RAMSEY'S 1926 CLAIM, "…THAT THERE DO NOT SEEM TO BE ANY SUCH THINGS AS THE RELATIONS HE (AUTHOR'S NOTE-KEYNES) DESCRIBES…", IS FALSE[1]: IT VITIATES RAMSEY'S ENTIRE CRITIQUE OF KEYNES

MICHAEL EMMETT BRADY

Adjunct Lecturer, California State University, Dominguez Hills
College of Business Administration and Public Policy
Department of Operations Management
1000 East Victoria St
Carson, California 90747, USA

ABSTRACT

Ramsey made many,many, many errors about Keynes's logical theory of probability, as contained in A Treatise on Probability,in his reciews of 922 and 1926.Given the extent and magnitude of these errors, I have decided to focus on the most severe of these many, many, many errors

The most severe error is Ramsey's complete confusion and conflation of Keynes's Boolean ,objective ,logical, probability relations with the metaphysical relations of Plato, as well as Moore's use of Plato's metaphysical relations or entities to serve as the foundation for his intuitionistic approach in analyzing moral and ethical issues, especially as it relates to Moore's concern for "the Good".

Now it is a correct conclusion that, as regards issues in ethics, morality, aesthetics and metaphysics that Keynes, despite some criticisms, did accept Moore's intuitionistic approach in those specific fields. However, to claim that Keynes's work on probability and statistics is based on a foundation of Platonic relations /Moorean intuitionism, with assorted metaphysical entities supposedly floating around somewhere in outer space, waiting to be intuited, is simply preposterous and ludicrous lunacy.

Keynes's logical theory of probability, in his A Treatise on Probability, is based wholly on a foundation of the formal, mathematical, symbolic logic that was originally presented in G. Boole's The Laws of Thought (1854). Keynes's method was Boole's method. Boole's method was composed of (a) a relational, propositional, formal, mathematical, symbolic logic, (b) an interval valued probability approach, (c) required the general rejection of the POI, and (d) required a logical, objective probability relation holding between RELATED propositions, not Ramsey's idiotic, imbecilic and moronic claims based on an analysis of UNRELATED propositions.

Keywords: Boole's objective, logical, probability relation, imprecise probability, interval valued probability, non-numerical probability, approximation, inexact measurement, Boole's relational propositional logic, Keynes, logical theory of probability, A Treatise on Probability

JEL Classification: D81

1.0 INTRODUCTION

The paper will be organized in the following manner. Section Two will examine an extremely flawed "defense "of Keynes's position, as presented in his A Treatise on Probability, that completely overlooks the basic and fundamental ,foundational error made by Ramsey in all of his discussions concerning the role of propositions in logical analysis ,as used by logicians such as Keynes and Russell ,during Ramsey's entire life-his claim that logical theories of probability involve the use of UNREATED propositions as premises in a logical argument form. Thus, Ramsey's basic point is simply absurd nonsense that should never have been taken seriously by any academician.

Ramsey's basic error was to consider the possibility of analyzing UNRELATED propositions logically. Ramsey continuously asserted from 1921 through 1926 that an analysis of UNRELATED propositions had been seriously undertaken by both Keynes and Russell.

Section Three will tie this most basic, foundational error of Ramsey's to a further major error. This involved Ramsey's belief that Keynes's A Treatise on Probability was based on metaphysical speculations related to Plato's theory of forms ,as well as Moore's use of Plato's theory ,which served as a foundation for Moore's own Intuitionism. Section Four will conclude the paper

2.0 THE ERRONEOUS ANALYSIS OF LARS P. SYLL CONCERNING RAMSEY'S CRITIQUE OF KEYNES'S APPLICATION OF BOOLE'S RELATIONAL, PROPOSITIONAL LOGIC IN HIS A TREATISE ON PROBABILITY

Consider the following claims made on by Syll:

"Although Blackburn on the whole gives a succinct and correct picture of Keynes's view on probability, I think it's necessary to somewhat qualify in what way and to what extent Keynes "lost" the debate with Frank Ramsey.

In economics, it's an indubitable fact that few mainstream neoclassical economists work within the Keynesian paradigm. All more or less subscribe to some variant of Bayesianism. And some even say that Keynes acknowledged he was wrong when presented with Ramsey's theory. This is a view that has unfortunately also been promulgated by Robert Skidelsky in his otherwise masterly biography of Keynes. But I think it's fundamentally wrong. Let me elaborate on this point (the argumentation is more fully presented in my book John Maynard Keynes (SNS, 2007).

It's a debated issue in newer research on Keynes if he, as some researchers maintain, fundamentally changed his view on probability after the critique levelled against his A Treatise on Probability by Frank Ramsey. It has been exceedingly difficult to present evidence for this being the case.

Ramsey's critique was mainly that the kind of probability relations that Keynes was speaking of in Treatise actually didn't exist and that Ramsey's own procedure (betting) made it much easier to find out the "degrees of belief" people were having. I question this both from a descriptive and a normative point of view.

Keynes is saying in his response to Ramsey only that Ramsey "is right" in that people's "degrees of belief" basically emanate in human nature rather than in formal logic.

Patrick Maher, former professor of philosophy at the University of Illinois, even suggests that Ramsey's critique of Keynes's probability theory in some regards is invalid:

Keynes's book was sharply criticized by Ramsey. In a passage that continues to be quoted approvingly, Ramsey wrote:

"But let us now return to a more fundamental criticism of Mr. Keynes' views, which is the obvious one that there really do not seem to be any such things as the probability relations he describes. He supposes that, at any rate in certain cases, they can be perceived; but speaking for myself I feel confident that this is not true. I do not perceive them, and if I am to be persuaded that they exist it must be by argument; moreover, I shrewdly suspect that others do not perceive them either, because they are able to come to so very little agreement as to which of them relates any two given propositions." (Ramsey 1926, 161)." (Lars P. Syll,2024, March-this version appears to be based on a number of past, similar versions and variations going back to 2012.The italics material of Syll above is wrong).

The first problem with Syll's claims is that Blackburn is a long time Ramsey supporter, who never read the A Treatise on Probability or The Laws of Thought. Blackburn has absolutely no understanding about how Keynes went about deploying Boole's relational, propositional logic in his A Treatise on Probability (TP, 1921), a logic that permeates the entire book. Blackburn has no idea about what the Boole-Keynes interval valued probability approach involves, just as Syll has no idea about what is involved in such an approach.

Nor did Keynes ever accept even one of the myriad claims made by Ramsey about Keynes's analysis in the A Treatise on Probability (TP, 1921). Keynes, of course, did accept Ramsey's purely mathematical construction and demonstration of betting quotients as being a superior foundation for PRECISE theories of probability, which are based only on the purely mathematical laws of the calculus of probabilities,when compared to the limiting frequency theory of probability. Unfortunately, the purely mathematical laws of the calculus of probability are extremely limited in actual application to decision making in a real world of unavailable, missing, unclear, fuzzy, ambiguous and amorphous data and information.

Thomas Aquinas was the first to clearly point out the differences between exact, precise mathematical analysis based on calculation and the necessity to apply imprecise, inexact techniques in the real world using estimation. Knight's" estimates" category, in his Risk,Uncertainty and Profit (1921),is identical to Aquinas's use of the word "estimates" ,although Knight was a mathematical illiterate who simply lacked the ability necessary to construct an imprecise approach to decision making.

The crucial error made by Ramsey, that infected all of his work on the role of propositions in formal, mathematical logic, was his wild and wooly belief that it had to incorporate UNRELATED propositions when Boole, in both chapters I and XVI of the Laws of Thought ,had made it very clear that only RELATED propositions could be analyzed logically in a formal analysis .

Ramsey's examples, such as

a) My carpet is blue; Napoleon was a great general
b) This is red; that is round
c) This is red; that is blue

all involve propositions that are UNRELATED to each other.

Bertrand Russell, in his July ,1922 review of Keynes's TP in the Mathematical Gazette, presents a Ramsey type example of Ramsey's UNRELATED propositions in his star footnote on page 120 of his review:

"2+2=4, Napoleon disliked poodles." (Russell, 1922, p.120,ft. *).

However, Russell does not identify Ramsey by name or include any citation to Ramsey's idiotic November ,1921 attack on Russell in an Apostles paper or the very similar attack on Keynes in the January,1922 issue of Cambridge Magazine, most likely because both Russell and Keynes felt that the resulting controversy would have marked the end of the academic career ,not only of Ramsey, but also of R. Braithwaite, who was Ramsey's most rabid advocate and proselytizer, at Cambridge University, England.

Syll, himself, like Blackburn, is simply ignorant of what the issue is here between Keynes and Ramsey, which first showed up in Ramsey's idiotic representation of Russell's approach to the use of propositions in logical analysis in a November,1921 Apostles presentation, where the same type of wild and wooly claims are made about Russell, who simply ignored Ramsey, just as Keynes ignored Ramsey.

Syll make use of some analysis by P. Maher, who also is completely ignorant of what the fundamental issue involved in all of Ramsey's critiques of Keynes's propositional logic between 1921 and 1926 is.

Syll does target what the fundamental target of Ramsey's 1926 review is, but has no idea that it is pure nonsense:

"But let us now return to a more fundamental criticism of Mr. Keynes' views, which is the obvious one that there really do not seem to be any such things as the probability relations he describes He supposes that, at any rate in certain cases, they can be perceived; but speaking for myself I feel confident that this is not true. I do not perceive them, and if I am to be persuaded that they exist it must be by argument; moreover, I shrewdly suspect that others do not perceive them either, because they are able to come to so very little agreement as to which of them relates any two given propositions." (Ramsey, 1926.In Kyburg and Smokler ,(eds.),1980,(2nd

ed.),pp.27-28-note that Ramsey's constantly repeated claims about "relates any two given propositions " appears nowhere in anything written by Keynes).

It is a simple matter to substitute, one by one, any or all of Ramsey's three examples (a), (b), and(c) or Russell's example into this completely idiotic assertion in order to understand that Ramsey is talking pure, unadulterated nonsense.

Ramsey claims above that Keynes's Boolean, relational, propositional logic is non- existent and is merely a phantasm of Keynes's mind. This represents the main attack on Keynes by Ramsey. Ramsey's 1922 example of the supposed failure of Keynes's logical theory of probability, which has been Cheryl Misak's favorite example cited continually by her since 2016, is the following statement:

"My carpet is blue; Napoleon was a great general."

Based on the two given propositions stated by Ramsey above, which are UNRELATED, which is the case for every one of Ramsey's examples in 1922 and 1926, it is OBVIOUS that there is no logical relationship between the two propositions and hence no logical probability could possibly exist. Both Boole (1854) and Keynes (1908, 1921) had made it very clear that the Boolean, relational, propositional logic could only be deployed between SETS, not Ramsey's "…any given two propositions", of RELATED propositions.

Let us see why Ramsey's conclusion is just so much preposterous, ludicrous, idiotic nonsense, masquerading as a scholarly criticism of Keynes's theory, as well as indirectly of Boole's LT, once it is realized that it was Boole, and not Keynes, who formulated the first technically advance logical theory of probability in world history. Let us simply insert Ramsey's gobbledygook about blue carpets and Napoleon into his bizarre claims on pp.27-28 of Kyburg and Smokler (1980):

"But let us now return to a more fundamental criticism of Mr. Keynes' views, which is the obvious one that there really do not seem to be any such things as the probability relations he describes between "My carpet is blue; Napoleon was a great general." He supposes that, at any rate in certain cases, they can be perceived; but speaking for myself I feel confident that this is not true. I do not perceive any relationship between "My carpet is blue; Napoleon was a great general", and if I am to be persuaded that they exist it must be by argument. Moreover, I shrewdly suspect that others do not perceive any relationship between "My carpet is blue; Napoleon was a great general either, because they are able to come to so very little agreement as to which of them relates any two given propositions..." (Ramsey, 1926.In Kyburg and Smokler ,(eds.),1980,(2nd ed.),pp.27-28).

Ramsey's entire argument against logical probability rests on the use of UNRELATED PROPOSITIONS. Ramsey's entire argument is obviously absurd.

What Ramsey is saying is that he sees no logical relationship between any two UNRELATED propositions, which is quite obvious. Ramsey is certainly correct on this point. However, as I have read the work of every, single proponent of logical probability since Thomas Aquinas nearly 800 years ago, I cannot remember ever coming across any proponent of logical

probability ever arguing that there was a logical relation holding between UNRELATED or irrelevant propositions.

The great mystery in the 21st century, then, is not about "…Mr. Keynes's mysterious logical relations…"that Ramsey thought were derived from Plato and Moore, but about how it came to pass that literally many, many thousands of academicians for 103 years came to accept the myth of how a supposed 18-year-old genius was able to refute Keynes's Boolean based logical theory of probability.

3.0 CONFUSING MOOREAN INTUITIONISM WITH BOOLE'S ROLE FOR INTUITION ABOUT LOGICALLY CONNECTED PROPOSITIONS

Consider the following claim made by J B Davis. Very similar claims have appeared in at least 40 papers, reviews, articles, book chapters, essays, and book reviews published by Davis since 1988.Many of these publications can be found in the Cambridge Journal of Economics, which is the main academic source supporting the Ramsey Myth:

"a… fundamental criticism of Mr. Keynes' views, which is the obvious one that there really do not seem to be any such things as the probability relations he describes. He supposes that, at any rate in certain cases, they can be perceived; but speaking for myself I feel confident that this is not true. I do not perceive them, and if I am to be persuaded that they exist it must be by argument; moreover, I shrewdly suspect that others do not perceive them either, because they are able to come to so very little agreement as to which of them relates any two given propositions." (Ramsey, 1978, p.63)4

To this Keynes later replied in 1930,'I think he is right'…" (Davis, 1996, p.436-the reader should note that the correct date is 1931, not 1930; the reader relational, propositionaltgenstein makes the same type of mistake as Ramsey did in his evaluation of Keynes's logical theory of probability, in that Wittgenstein is completely ignorant of the Boole -Keynes connection regarding the use of a relational ,propositional logic based on the original work of G. Boole in 1854. See Davis's footnote 4, p.446) .

Davis's entire paper is pure nonsense. There is no Keynes-Wittgenstein connection concerning probability and statistics and there is no convergence between any of their work in the late 1930's at all. Davis, like all Post Keynesians and heterodox economists, simply reads his own extremely deficient interpretation of what Keynes must have meant by the term logical relations into the foundations of his paper. Plato and Moore are the philosophers whom Davis claims Keynes is following, when it is obvious to anyone, who has actually read the TP, that it is Boole who Keynes is following. Davis's paper is based on the myth that Keynes's logical analysis in the TP is an ordinary discourse language logic and not a formal, mathematical, symbolic logic. This is all based on basic and fundamental confusions that assert that Keynes was using Moore's Intuitionistic, Platonic, metaphysical relations as the foundation for his TP. This fundamental error appears in its first fully developed form in a 1964 paper written by Lang. It is the foundation for all heterodox and orthodox economists' musings and ruminations on Keynes's TP. This is especially so in the post-Keynesian school of economics.

It is simple to see why it would be impossible for Keynes to believe that Ramsey was right. I will repeat the demonstration above again below, but using Russell's example of a pair of unrelated propositions:

"But let us now return to a more fundamental criticism of Mr. Keynes' views, which is the obvious one that there really do not seem to be any such things as the probability relations he describes between "2+2=4; Napoleon disliked poodles." He supposes that, at any rate in certain cases, they can be perceived; but speaking for myself I feel confident that this is not true. I do not perceive any relationship between "2+2=4; Napoleon disliked poodles", and if I am to be persuaded that they exist it must be by argument. moreover, I shrewdly suspect that others do not perceive any relationship between "2+2=4; Napoleon disliked poodles "either, because they are able to come to so very little agreement as to which of them relates any two given propositions..." (Ramsey, 1926.In Kyburg and Smokler, (eds.),1980,(2nd ed.),pp.27-28).

Ramsey simply did not have any understanding at all of Boole's relational, propositional logic. Neither do Syll or Maher or Blackburn.

4.0 CONCLUSIONS

The crucial error committed by Ramsey, in all of his discussions of Keynes's logical approach to probability between 1921 and 1926, was his failure to recognize that the foundation for Keynes theory is Boole's relational, propositional logic, which incorporates the necessity of an objective, logical, probability relation connecting sets of RELATED propositions.

The belief that Ramsey had discovered major errors in the logical foundations of Keynes's logical theory of Probability in Keynes's TP is a myth concocted by Richard Braithwaite .Braithwaite's editorial foreword to the 1973 CWJMK edition of the TP is simply nonsense .How this erroneous paper could have been placed at the front of the book by Donald Moggridge can only be explained by the fact that Moggridge had never read Keynes's book and had no idea about what Keynes was doing. It must rank as one of the greatest intellectual errors ever committed in world history.

It was Hishiyama, in 1969, who first pointed out that there was a very severe problem involved in Keynes research-no economist had actually ever read Keynes's TP. However, even more problematic was that no economist had ever read Boole's LT except for Keynes. Now it is a pre-requisite for anyone even hoping to grasp Keynes's analysis in the TP to have had some familiarity with Boole's work. No Keynes scholar in any field could, or even hope to meet, this pre-requisite.

The failure of Ramsey to understand, or even recognize the existence of Boole's approach explains how Ramsey linked Keynes to Moore and Plato, who also talked about objectively true relations. Keynes's rationality concern, which involved a decision maker in providing a logical analysis to support his conclusions, was confused with things being true. Boole was simply not mentioned or talked about. The result is that everything written about Keynes in the 20th and 21st centuries over the last 110 years that deals with Keynes's TP or the connections between Keynes's TP and General Theory is either wrong or partially wrong. An example of this is Davis's 1996 article in EHJET, which is based on illusions. Davis, like Coates and Carabelli before him, has simply concocted a fictional account of Keynes's work based on a

fictional creation that claims that the foundation of Keynes's theory of probability was based on Plato and Moore. In fact, Keynes's theory of probability is based on Boole.

What is presently taught to all undergraduate and graduate students worldwide at all colleges and universities in all social sciences, behavioral sciences and liberal arts, where ever Keynes's work is discussed and evaluated, is that Keynes's A Treatise on Probability is, as a whole, a fatally flawed book.

Keynes's TP, and the connections with Keynes's A Treatise on Money and General Theory, are based on myths, fables, stories, canards and lies dressed up as scholarly, scientific research and study. One need only read the recent papers of Gerrard (2023), Basili (2024), or Clarke's (2023) recent book, or any recent presentation made by C. Misak since 2016, to realize how deeply the Ramsey myth has been ingrained and inculcated into the average student's mind. For example, all of the papers of Bateman (1987,1989,1990,1992,2016,2021) don't make any sense once it is realized that there are no references to anything having to do with Plato or Platonic metaphysical relations anywhere in Keynes's TP ,but also anywhere in anything written on probability and statistics by Keynes in his lifetime.

REFERENCES

Arthmar, Rogério & Brady, Michael Emmett. (2016) .The Keynes-Knight and the de Finetti-Savage's Approaches to Probability: an Economic Interpretation. History of Economic Ideas, Vol. XXIV, no.1, pp.105-124.

Arthmar, Rogério & Brady, Michael Emmett. (2017). Reply to Feduzi, Runde, and Zappia. History of Economic Ideas, Vol. XXV, no.1, pp.55-74.

Basili, M. and Zappia, C. 2009. Keynes's 'non-numerical' probabilities and non-additive measures. Journal of Economic Psychology, 30, pp. 419–30. DOI: https://doi.org/10.1016/j.joep.2008.11.003.

Basili, M. and Zappia, C. 2021. Financial markets and Keynes's long-term expectations. Cambridge Journal of Economics, 45 (5), (September), pp. 1047-1067.

Basili, M. (2024). Keynes-Ramsey's century-old dispute: a reinterpretation by lattice theory and a coherent solution. DEPS University of Siena ,(February 28).

Bateman, B. (1987). Keynes's changing conception of probability. Economics and Philosophy,3, (March), pp.97-119.

Bateman, B. (1989)." Human Logic" and Keynes's Economics: A Comment. Eastern Economic Journal,15, no.1(Jan.-Mar.), pp.63-67.

Bateman, B. (1990). Keynes, Induction, and econometrics. History of Political economy,22, no.2, pp.359-380.

Bateman, B. (1992). Response from Bradley Bateman. Journal of EconomicPerspectives , Volume 6, Number 4 , (Fall),pp. 206–209.

Bateman, B. (2016). Review of Frank Ramsey(1903-1930):A Sister's Memoir. History of Political Economy.pp.181-183.

Bateman, B. (2021). Pragmatism and Probability: Re-examining Keynes's thinking on probability. Journal of the History of Economic Thought, Volume 43, Issue 4, (December) , pp. 619 – 632.

Boole, George. (1854). An Investigation of the Laws of Thought on Which are Founded the Mathematical Theories of Logic and Probability. New York: Dover Publications, [1958] .

Borel, Emile. 1924.A propos d'un traité de probabilités.Revue Philosophique de la France et de l'Étranger, T. 98 (JUILLET A DÉCEMBRE,1924), pp. 321-336

Brady, Michael Emmett. (2024). Pace Basili, neither Keynes nor Russell ever defined sets of "…imprecise beliefs" or sets of "...nonnumerical probabilities, represented by intervals…" (July, Preprint, ResearchGate).

Brady, Michael Emmett. (2024). On the many, very severe errors and deficiencies in Basili's (February, 2024) claims about the Ramsey -Keynes conflict. (Preprint. July).

Brady, Michael Emmett. (2021a). The diagram on p.39 (Keynes, TP;p.42 of the CWJMK ed.,Vol.8) has little to do with ordinal probability. Available at Researchgate.

Brady, Michael Emmett. (2021b). On the mathematical innumeracy of Heterodox economists working on Keynes's illustration on p.39 of his 1921 book. Available at Researchgate.

Brady, Michael Emmett. (2020a).J M Keynes's 1931 Comment, "…I Yield to Ramsey, I Think He Is Right" Refers to Ramsey's Work on Precise Probability and Degrees of Belief, Not to Imprecise Probability and Degrees of Rational Belief: 20th and 21st Century Philosophers and Economists Simply Are Ignorant About Keynes's Imprecise Theory of Probability Contained in Part II of the A Treatise on Probability. .(January).SSRN Electronic Journal. DOI: 10.2139/ssrn.371914

Brady, Michael Emmett. (2020b). How SIPTA Overlooked Keynes's Major Contributions to Imprecise Probability and Decision Making, 1999–2019 (August 20). Available at SSRN: https://ssrn.com/abstract=3678032 or http://dx.doi.org/10.2139/ssrn.3678032

Brady, Michael Emmett. (2020c). On the Very Severe Contradictions, Inconsistencies, and Confusions in the Assessment of Keynes's Logical Theory of Probability in the A Treatise on Probability by Heterodox Economists: J.M. Keynes Showed That Incommensurability Is Dealt with by Interval Valued Probability (August 29). Available at SSRN: https://ssrn.com/abstract=3683053 or http://dx.doi.org/10.2139/ssrn.3683053.

Brady, Michael Emmett. (2020d). A Historical Summary of How a Severe Misinterpretation of the only Diagram in Keynes's A Treatise on Probability in Chapter III on Page 39 Spread to Philosophers: From G. Meeks (1976) to S. Dow and V. Chick (2012) to S.

Bradley (2019) (February 5). Available at SSRN: https://ssrn.com/abstract=3532241 or http://dx.doi.org/10.2139/ssrn.3532241.

Brady, Michael Emmett. (2020e). The Claim That the Diagram on Page 39 of Keynes's a Treatise on Probability (1921) Represents 'Keynes's View of Probability' (S. Bradley, 2019), Has No Support: It Represents a Very Brief Introduction to Part II of Keynes's a Treatise on Probability On Non Additive Probability (January 13). Available at SSRN: https://ssrn.com/abstract=3518231 or http://dx.doi.org/10.2139/ssrn.3518231.

Brady, Michael Emmett. (2019a). Keynes's Theory of Measurement is contained in Chapter III of Part I and in Chapter XV of Part II of the A Treatise on Probability (1921;1973 CWJMK Edition): Keynes Stated That the Exposition in Chapter III of the a Treatise on Probability Was 'Brief', While the Exposition in Chapter XV, Part II, Of the a Treatise on Probability, Was 'Detailed' (March 12, 2019). Available at SSRN: https://ssrn.com/abstract=3350852 or http://dx.doi.org/10.2139/ssrn.3350852.

Brady, Michael Emmett. (2019b). An Examination of Some Possible Explanations for the Existence of the 'Mystery' Concerning the Only Diagram in the A Treatise on Probability on Page 39 (Page 42 of the 1973 CWJMK Edition) (March 10). Available at SSRN: https://ssrn.com/abstract=3349928 or http://dx.doi.org/10.2139/ssrn.3349928.

Brady, Michael Emmett. (2019c). How Keynes Solved the 'Mystery' of the Diagram on Page 39 (Page 42 of the 1973 CWJMK Edition) of the A Treatise on Probability in Part II in Chapter 15 on pp.161–163 Just As He Had Foretold on pp. 37–38 of Chapter III (March 9, 2019). Available at SSRN: https://ssrn.com/abstract=3349602 or http://dx.doi.org/10.2139/ssrn.3349602

Brady, Michael Emmett. (2019d). Professor Sakai's Conjecture About the Diagram on Page 39 (Page 42 of the 1973 CWJMK Edition) of the 1921 Edition Illustrating Keynes's Interval Probability: His Heuristically Correct Analysis of Keynes's Probability Intervals Is Supported by Keynes's Worked Out Problem on pp.162–163 of the A Treatise on Probability and Footnote on p.161 (March 7, 2019). Available at SSRN: https://ssrn.com/abstract=3348201 or http://dx.doi.org/10.2139/ssrn.3348201.

Brady, Michael Emmett. (2004a). J. M. Keynes' Theory of Decision Making, Induction, and Analogy. The Role of Interval Valued Probability in His Approach. Xlibris Corporation: Pennsylvania; Philadelphia.

_____. (2004b). Essays on John Maynard Keynes and …. Xlibris Corporation. Pennsylvania; Philadelphia

Braithwaite, R B. (1931). Book review of Harold Jeffrey's Probability. Mind. Volume XL, no.160(October), pp.492-501.

Braithwaite, R.B. (1973). Editorial Foreword to A Treatise on Probability, Vol.8, CWJMK edition. London, Macmillan, pp. xiv-xxii).

Broad, C. D.1922.Review of A Treatise on Probability. Mind ,31:72–85.

Bures, C. (1938). The Concept of Probability. A Critical Survey of Recent Contributions. Philosophy of Science. Vol. 5, No. 1 (January), pp. 1-20.

Carabelli, A. (1988). On Keynes's Method. Palgrave Macmillan ;London.

Carabelli, A. (2003). Keynes: economics as a branch of probable logic. In Runde and Mizuhara(eds.),2003, The philosophy of Keynes's economics, London, Routledge, pp.216-226.

Clarke, P. (2023). Keynes at work. United Kingdom; Cambridge University Press.

Davis, John B. (1994). Review of Maynard Keynes, D. Moggridge. Economics & Philosophy, Vol.10 (no.2), pp.359-364.

Davis, J. B. (1996). Convergences in Keynes's and Wittgenstein's later views.European Journal of the History of Economic Thought, (September), 3(3),pp.433-448.

Davis, John B. (2021). Keynes's Treatise on Probability 100 Years Later: Small vs. large worlds and closed vs. open systems. Working Paper series 2022-02. College of Business Administration, Marquette University, pp.1-19. See also History of Economic Ideas,2021, Vol.29, no.3, (November).

Dequech, D. (1997). A Brief Note on Keynes, Unknown Probabilities, and Uncertainty in a Strong Sense. History of Economic Ideas, Vol.5, no.2, pp.101-110.

Edgeworth, F. Y. (1922). The philosophy of chance, Mind, 31(23), 157-185.

Edgeworth, F. Y. (1922). Review of A Treatise on Probability. By John Maynard Keynes.JRSS,85,107-113.

Gerrard, B. (2023). Ramsey and Keynes Revisited. Cambridge Journal of Economics, 47, no.1, (January),pp.195-213.

Gillies, Donald. (1972). Review: The Subjective Theory of Probability. The British Journal for the Philosophy of Science.Vol.23, no.2, (May),pp.138-157.

Gillies, Donald. (2000). Philosophical Theories of Probability .London; Routledge.

Gillies, Donald. (2021). Difficulties in the Logical Interpretation of Probability. History of Economic Ideas, Vol. XXIX, no.3 (November), pp.143-147.

Good,I.J.(1950).Probability and the Weighing of Evidence. London; C. Griffin.

Good, I.J. (1962). Subjective probability as the measure of a non-measurable set, in: E. Nagel, P. Suppes, A. Tarski (Eds.), Logic, Methodology and Philosophy of Science, Stanford University Press, Stanford, 1962, pp. 319–329.

www.ijssmr.org
Page 78

Good, I.J. (1983a). Good Thinking. Minnesota; University of Minnesota Press.

Good, I.J. (1988). Causal Tendency. In Skyrms, B. and Harper, W. L.(1988). Causation, Chance and Credence, pp.22-46.

Hacking, I. (1980).The Theory of Probable Inference : Neyman , Pierce and Braithwaite .In Science ,belief and behavior :Essays in honor of R B Braithwaite .(ed.) by D.H. Mellor .London ;Cambridge University Press,pp.141-160.(Chapter 8).

Hailperin, T. (1965). Best possible inequalities for the probability of a logical function of events. American Mathematical Monthly, 72, 343-359.

_____. (1986). Boole's Logic and Probability. Amsterdam: North-Holland. 2nd edition.

Hishiyama, I. (1969). The Logic of Uncertainty according to J. M. Keynes. Kyoto University Economic Review, 39, no.1, pp. 22-44.

Hishiyama, I. (2010). A Critical Reorientation of Keynes's Economic and Philosophical Thoughts. In Silva Brandolini and R. Scazzieri, (eds.), Fundamental Uncertainty: Rationality and Plausible Reasoning. Palgrave Macmillan; London, pp.232-271.

Keynes, J.M. (1921). A Treatise on Probability. Macmillan, London, 1921.

Keynes, J. M. (1973). A Treatise on Probability .Macmillan, London. Volume 8. CWJMK edition of the A Treatise on Probability (with the editorial foreword of R. B. Braithwaite, pp .xiv-xxii).

____. F. P. Ramsey. In Essays in Biography, CWJMK (pp. 335-346), vol. X, London: Macmillan for the Royal Economic Society (reprinted from The New Statesmanand Nation, 3 October 1931).

Kyburg, H. E. Jr., & Smokler, H. E. (1964). Introduction. In Kyburg and Smokler, Studies in Subjective Probability. New York: Wiley.

Kyburg, H. E. Jr. 1995. Keynes as a philosopher. In Cottrell, A. F. & Lawlor, M. S. (Eds.), New Perspectives on Keynes. Durham: Duke University Press.

Kyburg, Henry E. (1999). Interval valued probability. Society for Imprecise Theory and Application (SIPTA): http//www/sipta.org.

Kyburg, Henry E., Jr. (2003). Are there degrees of belief? Journal of Applied Logic, Vol. 1, pp.139–149.

Kyburg, H.E., Jr. (2010). Logic, Empiricism and Probability Structures. In Fundamental Uncertainty: Rationality and Plausible Reasoning, Edited by S. Brandolini and R. Scazzieri. Palgrave Macmillan, England, pp.39-58.

Lang, Berel. (1964). Intuition in Bloomsbury. Journal of the History of Ideas.Vol. 25, No. 2 (Apr. - Jun.), pp. 295-302.

Levi, Isaac. (1996). Aspects of Conditional Logic, chapter 4).In For the Sake of an Argument: Ramsey, Test Conditionals, Inductive Inference, Nonmonotonic reasoning. Cambridge, England; Cambridge University Press.

Marsay, D. J. (2014).Ramsey on Keynes's Treatise.(December). (https://djmarsay.wordpress.com/mathematics/maths-subjects/uncertainty-maths/broader-uncertainty/keynes-treatise-on-probability/comments-on-keynes-treatise/ramsey-on-keynes-treatise/).

Mellor, D. H.(1983). The Eponymous F. P. Ramsey. Journal of Graph Theory, Vol. 7 ,pp.9-13.

Mellor, D.H. (1995). "F.P. Ramsey". Philosophy, 70, pp. 243-257.

Methven, S.J. (2015). Frank Ramsey and the realistic Spirit. Palgrave Macmillan; London.

Misak, C. (2016). The Subterranean influence of Pragmatism on the Vienna Circle: Pierce, Ramsey, Wittgenstein. Journal for the History of Analytical Philosophy, 4, no.5.pp.1-16.

Misak, C. (2020). Frank Ramsey: A Sheer Excess of Powers. Oxford: Oxford University Press.

Monk, R. (1991). Russell and Ramsey. London Reviews of Books, 29 August, pp. 11-13. Reprinted in Russell Society News, No. 72, (Nov. ,1991) ,pp. 25-26.

O'Donnell, R. (1989). Keynes: Philosophy, Economics and Politics. Palgrave Macmillan; London

O'Donnell, R.(2021a). Keynes and Knight: risk-uncertainty, distinctions, priority, coherence and change. Cambridge Journal of Economics,45(September),pp.1127-1144.

O'Donnell, R. (2021b) Keynes's Treatise on Probability: The First Century. Review of Political Economy, (October), 33:4, pp.585-610

Ramsey, F. P. (1922). Mr. Keynes on Probability, Cambridge Magazine, Vol. XI ,no. 1, (January),pp.3-5. Reprinted in British Journal of the Philosophy of Science, 40, [1989], pp.219-222.

_____. (1926). Truth and probability. In Mellor, D. H (Ed.) Foundations: Essays in Philosophy, Logic, Mathematics, and Economics, London: Routledge & Kegan Paul, [1978] and in Kyburg and Smokler (eds.), Studies in Subjective Probability,1980,(2nd ed.);New York; Krieger .pp.26-52.

Rowbottom, Darrell. (2008). On the Proximity of the Logical and "Objective Bayesian 'Interpretations of Probability. Erkenntnis, Vol.69, no.3 (November), pp.335-349.

Rowbottom, Darrell. (2018). Probability Theory. In Hansson,S.O. and Hendricks ,V.F.(eds.), Introduction to Formal Philosophy,pp.417-430.

Runde, Jochen (1994). Keynes after Ramsey: In Defense of A treatise on Probability. Studies in the History and Philosophy of Science, Vol.25, no.1, pp.97-121.

Russell, B. (1922). Review of A treatise on Probability by John Maynard Keynes. Mathematical Gazette, Vol.11 (July), pp.119-125.

Russell, B. (1948). Human Knowledge: Its Scope and Limits. Routledge; London, 2009.

Russell, B. (1959). My Philosophical Development. George Allen and Unwin; London, England.

Skidelsky, R. (1992). John Maynard Keynes: The Economist as Savior, 1920-1937, Volume II. England; Penguin Publishers.

Syll, Lars P. (2024). Keynes and Ramsey on probability,(19 Mar, at 14:10) | Posted in Economics | Comments Off

Wheeler, G. (2012). Commemorating the work of Henry E.

Kyburg, Jr.Synthese, Vol.186.no.2, (May), pp.443-446.

Wilson, E.B. (1923). Keynes on Probability. Bulletin of the American Mathematical Society, 29, 7,319-322.

Winslow, E. (1989). Organic Interdependence, Uncertainty and Economic Analysis. The Economic Journal, Vol. 99, No. 398 (December), pp. 1173-118.

Zabell, S.L. (1991). Ramsey, Truth, and Probability. Theoria, vol.57, no.3 (December), pp.211-238.

Zabell, S. L. (2005). Symmetry and its Discontents. Cambridge; Cambridge University Press.