The I-S METHOD

Individual Stock — Intermediate Swing

By

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CREDO

Fundamentals are Opinions based on Imperfectly Known Facts

The stock market consists of Individual Stocks pursuing their independent and often different trends. We buy and sell the Individual Stocks and not the Averages.

The Major Trends are composed of Intermediate Swings with normal consolidating reactions. The most profitable operations are in the Intermediate Swings because they have the fast vertical action and if we are right on the Intermediate Swings we will be right on the Major Trend.

Most market losses have been caused by the purchase of good sound stocks at the wrong time. Even blue chips that are going up today may be much lower next month. Timing is the Key.

The I-S METHOD is directed to the profits in the Intermediate Swing of the Individual Stock. It does not try to tell you all about the stock market, but to show you how to buy for the Upswing and Sell for the Downswing.

Nobody knows what the Stock Market will do, or When.

The METHOD replaces opinions and approximations with the concrete facts of Price Action. Because the Buy Signals and Sell Signals are definite and precise to-the-eighth, we can audit them against past price action and determine their validity in various types of markets.

Studies in Market Action and Speculative Technique

THE I-S METHOD

Franklin Paul Jackson, Los Angeles, California

THE STOCK MARKET INSTITUTE 2010 COLORADO BOULEVARD, LOS ANGELES 41, CALIF.

INTRODUCTION

For many persons, my early text, *"Selecting the Right Stock"*, was an introduction to the philosophy of technical analysis and charts, and the later study course, *"Studies in Market Action and Speculative Technique"*, explored further the use of Trendlines and other chart patterns. Although they have been out of print for several years, there have been so many other later texts available to the stock market student that this new text will assume you are familiar with those basics, because ordinarily a man does not subscribe to a text such as this until after he has prior study of the market and a considerable background in the use of charts in technical analysis. Only some of the earlier subjects that appear necessary as a prerequisite to the present studies are repeated in this text.

As originally prepared, the "Studies" were devoted primarily to the orthodox principles of technical analysis in the use and interpretation of price and volume charts, and the development of good judgment in stock market analysis, with an introduction to the use of mathematical barometers and "robots". Among the marvelous friends I made in that work was a former president of the old "Curb Exchange" who said he had listened to Jesse Livermore and Bernard Baruch argue as to the interpretation of a stock chart, and he had thought that if those two experienced chart men could not agree as to what the chart said, he had little hope of finding guidance. We became involved in a search for more precise methods, hoping to establish some specific mathematical standards so that Trends and Buy and Sell Signals could be precisely defined. The results from that research developed several techniques included in the present I-S METHOD.

Although these new Studies may not appear to use the usual patterns and methods of "chart interpretation", you will recognize that the principles behind those patterns usually are the basis for our new "Keys". We use the old priciples, but we now seek to formulate positive and definite rules for action that will enable us to discard opinion and personal judgment. What we are now doing is to use our knowledge and judgment in advance to formulate rules for applying the principles of price action that we have learned, in order that when the time comes to take action we will not be misled by opinion or decision of the moment. We can consider in advance the market phenomena or conditios that may confront us in the future and decide what action we should take under certain conditions. We seek definite rules so that we can "count to the eighth" and avoid errors of opinion, hesitation or impulse. We cannot, of course, anticipate all future situations but with our rules and Keys we expect to avoid many errors of speculation and avoid being misled by manufactured or timed news designed to induce us to do the wrong thing.

(over, please)

What we call the I-S METHOD emphasizes the Individual Stock and its Intermediate Swing, as distinguished from the study of the "Averages" and "cycles". We don't use the Dow Theory as such but we consider the "Averages" and a mechanical method of using their indication to determine whether the financial climate is more favorable to buying stocks for Upswing or selling them for Downswing, but the emphasis will be on the individual stock. We shall determine in advance how much profit or loss we intend to accept and when we will close out our trades and will not allow hope or fear to change our scientifically determined procedures. Our "Rules" will embrace several factors that may determine action to be taken, such as Trend Signals, Buying and Selling Signals, Operating Plans, and other elements of the Method—all of which are important and will be explained in detail.

Unfortunately, we have not advanced sufficiently far in this subject to enable us always to have the BEST rule, or even always to have in every situation the positive mathematical rule toward which we are striving, but such imperfections and failure to achieve the 100% mathematical goal will not materially affect results, and further research will no doubt enable all of us to improve on both the rules and procedures, but for now we can make profitable use of our present Keys and techniques. For most men the results will be better than when they are guided by the usual information, opinions and advice.

Before we complete these studies we are going to examine market action in what I think may be closer detail than you have ever studied it before, identifying Trend and "Buy" and "Sell" signals in a minutia of Price Action which most market technicians disregard, and frequently we will be able to say "Tomorrow if price moves to here it will be a Trend Reversal BUY Signal". We are going to get "technical" to an extent you probably have not been technical before. Sometimes you may be impatient with me for devoting so much time to small "unimportant details"—but I assure you they <u>are</u> important. They can mean THOUSANDS in your brokerage account.

This text is not written for beginners because ordinarily a person does not invest in a study course such as this unless he has already had some experience with the stock market and with technical analysis. However, I cannot know just what has been your previous study and experience and in some areas I must include some basics. I hope that you who are already deep in such subjects will bear with me and possibly you will be rewarded with some new thoughts on even the elementary subjects.

STUDY ONE

CONTENTS

THE I-S METHOD

INDIVIDUAL STOCK - INTERMEDIATE SWING

A METHOD BASED ON PRECISE RULES

In these new Studies we may appear to depart somewhat from some of our earlier concepts because we now seek to formulate positive and definite rules for action which will enable us to avoid the misleading "judgment" of the moment, and instead to use our research to formulate in advance the action to be taken on the appearance of typical patterns of price action we have analyzed in past markets.

We can consider in advance the principles to be applied to the market phenomena or conditions which may confront us in the future and decide what action we should apply to specific patterns. We cannot, of course, anticipate all future situations, but with our rules we expect to avoid many errors of speculation and avoid being misled by manufactured or timed news designed to induce us to do the wrong thing.

What we call the I-S METHOD emphasizes the Individual Stock and Intermediate Swing as distinguished from the study of the "Averages" and cycles. Our rules and "Keys" are based primarily on Price Action and include precise rules for determining Trend Signals, Buying and Selling Points, Operating Plans, and other elements of the Method.

The first Trend Signal method, based on Square Root swings, is but one of three I-S methods of determining "Trend Reversal Signals," all based on entirely different principles. The three, as now outlined, are

Square Root Swings
Moving Averages
Thrust

They all work together and supplement each other, but each is complete and can be used without knowledge of the other methods. Because they are all based on different principles, when one confirms another they have a high degree of reliability. Possibly the most important of these several trend methods are the Moving Average and the Thrust Method. Common to all, and appropriate to any stock market operation, is a body of procedures using detailed technical tools for protecting capital and taking profits —both long trend and short term profits.

With each study principle you learn additional techniques designed for greater safety and profits. You will recognize that this first Study on Square Root and Weekly Trends only introduces these operating techniques which will be further developed as you learn the technical principles behind each group of newer and more advanced signals. So,as you observe obvious shortcomings in some of the Keys and methods you learn in the beginning, please remember that the I-S text is progressive and many of these shortcomings will be filled in by techniques you learn later. The first principles are only the beginning.

We use weekly price charts and seek precise rules so that we can "count to the eighth" to get our signals, and thus avoid errors of opinion, hesitation, or impulse. Insofar as possible, we reduce trading to positive mathematical rules so definite that the trader in New York will get the same indications as another in San Francisco. The method is far from perfect but usually it is profitable. We long ago abandoned the hope for a perfect mechanical method, enabling us always to buy at the bottom and sell at the top, or to know at all times what a stock is going to do, and now we conceive our goal to be simply to make money.

THE GOAL AND STRATEGY OF CAPITAL GROWTH

Of course the ultimate goal in the stock market is to make money, but as the conscientious investment counsellors will explain, a man's path to his goal must often depend on considerations of individual programming and general economic and business conditions, as well as his individual problems of whether his personal finances dictate that he operate for longterm appreciation, or for secure dividend or interest income, or for rapid growth of capital such as may be obtained in the stock or commodity markets. The first two objectives are beyond the scope of these pages. It is the problem of the individual to determine his goals and his program for achieving them and to decide, if his goal be gold, whether it is worthy of the price which may be necessary to achieve it. All that can be considered here is a technique or method for growth of capital by profiting from the nearby wide price swings. Except as every investor prefers to time his purchases so as to see an early profit instead of loss, if only on paper, we do not try to solve the problems of the longterm investor. Our methods ordinarily appeal mainly to the short term trader. The techniques discussed herein are for trading the Individual Stock so as to profit in its Intermediate Swing. The principal technical tools are Trend Reversal Signals, Repeat Signals, and Operating Plan.

Before studying the details of the Signals and Operating Plans, we should understand our program and the reasons for what we do. The Strategy of our operations, the way in which we use our technical signals, must be designed to keep us in harmony with the natural swings of the market. The broad principles and outline for your Major Strategy in the next four paragraphs are of the highest importance and should be thoroughly understood and kept in mind in all your market decisions. They are fundamental to this business of stock trading.

THE MAJOR STRATEGY

Buying and Selling with the Trend

The major Trends of stock prices are composed of Intermediatde Trends or swings which alternately advance the major trend or interrupt it by contra reactions or consolidations. The swings which advance the major trends are the profitable swings for which to trade. Ordinarily, it is difficult if not impracticable to make any money by selling short to profit by the reactions in an Uptrend or to buy for profit in the rallies during a Downtrend.

UPTRENDS and DOWNTRENDS are determined by Trend Reversal Signals. When the last signal was Uptrend, you will only buy stocks and never sell short. You may buywhen the Trend Reversal Signal first changes from Downtrend to Uptrend, or you may wait for a Repeat Buy Signal or other Buy point as determined by your technical tools or your Operating Plan.. If you are strictly a long term "Trend Trader" you may hold until a Trend Reversal Signal changes the Uptrend to Downtrend, or if you are following one of the Operating Plans, explained later, you may use the Upswing or rally to take a predetermined profit of (for example) 10% or 50%, or $3 or $10, or other amount according to plan. In Major Uptrend you never sell short for an anticipated decline, but after taking a profit you wait for a reaction to end on a Repeat Buy Signal to buy again for another profit—in this or another stock. Therefore, in addition to having an order entered to accept the predetermined profit according to your Plan, in an Uptrend you are watching for a Trend Reversal Signal such as we shall study first. You may also be watching for a Repeat Buy Signal, but we shall study those later.

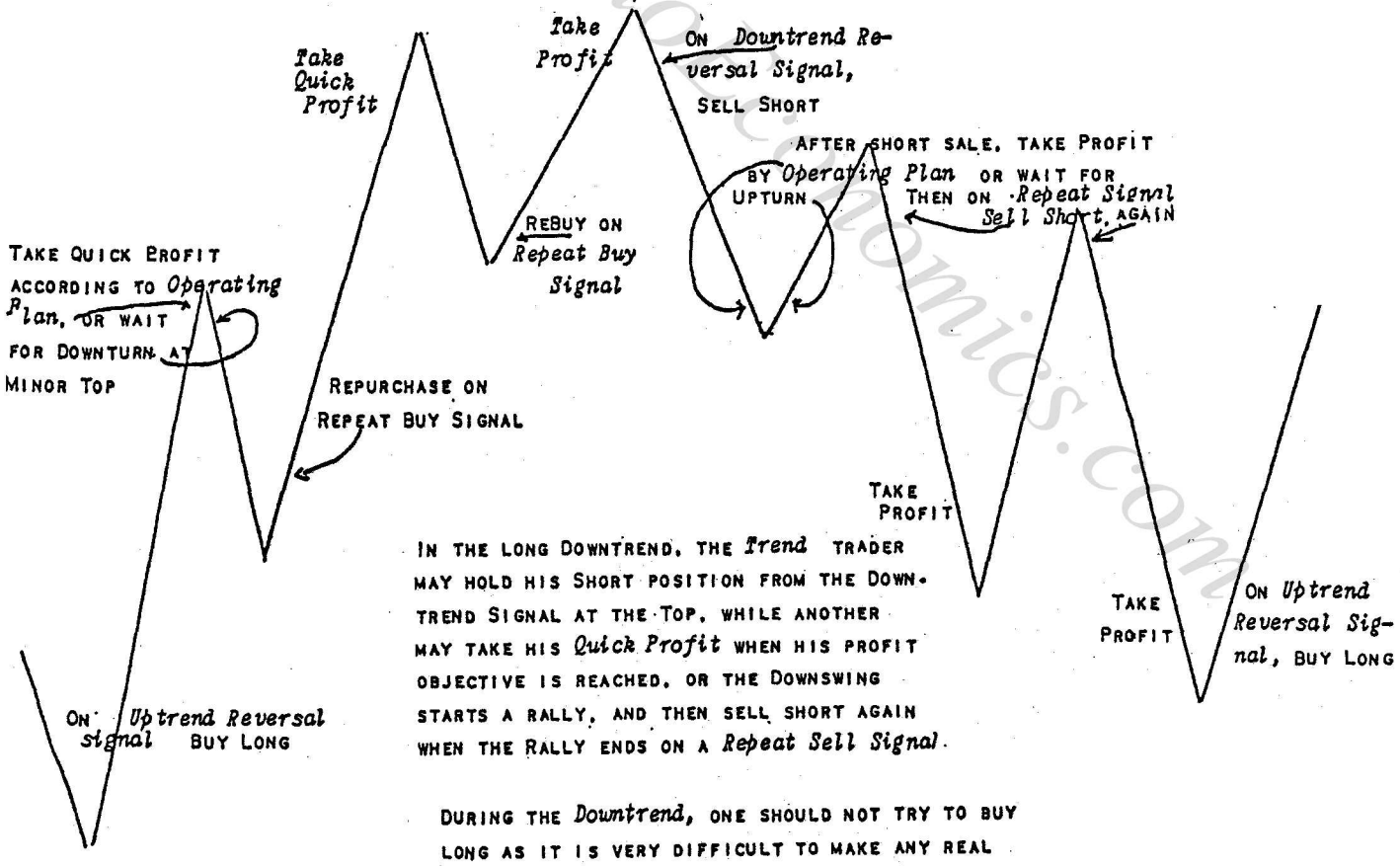
¶5 Similarly, in a DOWNTREND you never buy Long, but you only sell Short. On the Downswings or declines you may take your profits and then wait for a rally to sell short again as the rally ends and gives the Repeat Sell Signal.

¶6 Whether you are operating on the long side or the short side depends on whether price is in Uptrend or Downtrend. This keeps your operation in harmony with the natural swings of the market. So, our first problem is to determine the TREND.

¶7 The foregoing paragraphs, ¶ 3, ¶4, ¶5, ¶6, are of the highest importance as they represent the proper broad strategy for trading in stocks or commodities. It is not mere theory because this text explains in minute detail every technical detail mentioned. It is to implement this strategy that we have Trend Reversal Signals, Repeat Signals, and the other tools and tactics of the I-S METHOD . But in all the "counting to the eighth" and other details of our signals that we shall study, never lose sight of your broader strategy.

Formalized Diagram No. 1.

Do not expect the market to make it as easy as this looks.



THE FIRST LAW OF TRADING

Trade With The Trend

1 Market technicians are concerned with various kinds of Trends. You will see fascinating large wall charts showing the Averages, or possibly an individual stock, over many years, revealing cyclic and secular trends with informative curves and phases of the cycles clearly revealed. Much the same thing can be seen in the charts of the individual stocks in the long-term charts of THE STOCK PICTURE.

2 Getting closer to the market, technicians will draw trendlines across important Support points in Uptrends (or Supply points in Downtrends) revealing how the market tends to respect these trendlines when future reactions return back to the line. Probably more time is spent by amateur technicians doodling with such trendlines than is devoted to any other technical idea except (in recent years) the moving average trendlines. Now, of course, the computer calculates the moving average and draws the trendlines, requiring only minimum effort or thought on the part of the man behind the machines, until he tries to find a reliable way or formula to generate reliable Signals for buying or selling.

3 My original texts, "Selecting the Right Stock" and the study course, were written at a time when the geometrical trendlines drawn against Support Points as points of tangency, represented the then "state of the art". The geometric trendline does truly represent an "art". They serve best in retrospect. One can always draw, and if necessary redraw and adjust, and get interesting "fan" effects, and "breakthroughs". But their validity depends largely on the personal judgment and experience of the individual. Since I have joined the school seeking precise and definite Trend Signals, that say "Buy this stock here at this price", I have discontinued relying on geometrical trendlines for guidance.

4 MOVING AVERAGE trends provide very valuable Trend signals and this technique is developed in considerable detail in Part II of these Studies. The moving average will make very valuable contributions to profitable trading. By incorporating the square root principles in the moving average signals we are able to improve the reliability of the signals and develop some highly profitable applications of the moving average technique.

5 Another type of trend is what I think of as the Dow Theory Trend because it is based on the Dow Theory principle of an Intermediate Swing going higher than the prior Intermediate Top, to signal Uptrend. But whereas the Dow theorists have never been able to agree on just what is an Intermediate swing, which seriously flaws the value of the theory in individual stocks, the I-S METHOD applies the Square Root principles for the correct measurement for the length of the swings and amount of penetration of the prior Top. Thus this basic principle is scientifically incorporated into a very exact formula for the important Trend signals. Note that actually this Trend is not depicted by a Trend line, but is recognized as the dominant Trend by "keys" and rules for interpreting the Swing action.

6 Another advanced technical method of determining Trend by precise Rules is by the Thrust signals. Again Trend is not depicted by a Trend line but the dominant force of the market is classified as being Uptrend or Downtrend. Thrust very often signals the reversal of the dominant trend in the individual stock the very first

week of the new trend. Its principles are derived from all those other principles of technical analysis which you need to learn in order to enjoy the full benefits and profits from Thrust.

Interestingly, although depending on different principles, the various trends are in agreement a surprising part of the time, one confirming the other, and although we know that no one group of signals can be perfect, these different principles very well complete each other in that although one technique may fail to produce a signal at some turning point, we learn to have high confidence that one or another of the techniques will give a very timely signal not far from the extreme Top or Bottom.

2 There will be some other Trend formulae that will be very helpful for specific purposes at different places in the cycle. In developing our procedure for combining these various techniques and disciplines, and in order that you will have the confidence to use them because you know why they are sound, it seems best that we study the practical problems presented by the market which each Signal or "Key" is designed to meet, and the rationale behind our solution. Because each such technique is in concept and application different from the others, the text may in places appear somewhat disconnected as it jumps from one subject to another, but you will understand that in many respects they <u>are</u> different approaches to the one problem of Trend.

HOW IT ALL BEGAN

It was over a hundred years ago that Mr. Charles H. Dow, philosopher and scientist, a brilliant economist and a well-respected financial writer and founder of the Wall Street Journal, began the study of the Price Movement phenomena. Although his creation, the Dow-Jones Averages, began in 1898 and Mr. Dow died in 1901, giving him only a brief time for observation and study of those Averages, he had for several years been studying the phenomenon of stock price movements, of groups and cycles, and his deductions and observations of the Averages in that brief time have through many years stood the test of analysis and criticism by the keenest financial minds, and his Theory remains the most honorable body of thought on anticipating the future of finance and business.

Although Mr. Dow's writings on the price movement were not prolific, they are the foundation underlying all technical analysis. In addition to its broad philosophy, the Dow Theory gave us the most important concepts of the Primary and Intermediate Trends, the Double and Triple Tops and Bottoms, and the powerful Triangle, which Mr. Hamilton referred to as the action of the pendulum or Coil.

In our present study for exact measurements and "Keys" to market movements, later pages will give you more mechanistic and exact methods of applying the principles than were ever suggested by Mr. Dow or Mr. Hamilton (although attempted also by numerous other disciples), but preliminarily I think it well that we first study some elements of the original Dow Theory that appear important in our future systems work. And as you probably know, many technicians are studying the Theory for possible clues for systems to trade the modern stock indexes and options.

THE DOW THEORY

It is appropriate that a study of Technical Analysis begin with The Dow Theory because this most honorable method of interpreting the stock market was the true beginning of Technical Analysis.

As conceived by Mr. Charles H. Dow and expounded by Mr. Walter Peter Hamilton, The Dow Theory is based on observation of stock average figures and contains several principles that are necessary to any understanding of stock price movements. Every investor and speculator should understand these principles, because, although the Theory was developed only as a help in anticipatingfuture business conditions and was never intended as a guide for predicting the stock market, its first principle contains the logic of all technical analysis:

FIRST: The action of the Market, as represented by the Averages, reflects all that everybody knows and hopes and fears about the future of business and the Market

Mr. Hamilton thus explained the all-embracing principles:

> " The price movements of the stock market represent the sum of every scrap of knowledge bearing on finance. The market reflects all that the jobber knows about the condition of the retail trade; all that the banker knows about the money market; all that the best informed president knows of his own business together with his knowledge of other businesses; it sees the general condition of transportation in a way that the president of no single railroad can ever see; it is better informed on crops than the farmer or even the Department of Agriculture; . . . the market reduces to a 'bloodless verdict' all knowledge bearing on finance, both domestic and foreign." . . . Therefore, "there is no need to supplement the price movements, as some statisticians do, with elaborate compilations of commodity price index numbers, bank clearings, fluctuations in exchange, or anything else. The price movements reflect all these things since they represent everything everybody knows, hopes, believes and anticipates."

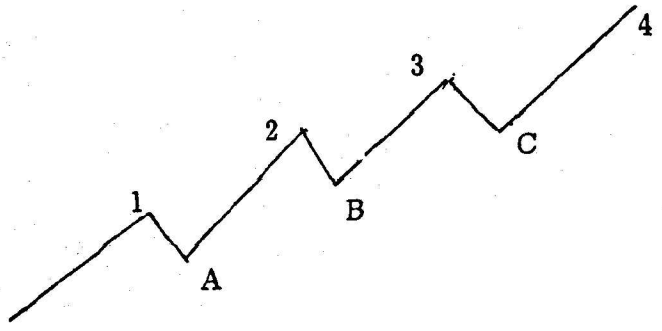
SECOND: The Market moves in Trends rather than aimlessly.

Although this proposition is now generally recognized, the intricacies of the Trends are not so well understood and need be studied because the principles apply also to individual stocks. During any long period of time, the stock market exhibits three movements:

1. The MAIN TREND, usually called the Major or Primary Trend.
2. The INTERMEDIATE MOVEMENT, also called the Secondary Reaction
3. The MINOR MOVEMENT, or Daily Fluctuations

The word "reaction" should be considered as including not only the reaction against the major upward trend, but also the recovery movement or upward reactions against the major downtrend.

Thus the Primary Trend is seen to be made up of Intermediate Movements in the same direction as the Primary Trend and of Intermediate Movements that are "reactions" or contrary to the major trend. A typical division of the Primary Trend into its Intermediate Movements may be outlined somewhat as follows:



Observe that although the Intermediate Movements upward, ending wih 1, 2, 3, and 4, above, may be irregular, the distinguishing and important characteristic is that each goes higher than the preceding Intermediate Movementand the reactions, A, B, C, each fail to go below the preceding reaction.

Similarly, the Intermediate Movements are interrupted by smaller reactions and are themselves composed of these minor swings madeup of several daily fluctuations, not shown in the above diagram

The three trends, the Major, Intermediate, and the Minor, all operating at the same time, have been compared to the ocean's tide, the wave, and the ripples . So long as the waves keep rolling in to higher levels on the sand, we know the incoming tide continues. The swimmer may easily be blinded by the spray and the splashes but the person who observes and marks with a stick the actual distance to which the waves roll up on the sand can usually detect the turn in the tide when the waves fail to come up to their previous marks. To say there is a bull market so long as the tops, 1, 2, 3, 4, in the above diagram are successively higher, is almost like saying that Up is up or Higher is higher. But it will be discovered that in actual practice it is not so simple.

THIRD: The movement of the Averages within a "Line", or a horizontal movement within a narrow range is an important indication of impending market action.

Hamilton recognized the implications of a "Line" when the Averages moved within three to five points, and even suggested a 5% range, but as stocks do not swing so large a percentage of their price in the higher levels as in the lower, somewhat smaller percentage should probably be applied to the higher prices. The consolidation which he saw as a "line" , appears in the 1980's as a "trading range".

Although the line confirmed simultaneously by both Averages may be expected to mark a change of Primary Trend, the line in even a single average is usually followed by an important move in the direction of the breakout. The movement of both averages above the line is considered as invariably bullish, while their movement below the line is considered as bearish, but not so positively. With such generalization there will be "false" breakouts, which sometimes make it less easy than it may at first appear.

The reason why a breakout above the line is usually more reliable is that lines are more apt to be formed in the later area of Accumulation, and the breakout on the topside is the start of the markup, whereas a downward breakout is more apt to be a "false move". Distribution usually has wide price swings, instead of a line

Not part of Dow Theory: Lines form so much more frequently in the individual stocks than in the Averages as to constitute one of the most valuable tools of the technician, and are discussed in greater detail in later lessons.

RESISTANCE LEVELS of Intermediate Movements determine Primary Trends

The reactions and reversals of the Intermediate Movements occur in every Primary Trend. The prices at which these secondary movements begin and end are known as "resistance" points or levels. Once a lower resistance point is established, then subsequently broken, weakness is shown. Conversely, when an upper resistance point is surmounted, it shows strength because the market is now able to continue above a previous Supply level. This breaking or penetration of a prior Intermediate level by a later Intermediate Movement is probably the best known and most frequently referred to of all the Dow Theory indications.

Probably of greater helpfulness, however, because its signals are at a more advantageous price, is the failure of an Intermediate Movement to penetrate the prior Intermediate resistance point. This indication is less frequently referred to by the Dow theorists for several reasons

First is their problem of deciding w
that it is not going to be penetrated (In the individual stocks, the corresponding problem is very well solved by the I-S Thrust signals.)

Second is the problem of when to decide that the indication has the "Confirmation" which is discussed in the next section.

CONFIRMATION. The Industrial and Transportation Averages Must Confirm

A signal from one average alone is without importance, according to the Dow Theory. The theory is that we cannot have industrial prosperity, or depression, without such prosperity or depression being reflected by the railroads as well as general industry. or months. Remember the Theory was intended to forecast business: this requirement for confirmationhas seriously impaired its usefulness in the stock market and is entirely dispensed with in the "D-Dow" trading method formula that I give you later.

Without confirmation, most of the Dow Theory is basic to understanding the movements of the stock market, and for your convenience the following, which will probably be criticised by most Dow theorists, attempts to summarize the most important principles of price action

4. Both averages make a line, at either a high level or after a secondary reaction, and both break through the line on the downside, or when,

5. One average makes a line and breaks through the lower limits of the line, and the other average confirms the bearish indication by either failing to make a new high or by breaking below the low point of the preceding secondary reaction.

The FINAL CONFIRMATION of the completion of a major bull market is given when

Both averages drop below the low points established in their preceding secondary declines.

D. CONTINUATION OF BEAR MARKET. It is a bear market as long as:

1. The recent lows in both averages are below the previous lows and the recent highs in the secondary rallies of both averages have not exceeded the high points of the preceding secondary rally, or

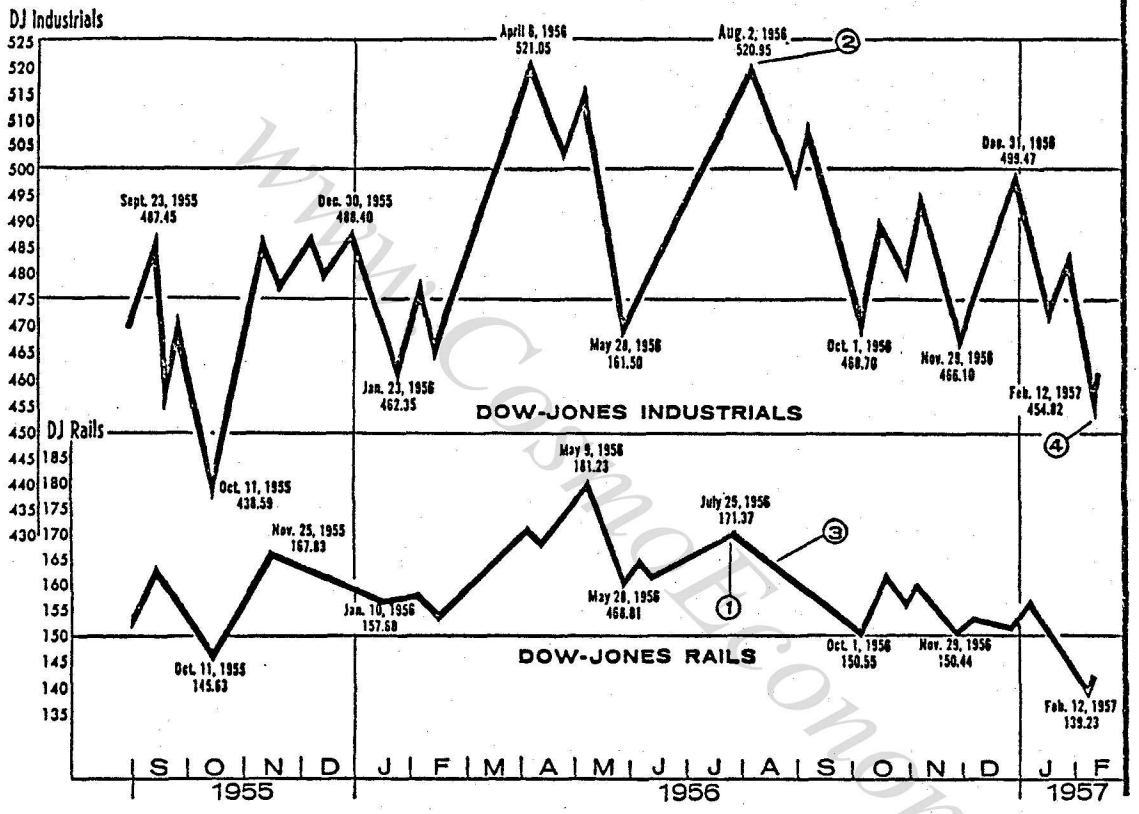
2. Both averages make a line, at either a low level or after a secondary rally, and both averages break the line on the downside, or

3. One average makes a line and breaks through the line on the downside, and the other average fails to go above the previous high or makes a new low.

The foregoing pages represent our understanding of some of the principles of the Dow Theory which have special relevance to the price movement of the general market and individual stocks, Mr. Hamilton made many other helpful observations about the action of prices,time periods, price patterns, etc., but the points noted here probably portray the principles he primarily stressed and most of the basic principles about which most Dow theorists agree.

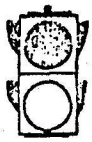
DEATH OF A BULL?

According to orthodox Dow Theorists, the Great Bull Market died on April 6, 1956. But not until last month did their doctrine produce the signal that entitled them to bury the body.

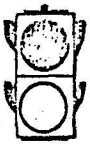


DOW BEAR SIGNAL

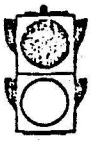
Like four traffic lights, four warning signals must combine to indicate a bear market according to orthodox Dow Theory. Here are the red lights that conjoined last month to signal the end of the 1946-1956 bull market:



① July 25, 1956: *Rails fail to top May 9 peak.*



② Aug. 2, 1956: *Industrials fail to punch past their April 6 peak.*



③ Aug. 29, 1956: *Rails break down through May 28 low.*

④ February 11, 1957: *Industrials break through May, October and November lows, thus signalling a bear market.*

WALL STREET

IS THE BULL MARKET OVER?

According to classic Dow Theory, last month's break signalled a bear market. But some professionals still have their doubts.

The Dow Theory has been interpreted differently by different students and writers, and the credibility of their opinions may depend largely on their reputation or recognition earned by prior public interpretations. Of course BARRON'S is the "home" of the theory and interpretations and comments that may appear in its pages are entitled to the highest respect. The name of the writer or unofficial Dow theorist who wrote the above interpretation for FORBE'S is not given and it is difficult to assess his orthodoxy. However, on occasions even a concensus of recognized opinion has been wrong.

A Word About Mechanics

The gap you note in page numbering, here and throughout the text, does not mean that a page has been omitted in your text. It is expected that additions will be made to these Studies from time to time and numerous page numbers are left blank for such additions, and also to enable you to add your own notes of principles or charts you may develop. To a considerable extent, these Studies will be evolutionary, and, I hope, progressive.

Also, you will observe that when a subject requires more than one page, it can be expanded, as Page 112, Page 112A, Page 112B, etc., by which the number properly represents a "Section" devoted to the subject, rather than a "page".When the subject is of a somewhat technical nature, the paragraphs of the page may also be numbered to facilitate later cross-reference to the precise detail or principal involved. For convenient brevity, the citation may show the paragraph number after a decimal, as "Page 112.3".

It may be appropriate here to explain the over-all numbering system used. Study I, relating to the basics of our technical analysis principles and techniques, is numbered in the "100" series. Study II, devoted mostly to the moving average and related subjects, has pages numbered in the "200" series, and Study III, explaining Thrust, etc., uses page numbers in the "300" series. This appears awkward in some respects, but in references to text pages, the number informs immediately as to the area of technical principles or knowledge involved.

We apologize for the poor reproduction of many of the charts, due largely to the condition of the original charts, not originally prepared for publication. We hope to redraw some of these eventually, but if publication had to await this task, it would long delay the printing of the Studies. We're giving you the best we can at this time. Later would delay your "Million".

There will be further "mechanics" to discuss with you later.

MAKING PRACTICAL USE OF THE DOW THEORY IN TODAY'S MARKET

Although these Studies will emphasize the Individual Stock, as distinguished from the Averages, it is well to know whether the general market as represented by The Averages is in a "Bull" or a "Bear" market, because ordinarily a Bull market provides a climate more favorable to long positions, whereas a Major Downtrend in the Averages provides the conditions favoring downtrend in the individual stock and short sales. Of greater importance is to know how to make these determinations because we will use the same methods and principles in our further study of the Trend of the Individual stock.

The Dow Theory used the swings of the Averages to forecast business, not the direction of the stock market. Rail freight was a prime indicator of the speedup or slowdown of business and it was logical that Mr. Dow required that the Industrials be confirmed by the Railroads. But since the Dow Theory was not intended to forecast the ups and downs of stock prices, the idea of confirmation was never intended to apply to our use of the Averages for such purpose. Therefore the I-S METHOD discards all thought about the Confirmation that has confused so many Dow Theorists in applying the Theory to the future of the stock market. Indeed, a good Barometer of business can be confusing, as in 1982 when stocks began their great upswing while business was still declining, and by the time a business upswing was apparent in 1983 many stocks had reached their Tops and started their Bear market.

With the somewhat involved Dow Theory thus simplified to the basic principle that when one Intermediate goes higher than the prior Interediate Top we have a Bull market, or a Bear market if it drops below the prior Intermediate Bottom, the determation of Trend is a matter of recording the Intermediate Trends on a chart. Immediately, however, we have the question of just what is an Intermediate Trend instead of a Minor Trend, or how far a minor reaction must extend before we recognize it as an Intermediate trend, making barometric Tops and Bottoms.

The charts on the Industrial Average show so many varying patterns of minor trends or jiggles, and longer swings, that the Dow Theorists are often unable to agree on whether a swing is minor or Intermediate, and whether the Tops were the important Intermediate Tops.

Much study has been devoted to these problems and to devise a formula that indicates Trend. Study of the various Reversals of the Industrial Average indicates, for instance, that 2% swings are only unimportant jiggles, while if we require 10% we would miss some important Trend reversals. Our best results appeared to be with 4% swings and we adopted that figure. For reasons you'll learn later, a smaller percent must be used in the higher 1980's.

Then after we decide on 4% Reversals, and mark all High points and Bottoms followed by such 4% reversals and one of these Highs is exceeded by a later swing, but only by a narrow amount, we are confronted with the problem of how far the former High must be exceeded ("penetrated" or "broken") before what has been a major downtrend will be considered to be reversed to Uptrend.

There are other problems also, and to give research credit where it belongs, and to provide you with a workable formula, the following reprints what I called the "Dunnigan-Dow Theory".

The

" DUNNIGAN-DOW THEORY "

An Improvement on the Dow Theory

The Dow Theory uncertainties as to what constitutes an Intermediate movement and the requirement for Confirmation between the Industrials and Railroads, have been eliminated by reducing the Theory to a few definite rules that make it more reliable as a Barometer of future price trends.

I call this the "Dunnigan-Dow Theory", because the late William Dunnigan was for years its proponent. He credited a "Dr. Samuel Moment" as formulating the original rules eliminating "confirmation" and using exact measurements to establish Intermediate Swings in the Industrial , but I have had my suspicion that Mr. Dunnigan himself should be credited with these bold steps. Now that the Dunnigan-Moment or Dunnigan-Dow principles have been published and on record even longer than had the Dow Theory before them, and have been so completely proven by interim market action, I think it is time that we give credit to where it belongs. If there is a "Dr. Moment", let him step forward and claim his Oscar. Until then, I'll prefer to call it the "Dunnigan-Dow" and possibly Jackson can be to Dunnigan what Boswell was to Dr. Johnson, or Rhea-to-Hamilton-to-Dow. What Mr. Dunnigan did to the Dow Theory was to strip away its concept of confirmation and setup precise rules for applying the basic principles, recognized, tho dimly, by Mr. Dow.

Undoubtedly, results better than the orthodox Dow Theory uncertainties are obtained by using a simple percentage basis for the Swings, as by charting swings of 4% or more on the Industrials. At one time Mr. Dunnigan used 2½%. "Dr. Moment" used a sliding scale. It is probable that swings amounting to the square root of price, or onehalf of the square root of price, would give even better results than these others.

Operations on the 4% Swings can be very simply formulated. We chart all swings of 4% or more, using at Tops the highest figure reached on the hourly average and at Bottoms, the lowest figure reached on the hourly average. The "A's" set up by these 4% Swings are called "Tops" and the "V's" are Bottoms. In defining 4% Swings, after a Top or Bottom has been setup, the swing that tests it may be less than 4% if it reaches into the Test Area. The Dow principles are reduced to Rules:

Rule 1: Buy when Closing Price rises 2% above the last Top

Sell when Closing Price drops 2% below the last Bottom.

Rule 2: does not wait for penetration of the last Top or Bottom. It uses "Test Area" which

At Tops, Test Area is 2½% below either of the last two Tops, to 1½% above either of last two Tops.

SELL when price comes within Test Area and drops 5%

At Bottoms, Test Area is 2½% above either of last two Bottoms to 1½% below either of last two Bottoms.

BUY when price comes within Test Area and rises 5%

We hope, of course, to get our Signal by Rule 2, without having to wait for penetration of the prior "A" or "V" as required by Rule 1. However, when we do not get it by Rule 2, we almost always will get a profitable signal by Rule 1.

There are other possibilities also. For

instance, Price may drop below the last "V" (or rise above the last "A") by more than the 1½ (outside the Test Area) and then reverse. In this situation, we can expect price to meet resistance around the last Bottom (or Top) and set up new Swings. However, if it goes on up through such Bottom, you will recognize a BUY signal when, by what we call

Rule 3, at a lower Bottom

a. Price rises 5% above the new Bottom
and also
b. Price rises above either of the last three Bottoms by 2%

or

at a higher Top, we will have a SELL signal if

a. Price drops 5% below the new Top
and also
b. Price drops 2% below either of the last three Tops.

We are not studying these "improvements" on the Dow Theory because we consider either the Theory or the Averages to be a key to success in the market, but because we are intensely interested in the principles and techniques that may be applied also to the price action of Individual stocks (and even commodities and financial futures). Although at any time the Individual stocks may be in widely disparate trends, the Tops and Bottoms made by the differing swings of the different stocks are among the best of our technical tools for determining Trend. The I-S METHOD Signals in the Individual Stocks will be found to be more reliable and their trends more clearly defined most of the time, than are Signals in the Averages. And even to know the direction of the "general market", you may find the corresponding Trend Signals derived from these Dow principles are more reliable as guides for trading if you calculate them on the NYSE or S&P indexes. Although for years it was pointed out that "you can't trade the Averages", that is no longer true, and techniques valid for the Averages are needed for the new option trading in the stock indexes. But that is a subject outside this text devoted to the Individual Stock.

In addition to using percentages, trading systems on the Individual Stock are frequently built on swings of a given dollar value, as swings of $4.50 were used in one of our old systems for General Motors. It is soon found, however, that a value, as $4.50 for instance, that may be predictive at $40, is not long enough when the price climbs to $80. Different values must be used because the natural swings are greater at the higher prices. Similarly, percentage swings need "adjusting" because the higher-priced issues normally do not swing so widely percentagewise as do the low-priced issues. This fact that low-priced and high-priced stocks move differently was the main problem for trading formulae and is one of the reasons many technicians have adopted the square root principles for charting and analysis.

The use of the Square Root principles has enabled us to adopt quite precise formulae applicable to both high-priced and low-priced issues for our Trend Reversal Signals and other important measurements and techniques. The I-S Signals on the Individual Stocks are largely based on the Square Root principles and before we delve further into these techniques of charting and signals we need to understand just why the Square Root principles are so important and how the proper charts can make the subject so simple and practical. The next few pages will be devoted to a bit of technical theory, and then we'll get into the business of Trends, and Signals, and Profits.

THE SQUARE ROOT LAW OF PRICE CHANGES

1 In technical analysis there is no substitute for charts. They make visual for you what otherwise is but a concept of Price and Time. A great deal of your success in the stock market will depend on your ability to interpret the chart and recognize the significance of the pattern before you. It is desirable, therefore, to give thought to the type of chart you are using, to know what information it shows best and what it may conceal. For instance, the percentage or log chart shows percentage best. Because in the higher prices it tends to condense the pattern, it tends to conceal the fact of the wider minor swings of Distribution, and because it expands in the lower prices it tends to conceal the formation of the narrow line of accumulation. This example intentionally jumps ahead of our text to emphasize the importance of having a full understanding of the nature and properties, the values and limitations, of the various scales in ordinary use.

2 First of all is the correct relaionship of the two main factors, PRICE and TIME. If the vertical Price scale is given too much space, that is, if the vertical space for each dollar or unit of price change is too great in proportion to the Time scale, the price movements will be very precipitous and give trends quite difficult to follow.

3 The three best known scale rulings are the Arithmetic and Logarithm scales and the (least well-known) Square Root Scale. The Arithmetic scale is, of course, the simplest and most frequently used, giving an equal vertical distance for each dollar or other unit of value. On the logarithm scale, equal dollar percentages show equal distances. The ratio of price movements is constant and it is also called the ratio scale. The Square Root scale is somewhat more difficult to explain but it is just as simple in use as either of the other scales

4 The important principle that affects all chart patterns and the important visual appraisal of the strength of the stock, is that although a high-priced stock ordinarily changes more in dollar units than does a low-priced stock, the low-priced stock usually will be found to change more percentagewise. Thus on an arithmetic scale chartpaper, the high-priced stock will show wide price swings in comparison with a low-priced stock, but on the logarithm (ratio or percentage) paper the low-priced stock will ordinarily show much wider price swings than will the high-priced stock.

5 In the effort to find some principle of harmony in the movements of high-priced and low-priced stocks, or some logical relationship in their movements, it was observed that in many market movements both the high-priced and low-priced stocks tend to move equal changes on their square roots. This is an important principle that we are going to use a great deal and should understand.

6 In 1931 Dr. F. R. Macauley, writing in the Annalist of March 13, 1931, page 425, pointed out that low-priced stocks move up and down a greater percentage than high-priced stocks, but that "other things being equal, stock prices tend to move equal increments on their square roots".

7 In 1932 a comprehensive study by Mr. Kenneth S. Van Strum showed statistically that low-priced stocks tend to move further percentage-wise than high-priced issues, and this was confirmed by several other statistical studies.

8 Mr. Harry D. Comer, in articles of March 13 and March 20, 1944, in BARRON'S, that great generator and storehouse of ideas on the stock market, pointed out that percentage comparisons of low-priced and high-priced stocks are likely to

1 other things (the inherent"strength" of the stocks) are equal. This suggests that when we can see visually or determine by measurement, that they are not moving equally, we may recognize that one stock is stronger than the other, which is often just what we want to know but it is concealed by the percentage or the arithmetic scale.

2 The inherent mathematics frequently distort the TREND of charted prices. On the log scale nearly all the low-priced stocks are seen to move up and down more precipitously than the high-priced issues. This is their nature. Thus when drawn on a ratio scale, the stock's price curve tends to rise sharply in the lower prices and then arc over in the characteristic parabola: ⌒ Conversely, if the same prices are plotted on an arithmetic scale graph, they begin slowly in terms of actual dollar gain, but have rapid dollar gains in the higher prices, and from a low price to a high price the price curve is ordinarily like this: ⌒

3 As Mr. Comer's articles in BARRON's so clearly demonstrated, on any comparison of price movements, the lower-priced stocks nearly always win percentagewise and look stronger in many comparative tabulations. When your $16 stock goesto $25, for a gain of 64%, the $100 stock can be expected (other things being equal) to go to $121, for a gain of only 121%. If it should go to $132, it has demonstrated more actual strength than the low-priced issue, but looks weaker on a percentage comparison or on one of the popular "ratio" ratings (which usually is calculated by dividing the price by the Averages or the change by the change in the Averages, or other data with which it is to be compared.) Thus a "rating" obtained in such a way can be convenient and entertaining, but unless they are at the same price level it does not help discover inherent strength or weakness.

4 For the same reasons, the ratio chart for short intervals of two uptrend stocks of similar strength will usually show the lower-priced stock moving at a rapid rate of ascent, a precipitous angle: /, while a higher-priced stock will tend to rise along a slower trend or angle: ⌒ On an arithmetic scale, the pattern comparison will be reversed, the low-priced stock appearing to creep up while the high-priced stock looks much more active.

5 From time to time you will see lists such as "Biggest Winners" or "Best Gainers" for the preceding year (or month or week). If you examine these you will often find that when ranked in terms of dollar gains, she higher-priced issues will tend to lead the list, but if they are ranked by percentage gains, the lower-priced issues will usually be the leaders. Not always, though, because of course there will always be some stocks that were actually outstanding performers rising far abovetheir price class. These were the truly strong issues—but while they were actually going up, because you will often find that they continued their Roman candle trajectory downward.

6 I started studying Square Root because The Annalist illustrations indicated it might give straighter trend lines, and then from Mr. Szatrowski's article (Page 112, ¶4) it appeared that square root might help solve the problems of the researchers using percent in identifying forecasting patterns, as related on the following page. Mr. Homer Fahrner's work was especially valuable. In this study we found that the "Square Root Law" (which is not a law, but only a tendency) is the best solution for making the Trend Keys and Rules of our most effective techniques, applicable to all price levels.

SQUARE ROOT REVEALS BAROMETRIC SWINGS

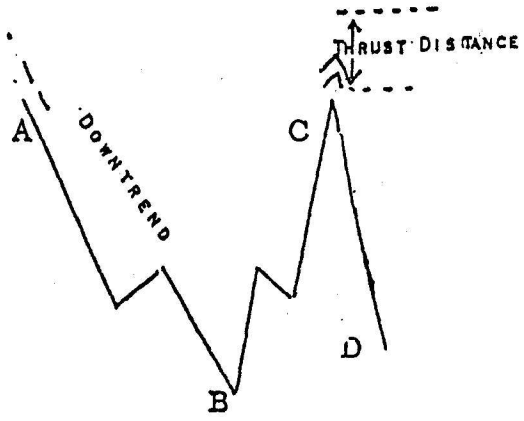
1 We do not use the Dow Theory as such, but its principles are basic to technical analysis and determination of trend of the individual stocks as well as the Averages.

2 Earlier pages have recognized that the primary problem not answered in the Dow Theory is a definition of the Intermediate Trend that has forecasting value. The three Dow Theory trends can frequently be identified in the moves of the individual stock, and most analysts agree that it is the Intermediate Trend that is the most profitable for trading, although as in the Dow Theory there is no satisfactory answer to the question of just what is an Intermediate Trend. I understand that Mr. Robert Rhea experimented with swings of 3% and 5%, but I do not know whether any of this research was published. Mr. Dunnigan and Dr. Moment published reports on the use of various percentages, 2%, 3%, 4% and 5%. BARRON'S irregularly publishes a tabulation of swings of about 3%, but I do not know just what is the minimum. Any of you who desire to research the present swings in the Averages can very well start with BARRON'S compilation, and the same periods may have some application to the NYSE and S&P Indexes.

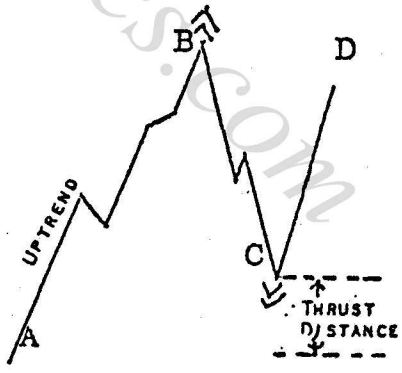
3 We are primarily interested in the individual stocks and disregard problems of terminology. We would prefer to use "Trading Trend" but "Intermediate Trend" is better known to most technicians. It may be recalled that Mr. Jesse Livermore published a system of identifying the significant swings which set up significant resistant points by averaging the prices of U.S.Steel and Bethlehem Steel, and used 5% of that average as identifying swings that create resistance levels where a reversal of trend might be recognized for trading purposes. Mr. Mandel applied similar principles for his "5 and 10" system in U.S. Steel, and Mr. Dunnigan's similar "Dow Theory Method" for GM and other stocks would have yielded huge profits over the years.

4 For any specific price bracket an appropriate percentage can be used but for a standard applicable both to high and low prices it is best,

The next page defines "SR Distance" illustrated below.



In Downtrend from "A", if B-C Swing equals SR distance, then as soon as C-D reaches SR distance (making C a BP), enter Stop Order to cover Shorts at the Thrust distance above C



In Uptrend from "A", if B-C Swing equals SR distance, then as soon as C-D Swing reaches SR distance, making C a BP, enter Stop Order to exit Longs at the Thrust distance below C.

1 for reasons explained in earlier pages, to use square root principles. Our research on this question indicated that swings of approximately one-half of square root of price is optimum in most stocks to reveal resistance levels with barometric significance, although a slightly larger figure is applicable at active Tops than at dormant Bottoms. That is, if a stock has declined this distance or more, and then rallies this distance or more, the Support or "V" thus shown is of such importance that if subsequently broken ("penetrated") a Change of Trend is indicated.

2. This one-half of Square Root is a minimum, and many swings will be much longer. But if the swing is less than this one-half of square root it probably is only a jiggle with no trend significance. Therefore we chart, or mark on our price chart, all swings equal to or more than half the square root of price. This distance we will call our SR distance, or SR Swing, although you will remember it is actually one-half the square root of price. For instance:

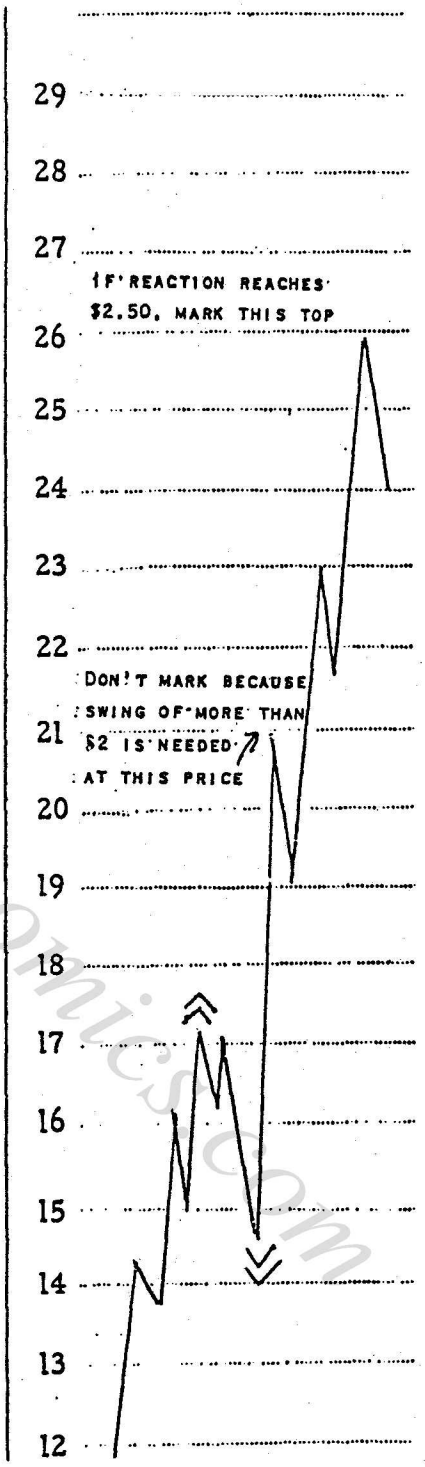
3 At price

$16	chart swings of $2 or more
$25	chart swings of $2.50 or more
$36	chart swings of $3 or more
$49	chart swings of $3.50 or more.

4 You need not remember these figures or calculate in each instance because with this Study is a Worksheet which gives this data in the column headed "(S)" for "Swings", as well as other specifics of the Method. Of course one of the mini calculators with the square root function will be more precise to the decimal and you may be able to use it more rapidly.

5 In UPTREND, when price reacts downward the SR distance or more and then rallies the SR distance or more, the lowest point of the reaction we will call a "Bottom". To distinguish it from a different bottom we learn later, we can call it an SR Bottom, but until you learn the later rule you need not differentiate. Such Bottoms (and also Tops made by SR Swings) we also call a "Breaking Point (BP)" for the purpose of Key One (⩔).

6 A BREAKING POINT (BP) is a price point the breaking of which on a later Swing denotes a Change of Trend. You will learn several "BP's"



derived from other criteria, of similar importance in the I-S METHOD.

1 On our individual stock price charts we will mark BP's at the bottom of SR swings with a "V" and to distinguish the SR swings we will use a double "V" mark: ⩔ . At the Tops of SR swings we will use the reverse mark, or double "A": ⩓. This will distinguish these SR Swings from other significant swings of lesser distance that you will learn later that will be marked with a single "V" or "A".

SQUARE ROOT KEY TABLE

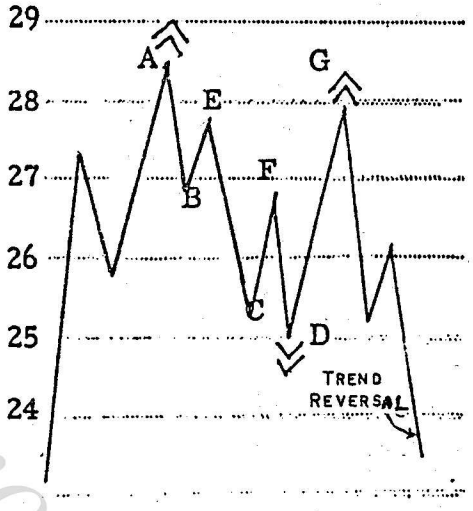
Price	A Swings	B Penetration	
15	2	1.	1
18	$2\frac{1}{8}$	1.125	$1\frac{1}{8}$
20	$2\frac{1}{4}$	1.125	$1\frac{1}{8}$
25	$2\frac{1}{2}$	1.250	$1\frac{1}{4}$
30	$2\frac{3}{4}$	1.375	$1\frac{3}{8}$

AMOUNT OF PENETRATION THAT GIVES SIGNAL VARIES WITH PRICE LEVEL

2 In an Uptrend, a Trend Reversal Signal (Downtrend Signal) is given when price breaks through the last SR Bottom " ⩔ " by a significant distance. This distance required for signal penetration also varies with the price level, being more, of course at a higher price level than at a lower price. To find a measurement that could be "Standard" at all price levels, we again have recourse to the Square Root principles. Although some stocks have a greater volatility than others at the same price, it appears that a penetration of one-fourth of Square Root gives the best results for most stocks. Incidental fractions we approximate to the next figure. For example:

3 When Price is $25, penetration is $1.25
When Price is $36, penetration is $1.50
When Price is $50. penetration is $1.875

The amounts for Penetration at various prices are given in Column "B" of SQUARE ROOT "KEY TABLE" ON Page 115. These values will be used in many other Signals of the I-S METHOD.



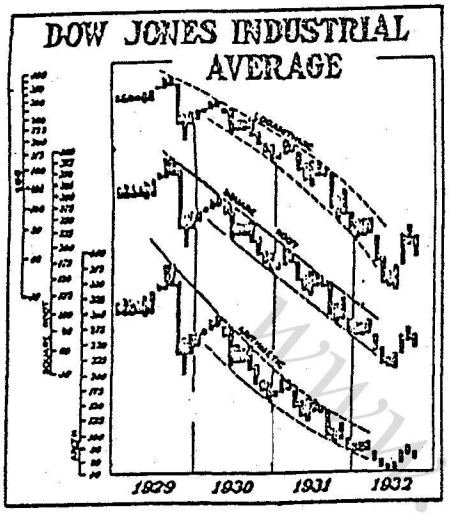
In the above diagram, "B" is not a BP because the swing A-B does not reach SR distance. Although A-C is SR distance, "C" is not a BP because the rally C-F does not reach SR distance. When the rally from D reaches SR distance (at $27.50) D is marked and when the next decline penetrates "D" by Thrust distance ($1) it completes a Trend Reversal Signal

$27\frac{1}{4}$

Extracts from THE ANNALIST

12/23/32

Chart 1.



THE following paragraph, written by Dr. Fred R. Macaulay of the National Bureau of Economic Research, appeared in THE ANNALIST of March 13, 1931, Page 506:

It is commonly recognized that, in general, high-priced stocks move a larger number of points, but a smaller percentage than low-priced stocks. A careful examination of a large mass of material has suggested that the relation is that, in general, stock prices move equal increments on their square roots. In other words, in a bull movement when one stock moves from 100 to 144; that is, from the square of 10 to the square of 12, another stock will move from 25 to 49; that is, from the square of 5 to the square of 7. It will be noticed that the higher-priced stock moves up 44 points, while the lower-priced stock moves up only 24 points. Therefore, the lower-priced stock moves up 96 per cent, while the higher-priced stock moves up only 44 per cent. They each move 2 points on their square roots, namely, from the square of 10 to the square of 12 or the square of 5 to the square of 7.

A still earlier reference to the general subject appeared in THE ANNALIST of Feb. 27, 1931, page 426, as follows:

F. R. Macaulay of the National Bureau of Economic Research has worked out an interesting equation describing the characteristic relationship between price level and amplitude of price fluctuation.

As far as we know, the above quotations contain the first public mention of the square root idea, as applied to the measurement of stock price fluctuations.

The idea there presented was that *during the same period of time* different stocks *tended* to move equal increments on their square roots, not that during equal consecutive periods of time the same stock or the same average tended to move equal increments on its square root. This idea was, of course, presented merely as a statistical generalization, not as a rigid mathematical law. If it were a rigid mathematical law it would make no difference which stock one bought—except that the lower the nominal price the greater would be the percentage profit.

Charting the prices of a stock on a square-root scale gives identically the same picture as charting the square roots on a natural scale.

The most practical use of the square root scale seems to be for the purpose of comparing the movements of the prices of different stocks. This is illustrated by Chart 4, which shows three stocks selected at random and plotted on the same square-root scale over the period from July 8 to the latter part of November, 1932. Although the three stocks selected lie in widely separated price-ranges and are dissimilar as to kind (one industrial, one rail, one utility), the square-root scale gives them an almost exactly equal range of fluctuations.

D. W. ELLSWORTH.

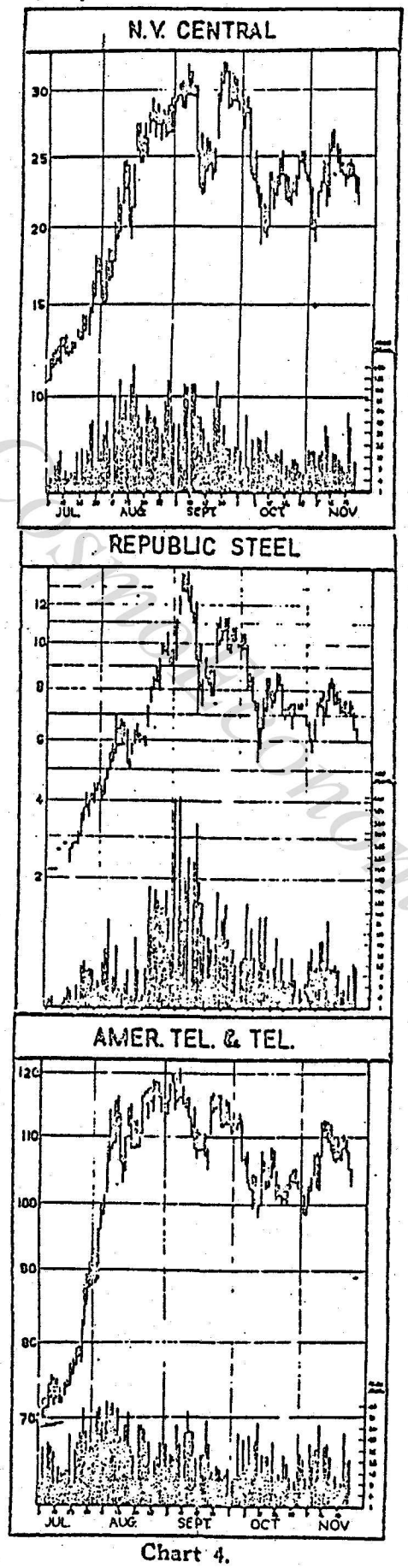


Chart 4.

New Highs Are Dangerous — Prior Bottoms Are Safer

Possibly because of thought habits induced by the Dow-Theory, and possibly because of the optimism inevitably aroused by rising prices, there is an almost universal practice among amateur speculators to buy on new highs or sell on new lows Very often this is correct, as where there has been a long trading range or line or triangle from which the new highs or new lows constitute a breakout. But just because the preceding Intermediate movement is exceeded on the current movement is no reason to expect that the current movement will go a great deal further. Indeed, in 1947 you saw a new Intermediate high, once in the Industrials and once in the Rails, which did not continue upward.

Instead of buying on new highs or selling on new lows, the professional technician prefers to sell when a previous Supply level is again reached, or buy when the previous low is later approached, and then protect his position by a stop order. Ordinarily, as previously pointed out, you will not sell just because the new High is reached, but when, as the new high is reached or possibly exceeded by a small margin, the stock turns downward, and possibly crosses the small trendline which may be apparent beneath the minor or intermediate upswing which has been in effect. It is important that you wait for some hesitation or sign that the upswing is actually meeting Supply again.

In the following broad Trading Range pattern, the above tactics and the principles previously discussed indicate SELL at the minor tops "C" and "D" and at "F" with STOP BUY orders just above the previous top "A" which thereby reverses to BUY in the advance after "G". Also, when the prior Support level of "B" is reached at "F", a BUY should be protected by a Reverse Sell just below "B".

Similarly, when reversing position on the breaking of the minor trendlines, a Stop should be entered just beyond the nearby resistance.