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Pace Davis, O'Donnell, Runde and Zappia, Platonic Intuition had nothing to do with Keynes's definition of intuition in A Treatise on Probability (1921): It comes from Boole

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Abstract	Original Research Article

Consider Zappia's 2021 comment in the History of Economic Ideas on D. Gillies' paper (2021), which is representative of the work of J.B. Davis, O'Donnell and J. Runde supporting the claims made by Ramsey that Keynes's logical relations did not exist . Zappia's conclusion demonstrates that he is an advocate/supporter of the Ramsey position , which was constructed elaborately by Richard B. Braithwaite from 1931 to his death in 1990.Braithwaite claimed that there were no such things as the objective ,logical, probability relations between propositions that were specified by Keynes in Chapter I of the A treatise on Probability on pages 4,8 and 9.

Zappia draws the following deeply flawed conclusion:

"An important historical issue in the literature on Keynes is whether he yielded to Ramsey's critique, namely, whether his was a complete acceptance of the idea that degrees of belief are purely subjective. Gillies and Letto-Gillies (1991) noted that Keynes may have accepted Ramsey's criticism only partially, something other scholars objected to because they saw in Keynes's memoir about his early beliefs a total retreat from the epistemology of the TP (Bateman 1996). Gillies's point is that it is difficult to say to what extent Keynes changed his mind, since he never undertook the task of modifying his original theory of probability. Instead of distinguishing from an epistemology, Keynes may have considered outdated and the technical theory of probability ensuing from this epistemology – as other commentators have done to save the TP from oblivion (Runde 1994) – Gillies suggests to follow Chapter 12 insights and to examine the kind of probability theory they may accord with." (Zappia,2021, p.149).

This paper will demonstrate that there is no textual evidence in Keynes's A Treatise on Probability supporting either Ramsey, Gillies, Zappia or any other Post Keynesian, Heterodox or Institutionalist economist or philosopher who has written on Keynes and his logical theory of probability

Keywords: History, Keynes, Economic Ideas, Runde and Zappia, Historical Issue.

1. INTRODUCTION

The paper is organized in the following manner. Section Two will deal with the Keynes-Boole connection. For the purposes of this paper, the crucial material is contained on page five ,footnote two and in the appendix to chapter 14 of Keynes's A Treatise on Probability (TP,1921).I will skip chapters 15,16,and 17 of the *A Treatise on Probability* (TP,1921), where Keynes goes over Boole's interval valued probability approach in great detail (See Arthmar and Brady (2016,2017),Brady(1986),Brady(2004a,b),Brady(2021a,b) and ,Brady(2022a,b,c).Section Three will

cover the severe problems in Runde's article, which is representative of the work of Davis and O'Donnell, based on his misbelief that Keynes's logical, probability relations are mysterious, mystical, metaphysical ,Platonic relations, as first claimed by Ramsey .Section Four will conclude the paper .

Of course, given that nothing in either the 1922 or 1926 reviews by Ramsey of Keynes, as regards Keynes's logical theory of probability, is correct (see Brady 2021, for a summary of 35 major errors made by Ramsey), it was logically impossible for Keynes to have yielded, either entirely or in part ,to Ramsey. For instance, Ramsey's very, very severe confusions about "…Mr. Keynes's mysterious logical relations…"(Ramsey,1926;In Kyburg and Smokler,1980,(eds.,2nd ed.),p.45),which demonstrated Ramsey's complete and total ignorance of G. Boole's objective ,logical, probability relation as defined in his relational, propositional, formal logic of Boole's 1954 The Laws of Thought on pp.7-8, means that Ramsey never read chapters I,II or X -XVII of Keynes's A Treatise on Probability ,which parallel Boole's chapters I,XI,XII and XVI-XXII.

One of the two major errors in Runde(1994),published in the philosophy journal, Research in the History and Philosophy of Science, is his belief ,still held by Runde as of 2025, despite a pointed warning to him in my final letter to Runde of 8/2/1993,that Keynes's Boolean logical ,objective, probability relations are NOT metaphysical ,Platonic ,relations .Nowhere in Keynes' s A Treatise on Probability or anywhere in the CWJMK ,does Keynes allude to or reference and talk about probability and

- Plato
- Platonic Forms
- Platonic relations
- Platonism
- Platonic entities
- Neo Platonism
- Platonic logical probability relations

Runde's assertions, made a number of times (pp. 98,99,103,104,107,108,109,110,111, and 118) throughout the 1994 article, that Keynes's relation of partial implication(RPI's) are Platonic entities ,which are floating around somewhere in the Universe that a decision maker must intuit, completely vitiates the entire article.

My warning to Runde in 1993 was the following one:

"On p.14, the belief that RPI's are Platonic entities is a mistake that a 1st semester freshman in general philosophy would not make." (Brady,1993, Letter to J. Runde,8/2/1993).

Runde still adheres to this belief. Unfortunately, Runde is not alone. The false Plato -Keynes connection is universally held by all Heterodox and Orthodox economists writing on Keynes A Treatise on Probability and/or the connections between the A Treatise on Probability and General Theory as of 2023,as being the flawed foundation for Keynes's logical theory of probability.

Some good examples of this mysterious and mystical belief in Platonic entities, that do not exist in Keynes's book, are the assessments of Backhouse and Bateman in the 1st(2008),2nd (2015) and 3rd (2018) editions of The New Palgrave Dictionary of Economics, ed. by S. Durlauf and L.E Blume :

"Like Moore…Keynes argued that the logical relations of probability are Platonic entities, not reducible to anything else, and known through intuition." (Backhouse and Bateman,2008, p.719)

"But it was exactly the idea that probability was a Platonic entity that Ramsey criticized. He had written about this as early as 1922 in a review of Probability in which he talked about fog shrouded mountains which are not visible…" (Backhouse and Bateman,2008, p.720-Backhouse and Bateman, as usual on this topic , are dead wrong. Ramsey is criticizing Keynes's non numerical (interval valued) probabilities, which he was completely ignorant of because he thought that Keynes was talking about ordinal probabilities based on Ramsey's confusions about Keynes's diagram on p.39 showing the mathematical lattice structure discussed by Boole in LT on pp.293-325)

The Backhouse and Bateman quotations are very representative of the economics and philosophy professions. They show how severely confused Backhouse and Bateman, as well as the economics and philosophy "Keynes scholars" in the 21st

century, were about the Boolean foundations of Keynes's logical theory of probability as contained in the A Treatise on Probability.

2. THE BOOLE-KEYNES CONNECTION

Keynes first connects his approach to Boole on p.5 in his footnote 2:

"With the term "event," which has taken hitherto so important

A place in the phraseology of the subject, I shall dispense altogether. †

Writers on Probability have generally dealt with what they term the

"Happening" of "events." In the problems which they first studied

This did not involve much departure from common usage. But these

Expressions are now used in a way which is vague and ambiguous;

And it will be more than a verbal improvement to discuss the truth

And the probability of propositions instead of the occurrence and the

Probability of events. ‡" (Keynes,1921, p.5).

The footnote is extremely important as Keynes links his discussion directly to Boole's in chapters I, XI and XII of *The Laws of Thought* (1854, LT):

"‡The first writer I know of to notice this was Ancillon in Doutes sur lesbases du calcul des probabilités (1794): "Dire qu'un fait passé, présent ou à

venir est probable, c'est dire qu'une proposition est probable." The point was

emphasised by Boole, Laws of Thought, pp. 7 and 167. See also Czuber,

Wahrscheinlichkeitsrechnung, vol. i. p. 5, and Stumpf, Über den Begriff der

mathematischen Wahrscheinlichkeit."(Keynes,1921,p.5).

Any scholar who actually reads this material will instantly realize that Keynes's discussions in chapters I and II of the TP are his interpretation of Boole's original work in chapters I, XI and XII of LT. It also leads the reader to totally reject F.P. Ramsey's two reviews of 1922 and 1926.A comparison between these chapters leads to the conclusion that Keynes's relational ,propositional logic and logical ,objective ,relation of probability is the same as Boole's relational ,propositional logic and logical, objective relation of probability ,which immediately leads to the conclusion that it is impossible for there to be any Plato connection to Keynes's TP as Keynes's relations *are internal, not external*, to the logical connections between the premises and the conclusion, whereas Platonic relations are external .

The second important Boole-Keynes connection occurs in the appendix to chapter 14. Keynes makes the Boole-Keynes explicit in this Appendix:

"Several modern writers have made some attempt at a symbolic

Treatment of Probability. *But with the exception of Boole*, whose

Methods I have discussed in detail in Chapters XV., XVI., and XVII.,

No one has worked out anything very elaborate."(Keynes,1921,p.155;Appendix to chapter 14;italics added).

3. RUNDE'S TOTAL IGNORANCE OF THE BOOLE -KEYNES CONNECTION EXPLAINS HIS BELIEF IN A SOME KIND OF PLATO-KEYNES CONNECTION

Runde's fervent belief in the Plato-Keynes connection regarding the TP explains his belief in the Ramsey Myth that was constructed by R B Braithwaite and D H Mellor at the University of

Cambridge, England. The Boole -Keynes connection has never been mentioned by Runde in any of his publications from 1985 to 2025, a period of 40 years.

I will let Runde's comments reveal his confusions about what Keynes is doing in his *A Treatise on Probability.* Keynes is referring to Boole's logical, objective, probability relations and not to Plato's purely speculative, metaphysical relations .Boole's logical relations involve an application of an approach to intuition that specifies an internal connection between the propositions representing the premises and the propositions representing the conclusion(s):

- "And unlike much of the other recent Keynes-philosophy literature, I shall place relatively more emphasis on the formal structure of his theory than on questions about its ultimate foundations. Indeed, much of the argument will be to the effect that Keynes's theory can be disconnected from both its empiricist epistemology and ontology of Platonic logical probability relations. "(Runde,1994, p.98).
- "Now the Ramseyian critic might well question an approach that presupposes entities (RPIs) the existence and apprehension of which is largely asserted. (Runde,1994, p.99-Of course, Keynes's RPI's are NOT entities and are NOT asserted. They follow directly from Boole's 1854 analysis om pp.7-8 of chapter 1 in LT, which Keynes cited on page 5 of the TP in the second footnote on that page.).
- "Finally, and this hints at some of what is to follow, Keynes is often quite modest in his claims about our 'intuitive power'. While he believes that the judgments arrived at on its basis are not as subjective in validity as they are in origin, he is sometimes quite a long way from the view that they derive from the apprehension of Platonic entities." (Runde,1994, p.103-There is no apprehension of Platonic entities in Keynes's TP).
- "2. Truth and Probability

The title of this section is borrowed from the remarkable paper in which
Ramsey rejects Keynes's approach to probability and lays foundations for what has since come to be called the subjective or 'personal' interpretation of probability. Ramsey's famous fundamental criticism of Keynes is that 'there really do not seem to be any such things as the probability relations he describes'.[10] When asked to estimate a probability, he argues, we do not try to contemplate the RPI between two propositions but simply assume that one is true and then consider what degree of belief we have in the other.
Ramsey holds that the notion of a degree of belief can have no precise
Meaning without some indication of how it is to be measured. "(Runde,1994, p.104-Runde's ft. 10 involves Runde in taking other Ramsey misbeliefs seriously. I have dealt with them in many, many other papers (see, for instance,Brady,2021a,b).

- "We are now in a position to assess the impact of Ramsey's critique on the
Treatise. The first half of Keynes's famous two-paragraph 'response' is a good place to start:

Ramsey argues, as against the view which I had put forward, that probability is concerned not with objective relations between propositions but (in some sense) with degrees of belief, and he succeeds in showing that the calculus of probabilities simply amounts to a set of rules for ensuring that the system of degrees of belief which we hold shall be a consistent system. Thus the calculus of probabilities belongs to formal logic. But the basis of our degrees of belief - or the a priori probabilities, as they used
to be called-is part of our human outfit, perhaps given us merely by natural
selection, analogous to our perceptions and our memories rather than to formal logic.
So far, I yield to Ramsey - I think he is right. [X, pp. 338-339, first published in The New Statesman and Nation, 3 October 1931]

This is straightforward enough and is widely interpreted as a unilateral
surrender on Keynes's part. I now turn to what seem to be the main issues
involved." (Runde,1994, p.107- Unfortunately,Runde fails to present the "But… " part of Keynes's comment ,where Keynes (a)makes it plain that Keynes's theory deals *with degrees of rational belief* and not Ramsey's *degrees of actual belief* and (b) makes it plain that Ramsey's theory can't deal with induction. The ONLY point where Keynes agrees with Ramsey is that Ramsey has presented a better foundation for numerical, precise probability, which has nothing to do with Keynes's Boolean theory of interval valued ,imprecise probability).

- "The standard interpretation of the Treatise is that RPIs are Platonic entities.
  Thus O'Donnell (1989, pp. 37-38) writes: '[Keynesian] probabilities are always objective and never subjective. This is because they are essentially connected to logic and not to psychology. Logical relations are viewed as objective because they are grounded in an external immutable realm which timelessly transcends mere individual opinion.' On this reading, which is much the same as that adopted by Ramsey, Keynes holds that there is a unique RPI between any hypothesis and any set of evidential propositions. Such RPIs are regarded as subjective only to the extent that they are relative to the particular body of evidence at the individual's disposal."

  Ramsey's claim that he cannot perceive RPIs is an attack on Keynes's
  ontological commitment to logical RPIs that underpin our rational beliefs.
  Keynes clearly revokes this commitment in the passage quoted above, and
  adopts Ramsey's view that the basis of our degrees of belief is simply 'part of our human outfit, analogous to our perceptions and our memories rather than to formal logic'. Our

rational beliefs, then, are not founded on directly
intuited RPIs.

This concession is widely interpreted as an admission to the effect that the
Treatise is (fatally) flawed and perhaps even that the very idea of logical
probability is a vain one. "(Runde,1994, p.108-Of course, it is an obvious error to claim that Keynes would base his theory on Plato ,when nothing dealing with Plato or Plato's theory appears anywhere in Keynes's TP. This is why no one making this claim in the last 100 years has ever given a specific page citation to the TP. Runde, himself, has never provided a page citation to any page in the TP. We can now get an insight as to why economics and philosophy are not scientific or artistic fields. Like O'Donnell and Ramsey before him, Runde simply reads into Keynes's TP material that he has made up in his own mind based on what he thinks Keynes must have meant based on Runde's assumption that Ramsey's false analysis is true. We are led inexorably to Hishiyama's conclusion about economists never having read the TP- Runde, like O'Donnell and Ramsey before him, never read Keynes 's TP. Runde read little, tiny bits and pieces of the TP , which he then cobbled together as an "interpretation".)

- "This passage [author's note -paragraph 12, p.32, chapter III,TP,1921] tends to receive greater emphasis from Keynes's critics than from his supporters. In fact, in his first crack at the Treatise, Ramsey (1989, p. 220) cites it as an example of Keynes confusing the perception with the existence of RPIs. "
  The problem is that Keynes's remarks about probability being relative to human reason is incompatible with the epistemology he outlines in Chapter 2. For he there speaks of having knowledge of RPIs, where knowledge corresponds to certain rational belief (VIII, p. 10) and only true propositions can be known (VIII, p. 18). Clearly Keynes cannot have it

both ways: either RPIs are objective logical entities, or they are relative to (fallible) human reason."(Runde,1994,p.109,1994-Of course ,contrary to Ramsey and Runde ,and all of the other 1000's of academics who have claimed that this passage refutes Keynes, the RPI's are *NOT PLATONIC* ,speculative, metaphysical , logical relations or entities ,but *BOOLEAN* ,objective, logical relations (see Boole,1854,pp.1-27).

- "In the Treatise Keynes treats rational belief as arising out of a knowledge of
RPIs which he portrays as being analogous to formal logic. We have seen that he later distances himself from this idea, perhaps as a result of Ramsey's critique. "(Runde,1994, p.110-Runde incorporates his erroneous "interpretation "that Keynes's RPI's are Platonic. It is obvious from p.5 of the TP that they are *NOT PLATONIC, BUT BOOLEAN relations*).

- Ramsey's first point arises in the context of his discussion of the existence of
RPIs. He points out that although we may agree on probabilities in some
particular cases (e.g. that the probability of a coin landing heads up is 1/2), 'we can none of us say exactly what is the evidence which forms the other term for the probability relation about which we are then judging' (Ramsey, 1988, p. 22). This observation is surely correct." (Runde,1994, p.111-As I have pointed out repeatedly, Ramsey is incorrect. Ramsey is suppressing the evidence in Keynes's h propositions on whether the coin is FAIR or UNFAIR in order to claim that it is marginal probability, not conditional probability. that is basic and fundamental in probability analysis).

- "Ramsey focuses on Keynes's ontology of logical RPIs in his attack on the
Treatise and forces a concession. Keynes abandons the idea that rational beliefs are founded on logical RPIs and accepts instead that they are closer to our perceptions and our memories than to formal logic. But Keynes's theory of comparative probability emerges unscathed. All that is required is a reinterpretation of the primitives of the theory, namely that the basic judgments of relevance, irrelevance, preference and indifference on which theory builds, are taken to be the individual's own. The shift is not as radical as it may seem, moreover, as there are a number of places in the Treatise which verge on the position I have been describing." (Runde,1994, p.118)

Pace Runde ,Keynes's RPI's are not ontological; they are epistemological. Ramsey never forced any concession from Keynes, who, with or without B. Russell, could have intellectually crushed and humiliated Ramsey at any time of his choosing from the appearance of Ramsey's January,1922 Cambridge Magazine review through his 1931 comment on Ramsey in *The New Statesman and Nation* by standing up at any Apostles meeting and saying the following-My objective, logical ,probability relations are identical to Boole's logical probability relations. Keynes never did this because it would have ended Ramsey's career at Cambridge University
There is no "Keynes's theory of comparative probability." Runde is citing from Keynes's chapter Four of the TP where Keynes is dealing with the prerequisites necessary for applying his advanced POI, as discussed by him on pp.50-58. Keynes's interval valued theory of probability supports his logical theory of probability, just as Boole's interval valued theory of probability supports his logical theory of probability.

Exactly the same, identical argument as made by Runde is made by Davis O'Donnell , Gerrard ,Bateman and Backhouse & Bateman. See all references made to Davis, O'Donnell, Gerrard ,Bateman and Backhouse and Batemen

4. CONCLUSIONS

Runde's 1994 paper is the worst paper on Keynes 's logical theory of probability that I have ever come across. It demonstrates, along with thousands of similar type papers, all based on mythical Keynes-Plato connections, which have been published in economics and philosophy journals , why economics and philosophy are not scientific fields .Thirty-one years have passed since Runde's paper was published . None of the vast number of errors in it have ever been pointed out, much less corrected. A field that is not self-correcting can never be called scientific in the philosophy of science view of the word unless the word is being given a new "interpretation." .

The erroneous Ramsey reviews of 1922 ,1923 and 1926 are over 100 years old .Nothing has been done about the immense number of errors in these papers, as is the case with the nearly 50 papers of I J Good, who made a horrible mess with Keynes's evidential weight of the argument, logical relation, V .Since it is a logical relation, it can never be equal to an equation or number ,as claimed by Runde

Keynes's logical, objective, probability relation comes from George Boole, not Plato. Keynes's theory of probability is based on interval valued probability, just like Boole's. It has nothing to do with Runde's ordinal or comparative probabilities, which underlie Keynes's application of his improved Principle of Indifference only.
Everything written on J M Keynes's TP and its connection with Keynes's A Treatise on Money, Vol. I or General Theory in the 20th and 21st centuries, with a very few exceptions, is seriously flawed.

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