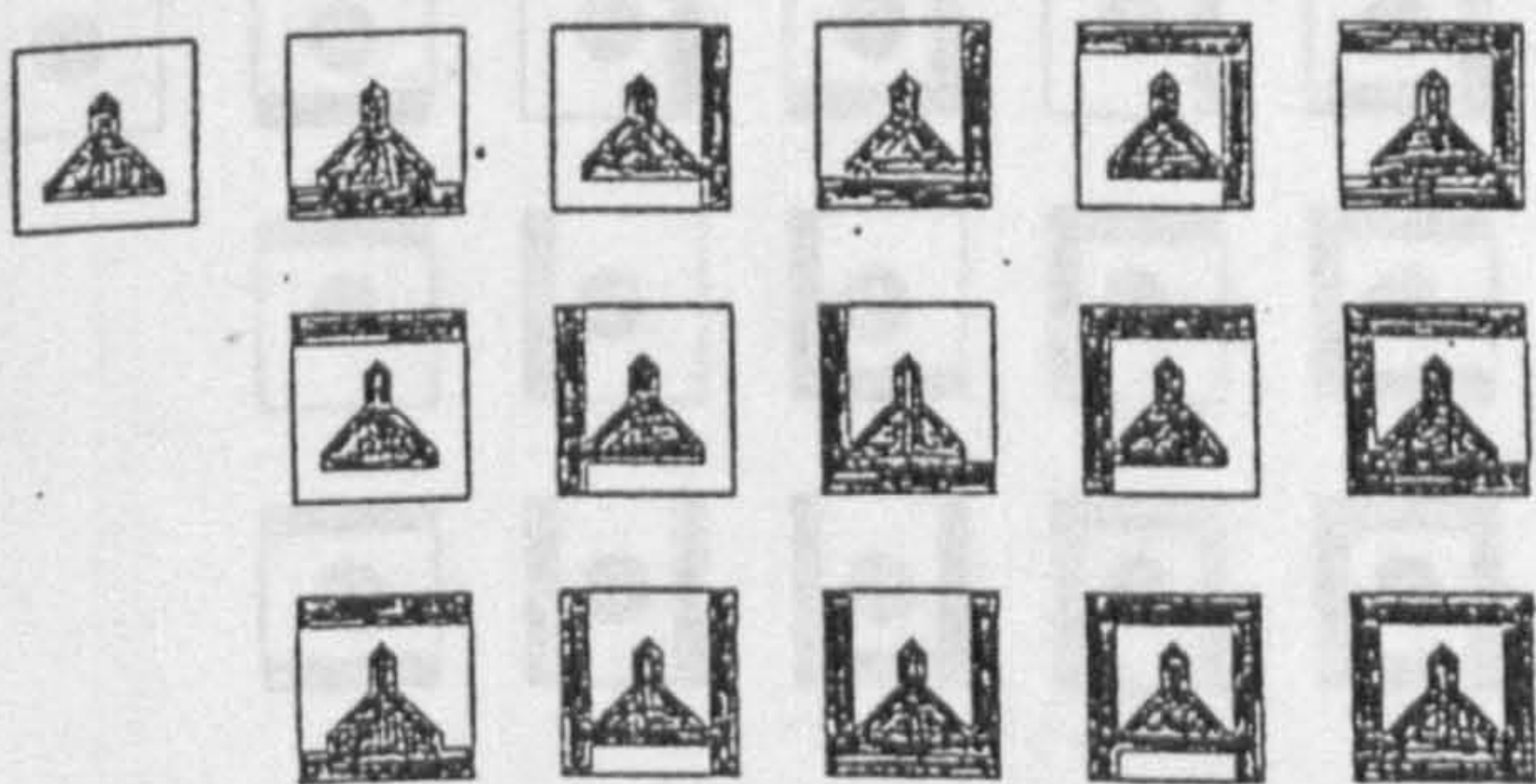
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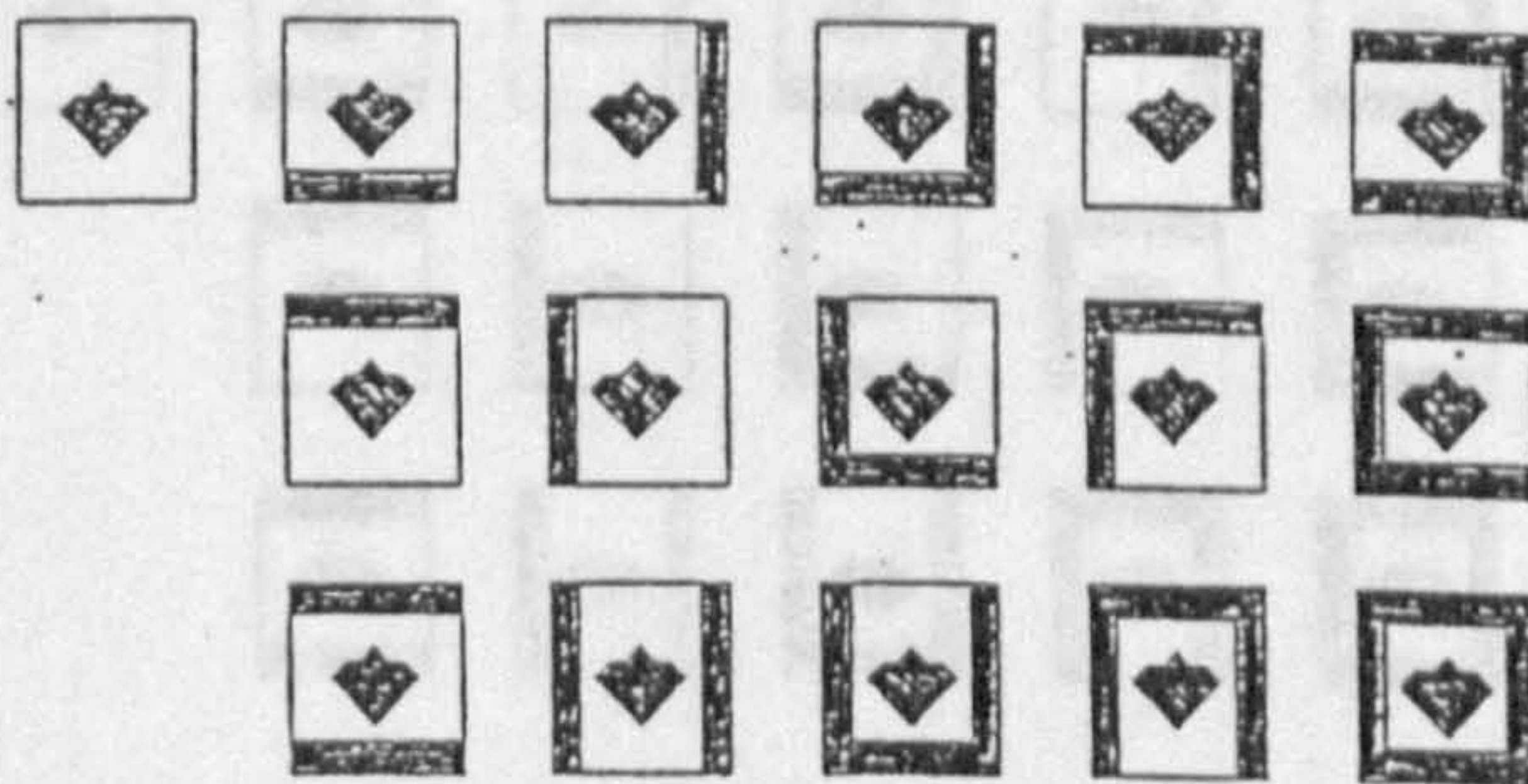
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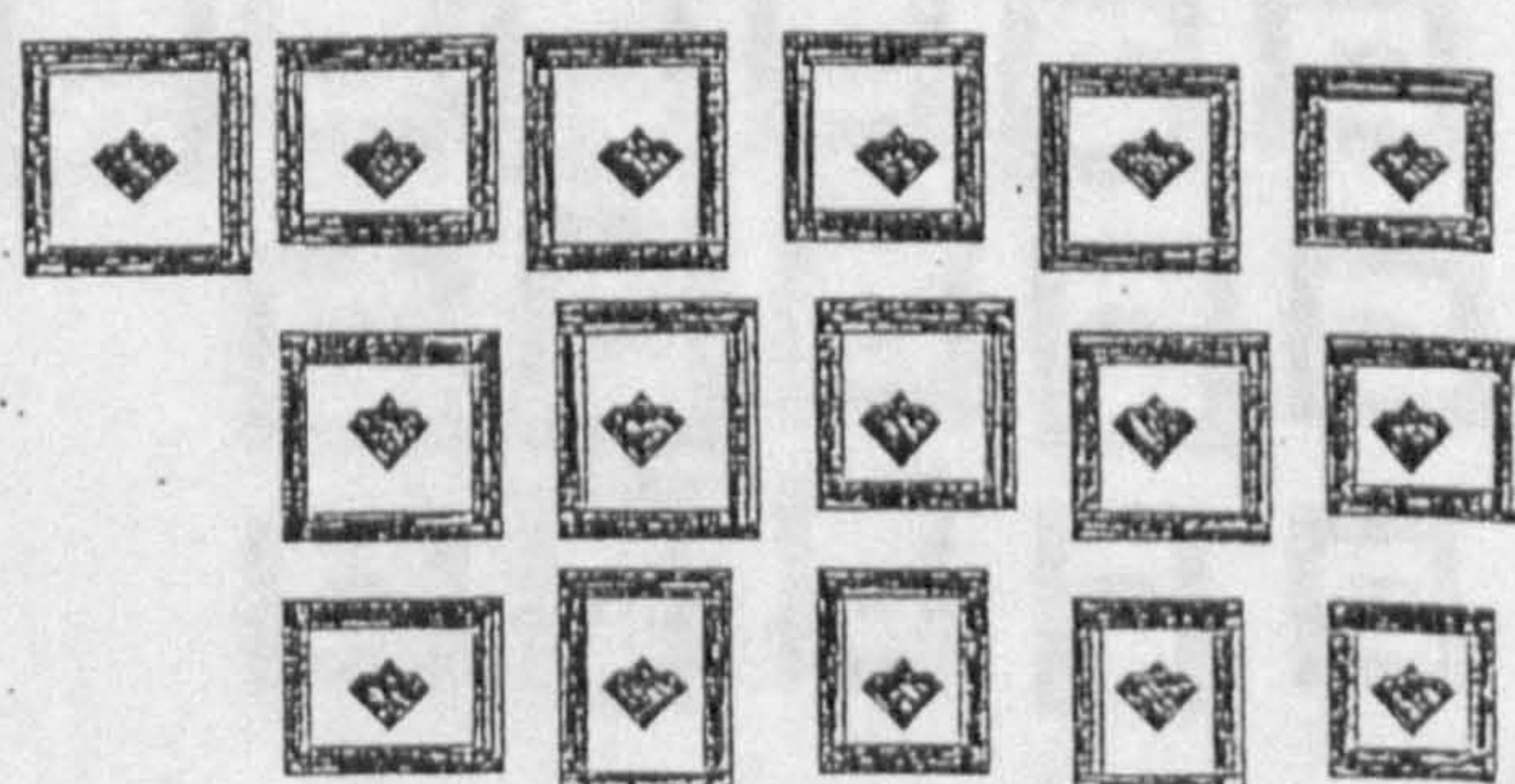
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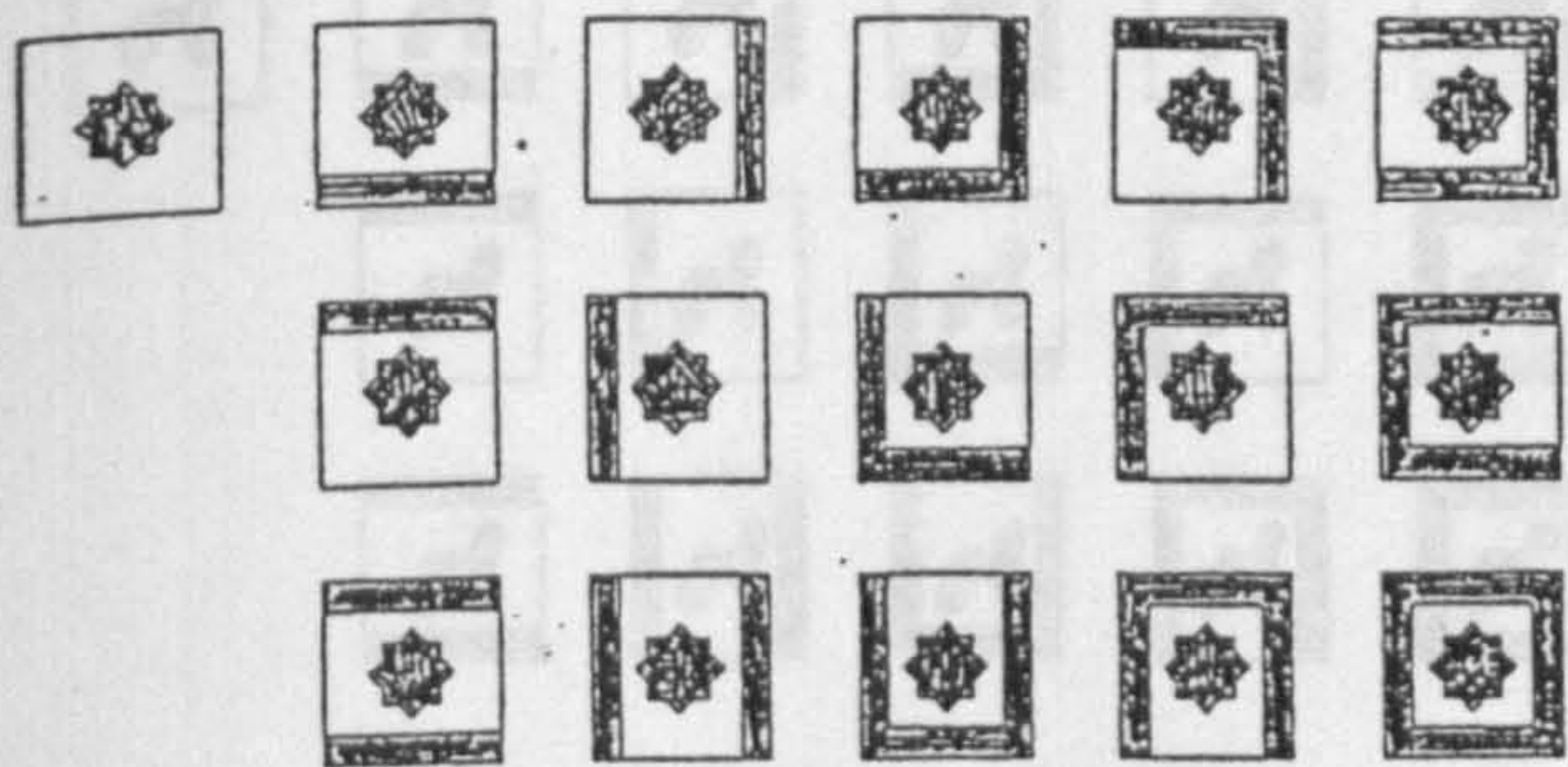
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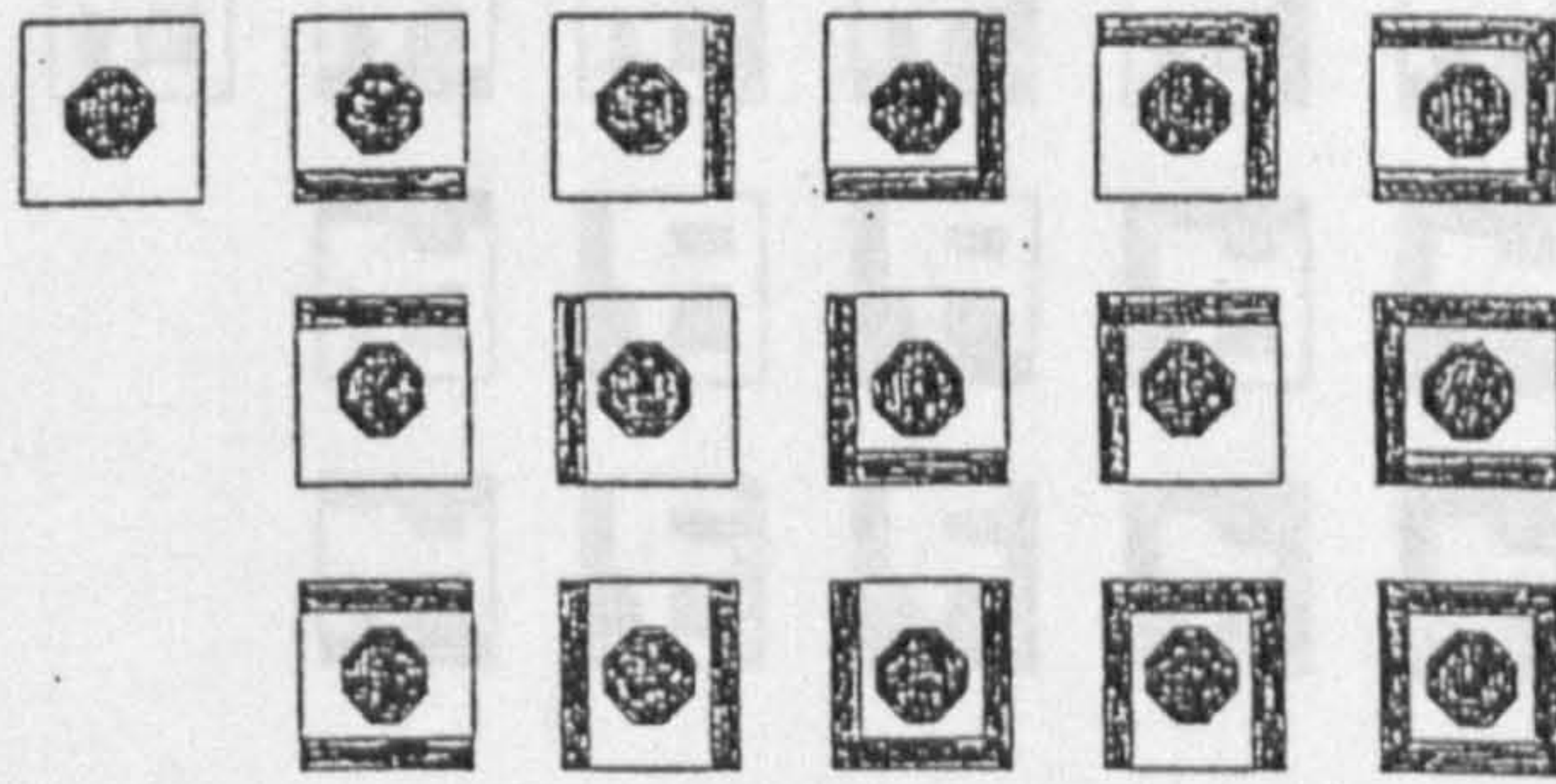
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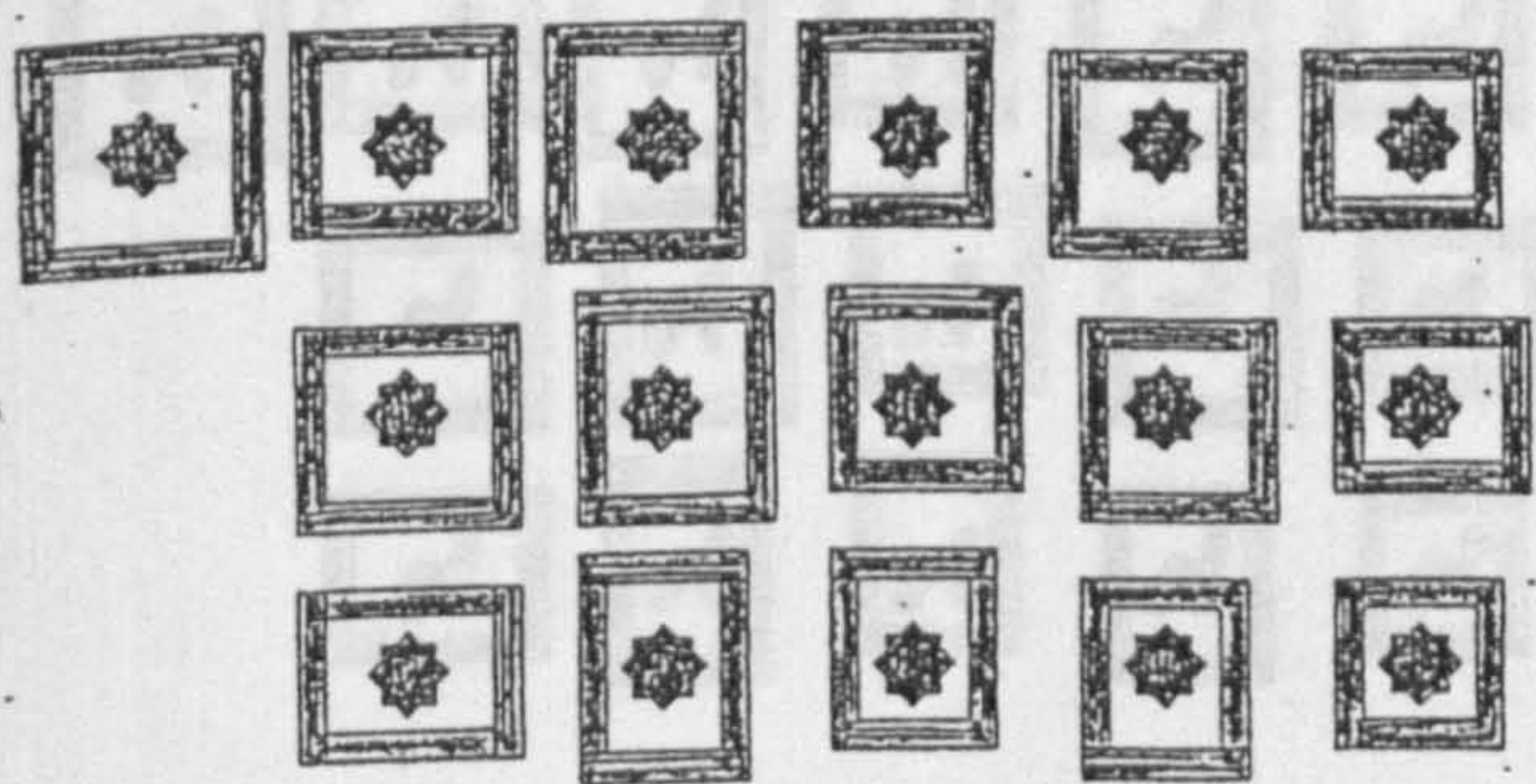
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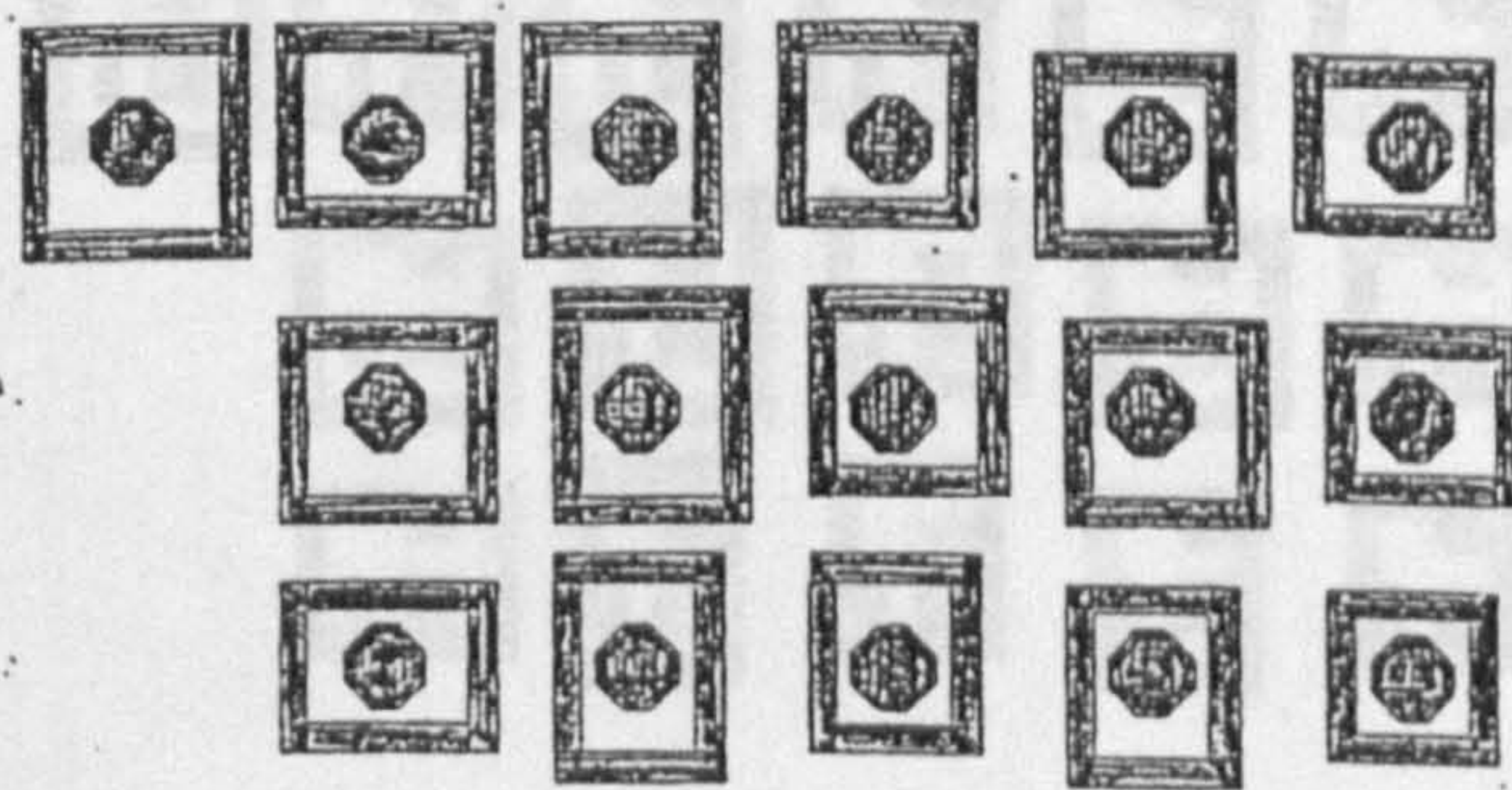
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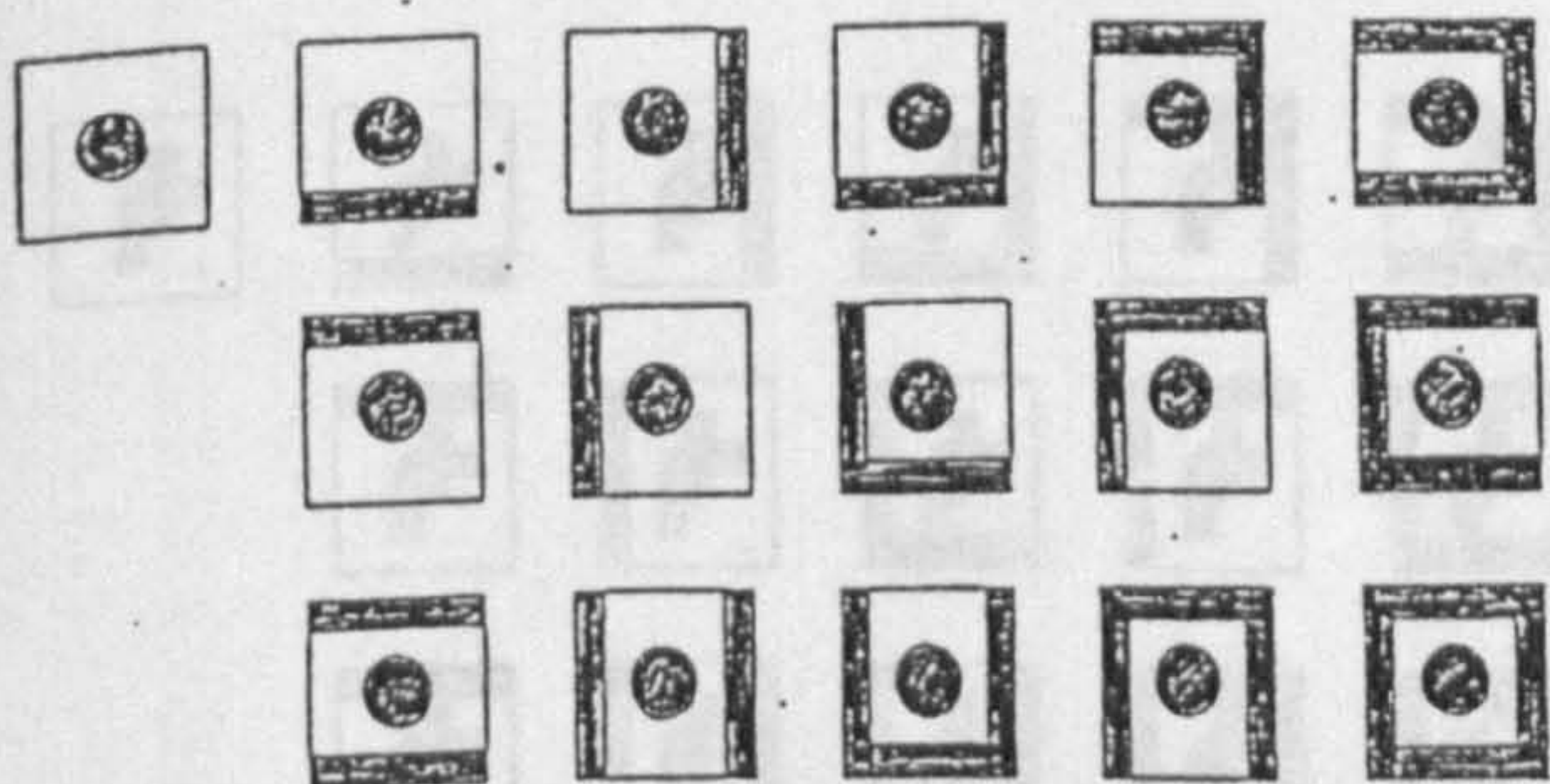
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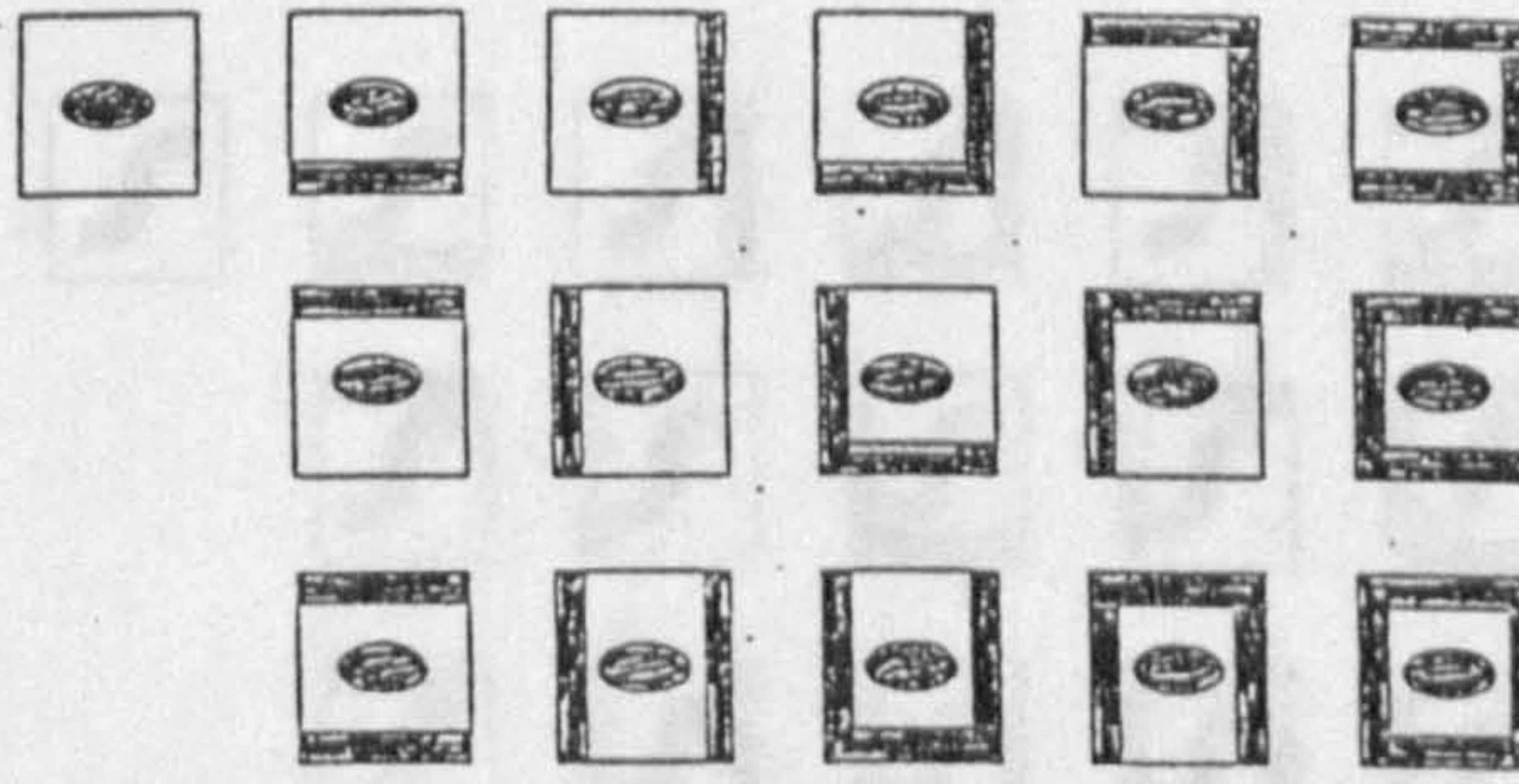
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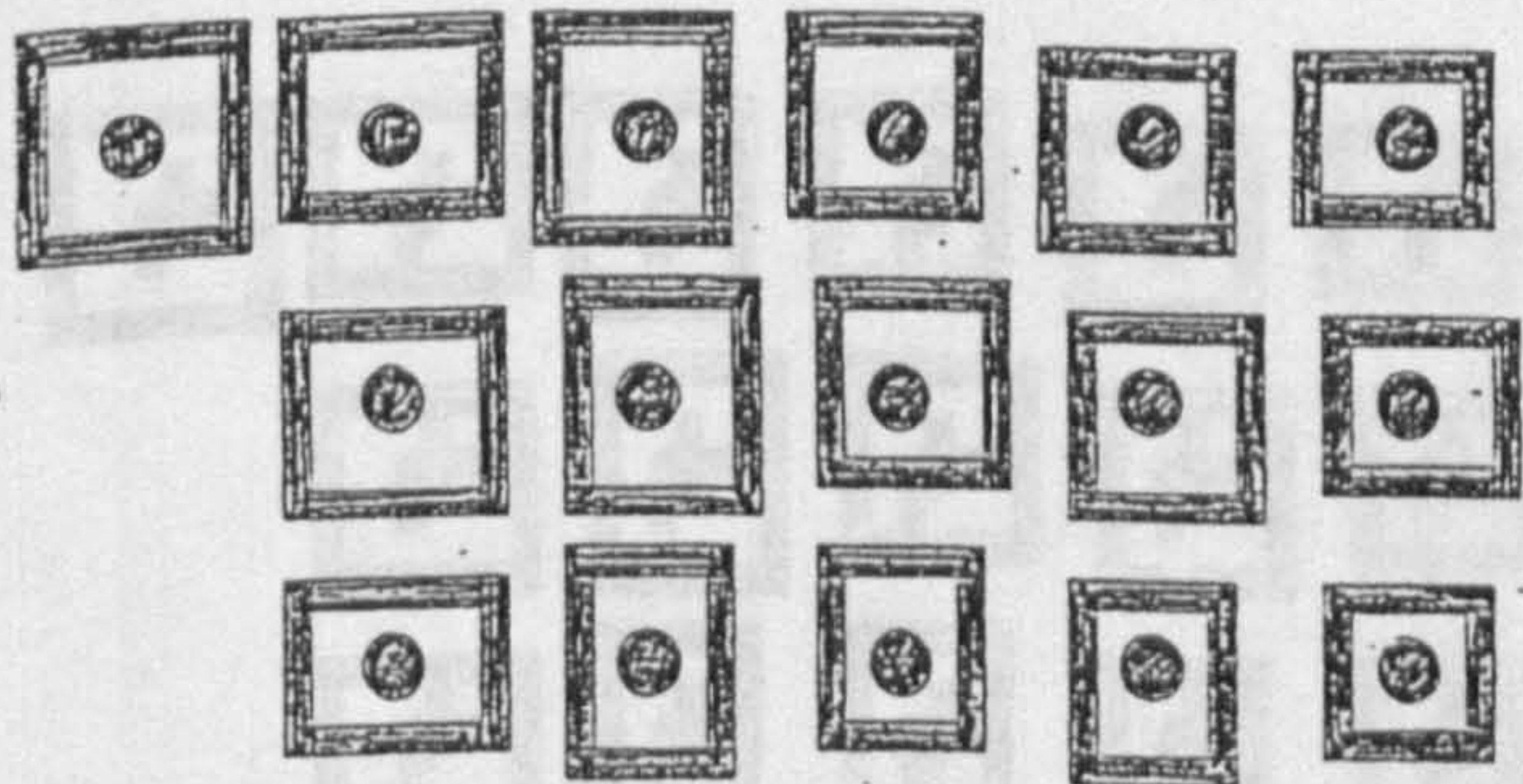
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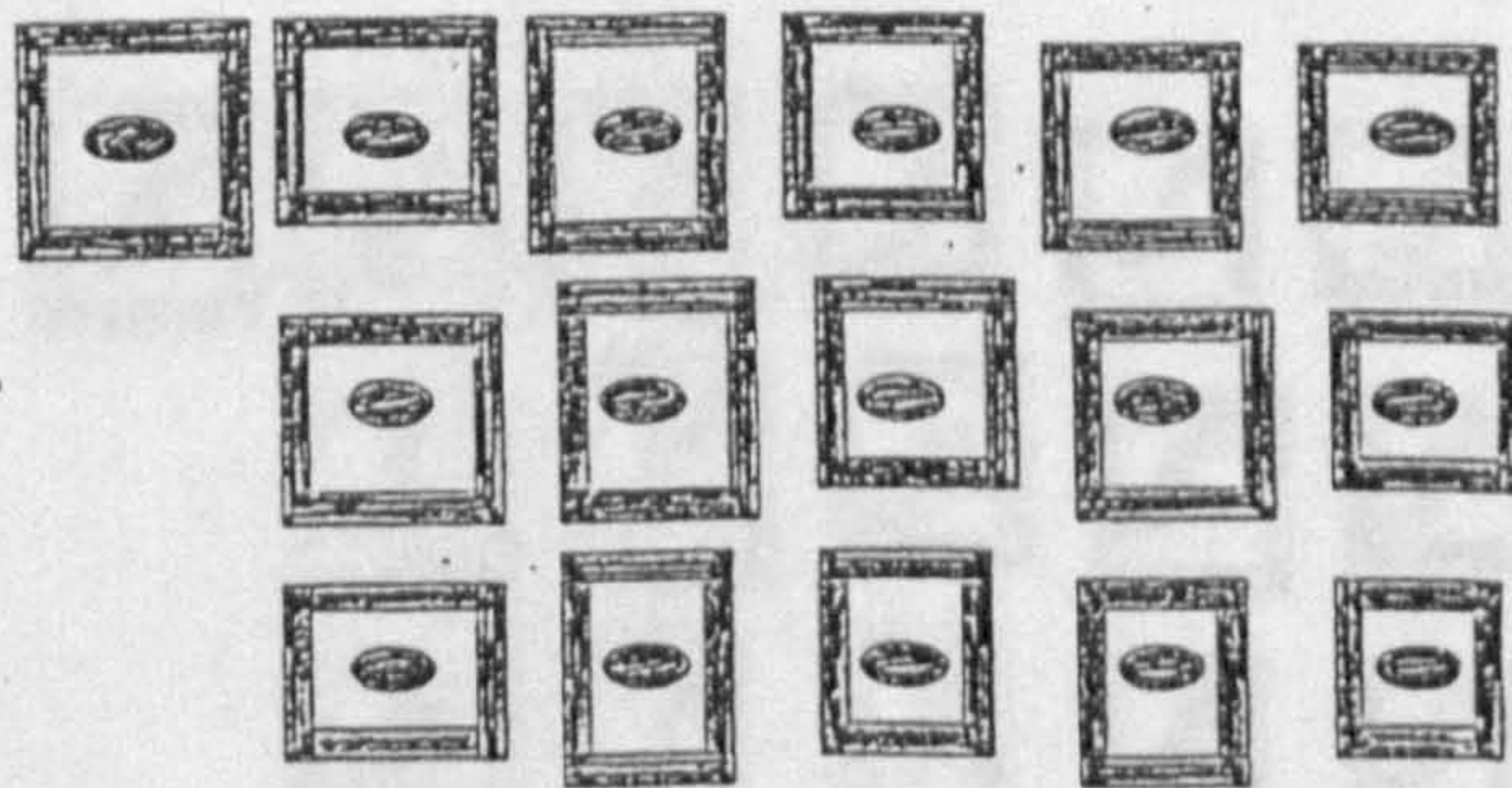
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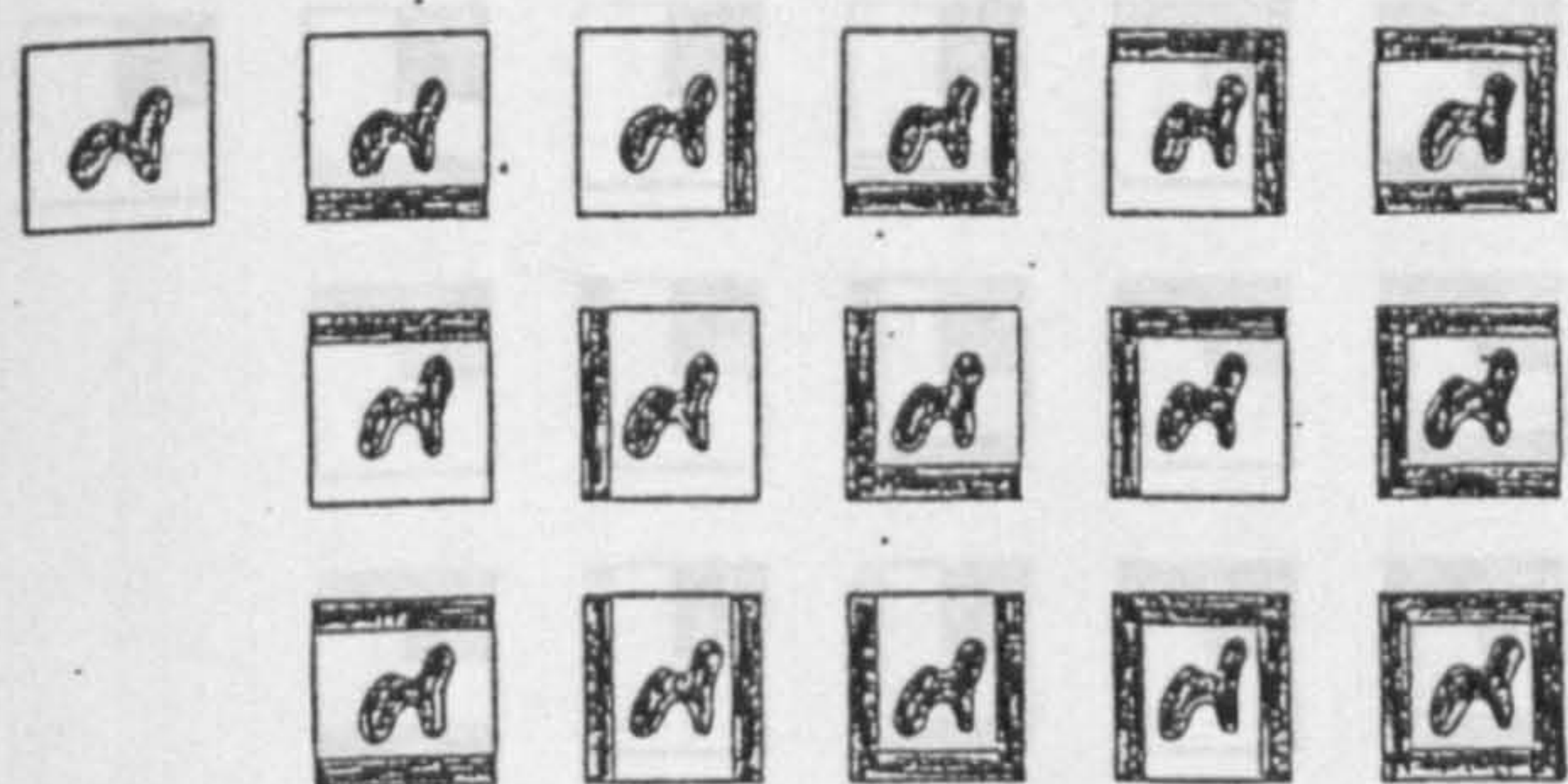
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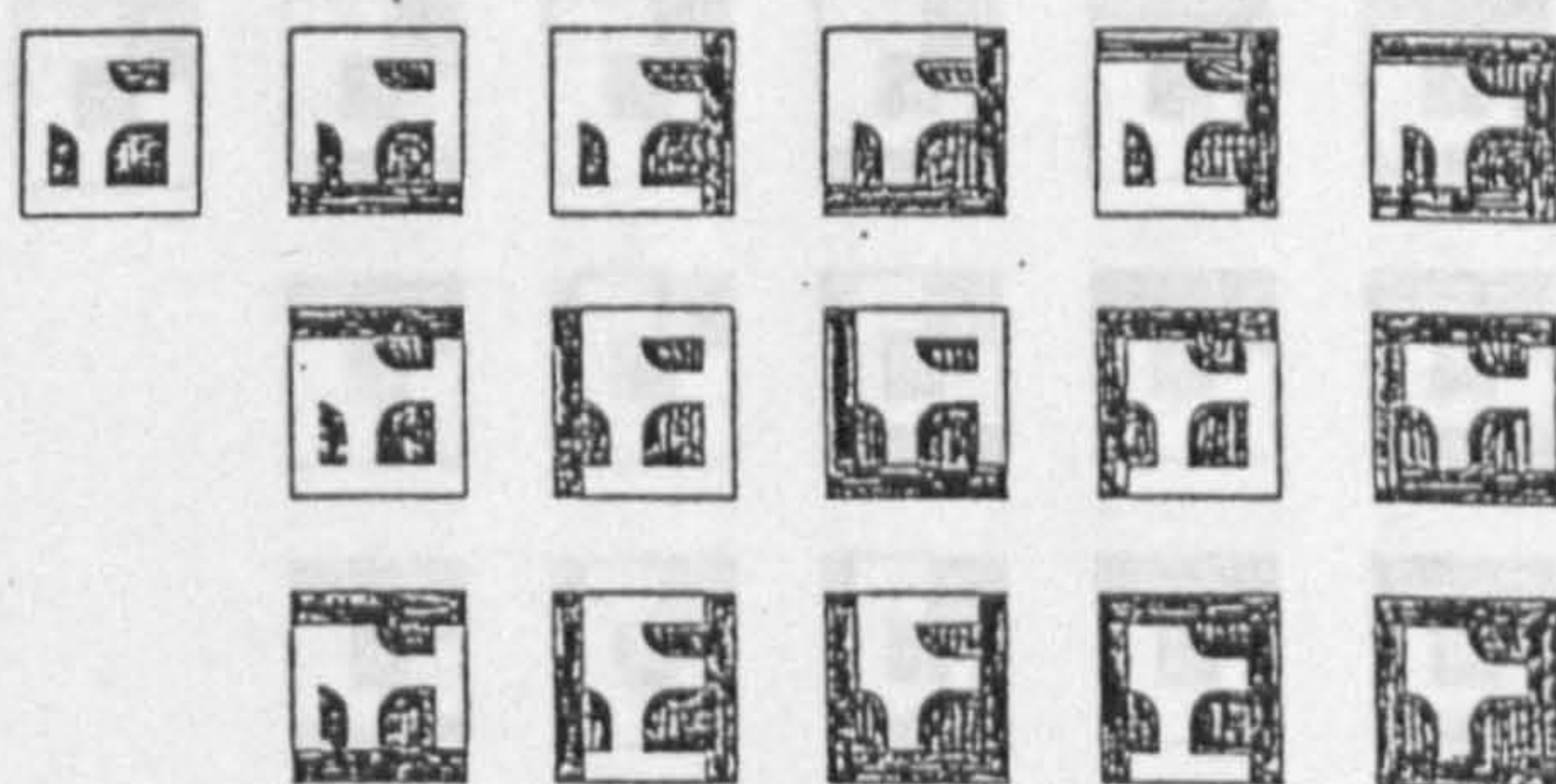
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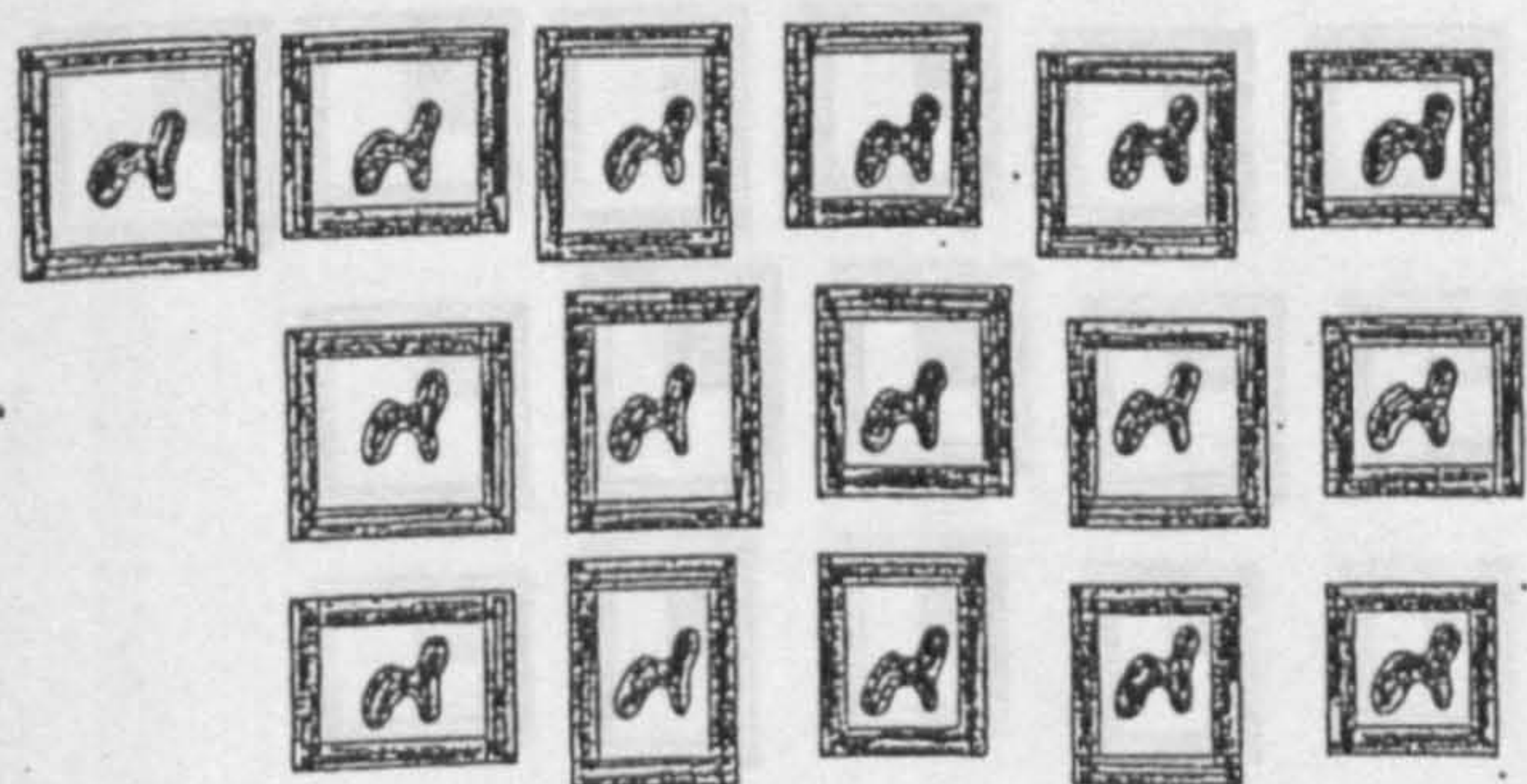
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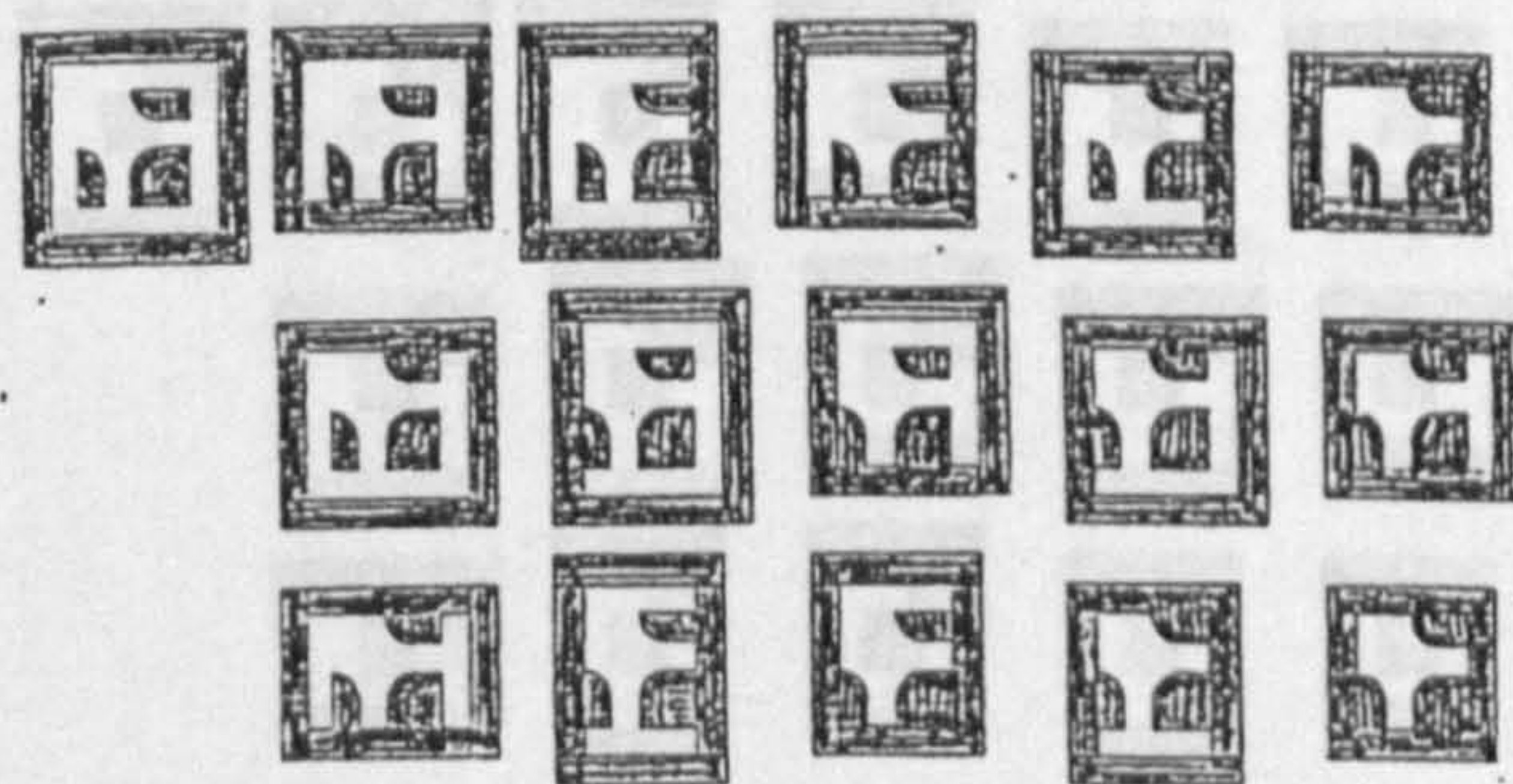
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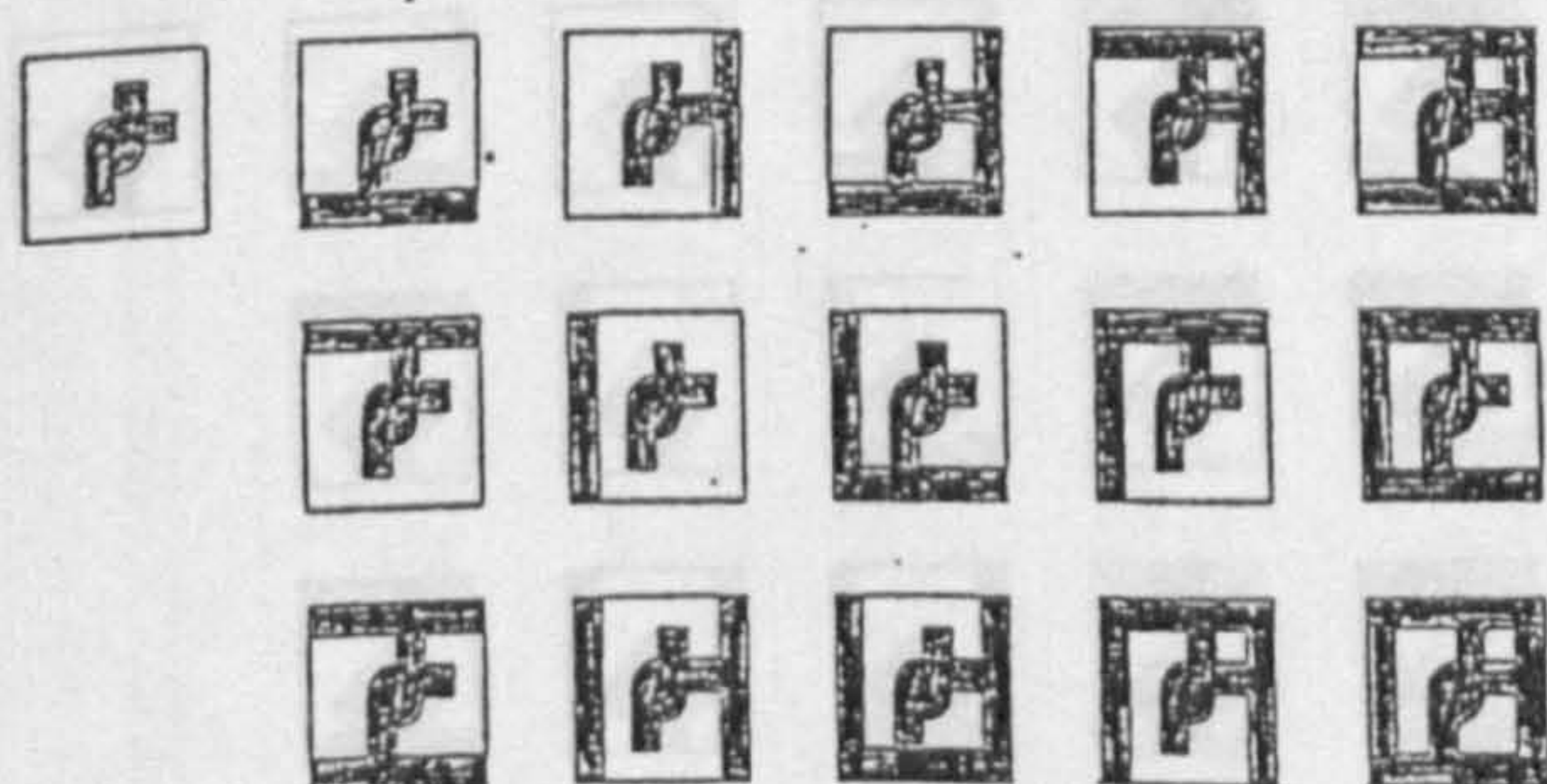
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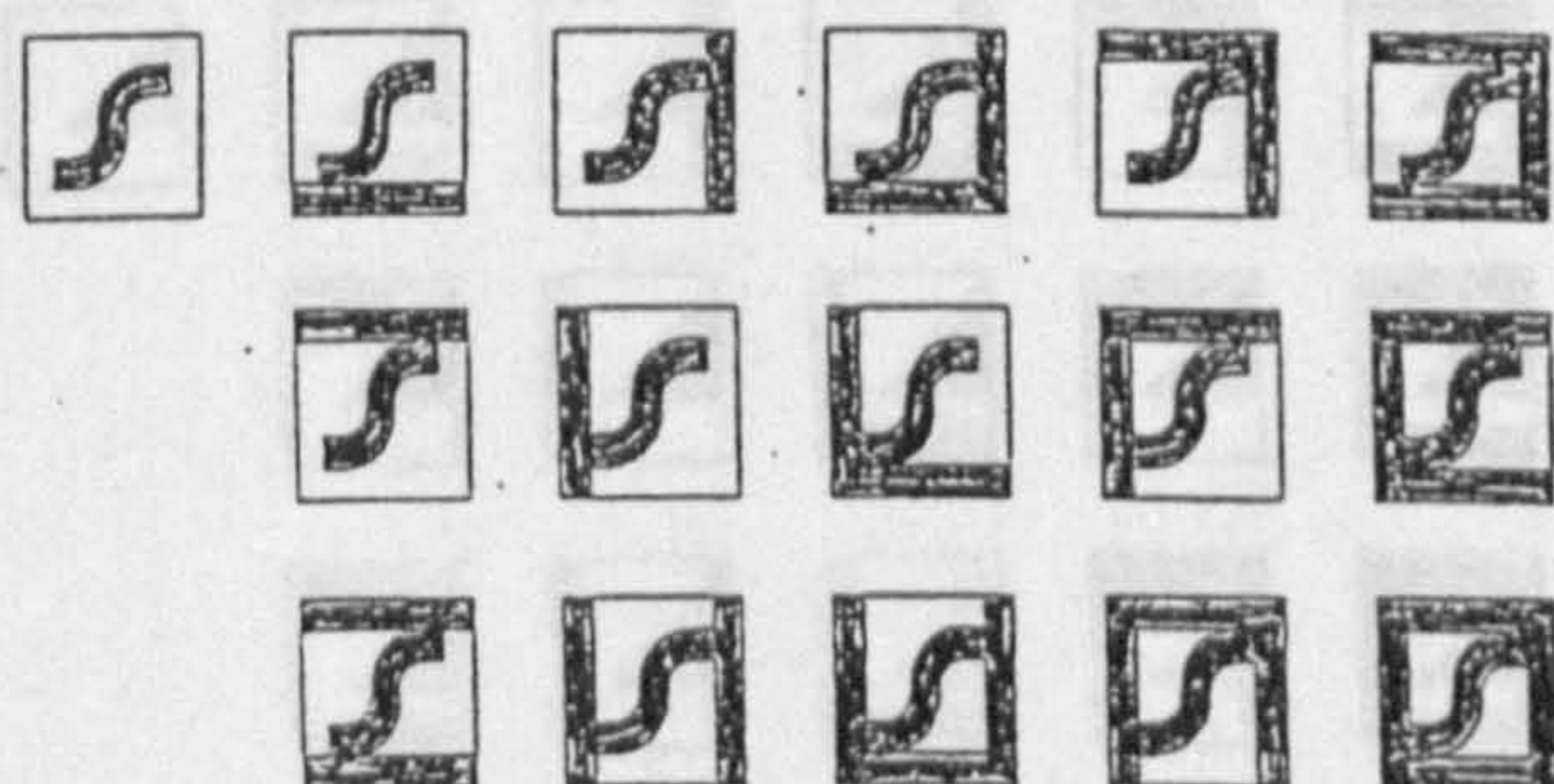
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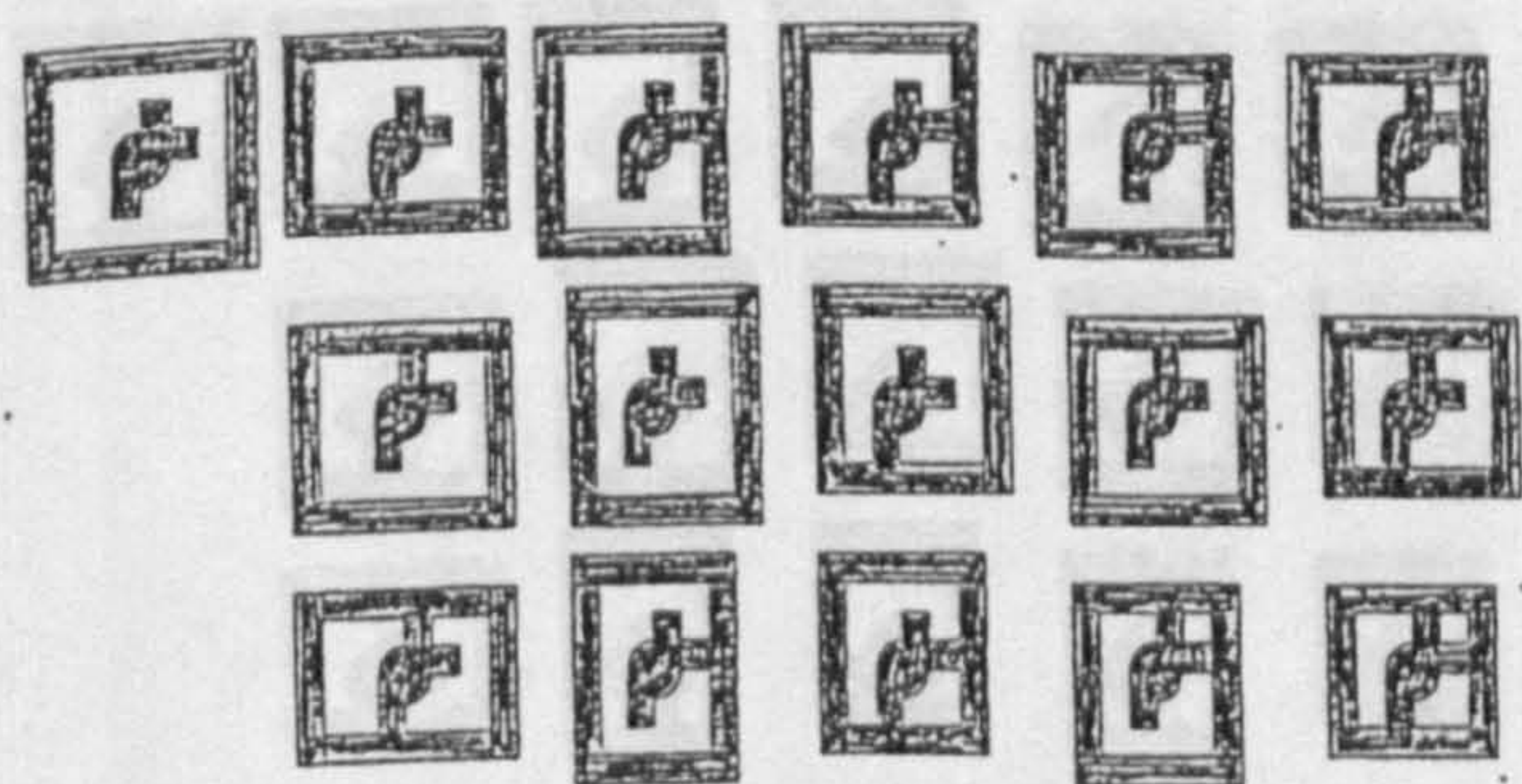
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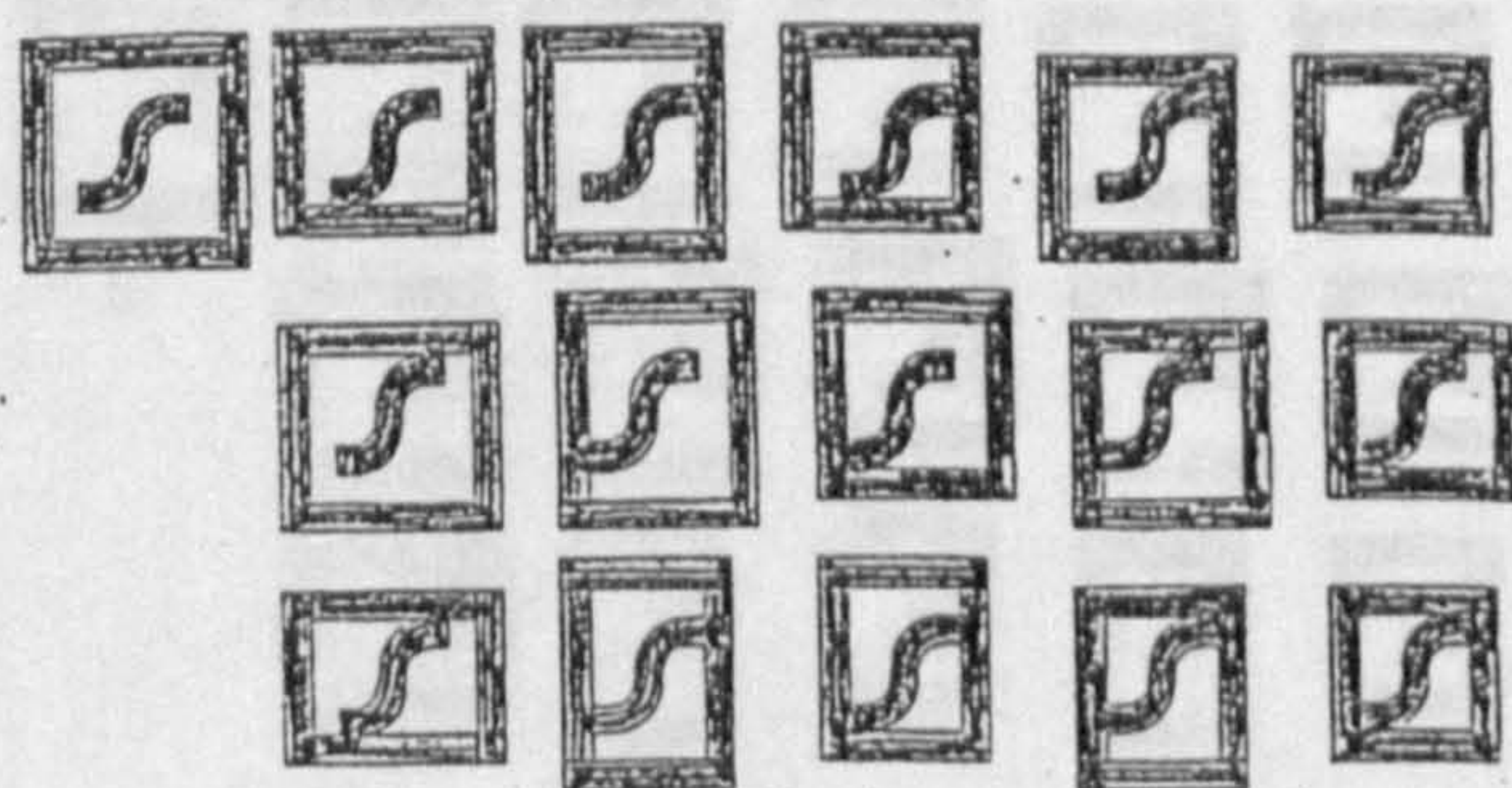
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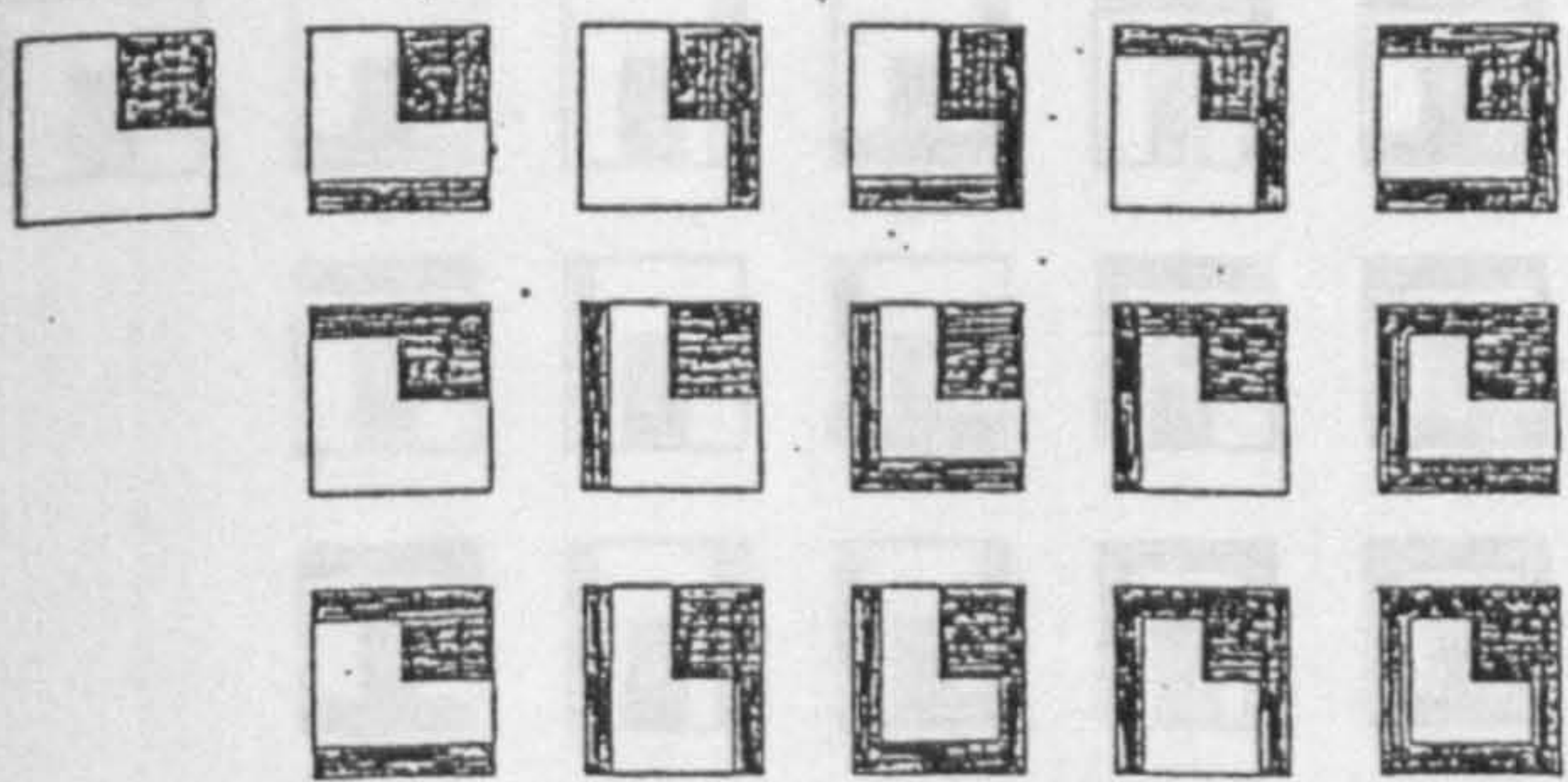
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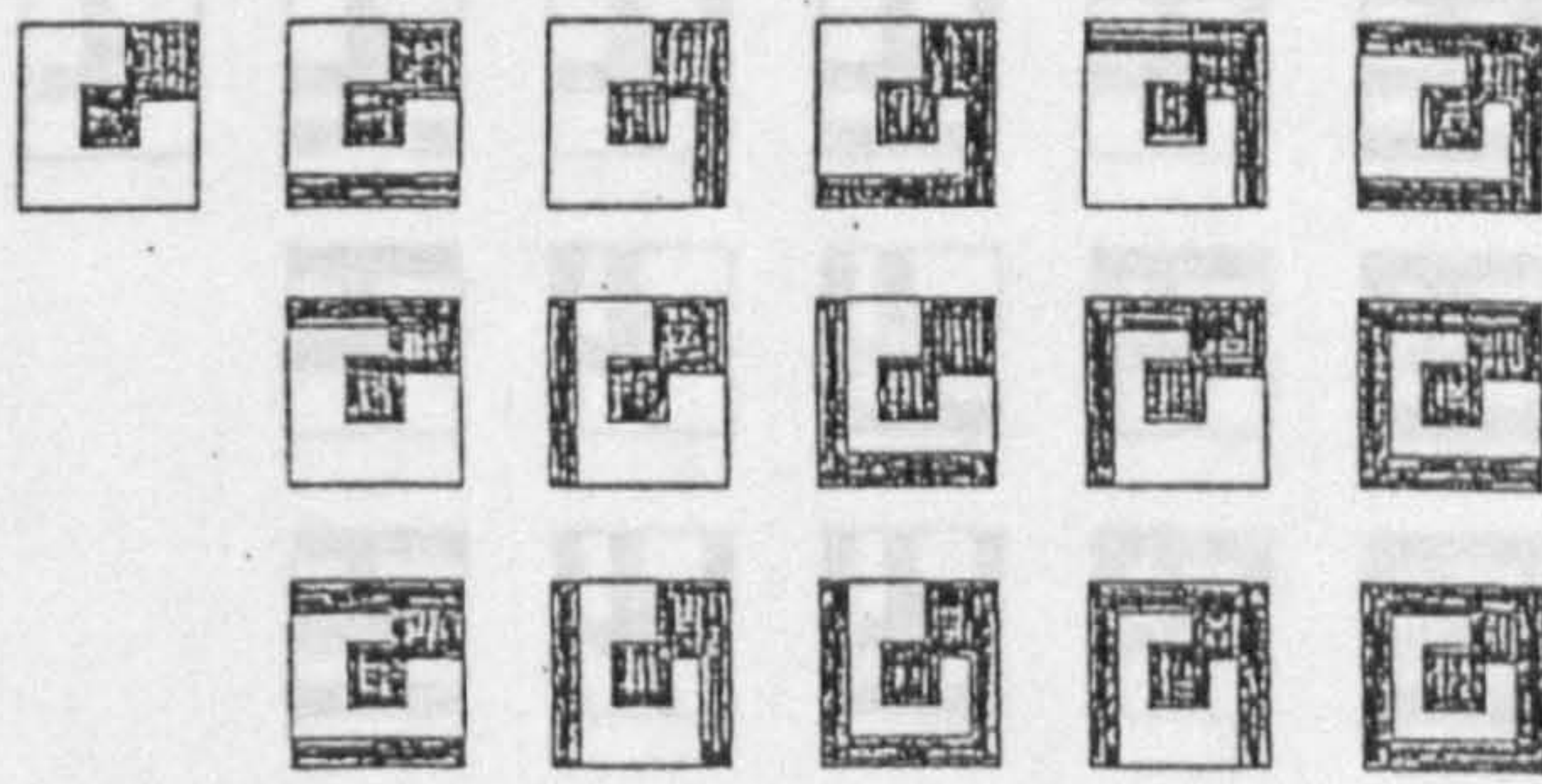
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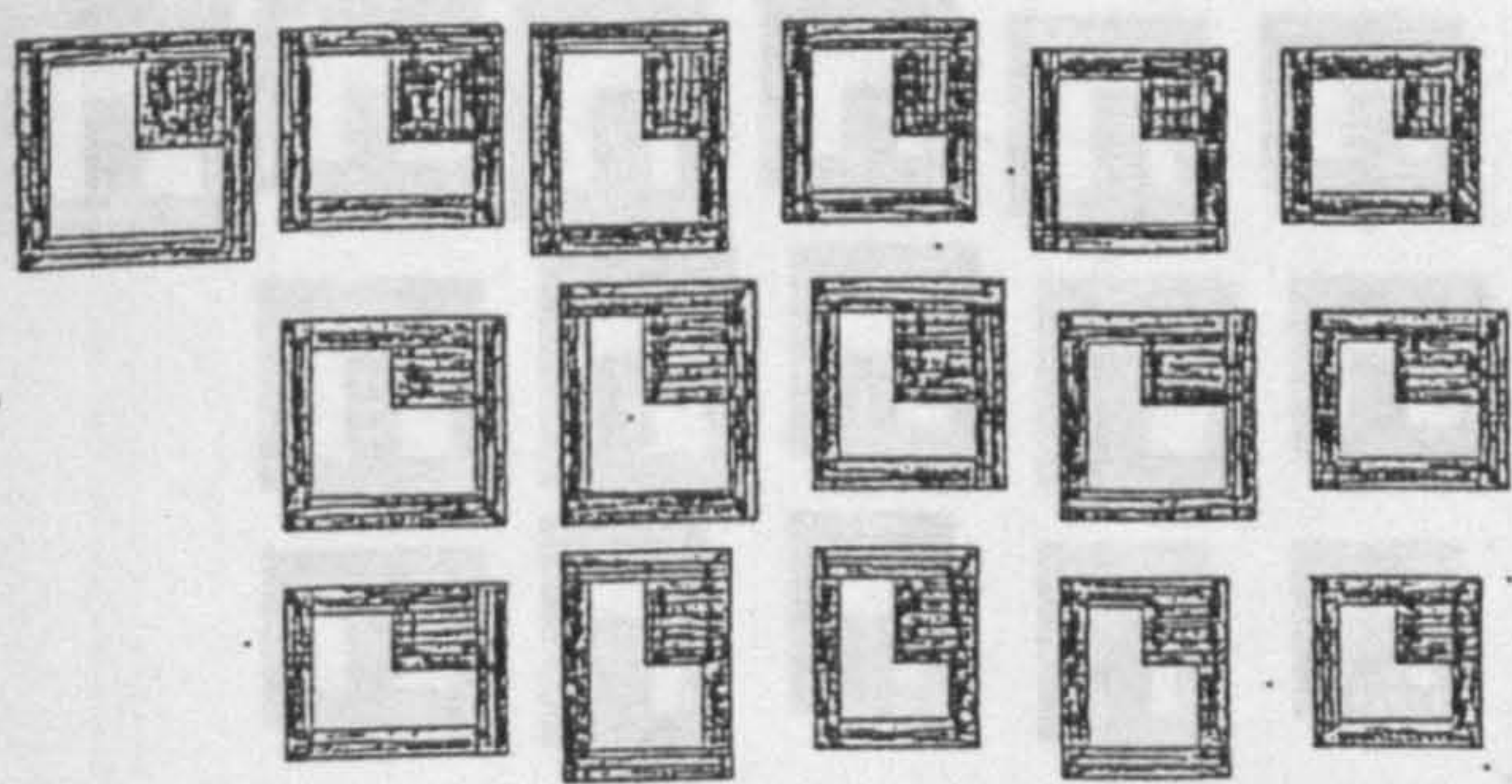
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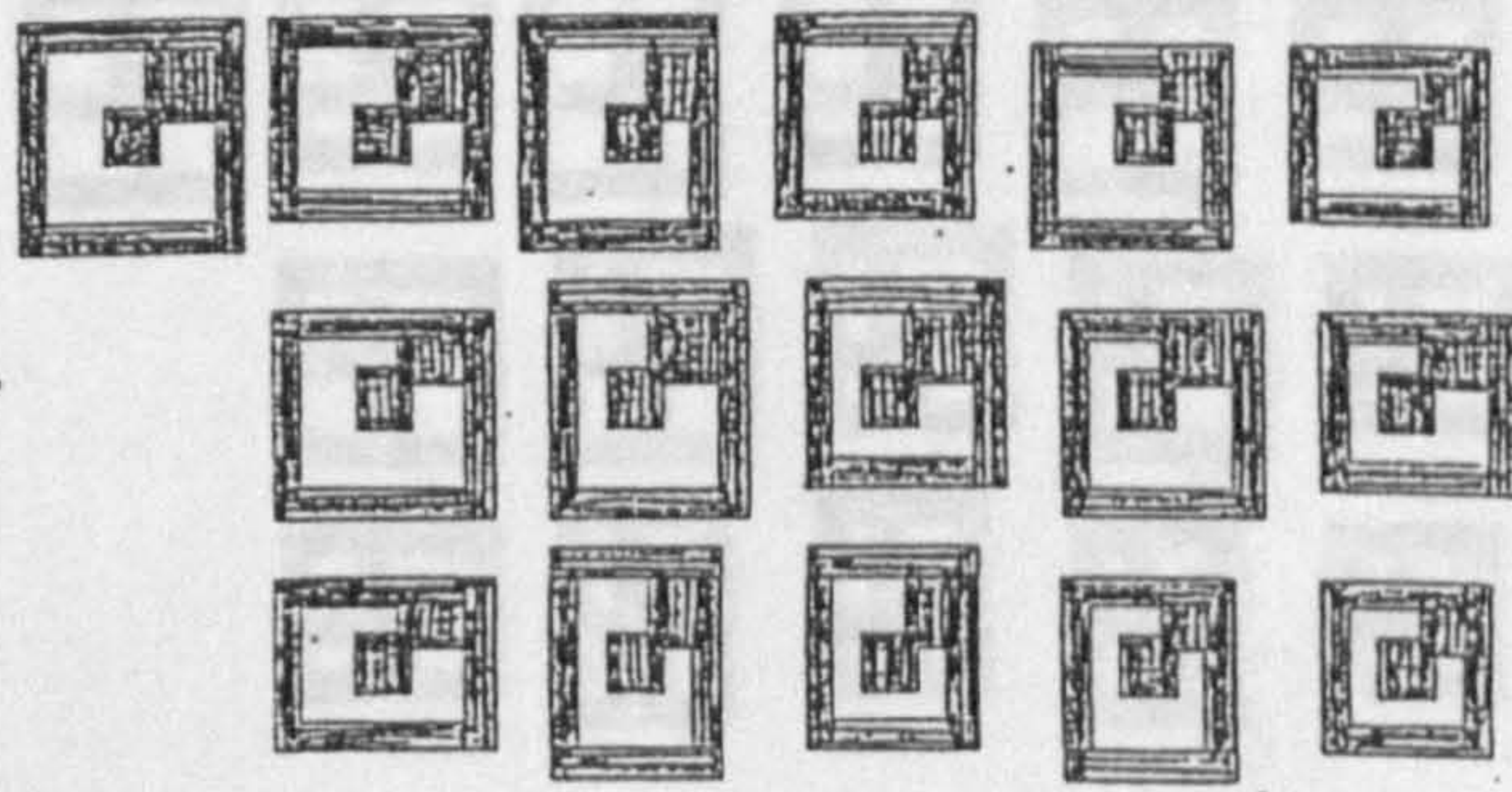
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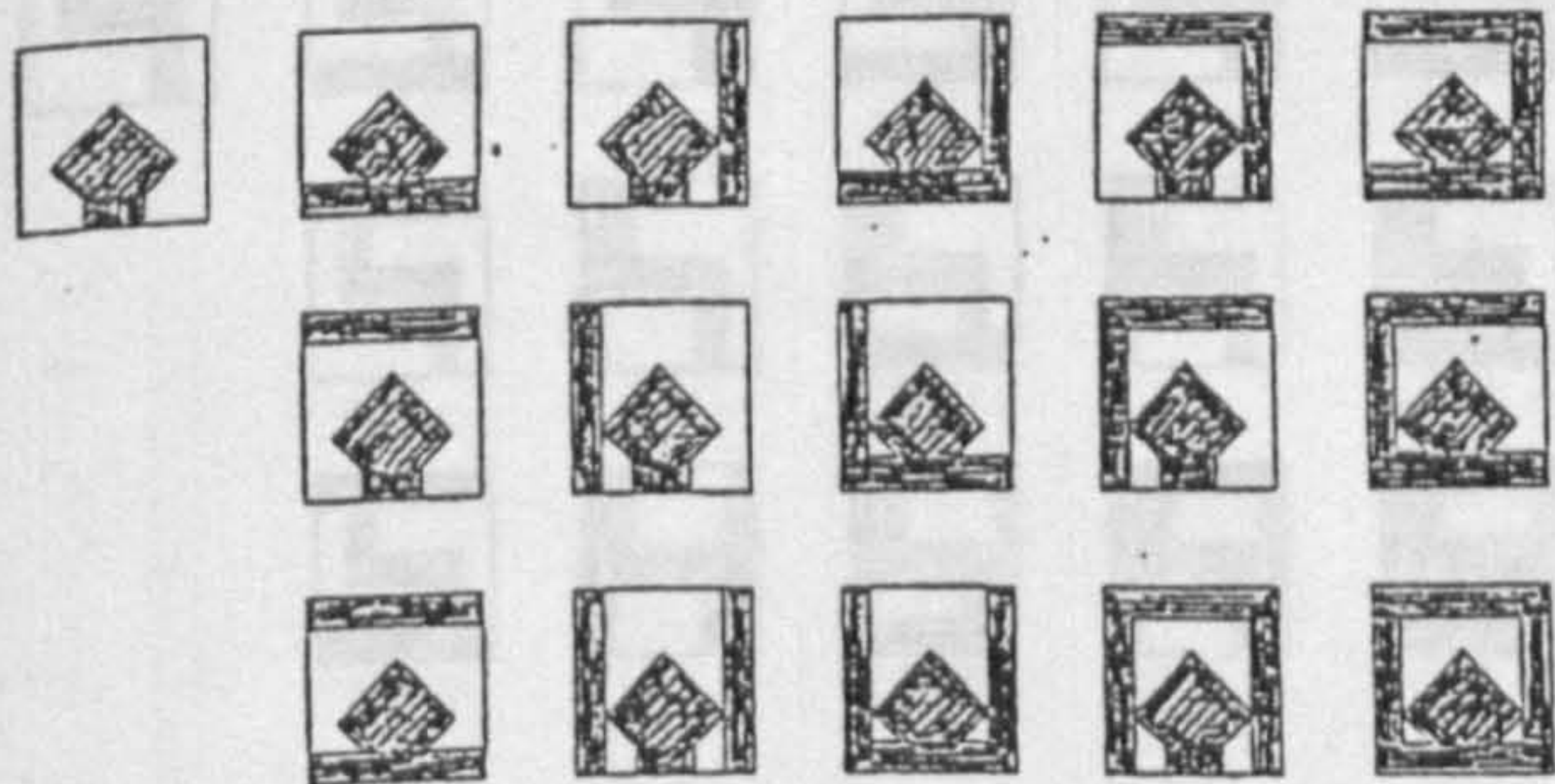
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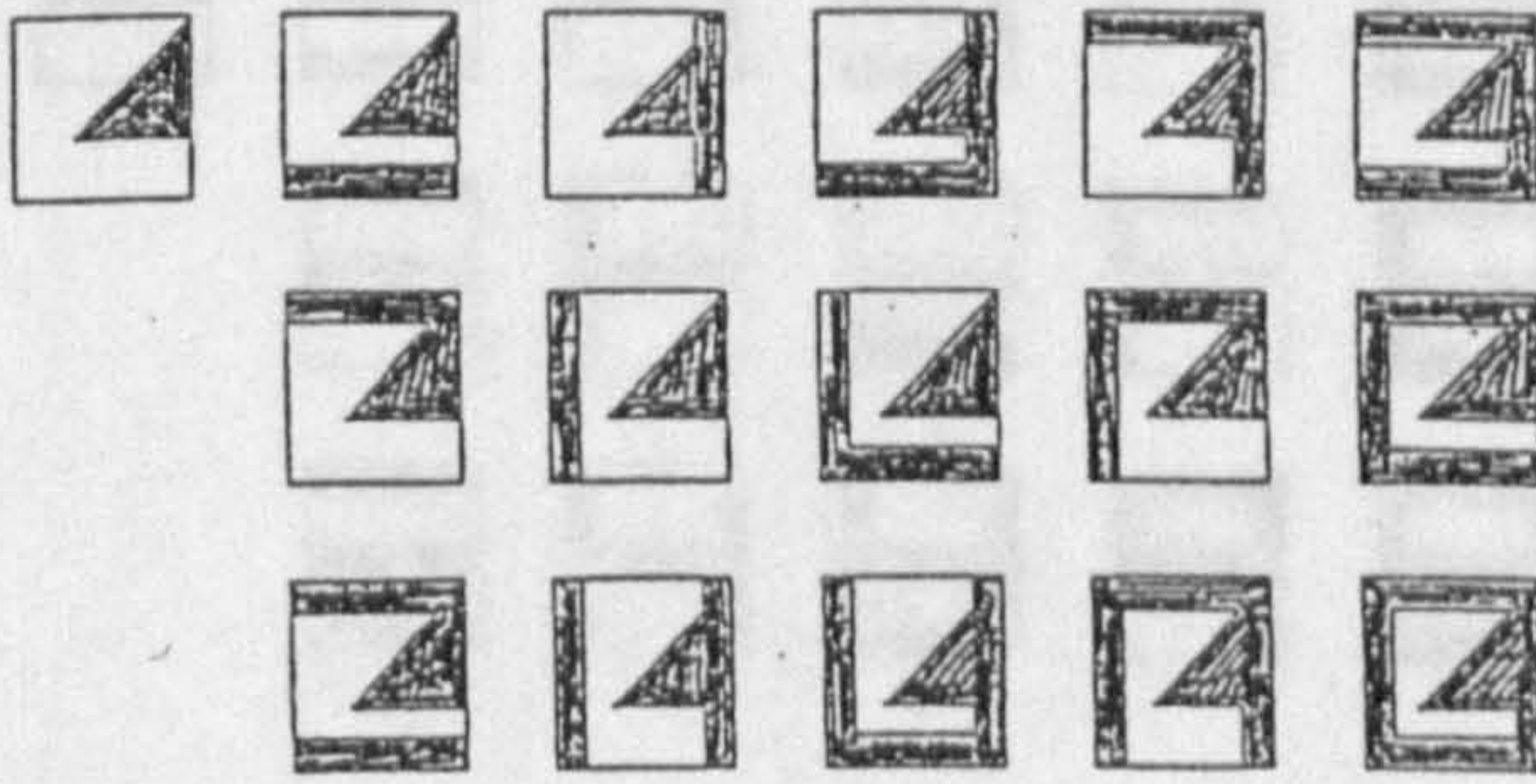
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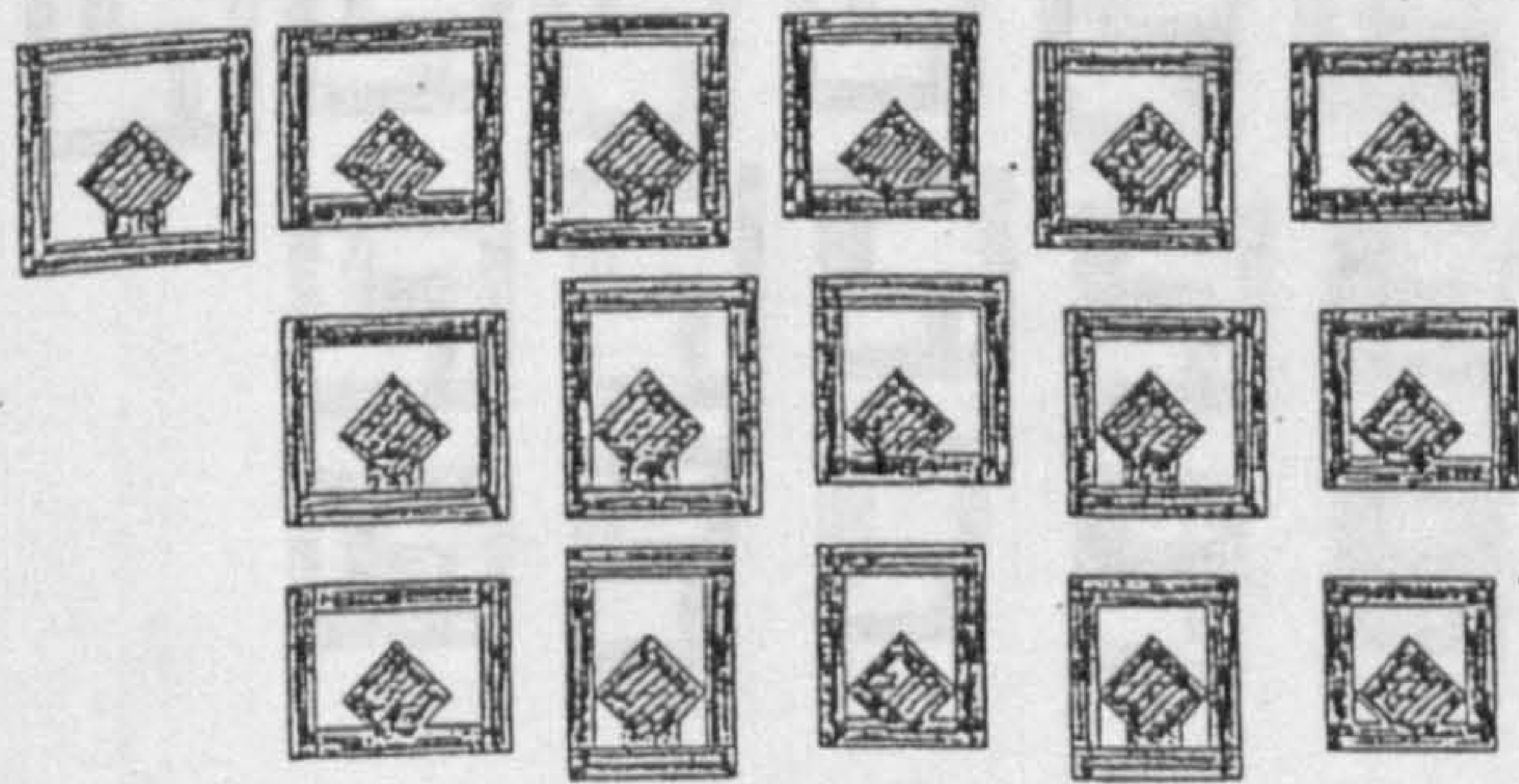
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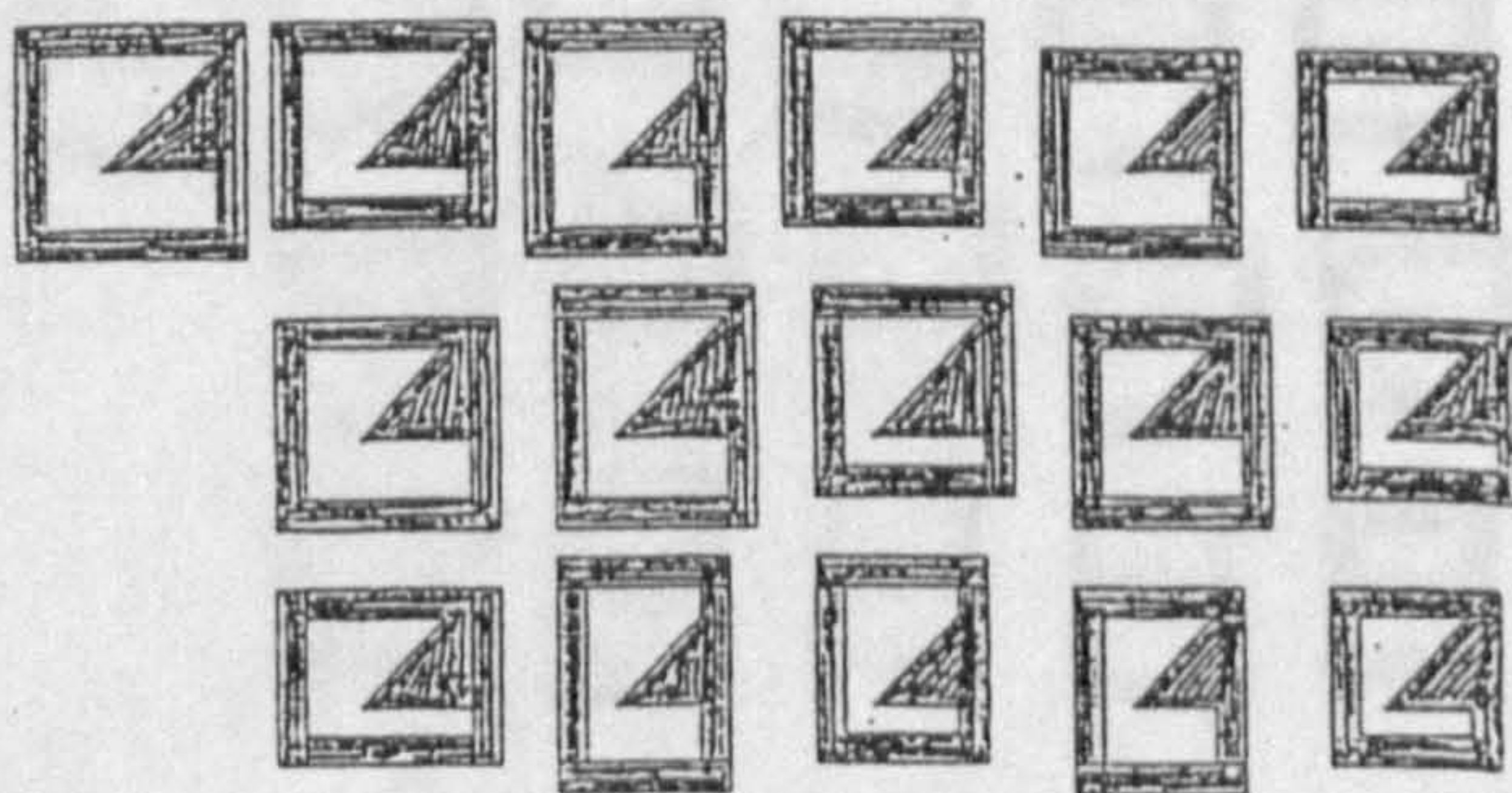
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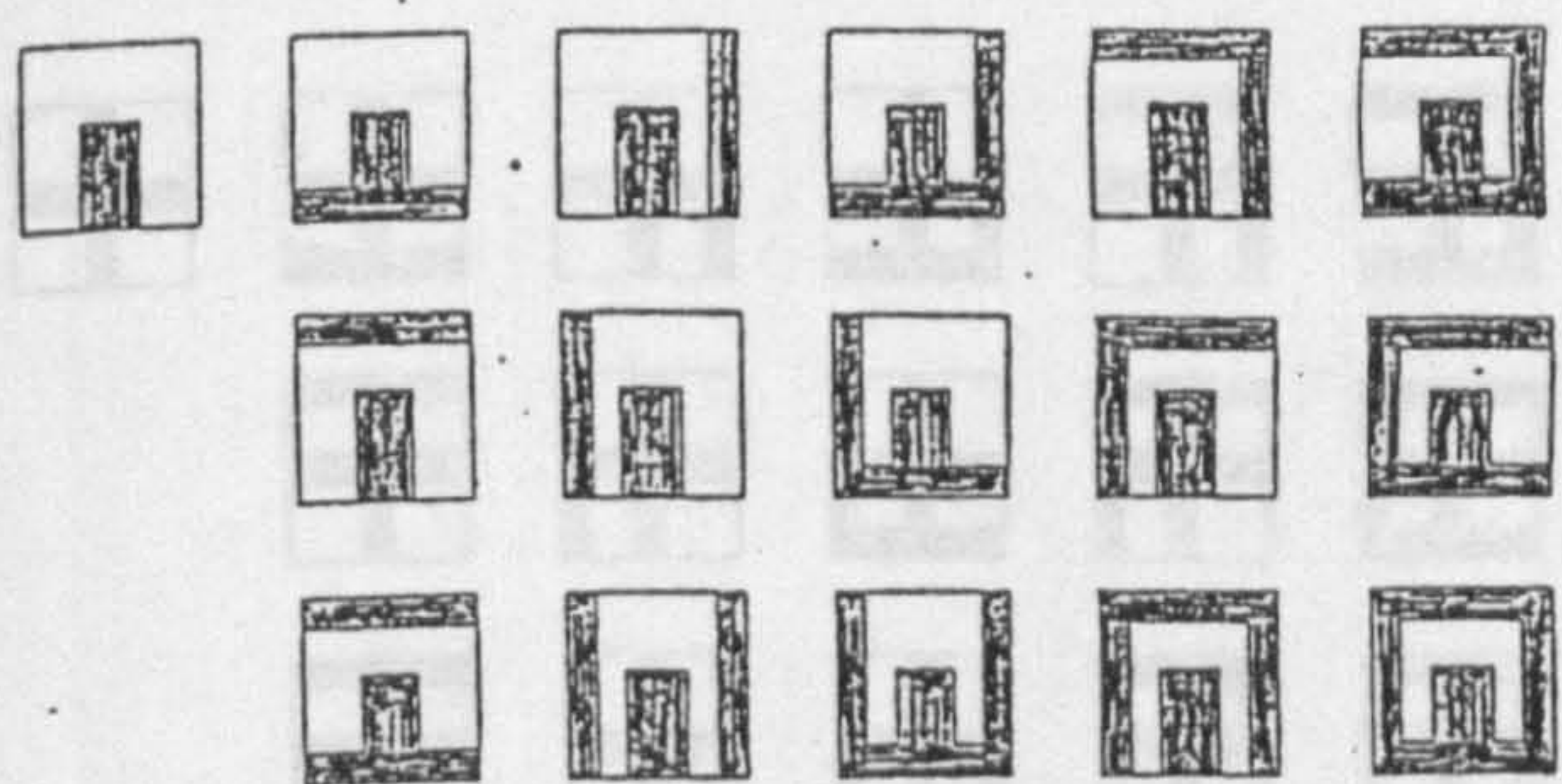
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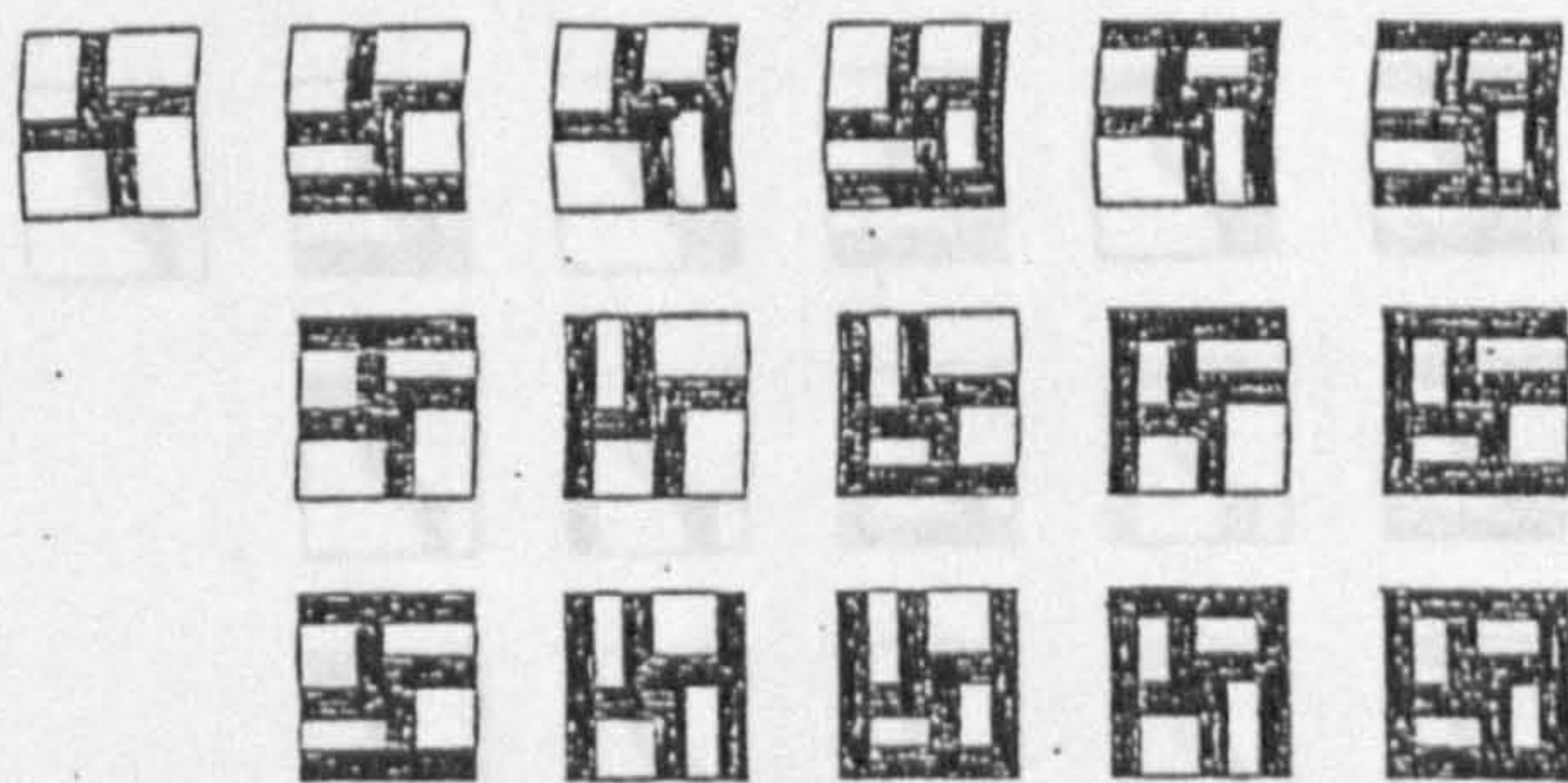
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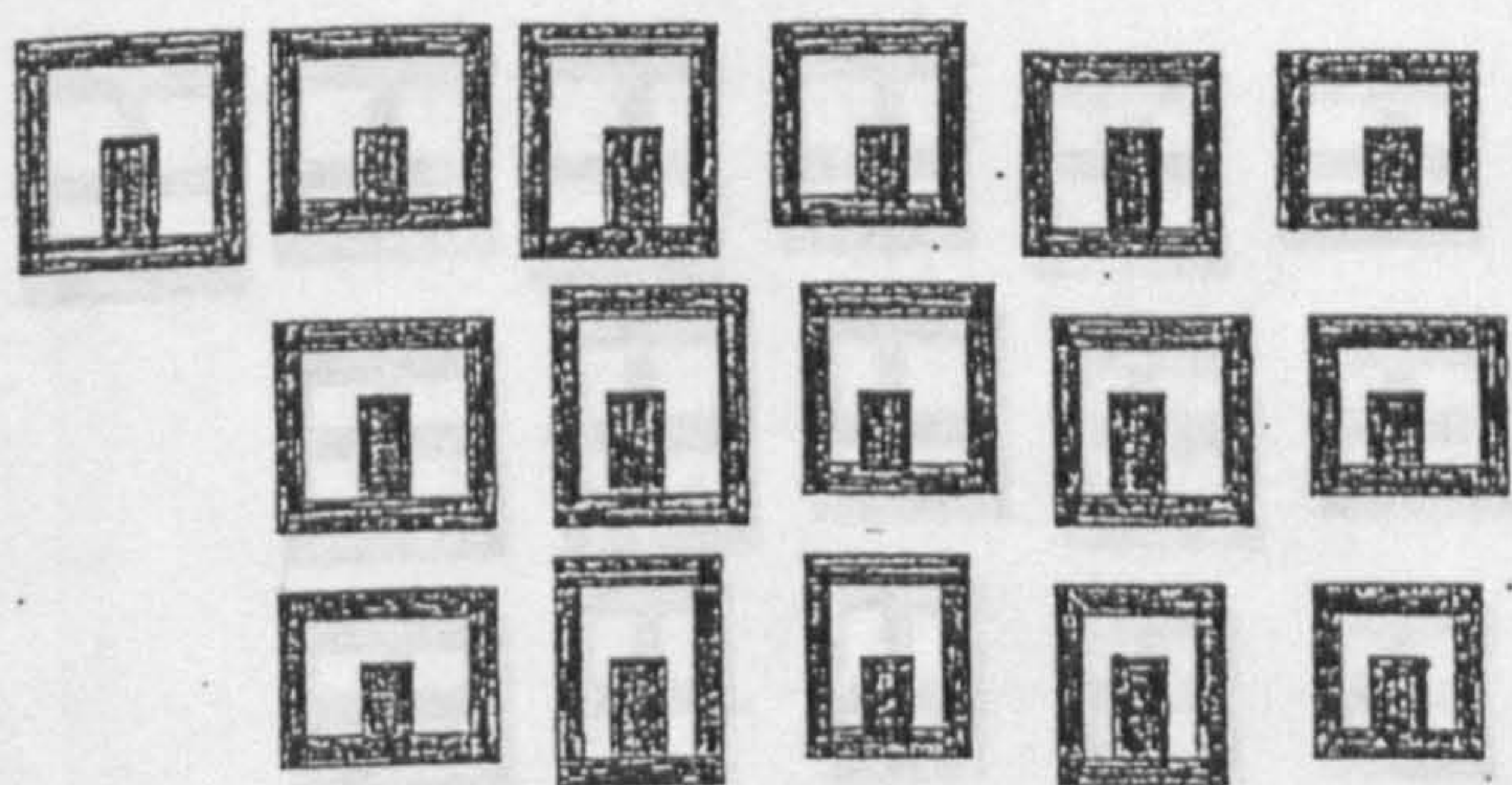
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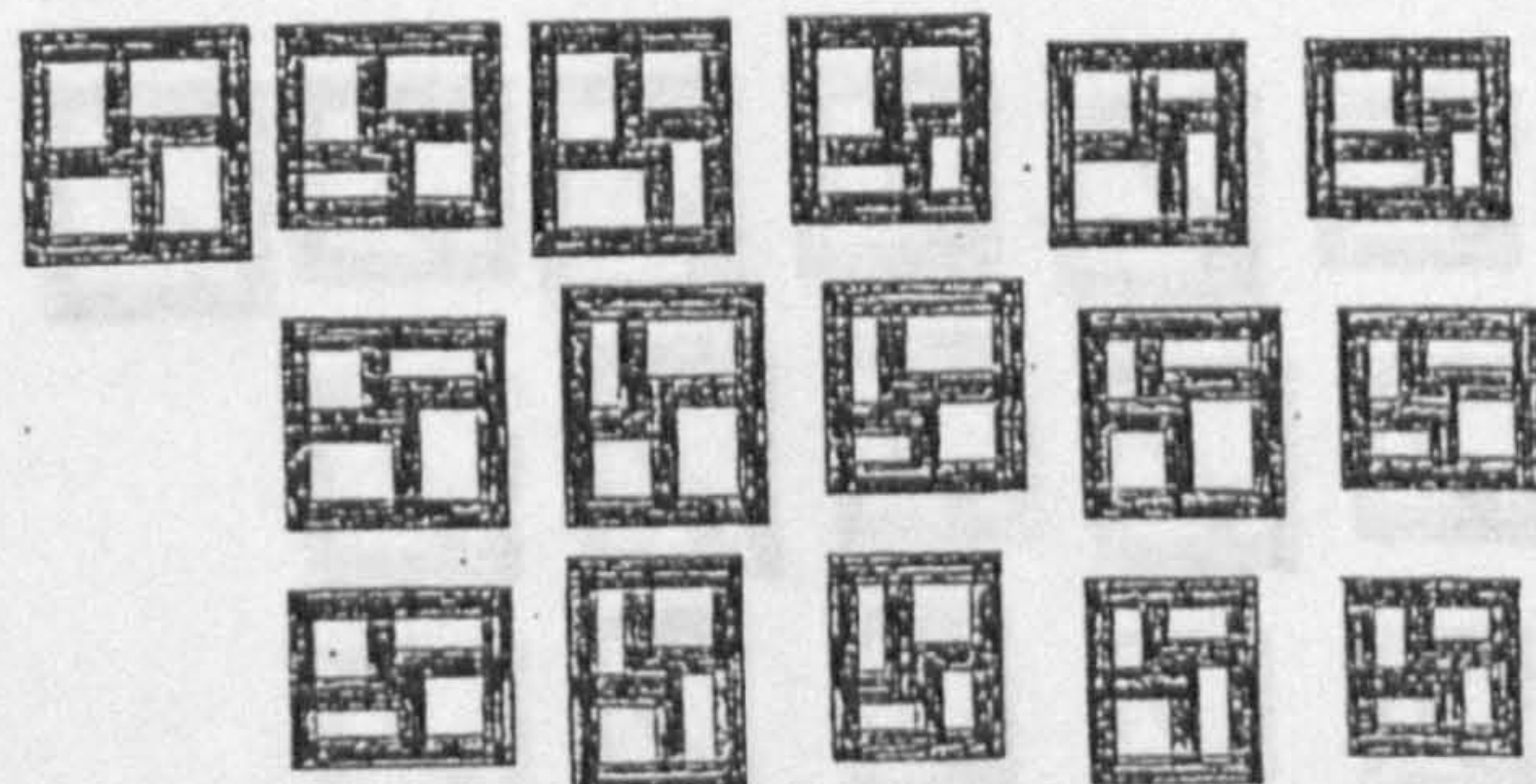
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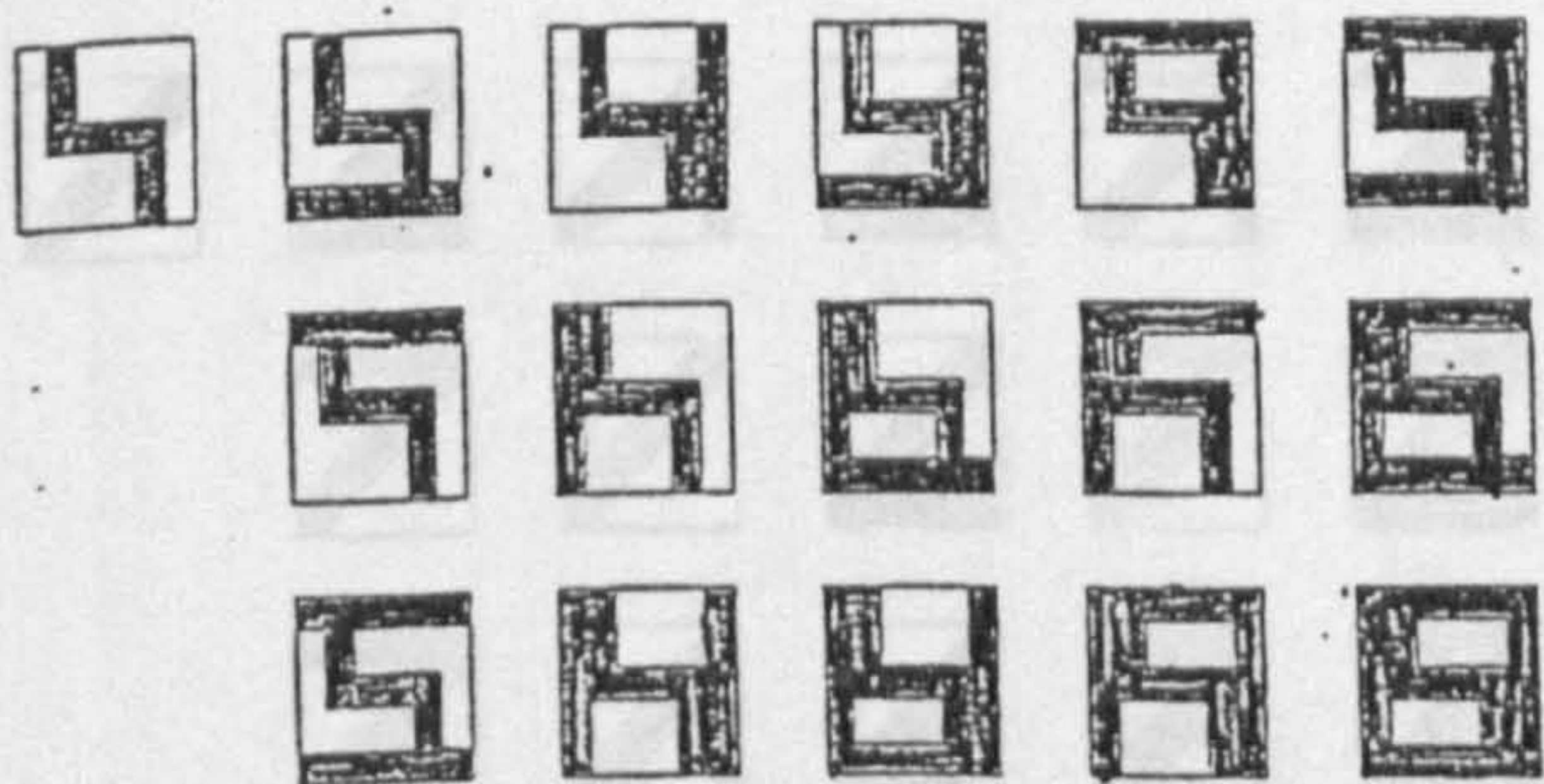
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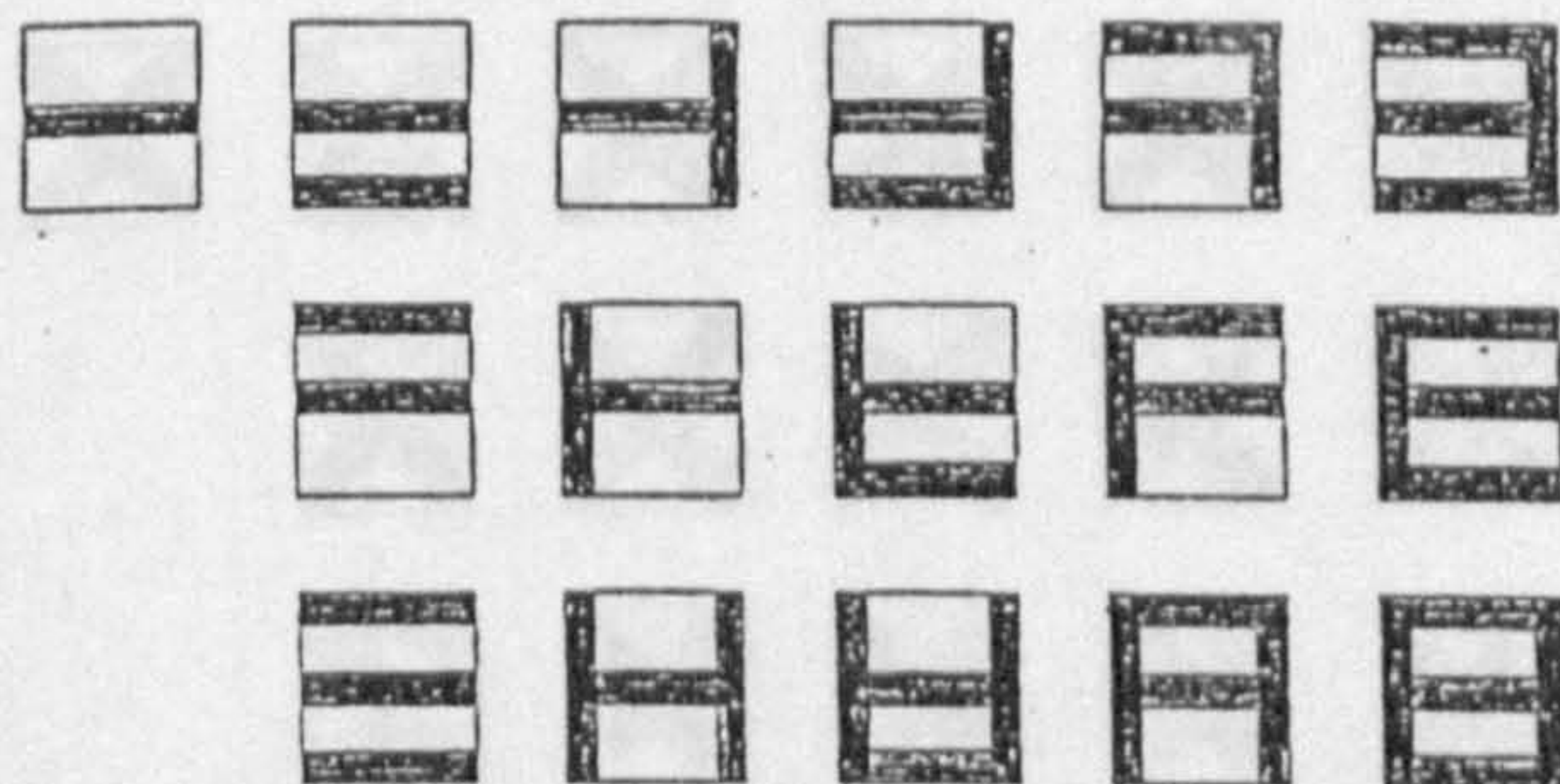
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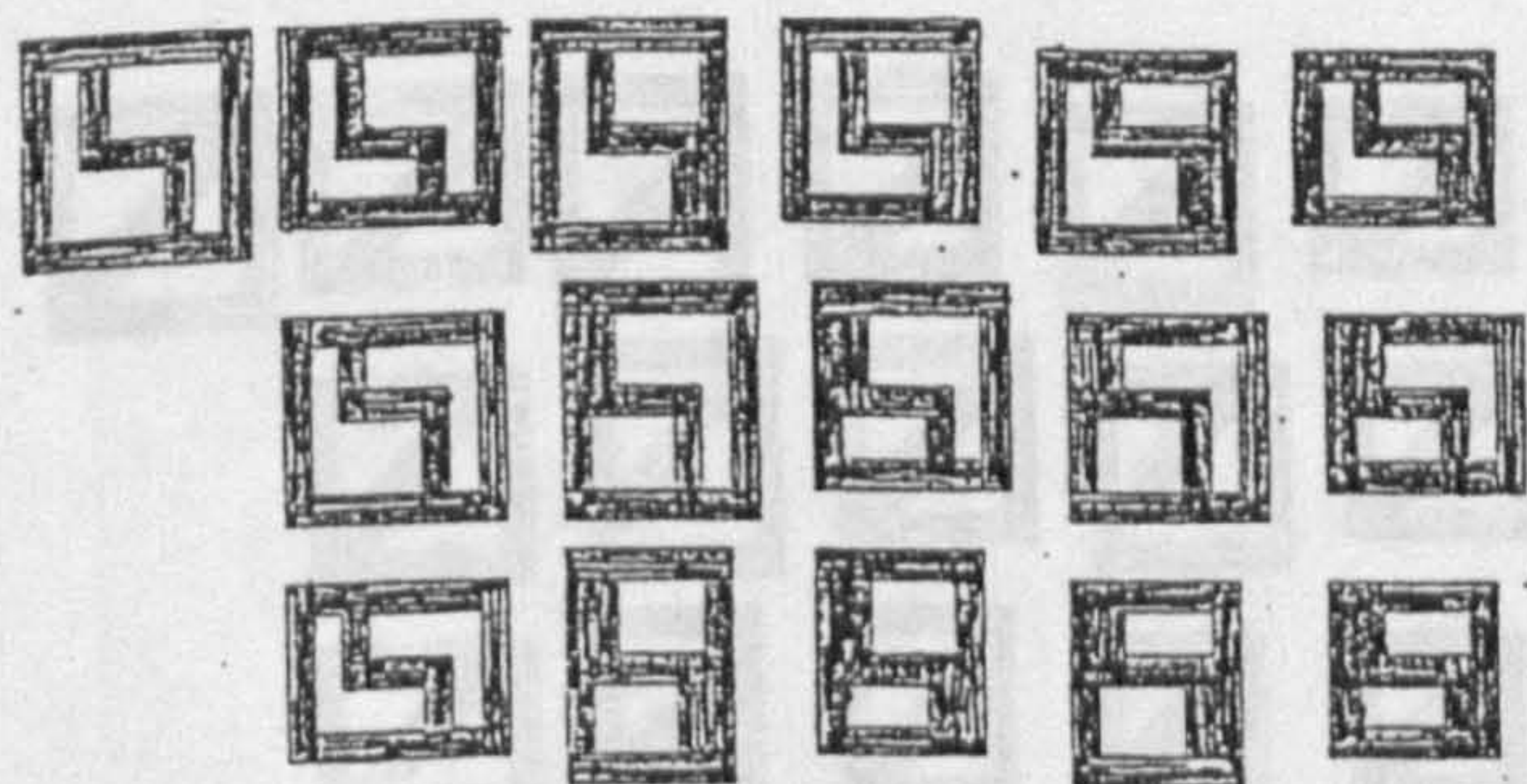
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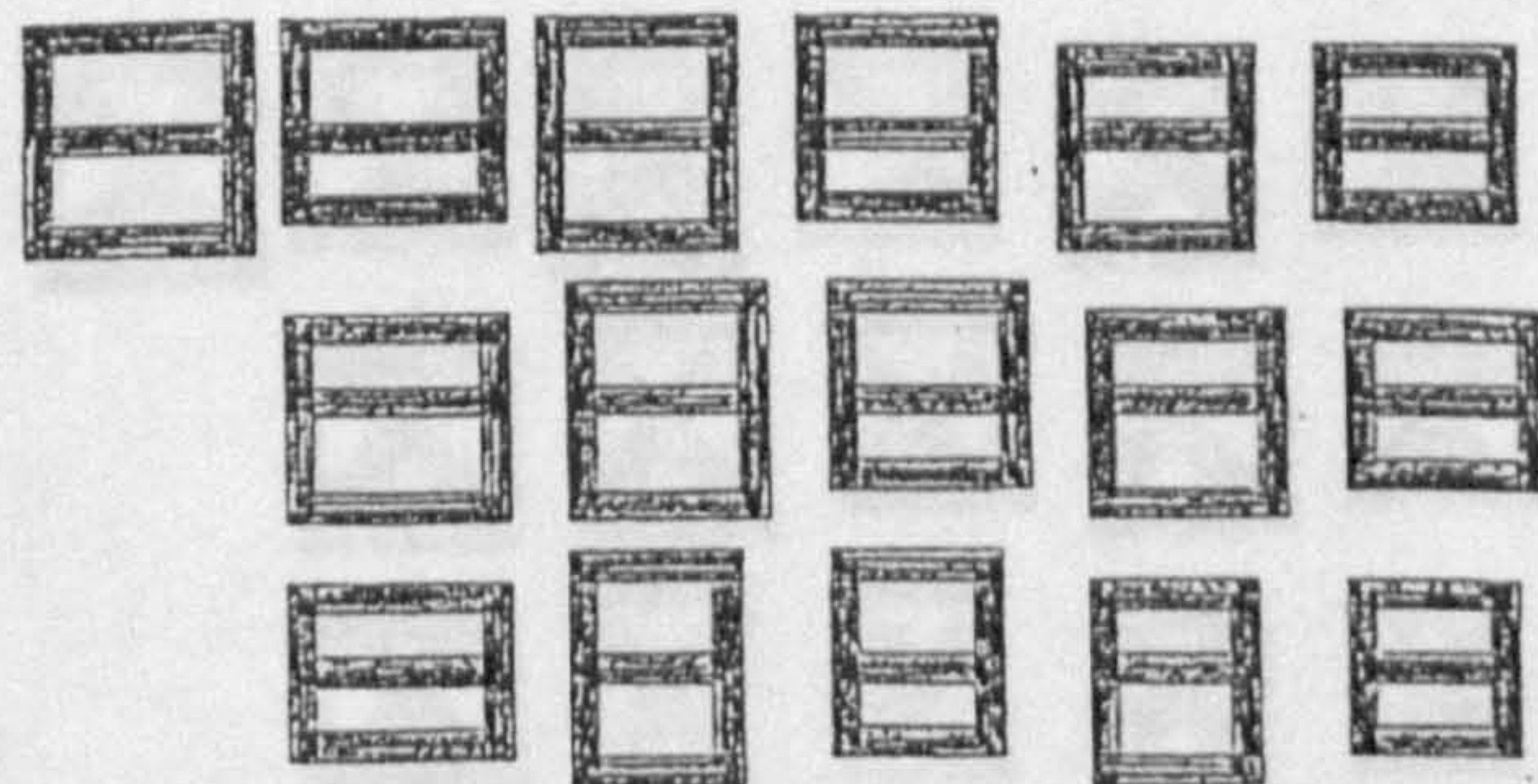
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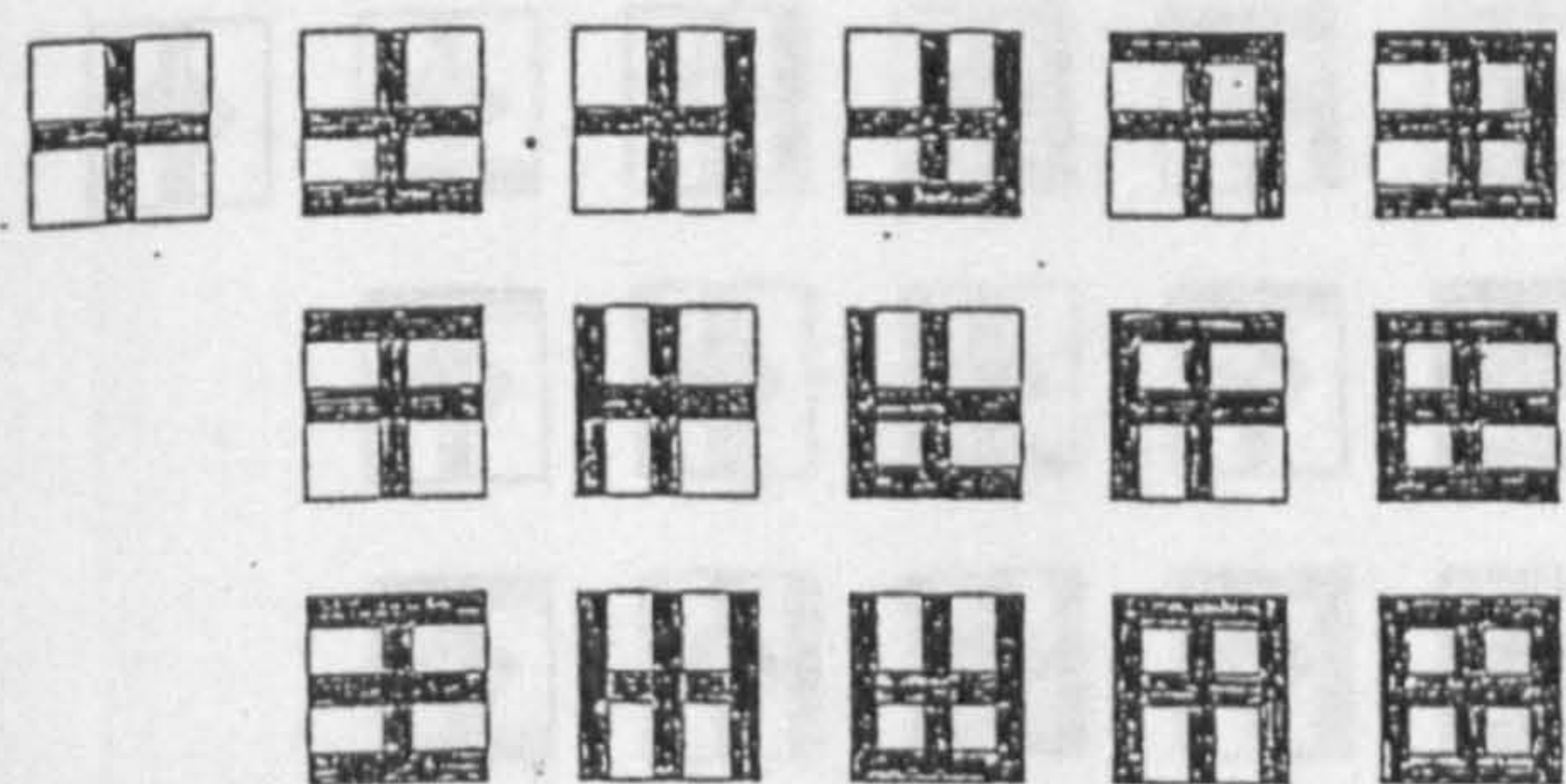
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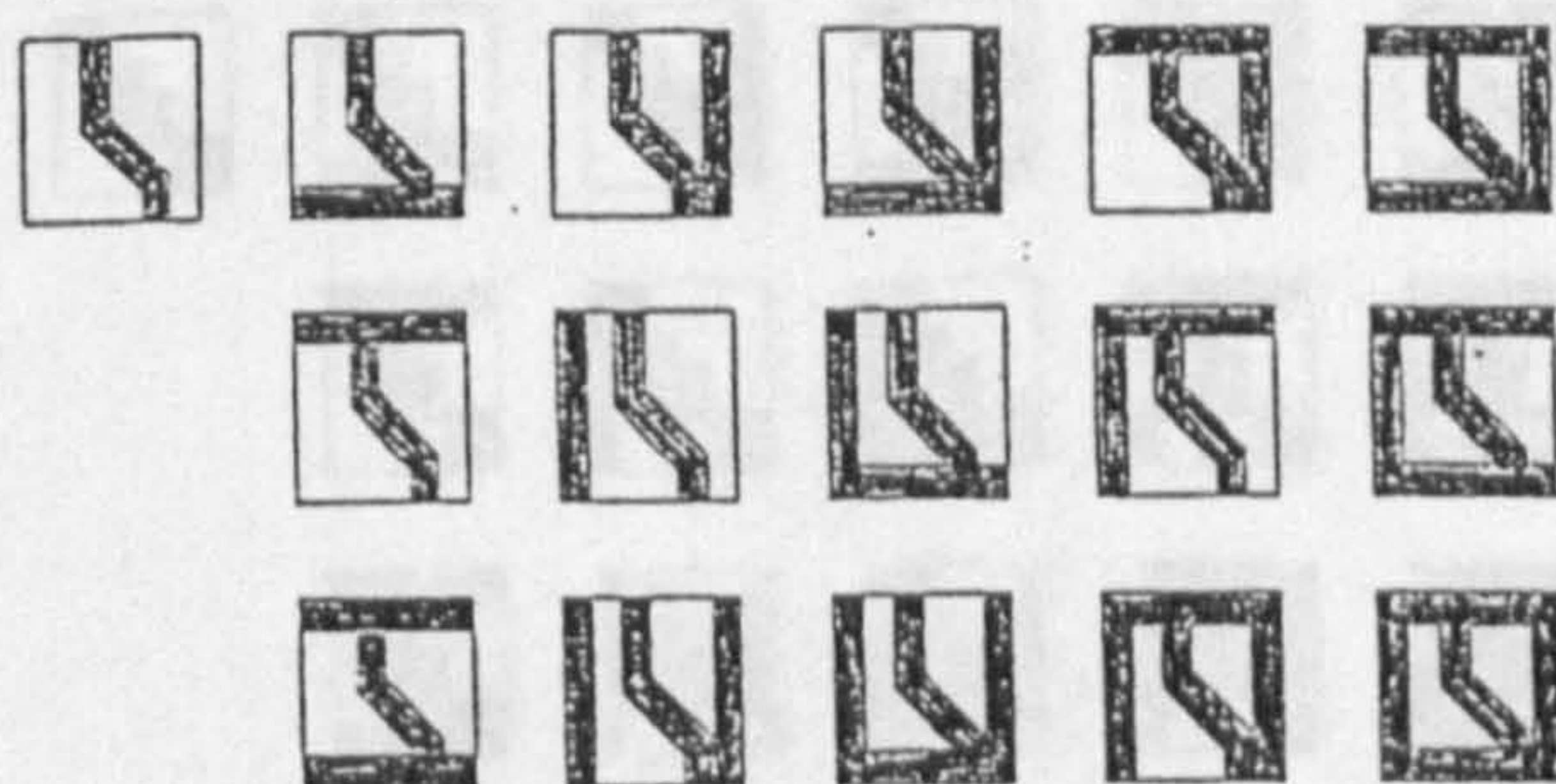
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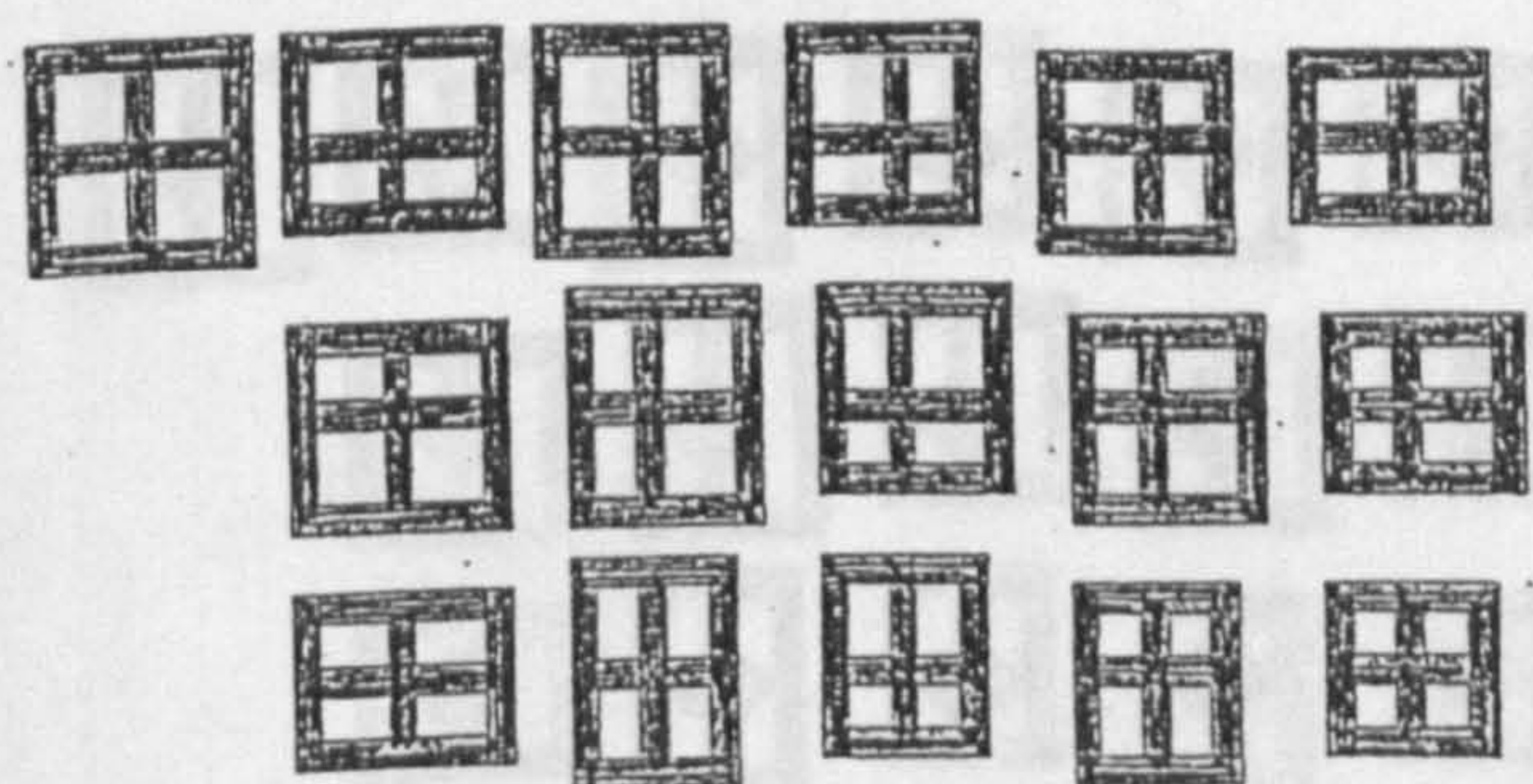
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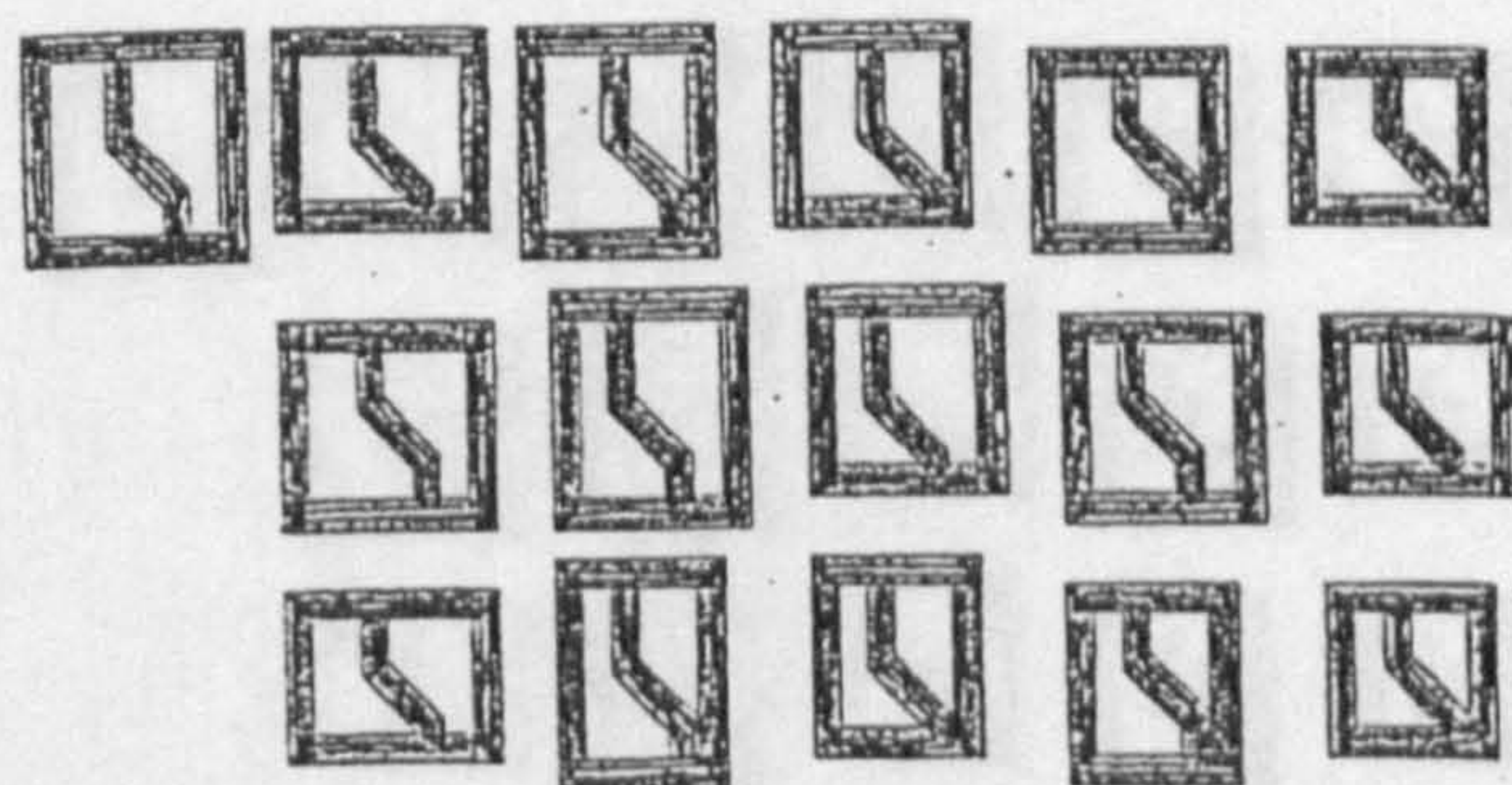
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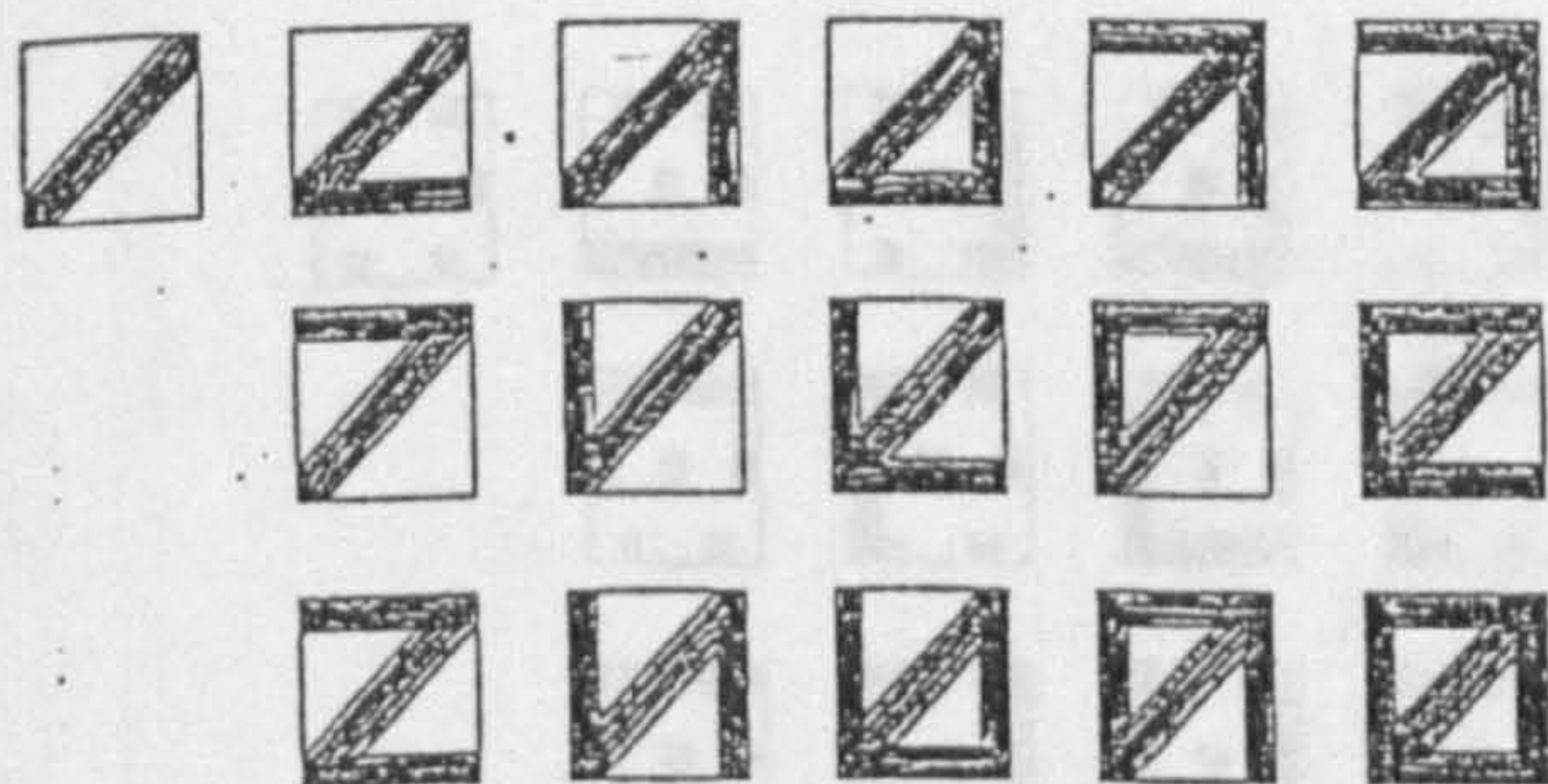
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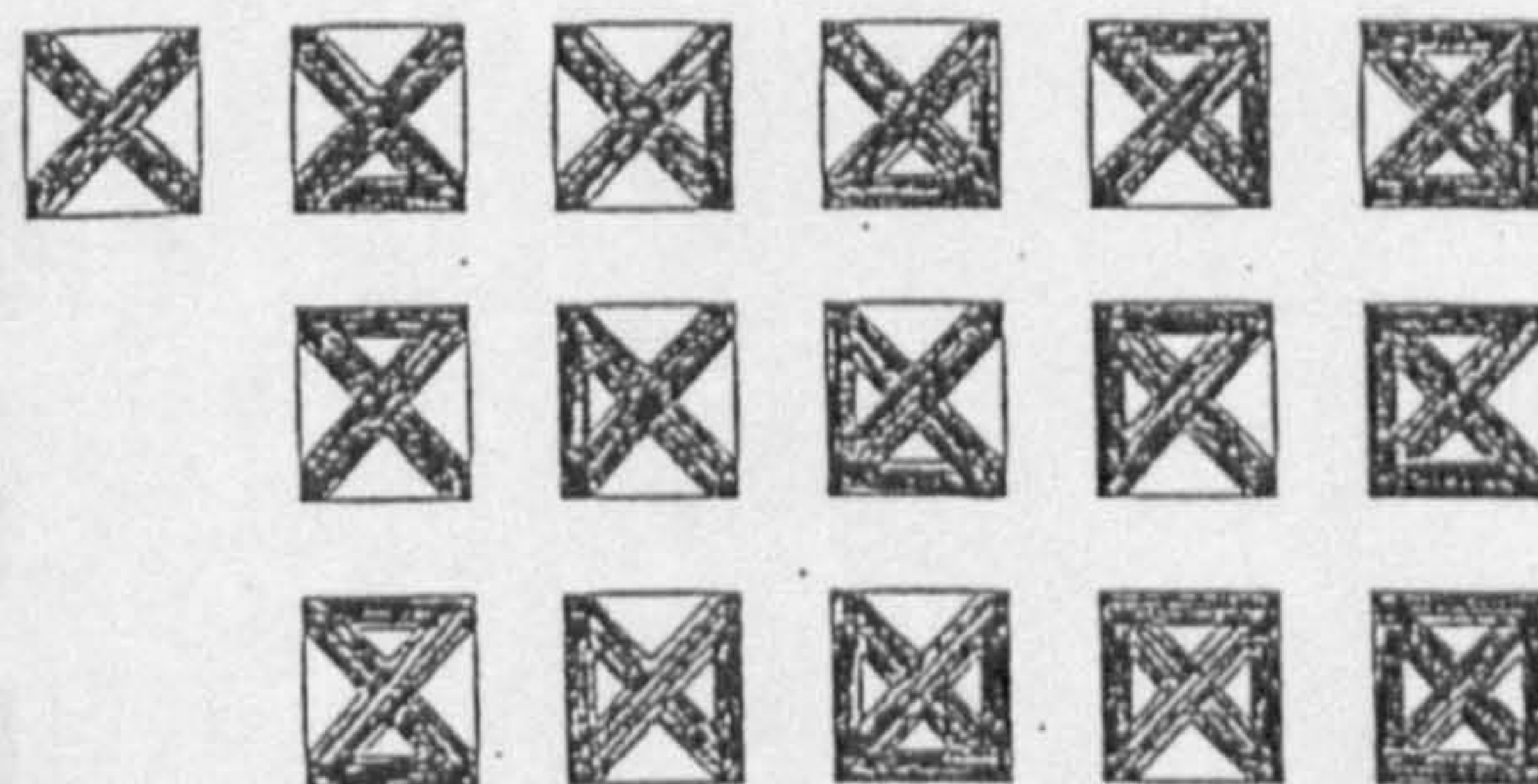
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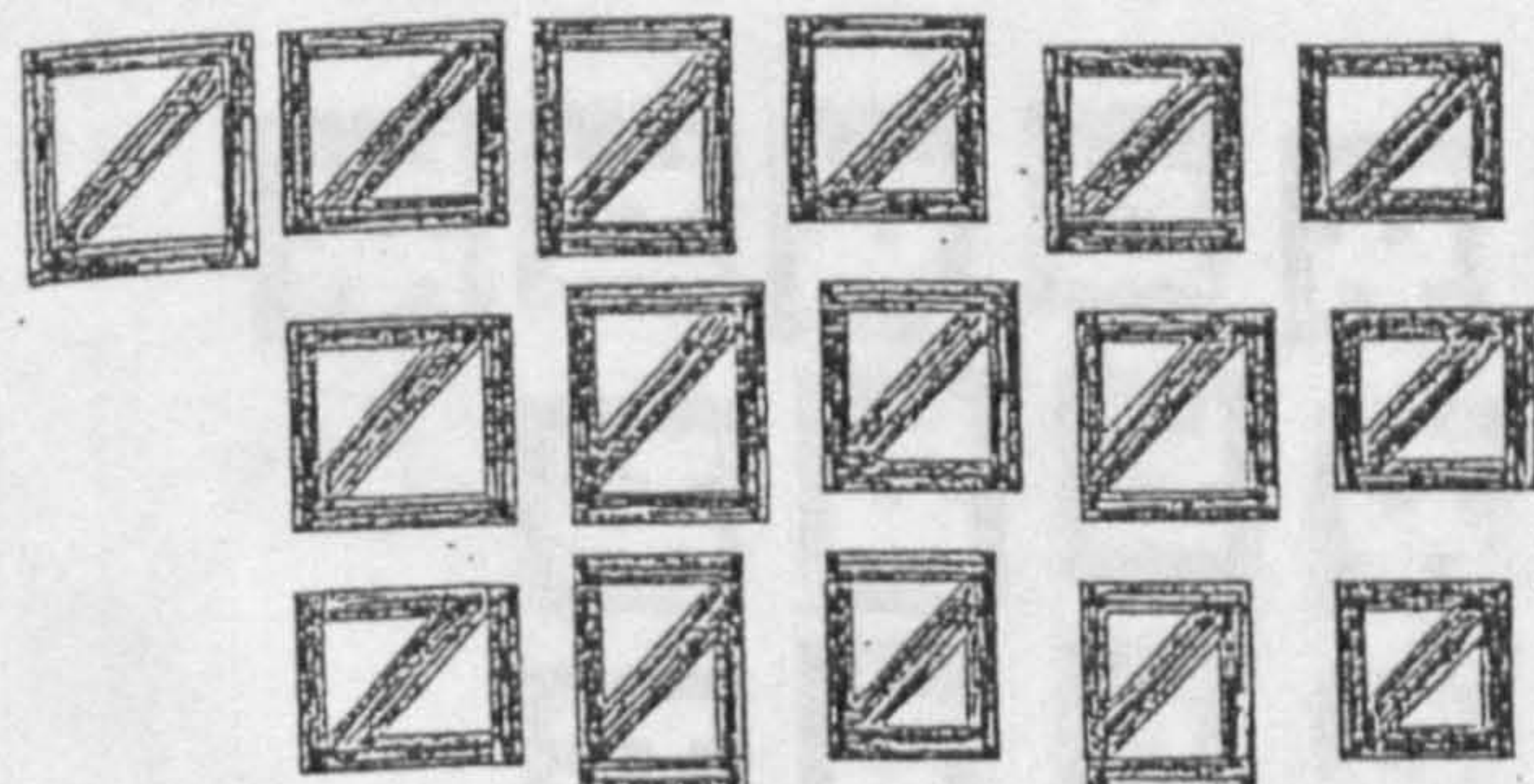
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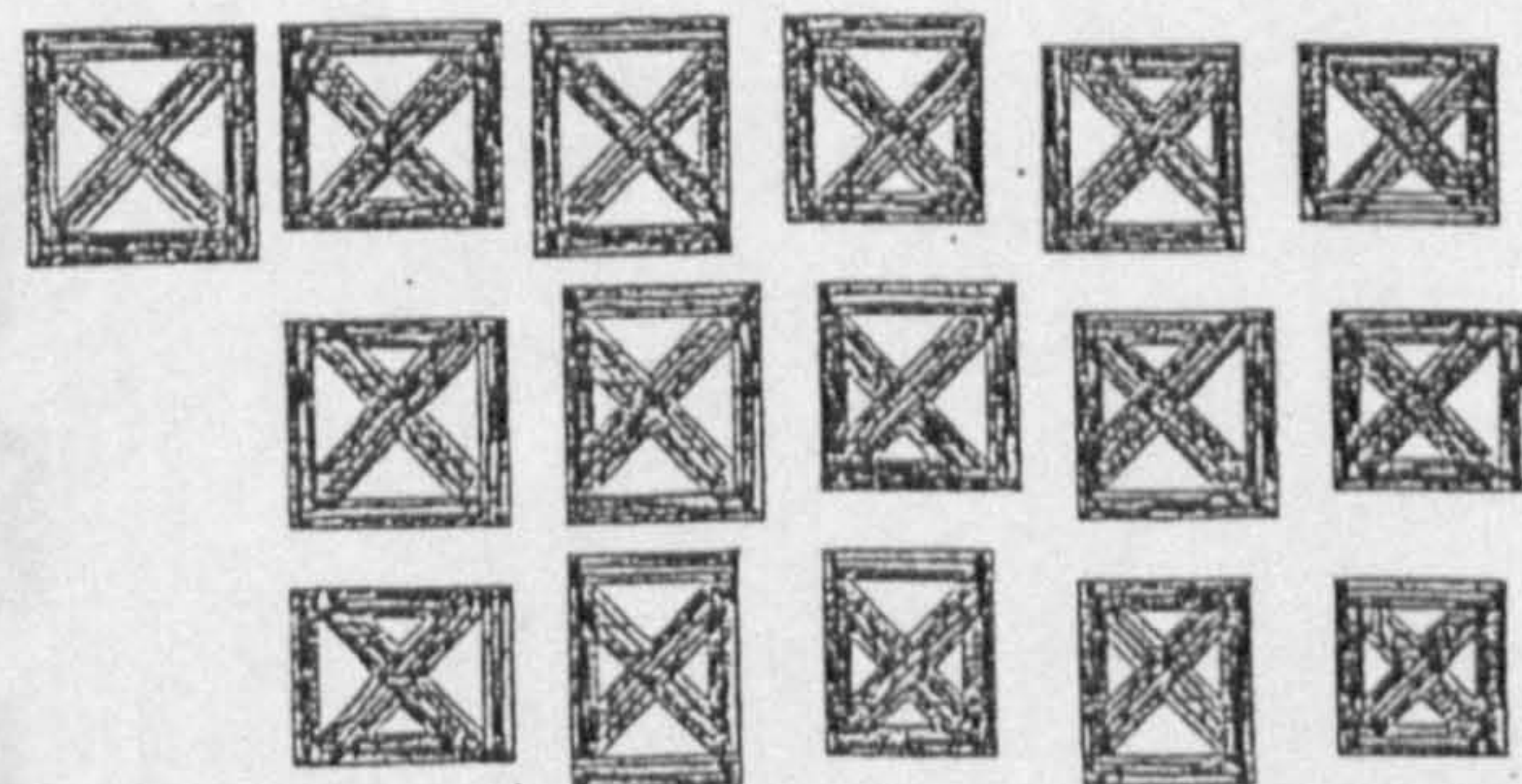
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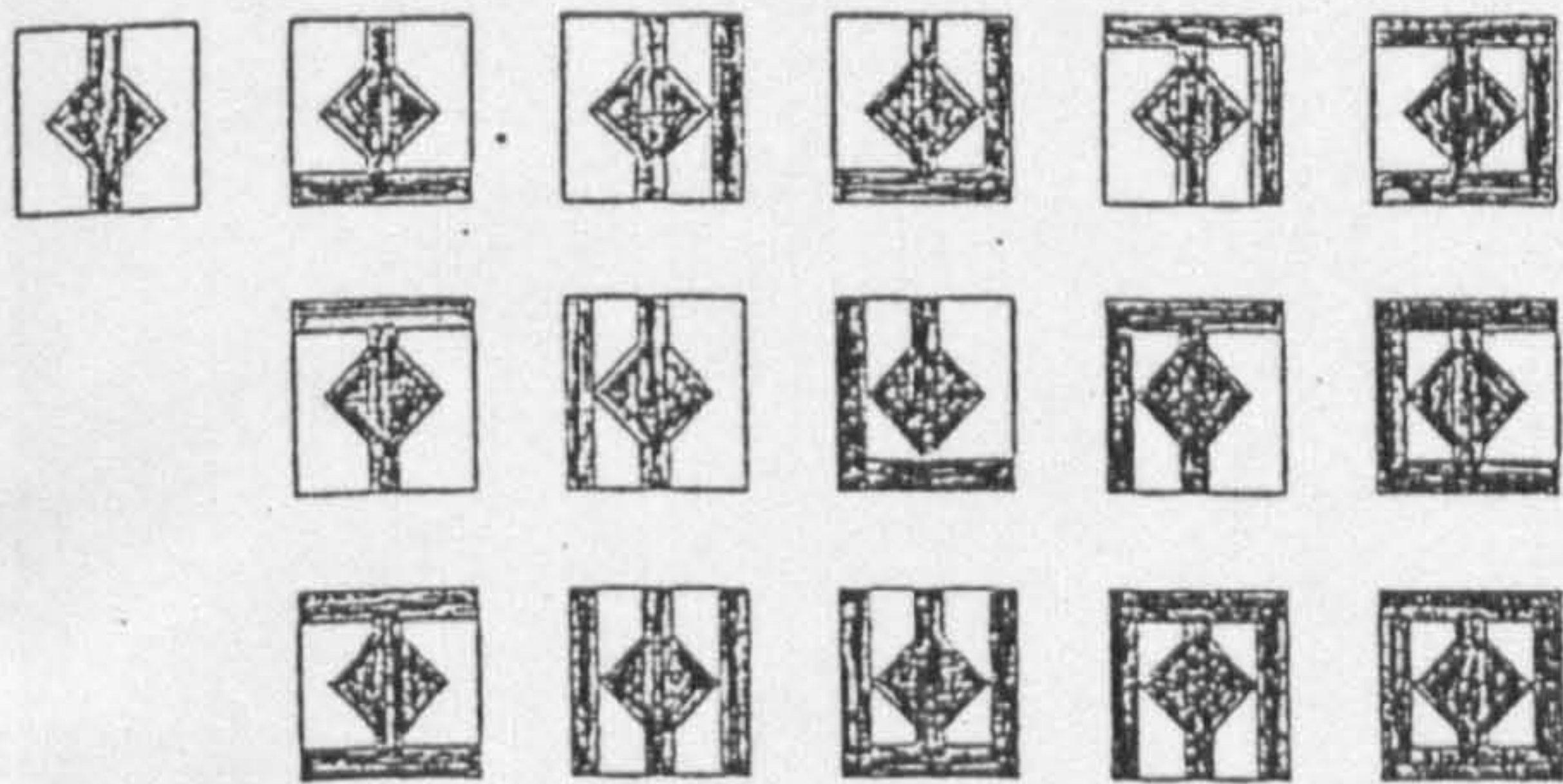
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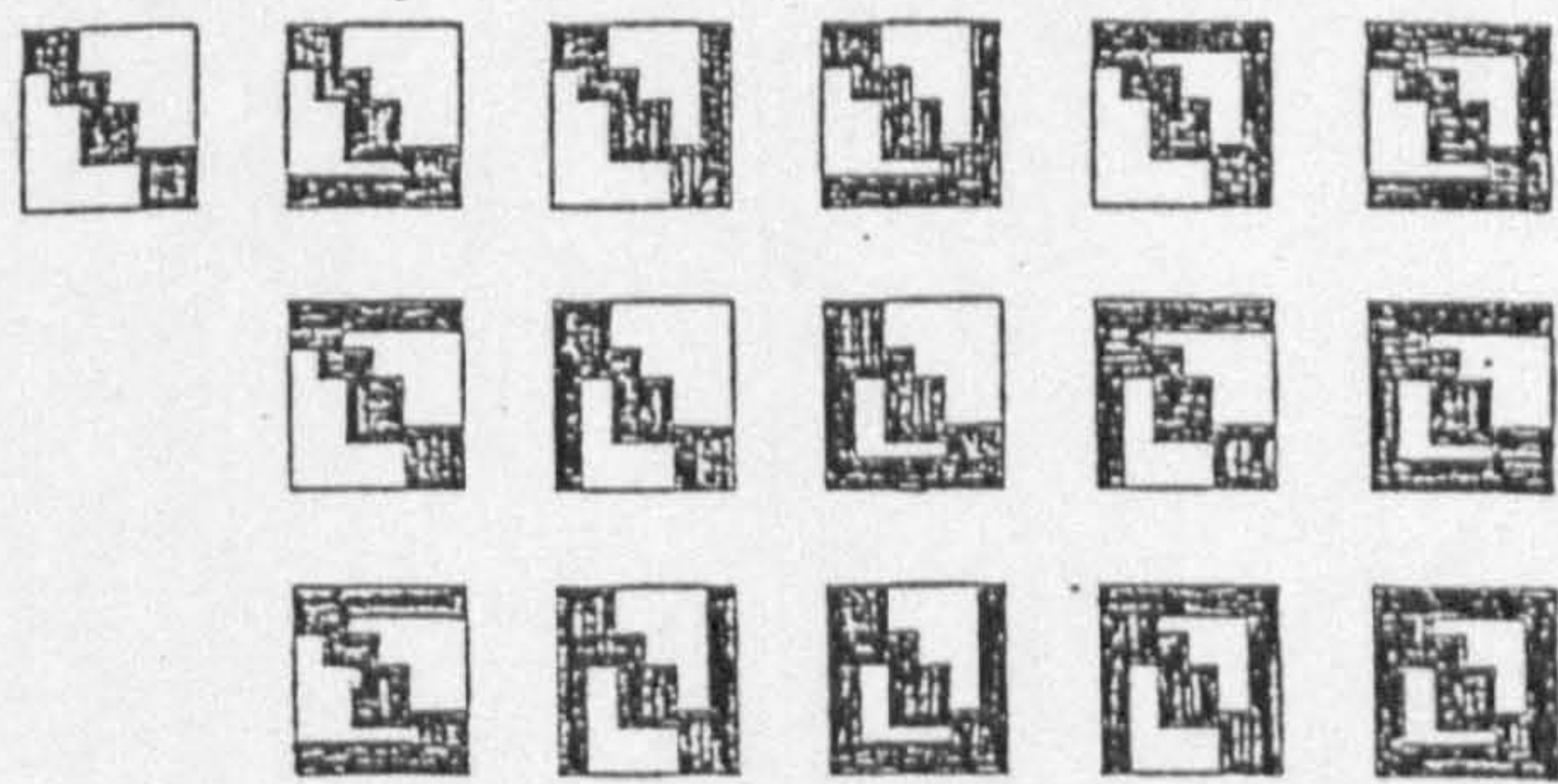
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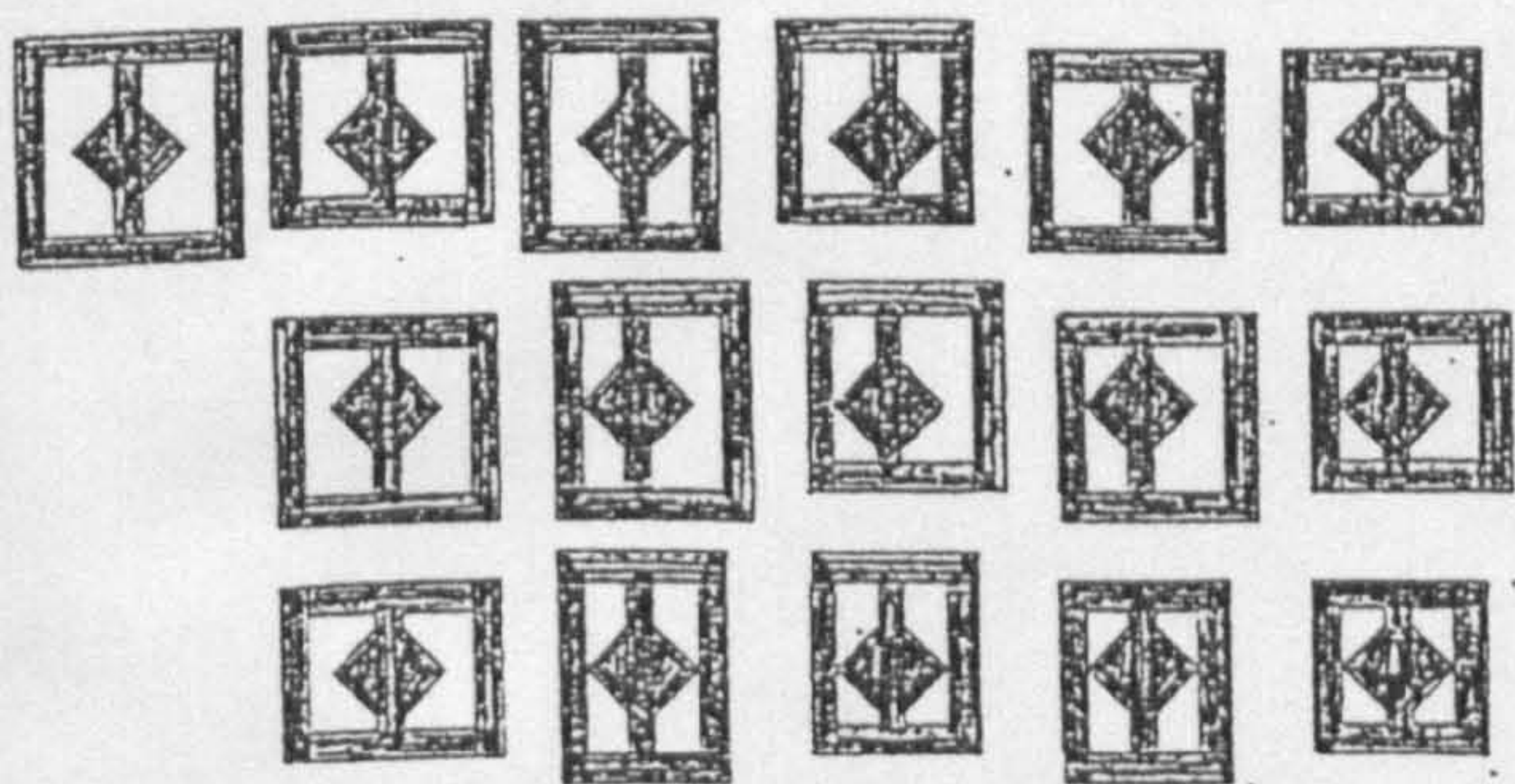
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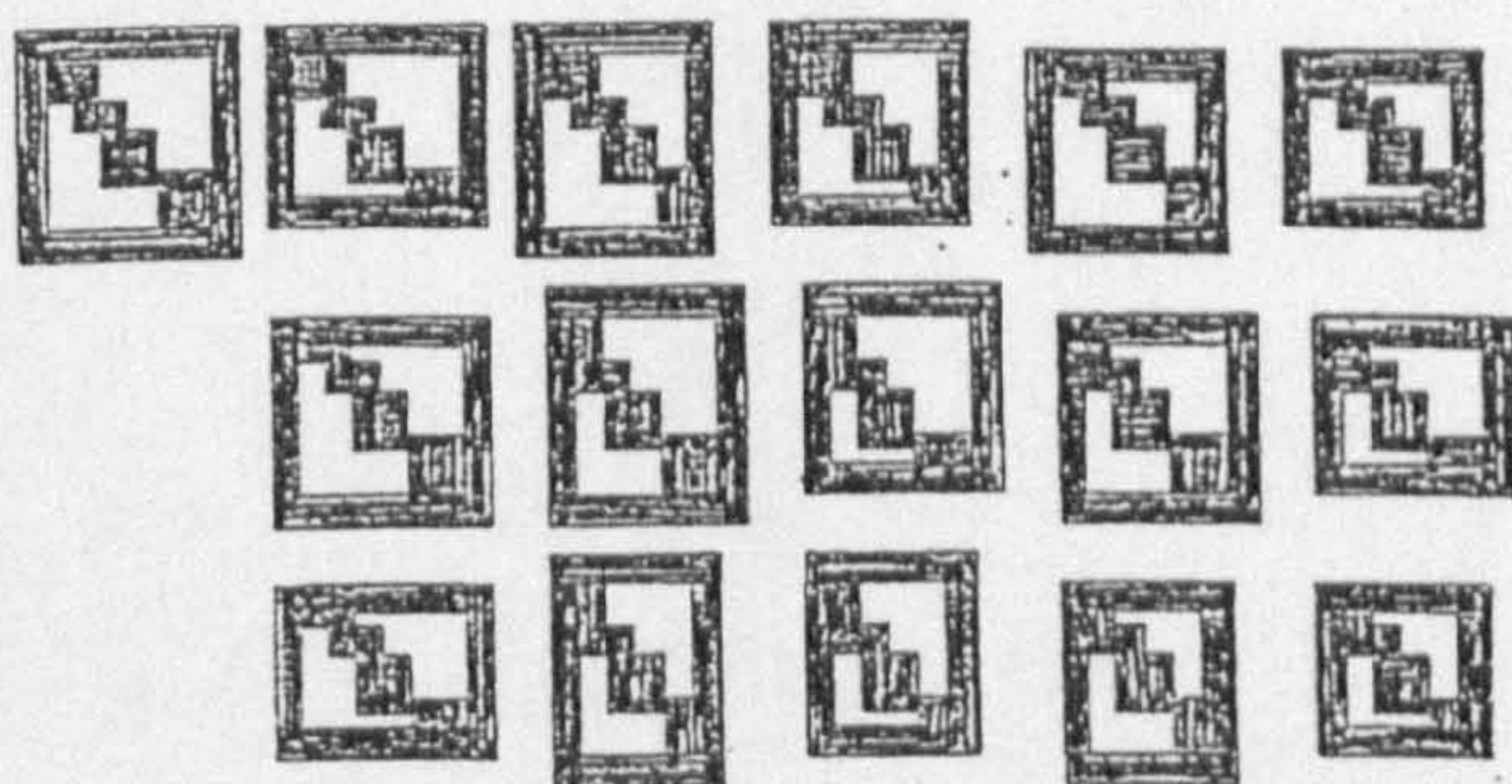
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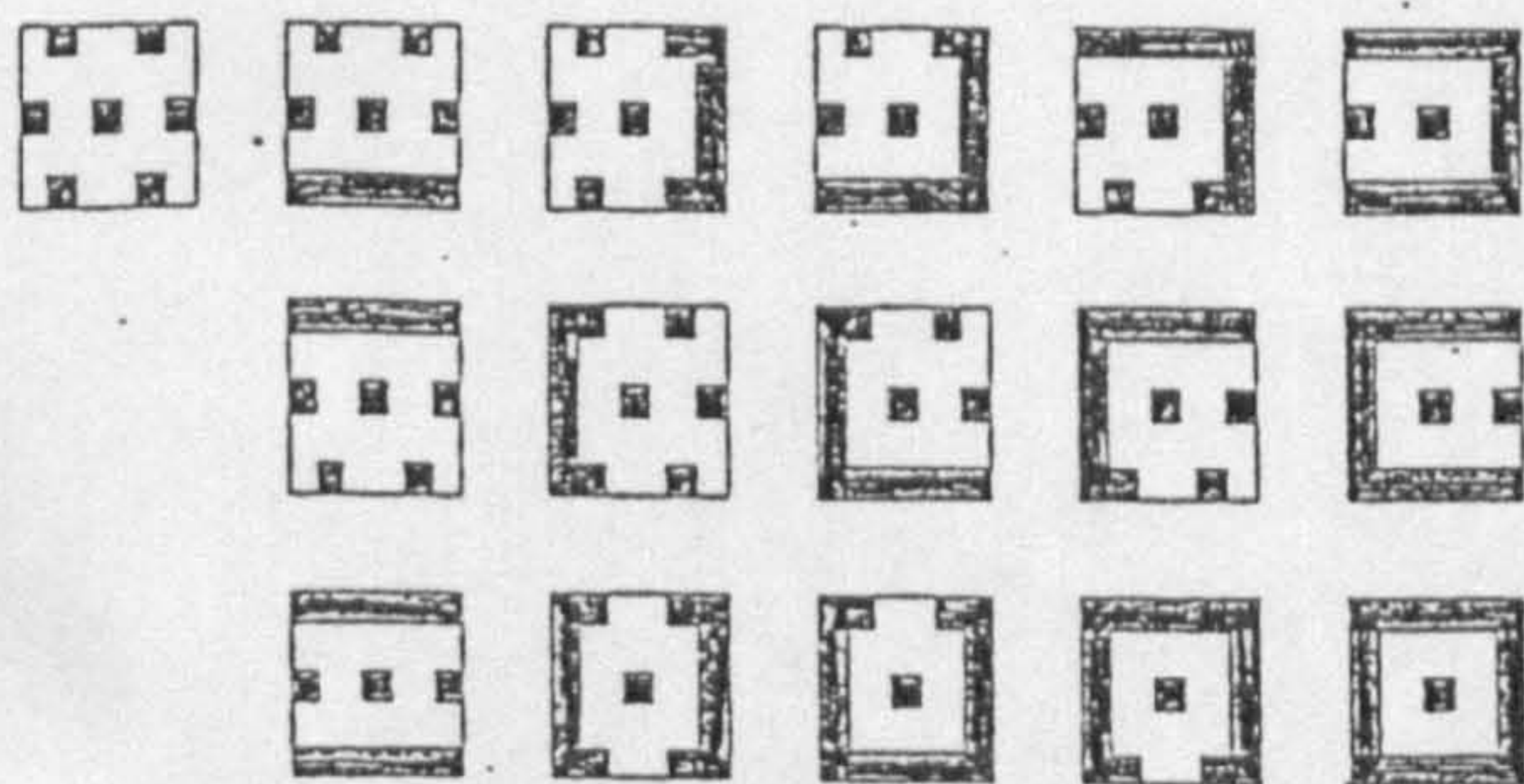
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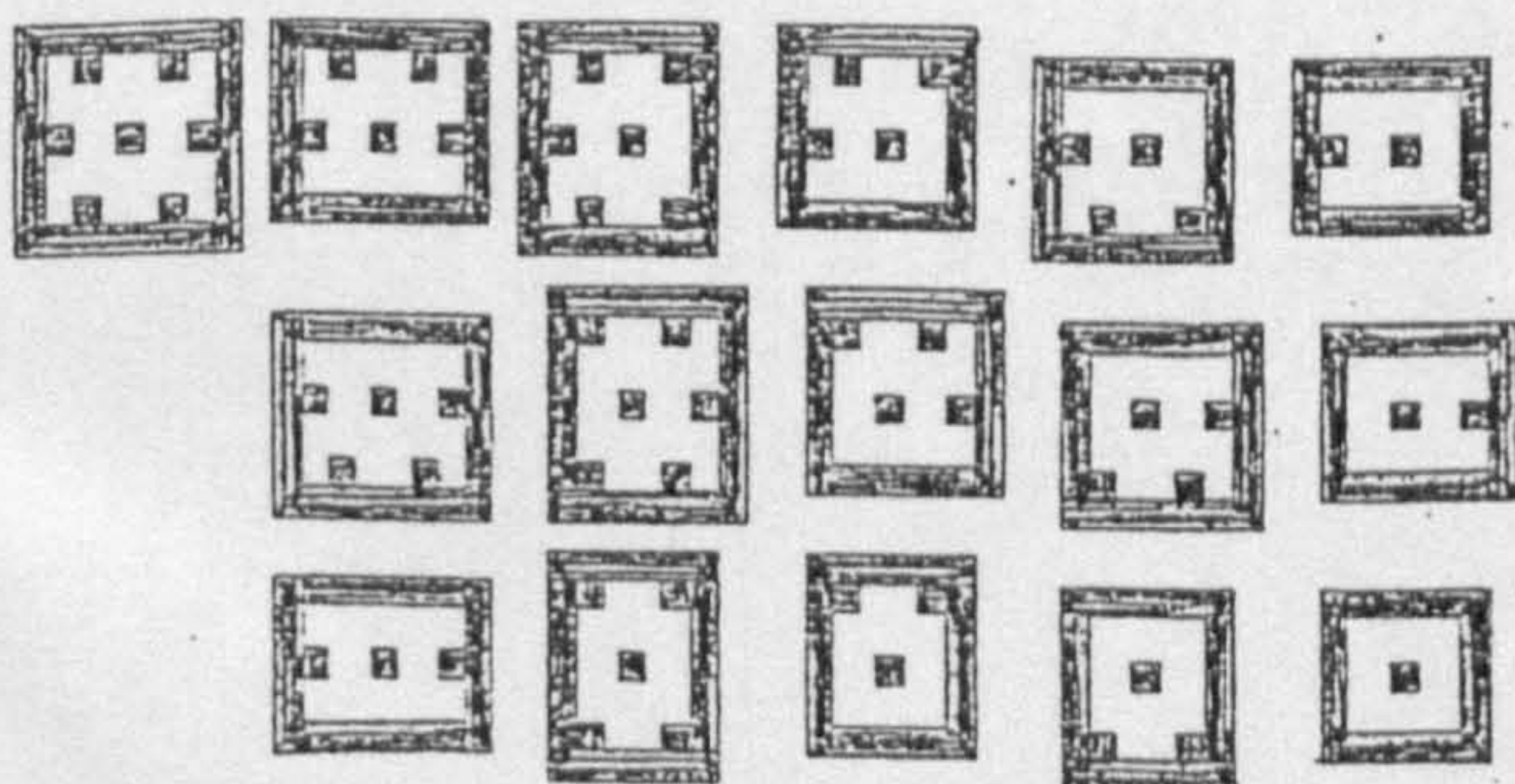
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