Arthur Cole and Entrepreneurial History

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> Entrepreneurship may be defined in simplest terms as the utilization by one productive factor of the other productive factors for the creation of economic goods. [1]

WITH those words in 1946 Professor Cole motivated the study of something new, entrepreneurial history, in his paper "An Approach to Entrepreneurship." [1] By 1948 Harvard and Cole had their Research Center in Entrepreneurial History, and the enchanted letters, EEH, were in their first avatar as *Explorations in Entrepreneurial History*. A most promising beginning was underway. No less a figure than Joseph Schumpeter had apparently made the entrepreneurial role the center of analytical attention for economists in studies of both economic development and of business cycles. To Cole it was transparently obvious that the entrepreneurial role *had* now to be built into economic theory, if economists were ever going to become "realistic" in their studies of the economic world. For without the entrepreneur, *nothing happens* in economic life. Factors of production do not magically spring into combination to make economic enterprises. The entrepreneur accomplishes this economic service. The existing theories of the firm and of markets were thus incomplete. Economics was said to be a social science, and therefore it must embrace the central figure in economic society, the person whose actions create all economic change. Economics would no longer be merely a study of an abstract world without people, institutions, technological change, or the passage of time. The study of entrepreneurial history would lead the way.

There followed a decade of intensive research effort: great men and talented youngsters alike were enticed and pressed into service. But by 1958 the Center had closed its doors. Books and papers by those associated with it reveal a fascinating set of voyages of discovery. There is no doubt that some kind of a "new world" had been found by the entrepreneurial explorers, but its precise shape and functioning had grown more complex with each new voyage: like the early journeys up the Amazon, the thing seemed to become a matter of deepening mystery as more was discovered.

Then, by 1960 the focus of research in economic history shifted, and entrepreneurial history was left behind. It did not, after all, become the center of the field. In addition, the "friendly rival," business history, also continued to flourish in its own better-defined and more closely charted regions. Entrepreneurial history seemed to have come to a dead end. But nearly four decades after the 1946 paper, entrepreneurial history is still not dead: it exists in a kind of limbo. It does not quite die, yet it refuses to live with any impressive vitality. Appallingly enough, the most recent excursions into the entrepreneurial regions by economists display no apparent knowledge of the earlier voyages launched from the Harvard center in the 1950s.

I have discussed possible explanations for this strange outcome in some fairly out-of-the-way publications in recent years [9, 10]. Today I want to re-examine Professor Cole's own private effort in those earlier intellectual voyages. I will concentrate on two papers and the book, *Business Enterprise in Its Social Setting* [2]. The two papers "An Approach to the Study of Entrepreneurship" [1] and "Meso-economics: A Contribution from Entrepreneurial History" [3] were published in 1946 and 1968 and thus bracket the book and the other work done by Cole that one associates with the years of the Harvard center.

Let me say that I had the privilege of knowing Professor Cole only very slightly, although we corresponded a few times on professional matters. I had been in no way associated with the Harvard center, and, well, this is a very large country. So I do not have the advantage of familiarity, and must make my judgments from the written record alone. Since Cole wrote with a wry sense of humor, plenty of "tongue in cheek," I am constantly in danger of misreading him.[1] I would like to enter this *caveat* here.

When I first met Professor Cole in Urbana, Illinois, I was an assistant professor at Purdue. I was attending my first meeting of the Economic History Association. Professor Cole was then already retired from teaching, and to me seemed to be quite an elderly person: a man of great distinction, but already part of the discipline's past. At Purdue we had already been pursuing quantitative work in economic history using (primitive) computers, but had not yet attracted much attention. I remember that Professor Cole seemed hard of hearing in Urbana and asked for some things to be repeated.

A year or so later my Purdue colleague, Lance Davis, told me that Professor Cole had apprised himself of our data-processing efforts at Purdue and was pressing upon us some records at the Baker library on which to try our stuff. Apparently the elderly gentleman was not so far out of things as one might have supposed. The documents in question were the faces of some thousands of bills of exchange drawn upon London through most of the nineteenth century. The result, thanks to Professor Cole, was our exchange-rate paper, printed in England in the summer of 1960 [4].

By then Lance had introduced me to the idea of entrepreneurial history. I read Cole's 1946 paper, some other papers in the old *EEH* and was intrigued. By the time of the first meeting of the "Cliometrics Society" at Purdue in December 1960, I was at work on my book, *The Vital Few* [7], my attempt to contribute to the *genre* Professor Cole and his center had developed. By the time I became interested in entrepreneurial history it was already in decline at Harvard and elsewhere. But Professor Cole liked my book, congratulated me on both its style and content and said good things about it to his friends.

Although the subject did not flourish, the young men associated with the Harvard center went on to such glory as our profession offers, posting an extraordinary record of achievement in the years that followed. Even so, from discussions I had with Professor Cole toward the end of his life, I got the impression that he considered his entrepreneurial history enterprise to have been a failure. In my essay on the subject for the *Encyclopedia of Economic History* [10], I argued that entrepreneurial history's main problem had been one of inadequate definition as a "unit of history" right at the beginning, largely because the subject was far larger than it seemed at first sight. Exploratory essays must come into existence before a new field of enquiry can settle down. But in entrepreneurial history all the papers seem exploratory. The more work that was done in entrepreneurial history, the wider the field became that had somehow to be delimited. I shall argue that Professor Cole's own work illustrates the problem.

Once it became clear that even child psychology and family structure — personality formation — would be involved in successful entrepreneurial history, it seemed questionable whether economic historians trained in "straight" economics were even equipped to do the work [6]. Ann Jardim's study of Henry Ford seemed to me to nail down that point once and for all [11]. The professional psychologist had something important to offer. But psychology is not part of the typical Ph.D. program in economics.

There continue to be occasional and sometimes intriguing contributions to entrepreneurial history, biographies mainly, and interest (quite properly) extends beyond the business world into public sector entrepreneurship. In recent years we have come to see people like Robert Moses and Admiral Rickover, even J. Edgar Hoover, as important entrepreneurial figures [8, 13]. What in the world would Schumpeter, or Cole, have thought of that?

The study of entrepreneurship is similar to the study of creativity in any field, for example, musical composition. On the grand scale of Schumpeter's conception ("creative destruction") or the more modest approach of Professor Kirzner [12] (the entrepreneur as arbitrager), it is *creativity*, originality, that is the central focus of entrepreneurial studies. The entrepreneurial contribution is precisely that of original perception, new ideas, new departures. The unexpected is made to happen. Most of the time, after all, it is the expected that happens. J. K. Galbraith, in his *New Industrial State* [5], makes a valuable distinction among the nation's great business organizations between the "entrepreneurial firm" and the sorts of clanking industrial bureaucracies upon which he lavishes his attentions.

On first recognition there seems to be little difficulty. When we think of musical creativity we think of the bold innovators: W. C. Handy, Arnold Schoenberg, Beethoven, Boccherini, Elvis Presley, the Beatles. But what we do not consider as innovation, the absolutely prosaic, is probably 99 percent of the money-making part of music: records for teenagers, for TV, films, grocery stores, and dentists' offices. The same is true in economic history. Most of economic life is dull, repetitive, just production routine. But we do not hesitate to recognize the great departures when they appear. The senior Henry Ford, not the present president of Ford Motors, was the great innovative spirit. Andrew Carnegie, Henry Frick, Pierpont Morgan, were the determining innovators in US Steel's history, not those who have presided over and administered its decline in subsequent decades. There is a difference between entrepreneurship and everything else, a big difference, and something is there to study, even if we seem not to have found the handle — yet.

In this regard it is instructive to examine Professor Cole's own changing vision of his subject. In the 1946 paper Cole writes within the optimistic *Zeitgeist* of an all-conquering American economy — in technology, production, management, institutions. The 1930s depression had vanished, finally, in World War II, with the American economy emerging unchallenged at the apex of world power. Cole sees it as a trend of inevitable progress (cycles apart): entrepreneurship both reflects and feeds the processes of development. He divides the history of American entrepreneurship into three stages of entrepreneurial thought processes:

Stage	*Style of Thought*	*Dates*
1. Empirical	rule of thumb	from scratch to 1860
2. Rational	informed	1860–1890
3. Cognitive	sophisticated	from 1890 onward

At this point Cole's thinking was very exploratory and tentative. He already knew plenty of anecdotal entrepreneurial data, and of course, he knew his American economic history. His dates, in fact, mainly reflected the latter. Although he continually used his knowledge of colonial entrepreneurs as examples, he saw nothing, apparently, to justify setting the colonial period in a separate stage. So 1860 is the end of the economy's growth under colonial laws and the constitutional settlement of 1789: after the Civil War the great expansion of business enterprise together with its amazing proliferation of organizational structures took place in an ambiguous legal framework, but with a new balance of economic power emerging. Beginning in the 1870s, however, an equally new legal-institutional framework began to manifest itself, designed to counter both the scale and ingenuity of business organizations *Munn* vs. *Illinois* in 1877, *Wabash* vs. *Illinois* in 1886, the Interstate Commerce Act in 1887). By 1890 the Sherman Antitrust Act meant that the classical American entrepreneur of the new giant enterprises had, potentially, the federal nonmarket control in his future, should his organizational thinking be delinquent. Obviously the business organizer must become "cognitive" or have his work demolished by the courts. To some extent then, Cole's initial foray into organizing entrepreneurial history was thus simply determined by major benchmarks in American institutional history.

Also, in 1946 Cole admitted mere "management" into the pantheon of entrepreneurship to some extent. He argues that entrepreneurial action is useless without "a solid operational base," but also he was aware that excessively bureaucratic management produces "dry rot," "ossification," and "extinction." Later on (in *Business Enterprise in Its Social Setting)* he valued the wisdom gained from failures as well as from successes. He had some trouble with the idea that entrepreneurial profit alone was sufficient motivation for entrepreneurial action. Partly he was under the influence of Schumpeter's vision of titans of economic conflict, and partly Cole was simply a romantic. He wrote of "the restless, innovating businessman," the "spirit of adventure" and so forth. He saw that the *distribution* of a firm's profits is a function of "law, custom and internal pressures" [1, p. 185], and thus profit can hardly motivate the entrepreneur whose actions, in any case, may well throw at risk the whole possibility of profits. Here Cole mixed up short-term profits and long-term entrepreneurial gains. The Schumpeterian entrepreneur, after all, is not concerned with short-run profits since his "creative destruction" means shifting his firm's production functions forward into time and uncertainty. Cole sensed this conflation, but did not resolve it. He merely said that short-run profits would not do to explain entrepreneurial action. We know, he wrote, "precious little about the motivations of entrepreneurs or the changes in motivations over time" [1, p. 188].

Cole saw that all the surrounding elements added up to an interdisciplinary study, that should involve established disciplines like business administration, psychology, and political science, in addition to history and economics. He saw the distant aura of a vast opportunity for scholarly activity on the horizon. He also sensed a fundamental problem. After listing all the hypothetical conditions for successful entrepreneurial effort, he realized that he had made a case for the professor's blackboard world of perfect competition, in which the gains from most entrepreneurship would be zero. But he merely noted this paradox and then passed it by. After all, the phenomenon of entrepreneurship is *real*, even if it cannot exist on the blackboard. Cole was a historian, hot on the trail of a *real thing* — existing economic theory to the contrary not withstanding. He hoped to change all that. The study of entrepreneurship would provide "a new emphasis in economics and business administration and a new outlook in economic history."

Business Enterprise in Its Social Setting [2] seems to have been meant to be a summing up. It was in print a year after the Center closed its doors, and Professor Cole obviously made every effort to cite, at least once, most of the people who had been there engaged, especially the younger ones. One supposes that, at his age, he must have wondered if the book would not be his last major writing effort. But in fact this book was really in part only an interim report on his own thinking, because the 1968 paper [3], "Meso-economics" goes far beyond the 1959 book.

The learning produced by the decade of the Center's work had greatly broadened our (and Cole's) outlook on entrepreneurship. Cole gave up on the idea of timed stages of entrepreneurial history. He realized that what makes differences in entrepreneurial climate may be partly "cultural," and that conventional economics was thus an inadequate intellectual base for analysis of entrepreneurial history. He lamented that deficiency of economics, but argued that it would be no barrier to the economic scholar who considered himself also to be a historian. Cole also had realized by 1959 that if the desire to maximize was assumed to be equally present in all persons, then "the market" would produce sufficient entrepreneurship at any moment to satisfy the economist's idea of "understanding" — if not Henry Ford, then Henry Smith, with the same outcome. Cole realized he could not get past the barrier of the profit-maximization assumption by adding other dimensions to entrepreneurial motivation. So the "unreality" of textbook economic theory would persevere despite entrepreneurial history [2]. Cole also realized that Adam Smith's dictum about the division of labor and the extent of the market is, following Allyn Young's famous 1928 paper on increasing returns, reversible [2, pp. 84–85]. Division of labor extends the market, and the "exfoliation" of business firms thus enhanced the possibilities of specialization and scale economies. This idea would loom large a decade later in "Meso-economics."

Much of the Center's work concerned entrepreneurship and business history in other countries. The result produced some enlightening conclusions. Family firms are less common in the United States than elsewhere. The famed British industrial revolution had not produced in Britain the same pervasive dominance of growth to giant firm size and "scientific" management that occurred in the United States by the later nineteenth century. Cole was particularly appalled by the trivial spread of modern cost accounting methods in nineteenth century Britain [2, p. 87]. He found that the emphasis upon monetary rewards in the US culture is peculiar, and is due to our lack of other kinds of social rewards to the successful. You make money because nothing else matters to your peers. He also noted with some surprise that American businessmen have acquiesced so easily to intrusions of government nonmarket control — "government interference." Cole lingered over changes in business malfeasance as firms grew in size. "When the concern grows large enough, quite surely all ordinary forms of dishonesty just do not pay" [2, p. 129].

So many different forms of entrepreneurship had come to light that Cole used a large part of the book to present a long series of biographical vignettes to illustrate the fantastic diversity that had been discovered by the Center's scholars. In this last part of the book he raised and then skirted the issue of the government and the entrepreneur. He presented cases of entrepreneurship at the beck and call of government but stayed away from such matters as governmental entrepreneurship and the interaction between different types of governments ("states") and the resulting differential entrepreneurial responses. In the 1950s these issues had hardly surfaced in this country; the government sector had shrunk from recent wartime levels. Such issues must have seemed of little importance toward the end of the Eisenhower government. Who could have known, after all, that the 1960s would produce such a powerful reversal of form?

Cole ended the book with the idea of entrepreneurial diversity, which he would enlarge upon a decade later in "Meso-economics." His basic idea was not dissimilar to Boehm-Bawerk's conception of capital as "the degree of round-aboutness" in production methods.

> I conceive the entrepreneur or entrepreneurial team — those who make, and are responsible for the strategic decisions of a profit-oriented enterprise — as located in the center of a series of concentric circles, or riding a log in the grip of a set of close and distant forces. Nearest to him (or it) is the personnel of the business unit for 'maintenance and aggrandizement' of which decisions are made. [2, p. 233].

In general Cole still held to his central 1946 position:

> Nothing that I have learned since 1946 has led me to alter the view which I expressed then: namely, that to study the entrepreneur is to

study the central figure in modern economic development, and, to my way of thinking, the central figure in economics [2, p. 28].

With that view he necessarily lamented the continued absence of the entrepreneur in economic theory, but as already noted, he had come to realize that entrepreneurship would seem to be a supererogatory exercise to the pure theorist. And in economics, pure theory tends to rule the roost.

To someone like me who knew Professor Cole mainly from his writings on entrepreneurship, the 1968 paper, "Meso-economics," came as a distinct shock. When I saw it, I expected a swan song beyond the eleventh hour. The paper was no swan song: Cole essentially declared the season "open" again on the illusive entrepreneurial role. The focus in the paper shifts totally away from the man to the results of his actions. Moreover, this paper is fairly "abstract," at least once removed from specific historical examples. The entrepreneurial figure is not now tied to any particular firm histories. There is no place here for heroes. The old mind-sets have vanished. Cole refers somewhat sarcastically to Schumpeter's idea of entrepreneurship as "gigantic forces." What Cole wants to do now is "elaborate a new theory of economic growth." To do this he becomes very Veblenesque, although I doubt that he saw it that way. In this paper there is something called "the business system," which develops in the gray area between micro and macro economics, between producing firms and economic aggregates like industrial sectors. This area in between is the realm of meso-economics [3, pp. 11–16].

It really does not seem to be a very good idea, at first sight. But it yields a very interesting perspective when you study it awhile. In "Meso-economics" he goes back to several ideas which were largely marginal in the 1959 book. First he ties the proliferation of usable technologies to the multiplication of kinds of business firms. Entrepreneurship is capable of infinite variety and tends to be linked both to specific forms of business enterprise and hence to the relevant specific technologies. General economic growth is produced by the resulting multi-dimensional economic expansion. The capitalist economy is characterized by "... extraordinary expansion, quantitatively, functionally, and geographically of the *business order*." (my italics) [3, p. 3] The concentric circles of the 1959 book are now moved to the center of Cole's thinking. The core real-product-producing firms are surrounded by a supporting infrastructure of information networks, advertising, marketing, financial services of all sorts, publishing, and business education.

The advent and improvement in business institutions giving advice to other business units contributes what may be presently regarded as the

> crowning contribution of the business world to the enlargement of national income ... [3, p. 16].

These firms, in more modern jargon, comprise the network of tertiary specializations that derive their own incomes from the real gains made by reducing transactions and information costs. Their increasing efficiency provides new scope for scale economies in the core industries. Imagine a steel-making firm adjusting its cash-flow surpluses and shortages through the services of a brokerage in the market for financial futures contracts. The latter firm is operating in a skyscraper office decorated with all the latest electronic paraphernalia for virtually instant transactions, with the world's relevant information coming up on screen and tape by the second. As this infrastructure can increase its own efficiency, new opportunities for scale economies appear for the core.

The entrepreneurial role enters this world in the myriad of small step-by-step innovations that made the infrastructure possible. The entrepreneur was not following the market, but following possibilities for change.

> The leading feature of the entrepreneurial action is change, and often the 'creative response' which Schumpeter specified — the execution of an innovational act not required by the pre-existing circumstances [3, p. 4].

The succeeding outer circles of Cole's world is an invention of the business world's entrepreneurship. It was not a line of action following from the usual heroic inventions in basic industry. In fact, however, Cole argued that the only reason the "business system" entrepreneurs, who invented the infrastructure, are not held in public esteem as are the great industrial inventors and innovators, is that no one could patent or restrict entry into the world of pure ideas [3, pp. 29–30]. The ideas came, and then came change, as the ideas were applied by all who could envisage their potentials. In this "intellectual soup" of the business society, consumed with reading, talking, studying, easy mobility of personnel — spying, good business ideas spread naturally.

Cole viewed the meso-economic system as a natural outgrowth of externalities created by business operations and the subsequent growth and differentiation of new firms. Growth occurs as the result of the natural tendency among businessmen for "aggrandizement." Each growing firm produces externalities, which in turn lead to more differentiation of business firms. Cole saw no great advantage in size itself, making fun of the "crippling bureaucratic arthritis" of some of the giants. He simply believed that the processes of growth of firms produce externalitites, which are then internalized by opportunist entrepreneurs into new kinds of enterprises. The infrastructure expands, ever-changing as it grows. In "Meso-economics" Cole thus left old-fashioned ideas of stages of history behind, and in fact, simultaneity of all conceivable "stages" is obvious: new firms, old firms, new technologies, old technologies, all coexist at any moment in time. Had Cole lived into the 1980s when the computer and word-processing worlds came into their own, he would not have been surprised. Robots making autos would be natural products of his concentric circles. He might have been bitterly disappointed by the failure of productivity in the outer circles to save the stumbling old giants in the core.

Cole then proposed his "seven theorems of meso-economics" [3, pp. 18–23]. These are in fact his observations from the history he has studied, seen from the perspective of his new revelation about the world of innovation in the capitalist economic system.

1. *The processes envisioned by meso-economics are open ended.* Endless proliferation of kinds of business units lies in the world of externalities produced by on-going business firms.
2. *The business system, like individual business units, may be conceived to 'trade on the equity.'* The proliferation of externality-motivated firms depends upon successes of the earlier firms. It is necessarily, he thinks, a world of economic growth, bred by success.
3. *Entrepreneurship abhors a customer's need.* True entrepreneurship *anticipates* need; does not wait for it to become apparent.
4. *The business system acts to conserve resources.* There are always "bottom fishers"; rarely are the assets of failed enterprises entirely wasted. Someone else will pick up the debris and put it to use.
5. *Business suffers from the extension of the margin of performance.* Long-term existence of firms in any lines of business produces a declining level of performance. Innovators are followed by imitators, who are in turn followed by "sluggards."
6. *The extent of the market is determined by the breadth of the business system.* So long as the "outer circles" are proliferating there can be no such things as shortages of capital, labor, or anything else. History shows that virtually any obstacle can be overcome one way or another by innovation so long as entrepreneurial motive and talent exist.
7. *Over time, the sources of economic advance become ever more recherché.* Technology becomes ever more sophisticated, and the knowledge required to use it ever more sophisticated, invention ever more exquisite.

This is what history shows. Economists would be wise, and economics the more useful, if such knowledge could be incorporated.

> If ... the theorist would accept the additional concept of variant qualities among entrepreneurs of businessmen, he would not need to banish the

entrepreneur completely, founding his propositions upon the unrealistic assumption that capital and labor will mysteriously find their way always into the places most useful to society [3, p. 23–24].

The economist might consider:

that the blast furnace, or the gasoline motor in the hands of the Arab or the Hottentot would have produced little effect on the world as a whole [3, p. 24].

His abhorrence of the unrealistic assumptions of economics, apparent already in the 1946 paper, colored this final paper on entrepreneurship. So by the late 1960s the failures of "development economics" gave him some bitter satisfaction. The theorists who had ignored the importance of entrepreneurship, the "social engineers" who had tried to change the reality of economic backwardness by "doses of capital," had suffered disappointment: "... the mere injection of capital did not produce the effect that their theoretical propositions had led them to anticipate ..." [3, p. 5]. Had Professor Cole lived in the 1980s he would have seen the development of feelings of deep modesty more ubiquitous in our profession: development economists were not the only ones of our profession who would find themselves "stumped" by reality. Whether any of them might have been the wiser from a study of history is a continuing question.

So Professor Cole ended his long and useful life with an avalanche of new ideas. We should all hope for such good luck. His problem with entrepreneurial history was due, in large part, to technological change within economics itself. He cited in 1946 the work of Taussig, Schumpeter, and R. A. Gordon, as the mainstream in the United States. But it was the economics of Samuelson, Hicks, and Koopmans — that was about to emerge as the mainstream technology in economic theory. Cole's hope that entrepreneurial history would become the new center of economic history was thwarted by the same forces. Cliometrics was already coming down the track in 1958 when the Harvard center closed. What changed economic history was the same thing that changed economics in general, technology. There was nothing "wrong" with entrepreneurial history as a proper topic for study. The question is not whether to do it, but *how* to do it. The study of the entrepreneur in American history did not stop in 1958, and it has not stopped now. It cannot stop because the entrepreneurial role is *real*; it is not an intellectual fiction to be tossed away when fashions change.

Economic history is like Cole's business system: it acts to conserve resources. What some have learned, others will use in due course. The economic history of American slavery was a moribund topic in 1955 when Hal Williamson challenged the young Alfred Conrad to see what econometrics might add to our understanding of it.[2] I think it will take more than a few entrepreneurial intellectual failures to discourage scholars from attempting to solve the riddle of the entrepreneurial contribution to American economic history. All of Professor Cole's contribution will be of use.

NOTES

1. As an example; in "Meso-economics," p. 4, he pokes fun at the idea that entrepreneurship could ever have been considered to be a factor of production: such an idea was "a tragic error." He then goes on to say: "One might as well speak of 'the cook' as a factor in the preparation of a meal." I confess that I cannot fathom this part. On the face of it, I believe he is joking. Am I correct? Someone who knew him better than I could no doubt be more certain of his meaning here.

2. During Conrad's short sojourn as a member Northwestern's economics faculty.

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Entrepreneurs and Managers in the Public Arena