THE EVOLUTION OF THE IDEA OF "VALUE INVESTING": FROM BENJAMIN GRAHAM TO WARREN BUFFETT

Robert F. Bierig¹
Duke University
Durham, North Carolina
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¹ Robert F. Bierig graduated summa cum laude and Phi Beta Kappa in 2000 from Duke University, where he studied economics and art history. During summer 1999, he worked for the investment firm of Ruane, Cunniff & Co. in New York City. He is currently employed as an investment banking analyst at Morgan Stanley Dean Witter in New York. Mr. Bierig grew up in Highland Park, Illinois.

Acknowledgments

From his freshman seminar on the life of John Maynard Keynes and in his many subsequent courses over the following four years, Professor E. Roy Weintraub instilled in me and many others an interest in the substance and history of economics. That interest led to my research on the evolution of the idea of "value investing" that is reflected in this paper. I would like to thank Professor Weintraub for his criticism and his insights that helped shape both this thesis and my development as a student of economics.

A Note on Sources

This paper draws on the writings, speeches, and lectures of Benjamin Graham, Warren Buffett, their associates, and fellow practitioners; many biographies, interviews, and business histories; and relevant articles in newspapers, magazines, and professional journals. On the life and career of Benjamin Graham, the most balanced and thoroughly researched source is without question Janet Lowe's *Benjamin Graham on Value Investing*. Lowe portrays Graham and his ideas through the eyes of several of his most devoted students, and her effort stands as the definitive biography on Graham. *Benjamin Graham: The Father of Financial Analysis* by Irving Kahn and Robert D. Milne also provides useful information on Graham's personal and professional experiences, although it tends to take a somewhat overly-reverential perspective.

Readers wanting to learn more about Graham's personality and outside interests as well as about the times in which he lived will find *Benjamin Graham: The Memoirs of the Dean of Wall Street* (New York: McGraw-Hill, 1996), a memoir that looks back on Graham's early, formative decades, both fascinating and genuinely insightful. Roger Lowenstein's biography of Warren Buffett also contains an excellent biographical section on Graham and is probably the best source dealing with Graham's direct influence on Buffett. John Train's *The Money Masters* presents a solid overview of Graham's investment philosophy that can serve as a useful introduction to the field.

The definitive biography on Warren Buffett must be Roger Lowenstein's *Buffett: The Making of an American Capitalist*. Lowenstein, a veteran reporter at the *Wall Street Journal* and a longtime shareholder of Berkshire Hathaway, gained unprecedented and unparalleled access to Buffett's family members, friends, business associates, and others – and he has written a biography that succeeds more than any other in capturing the essence of Buffett, both as a businessman and as a human being. Robert Hagstrom's *The Warren Buffett Way* helps readers understand Buffett's basic methodology in analyzing prospective investments, although it does not contribute much new material. However, *The Warren Buffett Portfolio* (Hagstrom's second book), sets Buffett's approach in a broader context and persuasively elucidates the power of Buffett's philosophy. In addition, readers searching for any and all pieces of information (no mater how trivial!) on Buffett will enjoy Andrew Kilpatrick's *Of Permanent Value: The Story of*

Warren Buffett (Birmingham, AL: AKPE, 1998), which functions as a veritable encyclopedia of Buffett arcana.

Forbes and Fortune have done a remarkable job of covering Buffett's career over the years. Carol Loomis, a senior editor at the latter magazine and a close friend of Buffett's, consistently writes the most in-depth and reliable articles in this area. Buffett himself has written numerous articles in various publications over the years, but by far the most important source regarding Buffett's thinking is his letters to shareholders in the Berkshire Hathaway Annual Reports.² Prior to Buffett's involvement in Berkshire, the best source regarding his thinking is his letters to partners in Buffett Partnership, Ltd., beginning in the mid-1950s.³ Buffett has also given several talks to students at colleges and high schools across the country, but his most significant speech is "The Superinvestors of Graham-and-Doddsville" delivered to students at Columbia Business School in 1984.

Finally, *Outstanding Investor Digest* provides extremely long features and interviews with the nation's most successful investors and money managers. Edited by Henry Emerson, OID is the single best source of timely information about the opinions and activities of "value investors," especially Warren Buffett and his closest circle of like-minded investors. In this paper, we rely heavily on OID for many otherwise impossible-to-access primary sources (e.g., speeches and lectures) by Buffett, Munger, and others as well as relevant secondary sources (e.g., notes from past Berkshire annual meetings and various investment conferences).

1. Introduction

Before the stock market crash of 1929, portfolio investment was a disordered and muddled activity. Benjamin Graham and David L. Dodd's *Security Analysis*, first published in 1934, brought structure and logic to the field, creating an intellectual framework for sound investment. In an area where much looks foolish shortly after publication, Graham's principles have proved reliable for over sixty-five years. Moreover, as Warren Buffett wrote in a

² These letters are of particular interest from 1977 onward. Note: they can be accessed via the Berkshire Hathaway website (www.berkshirehathaway.com) free of charge.

³ Although these letters are not available to the public, they are cited heavily by Buffett's biographers and can very likely be obtained (as I have done) by contacting former partners.

remembrance about Graham in the *Financial Analysts Journal*, their value has often been "enhanced and better understood in the wake of financial storms that demolished flimsier intellectual structures."

Graham mostly operated in a business environment conditioned by the extreme economic collapse of the 1930s. Indeed, the majority of investors remained shell-shocked for many years thereafter. As a result, Graham and his disciples could readily find extraordinary bargains in the public securities markets. However, in investing, like in life, one must adapt to the conditions at hand.

Investors in the United States eventually gained insight from the recognition that stocks had been chronically mispriced on the low side. Accordingly, investors bid stock prices higher and higher, and, by and large, the most obvious bargains of the type Graham had always searched for vanished. Thus, in order to remain successful, the Ben Graham disciples had to change their definition of a bargain in various ways. Graham's most famous pupil, Warren Buffett of Omaha, Nebraska, is generally credited with refining and enlarging his mentor's principles. Both because of the enormous size of Buffett's chief investment vehicle, Berkshire Hathaway, and because he finds businesses more interesting than did Graham, Buffett tries to find businesses whose cash flows he expects to grow substantially in the future.

This paper will trace the evolution of Graham's and Buffett's ideas in response to changes in both economic conditions and their own experiences. We emphasize that this paper does not argue for the merits of "value investing" or claim that "value investing" is *the* "correct" approach. Nor does the paper present a biography of Benjamin Graham or Warren Buffett – although we introduce some biographical material in order to contextualize the development of their thought. After all, like all ideas and beliefs, the ideas and beliefs held by Graham, Buffett, and their fellow "value investors" shaped and were shaped by personal and social experience.

We note that this paper does not simply reprise material that already appears in the widely available books and articles on Buffett and Graham. Rather, it narrates an evolving business/investment philosophy – and, therefore, it may be seen as a case study of specific kinds of ideas as we ask how thought in the discipline of "value investing" has changed, why it has changed, and how these changes have affected investment strategy and practice. In conducting

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⁴ Warren E. Buffett, "Benjamin Graham 1894-1976," *Financial Analysts Journal*, November/December 1976.

our research, we have drawn on the voluminous writings, speeches, and lectures of Graham, Buffett, their associates, and fellow practitioners; many biographies, interviews, and business histories; and relevant articles in newspapers, magazines, and professional journals.

This paper first examines Benjamin Graham and the origins of "value investing" and then takes up Warren Buffett and his redefinition of value. The "Graham section" is divided into three main parts. First, we discuss Graham's early years on Wall Street, with special attention given to Graham's tenure at Newburger, Henderson & Loeb, his activities during the 1920s, his course on security analysis at Columbia Business School, and the lessons from the stock market crash of 1929.

Second, we examine Graham's two major works on investing and the stock and bond markets, *Security Analysis* and *The Intelligent Investor*. This section focuses on the genesis of the *Security Analysis* project, the basic message and intellectual system delivered in *Security Analysis*, the contributions of *The Intelligent Investor*, and Graham's legacy.

The third section considers Warren Buffett's well-known speech, "The Superinvestors of Graham-and-Doddsville," to Columbia Business School students in 1984. The speech commemorates the fiftieth anniversary of the publication of *Security Analysis*, and through it we examine Buffett's elucidation of the Graham approach, his refutation of the Efficient Market Theory, and the performance records of several of Graham's students.

The "Buffett section" is divided into four main parts. First, we consider Buffett's start in the investment business and his activities as a classic Grahamite bargain-hunter, emphasizing Buffett's training in Graham's course at Columbia and at Graham-Newman Corporation as well as the early style of operation at Buffett Partnership, Ltd.

Second, we study Buffett's changing conception of the idea of value. Several examples demonstrate Buffett's difficulties in applying Graham's rigid, quantitative methodology, the later style of Buffett Partnership's operations, and Buffett's broadening philosophy. Third, we address Charlie Munger's influence on Buffett and on the evolution of "value investing" by considering the basic investment model employed at Berkshire Hathaway, Munger's analogy to the parimutuel system of horse racing, and his prescription for a successful investment strategy in domestic common stocks.

The fourth section explores Buffett's return to investing after his brief retirement thirty years ago, attending to the general state of the stock market in the late 1960s and early 1970s, Buffett's major shift to buying higher quality businesses, the influence of Philip A. Fisher, and Buffett's ultimate allegiance to the Ben Graham framework.

2. Benjamin Graham and the Origins of "Value Investing"

2.1 Lessons from the Early Years

Benjamin Graham graduated Phi Beta Kappa and second in the Class of 1914 from Columbia College. A devoted and energetic student, he excelled in mathematics, philosophy, English, Greek, Latin, and music. During his final months at Columbia, Graham received offers from three departments — mathematics, philosophy, and English — to join their faculties as an instructor. Each department head emphasized that, despite low starting salaries and slow prospects for advancement, the rewards of an academic career could be high. Overwhelmed by his many options, Graham sought out the advice of Columbia's Dean Frederick Keppel.⁵

A member of the New York Stock Exchange had recently asked Dean Keppel to recommend one of Columbia's best students for a position with his firm. Dean Keppel had a propensity to steer bright graduates into business rather than academic life — and, although he had not studied economics, Graham had an interest in the mysterious world of finance centered at the other end of Manhattan.⁶ Thus, Graham accepted the job with the Wall Street firm of Newburger, Henderson & Loeb. He started as an assistant in the two-man bond department, earning a paltry \$12 per week; but he had taken the first steps toward building a reputation as a legendary investor, an original thinker on economic issues, and a pioneer in the development of professional standards for financial analysts.⁷

Security Analysis, of course, was not the product of single, sudden outburst of inspiration. Instead, as this part of the paper demonstrates, it emerged only as the result of two decades of practical experience and hard work. Graham spent his first month at Newburger, Henderson & Loeb working as a runner helping to deliver securities and checks but took on

⁵ Irving Kahn and Robert D. Milne, *Benjamin Graham: The Father of Financial Analysis* (Charlottesville, VA: The Financial Analysts Research Foundation, 1977), 2.

⁶ Janet Lowe, Benjamin Graham on Value Investing (New York, NY: Penguin Books, 1994), 16.

additional responsibilities after a few weeks. Increased activity brought on by the outbreak of World War I caught the firm shorthanded, and Graham was used to "fill many gaps," including posting stock quotations, helping in the back office, and occasionally delivering securities.⁸ These routine jobs provided him with a chance to observe all aspects of the investment field.

When the market settled down and Graham had gained sufficient experience, the partners sent him out to call on customers. Though he proved a lousy salesman, suffering from shyness and lacking "chutzpah", Graham saw first-hand how little understanding most clients had of the bonds they owned or were being asked to buy. Wanting to supplement his own knowledge, he began studying railroads, the industry that at the time issued the most important bonds. Graham delved beneath the surface of the financial statements, continuing to probe "until he could see right through the conjurings of the accounting sorcerers."

Among Graham's earliest projects was an analysis of the June, 1914 reports of the then-popular Missouri Pacific Railroad. He became convinced that the physical and financial condition of the company was weak — and, as a result, that investors should not hold the company's bonds. This sort of detailed analysis and strong recommendation against purchase was uncommon, even for statisticians, as security analysts were called in those days. Graham showed his report to a friend who was a floor broker on the New York Stock Exchange. The friend, in turn, shared the study with a partner at Bache & Company, and Graham thereupon was asked to join that firm as a statistician.¹¹

Graham's boss at Newburger, Loeb & Company refused to allow him to leave, remarking, "It's time we had a statistical department. You can be it." Unlike today, when companies normally endeavor to present as rosy a picture of their prospects as possible, management at the time Graham started out on Wall Street often tried to conceal assets. After all, with less information available to the public, management could retain greater control over the company. As a statistician, Graham attempted to ferret out hidden assets and uncover higher corporate value than the share price reflected. Like an investigative reporter, he hunted for

⁷ Ibid.

⁸ Kahn and Milne, *Benjamin Graham*, 3.

⁹ Patricia A. Dreyfus, "Investment Analysis in Two Easy Lessons," *Money* (July, 1976).

¹⁰ Lowe, Graham on Value Investing, 21.

¹¹ Ibid.

¹² Kahn and Milne, *Benjamin Graham*, 3.

information by contacting the company itself or by talking to government regulatory agencies such as the Interstate Commerce Commission (ICC).¹³

Graham's role as statistician meant that he would focus primarily on the analysis of bonds and other debt issues. ¹⁴ His first really notable undertaking involved the Guggenheim Exploration Company, which held large interests in numerous copper-mining companies. In 1915, this holding company announced a plan to dissolve and proposed to distribute its various assets to its shareholders on a pro rata basis. Guggenheim was traded actively on the NYSE and sold for \$68.88 per share on September 1. Graham assumed that the value of each share of Guggenheim would be commensurate to the market price of the shares it held in underlying companies, plus Guggenheim's other assets.

Therefore, one share of Guggenheim Exploration would equal:

.7277 share Kennecott Copper @ \$52.50	= \$38.20
.1172 share Chino Copper @ \$46.00	= 5.39
.0833 share American Smelting @ \$81.75	= 6.81
.1850 share Ray Consolidated Copper @ \$22.88	= 4.23
Other assets	= <u>21.60</u>
Total: \$76.23	

On the basis of these straightforward calculations, each share of Guggenheim meant an almost assured arbitrage profit of \$7.35 for each share purchased, as long as simultaneous sales were made of the underlying copper companies. To be sure, as with any arbitrage situation, there were risks. For example, shareholders might not have approved the dissolution, or law suits could have caused delays. But none of these seemed especially substantial compared to the upside potential of the operation, and Newburger arbitraged a large quantity of shares on Graham's advice. When the dissolution was completed on January 17, 1916, both Graham's reputation and personal net worth rose considerably.¹⁵

The onset of World War I meant, among other things, a hike in taxes as well as an increase in their complexity. Graham began to study tax law and corporate tax returns in order to

¹³ Lowe, Graham on Value Investing, 23.

¹⁴ Common stocks, with relatively few exceptions for the railroads and utilities, were viewed as speculations. See Kahn and Milne, *Benjamin Graham*, 4.

¹⁵ Kahn and Milne, *Benjamin Graham*, 5.

assess their impact on corporate earnings. The financial statements of public enterprises at that time usually carried a sizable amount of goodwill, which was included with tangible assets on the balance sheet. Yet the exact portion of assets that were truly intangible was "a carefully guarded secret." Graham devised a way to unravel this mystery.

Graham knew that the Excess Profits Tax of 1917 permitted a credit for a certain percentage of tangible invested capital but prohibited such intangibles as goodwill, patents, and the like. Working backwards from three balance sheet items — taxes, pretax income, and the property account — Graham figured out a series of formulae for determining the exact value of goodwill. He explained this procedure in an article for *The Magazine of Wall Street*. Many years later, when the disclosure rules were changed, Graham's computations were shown to have been correct.

In these early years, Graham got a taste of the manipulative aspects of Wall Street that already bothered him and that he would eventually come to detest. An example is provided by the Savold Tire incident of 1919. Graham and a friend entered into a special deal involving Savold Tire, under which Graham purchased \$2,500 for 250 newly-issued shares of Savold at \$10. The shares quickly soared in price to \$37, and Graham and his syndicate sold them to book a tidy profit. Organizers soon set up a similar, bigger deal with Pennsylvania Savold, and Graham evinced uncharacteristic impetuousness by participating without taking the time to understand fully the intricacies of the deal.

Unfortunately, the deal completely collapsed in short order. The new offering was delayed and later canceled because the original Savold plummeted by 30 percent. Graham did manage to salvage one-third of his original "investment" after meeting with the promoter, who was pressured into returning some of the cash. Like today, such swindles were common, except that few victims complained to the district attorney's office (the SEC or NASD did not yet exist). Graham ultimately told of this incident — what he called the story of "Same Old Tires" — to illustrate a lesson: even an insider's tip can turn out to be a fake. 19

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¹⁶ Lowe, Graham on Value Investing, 28.

¹⁷ Ibid., 29

¹⁸ Kahn and Milne, *Benjamin Graham*, 10.

¹⁹ Lowe, *Graham on Value Investing*, 31.

During this period, Graham also devised a number of fairly sophisticated techniques to hedge his investments against market risks — and many of these tricks have since become quite common. For instance, he would purchase a convertible bond near par value while at the same time selling calls or an equivalent amount of common stock to protect an account against declining bond prices and rising stock prices. If the more severe risk was in rising bond prices and declining stock prices, then he would buy the bonds, sell the stock short, and sell a put. Since the premium prices obtained for puts and calls were high, these maneuvers guaranteed a satisfactory profit no matter whether the stock increased, decreased, or remained steady in value. These hedging operations have by now become an important part of the options or futures exchanges.²⁰

By the start of the 1920s, Ben Graham had lived just a quarter of a century. Still, he had already worked on Wall Street for six years — and in that stretch had impressed both associates and clients with his dedication, skill, and honesty. His interests began to crystallize around three basic activities: finding extremely undervalued securities, identifying absurdly overvalued stocks that he could sell short, or putting together arbitrage opportunities. With the Dow Jones Industrial Average hovering at 95, Graham left Newburger, Henderson & Loeb and struck out on his own, founding Grahar Corporation in June, 1923.²¹

The Du Pont-General Motors arbitrage provides a good example of a typical Graham play. The Du Pont Corporation, which controlled huge assets and dominated more than a handful of industries, had used its surplus cash to acquire a large block of GM stock. But despite these holdings, Du Pont sold on the stock exchange for no more than the value of its GM shares alone. Graham noticed this oddity and reasoned that either the market was overvaluing the GM shares or it was ignoring the worth of Du Pont's own operations.

Graham decided to bet on the probability that the market would over time correct for this imbalance. So he bought Du Pont common stock and simultaneously sold short seven times as many shares of General Motors. The market soon vindicated Graham's expectations as Du Pont's share price soared. Graham sold his Du Pont shares and closed out the short position in GM. Of course, this arrangement carried no risk: if the imbalance had been corrected by a decline

²⁰ Ibid., 37. ²¹ Ibid., 42.

in the price of GM, Graham would have profited by exercising the short position.²² Activities like this one have subsequently become a standard tool in the "value investor's" repertoire.

The story of Graham's investment in the Northern Pipe Line illustrates how the underlying value present in a stock may ultimately be realized. After reading an intriguing ICC annual report on railroads, Graham requested additional information about what data the pipeline companies were required to submit. He received a 50-page document full of key financial information of which most investors were not aware. Further research revealed that each of the eight oil pipeline companies possessed substantial amounts of investment-grade railroad bonds that, in some cases, exceeded the total market value of the pipeline company itself. It seemed to Graham that there was no reason for the companies to continue holding the bonds in reserve, and he felt that this situation represented an ideal example of a company trading at a price far less than its true asset value.

The most attractive of these pipeline companies was Northern Pipe Line, trading at \$65 but holding a hidden pile of high-grade bonds equal to \$95 per share. Graham battled against the corporate establishment, initially to no avail. The company president told him that "the pipeline business is a complex and specialized business about which you know very little, but in which we have spent a lifetime. We know better than you what is best for the company....If you don't approve of our policies, you should sell your shares."²³ Of course, shareholder advocates have long heard similar responses.

Graham, who by then had become the company's largest outside shareholder, refused to cave in. After much effort, he attended the 1928 Northern Pipe Line annual meeting with proxies for 38 percent of the shares and successfully obtained two board seats. Graham finally forced a special \$70 per share distribution to shareholders — and his total profit exceeded \$100 per share, nearly a 54 percent return on investment. The other pipeline companies eventually followed the same course with their own distributions. This transaction was classic Graham: he was interested only in undervalued assets; he did not care what the company actually did or if management was capable.²⁴

²³ Kahn and Milne, *Benjamin Graham*, 12-13.

²² Ibid., 43.

²⁴ John Train, *The Money Masters* (New York: HarperCollins, 1980), 99.

After eleven years on Wall Street, Graham decided that he ought to write a book laying out the fundamental principles of investing. In 1928, he returned to his alma mater, Columbia, to give a course on investment principles, believing that teaching would allow him to develop and organize his ideas. Graham spent the next 28 years lecturing in the evening division of the School of Business Administration. The course taught students to pick apart bonds and other debt issues to determine whether they could safely pay their semiannual coupon with full interest and return the principal at maturity. In addition, Graham devoted much attention to the more complicated topic of stocks, a "practice that no doubt appealed to his ambitious young audience."²⁵

Graham asked David L. Dodd, a member of the Columbia faculty, to record class discussions and transcribe them each week. Dodd became the co-author of *Security Analysis* in 1934. As former student and longtime assistant Irving Kahn notes, "Ben never asked you to believe what he said unless there were concrete examples to support what he said." Graham became known for his Socratic approach to instruction, pushing his students through incessant questioning to arrive at the correct answer for themselves.

The stock market crash of 1929 ambushed most investors, including Ben Graham. In response to the long bull market, Graham had gradually relaxed his hedging operations. Rather than engage in his full hedging practice, which had been costing him money since the market always seemed to rise consistently, Graham began exercising only half of the hedge. For a long stretch, this adaptation worked out smoothly — despite heightened risk — until the market collapsed and continued falling lower and lower.

At the end of 1929, the market calmed a bit.²⁷ Investors were given a warning, but Graham did not realize that the worst was yet to come; 1930 turned out to be Graham's poorest year ever. Although he was able to cover most of the short positions, the long positions in stocks with tumbling market prices strained his margin debt. Graham's managed accounts suffered tremendously, though he and his partner, Jerome Newman, did manage to keep their firm, Graham-Newman, afloat in an environment which ruined most other small Wall Street firms.²⁸

²⁵ Lowe, *Graham on Value Investing*, 56-57.

²⁶ Ibid., 57

²⁷ John Kenneth Galbraith, *The Great Crash 1929* (New York: Houghton Mifflin Company, 1954).

²⁸ Lowe, Graham on Value Investing, 68.

Despite his purposeful avoidance of overpriced, speculative issues, Graham made a mistake by taking on large amounts of debt. "I didn't repeat that error after that," he said.²⁹

By 1932, Graham recognized that the crash had created a fire sale on Wall Street, and he called for investors to return to the market. He wrote a three-part series for *Forbes* magazine in which he asked, "Is American business worth more dead than alive"? The articles chastised corporate management for taking advantage of investors and putting their own interests before those of the shareholders. The first article, "Inflated Treasuries and Deflated Stockholders," discussed the merits of breaking up major companies to harvest excess cash, something well-understood by Graham. He pointed out that the majority of publicly traded businesses were grossly undervalued by investors and that 30 percent of the companies listed on the NYSE sold for less than their net quick assets. He argued, essentially, that things had come full-circle: stocks had been clearly overpriced in 1929 but the opposite extreme prevailed in 1932 — stock prices had gotten outrageously low.

These articles provided "the desperately needed leadership that the financial community needed to get back into business." The last article of the series, "Should Rich By Losing Corporations Be Liquidated?", presented a powerful message encouraging stockholders to stand up for their rights as the real owners of a company. The enthusiastic response to these writings gave Graham the confidence and stimulation to proceed with plans for a much larger project — his textbook. Graham had survived the disastrous ending to the 1920s, the "most calamitous event in U.S. stock market history," and he had amassed "the deep well of experience from which he later would draw."

Graham had always tried to behave in a prudent manner, to make decisions objectively and on the basis of facts and reasoning rather than emotion. Prior to the crash, he had taken shortcuts that in retrospect proved too aggressive. After Black Tuesday, however, Graham worked to attain a high rate of return while minimizing risks and seeking a margin of safety. Although the average annual returns on his portfolio never again reached the peaks of the years preceding the Depression, Graham continued to deliver very large and reliable profits going

²⁹ Kahn and Milne, *Benjamin Graham*, 16.

³⁰ Benjamin Graham, "Inflated Treasuries and Deflated Stocks: Are Corporations Milking Their Owners?" *Forbes*, June 1, 1932.

³¹ Janet Lowe, *The Rediscovered Benjamin Graham* (New York: John Wiley & Sons, 1999), 5.

forward. The stock market rallied spectacularly between 1932 and 1937, and Graham-Newman prospered during the 1930s. Ben Graham, too, ascended to his place as the father of financial analysis.³³

2.2 Security Analysis and The Intelligent Investor

In addition to his regular post at Columbia Business School, Ben Graham accepted a teaching position at the New York Stock Exchange's school, called the New York Institute of Finance. Graham's tenure at the Institute and at Columbia enabled him to formulate and test his thoughts and theories. Professor Dodd's notes from class proceedings formed the basis for Graham and Dodd's classic textbook, *Security Analysis*. The book was written in Graham's style, and Dodd made occasional suggestions, checked facts and figures, and arranged charts and graphs.³⁴ The two authors prepared an outline and sample chapter, and McGraw-Hill accepted the proposal. A contract was signed at the end of 1932.

The first edition of Graham and Dodd's *Security Analysis* was printed a year and a half later, in 1934. The book, which has been continuously in print for more than 60 years, went through five editions and sold nearly one million copies. It became "the basic text for the teaching and practice of two generations of security analysts." As Graham wrote in the Preface, it "is intended for all those who have a serious interest in security values. It is not addressed to the complete novice...[and] the scope of the work is wider than its title may suggest." Indeed, it dealt not only with techniques for analyzing individual issues but also with the establishment of general principles for the selection and protection of security holdings.

The first edition of *Security Analysis* introduced a template that Graham followed in the three later editions he worked on. As biographer Janet Lowe explains, "the book builds on one concept after another, until the reader has the knowledge that he needs to do his own analysis of stocks, bonds, debentures, treasury securities and other issues."³⁷ Graham and Dodd themselves

³² Lowe, *Graham on Value Investing*, 79.

³³ Ibid., 80

³⁴ Kahn and Milne, *Benjamin Graham*, 21.

³⁵ Ibid.

³⁶ Benjamin Graham and David L. Dodd, Security Analysis (New York: McGraw-Hill, 1934), vii.

³⁷ Lowe, Graham on Value Investing, 87.

asserted that their chief concern was with "concepts, methods, standards, principles, and, above all, with logical reasoning."³⁸ Nevertheless, readers quickly point out that *Security Analysis* is not a "cookbook for the investment professional Value investing is based more on philosophy than on theorems. There is no step one, step two, and step three. Graham's purpose was to make his students use the deductive process to think for themselves."³⁹

Graham's basic message was that the stock market can be a highly illogical place, where greed and fear — rather than rationality — often prevail and where buyers and sellers from time to time behave in a herd-like manner. A famous passage made the point: "In other words," wrote Graham and Dodd, "the market is not a weighing machine, on which the value of each issue is recorded by an exact and impersonal mechanism, in accordance with its specific qualities. Rather should we say that the market is a *voting machine*, whereon countless individuals register choices which are the product partly of reason and partly of emotion."40 The disciplined investor, according to Graham and Dodd, does not blindly follow the crowd but instead searches for stocks selling for less than their intrinsic value and then waits for the market to recognize and correct the disparity.

Graham believed that the intrinsic, or central, value of any asset would be revealed by quantitative elements and that prices tend to fluctuate around this true value. However, he emphasized the point that security analysis usually cannot determine exactly what is the intrinsic value of a given security. The analyst has only to establish that the value is either adequate e.g., to protect a bond or to justify a stock purchase — or else that the value is significantly higher or significantly lower than the market price. An indefinite and approximate assessment of intrinsic value may in fact be sufficient for such purposes. "To use a homely simile," said Graham and Dodd, "it is quite possible to decide by inspection that a woman is old enough to vote without knowing her age, or that a man is heavier than he should be without knowing his exact weight."41

From his experience as a practical operator, Graham knew that analysts could not always rely on corporate management to present a fair and accurate picture of their enterprise's

 ³⁸ Graham and Dodd, *Security Analysis*, vii.
 ³⁹ Janet Lowe, *Value Investing Made Easy*, (New York: McGraw-Hill, 1996), 11.

⁴⁰ Graham and Dodd, *Security Analysis*, 23.

⁴¹ Ibid., 19.

condition. After all, the management could make an error or could be less than honest. It was, and is, the job of the analyst to find objective, trustworthy information. In Security Analysis, Graham and Dodd advised investors to think independently: "You are neither right nor wrong because people agree with you."⁴² Anyone who reads an early edition of *Security Analysis* today cannot help but be struck by the impression that there is not much new on Wall Street. It is apparent that "scams, frauds, misrepresentations, and clever approaches to salesmanship simply get dressed up in new clothes for subsequent generations of investors."43

Security Analysis, declares investment writer John Train in his best-selling book, The Money Masters, took applied portfolio investment "from an art, based on impressions, inside information, and flair, to a proto-science, an orderly discipline. [Graham] applied great astuteness, hard experience, and infinitely detailed labor to a field full of superstition, tips, and guesswork, one in which most people who have something to say also have an incentive to deceive the listener."44 And as journalist Thomas Easton writes, "Security Analysis is about as close as such a secular vocation gets to a Bible."45

The non-professional reader, however, was unlikely to find the length and depth of Security Analysis appealing. So, in 1949, Ben Graham came out with a new version of his investment text designed for the individual investor. The Intelligent Investor is less than half the size of Security Analysis and is written with the same lucidity and honesty that characterize the earlier textbook. It, too, was an enormous success. Although the publishers, Harper & Row, will not make public total sales numbers for the *The Intelligent Investor*, published reports indicate that the book sold more than 100,000 copies in the first two decades after its release.⁴⁶

Graham explained in the Introduction that "The purpose of this book is to supply, in a form suitable for laymen, guidance in the adoption and execution of an investment policy. Comparatively little will be said here about the technique of analyzing securities; attention will be paid chiefly to investment principles and investors' attitudes."⁴⁷ As in *Security Analysis*, he

⁴² Benjamin Graham, David L. Dodd, Sidney Cottle, and Charles Tatham, *Security Analysis*, 4th ed. (New York:

McGraw-Hill, 1962), ix. Lowe, Graham on Value Investing, 89.

⁴⁴ Train, *The Money Masters*, 82.

⁴⁵ Thomas Easton, "The Biggest Question: Does the Market Have a Real Value?" *Baltimore Morning Sun* (July 29,

⁴⁶ Lowe, Graham on Value Investing, 135.

⁴⁷ Benjamin Graham, *The Intelligent Investor*, 4th Revised ed., (New York: Harper & Row, 1973), ix.

distinguished investment from speculation: "An investment operation is one which, upon thorough analysis promises safety of principal and an adequate return. Operations not meeting these requirements are speculative."

Warren Buffett, who collaborated on the fifth edition of *The Intelligent Investor*, wrote in its Preface that "I read the first edition of this book early in 1950, when I was nineteen. I thought then that it was by far the best book about investing ever written. I still think it is." Buffett added that the book contains what he considers to be the most important sentence written about investing: "Investment is most intelligent when it is most *businesslike*." He also urged readers to pay special attention to the "invaluable advice" in Chapters 8 and 20. Chapter 8 tells how to deal properly with market fluctuations, and Chapter 20 distills all of Graham's previous teaching and writing on buying common stock at a discount, which he described as the margin of safety concept.

In classroom lectures, Graham often presented the parable of Mr. Market to describe the mental attitude toward market fluctuations that he believed led to investment success, and he repeated it for his readers in *The Intelligent Investor*. Buffett told the tale in his 1987 Annual Letter to Berkshire Hathaway shareholders: Graham said that you should,

Imagine market quotations as coming from a remarkably accommodating fellow named Mr. Market who is your partner in a private business. Without fail, Mr. Market appears daily and names a price at which he will either buy your interest or sell you his.

Even though the business that the two of you own may have economic characteristics that are stable, Mr. Market's quotations will be anything but. For, sad to say, the poor fellow has incurable emotional problems. At times he falls euphoric and can see only the favorable factors affecting the business. When in that mood, he names a very high buy-sell price because he fears that you will snap up his interest and rob him of imminent gains. At other times he is depressed and can see nothing but trouble ahead for both the business and the world. On these occasions he will name a very low price, since he is terrified that you will unload your interest on him.

Mr. Market has another endearing characteristic: He doesn't mind being ignored. If his quotation is uninteresting to you today, he will be back with a new one tomorrow. Transactions are strictly at your option. Under these conditions, the more manic-depressive his behavior, the better for you.

But, like Cinderella at the ball, you must heed one warning or everything will turn into pumpkins and mice: Mr. Market is there to serve you, not to guide you. It is his

⁴⁸ Ibid., 1.

⁴⁹ Ibid., vii.

⁵⁰ Ibid., 286.

pocketbook, not his wisdom, that you will find useful. If he shows up someday in a particularly foolish mood, you are free to either ignore him or to take advantage of him, but it will be disastrous if you fall under his influence. Indeed, if you aren't certain that you understand and can value your business far better than Mr. Market, you don't belong in the game. As they say in poker, "If you've been in the game 30 minutes and you don't know who the patsy is, *you're* the patsy."⁵¹

In Chapter 20 of *The Intelligent Investor*, Graham stated that, confronted with a challenge to "distill the secret of sound investment into three words, we venture the motto, MARGIN OF SAFETY. This is the thread that runs through all the preceding discussion of investment policy..."52 A true margin of safety, he explained, is one that can be demonstrated by figures, by correct reasoning, and by reference to actual experience. In the area of undervalued or bargain securities, there is by definition a favorable divergence between price and appraised value. "That difference is the safety margin," wrote Graham. "It is available for absorbing the effect of miscalculations or worse than average luck. The buyer of bargain issues places particular emphasis on the ability of the investment to withstand adverse developments."53

In December of 1994, Buffett and other former students of Graham who have gone on to achieve tremendous success participated in a conference called, "A Tribute to Ben Graham," in celebration of what would have been Graham's 100th birthday. Buffett remarked that, "if what I consider [Ben's] three basic ideas are really ground into your intellectual framework, I don't see how you can help but do reasonably well in stocks."54 These three basic ideas are:

- that the investor should look at stocks as part ownership of a business; (1)
- (2) that the investor should look at market fluctuations in terms of Graham's "Mr. Market" example and "make them your friend rather than your enemy by essentially profiting from folly rather than participating in it"; and
- (3) the three most important words in investing are "margin of safety", which means "always building a 15,000 pound bridge if you're going to be driving 10,000 pound trucks across it."

 ⁵¹ Berkshire Hathaway Annual Report 1987.
 ⁵² Graham, *The Intelligent Investor*, 277.

⁵³ Ibid., 281-282.

⁵⁴ Outstanding Investor Digest, May 5, 1995, 3.

"I think those three ideas 100 years from now will still be regarded as the three cornerstones, essentially, of sound investment," said Buffett. "And that's what Ben was all about." 55

2.3 The Superinvestors of Graham-and-Doddsville

In 1984, Warren Buffett delivered a now famous speech at Columbia University commemorating the fiftieth anniversary of *Security Analysis*. Buffett's talk offers insight into how Graham's disciples have used his "value investing" philosophy to reap extraordinary profits from investing — and it represents Buffett's attempt to refute the so-called "efficient market" or "random walk" theory. This part of the paper presents Buffett's basic argument.

Buffett asks whether the Graham and Dodd "look for values with a significant margin of safety relative to prices" approach to security analysis is out of date. The professors who claim that the stock market is efficient answer, "Yes." These professors believe that undervalued stocks do not exist because smart, active security analysts make use of *all* available information, thus ensuring ever-appropriate prices. Investors who appear to beat the market over the long run are merely lucky.

The hypothesis that the investors who beat the market year in and year out accomplish this feat by pure chance is worth examining, says Buffett. However, he presents of group of long run market-beating investors who were all well-known to him and whom he pre-selected as superior investors. Each investor in this group of all-stars shared "a common intellectual patriarch, Ben Graham." But each all-star filled his portfolio with different securities; they have "gone to different places and bought and sold different stocks and companies, yet they have had a combined record that simply can't be explained by random chance." Moreover, their record cannot be explained by the fact that they all chose identical securities because a leader was signaling which choices to make. The patriarch set forth an intellectual framework for the decision-making process — but each student applied the theory in a unique way.

According to Buffett, the unifying philosophical theme of the investors of the intellectual village of Graham-and-Doddsville is the following: they hunt for "discrepancies between the

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⁵⁵ Ibid., 3.

⁵⁶ Warren E. Buffett, "The Superinvestors of Graham-and-Doddsville," 1984.

value of a business and the *price* of small pieces of that business in the market."⁵⁸ These Graham and Dodd investors, as one might suspect, do not discuss beta, the capital asset pricing model, or covariance in returns among securities. They focus only two variables: price and value.

Buffett begins his study of the results by examining the group of four analysts, including himself, who worked at Graham-Newman Corporation from 1954 through 1956. All four left between 1955 and 1957 when Graham closed down the firm, and it is possible to trace the records of three of them. The first example is that of Walter Schloss, who never attended college but took Graham's night course at the New York Institute of Finance. Over the 28 years that Schloss had (to date) run his own partnership, he achieved a 21.3% annual compounded rate of return compared to an 8.4% return for the Standard and Poor's 500 index over the same period. Schloss's partnership had owned over 800 issues and usually held at least 100 positions at any given time. Assets under management at the time of the speech were \$45 million

"Adam Smith", in *Supermoney*, writes that Schloss "has no connections or access to useful information. Practically no one in Wall Street knows him and he is not fed any ideas. He looks up the numbers in the manuals and sends for the annual reports, and that's about it." All that Schloss does, says Buffett, is identify securities selling at considerably lower prices than their value to a private owner. The goal is simply to buy a dollar's worth of assets for 40 cents.

The next case Buffett presents is that of Tom Knapp, who also worked with Buffett at Graham-Newman. In 1968, Knapp, fellow Graham disciple Ed Anderson, and one or two likeminded partners formed Tweedy, Browne Partners. Tweedy, Browne was widely diversified during the 15 years they had (to date) been in business. They enjoyed a 20.0% annual return in this period; the S&P 500 returned 7.0%.

The third member of the group, of course, was none other than Buffett himself. He formed Buffett Partnership in 1957 and wound it up in 1969. Since then, Berkshire Hathaway in some ways can be seen as a continuation of the partnership. Buffett Partnership returned a compounded annual rate of 29.5% over its 13 years, compared to a 7.4% return for the Dow Jones Industrial Average, Buffett's benchmark. While it is impossible to provide a single index

⁵⁷ Ibid.

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⁵⁹ "Adam Smith," *Supermoney* (New York: Random House, 1972), 196.

that would measure investment management at Berkshire, Buffett felt comfortable saying that performance has been highly satisfactory no matter how one looks at it.

Buffett proceeds to consider the records of several additional investment entities. The first is Sequoia Fund, managed by Bill Ruane, whom Buffett met in 1951 in Ben Graham's class. The second is that of Charlie Munger's partnership, before he joined Buffett at Berkshire Hathaway. Both Ruane and Munger ran highly concentrated funds that generated profits far in excess of market returns. Throughout the entire period, there was virtually no duplication in these portfolios. Buffett goes on to cite still more examples, presenting nine records in all. He talks about small funds as well as extremely large funds. None was selected with hindsight from among thousands; each practitioner was selected years earlier on the basis of their Graham and Dodd approach to stock-picking.

Buffett points out that this group took on considerably less risk than average. He refers to their exceptionally strong record in years when the general market was weak as evidence of this assertion. Whether these investors buy the entire business or just small pieces of businesses through the stock market, their attitude is the same: all take advantage of the difference between the market price of a business and its intrinsic value. This technique is only possible if there exists a not negligible amount of inefficiency in the market. Says Buffett, "When the price of a stock can be influenced by a 'herd' on Wall Street with prices set at the margin by the most emotional person, or the greediest person, or the most depressed person, it is hard to argue that the market always prices rationally." ⁶⁰

Finally, the speech comments on the relationship between risk and reward. In many instances, risk and reward are correlated in a positive fashion. But, as Buffett demonstrates, the opposite is the case with value investing. If a dollar bill is purchased for 60 cents, it is riskier than if it is bought for 40 cents, but the expectation of reward is greater in the latter case. In other words, the greater the opportunity for reward in the value-oriented portfolio, the less risk is present.

Buffett gives one short example:

The Washington Post Company in 1973 was selling for \$80 million in the market. At the time, that day, you could have sold the assets to any one of ten buyers for not less

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⁶⁰ Warren Buffett, Superinvestors.

than \$400 million, probably appreciably more. The company owned the *Post*, *Newsweek*, plus several television stations in major markets. Those same properties are worth \$2 billion now, so the person who would have paid \$400 million would not have been crazy.

Now, if the stock had declined even further to a price that made the valuation \$40 million instead of \$80 million, its beta would have been greater. And to people who think beta measures risk, the cheaper price would have made it look riskier. This is truly Alice in Wonderland. I have never been able to figure out why it's riskier to buy \$400 million worth of properties for \$40 million than \$80 million. And, as a matter of fact, if you buy a group of such securities and you know anything at all about business valuation, there is essentially no risk in buying ten \$40 million piles for \$8 million each. Since you don't have your hands on the \$400 million, you want to be sure you are in with honest and reasonably competent people, but that's not a difficult job. ⁶¹

Buffett concludes his speech by stating that in his whole career of practicing value investing, he has seen no trend toward it. If anything, the academic world has probably moved farther away from the teaching of value investing. Buffett anticipates that "it's likely to continue that way. Ships will sail around the world but the Flat Earth Society will flourish. There will continue to be wide discrepancies between price and value in the marketplace, and those who read their Graham & Dodd will continue to prosper."

3. Warren Buffett and the Redefinition of Value

3.1 Buffett As Grahamite Bargain-Hunter

Warren E. Buffett, the best-known practitioner of the Graham and Dodd fundamental valuation methodology, started out in the stock market as a speculator. As a ten year old boy, he delighted in charting the prices of stocks by recording their ups and downs in an attempt to decipher patterns. He traded stocks and wondered about the market, always searching for an epiphany – "some mystical correlation in the charts, some system that would make him rich." Buffett told the writer Adam Smith, "I went the whole gamut....I collected charts, and I read all

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⁶¹ Ibid.

⁶² Ibid.

⁶³ Roger Lowenstein, Buffett: The Making of an American Capitalist (New York: Random House, 1995), 36.

the technical stuff. I listened to tips. And then I picked up Graham's *Security Analysis*. That was like seeing the light."⁶⁴

To Graham, stock speculation "is largely a matter of A trying to decide what B, C, and D are likely to think – with B, C, and D trying to do the same." When Buffett read *The Intelligent Investor* as a senior in college in 1949, he encountered a philosophy that freed him from having to imitate "B, C, and D"; he found an approach that fit his temperament, one that emphasized self-reliance and rationality. As Buffett's biographer Roger Lowenstein notes, "Buffett experienced it as a revelation, 'like Paul on the road to Damascus.' Quite simply, he had found his idol" in Ben Graham. 66

In the fall of 1950, Buffett entered Columbia Business School to study under Graham. Buffett found him to be as fascinating personally as he found his ideas. Graham taught 20 students at Columbia in 1950, and his lectures, delivered in the Socratic style, quickly became a two-man show. As soon as Graham would ask a question, Buffett's hand would be in the air with an answer. But rather than simply saying whether Buffett was right or wrong, Graham would press him to explain his reasoning and to take it further. As another student recalls, "Warren was probably the youngest person in the class – definitely the precocious pupil. He had all the answers, he was raising his hand, he was leading the discussions. He had tremendous enthusiasm. He always had more to say than anyone else."

Graham taught Buffett how to read a financial statement but also how to spot a sham. Buffett learned in a practical sense how to start with a company's published material and arrive at a fair value for its securities. The examples used in the classroom were not merely contrived to illustrate some abstract point. Instead, Graham used current examples; he talked about real stocks that were patently undervalued by the market *at that moment*. Says Buffett, Graham "was perfectly willing to share what other people would have considered secrets." For example, as Buffett's friend and fellow classmate Marshall Weinberg comments, "[Ben] was giving you ideas. Youngstown Sheet & Tube I bought at 34 5/8 and sold between 75 and 80. I bought GM on his recommendation, also Easy Washing Machine. He'd say, 'This is a stock that looks cheap

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⁶⁴ Adam Smith, Supermoney, 181.

⁶⁵ Graham and Dodd, Security Analysis, 341.

⁶⁶ Lowenstein, 41.

⁶⁷ Ibid., 42.

to me' – now, *this morning*. Real Silk Hosiery was another stock. The class paid for my degree."⁶⁹

When Buffett graduated in 1951, Graham (who had struggled through the Depression) counseled him against going immediately into stocks out of fear that another financial storm might be lurking around the corner. In a strange departure from his normal habit of not trying to predict the markets, Graham urged Buffett to consider that the Dow had traded below 200 at some point in every single year with the exception of the present one. Perhaps Buffett should wait, advised Graham, until after the next crash before heading to Wall Street. Buffett did not heed this warning – and as it turned out, the Dow never again dipped below 200.

After receiving the only A+ ever awarded by Graham at Columbia, Buffett offered to work without salary for Graham's New York investment firm, Graham-Newman. Graham did not consent at first, so Buffett returned to Omaha to join his father's brokerage.* From time to time, however, Buffett would send Graham ideas. Finally, in 1954, Graham hired him, and Buffett spent two years in New York as an analyst.

The United States economy was flourishing and the Dow was hovering at more than 380. Yet the last time stocks had reached such heights was 1929, and Graham remained extremely cautious. Buffett, one of twelve employees at Graham-Newman, shared a small office with Walter Schloss and later Tom Knapp. He spent his days combing over the Standard & Poor's *Stock Guide* searching for undervalued companies. Graham's preferred technique was to select stocks that were selling for two-thirds of their net working capital – i.e., stocks that were ridiculously cheap by the numbers. Whenever Buffett or another associate would find such a stock, he would show it to Graham. If the stock met his rigid criteria, Graham would buy it; if it did not, Graham would simply not be interested.

The biggest problem Buffett faced was that he could identify more stocks than Graham was willing to purchase. As happy as Buffett was to have the opportunity to work for Graham, he

* Graham preferred to hold his positions for Jews since they were not allowed into Wall Street's gentile firms at this time.

⁶⁸ Outstanding Investor Digest, May 5, 1995, 2.

⁶⁹ Lowenstein, 42.

⁷⁰ Ibid., 46.

⁷¹ John Train, *The Midas Touch* (New York: Harper & Row, 1987), 6.

⁷² Lowenstein, 53. Note: Net working capital is the total of current assets (e.g., cash, inventory, and receivables -- but not including property, plant and equipment) after deducting all liabilities.

became frustrated: the fund was sitting on \$5 million in capital while the circumspect Graham thought about when to get back into the market. Buffett felt constrained and hoped his boss would become more aggressive.

It is important to remember that Graham's main objective was not to achieve spectacular gains; his number one priority was essentially to avoid losing any money, to preserve what capital he already had. Thus, Graham was content to adhere to his stringent quantitative metrics and, according to Irving Kahn, got bored when someone tried to tell him about a company's products. For Buffett, on the other hand, the most interesting aspect of the investment process was thinking about what made one business better – and, hence, more attractive as an investment – than another.

By 1956, two years after hiring Buffett, Graham had lost interest in the day-to-day activities of the market, and he decided to close out Graham-Newman. Buffett returned to Omaha for good, where he formed a \$105,000 investment partnership for family and friends. He threw in \$100 of his own money, and, though the sum was truly tiny by Wall Street standards, he was finally steering his own ship. As general partner, Buffett's compensation was 25 percent of all profits earned over 6 percent.⁷⁴

Buffett Partnership, Ltd. purchased securities that the general partner believed to be undervalued. Of course, virtually all of Buffett's operations came straight from Graham's play book. As has been his practice throughout his career, Buffett refused to disclose his stock picks for fear that someone would try to copy him. He did not want other people buying his stocks (thereby driving up the price) in case he wanted to buy more. As Lowenstein observes, "behind this cordon of secrecy, [Buffett] was living a Graham-and-Dodder's fantasy, picking up small cheap stock after small cheap stock. His talent lay not in his range – which was narrowly focused on investing – but in his intensity . . . Company after company he analyzed and committed to memory. And when one became cheap, he pounced."⁷⁵

In addition to its bread-and-butter common stock investments, the partnership also engaged in what today would be called merger arbitrage (which Buffett learned at Graham-Newman) and in a few instances bought controlling interests in public companies or acquired

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⁷³ Ibid., 56.

⁷⁴ Train, *The Midas Touch*, 7.

private businesses. Always, Buffett stayed true to Graham's principles. A typical day at the office still meant reading annual reports and business publications. But, whether or not he consciously realized it at the time, Buffett was gradually beginning to apply those principles in different ways.

3.2 Expanding the Idea of Value

Eventually, Buffett started to show signs of increased boldness. He began to hold onto a winning stock for longer stretches or to put a significant percentage of his funds into a single issue. But, more importantly, his actual thinking started to change in a fundamental way. To Graham, a stock was defined in numerical terms alone; to Buffett, the qualitative aspects were equally appealing. As Lowenstein explains,

When Buffett looked at a stock, he was beginning to see not just a frozen snapshot of assets, but a live, ongoing business with a unique set of dynamics and potential. And in 1963...Buffett began to study a stock that was unlike any he had bought before. It had no factories and virtually no hard assets at all. Indeed, its most valuable commodity was its name.⁷⁶

Buffett's experience with this new investment would be a sign of things to come.

American Express in late 1963 was hit by the Tino de Angelis salad oil scandal. A brief summary of the incident is appropriate: An American Express subsidiary was suddenly liable for possibly hundreds of millions of dollars in damage claims resulting from the sale of salad oil that did not really exist. As a result, the stock plummeted in the market from a high of \$62.38 a share to a low of \$35 by early 1964. Buffett, acting like an investigative reporter, came to the conclusion that the "franchise" value of the company's basic business – credit cards and travel services – remained intact.⁷⁷ He assured himself that consumers retained their faith in the American Express name and that the company would come through the fiasco just fine.

To be sure, American Express lacked a margin of safety as Ben Graham would have defined that concept. Graham, who felt that a stock should be purchased on the basis of "simple and definite arithmetical reasoning from statistical data," would never have invested in it.⁷⁸

⁷⁷ Train, *The Midas Touch*, 40.

⁷⁵ Lowenstein, 64.

⁷⁶ Ibid., 79.

⁷⁸ Graham, *The Intelligent Investor*, 282.

Buffett saw something else: beyond tangible assets, beyond working capital, beyond plant and equipment, he saw the market dominance of the American Express franchise even though it could not be found on the balance sheet. As Buffett says, the salad oil scandal "could have ruined the balance sheet of American Express but the answer of course was that American Express with no net worth was worth a tremendous amount of money."

Buffett was by no means abandoning the Ben Graham formula of hunting for securities trading far below their intrinsic business value. Instead, his "definition of value was changing, or rather, broadening." By 1965, American Express stock had soared to 73 ½more than double its recent low, and Buffett Partnership trounced its benchmark of the Dow Jones Industrial Average by a whopping 33 percentage points.

Buffett made a similar bet on Disney in 1966, buying 5 percent of the company for \$4 million. His average price per share was \$53, which did not appear particularly cheap, but "on that basis you could buy the whole company for \$80 million when *Snow White*, *Swiss Family Robinson*, and some other cartoons, which had been written off the books, were worth that much [by themselves]. And then you [also] had Disneyland and Walt Disney, a genius, as a partner."⁸⁰ Buffett Partnership had risen 1,156 percent over its ten year life, compared to a 123 percent increase for the Dow. At the start of 1966, assets had grown to \$44 million.

By 1968, the Dow was near 1,000 – IBM was trading at 39 times earnings, Xerox was selling for 50 times, and Avon Products was hovering at 56 times. Buffett Partnership's assets had reached \$104 million, climbing 59 percent for the year (and beating the Dow by an unbelievable 50 percentage points). Yet Buffett's idea flow was rapidly running dry; he felt the market was overvalued, and he could not find the kinds of bargains that had built his career. He wrote his partners as early as 1967 that

When the game is no longer being played your way, it is only human to say the new approach is all wrong, bound to lead to trouble, etc. I have been scornful of such behavior by others in the past. I have also seen the penalties incurred by those who evaluate conditions as they were – not as they are. Essentially I am out of step with present conditions. On one point, however, I am clear. I will not abandon a previous approach whose logic I understand even though it may mean forgoing large, and apparently easy,

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⁷⁹ Warren Buffett, as quoted in Columbia University Business School, "Investing in Equity Markets," transcript of a seminar held March 13, 1985, 16-17.

^{80 &}quot;How Omaha Beats Wall Street," Forbes, November 1, 1969, 88.

profits to embrace an approach which I don't fully understand, have not practiced successfully and which, possibly, could lead to substantial permanent loss of capital.⁸¹

The level of the stock market became only more extreme over the next couple of years. Then, in 1969, at the height of his success, Buffett decided to wind up the Partnership. "I am not attuned to this market environment," he wrote his partners again, "and I don't want to spoil a decent record by trying to play a game I don't understand just so I can go out a hero." That year, Buffett earned a 7 percent return, outpacing the Dow by 18 points. His record had been way better than "decent": Had an investor put \$10,000 in the Dow in 1957, his total profit over the next thirteen years would have come to \$15,260. That same amount, had it been given to Buffett, would have produced a profit of \$150,270. The Partnership had grown at a compound annual rate of return of 29.5 percent, compared to 7.4 percent for the Dow.

3.3 Charlie Munger and a New Model

Charles T. Munger, Vice Chairman of Berkshire Hathaway and Warren Buffett's longtime partner, delivered a speech a few years ago to students at the University of Southern California School of Business. The speech, entitled "Investment Expertise as a Subdivision of Elementary, Worldly Wisdom," discusses the basic model employed by Buffett and Munger in running Berkshire Hathaway. Moreover, it offers important insight into how the thinking of Buffett and Munger evolved beyond the classic Ben Graham approach.

The first question one must address when examining the theory of investing in common stocks is: What is the nature of the stock market? As is well-known, the fundamental assumption of modern finance theory is that the stock market is efficient. Munger asks whether the stock market is so efficient that people cannot beat it. "Well, the efficient market theory is obviously roughly right – meaning that markets are *quite* efficient and it's *quite* hard for anybody to beat the market by significant margins as a stock picker by just being intelligent and working in a

⁸¹ Warren Buffett, Letter to Partners, October 9, 1967.

⁸² Warren Buffett, Letter to Partners, May 29, 1969.

disciplined way."83 Of course, the average result must be the average result; it is impossible for everyone to beat the market.

In Munger's view, "the answer is that [the market is] partly efficient and partly inefficient."84 Or, in Buffett's words, "observing correctly that the market was frequently efficient, [finance professors] went on to conclude incorrectly that it was always efficient. The difference between these propositions is night and day."85 The model preferred by Buffett and Munger – to simplify the reality of what actually occurs in the market for common stocks – is the pari-mutuel system at the race track. At first, this idea may sound bizarre, but "if you stop to think about it, a pari-mutuel system is a *market*. Everybody goes there and bets and the odds change based on what's bet. That's what happens in the stock market."86

As Munger explains, anyone can see that a horse "carrying a light weight with a wonderful win rate and a good post position etc., etc. is way more likely to win than a horse with a terrible record and extra weight and so on and so on. But if you look at the odds, the bad horse pays 100 to 1, whereas the good horse pays 3 to 2."87 Under these conditions, it is no longer clear which is statistically the best bet based on the mathematics of probability. That is, the prices change such that it becomes quite difficult to beat the system.

Further, the racetrack then takes an additional 17 percent off the top. Therefore, a bettor not only has to outsmart all the other bettors – but he or she must outsmart them by such a wide margin that on average that bettor can afford to take 17 percent of his or her gross bets off the top and give it to the house. It is still possible, given those mathematics, for a few people to beat the odds. After all, mere intelligence gives an edge because many gamblers know nothing about horses and just bet lucky numbers and hunches. Therefore, a person who strictly thinks about horse performance and nothing else could indeed have a significant edge – at least if it were not for the "frictional cost" caused by the house's take.

Of course, it is quite rare that someone actually does earn a substantial income from betting on the races. However, the market is not perfectly efficient. "And if it weren't for that big 17% handle, lots of people would regularly be beating lots of other people at the horse races,"

⁸³ Outstanding Investor Digest, May 5, 1995, 57.

⁸⁵ Berkshire Hathaway Annual Report, 1988, 18.

⁸⁶ Outstanding Investor Digest, May 5, 1995, 57.

remarks Munger. "It's efficient, yes. But it's not *perfectly* efficient. And with enough shrewdness and fanaticism, some people will get better results than others." 88

Munger then draws a parallel to the stock market, noting that the dynamics are the same – except that the house handle is far lower. He argues that transaction costs (the spread between the bid and the offer plus the commissions) are fairly low – as long as one does not trade too actively. So "some of the shrewd people are going to get way better results than average in the nature of things. It is not a bit easy But *some* people will have an advantage."⁸⁹

Faced with this model, Buffett and Munger asked themselves years ago how one becomes a winner rather than a loser, in a relative sense. As Munger says, the pari-mutuel system provides the key: all the winning bettors bet very seldom. "It's not given to human beings to have such talent that they can just know everything about everything all the time. But it *is* given to human beings who work hard at it – who look and sift the world for a mispriced bet – that they can *occasionally* find one." Moreover, the wisest people are those who bet heavily when the odds are in their favor – and the rest of the time they simply do not bet at all.

Very few investors actually operate in the manner described by Munger. But the managers at Berkshire Hathaway do operate that way. Their insight is that "you can get very remarkable investment results if you think more like a winning pari-mutuel player. Just think of it as a heavy odds against game full of craziness with an occasional mispriced something or other." Even Warren Buffett is not smart enough to find thousands of such opportunities in a lifetime. But when he does see one, he makes a very large commitment.

In the stock market, "some railroad that's beset by better competitors and tough unions may be available at one-third of its book value. In contrast, IBM in its heyday might be selling at 6 times book value. So it's just like the pari-mutuel system." Obviously, IBM had far better business prospects than the railroad, but once price is factored into the equation, it becomes very difficult to know what would work out best for a buyer trying to choose between the two stocks.

In attempting to determine what style the investor should employ in selecting common stocks so as to obtain an above average result in the long run, Buffett began his career by

⁸⁷ Ibid., 57.

⁸⁸ Ibid., 58.

⁸⁹ Ibid., 58.

⁹⁰ Ibid., 58.

following the Ben Graham approach. However, Graham essentially was "operating when the world was in shell-shock from the 1930s People were so shell-shocked for a long time thereafter that," according to Munger, "Ben Graham could run his Geiger counter over this detritus from the collapse of the 1930s and find things selling below their working capital per share and so on."

The problem with the classic Ben Graham strategy was that "gradually the world wised up and those real obvious bargains disappeared. You could run you Geiger counter over the rubble and it wouldn't click." The strength of the Ben Graham intellectual framework, though, was such that his followers could change their definition of what constitutes a bargain. In this manner, they could continue to do successfully what they had always done. As Buffett wrote in the Preface to the fourth edition of *The Intelligent Investor*,

In an area where much looks foolish within weeks or months after publication, Ben's principles have remained sound – their value often enhanced and better understood in the wake of financial storms that demolished flimsier intellectual structures.⁹⁴

However, Buffett and Munger moved away from "classic Ben Graham" because Graham did not have the same objectives as Berkshire Hathaway. Rather, Graham looked for situations that were so statistically cheap that a group operation in them almost had to work out well. As Buffett admits, even when he worked at Graham-Newman, Graham "felt that if we did a lot more than that, we were sort of cheating a bit because we were doing something that his students or the readers of his book couldn't do." Buffett, however, was inclined to "cheat."

For example, Graham never wanted to talk to management. As a professor targeting his teaching at a mass audience, he was trying to invent a system that virtually anybody could use. And he did not believe that the regular person could realistically go out and talk to management. So, having started out as Grahamites (which worked quite well), Munger explains that he and Buffett

... gradually got what I would call better insights. And we realized that some company that was selling at 2 or 3 times book value could *still* be a hell of a bargain because of momentums implicit in its position, sometimes combined with an unusual managerial

⁹² Ibid., 59-60.

⁹¹ Ibid., 59.

⁹³ Ibid., 60.

⁹⁴ Warren Buffett in the Preface to *The Intelligent Investor*, 4th Revised ed., viii.

⁹⁵ Outstanding Investor Digest, May 5, 1995, 5.

skill plainly present in some individual or other, or some system or other. And once we'd gotten over the hurdle of recognizing that a thing could be a bargain based on quantitative measures that would have *horrified* Graham, we started thinking about better businesses.

The first \$200 or \$300 million made by Berkshire Hathaway after Buffett took control came from "scrambling around with [the] Geiger counter." But the vast preponderance of the money came from owning the great businesses. In fact, even some of the early money came from being temporarily present in great businesses, such as American Express and Disney, which Buffett Partnership had bought after they became severely depressed in price.

3.4 Back in the Game

In 1962, Warren Buffett began buying shares of Berkshire Hathaway, a company located in New Bedford, Massachusetts that made suit liners. The stock was selling for \$7.60 a share yet had \$16.50 in working capital. This was a typical statistically cheap stock that would have appealed to Ben Graham. Buffett continued adding to the position at attractive prices until he ultimately amassed a controlling interest. When he "retired" in 1969, Buffett liquidated most of the Partnership's investments – but not Berkshire. He felt that it would make a decent long-term holding and kept a substantial portion of his net worth in the stock. No one could have known that Berkshire was to become Buffett's ultimate investment vehicle.

At the time when Buffett was sitting on the sidelines, fund managers were filling their portfolios with a handful of large, big-name growth stocks, like Xerox, Kodak, Polaroid, Avon, and Texas Instruments, known as the Nifty Fifty. These "blue-chip" companies were said to be "'safe' – indeed, *safe at any price*."⁹⁷ By 1972, the stock market was pricing the Nifty Fifty at an incredible 80 times earnings. Then, a year later in 1973, the party ended. The Nifty Fifty started slipping, and fund managers got nervous: their once "safe" stocks were falling.

At the same time that confidence on Wall Street melted away, Buffett came alive. He remembered Graham's simple advice: Be fearful when others are greedy, and be greedy when others are fearful. Now was the time to be greedy. Suddenly, things seemed cheap again: "He

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⁹⁶ Ibid., 60.

⁹⁷ Lowenstein, 148.

would run his finger down the price-earnings column of the stock table, and practically every P-E was in single digits. It was one of those rare times on Wall Street: America was being given away, and nobody wanted it." Mr. Market had turned seriously depressed.

Buffett began buying bargain after bargain for Berkshire's insurance company.* The best of those bargains, the Washington Post Company, was the kind of perfect pitch Buffett craved: here was a wonderful business trading at an insanely cheap price. Berkshire became the largest outside shareholder (and the investment today is up over 50 times cost). As Munger gleefully says, "we bought it at about 20% of the value to a private owner. So we bought it on a Ben Graham-style basis – at one-fifth of obvious value – and, in addition, we faced a situation where you had both the top hand in a game that was clearly going to end up with one winner and a management with a lot of integrity and intelligence....Of course, that came about back in 1973-1974. And that was almost like 1932. That was probably a once-in-40-years-type denouement in the markets."

In the early '70s, Buffett and Munger got another potentially extraordinary opportunity. See's Candy Shops, a leading chocolate chain on the West Coast, was for sale. The price sounded awfully high – this was not a cheap Ben Graham-type company – but Buffett realized that California consumers were willing to pay premium prices for See's highly regarded product. Further, Munger pushed him to think about the intangibles, like the brand name and the benefits of buying a very well-managed enterprise. Ultimately, See's accepted their bid, and Buffett now owned outright a business whose intrinsic worth stemmed overwhelmingly from its earning power, which could not be found "on the books."

In September 1976, Ben Graham passed away at the age of 82. His death prompted observers to wonder about Buffett's apparent departure from Graham's methodology. Indeed, many of Buffett's investments, such as See's, no longer remotely resembled Graham-type plays. For example, Buffett's rescue of GEICO that year represented an investment that clearly lacked a margin of safety in the statistical sense (Buffett saw value in the potential of new management to turn the company around). And Berkshire's foray into advertising agencies, which Buffett viewed as a free ticket on the explosive growth of the media business, meant he had a large stake in

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⁹⁸ Ibid., 150

^{*} Buffett had purchased the National Indemnity Company for Berkshire, primarily to use its "float"

companies with virtually no hard assets (Buffett viewed the lack of assets as a plus because the profits flowed directly to the owners; unlike textiles, an ad agency did not require more and more capital). 100

Obviously, Buffett had undergone a major transformation: he now analyzed businesses far more subjectively than did Graham. Influenced by Charlie Munger and by his own personal experience, Buffett had developed a taste for what he termed "wonderful" businesses. As he told a Forbes reporter in 1996, "Charlie made me focus on the merits of a great business with tremendously growing earning power, but only when you can be sure of it – not like Texas Instruments or Polaroid, where the earning power was hypothetical."¹⁰¹

In addition, the writings of investor Philip A. Fisher affected Buffett's evolution. As Buffett readily admits, "I am leagues ahead richer than I would be if I hadn't read Phil." ¹⁰² Fisher's first two books, Common Stocks and Uncommon Profits and Conservative Investors Sleep Well, stressed the importance of avoiding excessive diversification and the advantages of owning high quality businesses for the long-term. 103 "Much like Ben Graham," wrote Buffett after meeting Fisher, he "was unassuming, generous in spirit and an extraordinary teacher." ¹⁰⁴

Buffett's goal had shifted to trying to find "businesses with good to superb underlying economics, run by honest and able people and [available] at sensible prices" that he could hold "forever." His deviations from Graham were both meaningful and real – but they tend to overshadow a larger allegiance. Indeed, the very notion that "a stock had an 'intrinsic' worth, independent of the tape, Buffett got from Ben Graham." Moreover, it is difficult to imagine Buffett's folding the partnership "at the height of the Go-Go years, or jumping back in during the 1974 market depression, had he not read Graham's liberating parable of Mr. Market." ¹⁰⁶

Buffett's creative energies bubbled up again in the late '70s. He picked up shares of numerous undervalued stocks thanks to the depressed market, including Amerada Hess,

⁹⁹ Outstanding Investor Digest, May 5, 1995, 63.

Lowenstein, 154.

Robert Lenzner, "Warren Buffett's Idea of Heaven: I don't have to work with people I don't like," Forbes 400, October 18, 1993, 40.

¹⁰² Warren Buffett, Letter to the Editor, *Forbes*, October 7, 1996.

¹⁰³ Philip A. Fisher, Common Stocks and Uncommon Profits and Other Writings by Philip A. Fisher (New York: John Wiley & Sons, Inc.), 1996.

Warren Buffett, "What We Can Learn from Philip Fisher," *Forbes*, October 19, 1987, 40.

¹⁰⁵ Outstanding Investor Digest, May 5, 1995, 7.

¹⁰⁶ Lowenstein, 201.

American Broadcasting Companies, General Foods, Knight-Ridder Newspapers, Media General, SAFECO, F.W. Woolworth, and more. In the early '80s, fearing inflation, Buffett took positions in companies with well-known consumer brands, like R.J. Reynolds, that could raise prices in step with inflation. Similarly, he bought hard-commodity stocks, such as Aluminum Company of America, Cleveland-Cliffs Iron, Handy & Harman, and Kaiser Aluminum & Chemical. Berkshire had once not had any portfolio, but by 1983 it owned \$1.3 billion worth of marketable securities. 107

The '80s also witnessed Buffett's huge purchase of three million shares of Cap Cities, run by his longtime friends Tom Murphy and Dan Burke, for \$172.50 a share. As the decade came to a close, Buffett would come to own massive chunks of other "wonderful" businesses, including Coca-Cola and Gillette. And in the '90s, he loaded up on companies like General Dynamics, Wells Fargo, and Freddie Mac, among others. Buffett-watchers continue to hang on his every move.

Throughout his career, Buffett has stuck to one overriding mission: to search for companies selling for less than their "intrinsic value." Attempting to carry out such a mission would be impossible if not for the belief that "price is what you pay; value is what you get." This notion is absolutely central to the Ben Graham intellectual system. And it remains absolutely central to Warren Buffett's updated, modern approach.

Many pundits have called attention to Buffett's metamorphosis away from Ben Graham, noting Buffett's supposed change from a "value" investor to a "growth" investor. This sort of pigeonholing misses the point. To Buffett, the entire growth/value distinction is a fallacious one. In his mind, the growth potential of a business represents a *component* of its value in the same way that its assets are a component. "At a price, Coca-Cola's potential represents good value; at some higher price, it does not." ¹⁰⁸

All investing, as far as Buffett is concerned, is "value investing" – or at least it ought to be. In fact, he finds the very term "value investing" to be redundant:

¹⁰⁷ Robert G. Hagstrom, *The Warren Buffett Way* (New York: John Wiley & Sons, Inc., 1995), 277.

¹⁰⁸ Ibid., 417.

What is 'investing' if it is not the act of seeking value at least sufficient to justify the amount paid? Consciously paying more for a stock than its calculated value – in the hope that it can soon be sold for a still-higher price – should be labeled speculation....¹⁰⁹

As conditions have changed and as Buffett has acquired more and more experience – both vicarious and direct – his approach to investing has also changed. In the final analysis, the value of any asset today is "determined by the cash inflows and outflows – discounted at an appropriate interest rate – that can be expected to occur during the remaining life of the asset." Buffett, and other "value investors" like him, are simply trying to find the rare seriously mispriced bet.

4. Conclusion

This paper tells the story of the evolution of the idea of "value investing" from Benjamin Graham to Warren Buffett. It examines how and why changes in both economic conditions and personal experience affected Graham's and Buffett's approaches to investing. In constructing this history, we integrate information across a wide array of source material to portray accurately the course and character of the evolution.

The significance of Buffett's enlargement of Graham's basic concepts can scarcely be overstated. If Graham were alive today, he would undoubtedly encounter terrible difficulty in trying to find stocks that meet his criteria. As Walter Schloss commented a few years ago, "Ben had it *easier* than we did because there were a lot of cheap stocks around in his day. I find it hard to believe that he would even be in the market today because the kind of things that he liked aren't *around*...." Buffett's expanded strategy – while still faithful to Graham's principles – has enabled him (and others who share his outlook) not only to stay in the market for over fifty years but also to excel.

In 1995, Buffett addressed his divergence from Graham's criteria. He noted that Graham believed that net current asset value situations and the like constitute the ultimate bargain. "If you buy 100 of them, you have to make money [But] that way, you're not buying great

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¹⁰⁹ Berkshire Hathaway Annual Report 1992.

¹¹⁰ Ibid.

businesses – you're buying average businesses at great prices. I look at it a little bit like group life insurance. In other words, you don't have to give a medical exam to every one of these companies if you get a high enough group rate."112

Unfortunately for the would-be Grahamite, however, net current asset value situations do not exist in any quantity today – nor have they existed for most of the years since the late 50s, with exceptions in the early 70s. Therefore, Buffett prefers to give companies "a complete physical exam and then [tries] to buy the ones that are going to outlive the actuarial tables. But Ben's approach was just to buy a group of statistically very cheap stocks. And...it is harder to find those stocks today. However, Ben would not quarrel with buying stocks that appear cheap based on the present value of their future cash flows."113

What are the implications for the future of "value investing"? Many pundits now muse about the coming of the so-called New Economy, wherein Internet and technology stocks will soon dominate the business landscape. In this connection, Buffett has personally encountered criticism in recent years for his purposeful avoidance of such high-flying, high-priced enterprises. Some brasher critics even call him an investment dinosaur operating under an obsolete framework. 114

Buffett, who jokingly refers to himself as a "lifelong technophobe," admits that Internet stocks and high-tech companies fall outside what he calls his "circle of competence," or area of expertise. Leaving aside the question of whether Buffett himself will be able to adapt to radical changes in American business involving technology, or whether any such adaptation will be necessary at all, the intellectual framework employed by "value investors" as a group is most assuredly not in danger of obsolescence. The goal of every investor ought to be to pay less for a stock than its calculated value – and the same should be true 100 years from now.

¹¹¹ Outstanding Investor Digest, May 5, 1995, 5.

¹¹² Ibid., 4.

¹¹³ Ibid., 5.

¹¹⁴ Readers of this paper will recall that Buffett heard similar criticisms in the late 1960s, when he refused to participate in the euphoria of the Go-Go era. At that time, he wrote to his partners that "the game is no longer being played [my] way" and that he felt "out of step with present conditions." Though he could offer scant proof that prices were ridiculously high, Buffett stuck to his convictions, assuring his partners that "I will not abandon a previous approach whose logic I understand even though it may mean forgoing large, and apparently easy, profits to embrace an approach which I don't fully understand, have not practiced successfully and which, possibly, could lead to substantial permanent loss of capital." (See Warren Buffett, Letter to Partners, October 9, 1967.)

115 Berkshire Hathaway website (www.berkshirehathaway.com), see A Message from Warren E. Buffett

Indeed, as discussed in this paper, Buffett made this argument in his speech to Columbia Business School students in 1984 – and he has been making it ever since. In that speech, Buffett talked about investors who each had different portfolios, although each shared a common intellectual framework. That framework, of course, was the reason these investors succeeded. Different investors might understand different specific businesses in different ways. Thus, it stands to reason that they will pursue different paths to success.

For example, Buffett observes that "Bill Gates will understand a lot of businesses that I don't understand. Actually, I know something about his investments – and he invests in things that he understands. And more power to him. I just don't happen to understand those businesses. So he will have a universe that's different from my universe." The essential message is this: As long as an investor can identify a handful of "mispriced bets" available in the stock market, that investor should come out well in the long run. Even if Buffett does not "understand" technology or does not have any special insights in that sphere, other "value investors" are in fact capable of "understanding" technology and having insights. And there is simply no reason why these investors should not prosper in a technology-driven environment.¹¹⁶

As this paper has demonstrated, the idea of "value investing" has evolved considerably over the years. To say that this evolution has been one of unyielding progress over the century would be simplistic. In fact, Graham and Buffett each strove to adapt to the nature of the investment problem as it really was during the period in which each operated. As conditions change in the future, further adaptations will no doubt be required. Yet the strength of the basic Graham framework is such that it will remain sound.

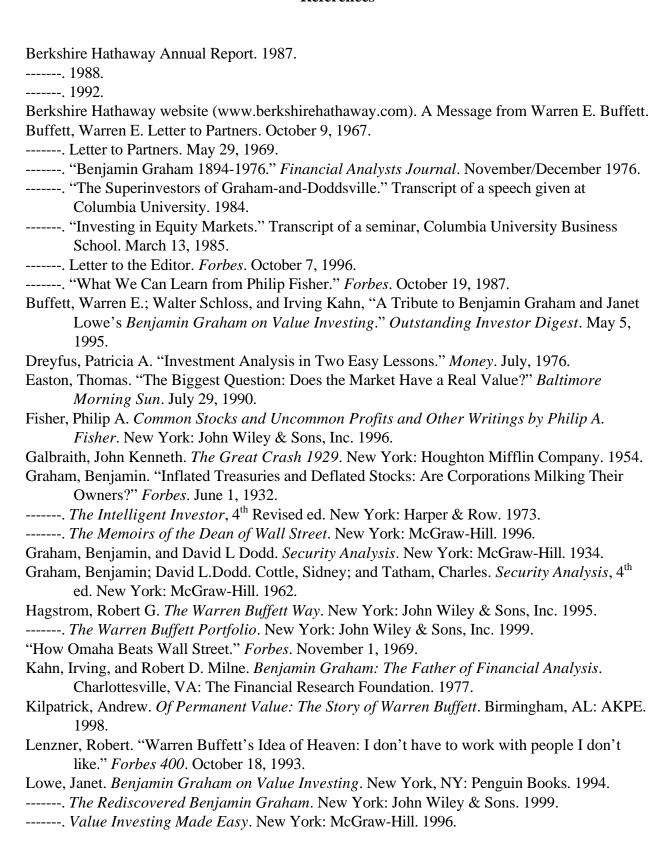
A naive observer of Buffett today would find it difficult to see the Ben Graham influence in many of his activities. However, that influence remains at the core of Buffett's investment model. Buffett continues to think about stocks as fractional ownership interests in underlying businesses, he continues to operate under the assumption that there is a distinction between price and value, and he continues to search for the largest discrepancy between those two items. In other words, he continues to be a "value investor."

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¹¹⁶ Robert G. Hagstrom, *The Warren Buffett Portfolio* (New York: John Wiley & Sons, Inc., 1999), 98-108. See, e.g., the record of William Miller.

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