

# Place Research Problem in Theory ----- A Theory Research Symbiosis

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## Abstract

Theory gives a specific perspective to research by providing systematic guidance for the identification and investigation of the logical relationship in the phenomenon of interest. To critically appraise the theoretical bases of a research, it is important first to familiarize with the language of theory, which mainly comprises of concepts and propositions. Furthermore, models are developed to act as a springboard for theory generation and theory practice. To organise the research findings in order to develop a body of knowledge, the connection between theory and research should be explicit in the study (JPMA 50:323, 2000).

The festivities at Olympia are at their peak. The whole city is decorated for this grand occasion. Hundred oxen are sacrificed in honour of the god Zeus. The crowd is enthusiastically waiting for the sports events to start. The strenuous race of the Greek athletes in armour is going to start; remember that the standard armour ('helmet, shield, and greaves) weighs 25--30 kilos. All these religious activities are being meticulously but impersonally observed by a respectable silently standing nobleman, a holy representative of such festivities called- Theoros.

The word theory has Greek origins, and means, "vision". For a layperson, the term "theory" has the connotation of self-prophecies and personal speculations regarding the phenomenon of the interest. For most of us in our daily lives, when we are comfortably relaxing in an armchair, we use our cognitive and thinking abilities to analyse persons, situations or events. As we become satisfied with our understanding of the topic, we stand up and conversation usually starts with "My theory regarding the political situation of the country is that. . . .", but for scientific research theory goes far beyond this. For scientific research, mental gymnastics are not the sole basis for theory formation. Research opens the door to the cosmos where empiricism observes the facts and objectively forms a theory from the relationship between the facts of the phenomenon. Consequently a building of knowledge is practically constructed upon the framework provided by the theory.

**Moral:** The most comprehensible thing about world is that it is comprehensible Albert Einstein.

"A theory is a set of interrelated constructs (concepts), definitions, and propositions that present a systemic view of a particular phenomenon by the specifying relations between variables, with the purpose of explaining and predicting the phenomenon"<sup>1</sup>.

As mentioned earlier the word theory is quite variable in terms of its expression and use. However, for a neophyte researcher, a more widely used generic definition is adopted in this article to develop a common understanding. This is a generic definition, which is a basic definition and therefore it has been adopted for the article so that the researchers may use it as a point where they can start. Theories are not real entities<sup>2</sup>. They represent uncertain knowledge. A theory is a tentative explanation of a phenomenon, formed on the basis of plausible relationships between known facts. It is ordering of facts pertaining to particular phenomena, in such a format that the interrelationship amongst them becomes apparent. The word tentative needs further explanation. Lets take for an example in a scratch pad on which an author may have given five points; these being the facts that he has discovered. But individually each of them could not give any meaning to the phenomenon. Now he instructs the readers are to complete the picture.

So it could be an envelope or an umbrella. On thinking about the facts and trying to relate them, we

have some direction and we can confirm this by further research and the context in which these facts are discovered.

**Moral:** Theories are not discovered, they are created.

**‘What comes first \_\_\_\_\_ theory or research’**

The answer is as simple as the chicken-egg riddle, whether the chicken comes first or the egg..

Actually, theory and research are so inter linked, that it would be unwise to consider them separately.

These are two complementary phenomena. Theory development is characterized by the two processes, i.e., Theory generation and theory testing. The observations made through scientific research are

organized through the inductive system of reasoning to formulate a general explanation of the phenomenon called theory. Then hypotheses are stated for specific observations through the deductive system of reasoning. Theory testing is eventually done through research based upon these hypotheses.

A research team tries to investigate what affects the pregnancy outcome, They interview healthcare providers and pregnant women, most of whom state that the quality of social sustenance available during pregnancy is conducive for a better pregnancy outcome. The different inferences are induced to generate the theory. Now the theory dictates the direction of data to be collected on the basis of the specific hypothesis deduced from the theory e.g., the presence of an educated mother in law during antenatal care is more beneficial in terms of the pregnancy outcome.

Now the question arises: is the research without a theoretical underpinning not valuable? The answer is both yes and no. The research would be useless if the researcher has not fully explored the theoretical rationale and support from the related disciplines. Not to do so is negligence on the part of the research scientist. It could be valuable if the no relevance theory is available, in which case non-theoretical research can form a basis for theory generation at later stages.

**Moral:** God gives no linen, but flax to spin-German proverb

Theory by providing a scientifically acceptable set of principles to explain a phenomenon<sup>3</sup> performs numerous general functions proceeding from the scientific researcher to the research consumer.

Theory facilitates the inter-relatedness of isolated facts and observation in an organized and systematic manner. So an efficient mechanism is developed for accumulation of coherent research findings.

Consequently knowledge becomes more accessible to both the practitioner and the researcher. The condensation of knowledge by theory is crucial for the advancement of the knowledge base.

Theory provides guidance by identifying a chain of events in a phenomenon. Eventually a frilly developed theory takes one leap forward to explain why and how the phenomenon has occurred. The ideal state of theory development would be that it achieves the ability of bringing profitable change in the environment.

## ID

It is present since birth and contains life instincts (hunger, thirst, sex) and death instinct (aggression, destruction).  
When basic instincts are not fulfilled, substitute objects are used for gratification: (displacement)

## EGO

It develops after birth, operates on the reality principle to do planning and action according to the needs.

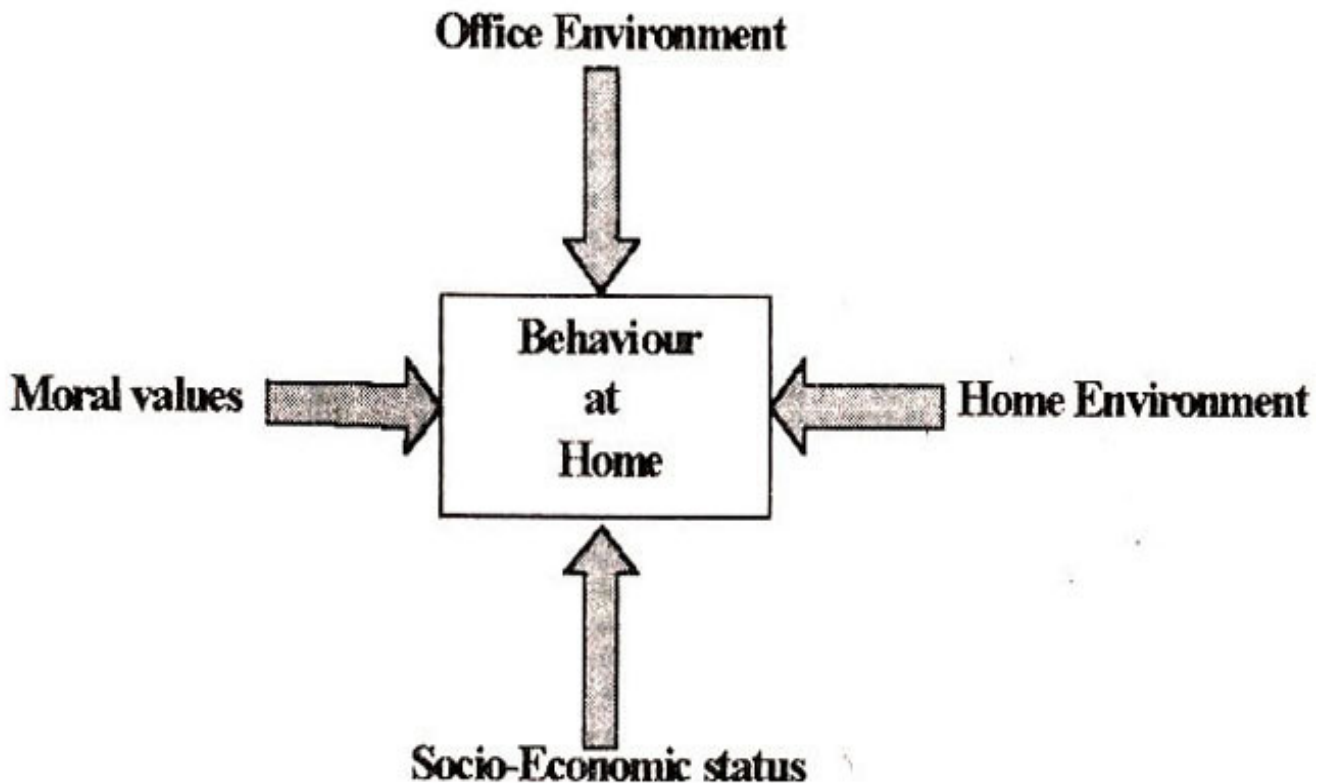
## SUPEREGO

It develops last and gives moralistic orientation to the reality based action of ego.

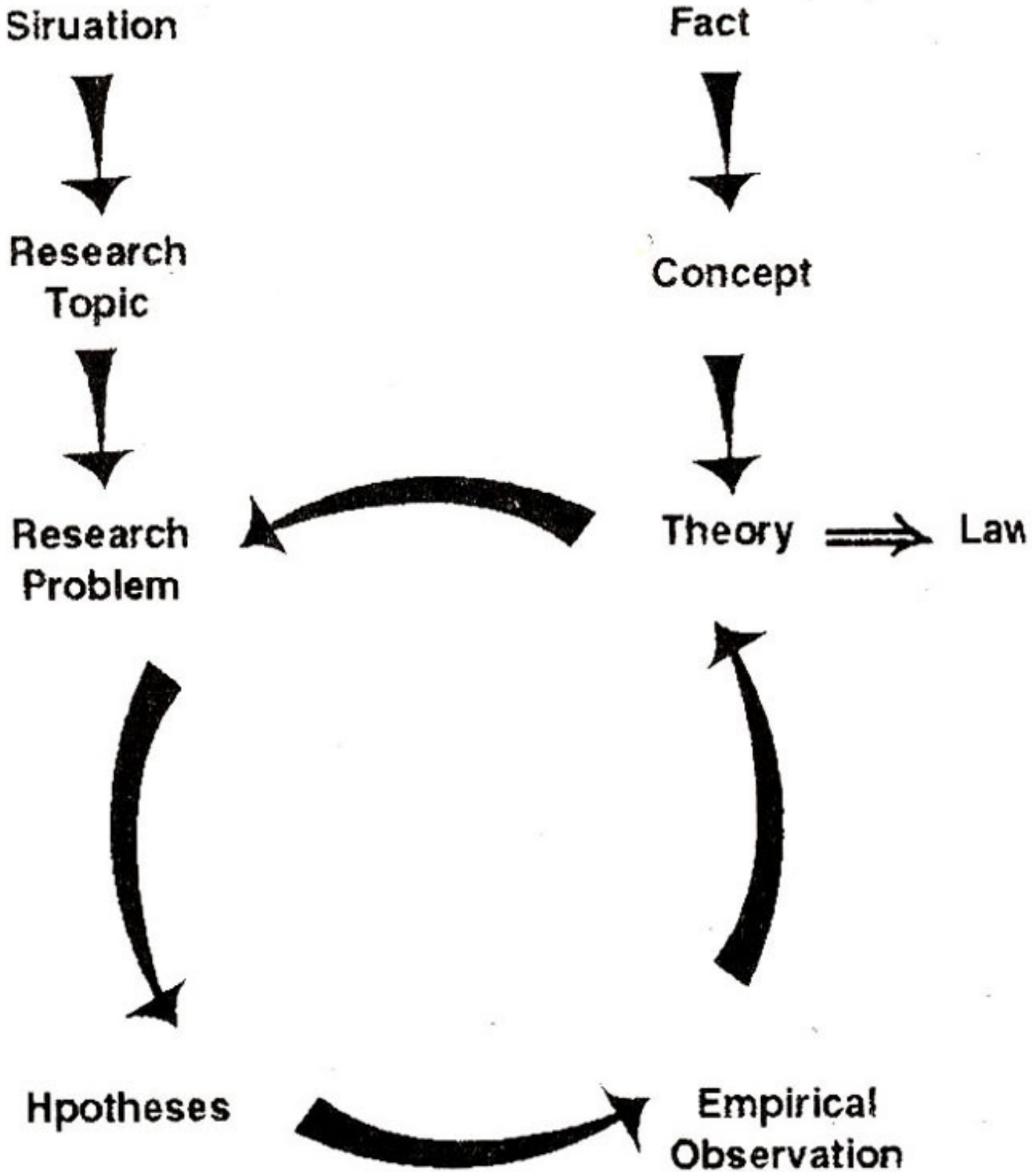
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*According to the psychoanalytic theory<sup>7</sup>.*

Theory motivates us to think and act for the continuation of knowledge by giving vision, direction and impulse to research.



Research is like travelling to a new destination. There are chances that you can reach there without a map, but that would relatively be not a logical way to reach the destination. Theory generates the idea in us to enquire that what would be its application in situations known to us.



Furthermore, theories may require revisitation, if the research does not endorse the hypothesis.

**Moral:** Science is organized knowledge \_\_\_\_\_ Spencer Herbert

For the communication of knowledge and the establishment of common grounds, it is important for

research to take a start and make progress. The researcher can only decide through definition whether different writers have the same meaning for a term or not. The language of theory has a specific scientific terminology. Here we are discussing the widely acceptable definitions and explanation of the terms.

**Fact:** This is the smallest irreducible unit of research findings. It is a statement of actual existence that can be verified

Aristotle could have avoided the mistake of thinking that women have fewer teeth than men do by the simple device of asking Mrs Aristotle to open her mouth\_\_\_\_\_ Bernard Russell

**Concept:** This is the tile given to an abstract idea, event or object. These are based on real world experiences and represent generalized mental picture of characteristics of that phenomenon e.g.,

**Health, family, women's empowerment**

As you have noticed these are titles which substitute the detailed description. Though the “concept” brings a sudden detailed description to mind, it is cautioned that a concept could be universal. However its description could be variable from research to research and theory to theory.

According to the World Health Organization, health is a state of complete physical, mental and social well being and not merely the absence of disease or affirmity<sup>4</sup> But the concept of health has other dimensions also (esthetical, anatomical, physiological etc.) and is mainly culturally influenced Furthermore, its definition is also dependent upon the role and status of the affected individual in that society<sup>5</sup>. For theorists, the process of conceptualization requires exposure to a vast amount of knowledge and experience. In a theory, observable concepts, either directly or indirectly, are called constructs: Height, weight, socio-economic status While non-observable concepts are called theoretical constructs: Psychoanalytical theory assumes that behaviour springs from unconscious drives and conflicts. Sigmund Freud coined the concepts of id, ego, and superego to explain his view of mind dynamics and personality under this theory<sup>6</sup>.

**Proposition:** This is a decorative statement regarding the nature of relationship(s) among the concepts. It provides a reason for the existence of a concept in a theory. It could be non-relational or relational. These are chronically malnourished children. These are cognitively deficit children. Chronic malnourishment leads to cognitive deficit in the children.

**Law:** when empirical evidences considerably vary & theories, then their soul proposition is called law. Facts and law are the only certain endpoints in the spectrum of knowledge. Conceptual framework or model: This refers to the pattern of organ isation of concepts, for explaining a phenomenon of interest during a pre-theory stage. They are prepared through the induction process. These concepts are often abstract and multi-dimensional. As related systematic research is usually not available, and concepts are mainly evaluated logically, based upon non-systemic research findings and intuition. These frameworks are used for theory generation Theoretical framework or model: This refers to related to problem statement of interest. This framework is developed during theory testing process. It is prepared mainly through the deduction processes. The concepts are usually less abstract and narrowly focused. They are formulated on the basis of existing theories and systematic research findings. They are used for postulating hypotheses for empirical testing.

According to the psychoanalytic theory<sup>7</sup>.

Now the problem statement is why secretaries, who are usually courteous and polite, are harsh and short tempered husbands. In order to sort out the problem, we took help from the psychoanalytic theory, the social learning theory etc. The theoretical framework identified the factors, which could hinder or promote such behaviour Though this framework might be imperfect, it allowed us to raise a number of research questions for a specific problem. When the questions were empirically tested, it was found that in the office secretaries repress their desire to yell at the boss. Which is congruent to the psychoanalytical theory that basic instincts (of aggression) are not fulfilled (at office), belong to a substitute object (wife) is used for gratification (out let for aggression) Medical professionals often

think that theories are social sciences and have no significant place in the biological sciences. This is a wrong assumption. Most of the major achievements in medicine are in fact theory based. There was greater advancement in understanding the mechanism and treatment of physical pain, when empirical data was collected on the basis of pain gate theory by Melzack and Wall<sup>8</sup>.

**Moral:** A theory is never proven or tested, it is the hypothesis deduced from it.

Research and theory are only meaningful when work is simultaneously done upon them. Research supplies the data, theory gives meaning to the data<sup>9</sup>. Theory guides the research but it's the research, which eventually provides sufficient empirical evidence to upgrade a theory to the status of law. Problem statement provides a context for research and raises some thought provoking queries. But before stepping further up the ladder of the research process, there is still dilemma: why is it important to answer these questions. This consideration forms the rationale of the study. The emphasis on the perspective of theory will let the investigator clarify what would be the utility of generating knowledge in a given context. Usually the researcher lacks an in-depth understanding of discipline. ends up failing to defend the theoretical rationale of the study in front of institutional review boards, funding agencies, publisher, even if he succeeds in crossing these "safety valves", he will be unable to find any genuine listener or readership. That would be a futile exercise when you are answering questions, which are of value to none. Establishing a reason for a specific research is trivial to justify the findings.

**Moral:** Research and theory are actually two parallel processes having a symbiotic relationship.

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