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AUTHOR Leavitt, Harold J.
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ABSTRACT

The idea of using groups, rather than individuals, as the basic building blocks for an organization is suggested in this paper. Although this idea is not new in theory, it is new in practice. To design an organization from scratch around groups appears to violate the American value of individualism. Groups, however, have advantages over individuals by providing support in time of crisis, being more innovative, making better decisions, gaining commitment of members, controlling individual members, and providing identity in a large organization. To design an organization around groups, one would follow the same procedure as with individuals in hiring, training, paying, promoting, designing jobs, and firing. Possible disadvantages that need to be considered include the increase in negotiation time, the need for better arbitration mechanisms, escape hatches for individuals, the possibility of alienating creative highly individualistic people, the competitive conflict between groups, the leadership of the group, and the possibility that groups will become so cohesive they will be closed to new input. Yet the advantages in potential increased productivity offset the inherent disadvantages. (Author/DE)

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SUPPOSE WE TOOK GROUPS SERIOUSLY....*

Harold J. Leavitt

Stanford University

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Harold J. Leavitt

Stanford University

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This paper is mostly a fantasy, but not a utopian fantasy. As the title suggests, it tries to spin out some of the things that might happen if we really took small groups seriously; if, that is, we really used groups, rather than individuals, as the basic building blocks for an organization.

This seems an appropriate forum for such a fantasy. It was fifty years ago, at Hawthorne, that we discovered the informal face-to-face work group. Since then we've studied groups inside and out; we've experimented with them, observed them, built them, and taken them apart. Small groups have become the major tool of the applied behavioral scientist. Organizational Development methods are group methods. Almost all of what we have come to call participative management is essentially based on group techniques.

So the idea of using groups as organizational mechanisms is by no means new or fantastic. The fantasy comes in proposing we start with groups, not add them in; that we design organizations from scratch around small groups, rather than around individuals.

But right from the start, talk like that appears to violate a deep and important value, -individualism. Let me just ask you to bear with me for a little while on that one. I don't think this fantasy will really turn out to be anti-individualistic.

*Prepared for Western Electric's Symposium on the Hawthorne Studies, Chicago, November 1974.

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In the rest of this paper, I would like briefly to address the following questions: (1) Is it fair to say that we have not taken groups very seriously in organizational design? (2) Why are groups even worth thinking about as organizational building materials? What are the characteristics of groups that might make them interesting enough to be worth serious attention? (3) What would it mean "to take groups seriously"? Just what kinds of things would have to be done differently? (4) What compensatory changes would probably be needed in other aspects of the organization, if we started out with groups as our basic unit? And finally, (5), is the idea of designing the organization around small face-to-face groups a very radical idea, or is it just an extension of a direction in which we are already going?

Haven't we taken groups seriously enough already?

The argument that we have not taken groups "seriously" doesn't seem a hard one to make. Our contemporary ideas about groups didn't really come along until the 30's and 40's. And by that time a logical, rationalistic tradition for the construction of organizations already existed. That tradition was very heavily based on the notion that the individual was the construction unit. The logic moved from the projected task backward. Let's have the task, the goal, then find an appropriate structure and technology, and last of all let's fit individual human beings into predefined man sized pieces of the action. That was, for instance, what industrial psychology was all about during its development between the two world wars. It was concerned almost entirely with individual differences and worked in the service of structuralists, fitting square human pegs to

predesigned square holes. The role of the psychologist was thus ancillary to the role of the designers of the whole organization. It was a back up, supportive role that followed more than it led design.

And it was not just the logic of classical organizational theory that concentrated on the individual. The whole entrepreneurial tradition of American society supported it. Individuals, at least male individuals, were taught achievement motivation. They were taught to seek individual evaluation, to compete, to see the world - organizational or otherwise - as a place in which to strive for individual accomplishment and satisfaction.

In these respects the classical design of organizations was consonant with the then existent cultural landscape. Individualized organizational structures blended with the environment of individualism. And all the accessories fell into place: individual incentive schemes for hourly workers, individual merit rating and assessment schemes, tests for selection of individuals.

The unique characteristic of the organization was that it was not simply a race track within which individuals could compete, but a system in which somehow the competitive behavior of individuals could be coordinated, harnessed, controlled in the interest of the common tasks. And of course one residual of all that was a continuing tension between individual and organization, with the organization seeking to control and coordinate the individual's activities at the same time that it tried to motivate him; while the competitive individual insisted on reaching well beyond the constraints imposed upon him by the organization. One product of this tension became the informal organization discovered here at

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Western; typically an informal coalition designed to fight the system.

Then we discovered that groups could be exploited for what management saw as positive purposes - toward productivity instead of away from it. There followed the era of experimentation with small face-to-face groups. We learned to patch them on to existing organizations as bandaids to relieve tensions between individual and organization. We promoted coordination through group methods. We learned that groups were useful to discipline and control recalcitrant individuals.

Groups were fitted onto organizations. We worked hard on improving the group skills of individual members so that they could coordinate their efforts more effectively, so that they could control deviants more effectively, so that they could gain more commitment from subordinate individuals. But that's the way we saw them, I propose, primarily as tools to be tacked on and utilized in the pre-existing individualized organizational system. With a few notable exceptions, like Ren Likert (1961), most of us did not design organizations around groups. On the contrary, as some of the ideas about small groups began to be tacked onto existing organizational models, they generated new tensions and conflicts of their own. Managers complained not only that groups were slow, but that they diffused responsibility, that they vitiated the power of the hierarchy because they were too "democratic"; and that they created small in-group empires which were very hard for others to penetrate. There was the period, for example, of the great gap between T-group training (which had to be conducted on "cultural islands") and the organization back home. The

T-groupers therefore talked a lot about the "reentry problem", which meant in part the problem of movement from a new culture (the T-group culture) designed around groups back into the organizational culture designed around individuals.

But of course groups didn't die despite their difficulties. How could they die? They had always been there, though not always in the service of the organization. They turned out to be useful, indeed necessary, though often unrecognized tools. For organizations were growing, and professionalizing, and the need for better coordination grew even as the humanistic expectations of individuals also grew. So "acknowledged" groups (as distinct from "natural", informal groups) became fairly firmly attached even to conservative organizations, but largely as compensating addenda, very often reluctantly backed into by organizational managers.

We have done badly by groups. We have never given them a chance. It's as though we had insisted that automobiles be designed to fit the existing terrain; that we not build roads to adapt to automobiles.

Are groups worth considering as fundamental building blocks?

Why would groups be more interesting than individuals as basic design units around which to build organizations? What are the prominent characteristics of small groups? Why are they interesting? Let me propose several answers:

First, small groups seem to be good for people. They can satisfy important membership needs. They can provide a moderately wide range of activities for individual members. They can provide support in times of stress and crisis. They're settings in which people can learn not only

cognitively but empirically to be reasonably trusting and helpful to one another.

Second, groups seem to be good problem finding tools. They seem to be useful in promoting innovation and creativity.

Third, in a wide variety of decision situations, they make better decisions than individuals do.

Fourth, they are great tools for implementation. They gain commitment from their members so that group decisions are likely to be willingly carried out.

Fifth, they can control and discipline individual members in ways that are often extremely difficult through more impersonal quasi-legal disciplinary systems.

Sixth, as organizations grow large, small groups appear to be useful mechanisms for fending off many of the negative effects of large size. They help to prevent communication lines from growing too long, the hierarchy from growing too steep, and the individual from getting lost in the crowd.

There is a seventh, but altogether different kind of argument for taking groups seriously. We have acted thus far as though the designer of organizations had a choice. He could build an individualized or a groupy organization. A groupy organization will, de facto, have to deal with individuals; but what we learned here so long ago is that individualized organizations, must de facto, deal with groups. Groups are natural phenomena, facts of organizational life. We may be able to create them, but we cannot prevent their spontaneous development. The problem is not shall we or shall we not have groups? The problem is shall we use groups

planfully or not? If we do not use them planfully, our individualized organizational garden will sprout groupy weeds all over the place. By defining them as weeds instead of flowers, we shall continue, as our early forebears did, to treat groups as pests, forever fouling up the beauty of our rationally designed individualized organization: forever forming informally (and irrationally) to harass and outgame the planners.

It's likely that the reverse could also be true - that if we define groups as the flowers and individuals as the weeds - new problems will crop up. Surely they will, but let's delay that discussion for at least a little while.

Who uses groups best?

So groups look like interesting organizational building blocks. But before going on to consider the implications of designing organizations around groups, one useful heuristic might be to look around the existing world at those places in which groups seem to have been treated somewhat more seriously.

One place groups have become big is in Japanese organizations (Johnson & Ouchi, 1974). The Japanese seem to be very groupy, and much less concerned, in their organizations, than Americans about issues like individual accountability. Japanese organizations, of course, are thus consonant with Japanese culture, where notions of individual aggressiveness and competitiveness are de-emphasized in favor of self-effacement and group loyalty. But Japanese organizations seem to get a lot done, despite the relative suppression of the individual in favor of the group. And it also appears that the advantages of the groupy Japanese style have really come to the fore in large technologically complex organizations.

Another place to look is at American conglomerates. They go to the opposite extreme, dealing with very large units. They buy large organizational units and sell units. They evaluate units. In effect they promote units by offering them extra resources as rewards for good performance. In that sense conglomerates, one might argue, are designed around groups, but the groups in question are often themselves large organizational chunks.

Groups in an individualistic culture.

Another problem. An architect can design a beautiful building which either blends smoothly with its environment or contrasts starkly with it. But organization designers may not have the same choice. If we design an organization which is structurally dissonant with its environment, it is conceivable that the environment will change to adjust to the organization. It seems much more likely, however, that the environment will reject the organization. If designing organizations around groups represents a sharp counterpoint to environmental trends maybe we should abort the idea.

And our environment, one can argue, is certainly highly individualized. But one can also make a less solid argument in the other direction; an argument that American society is going groupy rather than individual this year. Or at least that it is going groupy as well as individual. What's the evidence? It's sloppy at best. One can reinterpret the student revolution and the growth of anti-establishment feelings at least in part as a reaction to the decline of those institutions that most satisfied social membership needs. One can argue that the decline of the Church, of the village, of the extended family is leaving behind a vacuum of unsatisfied

membership and belongingness motives. Certainly popular critics of American society have laid a great deal of emphasis on the loneliness and anomie that seem to have resulted not only from materialism but from the emphasis on individualism. It seems possible to argue that, insofar as there has been any significant change in the work ethic in America, the change has been toward a desire for work which is socially as well as egoistically fulfilling, which satisfies human needs for belongingness and affiliation as well as needs for achievement.

In effect, I'm arguing that the usual interpretation of Maslow's need hierarchy may be wrong. We usually emphasize the esteem and self-actualization levels of motivation. Perhaps the level that is becoming operant most rapidly is neither of those, but the social-love-membership level.

The rising role of women in American society also has implications for the groupiness of organizations. There is a moderate amount of evidence that American women have been socialized more strongly into affiliative and relational sorts of attitudes than men; that they probably can, in general, more comfortably work in direct achievement roles in group settings, where they are strong relational bonds among members, than in competitive, individualistic settings. Moreover it is reasonable to assume that as women take a more important place in American society, some of their values and attitudes will spill over to the male side.

All this is to argue that although the notion of designing organizations around groups in America in 1974 may be a little premature, it is consonant with cultural trends that may make the idea much more apropos ten years out.

But groups are becoming more relevant for organizational as well as cultural reasons. Groups seem to be particularly useful as coordinating and integrating mechanisms for dealing with complex tasks that require the inputs of many kinds of specialized knowledge. In fact the development of matrix-type organizations in high technology industry is perhaps one effort to modify individually designed organizations toward a more groupy direction; not for humanistic reasons but as a consequence of tremendous increases in the informational complexity of the jobs that need to be done.

What might a seriously groupy organization look like?

Next question: Just what does it mean to say let's design organizations around groups? Operationally how is that different from designing organizations around individuals? One approach to an answer is simply to take the things organizations do with individuals and try them out with groups. Let's just raise the level from the atom to the molecule. Let's think about selecting groups rather than individuals, training groups rather than individuals, paying groups rather than individuals, promoting groups rather than individuals, designing jobs for groups rather than for individuals, firing groups rather than individuals, and so on down the list of activities which organizations have traditionally carried on in order to use human beings in their organizations.

Some of the items on that list seem easy to handle at the group level. For example, it doesn't seem terribly hard to design jobs for groups. In effect that's what top management already does for itself to a great extent. It gives specific jobs to committees, and often runs itself as a group. The problem seems to be a manageable one: designing job

sets which are both big enough to require a small number of persons and also small enough to require only a small number of persons. And big enough in this context means not only jobs that would occupy the hands of group members but that would provide opportunities for learning and expansion.

Ideas like evaluating, promoting, and paying groups raise many more difficult but interesting problems. Maybe the best that can be said for such ideas is that they provide opportunities for thinking creatively about pay and evaluation. Suppose, for example, that as a reward for good work the group gets a larger salary budget than it got last year. And suppose the allocation for increases within the group is left to the group members. Certainly one can think up all sorts of difficulties that might arise. But are the potential problems necessarily any more difficult than those now generated by individual merit raises? Is there any company in America that is satisfied with its existing individual performance appraisal and salary allocation schemes? At least the issues of distributive justice within small groups would presumably be open to internal discussion and debate. One might even permit the group to allocate payments to individuals differentially at different times, in accordance with some criteria of current contribution that they might establish.

As far as performance evaluation is concerned, it is probably easier for people up the hierarchy to assess the performance of total groups than it is to assess the performance of individual members well down the hierarchy. Top managers of decentralized organizations do it all the time, except that they usually reward the formal leader of the decentralized unit rather than the whole unit.

The notion of promoting groups raises another variety of difficulties. One thinks of physically transferring a whole group, for example, and of the costs associated with training a whole group to do a new job, especially if there are no bridging individuals. But there may be large advantages too. If a group moves, its members already know how to work with one another. And families may be less disrupted by movement, if several move at the same time.

Then there is the problem of selection. Does it make sense to select groups? Initially, why not? Can't we develop means for selecting not only for appropriate knowledge and skill but also for potential ability to work together? There is plenty of groundwork in the literature already.

After the initial phase, there will of course be problems of adding or subtracting individuals from existing groups. We already know a good deal about how to help new members get integrated into old groups. Incidentally, I was told recently by a plant manager in the midwest about an oddity he had encountered; the phenomenon of groups applying for work. Groups of three or four people have been coming to his plant seeking employment together. They wanted to work together and stay together. Maybe it's a trend!

Costs and danger points.

If we were to play this game of designing organizations around groups, what might be some important danger points?

In general, a group-type organization is somewhat more like a free market than present organizations. More decisions would have to be worked out ad hoc, in a continually changing way. So we would need to

schedule in more negotiation time both within and between groups.

We would encounter more issues of justice, for the individual vis-a-vis the group and for groups vis-a-vis one another. We would probably need more and better arbitration mechanisms, and highly flexible and rapidly adaptive record keeping. But modern record keeping technology is, potentially, both highly flexible and rapidly adaptive.

Another specific issue is the provision of escape hatches for individuals. Groups have been known to be cruel and unjust to their deviant members. One existing escape route for the individual would of course continue to exist: departure from the organization. Another might be easy means of transfer to another group.

Another related danger of a strong group emphasis might be a tendency to drive away highly individualistic, non-groupy people. But don't the kind of tight organizational constraints we now impose do the same thing? Indeed might not groups protect their individualists better than the impersonal rules of present day large organizations?

Another obvious problem: if we emphasize groups by rewarding them, paying them, promoting them, and so on, groups may begin to perceive themselves as power centers, in competitive conflict with other groups. Intergroup hostilities are likely to be exacerbated unless we can design some new coping mechanisms into the organization. Likert's proposal for solving that sort of problem (and others) is the linking pin concept. The notion is that individuals serve as members of more than one group, both up and down the hierarchy and horizontally. But Likert's scheme seems to me to assume fundamentally individualized organizations in the sense that it is still individuals who get paid, promoted and so on. In a more

groupy organization, the linking pin concept has to be modified so that an individual might be a part time member of more than one group, but still a real member. That is, for example, a portion of an individual's pay might come from each group in accordance with that group's perception of his contribution.

Certainly much more talk, both within and between groups, would be a necessary accompaniment of group emphasis; though we might argue about whether more talk should be classified as a cost or a benefit. In any case careful design of escape hatches for individuals and connections among groups would be as important in this kind of organization as would stairways between floors in the design of a private home.

There is also a danger of over-designing groups. All groups in the organization need not look alike. Quite to the contrary. Task and technology should have significant effects on the shapes and sizes of different sub groups within the large organization. Just as individuals end up adjusting the edges of their jobs to themselves and themselves to their jobs, we should expect flexibility within groups, allowing them to adapt and modify themselves to whatever the task and technology demand.

Another initially scary problem associated with groups is the potential loss of clear formal individual leadership. Without formal leaders how will we motivate people? Without leaders how will we control and discipline people? Without leaders how will we pinpoint responsibility? Even as I write those questions I cannot help but feel that they are archaic. They are questions which are themselves a product of the basic individual building block design of old organizations. The problem is not leaders so

much as the performance of leadership functions. Surely groups will find leaders, but they will emerge from the bottom up. Given a fairly clear job description, some groups, in some settings, will set up more or less permanent leadership roles. Others may let leadership vary as the situation demands, or as a function of the power that individuals within any group may possess relative to the group's needs at that time. We can build in a reasonable amount of process time to enable groups to work on the leadership problem, but the problem will have to be resolved within each group. And on the advantage side of the ledger, we may even get rid of a few hierarchical levels. There should be far less need for individuals who are chiefly supervisors of other individuals' work. Groups can serve as hierarchical leaders of other groups.

Two other potential costs: If we have an organization of groups, won't we have a great deal of infighting between groups? Won't power and conflict issues come even more to the fore than they do now? I think they will. Organizations of groups may become highly political, with coalitions lining up against one another on various issues. If so, the rest of the organizational system will have to take those political problems into account, both by setting up sensible systems of inter-communications among groups, and by allocating larger amounts of time and expertise to problems of conflict resolution.

But are we talking here about a new problem, unique to groupy organizations? Obviously not. Conflict among groups is prevalent in existing organizations. Large organizations are political systems now. But because these issues have not often been foreseen and planned for, our mechanisms for dealing with them are largely ad hoc. As a result we often

deal with conflict in extremely irrational ways.

But there is another kind of intergroup power problem that may become extremely important and difficult in groupy organizations. There is a real danger that relatively autonomous and cohesive groups may be closed, not only to other groups but more importantly to staff advice or to new technological inputs. These N.I.H. problems exist at present, of course, but they may be exacerbated by group structure. I cannot see any perfect way to handle those problems. One possibility may be to make individual members of staff groups part time members of line groups. Another is to work harder to educate line groups to potential staff contributions. And of course the reward system - the old market system - will probably be the strongest force for keeping groups from staying old fashioned in a world of new technologies and ideas.

But the nature and degree of many of the second order spinoff effects are not fully knowable at the design stage. We need to build more complete working models and pilot plants. In any case it does not seem obvious that slowdowns, either at the work face or in decision making processes, would necessarily accompany group based organizational designs.

Some possible advantages to the organization.

Finally, from an organizational perspective, what are the potential advantages to be gained from a group based organization? The first might be a sharp reduction in the number of units that need to be controlled. Control would not have to be carried all the way down to the individual level. If our average group size is five we cut the number of blocks that management has to worry about to 20% of what it was. Such a

design would also probably cut the number of operational levels in the organization. In effect we would be incorporating levels which are now primarily supervisory into the groups that they supervise.

We should, by this means, bring back many of the advantages of the small individualized organization. We would get that advantage within groups, and we would also get part of it simply because we had a small number of blocks, albeit larger blocks, with which to build and rebuild our organization.

But most of all - and this is still chancy, despite the extent to which we behavioural scientists have been enamoured of groups - we would presumably gain the human advantages of increased cohesiveness, motivation, and commitment, and via that route, both increased productivity, stronger social glue within the organization, and a wider interaction between organization and environment.

Summary

Far and away the most powerful and beloved tool of applied behavioral scientists is the small face-to-face group. Since the Western Electric researches, we have been, on the research side, learning to understand, exploit and love groups. We were interested in them initially as devices for improving the implementation of decisions. They increased human commitment and motivation. We have since come to love them because we think they are also creative and innovative, because we think they often make better quality decisions than individuals, and because they make organizational life more livable for people. You can't hire an applied behavioral scientist into an organization but that within ten minutes he wants to call a group meeting and talk things over. The group

meeting is his primary technology, his primary tool.

But groups in organizations are not an invention of behavioral types. They are a natural phenomenon of organizations. Organizations develop informal groups whether we like it or not. It is both possible and sensible to describe most large organizations as collections of groups in interaction with one another; bargaining with one another, forming coalitions with one another, cooperating and competing with one another. It is possible and sensible too to treat the decisions that emerge from large organizations as a resultant of the interplay of forces among groups within the organization, and not just the resultant of rational analysis.

On the down side we also know that small face-to-face groups are great tools for disciplining and controlling their members. Contemporary China, for example, has just a fraction of the number of lawyers that we have in the United States. Partially this is a result of the lesser complexity of Chinese society and lower levels of education. But a large part of it, surprisingly enough, seems to derive from the fact that modern China is designed around small groups. Since small groups take responsibility for the discipline and control of their members many deviant acts which would be considered illegal in the United States never enter the formal legal system in China. The law controls individual deviation less, the group controls it more (Li, 1971).

Control of individual behavior is also a major problem of large complex western organizations. This problem has driven many organizations into elaborate bureaucratic quasi-legal sets of rules, ranging from job evaluation schemes to performance evaluations to incentive systems; all

individually based, all terribly complex, all creating problems of distributive justice. Any organizational design that might eliminate much of that legalistic superstructure therefore begins to look highly desirable.

Hence the theme of this paper: Let's consider building organizations using a material we now understand very well and with properties that look very promising - the small group. Until recently, at least, we have used the human group primarily for patching and mending organizations that were originally built of other materials.

The major unanswered questions in my mind are not in our understanding of groups, nor in the potential utility of the group as a building block. The more difficult answered question is whether or not we are approaching an era in which Americans would willingly work in such apparently contra-individualistic units. I think we are.

REFERENCES

- Johnson, Richard T. & William G. Ouchi, "Made in America (under Japanese management)". Harvard Business Review, September-October 1974.
- Li, Victor, "The Development of the Chinese Legal System", in John Lindbeck (ed.), China: The Management of a Revolutionary Society. Seattle: University of Washington Press, 1971.
- Likert, Rensis, New Patterns of Management. New York: McGraw Hill, 1961.