

## Leading the organisation you can't see<sup>1</sup>

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Stuart Kauffman, of the Santa Fe Institute (a world centre for the study of complexity), explains some of the mechanisms in the generation of networks in a metaphor about 'buttons and threads' (In his book *At home in the Universe*). Scatter 20 buttons on a table, randomly choose two, connect them with threads and put them back. Repeat and repeat. At the beginning you are likely to choose buttons that are unconnected and that you have not picked up before, but, after a while, you will start picking up at random buttons that were already connected. Clusters of connected buttons will emerge.

A form of 'stable system' has been created from an apparently chaotic and random interaction. At the mid-point of this journey, when the ratio of threads to buttons is 0.5, the system experiences a 'phase transition' or *a sudden change in the size* of the largest connected cluster. Suddenly, you realise that you have a 'visible mass' in front of you. This is the 'transition point' when, for example, water freezes into ice.

Kauffman explains via simulation how, in a similar way, the 'interactions' of the total number of human genes gravitate to a smaller number of 'systems'. This is a number that - regardless of whether you are dealing with buttons and threads, genes, or any set of 'units' - tends to be pretty constant, roughly the square root of the number of original units. In the case of genes-to-cells, all the potential 'gene interactions' (for lack of a better way to describe them) do not generate a chaotic number of 'clusters': there is a definite number of known different types of cells in the human body.

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The progression of genes-to-cells follows Kaufmann's 'order for free' mathematics, as in the buttons and threads case. It's a journey from chaos to stability, from something that seems like random or chaotic interactions to some sort of stable system: the ice from the water, the cells from the genes. Chaos and random connections do not seem to produce more chaos (which can be a consolation in one's life).

What does this have to do with organisations? Quite a lot... Individuals in organisations establish networks of interactions and communications. Some of them are 'official' and 'designed': teams, task forces, committees etc. It is the *teamocracy* part. But more interesting are the ones that may be formed like Kaufmann's buttons: emergent clusters of individuals, not designed by the boss, but 'self-generated' by the interactions between them.

The literature describing 'non-designed' groups or associations inside the firm has become more and more solid in recent years. *Self-managed teams* are often interpreted in terms of semi-spontaneous associations that don't need a formal boss to achieve their objectives. The largely fallen-from-grace 'knowledge management' movement has created the term 'communities of practices' to describe networks of individuals linked by a common objective or interest (including the finding of solutions to an organisational problem). People following the systems approach and the concept of 'the learning organisation', tend to refer to 'networks of commitment' with more emphasis on the mobilisation of motivation and energy in the organisation. 'Emergent teams' is another generic term frequently used. More on the spontaneity side, 'hot groups' have been described as mobilisation of individuals with common interests and drivers of real organisational creativity. Finally, 'TeamNets' have been introduced in the UK as a 'way of encouraging voluntary relationships in team formation, information exchange and problem solving'.

All the above are examples of the richness of internal relationships within the organisation, a form of capital waiting to be unleashed and constituting part of the social capital of the firm. The leader-architect role is one of facilitating, enhancing, promoting and fostering relationships. He has two choices: collaboration by design (teams, task forces) and emergent collaboration. The second is much scarier to lead!

What do all those 'emergent groups' have in common? Despite the different labels, probably a lot. For a start, they live outside the organisation chart with different degrees of both independence and spontaneous formation. It may be that, like in Kaufman's buttons, they are somehow invisible at the beginning of their life and it is not until some level of interaction has been reached that they manifest themselves as a proper system. Leaders can no longer ignore 'the invisible world'!

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- [Leadership and 'home effects'](#)
- [The investors metaphor](#)
- [Leadership and social capital](#)
- [Creating associability](#)
- [Bowling regardless?](#)

You can also read more about the other two dimensions by choosing from this list:

1. [Time and Space](#)
3. [Legacy](#)

If you want to read more about leadership or want to continue reading from the above, you can read it all in my book [\*The Leader with Seven Faces: finding your own ways to practice leadership in today's organization.\*](#)