

# PROBABILITY IN MEDICINE AND IN PSYCHIATRY IN THE LIGHT OF IMMANUEL KANT'S PHILOSOPHY

Poster 3 • in the series\* • Psychiatry and medicine in the light of Immanuel Kant's philosophy

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Probability is just as relevant in psychiatry as it is in medicine. The great difference lies in its significance; probability in psychiatry is *philosophical probability* whereas probability in objective medicine is *mathematical probability*. Psychiatric diagnoses are based on psychological symptoms, some called psychopathological phenomena, which appear in a person's mind. This knowledge, therefore, is subjective knowledge. In medicine, many diagnoses are based on objective data, and thus on objective knowledge. In psychiatric science, phenomena and diagnoses are counted and calculated by statistical methods in the same way as objective data in medicine. There is, however, a great difference in their significance, depending upon whether they are *ideal objects* or *objects in an absolute sense*, even though both are counted and calculated by statistical methods. Through reference to Immanuel Kant's philosophy, these different significances and the consequences are demonstrated and discussed, particularly in view of the pending revision of ICD-10 for the ICD-11 classification.

## Introduction The basis of psychiatric and medical knowledge in brief

Psychiatric diagnoses are based on psychological symptoms, some of which are called psychopathological phenomena. Medical diagnoses are based on symptoms, signs, and data from various appropriate diagnostic procedures.

Symptoms in general and psychopathological phenomena appear as terms in a person's mind and, therefore, these objects of reasoning are *ideal objects*. (→ [Kant quotation 7](#)) Since the psychiatric classification categories constitute *ideal objects*, the category boundaries have to be defined by agreement, which means a dogmatic definition is afforded as reflected in the ICD-10 and DSM-IV classifications.

Objective data in medicine refer to *objects in an absolute sense*. (→ [Kant quotation 9](#)) Objective medical diagnoses are based on and also determined by these objective data.

Symptoms and phenomena which are *ideal objects* do not correspond directly to *objects in an absolute sense* (→ [Kant quotation 7](#)) therefore, psychiatric diagnoses and those medical diagnoses which are based on symptoms only cannot be proven on a physical basis. In contrast, medical diagnoses based on objective data are objective knowledge and can be proven on a physical basis. (→ [Kant quotation 9](#))

This is the basic difference between objective medical knowledge and subjective psychiatric and symptom-based medical knowledge. More details and a discussion are presented at this congress on the 2<sup>nd</sup> poster in this series MEDICAL DIAGNOSES AND PSYCHIATRIC DIAGNOSES – THE DIFFERENCE AND THE ENSUING CONSEQUENCES IN THE LIGHT OF IMMANUEL KANT'S PHILOSOPHY. (→ [Poster 2](#))\*

## Probability in medicine versus probability in psychiatry

Immanuel Kant distinguishes between *mathematical probability* and *philosophical probability*.

Immanuel Kant writes:

"In **probability** there always has to be an appraisal **measure**. This measure is **certainty** ... such a measure does not exist with **mere appearance**; in this case I do not compare insufficient knowledge (grounds) with sufficient knowledge, but only with knowledge which is to the contrary. ..." (→ [Kant quotation 9b](#))

In psychiatry, we compare a psychological idea (*ideal object*) with another psychological idea (*ideal object*). Psychological ideas are *mere ideas* (→ [Kant quotation 4](#)), so we compare one *mere idea (ideal object)* with another *mere idea (ideal object)* in our mind: on the level of phenomena, we ponder whether a phenomenon is present or not. Likewise with a psychiatric diagnosis, we ponder whether the characteristic phenomena assessed suffice the criteria of a psychiatric category or not.

In objective medicine, we search for definite objective parameters and then check if these parameters suffice the criteria of a diagnostic unit. More about *mere ideas* and ideas which can be proven on an objective basis → [Poster 2](#)\*

Both in psychiatry and symptom-based medicine, data which lead towards probability are subjectively true, which constitutes persuasion. (→ [Kant quotation 9](#)) In objective medicine, the data leading up to probability are objectively true, which provides certainty and conviction that this knowledge is true – true for everybody independent of any ideology. (→ [Kant quotation 9](#))

Hence, probability in psychiatry and in symptom-based medicine is *philosophical probability* ("philosophische Wahrscheinlichkeit") whereas probability in objective medicine is *mathematical probability* ("mathematische Wahrscheinlichkeit"). (→ [Discussion 1](#))

Immanuel Kant writes:

"Persuasion, accordingly, cannot be subjectively distinguished from conviction" .. but one can detect that it is "merely private validity ... mere persuasion" if others arrive at different results. (→ [Kant quotation 9](#))

This may happen in psychiatric practice in individual cases (→ [Discussion 2](#)) or in psychiatric science (→ [Discussion 3](#))

This is the reason why statistical studies in psychiatry and also in psychology, psychotherapy, and symptom-based medicine, lead only to relative knowledge within the ideology applied and therefore command less authority.

Each result attained in a statistical study in psychiatry is a *mere appearance*. (→ [Kant quotation 9b](#)) (→ [Discussion 3](#))

Therefore, a statistical study in psychiatry and also in psychology, psychotherapy, and symptom-based medicine, leads to a *mere appearance*, alongside another *mere appearance* when a different classification (theory) is applied. (→ [Kant quotation 9b](#)) (→ [Discussion 3](#))

Consequently, in psychiatry, psychology, psychotherapy and symptom-based medicine one has to be content with **subjective** and **practically adequate knowledge**. (→ [Kant quotation 9b](#))

## Keypoints

- Psychiatric knowledge is relative knowledge within a classification (ideology). (→ [Discussion 4](#))
- Probability in psychiatry commands less authority than probability in objective medicine (→ [Discussion 5](#)), and there are different levels of evidence in psychiatry and symptom-based medicine. (→ [Discussion 6](#))
- In psychiatry, one has to be content with subjective and practically adequate knowledge. (→ [Kant quotation 9b](#)) (→ [Discussion 7](#))
- Probability in the sense of mathematical probability cannot be attained in psychiatry. (→ [Discussion 5](#))
- In psychiatry, a statement is made on the basis of subjective experience or on the basis of statistical results obtained within an ideology. (→ [Discussion 8](#))
- In psychiatry the categories are mutually interdependent. (→ [Discussion 9](#))
- Psychiatric studies carried out with different classification systems cannot be compared because there is no *measure* (→ [Kant quotation 9b](#)) for comparison. (→ [Discussion 3](#))
- Evidence in psychiatry is subjective evidence, not objective evidence. (→ [Kant quotation 9](#)) (→ [Discussion 2](#))
- Evidence in psychiatry is not evidence accepted by everyone; it is not independent of an ideology as is evidence in objective medicine. (→ [Kant quotation 9](#))
- Validity and reliability in psychiatry is relative validity and relative reliability, within an ideology. (→ [Discussion 3](#))

## Conclusion

It is necessary to make a distinction between probability in psychiatry and probability in objective medicine. Psychiatrists should be aware of the basis of their knowledge; of the fact that their knowledge is subjective and, at the same time, also relative. This relativity should be acknowledged in psychiatric, and also in psychological and psychotherapeutic practice and science.

## Discussion

**Discussion 1:** It is the fundamental knowledge difference that leads to the different significances of probability. When objective data are counted and calculated in medicine, these data are necessarily true for everyone. (→ [Kant quotation 9](#)) In psychiatry and symptom-based medicine there is no such truth. (→ [Kant quotation 9](#)) Here, symptoms (phenomena) and diagnoses that are mere ideas (ideal objects), not necessarily true to everyone (→ [Kant quotation 9](#)), are counted and calculated in statistical science.

Therefore, probability for psychiatry and symptom-based medicine is philosophical probability whereas probability for medicine based on objective data is mathematical probability.

**Discussion 2:** In psychiatric practice, it often happens that psychiatrists have different views and/or theories and don't arrive at the same diagnosis when concerned with a case. This happens, in particular, when they have been educated in different schools of thought or if the case is rather untypical. Individual psychiatrists may be subjectively convinced their view, theory and diagnosis are right but they are still unable to prove their subjective truth. (→ [Kant quotation 9](#))

**Discussion 3:** When different classifications are used in a psychiatric study of a distinct population, different results are obtained; if Kraepelin criteria were applied, for example, and then a comparison made after using Bleuler criteria, ICD-10 criteria, DSM-IV criteria, or any other criteria. It becomes clear that in psychiatric science a statistical study leads to a mere appearance (→ [Kant quotation 9b](#)) within an ideology.

The consequence of this is that results from studies made using different classifications cannot be compared because there is no common measure. (→ [Kant quotation 9b](#)) The more the classifications differ, the more the results obtained will differ and, for example, future psychiatric studies with results obtained using ICD-11 will not be able to be compared with results from previous studies using the ICD-10 classification.

**Discussion 4:** Psychiatric knowledge is subjective knowledge and it is relative knowledge within an ideology. (→ [Discussion 2](#)) Depending on subjective conditions, things are viewed differently and rated differently. (→ [Kant quotation 9](#))

Psychiatric, and also psychological and psychotherapeutic knowledge is relative knowledge based on mere ideas. It is the basis of knowledge that leads to diagnostic problems in cases in psychiatry, psychology, and psychotherapy (→ [Kant quotation 4](#)), and to contradictions in practice and in science (→ [Kant quotation 3](#)). Understanding this fundamental knowledge difference and taking it into consideration will alleviate such problems and contradictions.

**Discussion 5:** Knowledge based on mere ideas leads to philosophical probability; such knowledge commands less authority than knowledge based on objects in an absolute sense which leads to mathematical probability. This could be best demonstrated in a comparison of the value of two studies: one study naming the diagnosis *luetice encephalitis*, based on objective signs, and one study with its former diagnosis of *progressive paralysis*, based on phenomena and symptoms which are subjective data. The knowledge difference is also reflected, for example, in continuing research to find objective (physical) parameters for the mental disorder we call schizophrenia.

**Discussion 6:** A mental disorder can be diagnosed more clearly if the clinical picture is typical. If the clinical picture (the complex of symptoms) is not typical, different views (different synthetic judgements) easily apply, which is also true for symptom-based medical diagnoses. In the case of objective medical diagnoses, this applies as long as there is only a suspected diagnosis. When the characteristic parameters of a suspected medical diagnosis are discovered, this diagnosis is no more a mere idea but an idea that can be proven on an objective basis.

**Discussion 7:** Although diagnoses in psychiatry can only be reached on the basis of phenomena, these mere ideas (→ [Kant quotation 4](#)) have proven to be very useful (→ [Kant quotation 2](#)). With these psychological ideas (→ [Kant quotation 4](#)), it became possible to categorize mental disorders in unities and find out which treatment proved to be best. In this way it was discovered which substances have, for example, a neuroleptic, antidepressive, or anxiolytic effect, and a symptomatological treatment became possible. On this basis other treatment methods have also been discovered and have proven to be useful in practice. (→ [Kant quotation 2](#))

**Discussion 8:** If a psychiatrist is asked in a court of law for example about probability in a particular case, a statement can be made on the basis of personal experience, or on the basis of scientific studies based on subjective data in the sense of philosophical probability and whose findings were reached by statistical studies within a classification, but this probability is not an approximation of certainty. (→ [Kant quotation 9b](#))

**Discussion 9:** Psychiatric categories depend to a certain extent on each other because they are defined in relation to each other. If a category is modified or a new category is introduced by agreement, other categories in the classification are influenced in such a way that following studies are faced with a different grouping of the patients and therefore lead to different results. (→ [Discussion 3](#)) Such diagnostic problems do not arise with objective medical diagnoses as each stands for itself and has its own (objective) physical parameters.

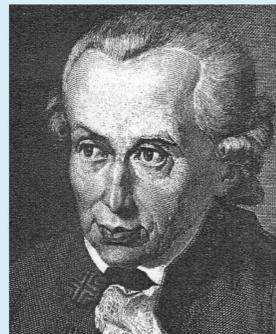
## Kant quotations\*\*

In his treatise *Critique of Pure Reason* the philosopher Immanuel Kant was concerned with human knowledge that cannot be proven on a physical basis.

**Kant quotation 2:**

**highest faculty of cognition**

"Thus all human cognition begins with **perceptions**, proceeds from thence to **terms**, and ends with **ideas**. Although it possesses in relation to all three elements, a priori sources of cognition, which seemed to transcend the limits of all experience, a thorough-going criticism demonstrates, that speculative reason can never, by the aid of these elements, pass the bounds of possible experience, and that the proper destination of this **highest faculty of cognition** is to employ all methods, and all the principles of these methods, for the purpose of penetrating into the innermost secrets of nature, by the aid of the principles of unity among all of which the **aim** is the highest, while it ought not to attempt to soar above the sphere of experience, beyond which there lies nought for us but the void inane." <sup>1</sup> (page 393)



Immanuel Kant  
1724 - 1804

**Kant quotation 3: boundaries of knowledge**

"Thus, pure reason, which at first seemed to promise us nothing less than the extension of our cognition beyond the limits of experience, is found, when thoroughly examined, to contain nothing but **regulative** principles, the virtue and function of which is to introduce into our cognition a higher degree of unity than the understanding could of itself. These principles by placing the goal of all our struggles at so great a distance, realize for us the most thorough connection between the different parts of our cognition, and the highest degree of systematic unity. But, on the other hand, if misunderstood and employed as **constitutive** principles of transcendent cognition, they become the parents of illusions and contradictions, while pretending to introduce us to new regions of knowledge." <sup>2</sup> (page 393)

**Kant quotation 4: psychological idea**

"Nothing but good can result from a **psychological idea** of this kind, if we only take proper care not to consider it as more than a **mere idea**; that is, if we regard it as valid merely in relation to the employment of reason, in the sphere of the phenomena of the soul. Under the guidance of this idea, or principle, no empirical laws of corporeal phenomena are called in to explain that which is a phenomenon of the internal sense alone; no windy hypotheses of the generation, annihilation, and palingenesis of souls are admitted. Thus the consideration of this object of the internal sense is kept pure, and unmixed with heterogeneous elements; while the investigation of reason aims at reducing all the grounds of explanation employed in this sphere of knowledge to a single principle. All this is best effected, nay, cannot be effected otherwise than by means of such a schema, which requires us to regard this ideal thing as an actual existence. The psychological idea is therefore meaningless and inapplicable, except as the schema of a regulative term." <sup>1</sup> (page 383)

**Kant quotation 7: real object – versus – ideal object**

"There is a great difference between a thing's being presented to the mind as an **object in an absolute sense**, or merely as an **ideal object**. In the former case I employ my conceptions to determine the object; in the latter case nothing is present to the mind but a mere schema, which does not relate directly to an object, not even in a hypothetical sense, but which is useful only for the purpose of representing other objects to the mind, in a mediate and indirect manner, by means of their relation to the idea in the intellect." <sup>2</sup> (page 375 – 376)

**Kant quotation 9: opinion, belief, knowledge**

"The holding of a thing to be true, is a phenomenon in our understanding which may rest on objective grounds, but requires, also, subjective causes in the mind of the person judging. If a judgement is valid for every rational being, then its ground is objectively sufficient, and it is termed conviction. If, on the other hand, it has its ground in the particular character of the subject, it is termed a persuasion.

"Persuasion is a mere illusion, the ground of the judgement, which lies solely in the subject, being regarded as objective. Hence a judgement of this kind has only private validity – is only valid for the individual who judges, and the holding of a thing to be true in this way cannot be communicated. But **truth** depends upon **agreement** with the **object**, and consequently the judgements of all understandings, if true, must be in agreement with each other (*consentientia uni tertio consentiunt inter se*).

Conviction may, therefore, be distinguished, from an external point of view, from persuasion, by the possibility of communicating it, and by showing its validity for the reason of every man; for in this case the presumption, at least, arises, that the agreement of all judgements with each other, in spite of the different characters of individuals, rests upon the common ground of the agreement of each with the object, and thus the correctness of the judgement is established.

"**Persuasion**, accordingly, **cannot** be subjectively distinguished from **conviction**, that is, so long as the subject views its judgement simply as a phenomenon of its own mind. But if we inquire whether the grounds of our judgement, which are valid for us, **produce the same effect on the reason of others** as on our **own**, we then have the same means, though only subjective means, not, indeed, of producing conviction, but of detecting the **merely private validity** of the judgement; in other words, of discovering that there is in it the element of mere persuasion.

"If we can, in addition to this, develop the subjective causes of the judgement, which we have taken for its objective grounds, and thus explain the deceptive judgement as a phenomenon in our mind, apart altogether from the objective character of the object, we can then expose the illusion and need be no longer deceived by it, although, if its subjective cause lies in our nature, we cannot hope altogether to escape its influence.

"I can only maintain, that is, affirm as necessarily valid for everyone, that which produces conviction. Persuasion I may keep for myself, if it is agreeable to me; but I cannot, and ought not, to attempt to impose it as binding upon others.

"Holding for true, or the subjective validity of a judgement in relation to conviction (which is, at the same time, objectively valid ), has the three following degrees: **Opinion, Belief, and Knowledge**. Opinion is a consciously insufficient judgement, subjectively as well as objectively. Belief is subjectively sufficient, but is recognized as being objectively insufficient. Knowledge is both subjectively and objectively sufficient.

Subjective sufficiency is termed conviction ( for myself ); objective sufficiency is termed certainty ( for all ). I need not dwell longer on the explanation of such simple conceptions." <sup>1</sup> (pages 460-461)

**Kant quotation 9b: probability – versus – mere appearance**

"PROBABILITY – EXPLANATION OF PROBABILITY – DIFFERENCE BETWEEN PROBABILITY AND APPEARANCE – MATHEMATICAL AND PHILOSOPHICAL PROBABILITY

"In **probability** there always has to be an appraisal **measure**. This measure is **certainty** ... such a measure does not exist with **mere appearance**; in this case I do not compare insufficient knowledge (grounds) with sufficient knowledge, but only with knowledge which is to the contrary ... therefore the philosopher has to be content with mere appearance, a **subjective** and **practically adequate knowledge** ... about mathematical probability in contrast, one can only really say that it is more than half of the truth." <sup>3</sup> (pages 512-513)

<sup>1</sup> modified J. M. D. Meiklejohn translation (→ [www.psychiater-psychotherapie.com](#))

<sup>2</sup> translation J. M. D. Meiklejohn  
Immanuel Kant, Critique of Pure Reason, Dover Philosophical Classics, 2003, unabridged republication of J. M. D. Meiklejohn's translation as published in 1900 by the Colonial Press, London and New York

<sup>3</sup> translation O. Maeser / A. M. Simma  
from: Band VI, Gesammelte Werke, Immanuel Kant: "Schriften zur Metaphysik und Logik 2" (Logik- Einleitung), WAHRSCHEINLICHKEIT – ERKLÄRUNG DES WAHRSCHEINLICHEN - ... suhrkamp Taschenbuchausgabe, herausgegeben von Wilhelm Weischedel, 1. Auflage 1974, ISBN 3-538-27653-7

\*\*Original German quotations → [Poster 1](#)  
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