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J.M. Keynes Versus F.H.
Knight: Risk, Probability,
and Uncertainty

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In 1921, F. H. Knight (1885-1972) published *Risk, Uncertainty and Profit*, where he argued about the distinction between measurable risk and non-measure uncertainty. In the same year, J. M. Keynes (1883-1946) published *A Treatise on Probability*, dealing with a similar subject. Unfortunately, Keynes's contribution has been underestimated in the shadow of his main work, *The General Theory* (1936), although he continued to insist on the significance of uncertainty. With different visions and methodologies, both authors contributed to the study of uncertainty. The purpose of this book is to clarify the significance of their contributions from various viewpoints.

In the history of economic thought, the concepts of risk and uncertainty, somehow, have been neglected for a long time. This book aims to return to economists in the past, including Knight and Keynes, and go beyond them toward new horizons of integrated science. According to J. K. Galbraith, there exists a clear dividing line between the 19th and 20th centuries in terms of uncertainty. In the 19th century, when capitalists were certain of the success of capitalism, and socialists of socialism, problems could be posed and solved with full certainty (p.5). Galbraith's interpretation of the lack of uncertainty in the economy before the 19th century has been widely accepted.

In my opinion, this idea led many economists to believe that there existed no study of uncertainty in economics until the 20th century.

This book, on the contrary, argues that the history of the economics of risk and uncertainty stretches back over 300 years by paying attention to the achievements also of mathematicians in this field. The topic is divided into six stages of development. Although the first stage, or the mercantile economy before the 1700s, had no economic theory, statistics as a branch of mathematics was firmly established by Pascal and Fermat. In the same way, in the second stage, which the author calls the B-A Age, the mathematician Daniel Bernoulli is considered the "father of risk economics", and Adam Smith is called the "father of economics." Keynes and Knight belong to the third stage, or the K-K Age. The fourth stage is called the N-M Age, when Von Neumann and Morgenstern worked on game theory. The fifth stage is called the A-S Age, when Arrow, Akerlof, Spence, and Stiglitz focused on imperfect information. Finally, by the sixth stage, the author discusses the return of Keynes and Knight and beyond.

It is already known that Keynes and Knight worked on micro and macro respectively. The author shows that while Knight intended to perform a direct comparison be-

tween risk and uncertainty without the help of any type of middle passage, for Keynes, “probability” played a very important role as the “intermediate belt” (p.54). To emphasize their different approaches is the main purpose of this book. However, I was more impressed by how both figures tackled the same problem, namely the difference between natural science and economics. In this book, I believe that Knight’s ideas on the human aspects of economics would interest readers more than that of Keynes, for the latter’s considerations about this problem, such as “animal spirits” and his definition of economics as a moral science, are already better known to readers.

In order to understand Knight’s ideas on human aspects, the explanation about Arrow’s criticism of Knight (chapter 4) is very useful. As the author points out, Knight was a philosophical man who took account of the non-reasonable aspects of the human mind and behavior, whereas Arrow was a very reasonable man who tended to balance the cost and benefit of his action, thus under-evaluating the effect of psychology on economic behavior (p.67). This leads us to the question about the characteristics of the Chicago School to which Knight belonged. Uzawa’s remark, which is translated from Japanese into English in this book, would interest readers about the decisive difference between Knight, who early on led the original Chicago School, and Friedman, who later modified the morals of the school in a different direction (p.118). As the author concludes, Knight did not believe that individualism could automatically bring about an ideal utilization of economic resources. As the author argues, Knight’s idea on the ethical foundations of a competitive economy can be

understood in terms of criticism not only of capitalism but also of the general equilibrium theory.

In my opinion, the most interesting part of this book is how Hicks, influenced by Keynes and Knight, explained the difference between natural sciences and economics (pp.54-55). Knowledge is extremely imperfect. There are very few economic laws we can know with precision. Hence, Hicks thought that economics does not belong to the core of natural sciences but rather is located at the edge of the sciences. Causality in economics is not as simple as in natural sciences. Hicks proceeded to think that economics is not only on the edge of sciences and but also on the edge of history. So, a consideration of economics may throw light on both directions. According to the author, Hicks also concluded that statistics is also on the edge of sciences and of history. By taking a lesson from Hicks, we can reconsider why students and scholars of economics and statistics should learn history.