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# THE CORPORATE CIA—A PREDICTION OF THINGS TO COME*

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This paper presents the case that there will soon be a confluence of the technical capability, manpower and motivation for corporations to know their competitors much better than they do now. An argument is given that a recognized new corporate activity will develop whose mission will be to study competitors with a view to finding weaknesses which can be capitalized upon. A likely consequence of this development will be the growth of covert activities of a kind which are at least distasteful, are probably immoral and possibly are illegal. If the development of corporate CIA's takes place there will be a new and fascinating arena for analytic skills, but the practitioner will be faced with some very demanding questions of what shall constitute moral behavior.

## The Issues

Shortly after World War II the government of the United States found it advisable to create an entity for which there was no precedent in the country's history. The duties of this entity, which was given the status of a separate administrative agency responsible directly to the National Security Council, are to collect, screen, collate, organize, record, retrieve and disseminate information germane to the security of the country. There were, of course, several antecedent organizations, both within and outside the military structure, whose duties were similar, but all of these lacked the stature, resources, and recognition accorded the new arm of government which was called the Central Intelligence Agency or, for short, CIA. This was the first time that our country felt it necessary not only to centralize the intelligence function, but to announce to the world that it had done so. The thesis of this paper is that large corporations soon will find it necessary to adopt a similar policy for approximately the same set of reasons. In particular, I predict that within five years the gathering of intelligence as currently practiced by governments in both military and diplomatic affairs will become a formal, recognized activity in corporate management.

Given that this prediction is lent any credence at all, a large number of complex issues can be raised and I can deal only with a few that strike me as being most interesting and pressing. Four reasonable points of view that one might adopt in response to a prediction of this kind have been suggested and attention is directed in part to each. Probably the largest group of readers will be those who react with not much more than passing interest. The second group will have their curiosity (scientific or otherwise) aroused and will consider pursuing the activity professionally. A third group will think of a corporate CIA as a possible means of gaining competitive advantage. The fourth group will become concerned with how the potential ill effects of corporate intelligence activity can be controlled. My own position on the matter is something of a mixture of the

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last three points of view. As a scientist, understanding an organism as complex as a rival corporation is a great challenge and there is the added attraction of possible material as well as intellectual reward. As a businessman, I am completely convinced of the value of knowing my competitors better than I do. And as a citizen, I feel that serious thought should be directed to the question of how we are to avoid the socially undesirable consequences of intelligence activity.

There is room, then, for many positions, but the first concern is that of establishing whether or not there is something worth taking a position about. With no pretense of doing more than scratching a surface, I propose to touch on the following:

First is an outline of the role of a corporate CIA stating how it could fill a gap in the coverage of staff specialists who have made their place in corporate management.

Second is an argument that economic, technological and moral conditions of today are conducive to the emergence of such a development.

Third are some observations from which one could reasonably conclude that corporate intelligence is already an important activity that lacks only formal recognition and a methodology of its own.

Fourth is a set of guide lines for conducting a corporate intelligence activity.

Fifth is a discussion of the central task of the corporate intelligence function and its relation to other corporate functions.

Sixth is an exposition of the scientific, legal and moral consequences of increased emphasis on intelligence activities.

## Why a Corporate CIA?

Turning, then, to a primary issue, one could reasonably ask, "Why should there be a corporate CIA?". Hasn't there already been a proliferation of staff specialists, each claiming the ear of the decision maker and each justifying his salary or fee on the basis of producing reports rather than a salable product? To answer this question fairly requires a look at history and an appreciation of the common characteristics of all staff work. (My usage of the word "staff" is strongly influenced by military practice which tends to make a sharp distinction between those who plan and advise and those who act and bear direct responsibility.)

There is a class of simple, well-delimited situations wherein there is no reason whatsoever to do other than concentrate in a single brain the activities of exploring alternatives and reaching a decision. In this simple kind of situation the cost of communication with all its ramifications of establishing common concepts and language far outweighs the expected cost of error due to misassessment or miscalculation on the part of an individual. The essence of such a situation is captured in the aphorism, "Too many cooks spoil the broth.". But as soon as one becomes concerned with situations which are even slightly complicated, the balance tends to shift the other way rapidly, i.e., the totality of thinking and acting must be shared by two or more individuals. The reason for the shift is twofold. First, the reliability of conclusions drawn from a single individual's

conceptual and computational capacity decreases rapidly as complexity increases. Secondly, and more important, when a situation is consciously conceived as being complex, it is likely that there is a high payoff from arriving at the correct conclusion. Said another way, it would seem that human beings do a reasonably good job of conceptualizing situations with a degree of complexity appropriate to the level of importance of the decision at issue. This is far from a universal and anyone could find counter examples by the score. None the less, I propose to proceed on the thesis that the argument is substantially valid.

We are led then to consider possibilities for the division of labor. One obvious way is the partnership idea wherein responsibility and decision making are shared equally among several people. This works after a fashion in a few business enterprises, but on the whole is a comparative rarity. Historically, it has been a failure in government. On the other hand, there are many examples of successful collaboration of staff advisors and responsibility bearing executives. In fact, the whole notion has been institutionalized in governmental, corporate and many other forms of organized activity. The point to be emphasized is in part obvious; namely, that staff study activity has proven its worth by standing the test of time; in part, less obvious, that it is of value only in complicated situations; in part, not so obvious at all, that the complexity which necessitates staff work also limits its utility.

Complexity can derive from many sources and it is usually treated in a nonprecise way not dissimilar to the numbering scheme which consists of one, two, many. The kind of complexity of interest here is that which permits a large number of concepts to be justifiably defended as representing a situation in question. Thus, a business enterprise of any size can be represented in a variety of ways, each of which is useful for one purpose or another, yet none bears much resemblance to another. For example, the legal counsel can and probably will regard a corporation as an entity which engages in conflicts of interest with other corporations while, incidentally, manufacturing and selling something along the way. The corporate controller will tend to think of the enterprise as an acquirer and distributor of cash and the means whereby the cash flow is generated will be of lesser interest to him than how much will arrive when. Similar arguments can be presented for the points of view of the corporate economist, the industrial engineers, the systems and procedures people, the organization analysts, etc. The observation that numerous staff groups and points of view exist need not be belabored, but it is important to note that these viewpoints and their adherents arrived on the scene at different times and survived for excellent reasons.

To be more specific, consider the recent history of three activities which either have become or are in the process of becoming entrenched in corporate organization. Probably, the least well established group are the long range planners. The detail of their proposed and actual functions are not yet firmly established, but it seems clear that their claim for existence rests on the mismatch of the time scales of other corporate planning activities to those of real life. It is easy to be sympathetic with this stand because institutionalized planning mechanisms, such as the annual budget, are clearly too narrow in both breadth and time horizon

to serve well all the purposes to which they are put. Another staff group, the market researchers, have been recognized longer and, at least in part, have justified their claim that it is worthwhile both to measure aspects of the consuming public and to attempt to understand the mechanism whereby purchase choices are made. Both satisfactory measuring processes and the desired understanding seem very elusive at this point in time (as attested by articles in various marketing journals). None the less, confidence resides in the attitude that some understanding and predictability is better than none and it's worth the cost. The third group is in one sense the oldest and in another the newest. If data processing is taken to be an outgrowth of the function of bookkeeping, it is the oldest staff activity. On the other hand, the advent of computers has so changed the function that it is probably preferable to consider it as something qualitatively different. The genesis of this new activity is abundantly clear—a technological revolution in information handling has taken place and there is no choice but to respond to it. It is a matter of record that corporate organizations have responded at an astounding pace. Data processors tend to bemoan their fate of having to court recognition, but adherents to almost any other discipline can observe how attention catching gadgetry helps bolster their case.

In at least these few instances, then, staff functions have been developed in response to a perceived need or opportunity for conceptualizing the world in some particular way. The reality is hopelessly more complex than can be dealt with completely by an individual attempting to govern a large organization, so opportunities arise for those who are willing to devote effort to a particular aspect of the whole. However, these occasions present only opportunities, not guaranteed winning ploys. A number of circumstances must coexist before emphasis on a particular aspect is economically justified. Or, put another way, there are a vast number of models of any real situation which could be created, but only a few will produce more than their cost. The central thesis of this paper is that a particular class of model shortly will be recognized as having a payoff-cost ratio larger than one and that a recognizable activity will grow to exploit the opportunity.

## The Role of A Corporate CIA

By definition, a corporate CIA is an activity devoted to gathering information and making models whose center of attention is the competitor. "Center of attention" in this sense is exemplified by the flow of money in accounting models, by the flow of goods in inventory models, by the presence of conflicting goals in game models, by a queue in waiting line models, and so on. Model types which have appeared in the literature have a "sine qua non" which types them. The center of attention is characterized by relatively realistic description, but completeness and accuracy tail off as one looks away from this focal point along any dimension. Thus, a model produced by a corporate CIA might well include facets of the competitors' production systems, but it would not normally make reference to the corporation's own equipment. Again, observations might be made from which the competitors' personnel policies could be inferred, but the

company's own policies would not normally be explicitly introduced. This is not to say, of course, that the company's own policies are not excellent candidates for investigation. Rather, the intent is to make an explicit demarkation of the province of the corporate CIA and to differentiate it from the spheres of operations analysts, market researchers, industrial engineers, legal counsel, etc. The province of the CCIA (an abbreviation used hereafter) will include research, design, production, personnel, sales, corporate development, etc., etc., but always of the *competitors' organizations*. This restriction of the center of attention to the competitor is *the* defining characteristic of the activity whose emergence I predict. It is also a self evident distinction from any staff activity currently given widespread, formal recognition in business practice.

The military parent of this idea, of course, is anything but new. Gathering of intelligence about the enemy is probably just as old as warfare. References to what are now unmistakably classifiable as intelligence activities appear throughout recorded history. Looking back not too far, for instance, cases can be found of kings acting as their own intelligence gatherers during purportedly friendly visits to other lands. But this rather ineffective method necessarily gave way to delegation of the task to others who were better equipped by reason of mobility and obscurity. Gradually the process was refined to the present state of the art. The current status of intelligence activity in the U. S. Army, which is nearly on a par with operations, logistics and administration, is indicative of the status corporate intelligence activities eventually will be accorded. Furthermore, it is likely that a parallel distinction of approximately equal sharpness will be made to the current separation of operations and intelligence in the military organizations.

## Why A CCIA Now?

Turning to the second phase of this discussion, the question at issue is why a development of the kind of activity outlined should take place now. The first argument concerns a necessary but insufficient influence; namely, that it is now within known technology to produce models of the competitor which will "pay for themselves". There are three relevant aspects of current technology, each of which has undergone violent change in recent years. The first, and most obvious, is the development of computers which provide capacity to store and retrieve information at far lower cost than heretofore possible. The second, and less well publicized, development is that of various devices used to gather information. It is now quite difficult to evade a clever and persistent eavesdropper who uses suitable mechanical aids. The third development, not well understood at all, is that of conceptual models which are useful in dealing with truly complex situations.

The reduction in cost of storing and retrieving information made possible by use of a computer is a subject that has been dealt with at length from a number of points of view. Studies and manufacturer's literature show that the cost can vary over a very large range depending on the frequency of access, time delay of response, the amount stored, etc. But analysis of even what is probably a "worst case", i.e., using a commercial data processor not designed specifically for in-

formation retrieval, indicates that information handling cost is not the dominant influence that it has been in the past.

Recent developments of sensory devices for information gathering, though startingly successful, are known to relatively few people, or at least this was the case prior to the publication of "The Naked Society" by Packard. "Bugging", wiretapping, long distance photography, and the like, are certainly not new, but technical developments, particularly in the direction of miniaturization, have tremendously increased capability for obtaining information that someone else would prefer to conceal. Rather than take space here to, at best, scratch the surface of a complicated topic, it seems preferable simply to point to the technical characteristics of miniature tape recorders, directional microphones, telephone conversation recorders, etc., that are readily available to any purchaser. Packard notes these in some detail. He also recounts cases such as the successful bugging of the U. S. Embassy in Moscow which reinforces the credibility of claims for the technical aids. Ultimately, information can almost always be gained by the seeker; the defender can at best impede the operation and make it costly. The importance of sensory device development lies in the fact that it sharply reduces the cost of accessing hidden information (provided, of course, that the seeker does not restrict the means he uses).

The third kind of technical development, that of models which can cope with complexity, is both the most difficult to describe and the most difficult to justify as having occurred. The problem is not one of justifying the need for a suitable class of models since we now require a variety of models to describe a business *from the inside*. The task of capturing aspects of value from the outside is obviously much more difficult. Rather, the requirement seems to be for a long digression on the applicability to intelligence models of the modes of thought of cyberneticians, learning machine designers, and students of self-organizing systems. Since this discussion properly belongs to a later section of this paper, it seems best not to pursue the issue at this point.

The second basic argument for the development of CCIA in the next few years rests on the thesis that companies will achieve much greater understanding of the magnitude of effects that stem from the actions of their competitors. At present, there is neither a high level of such understanding nor much effort expended to increase it. And so long as one is surrounded by a kind of multivariate chaos, or at least feels that this is the case, there is little motivation to sort out the causes of exogenous events. But there is reason to suspect that the current state of affairs is only in local equilibrium and that as understanding of internal relationships is increased, ability to sort out such causes will also increase. A natural consequence is further allocation of effort to isolate them. Carried to a logical conclusion, critical positive feedback will ensue and drive the whole system to quite a different point of equilibrium wherein all contenders (perhaps better named as survivors) will have a much more thorough understanding of both their own and their competitors' operations. Obviously, this will not happen overnight particularly since the current situation is sub-critical and moving toward criticality at an apparently slow rate. On the other hand, the consequences of posi-

tive feedback are notoriously rapid and one can easily misestimate the timing of events by failing to recognize the inadequacy of simple extrapolation.

The effort necessary to carry out CCIA activities will, of course, have to come from somewhere. But, here again, there is an influence, namely automation, which will tend to make resources available. Perhaps I should emphasize now that this whole essay is presented on the basis of prediction, not advocacy. It seems entirely reasonable to react with dismay to a suggestion that the activities in question, which may include spying, will absorb energies released from productive labor. But in the absence of other factors, which for the most part have yet to appear, the course of events predicted seems inevitable.

The basis for this claim becomes more apparent if the global point of view is abandoned and the situation is examined from the viewpoint of an executive who carries the ultimate responsibility for the success of his organization. To take an extreme case, assume that his product rests on a very fast changing technology like solid state electronics. He may adopt a common strategy and seek success simply by attempting to produce better products or lower priced products than his competitors. That is, he can base his claim for survival on having a more technically capable organization than his competitors. But what are the odds of being that much better or faster in developing products than the competitor? Current events are demonstrating that they are not high. Suppose, however, that he must bet a substantial share of his development resources on a particular device. How much is it worth to him to know what his competition is doing in the same field? My guess is lots. The simple fact that a financially and technically stronger competitor is researching a particular area may well be enough to cause our executive to drastically shift his emphasis. This case, of course, typifies the kind of situation wherein the role of intelligence is familiar and uncomplicated. The existence of a highly critical item of information is a given condition and the problem is to find it. In such a situation, we could critize the executive only if he failed to pursue the needed observation.

It seems reasonable to believe that he will see the situation in approximately the same way. He may do no more than peruse appropriate technical journals for clues. He may only tell his people to keep their eyes open at technical meetings. Or he may take some more overt step like trying to hire a knowledgeable employee of a competitor suspected of pursuing similar research. If he is even more aggressive, he will start some more covert operation such as buying knowledge from a competitor's employee or planting an agent on the competitor's staff. Clearly, at some point the actions become both morally and legally indefensible, but this condition is irrelevant to the point that a good executive will indeed conduct an intelligence operation of some kind when faced with such a situation.

At the other end of the spectrum is the case where the technical base of operations is quite stable and well established. Interestingly enough, a number of obvious candidates fail to meet these two criteria. For example, steel and glass making are going through substantial technical changes. The environment of sugar refining has been upset by Cuba's political development. Traditional building materials and methods are changing, etc. Perhaps the best example of enter-

prise not too affected by technical change is money lending. But even here there is strong motivation toward increased attention being given to what competitors are doing.

Consider the problem of the chief executive officer of a bank in maintaining and increasing the fortunes of his organization. Little, if anything, in his sphere of interest changes as fast as electronic products. Furthermore, his alternatives are circumscribed by governmental regulations. Yet, the fact remains that some banks prosper and grow at a rapid pace while others fail to survive and end up as the junior element in a merger. It is clear that the time scale of events is substantially different from that of the electronics world and it appears that critical elements of information are less likely to exist. On the surface, it would appear that an intelligence activity would offer little prospect of being effective. But one needs only to look beneath the surface to find that such is not the case. "Looking beneath the surface" means no more than formulating more sophisticated models of competitors' activities than conventionally done and using these models to find the binding constraints on competitors' activities. That some are growing and prospering while others are not is readily observable, but the underlying reasons for this behavior are not at all clear. The competitor is indeed a suitable subject for detailed observation and research. Its complexity, however, precludes a high level of understanding when the only resource allocated is part of the time of individuals who have other more immediate responsibilities.

## Intelligence Activity Already at Work

The third major argument of this paper is that one could reasonably reach the conclusion that corporate intelligence activity lacks only formal recognition and its own methodology. This may well be held to be self-evident, but a few illustrations will at least indicate the range of evidence which is quite large.

Some examples are:

1. The Macy shopping team introduced during the era when the store featured "6% less for cash".

2. The Wall Street Journal advertisements which feature the useful intelligence that bank officers gather for their customers.

3. The Honeywell "200" computer, a perfect example of a machine that was built to supplant a competitor's product. When a company writes and advertises a program to "liberate" the customer from his supposed bondage, there can be little mistake about intent. It might be argued that this course of action required "intelligence" only in the IQ sense, but analysis of the situation, particularly with reference to timing of the new product, suggest either good intelligence or very good luck.

4. The corporation whose successful formation purportedly is based on the "theft" of $10,000,000 worth of research. Assuming that this is an accurate picture of the facts, and some knowledgeable observers do, the group who seceeded from their employer to form the new corporation most certainly conducted an intelligence activity from a very privileged position.

5. The widely publicized case of recent date centered on the manufacture and

sale of antibiotics. There are charges and counter-charges now being reviewed in the courts, a ring of drug secret thieves has purportedly been exposed; there is evidence of collusion leading to price fixing on government sales, and so on.

6. A final case which needs only be mentioned here since Time Magazine reported on it in some detail. This is the apparently well established practice of the automobile manufacturers spying on each other for styling information.

This list could, of course, be extended to almost any length desired, but lengthening it would simply reinforce a belief that a wide variety of activities which can properly be labelled "intelligence gathering" do go on. On the other hand, the list neither confirms nor denies my conjecture that few of these actions have been taken as a result of, or in conjunction with, the development of a formal model. Just as any organization plans with or without a long range planning staff and operates with or without an operations analysis staff, so it gathers intelligence with or without a formal staff charged with gathering it. About all that one can be sure of is that any careful analysis that may have been done so far is well hidden. The change to be expected is one of giving more recognition to the need for formal intelligence analysis and more recognition to those who will make the analyses. Groups will be given opportunity to make specific hypotheses about competitors and will be assigned well defined responsibility to perform the intelligence gathering tasks necessary to confirm or deny them.

## The Formation of A CCIA

The current situation seems analogous to that of about 1950 with CCIA activity playing the role of operations research. At that time, a few people felt that models useful for controlling operations could be developed by a staff with a particular background and training (that of science). "Useful" in the sense used meant ultimately "more than effective enough to pay for their cost". This feeling was a hypothesis rather than a result of much demonstrable evidence; consequently, advocates had to plead for a chance to demonstrate their case. The same may reasonably be expected by would-be developers of intelligence models. Such a person is in the position of asking for appreciable resources to research an admittedly very complex phenomenon and he cannot in honesty guarantee success in any particular instance. Operations research grew slowly as a result of being a gamble in the earlier days and the same sort of influences will slow the development of the CCIA. There is an important compensating influence, however, in that operations analysts have demonstrated the power of the formal model in internal business operations. It would seem a substantially lesser job to demonstrate that formal models will work well on a different scene.

At this point, it should be clear that a CCIA has been defined in such a way that "cloak and dagger" operations are a relatively small part of the whole. It would be foolish to ignore the potential of such activities, but they become important only after the criticality of some item of information has already been established. A "fishing" expedition carried on covertly will probably be very expensive simply because the bulk of what is uncovered is apt to be of very limited use. Or, put another way, there is so much less expensive information which goes

undigested and unused that intelligence money is better spent trying to make sense of what is available without resorting to covert methods. To the extent intelligence work is limited to this kind of activity, moral issues are largely irrelevant and one is free to consider the scientifically interesting aspects.

Assuming for the moment that life is so simple, the following guidelines may be useful if one chooses to create a CCIA or to work with one:

1. Recognition should be given to the fact that most scientific work requires a continual interplay of data gathering and model making. Some people tend to "ivory tower" hypotheses and then check them with data. Others prefer to gather data more or less haphazardly and then ruminate over it until a model emerges. There can be no hard and fast rule to choose between these two approaches, but since some data will likely be expensive to get, the chances are that the first approach will be preferred.

2. An aspect of operations research that is, or at least used to be, strongly emphasized is that the analyst should build normative models. The precept for the intelligence modeler is the opposite; namely, to build descriptive models. This suggestion stems from the apparently useful maxim that responsibility for operations and intelligence should be separated. It is likely that one will need all his resources to predict the behavior of a competitor and that he will hopelessly overload and bog down if advice on operational decisions is added to an already complex task.

3. Intelligence model builders will be well-advised to adhere strictly to the operationalist philosophy of Bridgeman. The first question an operations analyst should ask is "What decision am I trying to influence?". The first question the intelligence analyst should ask is "What can I observe and hopefully measure?". The intelligence modeler must be at least as operational in point of view as the operations analyst.

4. The CCIA will be at least as needful of team effort as OR at one time was held to be. It is not nearly so clear in 1964 as it was in 1954 that team efforts are effective in operations research. But, whereas OR efforts have tended to become more specialized, hence, less requiring of broad background, the intelligence modelling activity will have as its sphere at least one whole corporation (a competitor's) in all of its complexity.

5. Successful CCIA operations will be observed to be pack-rat like in their clinging to data. The maxim to be followed in assessing the utility of saving data will be, "When in doubt, save it.". It follows that the CCIA will develop and use a whole spectrum of file types which will probably vary from computer disks with millisecond access to unsorted garbage with access time measured in weeks. For some unexplained reason, many people fail to recognize that the access time-cost of storage tradeoff extends over a very large range and they tend to err either by keeping too much in high cost form or throwing away beyond retrieval that which could and should be kept at very low cost. A successful CCIA will not make this error.

6. A corollary to care in storing data will be care in classifying data prior to storage. This is not the place to delve into the relationships of classification

technique, concept formation, ease of retrieval, etc. It is worthy of note, however, that associative processes of thought and data handling will be important, at least until the earliest stages of ignorance are past. It may also be the case that an efficient associative memory device (content addressable) will provide the impetus necessary to stimulate CCIA activity.

Aside from these more or less specific guidelines there are some broader observations which are in part prediction, in part recommendation, in part speculation, and on the whole reflective of the author's personal preference and prejudice. The observations can be summed up with the statement that insofar as intelligence models are concerned (and probably much more broadly), the people who call themselves cyberneticians are on the right track. There are a number of reasons for this belief among which are their strict adherence to operationalist philosophy, their willingness to deal with very basic and, hence, general concepts (e.g., states, transitions, homeostasis, etc.), and their explicit recognition of systems which are complicated beyond hope of complete description with currently available tools. But the most commanding aspect of their point of view is the important place given to the notion of survival of an organism. A corporation can usefully be viewed as a very complex organism which has the need to survive above and beyond the need for profit, growth, and other goals attributed. This is not a new idea, but it has not as yet been a very important one. Given a sufficiently higher level of understanding of how one corporation can cripple another, it becomes paramount. The relevance of cybernetics to this kind of situation is very nicely summed up by Ashby, who notes that cybernetics and game theory can be viewed as the foundations of a theory of "How to get your own way". One can hardly disagree with his remark that few subjects are richer in application.

## The Task of A CCIA

Earlier in this discussion, a CCIA was defined as an activity charged with modelling the competitor. But, just as one can build many models of a corporation centered on internal activities, so can one build many models of the opposition and there must be some basis for choice. The central task of a CCIA is to model the opposition, but how? Here again, cyberneticians suggest a most useful mode of thought in that they direct attention to searching for constraints or rigidities. The view taken is that if one is going to control a many variable organism (the competitor), he must be prepared to cope with a variety of responses from that organism. He must match variety with variety. But it is readily observable that an organism does not respond with all possible combinations of all variables. There are always some combinations of variables which are forbidden, that is, there are some constraints which restrict an organism's behavior. When one finds such constraints he can control the organism with far less resource than would otherwise be necessary. This might seem to say very little more than that one should look for behavior he can predict. Regular behavior does not, however, imply that it is preserved by anything more permanent than custom.

To be more concrete, one might find (if he went looking) that the competitor's

sales manager in the Northeast is weak, or that there is a bottle neck in a certain production process, or that there is a severe imbalance in the age distribution of their executives or that the top management habitually over-corrects when it encounters a transient. Each of these action limiting conditions and the myriad of others that might exist are removable at some cost in money and time. But, until they are removed they provide opportunity for exploitation. To be still more specific, consider the possibilities of discovering constraints on either side of some corporate duels that have existed or could exist. To name a few:

1. Schenley vs. Seagram in liquor.
2. Lever Brothers vs. Proctor and Gamble in soap.
3. Hertz vs. Avis in rental cars.
4. Boeing vs. General Dynamics in the TFX situation.
5. New York Central vs. Pennsylvania RR.

This list, too, could be expanded greatly, but the suggestion is probably sufficient. No doubt the most obvious constraints of each of these organizations has been exploited by its competitor without the thought being given the name. But it seems likely that there were and are other constraints of a more subtle character that have gone unnoticed through lack of analytical effort.

The central task of a CCIA can then, to real advantage, be limited to the building of models which will identify and demonstrate limitations on the actions of competitors. This leads to the question of "What next?". Appealing again to the military model, the indicated next step is integration of intelligence with operations. This can be done in varying degrees of formality ranging from parallel briefing of the top executive to formulation of some higher level model. The process cannot be pursued in detail here; the important point is that the CCIA delivers only a component to some strategic decision maker who will then decide what to do. If a high degree of control has been gained over a competitor, the actions can be taken which will cause him to react in a predictable way. Such an action will give the intelligence analyst a particularly good opportunity to test his understanding, but such tests will be, at most, ancillary to the main purpose of contributing to the welfare of the analyst's organization. There is a certain "with, but after" role that intelligence plays vis-a-vis operations in the military and a carry over to the CCIA seems likely. In short, the CCIA as visualized, is very specifically *not* the strategic decision element, but only a servant of it.

## The Need for Control

At this point, it is worthwhile to reiterate that the comments immediately preceding have been made within the assumption that one could restrict his interest purely to the scientific aspects of intelligence work. Another way of stating this assumption is that a solution to the moral and social problems raised has been taken as given. The fact of the matter is that no such solution exists at present. If one looks to the law, the Sherman Act, the Robinson-Patman Act, and the present vigilance of the Justice Department are somewhat reassuring. We have at least in part responded in the past with governmental regulatory action that has curbed the most severe concentrations of power. This sug-

gests that if the least desirable outcomes of corporate intelligence work becomes prominent, we may again be resourceful enough to restore some sort of sensible balance. We are ill advised, however, to rely on mere optimism.

It may be held that it is "scare thinking" to suggest that possible controlling actions be investigated now. But perhaps a few examples of current practices will be persuasive to the contrary. An unimportant, but illuminating, case was mentioned in front of me recently. It seems that an executive had the chore of "enticing" (his word) executives from competitors to fill out his staff. He mentioned that there was an agreement among members of his industry not to "pirate", but he was either ignoring it or he had somehow convinced himself that this case was different. The legal and moral status of the agreement itself is worth questioning, but, bypassing that issue, consider the effect of greater knowledge on the problem faced by my acquaintance. So long as he had only a very dim idea of the effect on his competitor's losing a key employee, he could retreat behind euphemisms and avoid direct confrontation of the issues. But, assume that he is informed that a prospective "piratee" is indeed vital to the success of the competitor as he might learn with better intelligence work. His thinking now has to go deeper and he will consider the likelihood of breaking up the coalition represented by the no-pirating agreement, the likelihood of reprisal, etc. He may choose to abide by the agreement and forget the candidate, which is certainly a stabilizing action. But he may choose the reverse with full knowledge that it was his complete understanding of the consequences that led him to his decision. He will then value information about his competitor more, presumably spend more on it and take further steps of a destabilizing nature. His competitor who lost the man will likely take an equivalent set of actions, thus moving even further from the present equilibrium.

The case of the electrical manufacturers trial and conviction of conspiracy has been by now well publicized. There seems no doubt whatsoever that a dozen or so manufacturers of heavy electrical equipment met, formed a coalition, and parcelled out the total business available in a way specifically designed to circumvent the competitive bid system. Apparently, not all members were faithful to the group at all times, but the coalition was at least in part successful until it was discovered. In this case, the actions taken were not at all in the grey zone of the law. They were well in the black and they constitute demonstrable evidence that some people will ignore the social consequences of their actions even at the risk of imprisonment.

In another case, a very senior executive of a very large company was confronted with the fact that his sales people were making delivery promises of a few days' delay when the production facility could not possibly do better than a month's delay. The decision made was that completely unrealistic promises should continue to be made and the comment justifying the decision was, "We can't afford to get religion until our competitors do . . .". In short, the staff was told to deliberately lie to its buying public.

The conclusions that I believe are worth drawing from these examples and many others like them are:

1. There is no reason to believe that a simple appeal to conscience and social values will be effective in a system where competition is a dominant feature of the environment.

2. Detailed knowledge of the competitor will, in most cases, tend toward actions which are destabilizing, i.e., the strong will grow stronger and the weak weaker.

3. The "rules of the game" are inadequately drawn up currently and this favors the group with the most flexible conscience.

As further verification that the problem of control is a real one, ask yourself whether or not you would engage in the following practices, and, if not, how you would control them:

1. You are offered the opportunity of recording all telephone conversations without your callers knowing it.

2. You are asked to "bug" the hotel room of a competitor.

3. You are asked to note during a technical meeting "field trip" as much as you can of a competitor's equipment.

4. You are asked to design a method to confuse the results of a competitor's test marketing experiment.

5. You are asked to try to hire a competitor's employee.

6. You are asked to be a covert agent spying for company one while purportedly working for company two.

7. You are asked to research the personal history of all members of the competitor's executive group.

8. You are asked to develop a model of the competitor with full knowledge that some of the data will come via means of which you disapprove.

A very few experiments have indicated that a wide variety of attitudes exist toward this set of questions. Assuming the results are valid, they reflect the most perplexing question that can be raised with respect to the development of CCIA activity. The question is, "How can a basis be stated both for what a CCIA should and should not do and for what it will and won't do?". One can appeal to social values for an answer or, perhaps, to definitions of personal privacy that one thinks should limit permissible intrusions. But the grey areas are very large and it seems possible to construct a counter example to almost any broad statement. A reliance on existing law, for example, appears to permit actions which most people regard with at least distaste. This situation may well change as new law is evolved to meet recognizable new conditions, but this entails an appreciable period during which the issue of how one will behave toward his competitors must be resolved on other grounds.

## A Tentative Conclusion

A tentative conclusion is that *no* general basis for behavior will be found in the sense of a rule or code. Rather, the whole pattern will evolve as a series of ad hoc decisions specific to individual situations and that the result will be a very broad spectrum of behavior. This exists today in the form of unwritten "gentlemen's agreements", in the refined competition of professionals who agree not to criticize

each other, in the rougher competition of the used car industry, and on through the no-holds barred tactics used to dominate illegal activities such as gambling or sale of narcotics.

In a sense, then, the future is likely to resemble the past in that the one who plays the game the roughest will make the rules. His opposition will have to respond in kind as soon as any practice becomes effective. But this very characteristic suggests that the kind of equilibrium that the United States and the USSR now have may emerge. That is, it will become quite important not only to have retaliatory power, but to make it known to the opposition that this is the case. It will thus become advantageous not only to model the competitor and know his weaknesses, but to let him know that such work is being done. Hopefully, he will respond by behaving within the existing ethics of the business in question, either because he accepts them as desirable, or from fear of touching off a series of mutually damaging actions.

It may seem, in part, an inconsistent argument to suggest that a CCIA will emerge because it can gain competitive advantage and then to suggest that potential advantages will not be capitalized upon for fear of encouraging mutual loss. Actually, the process anticipated is one of moving from a set of current equilibria to a new set of equilibria where each organization will know its competitors' capabilities far better than it does today. Relative positions will change in the transition; gains and losses will be incurred depending on who moves first, how well and how fast. But new equilibria will evolve as dictated by law or mutual agreement. Hopefully, these new equilibria will be typified more by competitors having the capability to behave in a socially undesirable way than by actually behaving that way.

## A Summary

To summarize briefly, the arguments presented herein are as follows:

First, there is, at present or will be very soon, a coexistence of the technical capability, the manpower and the motivation for corporations to know their competitors better. This confluence of necessary ingredients will find expression possibly accompanied by covert activities we would prefer not to have.

Second, the emergence of this kind of activity will present an opportunity for fascinating scientific work, but it should not be approached with the expectation that proverbial scientific detachment from consequences can be maintained.

Third, unevenness in the rate of gaining understanding of competitive relationships will yield advantage to those organizations which move first and fastest. Pioneers in the creation of CCIA's will take a gamble with moderately long odds against early success, but with a high payoff in the long run.

Fourth, undesirable invasion of privacy and waste of resources may very well result from increased activity in the intelligence field. The probability of such eventualities is high enough to cause concern now. Appropriate rules and definitions of terms will be hard to find, but they will have to be found lest the communist caricature of rapacious capitalism begins to be more nearly a fact.