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Rowland Hamilton's neglected
contribution on risk, uncertainty and profit*

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Introduction

Rowland Hamilton - a nineteenth-century British author on the social sciences¹ - published the following works: *The Resources of a Nation: a Series of Essays* (1863); "General Relations of Employers and Employed" (1873); 'Introductory Observations on Primary Education' (1875); *Money and Value: An Inquiry into the Means and Ends of Economic Production* (1878); and "Thrift in Great Britain" (1892).

Hamilton's ideas and arguments on the subject of risk, uncertainty and profit are mainly analysed in his 1878 inquiry, though some minor comments are also included in his 1863 and 1873 works.

The main theme of his 1878 inquiry is the function of money and its substantial role in the economy. The anonymous reviewer of his 1878 work in the *British Quarterly Review* writes that,

Altogether, we are glad to recommend this work very cordially to the attention of those interested in political economy and finance. Mr Hamilton is a clear writer, because he has first of all been a clear thinker; and although the use of technical terms cannot be always avoided, the subject is here dealt with in a luminous style. (Anon., 1878, p. 249)

However, Hamilton completed his inquiry using only a few references to the economic literature of the period. Of the well known economists he referred only to McCulloch (p. 223), J.S. Mill (ibid., pp. 179-80) and Jevons (ibid., p. xxiv).²

The classical character of his inquiry is mainly inferred from his treatment of some influential economic subjects. More specifically, he favoured *laissez-faire* (Hamilton, 1863, pp. 91-3), the free trade doctrine (p. 15) and free market competition (pp. 170-1, 277), while he was hostile to any monopolistic situation in the economy (p. 290); he considered that the market price fluctuations tend toward an equilibrium between supply and demand (1863, pp. 131-2; 1971, p. 289); he regarded the supply price as determined by the cost of production and the demand price by utility (1863, pp. 116-17; 1971, pp. xx, 100-1, 124, 276); he recognized the wage fund doctrine (p. 217) and

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the positive relationship between wage rate and work effort (p. 121). Moreover, he emphasized the extensive division of labour (1863, pp. 18-20; 1971, pp. 66, 135, 149), the efficient combination of the factors of production -mainly capital and skilled labour (1863, p. 23; 1873, p. 502; 1971, pp. 41,182, 186-9,195) - the monetary organization (1971, ch. 2), and innovations (1863, p. 119; 1971, pp. 290, 296, 301) as the crucial factors in economic development.

Monetary analysis is the main subject of his work. He analysed the value of metallic

money and its function as a medium of exchange, as a standard of value and as a 'reserve of purchasing power' (pp. 7-9, 17, 19-21, 52-3; see also 1863, pp. 249-52). He gave emphasis to the latter fundamental function of money as the one which minimizes the harmful effects caused by any abrupt and unexpected disequilibrium between supply and demand and by ignorance and uncertainty, which accompany the future course of the various economic variables. As Hamilton wrote: Their [i.e. the precious metals"] primary use as money is to aid in that redistribution of commodities rendered needful by the inequality and uncertainty of natural production" (p. 133).

By the use of money, some of the economic causes which produce risk and uncertainty are restricted but not eliminated because it is a "fact that risks and reverses are inseparable from all industrial enterprises" (p. xviii).

Moreover, Hamilton developed the quantity theory of money (pp. 35-6, 75, 104; see also 1863, pp. 270-1); the various substitutes for metallic money and their effectiveness on the economic process (pp. 70-2); and he analytically portrayed the banking system and credit (pp. 224-74). Thus the main body of his scientific analysis is focused on the functioning of the monetary economy and only sporadically did he investigate the rate and the variability of some other significant real economic variables.³

Hamilton's survey has a positive and normative character (pp. xiv, xviii-xix), while his scope and method of inquiry, as he wrote, "is not to present an historical sketch, but to deal first with more general principles, and then to proceed to those arising from them which are more liable to casual modification" (p. 26).

On the other hand, the style of his writings is more explanatory than exploratory and strictly scientific. In regard to his methodology, his reviewer comments that, "He unites the power of distinct observation of the empirical student with the faculty for abstract thought which enables the thinker to suggest hypotheses that express the generalized results of experience in "laws" (Anon., 1878, p. 249).

Leaving aside all the above economic subjects, in this paper we will analyse the special contribution of Hamilton on the topic of the entrepreneurial function as the bearer of risks and uncertainty, and the receiver of a special

reward (i.e. pure profit). His significant and independent (in the sense that there is no trace of theoretical influences upon him by other writers) contribution to this subject is unquestioned as he was a pioneer in relating the existence of uninsured risks and uncertainty to the function and reward of the entrepreneur. Though many classical economists recognized the function of risk-bearing as characteristic of the role of capitalist-entrepreneur (see Kar-ayiannis, 1990, pp. 249-50), none of them (as far as I know) studied the special entrepreneurial function as the one bearing the risk and uncertainty.

The pertinent literature has paid no attention to Hamilton's contribution to the theory of entrepreneurship. It is the purpose of this paper to assess his special contribution to the subject and to attempt to give Hamilton the position he deserves in the history of economic thought and in the history of the special topic of entrepreneurship and profit. The first section (Risk and Uncertainty) outlines what Hamilton has written in regard to the main causes of risk and uncertainty. The next section (Entrepreneurship and Profit) analyses Hamilton's views on entrepreneurial activity, its motive, its ends and its justification as bearing the risk and uncertainty.

By using extensive references (mainly contained in the footnotes) to other authors who developed the same theory, that is, Cantillon and Knight, I will evaluate the

independent and significant contribution of Hamilton in my conclusion, as we have no evidence to verify influences among these authors. As is known, Jevons discovered Cantillon's work and published an article on his economic analysis in January 1881, when Hamilton's work had already been published. On the other hand, Knight (based on his doctoral dissertation written between 1914 and 1917 and edited in a new form in 1921) though he devoted about 50 pages of his monumental work to the subject giving an historical sketch of the treatment of entrepreneurship and profit in economic literature, did not make any reference to the works of Cantillon and Hamilton.

Risk and uncertainty

The uncertainty inherent in economic life in regard to the future rate of many economic variables and its unexpected and unknown fluctuations, produces some risks which cannot be measured and insured against. Hamilton has properly distinguished between measurable and non-measurable risk, the latter being that which is produced by uncertainty and which fully justifies the profits of the entrepreneurs.⁴ He argues that,

Deducting wages and interest, there remains an uncertain balance of excess or deficiency in the ultimate reproduction, just as surely uncertain as human knowledge is fallible. Risks there are, it is true, in work of all kinds, but as far as results can be estimated, or special risks provided for by insurance, average rates of production may be assumed, but these must, nevertheless, tell in the final results,

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which are further subject in a greater or less degree to special uncertainties, arising from fluctuations of supply and demand' to which I need not refer more at length. It is these final results which are commonly spoken of as profits, and much of the work done for profits cannot, in the nature of things, be shared. (1874, p. 509)

Those risks produced by uncertainty, according to Hamilton, are borne by those who want to bear them: 'the risks and uncertainties ... attend upon all undertakings in a greater or less degree' (p. 162); 'to incur risks is not in itself culpable. On the contrary, some degree of uncertainty waits on all enterprise which depends on future conditions which never can be perfectly anticipated' (pp. 208-9).'

Hamilton held that the various risks and uncertainties that existed in the economy originate in the following causes:

1. The imperfect knowledge of agents of the future rate of prices and demand for goods (p. 29; see also 1874, p. 509).
2. Misdirected production (p. 257).
3. The 'uncertain gap between the money in which all importers and wholesale dealers had to pay their longer obligations and that in which their transactions had to be carried out to the end by retailers and consumers' (p. xxviii), that is, by variations in the value of money. An analogous idea was also stressed by Cantillon and Knight.⁶
4. The unexpected and sudden changes in the rate of demand: 'For the demand of the average of mankind is not only capricious, but unintelligent' (p. 30).⁷
5. 'the risk of loss from misadaptation of supply to demand ... may arise either from error in judgment on the part of the employer, or even from causes impossible for him to foresee and provide against' (p. 214).⁸

The risks and uncertainty occasion the following deleterious effects on the economy - besides those which accompany the entrepreneurial activity (see the following section).

- (a) Ignorance and uncertainty make the economic agents reluctant to undertake extensive economic actions (p. 27).

(b) 'The high rate of interest in many new countries does not represent the insecurity of property so much as the risk of failure arising from the difficulty of adapting the new capital to the existing agencies which have to be modified to carry out the work designed' (p. 192, see also p. 218).

(c) 'the wage-earner may be uncertain whether he gets work or not; he does not, having once obtained it, run any further risk as to the ultimate success of the undertaking upon which he is engaged' (p. 213).

(d) 'Holders of "money" do incur one definite risk; no one is obliged to take or to pay them for their money' (p. 220).

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Thus, according to Hamilton, on the one hand uncertainty operates as a disincentive to agents, and on the other the labourer is under the burden of finding appropriate employment for himself and the capitalist must find a profitable investment for his capital. This uncertainty assumed by the labourers and the capitalists was not featured by Cantillon and Knight in their treatment of the subject.

Entrepreneurship and profit

Hamilton clearly distinguished between the crucial role of capitalist and that of the entrepreneur (pp. 210-11). In his article of 1873 he argues that, 'the routine headwork of the superintendent; the "abstinence" and the care in selection of the capitalist; the special enterprise and powers of direction of those who take the ultimate control of undertakings, are all clearly distinct functions' (1874, pp. 508-9).⁹

Moreover, he made a strict separation between the gross profits, interest (as a reward of abstinence)¹⁰ and net profits leaving the latter as the sole reward for entrepreneurial activity (pp. 216-17; see also 1863, p. 336).

The entrepreneur, according to Hamilton, is an active factor in the economy, the one who contributes eminently to economic development. Yet the entrepreneur is inspired by two motives. First by the profit motive, and particularly by trying to maximize his expected profit:

There is ... in all cases the expectation of profit, as the inducement to undertake the labour and risk [1863, p. 354]. The reasonable desire of those who accept loans [i.e. the entrepreneurs] is to secure to themselves in a larger degree all the more or less of gain which may be derived from their own skill and experience in the management of some special kind of industrial work. Those who grant loans forego this advantage, but are assured of a more certain income, (p. 210; see also pp. 158, 186)

Secondly, the entrepreneur is motivated by the freedom he enjoys in running his own business:"

A love of gain is no doubt a powerful stimulus to exertion, but too much has been made of this motive, and it is moreover one of those which, unbridled, are so apt to o'erleap their own intention. The sense of freedom combined with a sense of a definite sense of responsibility for the use of it, are the most favourable conditions for drawing out the best energies, especially of an enterprising race like our own [i.e. the English], (pp. 218-19, fn. 1)

The above-mentioned motives operate freely and without restrictions, because 'no power on earth can restrain men from being guided by the practical experiences and by the pressing necessities of life' (pp. 48-9).

The entrepreneurs or 'speculators' or 'adventurers' as Hamilton labelled them (pp. 212,216), are 'the born pioneers of commercial intercourse' (p. 29)

who have voluntarily agreed 'to incur freely the risk of experiments' p. 30). The entrepreneur, according to Hamilton, has the ultimate responsibility of the enterprise, bearing the risks and uncertainties incurred. As he points out:

If merchants and manufacturers waited for absolute certainty, they would ignore their function in the general economy of life [p. 209]. If the 'adventurer' accepts a loan, he guarantees the lender against loss to the utmost of his resources ... therefore he bears the first brunt of risk, and it stands to reason that his directions as to the ordering of the labour employed must be supreme within the limits of the undertaking for which he is thus finally responsible ... his special function is to direct and adjust, and, in the interest of all concerned, he should have fair scope for the exercise of it (p. 216)

If we consider the words of Cantillon and Knight on the same subject, a resemblance among their views can be easily shown:

All the rest are Undertakers, whether they set up with a capital to conduct their enterprise, or are Undertakers of their own labour without capital, and they may be regarded as living at uncertainty. (Cantillon, 1964, p. 55, see also p. 81)

The essence of enterprise is the specialization of the function of *responsible direction* of economic life, the neglected feature of which is the inseparability of these two elements, *responsibility and control*. (Knight, 1964, p. 271) The apparent separation between control and risk taken turns out, as predicted, to be illusory, (ibid., p. 297)

However, the valuation of risk and uncertainty is subjected to personal experience and knowledge. In Hamilton's words: 'the sum given for uncertain results is more a matter of individual opinion which must stand or fall by the test of time' (p. 159).¹² So there must be a differential rate of profit among entrepreneurs in relation to their evaluation of the future course of some crucial economic variables.

On the other hand, the entrepreneur, according to Hamilton, acts as an innovator, particularly in creating and promoting new products, in discovering new markets and in organizing the enterprise more efficiently. This fundamental entrepreneurial function, which was developed by Schumpeter almost 40 years later (1978, pp. 132-6; see also Karayiannis, 1990, p. 255), is inevitably accompanied by various risks and uncertainties.¹³

As Hamilton points out:

No branch of enterprise ever yet was opened up which did not involve some loss and disaster to the early adventurers, and some persistence, in spite of difficulties, may well be urged in favour of attempts to introduce new industries, or a better organization of industries, which may help to develop a wage-earning power, especially among the poorer classes. As far as such industries can acquire the support of this class the fresh wages earned and expenses lessened by improved production are indeed a double gain [pp. 295-6]. To create a demand by affording

a suitable supply is no new thing in commercial enterprise. Those who undertake such ventures often do so on the very imperfectly secured hope that future profits may recompense their first losses. Moreover we have all to buy our experiences and grow wise only by repeated failures... the pioneers in this great work may... take the first risks, try the first experiments, undergo all the incidental crosses and losses to which all pioneers are subjected, and create the demand by affording the most suitable supply. When this can once be accomplished the field may be left open to those engaged in the ordinary conduct of the trade, and further operations thus become thoroughly self supporting. It is the first steps which are the most difficult and the most costly, (pp. 299-300)¹⁴

Therefore,

All that I urge is that the capital needed is at hand, ready and waiting to be applied. It is 'mind', not 'matter', that is wanting. It is a problem of life, not of mechanism [p. 295]. The true leaders of men, to

patience, experience, and intellectual capacity, must add the courage and resolution which nerves them to undertake the necessary risks of action in doubtful emergencies. (1863, p. 351)

From the previous analysis one may deduce that, according to Hamilton, the active role of the entrepreneur is devoted to the direction, responsibility and control of his enterprise and the introduction of various innovations, while the passive one is the bearing of the ultimate risk and uncertainty.

Hamilton classified the various incomes according to the way they are received. He considered that wage, rent and interest are contractual incomes, while net profit is the only residual of distribution - a classification also introduced by Cantillon (1964, p. 51) and Knight (1964, p. 271).

As Hamilton says:

wages - and in this generic term must be included 'pay', salaries, and all other forms of fixed remuneration - may be disproportionately too high or too low. Profits represent alike the very scanty earnings of the struggling shopkeeper and manufacturer, and the exceptional gains, usually associated with inordinate risks, of the fortunate speculator, (p. 212, see also pp. 215-16)

Again, 'wages as a rule are and must be paid immediately' (p. 214), while 'profits are rather saved out of, than added to, the cost of production' (p. 215).

Profit is the reward for the above-mentioned services supplied by the entrepreneurs. However, Hamilton links this reward much more with the functions of responsibility in directing and controlling the enterprise, and of bearing the risk and uncertainty, than with the innovative activity. He stressed that

The word 'profit' is, in fact, used in two different senses: the first is the excess of production over expenditure; the second (and commoner), the uncertain remuner-

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ation of those who undertake, not the superintendence only, but also the risk of employing capital, and who, in a greater or less degree, control the direction and manner in which labour is employed: the expectation of profit and the risk of loss are constantly associated together. (1863, p. 330)

Thus, the market price of goods 'will include the recompense of those on Whose responsibility the several undertakings are carried on' (p. 238), and Nothing can be more inane and futile than to cry out for special remuneration of any kind without acquiring the skill or undertaking the cares and responsibilities of the work associated with it' (p. 292).

Therefore the uninsured ultimate risks that are assumed by the entrepreneur in running and expanding his enterprise justify his fair reward.¹⁵ As Hamilton put it:

Profit and risk are so inseparably connected, that 'profit and loss' is the appropriate heading of every trader's account which records the success or failure of his several transactions. Indeed, when interest and the wages of superintendence and indemnity against loss are provided for, the final profit may well be termed the remuneration for risk; the risk being of such a kind as, to a greater or less degree, but not altogether, can be provided against by due care, skill, forethought, and good management, (pp. 215-16)¹⁶

Again, The element of risk, however, cannot be wholly eliminated in practice, and is therefore a fair basis for a compensating charge' (p. 218). And as profits ... are often earned under arduous conditions and associated with peculiar risks' (p. 174), 'There is inevitably an uncertain balance of excess or deficiency at the end of every work of reproduction, and it is this resulting risk which is inevitably associated with profit' (p. 215).

Hamilton postulates a proportional relationship between the rate of profit and the rate of risk. He considered that 'the great profits ... are often associated with great risks, without actual injury to any one' (p. 208). This Happens more often in the case of the

innovative activity of the entrepreneur, while in the course of things 'Men grow rich by good fortune and industry, or grow poor by thriftlessness and misadventure' (p. 85). A similar argument was put forward by Knight: "The income of any particular entrepreneur will in general tend to be larger: (1) as he himself has ability, and good luck' (1964, P- 283).

Conclusions

The significant and independent contribution of Hamilton to the theory of entrepreneurship bears a strong resemblance to theories developed by Cantillon and Knight, and could be considered to show that the way is somehow Prepared for new ideas and individuals articulate these ideas independently of each other.¹⁷ Hamilton's contribution can be summarized as follows:

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1. The various risks and uncertainties inherent in economic life are assumed, though differently, by the labourers, capitalists and entrepreneurs.
 2. Most of the risk and uncertainty is assumed by the entrepreneur because: he does not have perfect knowledge of the future rate of economic variables; some variables are influenced by causes out of his control; he has the ultimate responsibility and control of his enterprise; he innovates in various areas and by various means without having a clear perspective on the results of his actions.
 3. The entrepreneurial function having the responsibility and control of the enterprise and assuming the risk and uncertainty is justified in receiving a specific economic reward, that is, the pure profit which is the sole residual element of income distribution

Notes

* A first draft of this chapter was presented at the History of Economic Thought conference, September 1990, University of East Anglia, Norwich, England. I wish to thank Professor S. Todd Lowry for his suggestions on an earlier draft of this paper.

1. Unfortunately, until now, the only biographical data I have come across while searching in a variety of British reference sources (for example, the biographical sources in the British Library; the index of Macmillan archive in the British Library, Dept. of Manuscripts; the Palmer's index to *The Times*; the Library of the National Institute of Economic and Social Research; and the British Library of Political and Economic Science) is that Hamilton was an Honorary Secretary to the 'Standing Committee on Education' (see Hamilton, 1875, p. 267). He was also a permanent discussant on various subjects of education in the *Transactions of the National Association for the Promotion of Social Science*, at least from 1873 until 1884 (see the various volumes of *Transactions*, 1873-84).

2. All page numbers standing alone in parentheses refer to Hamilton, *Money and Value* (Hamilton, 1971).

3. His anonymous commentator in the *British Quarterly Review* mentions that, 'He [Hamilton] has brought to bear an acute and trained intelligence upon some of the most complex phenomena of our monetary system' (Anon., 1878, p. 249).

4. The same distinction, as is well known, had been drawn also by Knight (1964), pp.20, 46.

5. Knight stated a similar view: 'Universal foreknowledge would leave no place for an "entrepreneur". His role is to improve knowledge, especially foresight, and bear the

incidence of its limitations' (1964, p. lix).

6. As Cantillon wrote: 'many people set up in a City as Merchants or Undertakers, to buy the country produce from those who bring it or to order it to be brought on their account. They pay a certain price following that of the place where they purchase it, to resell wholesale or retail at an uncertain price' (1964, p. 51, see also pp. 47-9, 51-3). For Knight, the 'profit arises from the fact that entrepreneurs contract for productive services in advance at fixed rates, and realize upon their use by the sale of the product in the market after it is made' (1964, pp. 197-8).

7. In regard to this cause, Cantillon comments: 'These Undertakers can never know how great will be the demand in their City, nor how long their customers will buy of them since their rivals will try all sorts of means to attract customers from them. All this causes so much uncertainty among these Undertakers that every day one sees some of them become bankrupt' (1964, p. 51).

8. As Cantillon says, 'the price of the Farmer's produce depends naturally upon unforeseen circumstances, and consequently he conducts the enterprise of his farm at uncertainty' (1964, p. 49).

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9. Knight (1964, p. 271), draws the same distinction on the basis that the capitalists and the entrepreneurs not only receive dissimilar types of income, but also play different roles in the economy.

10. He follows (1863, p. 330) Senior's theory on this subject.

11. Cantillon similarly argued: 'It will then come to pass that the Overseers become Undertakers, will be the absolute masters of those who work under them, and will have more care and satisfaction in working on their own account' (1964, p. 61).

12. Similarly, Knight says: 'we judge the future by the past. Experience has taught us that certain time and space relations subsist among phenomena in a degree to be depended upon' (1964, p. 204).

13. The relationship between the entrepreneurial innovative activity and its function as bearing the risk of uncertainty was also recognized by Knight in his latter work on the subject (1942, p. 128).

14. See also his *Essays* for a relevant argument (1863, pp. 341-4, 355).

15. Cantillon had developed a similar justification for the existence of profits by relating the special risks and uncertainties to the entrepreneurial function of bearing them (1964, pp. 49, 51, 55).

16. As Knight wrote: "The true uncertainty in organized life is the uncertainty in an estimate of human capacity, which is always a capacity to meet uncertainty' (1964, p. 309).

17. I thank Professor C. Jung (University of Richmond) for this comment.

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