Pragmatic Epistemic Justification and F. Gonseth's Idoneism

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What is knowledge ? How can knowledge be distinguished from simple opinion or belief ? Are we able to insure ourselves against error ? This is the kind of questions that Socrates asks the young Theaitetes. During the dialogue, several successive definitions are proposed, the last one being that knowledge is true belief followed by its justification.

But this characterization leaves many questions unanswered.

1. Can knowledge be grounded on opinion, on belief ? Isn't belief subjective, when knowledge is supposed to be objective ? Obviousness itself doesn't provides any guarantee : it often happened that things that seemed obvious to anybody finally turned out to be false.

2. It is easy to give a sentence the truth value "true". But haven't I often been wrong ? Didn't I often believe that a sentence was true when it was false ? What insures that an opinion or a belief is true ? What are the criteria of truth ?

3. Is it enough, to protect oneself against error, to require that knowledge be justified ? Gettier's counter-example compels us to doubt that. When can a justification be considered sufficient ? Isn't justification also liable to error or deception ?

As the Swiss philosopher of science Ferdinand Gonseth (1890-1975) properly observes, these attempts to define knowledge suffer from a serious flaw : they remain on a purely discursive level. They are only words that don't properly involve an activity. They lack an essential feature, namely the sanction of experience.

In order to understand what knowledge is, Theaitetes' question "What is knowledge" doesn't go far enough. We ought to ask a more basic question, namely "What is knowledge used for ?" And the answer to that question is "Knowledge is used on the one hand to identify the circumstances we are in, on the other to determine, as a function of this state-of-affairs and the objective to be achieved, which decisions should be taken".

Can this characterization of the aim of knowledge smooth out the difficulties mentioned above ?

1. It avoids resorting to a subjective belief. Is my knowledge false or true ? It is the efficiency of the action that it allows me to guide that will decide : the chance of succeeding of actions based on good knowledge is better than that based on an erroneous estimation of the situation. And if one gets control of all factors, one almost certainly will succeed.

2. It assumes the risk of error. All my knowledge isn't equally reliable : I consider some data as possible, others as probable or as certain. And even knowledge that I consider today as certain can be tomorrow be questioned. This very thing happened with classical mechanics, whose reliability had nevertheless been amply and exactly verified during more of a century : it turned out to be inadequate for speeds close to that of light and in the microphysical domain..

As Gonseth says, we have to take decisions in a state of informational incompleteness, which means that we will sometimes be mistaken. But that does not prevent our knowledge to be, in many domains, extremely efficient. Knowledge doesn't need to be absolute and definitive to be efficient : even summary and partial knowledge can be already useful.

One could say : "You implicitly admit that there is false knowledge. Now a false knowledge is not properly a knowledge, since it leads to error and isn't efficient. Knowledge has to be necessarily true, otherwise it is not knowledge".

Unfortunately, our knowledge is fallible and we have today no means to distinguish between definitively established truths – supposing that there are some – and those that will be questioned tomorrow. To adopt so rigid a position regarding knowledge amounts to making it a fictitious notion, inaccessible to the human condition and therefore useless. It's wiser to admit that there is, hidden in the knowledge that we believe true, part of it that will possibly some day appear false.

3. Putting knowledge in such a pragmatic context necessarily has an impact on the notion of truth. If it is the efficiency of prediction that distinguishes a true theory from a false one, shouldn't one abandon the notion of truth for a weaker one ?

Gonseth defended a philosophy of knowledge that he called *idoneism* (from Latin *idoneus* : appropriate, suitable, sufficient). The French word *idoine* can be translated in English by *adequate* and the quality *idonéité* by *fitness* or *adequacy*. It is near to what van Fraassen calls *empirical adequacy*. Here the definition that Gonseth gives of it :

> Adequacy is the quality of the statements which, in a given situation, fit the circumstances, conditions, demands and means of investigation of the situation best.

For Gonseth, all knowledge is summary, approximate, schematic, revisable, open to future modifications. It is not true, it is only adequate.

What are the differences between adequacy and truth ?

1. Adequacy leaves some distance between reality and the model we build of it. The model is only a framework, it retains only the relevant elements for the problem as posed.This distance allows a critical attitude : it prevents us from taking our approaches for reality itself, or to believe that our models exhaust reality. However, it doesn't hinder the model from often capturing the main features of the real : the fact that the model is adequate presumes some structural analogy between it and what it schematizes.

2. One says : "Truth is one, error multiple". One could also say : "Truth is one, adequacy is pluralistic". Depending on the objective pursued or the required precision, the distance we have mentioned allows several different models to fit the same reality. During the inquiry, it may happen that a model that appeared until now perfectly adequate appears insufficient in other circumstances. What Gonseth calls a horizon of reality must make room for a deeper horizon.

2a. This multipicity of models has however to be nuanced. The outclassed model shouldn't be thrown away. It often remains partially valid, in circumstances where it had appeared adequate. Gonseth says that it has been "dialectized".

2b. There are degrees of adequacy : some models are more largely, more profoundly or more precisely adequate than others. The distance between the model and reality is variable.

2c. We have said that one could change models depending on the objective pursued. But it doesn't therefore mean that the same model could not be suitable for different purposes. Since the final action consists in choosing causes whose effects are the objectives sought, causes will not produce different effects because the objective has changed. A good knowledge of the relationships between causes and effects can be used for very different purposes.

3. A third and important difference that we have already mentioned above is that truth lies on a speculative, purely discursive, verbal level while on the contrary adequacy relates to the level of experience, of commitment to efficient practice.

Contrary to a false belief, that can remain unverified, inadequacy involves validation by experience: an inadequate model can lead to actions that don't achieve their purpose, while, by definition, an adequate model allows an efficient action. (Which of course doesn't guarantee that the desired result would be obtained : one doesn't always have the means of one's ambitions.)

I have said at the beginning that adequacy represents a weakening of the notion of truth. But what has been lost in discursive affirmation, is gained in operative reliability. One exchanges a proud paper truth for a more modest, but firmer anchoring in experience and the real. Because what is pure knowledge worth that won't guarantee an efficient action? And don't we qualify knowledge as true precisely because it has allowed and still permits efficient action ? In other words : isn't the only reliable and accessible criterion of truth of a judgement the practical efficiency that it permits, that is to say its adequacy ?

Here a summary comparison between truth and adequacy :

truth	**adequacy**
logically strong	logically weakened
identity between model and reality	distance between model and reality
oneness	plurality
absolute	degrees of adequacy
does not depend on the purpose	can depend on the purpose (but there are more universal models)
purely discursive	verified by and anchored in experience

Some will tell me : "Adequacy is not enough for me. It's truth, that I want, definitive and absolute truth".

But to require isn't sufficient. One has to have the means to realize one's demands. One must choose : either truth, but a purely verbal, metaphysical truth, disconnected from experience, or adequacy, less ambitious, but verifiable, efficient, anchored in experience. In our human condition, we sometimes have the means of improving the adequacy of our models, but we have no verifiable means to go beyond adequacy. And it is adequacy, not truth, that best guarantees the reliability of our knowledge.

Some people would say, further : "What you say is perhaps true for the natural sciences, but in the area of logic and mathematics, there are absolute truths". – Perhaps, but one must not forget that a pure formalism doesn't tell us anything about the world until it has been connected to it by correspondence rules. Once again, it is necessary to verify what formalism applies to what domain in what circumstances. For example, non-euclidean geometries are as coherent as euclidean geometry and only experience will allow to verify which applies to our space and in what conditions. (I know that all of them can fit if the curvature of space is weak and the area small enough, but non-euclidean geometry with strong curvature are not suitable for our space.)

Gonseth has emphasized this point by describing logic as the physics of common objects. He thus stressed the pragmatic anchoring of the formalism. To illustrate this idea, one can take another example, that of arithmetic. The laws of arithmetic are verified only if the elements that one manipulates are individualizable and conserved. If the elements can break up into several elements, or if they can disappear (for example by melting or by sublimating), it can happen that three elements and two elements give four or six elements. One can therefore say that arithmetic is a physics of individualizable and conserved objects.

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Literature

Fraassen, B.C. van 1980 *The Scientific Image*, Oxford : Clarendon Press.

Gettier, E.L. 1963 « Is Justified True Belief Knowledge ? », *Analysis* 23, 121-123.

Gonseth, F. 1936 and 1974 *Les mathématiques et la réalité,* Paris : Blanchard.