Assignment:1
Summery of
'Computing Versus Human Thinking'
by Peter Naur

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1 Introduction

In this article an overview of Peter Naur's work from past fifty years has been given, which is on the topic 'human versus computer thinking.' Mainly, author shows the contrast between computing and human thinking. His latest work is the description of the nervous system which shows that nervous system has no similarity with computer. Also, ha has found that a large part of what is currently talking about human thinking and about scholarly and scientific activity is not true as well as harmful to our understanding.

2 Description as the Core Issue of Science and Scholarship

His work in astronomy, around the year 1955, an ultimate item in his awareness came from Bertrand Russell's explicit rejection of any notion. Russell has pointed out clearly that astronomers science is concerned, not with causes, even not with logic, but with description.

When he got into computing to establish the programming language Algol 60, he observed the critical issue of description. His main contribution to this work was the development of a new form of description, counting the work of John Backus. This type of new description was an indirect critique against the form of description established in previous version, i.e., Algol 58.

3 Computer Design

He was mostly engaged in the designing of Algol 60 compilers and his main contribution was with Jorn Jensen, of the Gier Algol compiler. The primary issue in compiler design was storage allocation, not syntactic analysis. Gier Algol contains nine translation passes and the execution of the translated program was held in a paging system.

4 Techniques of Programming and Program Description

He has entered the discussions of programming problems of computers and on computer establishment as an academic subject. According to him the most proper designation for computer science should be datalogy, which is the study of data and its processing. Copenhagen University has adopted this concept. He has presented programming techniques in such a way which aims to enhance the programmer understanding of the program he is constructing. Later on in [14-1966] he has suggested that one main problem is the question of description of algorithms and programs. Also, in [18-1969] he has introduced a discipline, programming by action clusters, which help the understanding of programmers by creating relations. In [22-1976] a description of how to formulate the program as an interpreter of control records has given by him what may enhance the efficiency and the understanding of grammars of certain program types. One use of general snapshots is described in a work in which he applies Turing's universal machine. During

the Conference on Software Engineering in October 1968 the problems of program development were brought forward.

In the following years the discussions become centered specially on ideas of so-called structured programming and formal specifications of programs and he has participated in this discussion with empirical studies of the programming activity. He has suggested that the claims for advantages of formal specifications as a human programmer's tool are unjustified. As the primary result of these studies, he has defined programming as a human activity.

5 Descriptions of Mental Life

His programming activity work led him to related aspects of natural languages and mathematics, also the psychological and philosophical issues of human thinking. So that he had a purpose to examine few newly published works on these topics. He has found this review task confirmed time after time that present-day writers moot on confused cognitivist notions, mental life from totally defect. Gradually he came to realize that the entire psychology field, which concerned with mental life, during 20th century it has become entirely misguided into an ideological position so that only discussions that adopt the computer awakened form of description of mental life is accepted. So, in order to clarify this extraordinary situation of psychology he has engaged into a series of studies.

He has mentioned that based on his current experience the argumentation in recent discussions which is related to human knowing is defect; he decided to carry out a better systematic study of the formalization significance, rules and logic, in discussion of linguistic activity, human thinking and scholarly activity. As a result he published two papers and a book titled Knowing and the Mystique of Logic and Rules.

6 Science and Scholarship

When he was working the book on knowing, he discussed the place of computing in relation to other science fields and scholarship in two articles. In these articles author argued that as far as the scholarship and science activity is concerned, computing creates sense in the form of description, while problems of logic are irrelevant.

Other science and scholarship issues imposed themselves upon his attention in the ideological form suppression of scientific discussions of computing and human thinking, which is not only in the field of psychology but also in the current computer literature. Through the following 3 incidents such suppression have been illustrated. November 1995, brought an article by the psychologist G. A. Miller: WordNet: A Lexical Database for English, Communication of the ACM.

In 1995 he was given a book by B. von Eckardt, entitled, What is cognitive science? by computing reviews for review. He wrote a review that indicated the failure of the writer to argue for field, by pointing out in a detailed manner that how the author is committed to confused ideas both of science, computing and mental life. His review was rejected by the Computing Reviews editors. Later he had published in The Computer Journal. In addition, another article titled Computing as Science was rejected by Communications of the ACM editors.

7 Philosophy as Presumption

He has decided after writing the on Knowing that at least a part of the ground of the decay of psychology depends on the philosophical influence, which results an Antiphilosophical Dictionary: Thinking—Speech—Science or Scholarship, published first in a version in Danish and after that in English language. In this he carries through a critical pronouncements analysis, allegedly philosophical by some of the well known philosophers. He established what is said by philosophers about human mental life is invalid of empirical support. The main idea behind the work is that philosophy is an ideology of guess, which is harmful to science and scholarship. He has supplemented this work with empirical study, which is carried out together with Erik Frokjar, of the importance or philosophical locations in scientific and scholarly work. Here the study was based on the pronouncements from 80 scientist and a scholars from different fields, all professors from Copenhagen University. These pronouncements gives the confirmation that the impact of philosophy on science.

8 Conclusion

In the conclusion, the discussion of the theme which is given in the title: computing presents us a form of description, which is very important for narrating a high variety of phenomena of this world. Whereas, human thinking is not like one of them, the reason being that thinking of human generally is a matter of the plasticity of the elements of the nervous system. On the other hand computers- Turing machines- have no plastic elements. In order to describe thinking of human mind one needs a different form, as described by the Synapse- State- Theory.