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HYPOTHESIS AND FUTURE CONCEPTS

Éva TÓTH

Department of Theory of Science and History of Engineering
Technical University of Budapest
H-1521 Budapest, Hungary
Phone and Fax: 361 166-66-28

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Abstract

The prognoses are analyzed as the hypotheses. The prognoses as hypotheses are situated on the scale of probability according to the number and character of the hypothetic elements they contain. Either the information referred to is hypothetic in part or the conclusion drawn from proved reliable statements cannot be formalized.

Keywords: prognoses, hypotheses, background, information, probability.

The shaping of future concepts is greatly influenced by the acquired knowledge, by the limitation and the specific possibilities of the whole cognitive process.

No future researcher believes that he will know future or that future can be known in general, in the classical meaning of the word. In the present one cannot know the phenomena, events, processes which will create future. Future can be approached intellectually, one can imagine events or come to certain conclusions. While giving a prognosis we want to recognize the processes of the past and the present showing to the future or the tendencies of these processes showing to the future – it can be done as they exist.

All cognitive processes are characterized by an active participation of the cognizer, the subject, i. e. the concept to be shaped implies not only the features, characteristics, state, etc. of the object but the experience, knowledge, skills, abilities, capacity of the subject as well.

In shaping future concepts the activity of the cognizer is especially emphasized, its significance is growing. While in the physical reflection based on a direct object-subject relation the subject is not always aware of the fact that is not an 'indifferent' observer of the phenomena but what he 'sees' reflects his direction as well, the observations (cognition) made with a view of shaping future concepts are characterized by conscious activity. As is well known, future cannot be perceived so past and present (their phenomena) have to be looked at through special 'glasses' (glasses searching future). What we want to recognize in the existing phenomena is something

that refers to the future, possibilities from which future (can) develop. For this the existence of the object (phenomenon) is not enough, the possibility of consciously guidable activity of reflection, the experience, knowledge, ability of the observer and everything else which makes his thinking future-oriented is necessary, too.

On the basis of acquired information while using appropriate methods the future concept, the prognosis is born. In fact it is a hypothetic statement or statements – a hypothesis.

The prognosis shaped by a scientific investigation of the future of the phenomena is a hypothetic answer (hypothesis) which means the exceeding of the present level of human knowledge. A hypothesis implies some elements of human knowledge and the plus information meaning the exceeding of the previous level of knowledge. In other words, each hypothesis contains something new, original. This extremely advantageous feature is accompanied by the risk of error.

The prognoses as hypotheses are situated on the scale of probability according to the number and character of the hypothetic elements they contain. Either the information referred to is hypothetic in part or the conclusion draw from proved, reliable statements is non-logical, plausible. It is especially true for asking for expertise where the mechanism of shaping statements cannot be formalized.

Naturally, the future concept compiled from experts' reports or shaped by any other intuitive method is not a concept at will as it is based on all available (up to that point acquirable) information, on the experts' knowledge, on the so far determined and set laws of the sciences involved by which the prognosis can be 'verified' and a statement inconsistent with them cannot be considered reliable.

A general characteristic of hypotheses is that they contain a lot of new information only if their probability compared to the information background is little (on the other hand, risks are bigger in this case). This inverse proportion between the probability and the novelty value of the hypothesis is valid for the hypotheses concerning the future as well.

But the probability of a hypothesis concerning the future is determined not only by the relation to its novelty value. If the novelty value of a prognosis is – let's say – 0 (i. e. the future is seen exactly the same as the present) its probability is also 0 (i. e. impossible) as we can be absolutely sure that the conditions of the present will not remain the same in the future. On the other hand, if the novelty value of a phenomenon is too high and the prognosis is totally separated from the possibilities that could be seen in the present its probability will be approximately 0 but it cannot be considered impossible. (Some elements of the most improbable utopies/antiutopies have come true so far!)

The more concrete the matter and the more determined the time that the novelty concerns the less the probability of the future concept is. The novelty value and the probability do not countermove so unambiguously as it is the case with the hypothesis concerning the future. In the probability of a future concept not only the involved novelty value is expressed but the fact as well that each future situation has only a certain probability in the present.

Thus, all future concepts contain a certain risk in relation to the information background, though of different degree. Probability weighs realization, whereas risks weigh non-realization.

The novelty value of future concepts cannot mean that their statements would be inconsistent with the information background. As in any case a prognosis of future presumes a certain distancing one has to remark that this 'distancing' cannot lead to opposition, contradiction. Only in this case can we speak of a hypothesis, a hypothetical answer given to a problem.

A future concept consists not only of one hypothesis but of several different ones from among which some take the determinant character of the past and the present into more consideration, i. e. they bear less novelty (originality) and some are much more separated from past and present i. e. their novelty value is high. The realibility of a future concept can be increased by working out several hypotheses of different novelty value and probability.

In studying the future of a given phenomenon the uncertainty of the probability of the shaped future concept is often improved by working out more than one alternative. As it is in the nature of the objective probability of the phenomena the present conditions bear the possibility of several kinds of future. If it is expressed in a future concept its reliability will grow. A truth value can generally be given to a hypothesis in an information background. It is called a conditional or relative truth value. That is: if the initial information background is true the initial relative truth value of an answer given to a problem formulated on the basis of this initial information background is higher if it is in accordance with the whole information background. The greater this accordance, the higher is the truth value.

Relative truth is time-dependent, i. e. the truth value of a hypothesis changes according to the increase of the information background.

As prognoses are hypotheses only relative truth can be valid for them. It is clear that the closer the relation between a future concept and its information background and the more the truth value of the information background increases, the higher could be the truth value of a prognosis.

In the case of hypotheses the truth value denotes the correspondence ('rightness') that is the truth value of the hypotheses grows as it turns into a proved statement (thesis).

In the case of prognoses the truth value denotes the tendency to realization. The truth value of the prognosis increases until the prognosticated event comes true or decreases until another event comes true and so the previous one becomes impossible.

From among the prognoses only a few come true that is why the relative truth value increases only of very few, most of them become impossible in time.

The change of the relative truth value throws light upon the fact that the realization of a prognosis is a long lasting process and we progress step by step. So that my prognosis could be realized first the elements of the information background in direct connection with the prognosis must be realized (it means that their truth value increases) but so that these elements could be realized other events preceding them must become true ... and so on up to the present.

What does the statement that the relative truth value of a prognosis (as hypothesis) depends on the fact whether it is in concordance (close relation) with the information background mean? This question can be raised because in future research – as it could be seen from the above mentioned – it is very important how big the distance is from the present The above mentioned concordance or close relation requires only that the prognosis (hypothesis) should be shaped on the basis of a well-founded information background, following the rules of the methods of prognosticating. The relative truth value of our prognosis will be high and will even increase (to very probable) to the extent of this concordance whereas if we cannot or can only slightly rely on the information background we can expect that our prognosis with a low truth value will not come true (and as we know it happens very frequently).

Prognoses among hypotheses are characterized by the fact that even prognoses with a low truth value have a chance to come true as because of the changes of the information background the relative truth value of such a prognosis may grow.