problems.

of human relationships. Because of their activities,

the possibility of perfecting the interview becomes

a problem worthy of attention by all who put their

faith in the methods of science as applied to human

questions: (a) Does the interview as a method

of research enlarge the area of possible study of

social phenomena, including the human aspects of

industry? (b) What procedure can be set up as

a means of testing the validity of interviews in a

given piece of research, and what factors enter into

The Concern of Industrial Management

in the Problem

Have these questions any interest for industrial

management? Are there subjects of research into

the principles and practice of administration and

management which require the interview as a

At the annual meeting of the National Electric

Light Association in May, 1926, Owen D. Young,

speaking of the development of power resources

and declaring that "public service is the goal'. . .

a public service which not only meets its own eco-

nomic requirements but supplies our social needs.'

said: "You are not afraid of new inventions and

new engineering in your physical plants. You are

accustomed to rapid progress. May I suggest that

invention, improved engineering and courage to

take the road are needed now in the social more

than in the physical sciences? I recommend that

we take the overhead of research and experiment in

the social field now when the social balance sheet

is stable and not postpone them to the day when

Weighty support for such a view of the impor-

tance of the social sciences to industry and busi-

ness today is found in Dr. Person's paper at this

session, on Management's Concern in Research.

May I read again his classification of the range of

information required as a basis for managerial de-

cisions? As I read it, will you think whether any

the reliability of data thus obtained?

method of securing data?

it may be too late."2

The subject then resolves itself into two main

Its Importance as an Essential Element of the Total Procedure of an Investigation Involving Human Relations

By MARY VAN KLEECK Director Department of Industrial Studies, Russell Sage Foundation

The Problem

THOSE of you who are accustomed to exact measurements of machinery and materials will be inclined to change the title of this paper to Conversations of a Social Scientist, with quotation marks about the word scientist. Perhaps the implications in that suggestion will clarify the problem. Conversation is a means of human intercourse. The question is how to perfect the interview as a method of social research. Social research has to do with human beings in their relationships to one another. . Because human beings are the subject and the final source of information, the interview is the distinctive tool of the social sciences as contrasted with the physical sciences. All sciences, whatever their subject matter,-whether atoms or social institutions,-have in common the method of observation and in varying degrees the method of experiment. But when some phase of society or the relationship of human beings is the subject, two other methods emerge; namely, documents or records of the activities of human beings, and interviews.

'The difficulty in the use of the interview is the variety of factors and circumstances which affect it. An interview involves always at least two personalities. What a man says reflects his emotions, his "state of mind," his own experiences; and what he says about social conditions or institutions is not invariably the same thing which someone else observing the same conditions would say. Moreover, the investigator who interviews him is subject to the same personal variations, and the relationship between the two personalities introduces another imponderable factor. The same person

may gain different impressions at different times. This kind of variability does not beset the physical sciences. Physical science finds assurance of validity in methods which are implependent of the feelings, emotions and personal limitations of the man making the observations. The fact that water is made up of two parts of hydrogen and one of oxygen can be discovered, recorded and verified without danger that the emotions of the investigator,-his preference for oxygen, perhaps,- may lead him to report that he has found water with two parts of oxygen and one of hydrogen. In their search for similar assurance, economists and sociologists have made use of statistical methods. By counting units and figuring arithmetically the relationships between them, independence of per-

research, we reject as subjects for research all phases however, that the scientific spirit of our age refuses any such limitation. Investigators in industry and outside of it are actually seeking to apply the scientific method to a variety of phases

sonal factors is possible. But when the subject is the relationship of individuals to each other in a group or the interactions of two groups and when a main source of information is a conversation or series of conversations, different results may be secured by different investigators, and reliability becomes difficult to measure. If, however, the reliability of data obtained through interviews cannot be measured, and if we are thrown back solely upon quantitative methods, the essence of which is counting units, then we are forced to conclude that no subject which cannot be elucidated by counting is within the scope of scientific treatment. If we reject the possibility of perfecting the interview as a reliable method of of human relationships regarding which data can be obtained only by interviews. Signs are many,

of these subjects is so unrelated to human beings and their reactions that no phase of it would require the methods of social science and particularly the interview to secure the necessary data? Dr. Person's classification is as follows:

- a. "Materials; their fabrication and consumer
- "Progress of the arts employed in industry."
- "Organization for and direction of transformative and distributive processes."
- d. "Human individual and group reactions to organization and direction procedures and relationships."
- e. "Consumer demand, and the general and particular markets.'
- "Industrial tendencies pertinent to longrun planning of policies and programs."
- g. "Environmental influences such as social customs, government regulation, international relations."

The first subject, materials, would seem to be independent of human relationships. But can the industrial manager know all that he needs to know about materials if he excludes from the range of his knowledge the habits and attitudes of the men who make them, their skill, their training, their creative powers? Must he not also know the habits, the attitudes and the circumstances of purchasers? Can the market be understood without using the methods of the social sciences?

The discussion so far has assumed that research is a means of discovering facts. In the relationships of industry has not research another function, namely, to point the way out of conflicts? "The Contributions of Research to the Harmonizatiton of Opinion"s was the subject of an address by Professor S. A. Countis of the University of Michigan before a group of educators a few months ago. "Research is ordinarily valued because it results in the discovery of truth," said Professor Courtis. "My thesis is that the supreme value of research I lies in the power of truth to harmonize conflict of human opinion and make co-operation possible." By way of analysis of his thesis he finds "seven major (types of conflict: (1) the pseudo conflict of misunderstanding; (2) the intentional conflict of dishonesty; (3) the irrational conflict of emotional bias." The remaining four he calls rational conflicts: "the conflict based upon conclusion drawn

'Paper presented at a meeting of the Taylor Society, New York, December 10, 1926.

^{*}National Electric Light Association Bulletin, June, 1926, p. 362.

School and Society, June 5, 1926, p. 707.