

**The “Matrix” Organisation of Project Teams
as a Mini Bureaucracy**

Fred Emery

February 1977

The property of matrix is that each cell *can* take a value quite independently of any other cell but, in a two dimensional matrix for instance, the values are all expressed in the same two dimensions.

The naïve assumption in mature organisation is that the ‘value’ in each cell will be a simple function of personnel available (assuming that personnel development puts some constraint on availability) and project requirements.

This is naïve because a major constraint is who gets to be leader of what project. The leader is the real value entered into the cells of the matrix and overall system influences are bound to be such that the cell entries can *not* “take a value quite independently of any other cell”. Why is this likely to be a major constraint? First, project leadership will have a major role in individual career advancement. Second, it will be the focus of inter-professional struggle for power and the preferment of its members. Third, the administration, if actually not in the bands of one of the professions, will have to play sides in the power game to exercise their own authority.

Task orientation in this structure will be no better than in the normal bureaucratic structure. Resources and tasks will not be properly matched because these questions will be secondary to whether the “Roman Catholics” or the “Free Masons” get the key jobs of project leaders.

MATRIX

The internal structure of these project teams retains its essentially bureaucratic nature:

- a. The project leader is the only one judged by achievement of the overall project.
- b. He alone in the “team” has the right to define or alter individual tasks.
- c. He alone has the right to determine how individual efforts are coordinated.

The fact that an ad hoc section of this nature has a clear goal and a not too distant end in sight will not stop the usual dynamics of bureaucracies from operating.

Remember, it is still not a personally relevant goal for the section member and they will not take easily to being told what to do by someone from a different profession.

The Gordian knot is the concept of project leaders and the attendant distribution of powers and responsibilities. If there is not the will to cut this knot, then too much should not be expected of matrix organisation. Unless, of course, there is a sufficiently high degree of identification with organisational objectives, and specifically the project objectives, to override personal and professional aspirations.

The proven way to cut this knot has been published (Emery, F. and Emery, M., 1974,1976).

Now, what has this matrix organisation achieved?

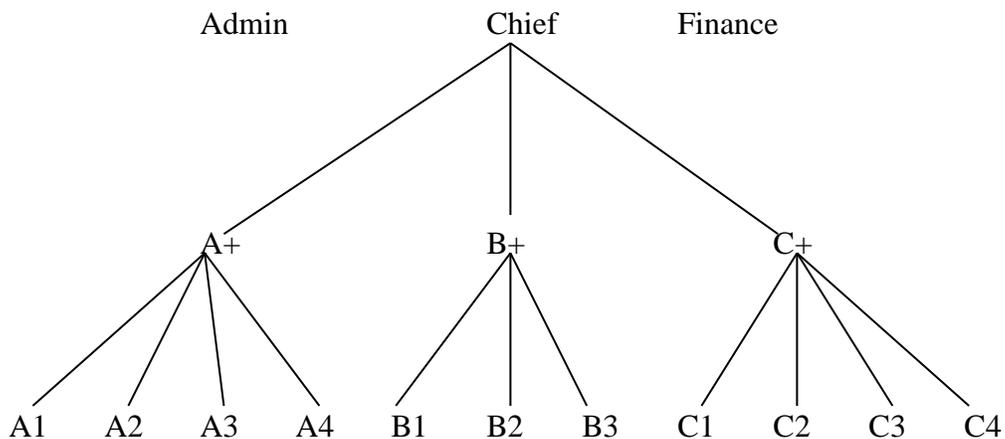
When there is strong and common motivation it does negate the entrenched specialist interests and greatly improves the communication and coordination of specialist efforts. Hence the strong case for the so-called battle group formations in modern armies. My point is that these motivational conditions cannot be achieved in these structure. Self managing groups can achieve them.

DIAGRAM

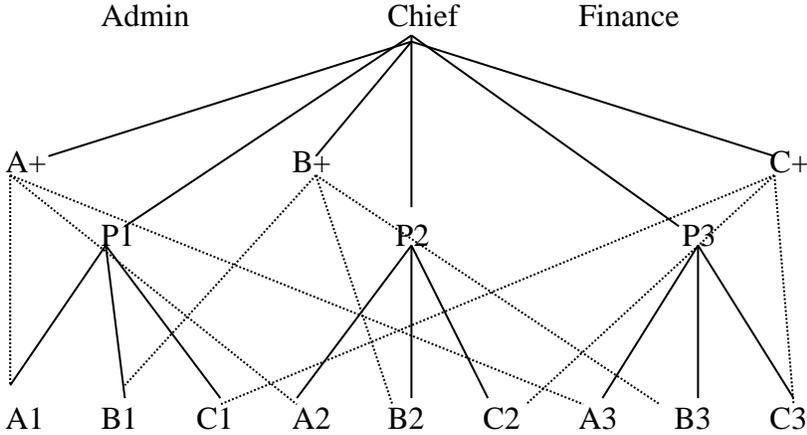
The following diagrams illustrate the swings and roundabout problems that plagues task forces or 'matrix organisation' in a basically bureaucratic structure. The flow of work about the project is greatly enhanced and less liable to error or waste. However, the administrative structure becomes more complex and ill-defined. It becomes just the sort of murky waste the bureaucratic feel feeds best in.

The form shown at the top of the diagram shifts the main mass of necessary communication onto communication between peers. The bottom diagram is an overlay on this to suggest how participation might be affected at each level of project planning and resource allocation.

I. *Bureaucracy*

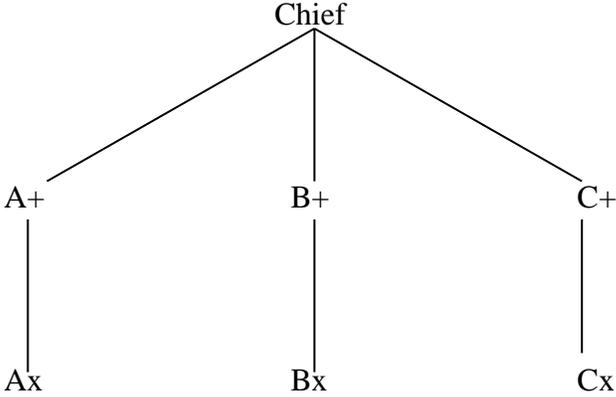


II. Mini Bureaucracy



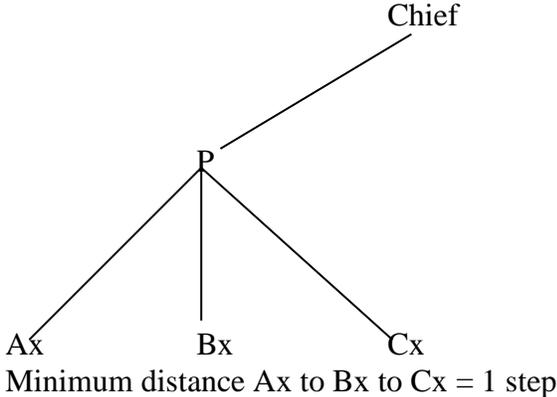
PROJECT FLOW

I.



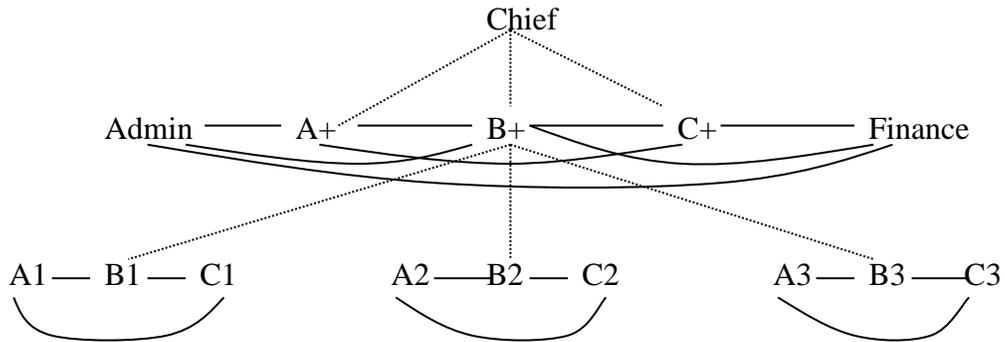
Minimum distance Ax to Bx to Cx = 4 steps.

II.

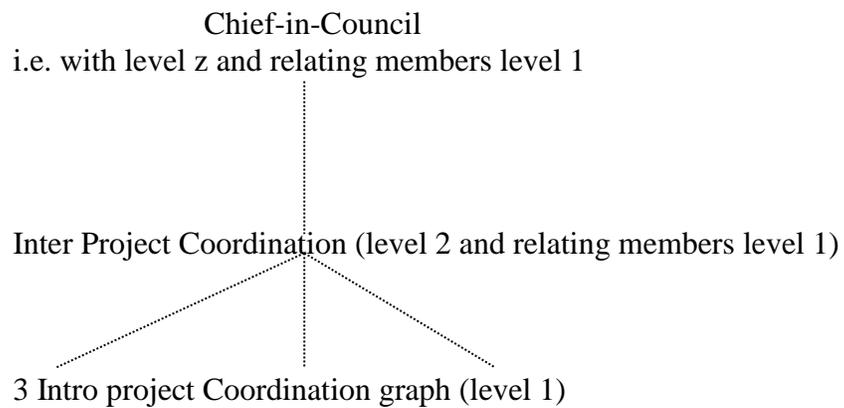


NON BUREAUCRATIC FORM

A. Non Dominant Hierarchy



B. Non Dominant Participative Hierarchy



Bibliography

Bass, L.W., *Management by Task Force*, Lomond Books, Mt. Airy, Maryland, 1975.

Kingdon, D.R., *Matrix Organization*, Tavistock Publications, London, 1973.

Metha, P. *et.al*, *A preferred Model for the Organisation of Technical and Drafting Grades in BMR*, Bureau of Mineral Resources, Canberra, 1976.

Stamyer, J.T., "Management of Design", Chapter 17 in J.E. Allen and J. Bruce (eds), *The Future of Aeronautics*, Hutchinson, London, 1970.