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THE ACHIEVEMENT MOTIVE: A SOCIOLOGICAL ANALYSIS

by

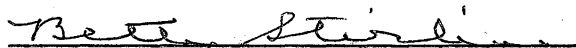
H. Dale Baumbach

A Thesis in Partial Fulfillment
of the Requirements for the Degree
Master of Arts in the Field of Sociology

August 1970

166547

Each person whose signature appears below certifies that he has read this thesis and that in his opinion it is adequate, in scope and quality, as a thesis for the degree of Master of Arts.

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PART I

REVIEW OF THE LITERATURE

I. INTRODUCTION

Our contemporary age can be characterized by large-scale attempts to even out the disparities of opportunity and reward in the economic system of the United States. Both the Federal and State governments have inaugurated numerous programs aimed at achieving this end. In the development of these programs however, serious questions have been raised as to whether the creation of new opportunities will automatically generate within people the desire to get ahead or whether financial incentives or other material rewards intrinsic to these programs are the most effective ways to get the best in productivity out of people.

Inherent in these questions is the difference of opinion which exists regarding the relative importance of environmental conditions and personal motivation as determining factors in the economic success of individuals and societies.

The importance of motivation to effective performance and personal satisfaction has long been realized. Among men of equal abilities, some are consistently superior performers while others never achieve their full potential. On the one hand, those advocating an individual approach attribute such differences to

underlying motivational patterns ingrained in the individual personality. Others, however, have seriously challenged this contention on the grounds that specific environmental conditions are the key factors influencing individual performance. Others have argued that environmental factors are important only insofar as they affect individual motivation.

The purpose of this study is to investigate the relative importance of environmental factors and individual motivation in social and economic achievement. To facilitate the integration of this entire study, this paper will be presented in two parts. Part I, along with the introduction, will deal with the review of the literature, beginning with an historical perspective and concluding with related studies which gave rise to the specific hypothesis of the present study. Part II will consist of the presentation of the present experiment, including a statement of the problem, definitions, method, results, discussion and conclusion. This has been done since in a study such as the present one, involving the necessary reporting of a vast amount of previous research and theoretical positions, I feel this format will allow greater continuity between the various aspects of this report, and will assist the reader in comprehending a bit more easily how the present experiment is related to the previous research and theoretical positions and how the latter, in turn, are related to each other.

II. HISTORICAL PERSPECTIVE

In arguing for an individual approach to achievement, David McClelland of Harvard University has proposed a theory of motivation based on the concept of a need for achievement (n Ach) to explain the economic success of individuals and nations. This need for achievement, McClelland contends, is the basic underlying factor which is in part responsible for the success or failure of an individual in his daily life endeavors. An individual with a high achievement motivation will be more likely to succeed than an individual with a low achievement motivation.

Extending this theory to societies at large, McClelland has postulated that the collective achievement motivation of the individual members of a society is the primary factor responsible for the success or failure of that society; the higher the collective n Ach, the more successful the society will be. The presumed mechanism by which n Ach level translates itself into economic growth is the entrepreneurial class. If the n Ach level is high, there will presumably be more people who behave like entrepreneurs, acting to produce more than they can consume and hence, raising the general economic level.

Achievement motivation has been shown to be directly related to success in a wide variety of individual endeavors, and a great deal of work has been published regarding the various behavioral

and social consequences of achievement motivation. However, only a brief summary of the work done primarily relating achievement motivation to economic development will be presented here, along with a brief summary of the work done on the sources of achievement motivation.

Protestantism and Achievement Motivation

The hypothesis that n Ach is associated with economic growth was derived from a particular historical sequence of events in Western Europe--the Protestant Reformation and the rise of Capitalism (McClelland, 1961: 36-63). Max Weber (1904) has described in convincing detail how the Protestant Reformation produced a new character type which infused a more vigorous spirit into the attitudes of both workers and entrepreneurs and which ultimately resulted in the development of industrial capitalism.

In a recent study, Winterbottom (1953) proposed a psychological means by which the historical development described by Weber may have come about. In her study, Winterbottom found that mothers of individuals high in n Ach utilized child-training techniques which give rise to behavioral patterns similar to those described by Weber as resulting from the Protestant Reformation. She suggests that the Protestant Reformation effected a revolution in child-training practices within the family which led to a higher level of n Ach in the children of Protestant families. This higher level of n Ach, in turn, led to the rise of modern Capitalism.

McClelland (1961: 46-50) notes that Weber's description of the kind of personality type which the Protestant Reformation produced is startlingly similar to that of a person with high achievement motivation. Weber noted that Protestants seemed to work harder and longer, they saved their money for long-range goals, that Protestant entrepreneurs rose to the top more often in the business world despite the initial advantages of wealth many Catholic families on the Continent had. In particular, he points out that the early Calvinist businessman was prevented by his religious views from enjoying the results of his labors. He could not spend money on himself because of scruples on self-indulgence and display, and so, more often than not, he re-invested his profits in his business, which is one reason why he prospered. Weber feels that such a man gets nothing out of his wealth for himself, except the irrational sense of having done his job well. McClelland (1961: 508) notes that this is exactly how the achievement motive is defined in coding for it in fantasy stories. He thus interprets Weber's argument for the connection between Protestantism and the rise of capitalism in terms of a revolution in the family, leading to more sons with strong internalized achievement drives.

Evidence in support of this contention that Protestantism does give rise to higher n Ach has been found in various reports. In a recent study, McClelland (1961: 50-57) found a distinct association between the level of economic development and Protestantism. He reports that as of 1950, Protestant countries were significantly

more economically advanced on the average, even taking their differences in national resources into account, than were Catholic countries. In another study, McClelland et al. (1955) have also found that Protestant mothers stressed earlier independence, mastery training, and self-reliance than did the Catholic mothers.

From this it should follow that Protestant boys, on the average, should have a higher level of n Ach. McClelland et al. (1958) have presented some evidence in support of this notion. They tested their hypothesis in Germany, where Protestants and Catholics have lived side by side for centuries, so that comparisons would not involve complications arising out of migration differentials. They found that, where other factors were held equal, Protestant boys had a higher n Ach on the average than Catholic boys. They further found that significantly more of the Protestant than Catholic boys were attending a "modern language" as contrasted with a "classical language" school. They note that this finding is interesting since Weber argued that Protestants more often went to technical or modern schools which they found to be better preparation for business, whereas Catholics showed a greater preference for classical humanities studies. McClelland, et al. suggest that attending a more "modern" school perhaps becomes the means by which higher Protestant n Ach becomes channeled into business activity, at least in Germany. In partial support of this they found that German boys with high n Ach did appear to look with more favor on business occupations. There was, however,

as yet no evidence that they would actually be more likely to enter these occupations.

It does seem likely, therefore, that Protestantism may contribute to higher economic development by giving rise to a higher level of n Ach. But clearly Protestantism is only one of several general factors which could affect the level of n Ach. Throughout the Centuries, numerous societies other than Protestant have enjoyed varying degrees of economic and social success and, following McClelland's hypothesis, a high level of n Ach should predispose any society to vigorous economic activity. Considerable evidence in support of this latter notion has been accumulated.

Achieving Societies In The Past

In studying economic and social development in Ancient Greece, Berlew (1956) analyzed the literature of the Greek civilization for achievement motivation using the scoring procedure for imaginative literature described by McClelland (1961: Chap. 3). Berlew's assumption was that various samples of literary material would adequately represent the strivings and hopes of at least the portions of the Greek population significant for economic growth. The samples to be analyzed were selected according to various pertinent criteria. His hypothesis was that the level of achievement motivation in Greece should have been high before its period of maximum growth and should have fallen significantly before the subsequent decline of the civilization. The level of n Ach thus

should precede and presumably determine the changes in general activity level in the culture. He notes that it presumably would take some time for an active and energetic entrepreneurial class to build up a great civilization, although it might take less time for their children and grandchildren with lower achievement motivation to "let things go" so that the civilization declines and collapses.

The measure of the economic rise and fall of classical Greece was taken to be the area with which she traded, in millions of square miles, as determined by the location of vases unearthed in which her chief export commodities were transported. Although not a perfect index of economic development, the figures derived from this measure, as Berlew notes, tended to agree rather well with estimates by historians of her economic position based on a consideration of all the factors involved. Since Athens was generally regarded then as the economic and cultural center of Greek civilization, Berlew chose documents to be scored and economic indices as much as possible from Athens and the surrounding regions whose development paralleled hers. The economic development was thus divided into three general periods as follows:

Period of growth---900 B.C. to 475 B.C.

Period of climax---475 B.C. to 362 B.C.

Period of decline--362 B.C. to 100 B.C.

Berlew found that in every category of material scored, the

highest incidence of achievement imagery occurred in the growth period, the next highest in the climax period, and the lowest in the period of decline. Figure 1 plots n Ach score against the measure of economic development adopted. As can be seen, the level of n Ach is highest in the early period when economic growth is still low. By the time economic development had reached its maximum (presumably pushed along by the high level of n Ach), the over-all level of n Ach had dropped, foreshadowing, as Berlew hypothesized, the subsequent economic decline. Berlew concludes that so far as Ancient Greece is concerned, his hypothesis is confirmed: A high level of achievement motivation precedes economic growth, a lower level of achievement motivation precedes economic decline.

As further confirmation of Berlew's results, Aronson (1961) applied his measure of shape variables and use of space to the designs appearing on Greek vases as photographed in the Corpus Vasorum Antiquorum. Earlier, Aronson (1958) had discovered that subjects with high n Ach "doodle" in characteristically different ways from subjects with low n Ach and has cross-validated his findings with several samples of male college students. His findings have also been confirmed in other countries.

Both "diagonals" and "S-shapes" were found to be characteristic of subjects with high n Ach. Just like the n Ach scores based on literary productions, these designs appeared most frequently

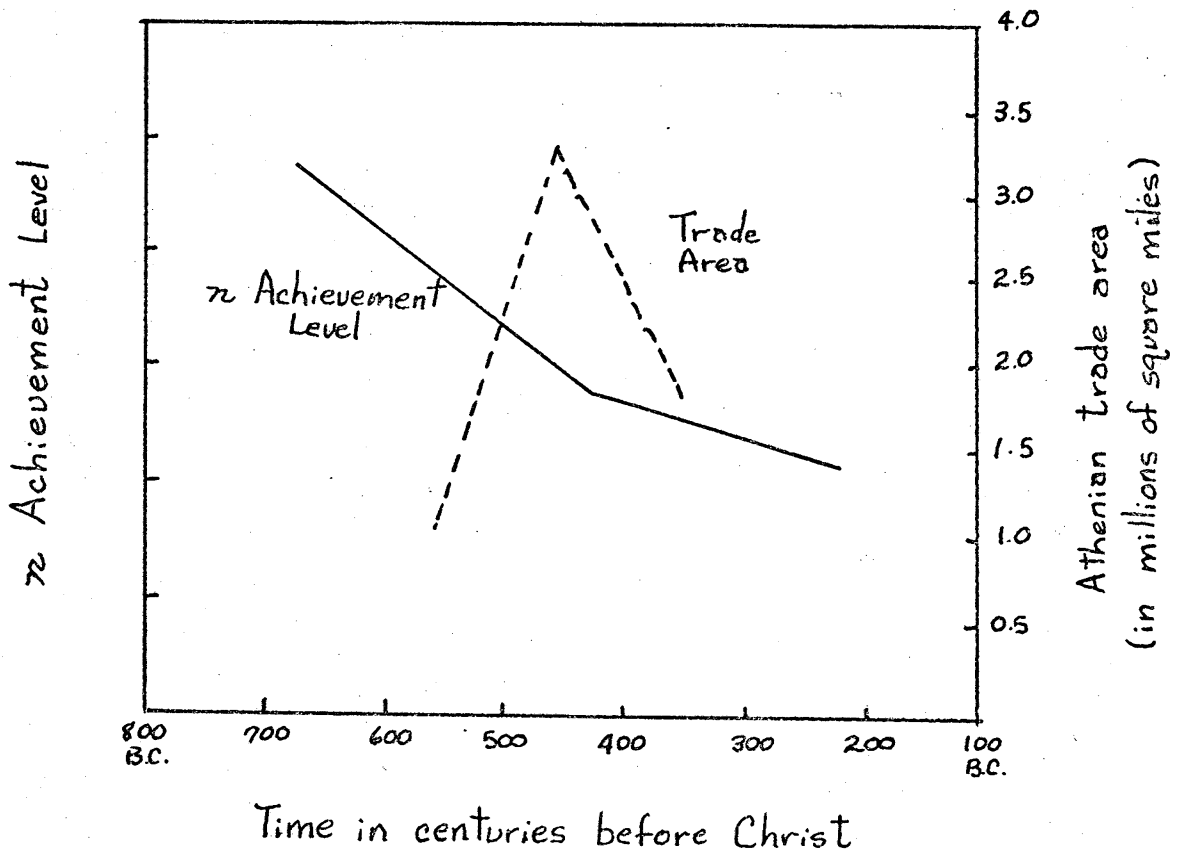


Figure 1 Average Achievement level plotted at midpoints of periods of growth, climax, and decline of Athenian civilization as reflected in the extent of her trade area.¹

¹Reported in David C. McClelland, The Achieving Society. New York: The Free Press. 1961, p. 120.

in 6th-century Greece, next most frequently in the 5th century, and least frequently in the 4th century.

If the S-shape continues to undulate, it becomes a "multiple wave," a characteristic Aronson found to appear significantly more often in the doodles of contemporary individuals with low n Ach. No significant trend for this characteristic was found for the vase designs, although it does appear most often as was predicted during the period of decline.

Since Aronson had found that subjects with low n Ach tended to fill up less of the space at the bottom of a piece of paper with doodles, he also measured the amount of unused space at the bottom of the Greek vases, dividing in each instance by the vertical height of the vase in the photograph to get the proportion of space that was unfilled. As in the case of diagonals and S-shapes, the proportion of space unused followed the n Ach trend in Greek history quite closely for the first two periods. It was lowest in the period of growth, and highest in the period of climax. Aronson notes that the sample of vases for the third period was so small that with only one measure coming from each of them, the shift back toward more use of space cannot be taken to mean very much.

The signs of high n Ach thus, are most frequent (more diagonals and S-shapes, less unused space) in the period of growth, and

significantly less frequent in the period of climax. In analyzing this data, McClelland (1961: 126-129) notes that the designs the person with a high n Ach makes are not completely meaningless. He feels that what they suggest is that in movement as in everything else he is energetic (tends to use up space, prefers "dynamic" diagonals to static verticals and horizontals) and likes variety or trends to innovate (prefers S-shapes to redundant multiple waves). He further notes that the functional similarity between painting vases and making doodles is greater than one might at first suspect and concludes that Aronson's results strongly confirm the original hypothesis about Ancient Greece.

In another study, Evan Davies (1969) applied the McClelland-Aronson test for n Ach to the pottery of the Minoan civilization which was based on the island of Crete. On the basis of the historical development of Crete, he divided the Minoan culture into three different periods as follows:

Early Minoan (Period of growth)---2600 B.C. to 1950 B.C.

Middle Minoan (Period of Climax)--1950 B.C. to 1650 B.C.

Late Minoan (Period of decline)---1600 B.C. to 1400 B.C.

He then divided the pottery samples into subgroups for each period and found that the highest level of n Ach occurred in the Early Minoan period. This, he notes, preceded the great flowering of Minoan art and culture in the Middle Minoan period. Thereafter,

however, the n Ach declines so that by the onset of the Late Minoan period the Minoan level of n Ach had continuously deteriorated and was finally overthrown by the Mycenaen civilization. Thus, Davies concludes, the seeds of decline (lowered n Ach) had been laid down in the Middle and beginning of the Late Minoan periods.

Cortes (1960) applied the n Ach measure to literature from Medieval Spain and found results similar to that found with Ancient Greece. As outside limits for the historical period to be investigated, he chose roughly 1200 A.D. as a beginning point, since it was only in the 13th century that Spain had reconquered enough of her territory from the Arabs to become in any sense a "nation," and 1700-1710 as an end point since thereafter there are signs that the economic decline beginning about a century earlier had come to some kind of an end. As a measure of economic growth, Cortes used the figures collected by Chaumu (1959) and Usher (1932) on the tonnage of ships per year cleared from Spain for the New World. These figures seemed to reflect satisfactorily the consensus of economic historians as to the periods of growth, climax, and decline in the Spanish economy in the late Middle Ages. In selecting literature to code for n Ach, Cortes limited his sample to the kingdom of Castile (excluding the kingdoms of Aragon, Catalonia, Navarre and Valencia) because it included more than 75 per cent of peninsular Spanish territories and almost 85 per cent of the population by the end of the 16th century.

The results, expressed as in the other studies in terms of number of achievement images per hundred lines, are identical with those obtained in the study of Ancient Greece. Achievement motivation is highest (mean = 10.74) during the early period and had definitely dropped (mean = 6.07) by the time of economic climax, foreshadowing once again the subsequent economic decline. Thus, as can be seen in Figure 2, the initial high level of n Ach is followed some time later by a wave of economic growth which subsides fairly abruptly after the level of n Ach has decisively dropped. The result is very much like that obtained for Ancient Greece and confirms the connection between achievement motivation and economic growth in another time period for a totally different culture.

It seems then, that a high level of n Ach does lead to subsequent economic growth. An alternative explanation of the Greek and Spanish findings as pointed out by McClelland (1961: 133) however, is that n Ach decline precedes economic growth since, upon re-inspection of the figures presented earlier, all that has actually been measured is such a decline and it is not known whether the initial point is high or low relative to what it had been earlier. The question that is raised is whether in fact a rise in n Ach level precedes a wave of economic growth. In an attempt to answer this question, Bradburn and Berlew (1961) examined the literature and economic history of England from Tudor times to the Industrial Revolution.

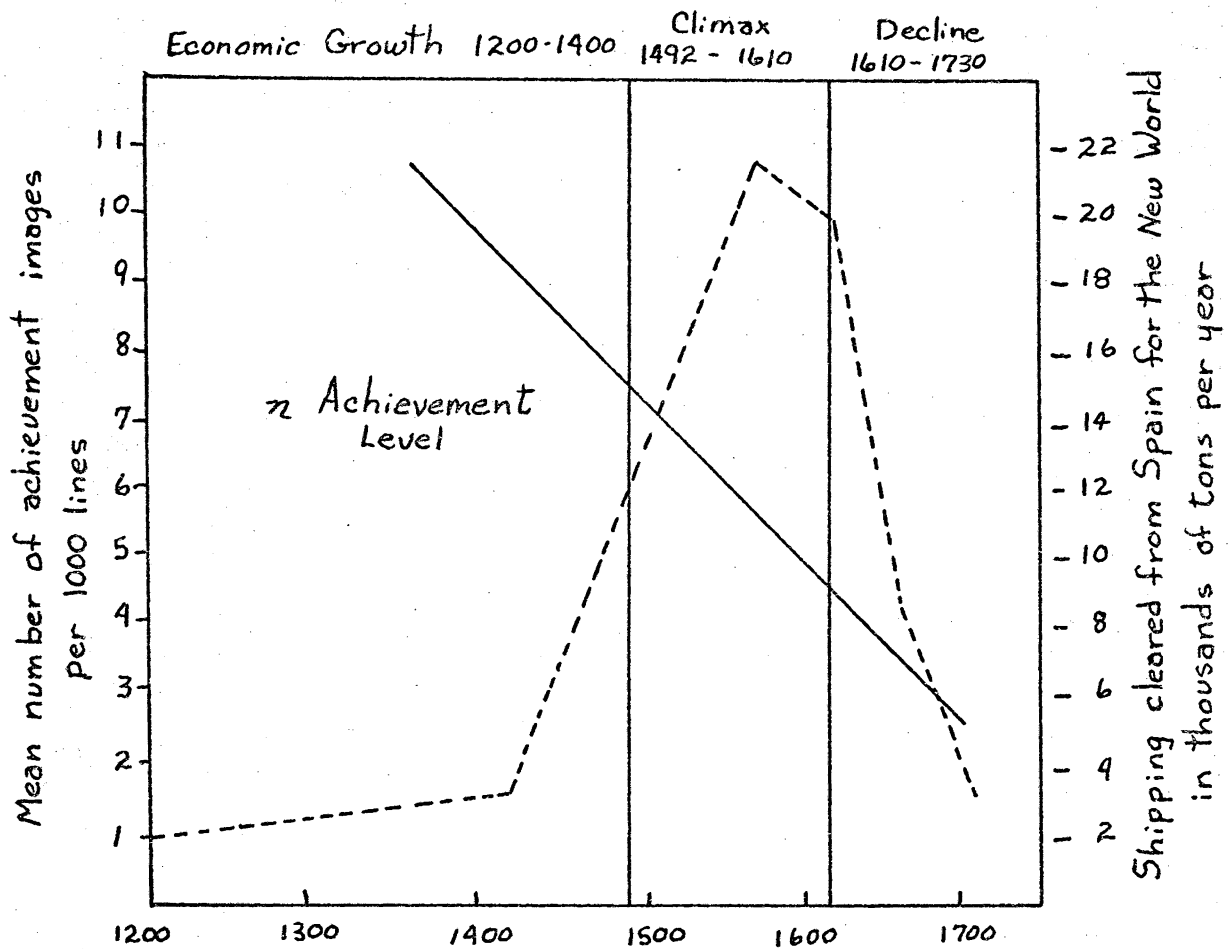


Figure 2 Average n Achievement level in literature at midpoints of periods of economic growth, climax, and decline in Medieval Spain.¹

¹Reported in J.B. Cortes, The Achievement Motive in the Spanish Economy Between the 13th and 18th Centuries. Econ. Develpm. Cult. Change, 1960, 9, 144-163.

Bradburn and Berlew (1961) set out to get a continuous record of an Ach level in England from around 1400 in half century periods up through the beginning of the Industrial Revolution (around 1830). In other words, they wanted to start well before England began to stir under the Tudor kings, back in the days when it was still largely pasture and woodland, when "from Blacon point to Hillbree a squirrel may jump from tree to tree," and to carry the record continuously up through the time when England was largely a concentration of great industrial cities that became the workshops and commercial capitals of the world.

As an index of economic level, Bradburn and Berlew used the coal import figures at London collected by Nef (1932) and Jevons (1906). The reasoning for this was that coal then, like electricity now, provided the power for many key economic activities, both commercial and domestic. The starting point which they used was the first year for which figures were available, namely 1585-1586. They then decided to get estimates of coal imports for every third of a century thereafter to get enough points to plot a reasonably stable regression line. They decided to use a regression line instead of a simple percentage level since such a measure tends to inflate enormously the percentage gains at the early stages of growth when the initial levels are very low. Thus, rather than use the figure for any given year, they averaged all figures available for the third of a century in question to get an approximation of imports over that period. Then gains in

roughly equal time periods of approximately 33-35 years could be obtained simply by subtracting each level from the preceding one (i.e. the level of 1618-1620 subtracted from the level of 1585-1586, etc.).

The regression formula for the straight line relationship ($\log \text{ gain} = .671 \log \text{ level} + 1.6389$) predicts what the gain should be from one time period to the next. Then this predicted value can be compared with the obtained value and the deviation expressed in standard score units to see how fast the economy was expanding or contracting in terms of its average performance over this time period. The standard score values obtained in this way by Bradburn and Berlew are plotted in Fig. 3 at mid-points in the intervals over which the rate of gain took place. That is, they plotted the gain between 1585 and 1618-1620 at 1600, simply because it had to be plotted at some point and the mid-point seemed more representative than the end point for a rate of gain taking place over the whole period. Actually if the plotting were done at the end points, no differences in the interpretation of the relationship between Achievement and economic changes would be necessary.

Although the estimates are, as Bradburn and Berlew readily admit, rather crude, they nevertheless show three rather well-defined phases in the economic growth of England to the Industrial Revolution. The first period, centering in the years 1600-1690, is one of moderate overachievement (mean standard score for the

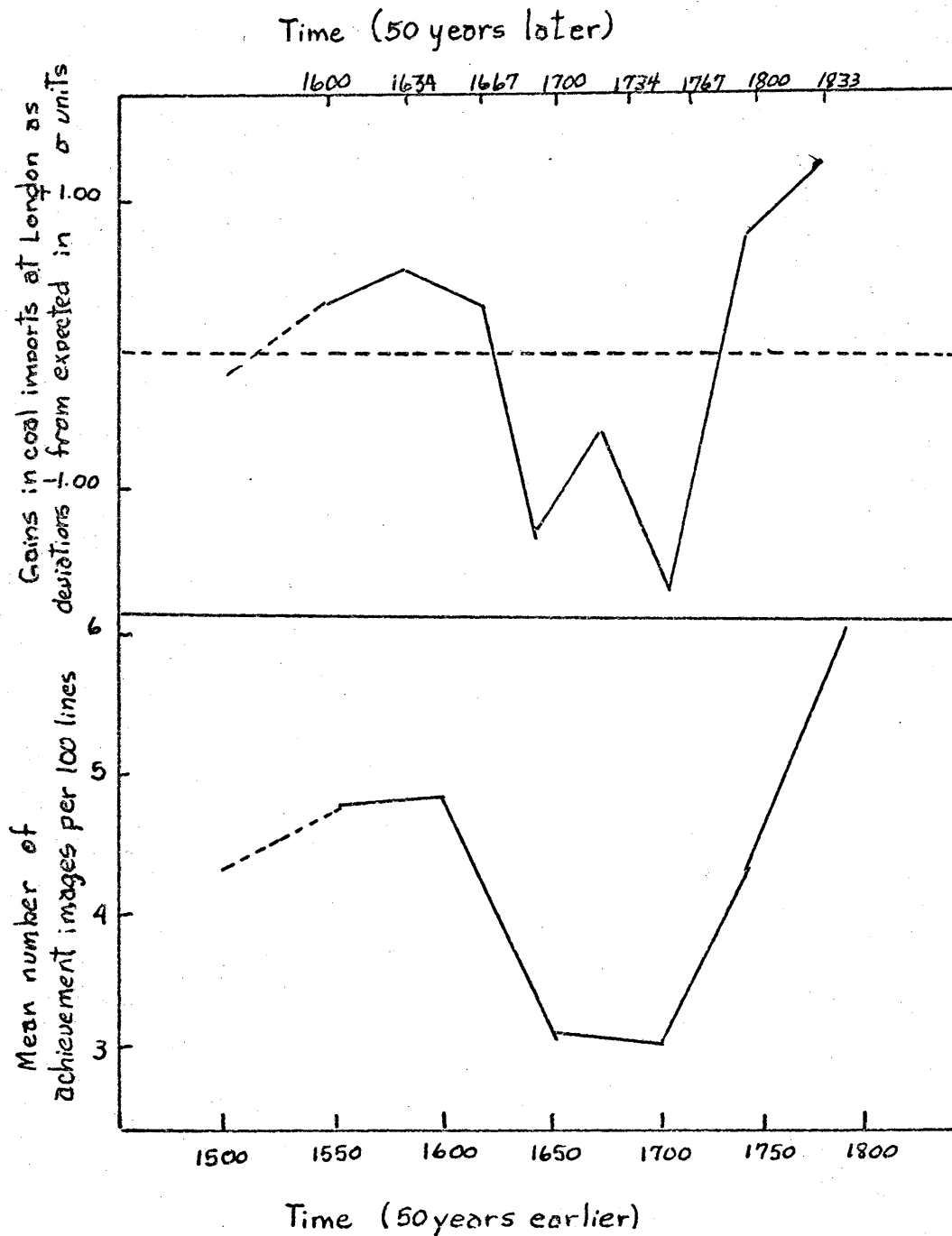


Figure 3 Average Achievement Levels in English Literature (1550-1800) compared with rates of gain in coal imports at London 50 years later.¹

¹Reported in David C. McClelland, The Achieving Society. New York. 1961, p. 139.

first three estimates of gain = + .33). This is followed by a period of stagnation or underachievement centering in the years 1700-1780 (mean standard score for the three estimates of gain in this time period = -1.11). Finally, by 1800 the third phase of phenomenal economic growth culminating in the Industrial Revolution is already well under way (mean standard score for the two estimates of gains in this time period = +1.17).

Figure 3 also plots for easy visual comparison the motivational scores for a 50-year earlier time period along with the economic gain figures. Obviously the fit between the two curves is fairly close, the main point being that the motivational changes precede the economic ones by 30-50 years. The simplest summary of the data is that n Achievement level was high from 1500 through 1625 and that this high level definitely appeared before the rapid economic growth that extended from 1600-1675. Furthermore, Bradburn and Berlew note that n Ach figures for literature 50-75 years earlier showed that so far as this literary form is concerned, n Ach level was lower earlier in the mid-15th century (mean = 4.60) than it was later, around 1525 (mean = 6.16), confirming the hypothesis that the over-all measure starts (1540) at a high point in the n Ach curve. This result is an interesting and potentially important confirmation of the theoretical expectation, not tested in Greece or Spain, that n Ach has to rise to the high point at which it appears at the beginning of the phases of economic growth that have been chosen for study.

It seems rather clear that the economic slump characterizing the first half of the 18th century was preceded by a fall in n Ach level beginning in the period 1625-1675 and continuing through the next 50 years to 1725. The drop appears in all forms of literary samples evaluated. The simplest statistical comparison is between the level for 1500-1625 versus the level for 1626-1725. T tests were computed for the comparison level for each of the three types of literature (plays, accounts of sea voyages, and street ballads) separately, and their p values combined by the chi-square technique. The results show that the chances of the drop arising from sampling fluctuations are less than one in a hundred, i.e. the drop in n Ach is marked and statistically highly significant.

In accounting for what produced this drop, McClelland (1961: 144) states that these were years of great internal stress and civil war in Britain, of struggles between kings and Parliament as to who should rule. Apparently, McClelland notes, the generally unsettled conditions of ordinary life affected the motives and the values of the people at the time more than it did England's economy, which continued to thrive throughout the 17th century. Thus, the political instability of the 17th century did affect the economy not at the time, but a generation or two later and then only indirectly by affecting the motives and aspirations of the people.

In the third phase of the English economic development there was a marked increase in the rate of growth beginning near the end of the 18th century and continuing on through the Industrial Revolution. The coal import figures in Fig. 3 show that the gains from around 1770 to 1883 were well above average and reached a magnitude several times as great as the earlier spurt in Elizabethan times. Between the mid-18th and mid-19th centuries the British economy was transformed "in a way which no country had ever before known." (Meier and Baldwin, 1957: 149). The chief agent of change was the rapid growth in technology brought about by the marriage of science and industry. The last third of the 18th century saw the practical application of many technological improvements which made greatly increased productivity possible--- the spinning "jenny," the power loom, Watt's steam engine, new applications of chemistry to industry, improved methods of producing pig iron, and the use of iron wire rope for winding up coal. (Meier and Baldwin, 1957: 152-153). McClelland (1961: 145) notes that it is clear that a rise in n Ach level preceded these striking economic developments.

Of particular interest, in light of the presumed connection between Protestantism and n Ach, is the fact that the period of 1500-1625 is precisely the time when Protestantism and eventually Puritanism was growing most rapidly in strength and numbers both in England and Scotland. In mid-century John Knox led the Calvinist revolution to a successful outcome, with the help of the English,

in Scotland. In England the century began under the leadership of a king, Henry VIII, who certainly in his youth set an example of high n Ach for his people. "He could bend a bow with the best forester in the realm, and when complimented on his archery by the French ambassador could reply, 'It was good for a Frenchman.' His colossal suit of tilting armor in the Tower reminds us that once he flashed through the lists like Lancelot, laying low his adversaries and calling for more. He was a champion at tennis and a mighty hunter...Among other accomplishments this Admirable Crichton was no mean musician, and played well on all known instruments." (McClelland, 1961: 142). Henry, while orthodox enough himself in the beginning in religious matters, encouraged the "new learning" brought over from Renaissance circles in Europe. Eventually he broke with Rome over the question of his remarriage, but certainly the rupture would not have lasted without the ground swell of support in public opinion led by the scholars he had encouraged and two great religious reformers--Cramer, who translated the Prayer Book into English, and Latimer "the soul of the popular movement," who "by his rough, homely sermons, set the standard of that English pulpit oratory which, together with the Bible and the Prayer Book, effected the conversion of the people to Protestantism in the course of the next hundred years." (McClelland, 1961: 142).

The basis for the Protestant Reformation had been laid decades before by Wycliffe's translation of the Bible into English, but

the popular movement which had failed then gained decisive momentum during the very years when, as McClelland notes (1961: 142) evidence shows that n Ach level in England was high. So far as this period in history is concerned, the rise of Protestantism and n Ach are closely connected, as indeed they should be if McClelland's interpretation of Weber's hypothesis in psychological terms is correct. In addition, the increase in n Ach between 1700 and 1750 was accompanied by a Protestant revival. It was during this period beginning in 1729 at Oxford that John Wesley sparked the religious revival that culminated in the foundation of the non-conformist Methodist Church. Here again, in the first half of the 18th century as in the first half of the 16th century a strong Protestant movement coincides with a high n Ach level and both are followed in a generation or so by a greatly increased rate of economic growth. There is even some evidence that the rise in n Ach at the end of the 18th century was significantly higher as it should have been than the rise in 16th century which had preceded the first--and lesser--wave of economic growth.

Achieving Societies In The Present

In assessing motivational levels among more contemporary nations, McClelland (1961: 70) has used children's stories in coding for n Ach. These, he feels, are the nearest equivalents corresponding to the folk tales and other types of literature used in the earlier studies. First, he notes, they often derive from the same oral traditions that are represented in folk tales. Second,

they have existed (for at least the past generation) in more-or-less standard form in school books used by second to fourth-grade children of all lands. Such stories are simple, short and imaginative--at least in the sense that they normally do not yet deal with factual, historical events or political problems. They tell about imaginary situations, sometimes fantastic (from the world of fairies, giants and dwarfs) and sometimes realistic (from everyday life), but the intent is everywhere the same--to provide something interesting and instructive for the child to read. In this sense the stories are "projective" and tend to reflect the motives and values of the culture in the way they are told or in their themes or plots. These stories, McClelland feels, represent "popular culture"--what is considered appropriate for all children to read, not just those from a special social class. In this sense they should be less biased than novels, for example, which may reflect the motives and values of a much narrower segment of the population. Children's stories are also less subtle, more direct in their "message," than many other forms of literature. As Margaret Mead (1951) has put it so succinctly, a culture has to get its values across to its children in such simple terms that even a behavioral scientist can understand them. Finally, and most importantly for his research design, McClelland notes that children's readers, containing such brief comparable stories, could in fact be obtained from a generation ago for a representative sample of countries. The hypothesis could therefore be tested that n Ach levels in them would predict subsequent

economic growth.

In his study, McClelland (1961: 63-106) collected completed sets of stories from 23 countries for an early period (1920-1929, centering around 1925) and from 40 countries for a later period (1946-1955, centering around 1950). All the stories were then coded according to the n Ach criteria. As an index of economic growth, McClelland used two measures--Clark's (1957) estimates of real national income and kilowatt-hours of electricity produced. Economic gain for each country was evaluated in terms of the regression line which best fit the over-all relationship between initial level and gain (see McClelland, 1961: 88).

The countries were listed according to gain in electrical output (1929-1950) as compared with expected gain, and the n Ach levels for 1925 suggested that there were strong tendencies for those countries at the top which performed better than expected economically to have been high in n Ach at the outset of the period over which growth was measured.

The results are quite striking, and McClelland contends that his general hypothesis is strongly confirmed. The estimates of n Ach are positively correlated with subsequent economic growth and very significantly so for the electrical output measure, or for both measures combined. On the other hand, n Ach level as estimated from the 1950 readers is not related to previous economic

growth.

McClelland (1961: 93) contends that it is difficult to argue from these data that material advance came first and created a higher need for achievement. Rather, he contends, the reverse appears to be true--high n Ach levels are associated with subsequently more rapid economic development. He notes that the relationship is quite sizeable and unlikely to be altered by various adjustments. Thus, 78 per cent of the countries above the mean in n Ach in 1925 were "overachievers" so far as electrical output is concerned, as compared with only 25 per cent of those below the mean in n Ach, a difference that could have arisen by chance less than 5 in 100 times. The adjustments in the regression coefficient for three countries (Norway, Canada, and Switzerland) which might certainly be criticized, do not any of them change the sign of the gain. Thus Norway remains an underachiever, and the other two remain overachievers, even if no adjustments are made. Furthermore, if published figures on Russia's electrical output can be accepted at face value, it would have to be classified as doing better than expected, since it went from a kilowatt-hour per capita figure of around 40-50 in 1929 to 440 in 1950. Yet Russia's n Ach level in 1925 is estimated to be below the mean. The Russian electrical output figures were not included in the table by McClelland since he felt that both the electrical output figures and the population estimates "seem more than usually open to error," but even if Russia were included as a negative instance

of the predicted relationship, the over-all association would still be significant at the .05 level.

There is, however, one rather obvious complication involved in all of these data, which McClelland readily notes. Many of the countries that were underachievers economically speaking were crippled by World War II, either because they were conquered, occupied, or heavily bombed (e.g., Netherlands, Germany, France, Norway, Belgium). Actually, failure to gain in electrical output over expected between 1929-1950 is significantly correlated with degree of interference by the war, when such interference is estimated as the maximum drop in electrical output (in percentage terms) in any one year during the war over any other previous year. In other words, poor economic performance may not be the result of lack of motivation but of damage suffered during the war.

McClelland (1961: 93) notes, however, that the crucial and rather surprising fact is that war damage as estimated above is also very significantly negatively correlated with n Ach level in 1925 ($r = -.58, p < .01$). The countries low in n Ach like the Netherlands, Belgium, France, and Germany, were in general the ones most severely damaged in the war, while the countries high in n Ach like Australia, United States, Canada, and Sweden were not. There are, of course, various difficulties in drawing any concrete conclusions, but McClelland suggests ignoring the war

altogether. He notes that after all, from the theoretical viewpoint and in the historical studies cited earlier, external events, whether for good or for ill, are turned to one account or another depending on the motives of the people involved. In a sense, then, history is what happened, not what might have happened if there hadn't been a war, depression or an invasion. As history actually happened, a high *n Ach* level in 1925 predicts economic growth pretty well to 1950 regardless of wars, depressions, and the like.

As for the small countries, McClelland (1961: 96) feels that there was freedom of movement even for them. The Danes, for example, with high *n Ach* came out of the German occupation an overachiever and much better off than the Norwegians, the Dutch and the Belgians with lower *n Ach*. The latter, he notes, may have struggled more against the German occupying forces, but the Danes paid more attention to what the hypothesis predicts--namely, to economic matters. If we take the hypothesis in its strongest sense, it says that people with high *n Ach* will tend to focus on economic matters to the exclusion of other interests like fighting wars, so that in the end they will be better off economically. This, McClelland notes, is exactly what the data show and a strong case can be made for not giving extra credit to those countries which spent their time and resources doing other things. What these countries "lost," economically speaking, during the war, he notes, was really lost and can very properly be charged to their account in most cases, either because they did not respond

vigorously enough to the destruction, or because they didn't avoid the war in the first place, or because they spent their energies in non-economic pursuits during the occupation such as fighting their conquerors. He therefore feels that the figures on economic growth are the best estimates that can be made, and has used them uncorrected. He does note, however, that so far as his key hypothesis goes, it is not much affected by the argument over whether to correct for war damage. National levels of n Ach as estimated in children's readers for around 1925 predict subsequent gains in economic productivity significantly despite all reasonable corrections or adjustments for war damage.

In another study, McClelland (1961: 97) compared the national levels of n Ach in 1950 and subsequent rates of economic growth for various countries. 1952 was chosen as the starting date for measuring growth since this gives at least a minimum lag from the 1950 median date for the reader data and at least a six-year period (to 1958) over which to measure rate of growth. McClelland notes that while six years is generally speaking too short for the kind of trend he is looking for, this particular decade has an advantage that would not obtain for all such short time periods. That is, it was a time of relative peace and prosperity; there were no world-wide major wars or depressions. Therefore, one might expect that levels of achievement motivation could express themselves more directly in national economic activity than if there were major influences from the outside like the widespread

depression of the thirties or World War II.

Electrical output was again chosen as likely to be the most representative measure of economic growth on which accurate comparable figures are most generally available. This time, however, McClelland did not feel there was any need to convert output into per capita terms since there were no major territorial changes in the countries concerned in the time period under study.

Therefore, absolute mean monthly electrical production figures were used for 1952 and 1958, as published in the UN Monthly Bulletin of Statistics. Level of production in 1952 turned out to be almost perfectly correlated ($r = .976$) with gain in production to 1958 when all figures were transformed into logarithms to insure linearity of regression and to get countries like Tunisia (mean monthly production in 1958 = 20 million kwh) on the same scale with Russia (19, 400 million kwh in 1958) and the United States (60,344 million kwh in 1958). Again as in the previous study the interesting question is whether a country is gaining in electrical production faster or slower than would be expected from the regression equation, as a function of its estimated n Ach level in 1950. The relationship was found to be surprisingly high ($r = .43$, $N = 39$, $p < .01$) considering the short range nature of the electrical output figures and possible sampling errors in the selection of children's stories, particularly from underdeveloped countries. Countries high in n Ach in 1950,

generally speaking, gained more rapidly than expected in electrical output between 1952 and 1958 and vice versa. Rates of gain were computed in terms of standard scores of deviations from expected gain to provide some meaningful unit of comparison. Here again, the advantage of the regression method is that it puts the countries at the same starting point, so to speak, and the standard scores show how well or poorly they have done compared to each other. Thus Russia has done very well--better than roughly 90 per cent of the countries relative to its starting point, if we convert the standard score into its percentage equivalent. Similarly, the United States is doing slightly better than would be expected, Switzerland and Belgium much worse. Thus, to a remarkable extent n Ach levels in children's readers forecast which countries will do well or poorly.

The findings in this study are particularly impressive because they are an independent confirmation of the results for the 1925 sample of countries. More countries are involved, including many poor ones, and the countries that were high in n Ach and rate of growth in the early period are not in the later one. The n Ach level (1925) correlates only .26 with n Ach level (1950) and gain in electrical output (1929-1950) correlates only .13 with the same estimate for 1952-1958.

McClelland (1961: 101) points out that the 1950 finding has two important theoretical implications. First of all, it suggests

that the failure of the 1950 n Ach levels to correlate with previous economic growth (1929-1950) is not due to the fact that children's literature is somehow less representative of national motivational levels in 1950 than in 1925. He notes that the diehard economic determinist who wants to think of motivational levels primarily as responses to economic opportunity might explain away the failure of rapid rates of economic development to produce higher levels of n Ach in 1950 on the grounds that the readers in 1950 are no longer representative, particularly in under-developed countries where children's books may be produced by people in the Ministries of Education who are far removed in every sense from the people. Yet, McClelland notes, such a rationalization seems seriously weakened by the fact that the books do yield n Ach levels which predict subsequent rates of economic growth. To put it somewhat differently, the very same scores which are uncorrelated with previous growth rates are correlated with subsequent growth rates.

The 1950 finding suggests in the second place that n Ach levels in children's readers are more of a reflection of the mood or motivational level of a nation at the time than an educational influence which is affecting the next generation. McClelland (1961: 101) notes that on the basis of the 1925 finding one might infer that high n Ach in the readers at that time had increased the n Ach of the children exposed to them. These children might therefore have had higher n Ach when they grew up some twenty

years later, and their additional energy might then be held responsible for more rapid growth in certain countries. Probably the time period is too short for any such effect to have taken place, but the 1950 finding argues more persuasively against it because n Ach levels in the readers are correlated with economic growth in the very near future or practically simultaneously. McClelland (1961: 102) argues then, that the readers appear to reflect more the motivational level of the adults at the time they are published, perhaps particularly of the adults responsible for the education of children, rather than the motivational level that the children reading the books are going to have ultimately when they grow up.

One last point from these data is that, generally speaking, the poor or underdeveloped countries tend to be higher in n Ach. McClelland (1961: 102) notes that it is as if many of the backward countries realize their backwardness and are now motivated to close the gap between themselves and the more industrially developed countries. Such an interpretation will, of course, surprise no one. What it suggests once again, however, is that the n Ach score is a sensitive barometer of the concern felt in a country for economic development. McClelland further suggests that if one follows the same line of reasoning, we could infer that in general there was a higher concern for economic development among the countries of the world around 1950 than there had been a generation earlier. This was true not only among the countries

added to the sample in 1950--in general the poorer, less-developed ones--but also among the 23 countries included at both time periods. Their average n Ach score rose from 1.52 in 1925 to 1.93 in 1950. The inference that there is a growing concern for economic matters in all countries is again supported by many other facts (e.g. the better economic statistics recorded in UN publications) and, McClelland notes, confidence in the n Ach score as an index of that concern is therefore correspondingly strengthened.

It might be interesting at this point to have a closer look at the data for the United States in order to see a bit more clearly just how n Ach is presumably translated into economic activity.

In a recent study, de Charms and Moeller (1961) analyzed achievement motivation and economic production in the United States during the period of 1800-1950. They sampled every third page of four American reading textbooks typical of each twenty-year period from 1800-1950 and obtained achievement imagery scores as plotted in Fig. 4. A characteristic wave of achievement motivation appears very clearly in the data: It rises from 1800 to a peak in 1890 and drops significantly regularly thereafter.

De Charms and Moeller also obtained a rough index of rate of economic growth in terms of the number of patents granted per 1,000,000 population as plotted in Fig. 4. This index is

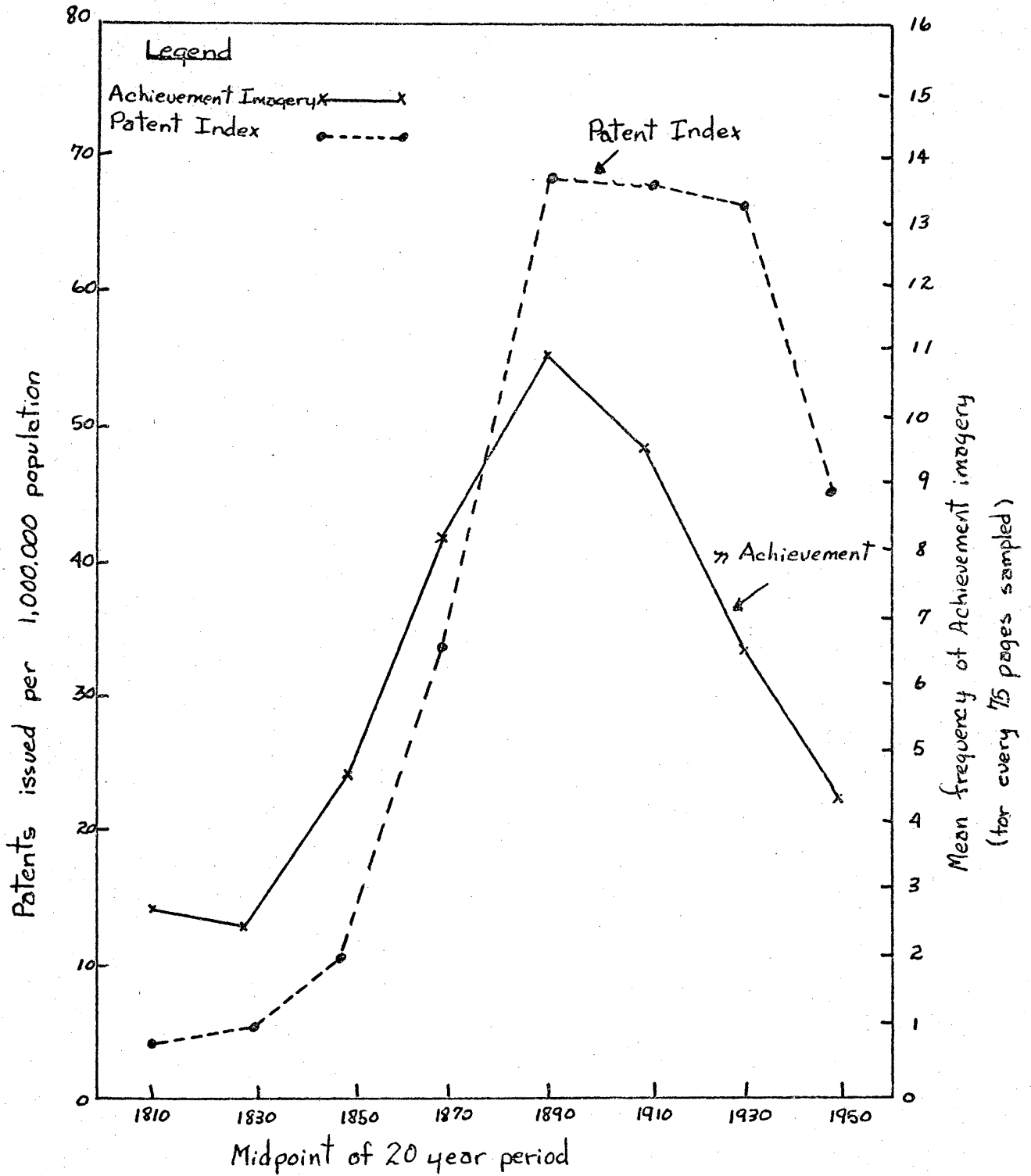


Figure 4 Mean frequency of achievement imagery in children's readers and the patent index in the United States, 1800-1950.¹

¹Reported in David C. McClelland, The Achieving Society. New York: The Free Press. 1961, p. 150.

of particular interest, both for the theory of economic growth and for the theory of how achievement motivation affects behavior. Economists have agreed with surprising unanimity that technological innovation (in this study reflected in the patent index) sparked the Industrial Revolution in the West. The question as to what accounts for increases in the rates of technological innovation has, however, been the subject of considerable dispute. McClelland (1961: 151) feels that de Charms' and Moellers' data suggest that perhaps the factor which is responsible for such increases is an increase in achievement motivation among the general population. He notes that, at any rate, the two curves coincide very closely and, if anything, changes in the achievement imagery curve occur somewhat ahead of similar changes in the patent index curve. The time difference, however, is not in itself distinctive enough to make a case for a causal connection between n Ach and technological innovation. He goes on to note, however, that, along with this data is the finding by other researchers (Moss and Kagan, 1961) that high n Ach leads individuals to be interested in concrete knowledge of results, or more specifically in "constructional" activities. From constructional activities to technological innovations then, is not a great step, nor is technological innovations to rapid economic growth. McClelland thus feels that a reasonable case can be made from the existing data for n Ach producing an interest in constructional activities which lead to technological innovations and on to rapid economic growth. As to why the achievement imagery curve does not "lead" the economic

growth index by a longer period of time as in previous studies, McClelland states that the answer probably lies in the nature of the economic index used, the patent index. It takes time usually for patents to be reflected in gross consumption or production measures of economic growth. Patents, as they reflect technological innovations, are in a sense the "seeds" of rapid development, but it often takes time, a decade or more, before they become used widely enough to affect more general economic growth measures. Thus, if higher n Ach is producing more technological innovations from the people who have it, indexes reflecting these two factors should be closely associated in time and both should precede general increases in economic productivity. Such, McClelland contends, clearly seems to be the case so far as the United States is concerned, as can be seen in Figure 4. He thus notes that the psychological and technological basis for American prosperity in the early 20th century appears in the records of the late 19th century and the "take-off" in the economic growth in the United States in the late 50's and early 60's was preceded (and caused) by a marked rise in both n Ach level and in innovating activity. Thus, the link between n Ach and economic growth appears to be the "innovating entrepreneur."

Sources Of n Achievement

The question naturally arises at this point as to what causes, or produces, varying degrees of achievement motivation in the first place. Various studies dealing with this question have

concentrated primarily on child-rearing practices within the family. McClelland (1958) has shown that such differences may be traced to the attitudes of the mother.

The results of Winterbottom's study deserve review here since the themes running through them have formed the basis of much of the later work and have essentially been confirmed in further studies. Briefly, Winterbottom found that the mothers of sons with high n Ach tended to expect "self-reliant mastery" at earlier ages than mothers of sons with low n Ach. They also placed fewer restrictions on their sons than did the mothers of the "lows," but the restrictions they did insist on were to be observed at an earlier age. Even so, the self-reliance training was expected still earlier by these mothers. It preceded the age at which the restrictions were imposed. The boys were encouraged to master something, and once they had done so, held to it by restrictions against "regressive" behavior. The mothers of the "lows," on the other hand, made more restrictions altogether, and did not expect their sons to show independence and mastery so early. In a word, their sons remain more dependent on adults, both for achievement help and for restrictions, for a longer period of time.

In a study on the influence of the father, Rosen and D' Andrade (1959) found that both the mothers and fathers of boys with high n Ach tend to set higher standards of excellence than do the mothers and fathers of boys with low n Ach. Furthermore, while

the mothers of the "highs" tend to show more authoritarianism and "warmth" toward their sons and appear to be much more actively involved with their sons than the mothers of the sons with low n Ach, the fathers of the highs differ quite markedly from their wives in that they show less dominating behavior toward their sons than do the fathers of the "lows." Very high rigidity or authoritarianism on the part of the father tends to lead to low n Ach. The authors note that dominating behavior on the part of the father will make the boy more dependent and perhaps more obedient and responsible, but it will not encourage him to set his own standards of excellence and to strive for them on his own. Furthermore, since the boy is more likely to get his conception of the male role from his relationship to his father rather than his mother, he will conceive of himself as a dependent, obedient sort of person if his father is strong and dominating. In households where the father is absent (McClelland, 1961: 374) sons tend to develop a generally low level of n Ach.

Winterbottom's findings have been supported by other cross-cultural studies (McClelland and Friedman, 1952) but in a later work on a larger group of cultures (Child, Storm and Veroff, 1958) her findings for self-reliance training were not confirmed. Instead, this study revealed that apparently it is the achievement rather than the self-reliance aspect of Winterbottom's child-training variable which is more universally associated with achievement fantasies.

The cross-cultural study by Child et al. also yielded some further results on the effect of "restrictiveness." They found that cultures which were "rigid" in the sense of punishing their children for "sins of omission" (i.e., for failure to be obedient, responsible, self-reliant or nurturant) tended to produce folk-tales containing less achievement imagery. Again as in Winterbottom's study, restrictiveness in parents seems to be in general associated with low n Ach. However, within the cultures high in rigidity, the greater the stress placed on achievement training the higher the level of folk-tale n Ach (1958: 487) suggesting that if a culture makes a lot of demands on its children, it must put even greater stress on achievement, if it is to produce high n Ach. This finding is somewhat like the tendency of the mothers of the highs in Winterbottom's study to set earlier (though fewer) restrictions than mothers of lows, and to set achievement demands even earlier still.

As to checking Winterbottom's results on other groups of mothers and sons, Rosen (1959) succeeded in getting a large sample from some six different ethnic backgrounds (French-Canadian, Italian, Greek, Negro, Jewish, Protestant) of varying social status. He found that there was an overall tendency for the mothers of sons with high n Ach to put down earlier ages for expecting achievement in their sons. Furthermore, he found distinct differences between upper, middle, and lower-class families. For the middle and upper-class families, his results were substantially the same

as in Winterbottom's sample. For the lower-class families, however, he found a generally low level of n Ach. This he attributes to the finding that in the lower-class groups, caretaking is expected relatively earlier than independence and mastery, as contrasted with families from other social statuses. If caretaking, he notes, can be taken to reflect the authoritarianism measured by Winterbottom's "restrictiveness" items, then this would explain the low level of n Ach, since Winterbottom had found that mothers of "lows" were more restrictive. Thus, he notes, early mastery training promotes high n Ach, provided it does not reflect generalized restrictiveness, authoritarianism, or rejection by the parents. In other words, putting down an early age for expecting a boy to make decisions for himself may indicate a genuine interest in self-reliance and mastery on his part, or it may be part of a general push to get the boy to look after himself so that he will not be a burden or trouble to his parents, as in the case of the lower-class families. If it is the latter, the boy does not develop higher n Ach. Or to look at it in another way, McClelland (1961: 345) notes that the boy can be put on his own too early, as in the predominantly lower-class, early caretaking families, and this is not an optimal condition for producing high n Ach. Instead, what is desirable in somewhat idealized terms, is a stress on meeting certain achievement standards somewhere between the ages of six and eight, neither too early for the boy's abilities nor too late for him to internalize those standards as his own.

By way of summary, then, McClelland concludes (1961: 356) that moderate child-rearing pressures on several dimensions are optimal for producing n Ach. First, excessive father dominance is one in which the son develops low self-reliance and n Ach because the father makes the decisions and little pressure is put on the son to work out high standards for himself. Secondly, simply setting low standards of excellence and displaying an indulgent attitude toward the son does not produce high n Ach. Thirdly, very early achievement demands (as in the case of certain lower class groups in the United States) where the son is, so to speak, "thrust out of the nest before he is ready to fly," also does not lead to high n Ach. Factors, on the other hand, which do lead to high n Ach are reasonably high standards of excellence imposed at a time when the sons can attain them, a willingness to let him attain them without interference, and real emotional pleasure in his achievements short of overprotection and indulgence.

III. RELATED STUDIES AND HYPOTHESES

In relating achievement motivation to economic development, and by implication the issue of poverty, McClelland takes somewhat of a "cultural" approach. Although not explicitly stated in his hypothesis, he strongly implies (see McClelland, 1961: 337-390) that economic deprivation (poverty) is largely a consequence of low achievement motivation. That is, a low level of achievement motivation is seen to lead to failure in various economic and

social endeavors with the general consequence of poverty. Low achievement motivation, in turn, as shown by Winterbottom (1958), Rosen and D' Andrade (1959) and Rosen (1959), is a result of differential socialization practices. That is, those in poverty, themselves low in n Ach, employ various child-rearing practices which do not produce high n Ach in their children and hence, their children are more apt to fail in their endeavors, perpetuating their condition of poverty.

This concept of a "culture of poverty" is, of course, not unique to McClelland's hypothesis, but has been the source of considerable discussion and dispute among various authors dealing with the poverty issue.

In their work on poverty, Ferman et al. (1968) have suggested that the presence of a culture of poverty must be considered in any definition or explanation of poverty. This culture of poverty, they suggest, involves the behavioral and attitudinal characteristics of the individual and, according to them, a group of individuals or families may be said to be in poverty when they share a distinctive set of values, behavior traits, and belief complexes that markedly set them off from the affluent groups in the society. This, they feel, is a derivative of prolonged economic deprivation, lack of adequate financial resources, and socialization in an environment of economic uncertainty. This "culture of poverty" is thus characterized by an intergenerational persistence and transmission

to the children of the poor.

Valentine (1968) has also dealt with the culture of poverty concept and considers several descriptive models. In one model, he describes the primary characteristics as a self-perpetuating subsociety with a defective, unhealthy subculture. According to this model, the poverty subculture is self-generating in the double sense that the particular socialization practices perpetuate both the cultural patterns of the group and consequent individual psychosocial inadequacies which serve to block any escape from poverty. This is in accord with McClelland's hypothesis since he has presumably isolated one major component, n Ach, which contributes to the self-perpetuating aspect of the poverty subculture and which, in general, distinguishes this subculture from the dominant, middle-class culture.

Looking at it from another perspective, Valentine (1968) presents a second descriptive model of poverty in which he describes poverty as an externally oppressed subsociety with an imposed, exploited subculture. According to this model, the lower-class poor are a structurally distinct subsociety, and their life is therefore situationally distinct from that of all other social strata. Elements of pathology, distortion, and incompleteness in the life of the lower class, he proposes, have their source in the structure and processes of the total system, mediated by denial of cultural resources to the poor. The disadvantaged

position of the poor, therefore, is maintained, not by factors of the poor individual, as McClelland contends, but primarily by the behavior of the higher strata, acting in their own interest as they see it, to preserve their advantages by preventing a redistribution of resources. McClelland's hypothesis, however, is in direct opposition to this as he contends that it is factors of the individual (n Ach) which are of prime importance. He does concede (1961: 376) that the environmental factors are important, but he contends that whether or not an individual will respond to and take advantage of these conditions is dependent on his individual level of achievement motivation. Thus, in any program directed at the poor, he contends that one must deal with the individual factors (achievement motivation), in addition to various environmental factors. In a recent work (McClelland, 1969) he has attempted a program aimed at modifying individual motivation and has had varying degrees of success. In general, those exposed to his individual training programs tended to be more energetic and economically successful than counterparts who had not been so exposed. In particular, he did find that those who had received n Ach training tended to take more ready advantage of economic opportunities than did those who did not receive this training.

Rossi and Blum (1968) have raised the question as to whether the poor are indeed qualitatively different from the rest of American society. Some of the major features of the poor cited by them involve the areas of labor-force participation, occupational

participation, family and interpersonal relations, community characteristics, relationships to the larger society, and value orientations.

With regard to labor-force participation, the poor are characterized by long periods of unemployment and/or intermittent employment. For the poor, public assistance is frequently a major source of income for extended periods. As regards occupational participation, when employed, the jobs held by the poor typically are at the lowest level of skills (e.g. domestic service, unskilled labor, menial service jobs, and farm labor). In family and interpersonal relations, the poor are characterized by high rates of marital instability (desertion, divorce, separation), high incidence of households headed by females, high rates of illegitimacy, and unstable and superficial interpersonal relationships characterized by considerable suspicion of persons outside the immediate household. As to the community characteristics, the poor typically live in residential areas with very poorly developed voluntary associations and low levels of participation in such local voluntary associations as do exist. In their relationship to the larger society, the poor generally show little interest in, or knowledge of, the larger society and its events which all expresses some degree of alienation from the larger society. Their value orientations are characterized by a sense of helplessness and a low sense of personal efficacy. They tend to show dogmatism and authoritarianism in their political ideology while

generally adhering to fundamentalist religious views with some strong inclinations toward beliefs in magical practices. Furthermore, they tend to display low n Ach and low levels of aspirations for the self.

Some of the socio-economic characteristics cited by Rossi & Blum which differentiate the poor are that the lower the socio-economic level, the higher the incidence of symptoms of mental disorder, the less well adjusted on personality tests, and the higher the rates of rejection from selective service on psychiatric grounds. Also, the lower the socio-economic level, the less competence with standard English, the more likely to score poorly on tests of verbal and scholastic ability, and the more likely to drop out of school before completion. Furthermore, the lower the socio-economic level, the less likely are parents to socialize their children through the use of explanations for obedience to rules and the more likely to assert such rules without presenting rationales.

Rossi & Blum contend, however, that in almost every case, the alleged "special" characteristics of the poor are ones which they share generally with the "working-class" or "blue collar" component of the labor force. Thus, they admit that the poor are different, but the difference they contend, is mainly a matter of degree rather than of kind. In thus casting considerable doubt on the distinctiveness of the poor, they raise serious doubts as to the

existence of a culture of poverty per se. They state:

...Those traits used to define the culture of poverty are manifested by the extreme poor with only somewhat greater frequency than is true of those immediately above them in socio-economic status. This is not to deny the importance of these characteristics in marking out a group which displays especially aggravated forms and degrees of disabilities, but merely to state that poor do not display characteristics qualitatively different from those immediately above them in the stratification hierarchy, and so on up the ladder. (Rossi & Blum, 1968, p. 10).

In discussing the intergenerational transmission of the poverty culture, Rossi & Blum point out that children in many poor households are being reared in a culturally deprived environment which is both linguistically and emotionally impoverished. As such, considerable proportions of such children will not find their way into the professional and managerial (entrepreneurial) occupations. However, they go on to point out that it is not inconceivable that despite handicaps of early childhood, large proportions will find their way higher in the "blue collar" occupations than their parents did. Some poverty then, is "inherited," but life chances are reshuffled sufficiently in each generation to allow a large proportion of the children of the poor to move out.

They note that the fact that the poor are different and show higher rates of a wide variety of disabilities seems well enough documented and that if this is what is meant by a culture of poverty, then the concept has some validity. They go on to point

out, however, that if there is a subculture of the poor, then one may as easily postulate a subculture for the working class, middle class or any other recognizable class group in the society. All that would be necessary within such a theoretical model would be to postulate some initial state in which class differences are generated; then, the processes of intergenerational transmission would account for the persistence of differences at any point in time thereafter.

In discussing some of the reactions to class position, Rossi and Blum note that lower status persons feel deprived and know they are on the bottom of the hierarchy and to be at the bottom of the heap, means being evaluated negatively. If the norm of the society expresses success in terms of the attainment of wealth, then those who do not attain wealth have failed. Low socio-economic status is thus a position of failure. Furthermore, the process of creating the "problem poor" or poverty as a social problem is a process in which the poor are degraded by being labelled failures and unworthy of full citizenship in the society. An especially psychologically punishing evaluation is given the poor through the very process of singling out this group for special programs or treatments which serves to mark them off as much less than full citizens.

The negative evaluation of the lower levels of the socio-economic structure is manifested in a number of ways. To begin

with, the tone of our society is decidedly middle class. The mass media, for example, portray the American household as a middle class household, and working class or lower class individuals are portrayed as either problems or comics. Textbooks, mail order catalogues, advertisements, novels, etc., all show much the same pattern. The positively evaluated persons, dress, homes and speech are middle class or better. At least by implication if nothing else, the lower status person finds himself negatively evaluated because he does not see his counterparts put forth in a positive way in the institutions which set the tone for the society. Even the special legislation which is designed to provide some measure of relief for the poor in and of itself places them in a special category. Rossi & Blum contend that it is hard to see how the treatment of the poor as a special group can do anything but compound the feeling of being less than equal. The most extreme form of negative evaluation is, of course, discrimination which in our society is most severely directed at the Blacks and for this group the psychological burden of being lower class is added to (or multiplied by) being at the same time a much discriminated against ethnic group.

Rossi & Blum note that some of the characteristics of the poor can be seen as reactions to the punishment of being judged negatively. They note that the social stratification system of an open society with few ascriptive bars to achievement creates a situation in which all individuals are subject to positive or

negative evaluations depending on the degree to which they have in fact achieved. This process of evaluation is one which rewards some and punishes others, generating in turn reactive processes which underlie some of the class differences. It is to this source, they feel, that one should probably attribute the lowered self-esteem of the poor, the phenomenon of "value stretch," in which the poor exempt themselves from main value themes, their apathy and withdrawal from participation, their sense of helplessness and powerlessness, and high levels of dissatisfaction with their position in life.

Rossi & Blum cite two major factors which contribute to the maintenance of class differences. First, is the fact that different socio-economic status levels are exposed to different media and educational experiences. Studies of book reading, exposure to newspapers, magazines, radio, and television, all indicate that upper socio-economic status persons read, listen, and view more than lower socio-economic status persons and, furthermore, expose themselves to materials of greater complexity and difficulty. Hence, the articles in newspapers and magazines which discuss such topics as child-rearing practices or diet are more likely to be read by upper socio-economic status persons. Those changing tendencies within the society which are diffused, or at least supported by reading, listening, and viewing therefore move more slowly into the lower levels of the socio-economic status groups. Thus, some of the socio-economic status differences

that may be found at a particular point in time represent differential diffusion along socioeconomic status lines.

The second major mechanism cited by Rossi & Blum which serves to maintain socio-economic status differences involves differential association along class lines. Work groups, friendship groups, neighborhoods, and kinship groups tend to be homogeneous with respect to socio-economic status level. Such informal supports afforded by such groups they note, are important in determining a variety of behaviors. A good part of the reason, for instance, for class solidarity in voting behavior lies in the political homogeneity of informal groups. Also, the class composition of high schools has an effect on intentions to go to college, and this effect serves to modify the influences of the class background and academic performance of the young persons involved. Thus, Rossi & Blum note, adults are responsive to the political climates of their small groups and adolescents are responsive to the intellectual climates of their high schools.

These findings of Rossi & Blum are of particular interest since they raise the question to which the hypothesis of the present study is partially directed concerning the relative effect of a persons immediate social situation on his attitudes, particularly toward achievement. If we accept the general proposition that face-to-face influences are more effective and persuasive than those emanating from the mass media, then we can

begin to understand how the poor manage to evade some of the more punishing aspects of being negatively evaluated by the social stratification system and how they manage to maintain patterns of behavior regarded as deviant by the larger society. Surrounded by persons who are in much the same socio-economic situation as himself and more oriented toward obtaining approval of friends, neighbors, and kin than to the approval of the larger society, an individual can find some support for his particular style of life. This, Rossi & Blum suggest, is the process which is considerably more important for the maintenance of class differences than early childhood socialization. They note, however, that some degree of cross-class contact continually occurs within intimate face-to-face groups and that this may be enough to account for at least some part of the lack of clear-cut class differences.

In a related work, Theodore Kemper (1968) has presented a general outline of a theory of reference groups in which he emphasizes the importance of an individual's particular reference group in the development of achievement motivation. He points out that if an individual is to develop an achievement motivation, he must not only be provided with the normative elements (the "what-to-do") but must also be provided with a role model (the comparative element) from whom the individual may learn how to achieve. In addition, he states that an audience must be available which serves to create (or not to create) pressure for achievement along with some type of reward, directly or indirectly,

for achieving (or not achieving). The individual's reference group, he contends, often provides all of these elements, modifying the individual's behavior accordingly. McClelland's n Ach theory, on the other hand, makes no mention of role models.

In discussing the lower class Negro community where there is a generally low level of achievement motivation, Kemper points out that a major problem, both where the family is intact and where it is not, is that the depressed state of Negro achievement, combined with the ghetto living that makes society's high achievers (i.e. whites) both visible and disliked, deprives Negro youth of role models. This, he contends, in conjunction with lack of cultural--not simply mothers'--emphasis on high levels of excellence, would seem to help explain the phenomenon of low Negro n Ach. He does concede that the early socialization practices are of great importance in the initial development of n Ach as McClelland has shown, but he contends that the availability and content of the reference group is equally as important. Unlike McClelland's theory, however, Kemper's arguments are based primarily on logical theory. An attempt will be made in the present study to shed some empirical light on Kemper's theory as it relates to achievement motivation.

In summary then, two opposing views can be drawn from the foregoing arguments. On the one hand are those such as Valentine, Rossi and Blum, who emphasize the role of environmental factors

in poverty. These authors tend to take a predominantly environmental view of economic success or failure and tend to view such to be the result of a quantitative deprivation of environmental factors. The poor are poor because they have not had the opportunity or physical resources to be otherwise. Likewise, a society may reach economic heights and success only because it had the necessary resources to do so. On the other hand are those such as McClelland who view economic success to be the result of individual factors. These authors emphasize a qualitative approach in their explanations of economic success or failure. According to this view, the reason for the economic (or social) success of individuals or societies lies in the basic motivations of the people. In McClelland's hypothesis, the prime motive is the Achievement motive. Lying somewhere between these views is Kemper's reference group theory. While acknowledging the importance of individual factors such as achievement motivation, he points out the need to consider various environmental factors as well, particularly those environmental factors which affect individual motivation and achievement.

Aside from the strictly theoretical issues involved in these opposing views, there are considerable practical implications involved also. As Rossi and Blum (1968) note, whether one conceives of the poor as qualitatively different from the rest of society or mainly differing in degree from those above them has a considerable affect on any social policy directed at the

poor. A social policy based on a qualitative model tends to stress rehabilitation and retraining whereas one based on a quantitative model stresses institutional changes in society along with the provision of some type of income maintenance.

McClelland has quite obviously taken the qualitative approach and has designed a rather extensive program (McClelland, 1969) of social and personal rehabilitation and retraining based on the concepts and dynamics of the achievement motive.

Basically, his program consists of an intensive individual training program in which the individual is encouraged to explore his own personal motivations. He is then given intensive training in achievement motivation. As a result, the individual generally tends to himself develop a stronger motive to achieve. Of particular interest, however, is the finding that the development of a new reference group among the course participants is a critical factor contributing to whether or not the individual participant will develop a subsequently high achievement motivation. In those cases where the participants formed an "alumnus association" which served as a new and continuing reference group and which continued to meet after the course had ended, the results were most apparent. Where such an association was not formed, changes in achievement motivation and activity tended to be generally minimal.

Roy Thompson of Training and Development Systems, Ltd., Boston, Mass. has also employed McClelland's training program in his work with underprivileged people in poverty areas with considerable success. He also has found that the establishment of an alumnus association was a crucial factor in determining the overall effects of training. In a personal letter dated April 15, 1970, he noted that in courses conducted where this new reference group was not formed, the outcomes were considerably less than where this had occurred. Furthermore, in his work with underachieving college students, he noted that the individual and group counselling sessions which follow the initial intensive training experiences seemed to be the most critical factor, at least in achieving long-term, positive changes in students' performances. He noted also, however, that the development of a new reference group among the trainees has been used with equal effects. This would seem to be some evidence in support of Kemper's theory.

The question that arises, then, is not whether achievement motivation is in fact a critical factor contributing to economic success or failure. The mass of data which has been accumulated and cited above, I think, clearly indicates that achievement motivation, at least as defined and measured, is in some way closely linked with economic performance. The question, rather, to which the present study is particularly directed is the issue of the relative importance and influence of the reference group

on achievement motivation.

PART II

REFERENCE GROUPS AND ACHIEVEMENT MOTIVATION

Statement of The Problem

David McClelland's theory of n Ach strongly emphasizes individual factors as responsible for the social or economic success of individuals and nations. According to his theory, the fundamental principles underlying the social or economic development of institutions, communities, or nations rest in the basic motivations of the people, and the primary factor which gives rise to such developments is the achievement motivation of the people. A great deal of research has been published which strongly supports this theory.

The initial sources of achievement motivation have been traced to specific child-rearing practices employed during early childhood. These practices have been found to occur most frequently in families with a strong Protestant background and much work has been done relating achievement motivation to the Protestant Reformation and the rise of Capitalism as described by Weber.

Economic and social achievement, according to McClelland's theory, is postulated to be the result of a high level of achievement motivation which is ingrained in the individual personality during the socialization process of early childhood. Hence, any programs directed at economic or social under-achievement

must deal directly with these personality variables.

Theodore Kemper (1968) has proposed to modify McClelland's theory by introducing the concept of the reference group. He argues that while n Ach may in some cases be a result of socialization in early childhood, it may also be developed and modified in an individual by his identification and association with his reference group. Hence, economic and social achievement, in addition to being affected by ingrained personality factors, may also be affected by the immediate social situation, particularly the level of achievement motivation of an individual's reference group.

Although Kemper's theory has not as yet been supported by much empirical research, some recent work by Rossi & Blum (1968) has offered evidence in support of his theory. Specifically, Rossi & Blum found that the economic and academic aspirations of adults and students living in poverty areas tended to be greatly affected by the attitudes and aspirations of the informal social groups with which they interacted, apparantly either over and above or in spite of their individual personality factors. Much more research on Kemper's theory needs to be done. However, in view of the findings of Rossi & Blum, McClelland's findings may represent only one possible source of achievement motivation. An alternative explanation may lie, as noted by Kemper, in the individual's relationship to his particular reference group.

That is, achievement motivation, in addition to being developed and affected by various child-training procedures, may also be developed and modified by identification with a reference group which has a high level of achievement motivation.

The purpose of the present study is to further investigate the influence of the reference group on achievement motivation. The specific hypothesis being tested is that an individual with an initial low level of achievement motivation, when established for a certain period of time in a new reference group with a high level of achievement motivation, will himself subsequently develop a higher level of achievement motivation.

Definitions of Terms Used

Achievement motivation is defined in accordance with an operational definition and measurement procedure designed by McClelland, and fully described elsewhere (McClelland, et al., 1953). Basically, this definition employs a modified form of the projective Thematic Apperception Test in which stories written in response to various pictures are scored according to any reference to an achievement goal or theme. If there is reference to an achievement goal, the stories are then further scored according to whether the attainment of the achievement goal is accompanied by feelings of personal success for the accomplishment or whether nonattainment produces feelings of failure. In this scoring system, there are three criteria, any one of which will establish the presence of an

achievement goal: (1) Competition with a standard of excellence, (2) Unique accomplishment, and (3) Long-term involvement.

Reference group is defined in the present study as the specific experimental group with which the individual subject interacts throughout the experiment.

Measure of Achievement Motivation

The projective measure of Achievement with two four-picture equivalent forms of the measure were used in this experiment. Following the procedure developed by McClelland (1953), the pictures were projected on a screen for 20 seconds and Subjects were given five minutes to write their stories. The pictures used were:

Form A

1. Two men working in a machine shop.
2. Two men in an office discussing papers.
3. Heads of two men (TAT 7 BM).
4. A young man sitting by a desk gazing into space.

Form B

1. Two men in a printing shop.
2. Young boy standing before a surgical mural (TAT 8 BM).
3. Two men talking in a conference room.
4. A young boy sitting at a desk in a classroom gazing into space.

Mimeographed "answer sheets" were distributed and the following instructions were given by me immediately preceding the presentation of the pictures:

This is a measure of your creative imagination. A number of pictures will be projected on the screen before you. You will have 20 seconds to look at the picture and then five minutes to make up a story about it. Notice that there is one page for each picture. The same four questions are asked. They will guide your thinking and enable you to cover all the elements of a plot in the time allotted. Plan to spend about one minute on each question. I will keep time and tell you when it is about time to go on to the next question for each story. You will have a little time to finish your story before the next picture is shown.

Obviously, there are no right or wrong answers, so you may feel free to make up any kind of a story about the pictures that you choose. Try to make them vivid and dramatic, for this is a test of creative imagination. Do not merely describe the pictures you see. Tell a story about it. Work as fast as you can in order to finish in time. Make them interesting. Are there any questions? If you need more space for any questions, use the reverse side.

The stories were scored "blind" according to the latest refinement of the scoring system (McClelland, 1953). Prior to distributing the answer sheets, a number was randomly assigned to each sheet. Each subject was then asked to take a sheet of scratch paper which was provided and jot down the number on his sheet along with his/her name, age, and sex. These latter sheets were collected separately at the conclusion of the projective test and filed separately until all stories had been scored. On the second testing (Form B), the same procedure was followed and it was only by chance that an individual subject would receive the same number he had in the previous testing. Hence, when the stories were scored, only the number was available to me and no individual

identification either by name, age, or sex was possible.

Following is a brief description of the scoring categories for the stories. A scoring manual with complete instructions and examples is available elsewhere (McClelland, 1953).

1. Achievement Imagery

The scorer must first decide whether or not the story contains any reference to an achievement goal which would justify his scoring other categories as achievement related. Attainment of an achievement goal is accompanied by feelings of personal success for the accomplishment, and non-attainment produces feelings of failure. There are three criteria, any one of which will establish the presence of an achievement goal:

a. Competition With a Standard of Excellence. One of the characters is engaged in some competitive activity (other than clear cases of aggression) where winning or doing as well as or better than others is the primary concern. ("He wants to win the essay contest.") One of the characters is engaged in what might seem to be a routine task or everyday performance, but there is evidence of concern with mastery of the task. ("If he doesn't do a good job, he will be mad.")

b. Unique Accomplishment. One of the characters is involved in accomplishing other than a run-of-the-mill daily task which could mark him as a personal success. Inventions, artistic creations, and other extraordinary accomplishments fulfill this criterion.

c. Long Term Involvement. One of the characters is involved

in attainment of a long term achievement goal. Being a success in life, becoming a machinist, doctor, lawyer, successful businessman, etc., are all examples of career involvement which allow the inference of competition with a standard of excellence, unless it is made explicit that another goal is primary, e.g., food for the kids, personal security.

2. Doubtful Achievement Imagery

Stories containing some references to achievement but which fail to meet one of the three criteria for Achievement Imagery are scored Doubtful Imagery and not scored further for achievement-related categories.

3. Unrelated Imagery

Stories in which there is no reference to an achievement goal are scored Unrelated Imagery and not scored further.

4. Need

Someone in the story expressed the desire to reach an achievement goal. Expressions such as "he wants to be a doctor," "he wants to finish the painting," are the clearest examples.

5. Instrumental Activity

Overt mental activity by one or more characters in the story indicating that something is being done about attaining an achievement goal is considered instrumental activity. There must be an actual statement of activity within the story, independent of both the original statement of the situation and the final outcome of the story.

6. Anticipatory Goal States

Someone in the story anticipates goal attainment or frustration and failure. The anticipatory goal state is scored positive when someone is thinking about the success he will achieve, or negative when someone is worried about failure, expects the worst, or is wondering whether or not he will succeed.

7. Obstacles

Stories are scored for Obstacles when the progress of the goal-directed activity is blocked or hindered in some way, or things do not run smoothly, or there are obstacles to be overcome before the goal may be obtained.

8. Nurturant Press.

Forces in the story, personal in source, which aid the character in the story who is engaged in ongoing achievement-related activity are scored Nurturant Press. Someone aids, sympathizes with, or encourages the person striving for achievement.

9. Affective States

Affective states associated with goal attainment, active mastery, or frustration of the achievement-directed activity are scored:

a. Positive Affective States are scored when there is indication of enjoyment, pride, or satisfaction.

b. Negative Affective States are scored when there is failure to attain mastery of an achievement goal accompanied by affect.
("He is worried about his failure")

10. Achievement Thema

Achievement Thema is scored when the achievement imagery is

elaborated in such a manner that it becomes the central plot or theme of the story. Striving for an achievement goal and eventual attainment of the goal may be the central plot of the story.

One point was scored for all categories, except Doubtful Imagery and Unrelated Imagery. Doubtful Imagery received no score, and Unrelated Imagery received a score of -1. An individual's achievement score was an algebraic summation of his scores on all four stories.

Experimental Tasks and Procedures

Fifty-seven male and female college students of various majors and class standings were recruited for initial testing. Most of these subjects were recruited from an introductory course in Sociology and an introductory course in Personality. Some, however, were subjects who had responded to a memo inviting all interested students to take part in the experiment. None of the subjects were rejected other than a very few who could not meet the required time schedule. Since the budget for this experiment was rather limited, participation in this experiment served to fulfill a part of the course requirements for those subjects enrolled in either of the courses to offset the extensive participation time required of the subjects. Although all subjects recruited seemed more than willing to participate in a "real" experiment, this added inducement was included to ensure full participation throughout the experiment. Only a few minor attendance problems were

encountered and these were dealt with as explained below.

All subjects were given Form A of the projective measure of n Ach and the distribution of combined scores was divided into High and Low halves at the mean. The 21 subjects with the highest scores in the upper half and the 14 subjects with the lowest scores in the lower half were then used as subjects in this experiment. Those with the low scores were then randomly assigned to one of two groups: The Experimental Group or the Control Group. All 21 subjects with the high scores were assigned to the Experimental Group. There was a total of 7 experimental groups, each consisting of one subject low in n Ach and three subjects high in n Ach, with each group meeting separately once a week for one hour for a total of four meetings for each group. One exception to this was one group which consisted of one subject low in n Ach and only two subjects high in n Ach. This exception was due to one subject high in n Ach who had been assigned to the group but who left school following the first meeting. On those days when one or more members of the group was absent, the meeting was postponed until the following week and I contacted the absent member with a friendly reminder of the group's meeting. An interesting development in several of the groups here was that when one of the members was absent, one or more other members of the group voluntarily talked with the absent member later to be sure he/she would attend the following meeting. As it turned out, no one member was absent more than on one occasion. Apparently the

subjects were indeed becoming personally involved with and identifying with the group. Furthermore, when a group meeting was postponed, obvious disappointment was expressed by those members who had attended.

Two achievement-oriented tasks were constructed for the experimental group. The first was a modification of a business game invented by Litwin and Ciarlo (1959) in which individuals with a high n Ach typically do very well. In this game, each participant is presented with the task of constructing by himself various models made out of Tinker Toys. He first assembles one on his own according to a pattern given him; then he times himself to discover how long it takes him; finally he decides how many he will attempt to make in a five-minute period. He is also presented with norms as to how long most other people take to construct the model in question. Finally, he is given information as to the cost of parts for the model, the selling prices, and the penalties for changing production targets at a later point. Various payoffs are arranged in the game, which can make profits larger or smaller depending on the number of units produced in relation to the number contracted for. Basically, what the participant has to do is to set his goal in terms of his knowledge of all the factors that should influence him in choosing a production goal. Next, he actually performs the task and carefully calculates his profits or losses. Then he repeats the process on a second and on a third model.

The scoring procedure for the present experiment was modified, however, in that group scores were emphasized rather than individual scores as in Litwin and Ciarlo's procedure. In the present experiment, while each subject computed his individual score, the subjects were told at the beginning of each session that the group mean of scores would be computed at the end of the session (which it actually was) and each group would be compared with another on the basis of this score. I thought that in this way, the subjects would be more encouraged and likely to think in terms of the group activity rather than individual activity and hence, this would facilitate individual identification with the group. Furthermore, by making each subject more aware of and concerned about the group score, I thought that perhaps this would also encourage those with high n Ach to interact more with the one subject low in n Ach in an effort to "teach" him how to raise his score and, while raising the entire group's score, get the "low" subject to think in achievement-related terms.

A further modification of Litwin and Ciarlo's procedure was in the time allotted to complete the "contract." Due to a shortage of materials and time, a three-minute period was used instead of the five-minute period suggested by Litwin and Ciarlo. I do not think that this shortened time period would significantly alter the over-all effects of the procedure. The primary purpose of this game is to encourage the participants to think in achievement-related terms and this is ensured by the nature of the "contract."

The five-minute period used by Litwin and Ciarlo was merely one which happened to be convenient for them. Furthermore, in their work, the models used by them were somewhat more complicated than the models I used in the present experiment. Hence, subjects in the present experiment could complete a comparable number of units in the shorter time period to what Litwin & Ciarlo's subjects could complete in the longer time period.

The second task used for the experimental group consisted of running a model electric train around a circular, banked track, and was based on the finding by McClelland (1961: 210) that individuals high in *n* Ach tend to take more moderate risks than individuals low in *n* Ach. In this task, each subject operated by remote control an electric model train and was timed by another of the group members as to how long it took him to maneuver the train around the banked track five times. This constituted one trial, and each subject took five consecutive trials before passing the controls on to the next subject. If the train was derailed while going around a corner or over a bank too fast, the timing was not stopped, but continued while the operator or another member of the group re-railed the train and proceeded around the track. Thus, if it took say, 15 seconds to put the train back on the track, this additional time would be included in figuring the total time it took him to complete a trial. No restrictions were placed on who should re-rail the train if it went off the track since one of the primary objectives of these tasks was to

encourage group interaction. Hence, it was left up to the group to work out such specifics according to their own particular organizational patterns. They were not specifically instructed accordingly, but no mention was made of how to re-rail the train. In the instructions, I merely mentioned that the time must be kept running while the train was put back on the track. (And no questions were asked as to how to do it or who was to do it).

In this train task, I thought that since subjects high in n Ach tend to take more moderate risks, they would then take less risks than those low in n Ach in maneuvering the train, while still maintaining "competitive" speeds, not de-railing due to excessive speeds as often, and hence, their times would be lower than the subjects low in n Ach. (In trials testing this assumption with other subjects prior to the present experiment, such was typically the case). Here also, as in the business game, individual scores were calculated but group scores were emphasized, again for the same reasons described above.

Each of the above tasks was presented to each group on alternate meetings and the task activity on each day was interspersed with 5-minute discussion periods in which each group was instructed to discuss among themselves the meeting's activity. On the days when the business game was the activity, the discussion periods would follow the completion of each model. On the days when the train task was being worked on, the discussion periods occurred

after each subject had completed one trial. This was done to further facilitate group identification and by allowing the subjects time to discuss what they had done and how they had done it, to provide further achievement-oriented "training" to the one subject low in n Ach in each group.

Since McClelland (1961: 232) found that people with high n Ach typically perform significantly better under controlled experimental conditions when they have feedback as to how well they were doing, each group was given fictitious information as to how well they as a group were performing in comparison with the other groups. Each group, however, was told that they were performing "a little better than average" and fictitious combined means of the other groups were cited which were just a little lower than the particular group's mean for that day. This was also done in order to reinforce the feeling of having achieved, particularly on the part of the subject low in n Ach, but keeping such reinforcement at a minimum so that the subjects would not become "satiated" but would, rather, continue trying to achieve in the next session.

When each group had completed its four meetings, all Subjects (Experimental and Control) were then given the final form (Form B) of the projective measure of n Ach. Group scores on Form B (Post-test) were then compared with those of Form A (Pre-test) and tested to see if there was any significant differences or direction of change.

Results

Mean scores and standard deviations were computed for both the Experimental and Control groups and are reported in Table 1. The standard t-test for differences between means was applied to test for significance.

As can be seen in Table 1, there is no significant difference between the mean scores for each group on the Pre-test ($t = 0.50$, $df = 12$), indicating that the two groups were well matched. The difference in direction and magnitude of change between the two groups as a function of the experimental treatment as measured by the Post-test, however, is quite apparent as can be seen in Fig. 5. The level of n Ach for the Experimental group on the Post-test is considerably higher than its Pre-test level and this difference is highly significant at the .10 level and closely approaches significance at the .05 level ($t = 2.426$, $df = 6$). The level of n Ach for the Control group, on the other hand, did not change significantly from the Pre- to the Post-test ($t = 0.007$, $df = 6$). In addition, the difference between the mean scores of the Post-test for the two groups is highly significant at the .10 level and also closely approaches significance at the .05 level ($t = 2.145$, $df = 12$).

Table 1. n Ach scores for Pre- and Post-Experimental Tests

| Group | N | Pre-Test | | Post-Test | | Significance of Difference (t-test) |
|-------|---|----------|-----|-----------|-------|--|
| | | Mean | SD | Mean | SD | |
| Exp. | 7 | 1.14 | 2.5 | 5.86 | 5.4 | 2.426 |
| Cont. | 7 | 1.57 | 1.7 | 1.14 | 0.007 | 0.000 |
| t | | 0.50 | | 2.145 | . | |

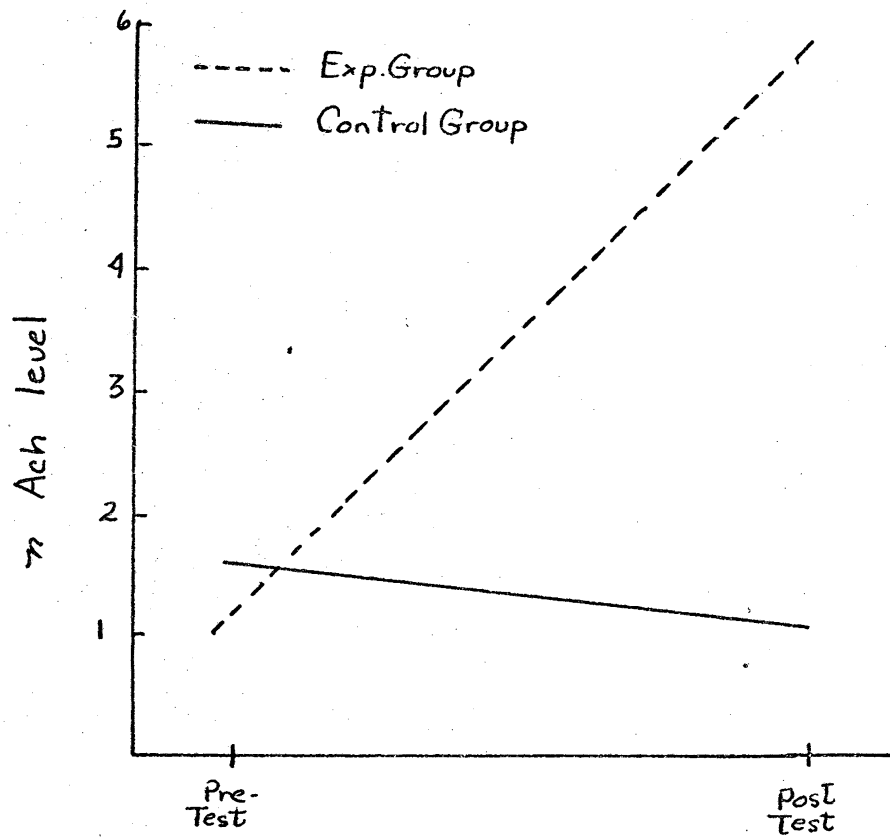


Figure 5 Mean n Ach Scores for Experimental and Control Groups.

Discussion

The results of this experiment tend to strongly support the initial hypothesis and demonstrate that those individuals with an initial low level of n Ach developed a subsequently higher level of n Ach through association with a reference group which was generally high in n Ach.

Kemper (1968) has argued that the level of achievement motivation of the individual's particular reference group must be taken into account when considering the sources or means of change of individual achievement motivation. This argument would seem to fit in very well with the findings of Rossi & Blum (1968) that the informal support of class groups are highly influential in maintaining socio-economic status differences and in influencing intellectual attitudes of high school students toward academic achievement.

While the number of cases in the present experiment is perhaps too small to allow any broad generalizations, the results lend strong support to Kemper's position and may help explain the lack of clear-cut class differences which Rossi & Blum suggest to be due to some cross-class contact. In view of the findings of the present experiment showing the dramatic effects of the reference group in modifying achievement motivation, such a lack of clear-cut differences may be due to the influential effects of the respective reference groups. That is, those individuals experiencing

such cross-class contact may in fact be exposing themselves to and developing new reference groups with different achievement attitudes and norms. As a result, these individuals may themselves be developing the attitudes of this new reference group and learning how best to achieve these new norms, and achieving them. Since previous research has shown that n Ach is correlated with socio-economic status differences with n Ach level higher among the higher status groups, those individuals developing new reference groups through contact with higher status groups, may themselves be developing a higher level of n Ach. This, then, according to McClelland's hypothesis and findings may help explain the occasional upward mobility of those persons in frequent contact with higher economic status groups. Such individuals, as a consequence of the newly developing reference groups, develop a subsequently higher level of n Ach. Due to this higher n Ach they then take greater advantage of available opportunities, thereby raising their economic and social achievements and status.

It might be argued, however, that the extent of such an effect would also be partially determined by how closely tied the individual might be to any particular reference group within his own status level which might have attitudes and norms which conflict with those of any new reference group. This is especially pertinent when one considers the finding in the present experiment that those individuals low in n Ach who were in the Control group actually showed a slightly lowered level of n Ach at the end of

the experiment than they did at the beginning. One could argue from these data that those in the Control groups who were low in n Ach continued to interact with their usual reference group which by all indications was also itself generally low in n Ach. As a result, these individuals' achievement motivation itself decreased, or at least did not change. Likewise, an individual who may have close ties with a reference group low in n Ach may not as readily develop a new reference group which may compete for his allegiance. However, in the present experiment those individuals in the Experimental group who were also initially low in n Ach presumably did not make any dramatic breaks with their prior reference group which was also, by all indications, low in n Ach. Yet these persons who experimentally interacted with a new reference group high in n Ach during the course of the experiment showed a considerable increase in their n Ach levels. Hence, it would seem that contact and interaction with a group higher in n Ach than oneself will lead to the development of a higher n Ach in an individual, whether or not he continues to associate with a reference group low in n Ach. But one would assume that as soon as the interaction with the "higher" group ceased, the association with the "lower" group would serve to again lower the n Ach level. Further research, however, needs to be done to clarify these points.

Some further implications for programs of directed social and individual change may also be drawn from the present findings

and considerations. If the achievement motivation is as important as it seems to be in determining the level of social or economic achievement an individual may attain, and if the reference group is likewise important in modifying achievement motivation as the present results indicate, then it would seem to certainly help explain the generally minimal results of various change programs.

Individual Psychotherapy programs, for instance, have typically not been exceptionally effective, particularly with the lower socio-economic status groups. But such programs do not deal with the reference group of the individual, other than only indirectly, nor do they generally make any attempts at establishing any new reference group. More often than not, the emphasis is on getting the individual to better understand and cope with his existing groups. While such an approach does have some practical utility and humanitarian overtones, it would not seem to help the individual develop new and more effective attitudes and modes of achievement which would help him enhance his social, psychological, and economic achievements. In view of the present findings, a further factor hindering the success of such individual programs may be that, since in these programs the reference group is not dealt with, the negative effects of the reference group serve to counteract any positive effects gained from therapy. What seems to be most effective is a program along the lines of that which McClelland and Thompson found to be productive in achievement motivation training involving both the individual factors and environmental

factors such as the reference (alumnus) groups. In this context, the somewhat greater effectiveness of group therapy programs in some situations could be explained by the fact that such programs serve to establish a new and therapeutically beneficial reference group.

The minimal effects of various programs of directed social change might also be at least partially explained by the fact that many of these programs do not take into account the various reference groups as they affect individual attitudes and motivation. Instituting a guaranteed income or some other form of economic maintenance, for example, has been viewed by various authors as the key to improving the social and economic situation of those presently in poverty. While such programs may improve the economic situation somewhat, in itself it would not serve to alter the attitudes and motivations of the people. A program specifically directed at attitude and motivational change taking into account the effects of reference groups should also be incorporated into any such program if any long-lasting positive social changes are to be achieved and maintained.

Conclusion

The results of the present experiment thus demonstrate that the reference group is indeed an important factor in modifying achievement motivation, indicating that perhaps the immediate social situation is at least as important as individual personality

factors in determining social and economic achievement after all. Achievement motivation, in turn, has previously been shown to be closely related to the social and economic achievement of societies and nations, as well as individuals, at least as defined and measured by McClelland. This definition and method of measurement, however, is subject to some criticism. The definition, at least, is actually rather general and the possibility remains that perhaps this definition in fact takes in a host of other individual and social factors yet to be isolated. While perhaps theoretically provocative, its practical application remains considerably abstract and difficult to implement as McClelland's recent work (1969) has demonstrated. Achievement motivation apparently is indeed related to social and economic achievement, but further work needs to be done to isolate the particular individual and social factors which combine to make it related. What the present experiment has clearly demonstrated, is that one aspect of the immediate social situation, the reference group, is one important factor contributing to the achievement motivation.

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THE ACHIEVEMENT MOTIVE: A SOCIOLOGICAL ANALYSIS

by

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An Abstract of a Thesis

in Partial Fulfillment of the Requirements

for the Degree Master of Arts

in the Field of Sociology

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ABSTRACT

David McClelland's theory of n Achievement (n Ach) and Max Weber's theory of achievement implicit in THE PROTESTANT ETHIC AND THE SPIRIT OF CAPITALISM are experimentally analyzed and compared with Theodore Kemper's theory of reference groups in an attempt to determine the relative importance of factors of the immediate social situation versus ingrained personality characteristics in the development and modification of achievement motivation. In examining the effects of the reference group on achievement motivation in this study, the subjects were initially ranked according to level of n Ach and those low in n Ach were individually established in reference groups composed of subjects high in n Ach. They then experimentally interacted with these groups in a one-hour meeting each week for a total of four weeks. It was found that those subjects initially low in n Ach showed a substantial increase in n Ach as a result of interacting with the reference group high in n Ach, demonstrating that one factor of the immediate social environment, the reference group, is important in at least modifying achievement motivation. The implications of these results are discussed for various programs of individual and social change as well as for the theoretical implications involved.