Sociocracy: An Organization Model for Large-Scale Agile Development

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ABSTRACT

Large-scale agile requires also to put in place supporting structures that do not hinder, but foster agility. In this paper, I want to present Sociocracy as an organizational model for scaling agile development that provides that kind of structure. By focusing on the principles of Sociocracy, I elaborate on their application in a large-scale setting. Finally, the relation of Sociocracy to comparable models (first and foremost Holacracy) completes the discussion.

CCS Concepts

• **Software and its engineering** →**Software creation and management → Software development process management → Agile software development • Software and its engineering** →**Software creation and management → Collaboration in software development → Programming teams • Social and professional topics** →**Professional topics** →**Management of computing and information systems** →**Project and people management** →**Project management techniques.**

Keywords

Circle, consent, double-linking, hierarchy, self-organization, semi-autonomous, shared decision making, Sociocracy

1. INTRODUCTION

Self-organization is one of the core values in agile development [1]. Implementing self-organization in practice is for a single agile team already challenging, it is even harder for large-scale agile development. According to my experience of working in large-scale agile for more than fifteen years self-organization in the large is a challenge, because it seems that the more people are involved the lower the trust level falls and thus the more control mechanisms are put in place. Yet control is countering self-organization [3]. Sociocracy offers a solution especially for large-scale agile development by arguing that it is the structure that enables self-organization and not the people [2]. Especially the principles of double-linking and shared decision making are at the core of enabling self-organization even independent of scale.

After providing a short introduction of Sociocracy's history, I will

examine the four principles of Sociocracy and provide some examples of how they can be applied in agile development.

2. HISTORY OF SOCIOCRACY

Sociocracy has its main origin in Quakerism. The Quakers are known for organizing themselves in a very efficient and peaceful manner even with thousands of people being present in a meeting. Kees Boeke, a civil engineer, Quaker, and pacifist grew up in this attitude and created a private school with the same principles as Quakerism in mind [2]. Gerard Endenburg, a student of that school who later became an electrical engineer, took these ideas in the 1970ies forward and merged these with cybernetic principles and systems thinking in order to create what now is known as Sociocracy. After Endenburg took over the company of his parents -Endenburg Electrotechniek- he decided to run the company according to these principles [4].

Both Boeke and Endenburg were Dutch, which means all thoughts and experiences had been expressed in Dutch. This was true until the beginning of this century when John Buck started to learn Dutch in order to study Sociocracy and then documented the ideas and made them publicly available [2].

3. SOCIOCRATIC PRINCIPLES

Sociocracy is based on the following four principles [2] that create the structure not only for self-organization, but for scaling, too:

1. Shared decision making based on consent,
2. Circles as semi-autonomous units,
3. Connecting circles by double-linking, and
4. Electing people to functions and tasks.

A more detailed explanation of these four principles is provided below.

3.1 Shared Decisions based on Consent

The first principle focuses on decision making. The subsequent list provides an overview of the most commonly used ways of decision making, which provides a basis for understanding the difference to the sociocratic way:

- Autocratic – one person decides. This has the advantage that making the decision is fast and the disadvantage that often the implementation is slow due to the lack of buy-in.

- Democratic – the majority decides. This has similar advantages and disadvantages as autocratic decisions with the differentiation that everyone gets at least heard, although the voices of the minority will be ignored.

- Consensus – everyone decides. This has the advantages of the buy-in from everyone and the disadvantage that it typically takes a long time for the decision to be made.

- Magic – something random decides. Magic decision making can imply throwing a dice, asking an oracle or something the like. The advantage is that nobody can be blamed for the decision and the disadvantage is the lack of control on the decision.

- Chaotic – wait and see. Abstaining from making a decision and hoping that time will sort things out. The advantages and disadvantages are comparable to magic decision making.

Now Sociocracy suggests another way of making a decision, which is based on consent. Although the word sounds similar to consensus the difference is quite stark especially when applied in practice. If a decision is made by consensus, all people involved are asked if they agree with the decision. Contrary if a decision is made by consent the involved people are asked if they have a reasoned and paramount objection [2]. Paramount means here if the decision puts the joint goal of the group at risk. And reasoned means that the arguments are provided about how the goal is put at risk. Thus, it is not possible to just state "I don't like it." This way an objection is always regarded as a great way for improving the decision. It has nothing to do with a personal preference, yet only with working toward the joint goal. As Endenburg summarizes: "In applying the principle of consent, sociocracy doesn't ask for a 'yes' but does provide an opportunity to give a reasoned 'no'." [4] The reasoned 'no' also triggers a different behavior – the rest of the group is not trying to convince the no-sayer that he is wrong, but seeks for a solution jointly. The reason is, that everyone understands by the objection provided that the decision at stake needs to be improved, which is for the better of everyone.

A decision based on consent has often additionally a timestamp – so the group will get back to that decision after a given period of time in order to analyze if the decision was helpful or if it needs to be revised. Please note that a group can decide to delegate an outstanding decision to a specific person too, e.g. an expert on that subject matter and trusting that person to make an autocratic decision. So deciding based on consent can also mean that it is decided to make a particular decision based on a different decision approach (autocratic, democratic, consensus, magic, or chaotic). Therefore, deciding based on consent doesn't substitute other ways of decision-making but governs these.

3.2 Circles as Semi-Autonomous Units

Sociocracy speaks about an organization being based on so-called circles, where a circle can be just anything e.g. the board of directors, the group of department leaders, or a software development team. Basically, a circle in this sense is a group of people with a common goal and with the same "rights" in that circle. So there isn't anybody who is superior if it comes to decision making (when it comes to making a decision, everyone's consent is requested). Now this principle suggests that such a circle is semi-autonomous and self-organizing in respect to its own aims [13]. For example, a software team can decide on how the software they're developing will be created. This principle is very much in-line with the understanding of a self-organizing team in agile development [1], which is for example reflected by the development team deciding on how it will organize its work [12].

Furthermore, a circle makes "policy" decisions, which are decisions that govern the circle's way of working. Or in other words, policy decisions are defining the boundaries, rules, and guidelines to enable this group of people to work together. This is comparable to a retrospective, in which an agile team decides on how it collaborates and achieves its goal, or rather on the rules that guide the work of the team. Thus an agile team, is already a semi-autonomous circle in the sociocratic meaning.

Yet in agile development only retrospectives on the team level are implemented for making these policy decisions. Sociocracy requires every circle to have meetings in which they decide on their own policies.

3.3 Double Linking Circles

The third principle deals with structuring the circles. In a typical hierarchical organization the top assigns people to steer, lead, or manage a next lower circle. For example a department manager is assigned by the business unit in order to run the department. This is also true in Sociocracy – so the existing hierarchy stays intact. Figure 1 shows a traditional hierarchy with the blue links representing the appointment of managers to the next lower level of the hierarchy. The persons shown in blue work this way always on two levels of the hierarchy – as a manager for their group and as a peer on the level that decided on the appointment. In this figure the red person on the lowest level is representing the spokesperson of the team, e.g. the Scrum Master in an agile team.
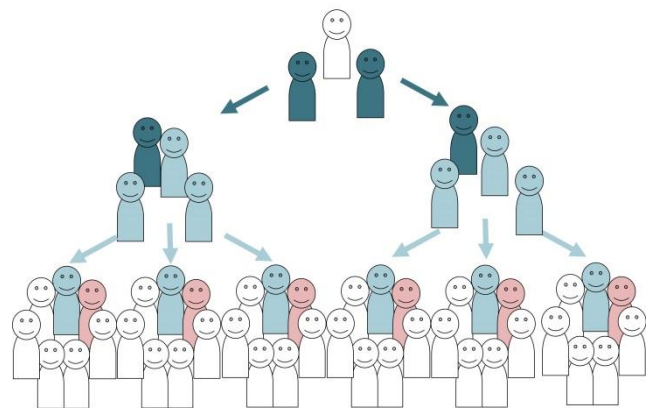

Figure 1. Traditional hierarchy

Comparing now such a hierarchy with cybernetics and/or with Agile, it becomes obvious that one main thing is missing: feedback. Thus, in a sociocratic hierarchy you will find in addition to the top-down assignment, that people are elected to represent the circle at the next higher level from the bottom-up. For example, the department managers elect a person who will represent them at the business unit level. This principle is called double-linking. The circles are interconnected by two links – one top-down (often by somebody who is called the manager) and one bottom-up (by the representative) [2].

Figure 2 resembles such a structure. Still the top-down appointment is shown in blue, but now there is also a link bottom-up, which is shown in red. So the red link represents the elected representative (also known as the delegate), representing her group at the next higher level. And like the manager, that person

is also working on two level: she is a regular member of her circle but as well of the circle one level higher up and is asked for her consent when it comes to making decisions.
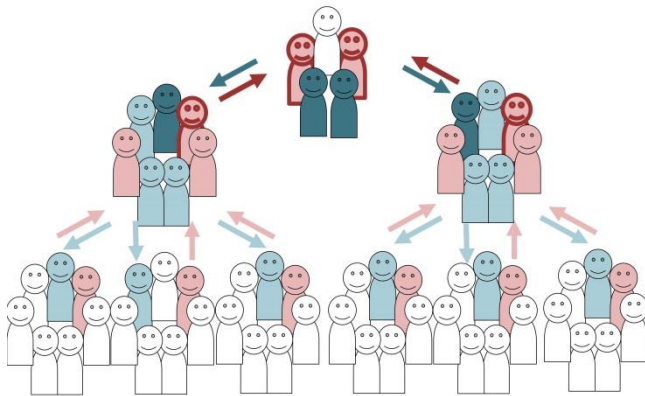
Figure 2. Sociocratic hierarchy with double-linking

This double-link resolves also the sandwich position of most middle managers. Their problem is that on the one hand they have to manage their group or team according to what their boss or their hierarchy level decided and on the other hand they want to provide the feedback from their group or team to the next higher level. This isn't a problem as long as these messages do not contradict each other. Yet if these are conflicting messages, then, most often the manager picks a side in order to resolve this, so either they manage by command and control (implementing the top-down link only) or they are often overruled from the top, because they implement the bottom-up link only. Double-linking separates the top-down from the bottom-up link by having two different persons taking the respective responsibility. This way double-linking implements the feedback loop that is missing in a traditional hierarchy.

3.4 Electing People to Functions and Tasks
The fourth principle focuses on roles and responsibilities. This principle suggests that once it is understood what kind of functions and tasks need to be fulfilled the circle elects (of course by consent) people to the positions [2]. This is also true for the double-linking. As an example the department managers will elect, based on consent (which is also characterized by a timestamp) one person as a representative to the business unit circle.

This kind of election works as follows [2]:

1. Clarification and definition of the functions and tasks that need to be filled

2. Everyone who is involved is invited to make a proposal for a person who can fulfill this position by writing his suggestion as: I, [name of the proposer] propose [name of the proposed]. Note that a proposer can also nominate himself and that also the facilitator is invited to propose someone, because the facilitator is internal – meaning she is part of the circle.

3. Proposals are collected by the facilitator and read out loud.

4. By going round everyone provides a rationale for his proposal: "I proposed [the proposed], because [reason]."

5. In a next round everyone is asked if he would like to make a change to his proposal after he has heard the reasons for all people being proposed.

6. The facilitator summarizes the remaining suggestions and makes a proposal based on that summary. Note, that this proposal is not based on majority suggestions, but on the facilitator's rationale which she has to make transparent.

7. In the final round everyone is asked if they will give their consent or rather if they have any paramount reasoned objection to the proposal. The last one to be asked is the person who has been proposed.

8. Celebrating the decision.

A few things are important to point out – with this approach Sociocracy does not seek for the *best* suggestion, yet for one which is good enough. According to my experience, elections are this way faster than looking for the best fit (which is hard to find anyway) and it is still very transparent for everyone. Moreover, the focus is on the work to be done and if the person who is suggested will be able to do this kind of work (or if he will put the goal of the whole group at risk). As mentioned above, very often it is helpful to add a timestamp to a decision. Thus, also for an election it might be beneficial to elect somebody for a pre-defined timeframe and revisited the decision after the time is up.

Another point worth emphasizing is the fact that the proposed person is always asked last. The reason is that he might gain much higher confidence about himself fulfilling that role after having heard the confirmations from his peers. In an sociocratic election I have facilitated, the proposed person told me afterwards that he would have never dared to step forward, but that he is now proud that all his colleagues showed high confidence in his capabilities. I have also experienced that occasionally the proposed person objects for any kind of (paramount) reason. Yet, in that case I have always experienced that then the whole group quickly found a way to help the person out and resolve the issue so that the proposed person could consent to the proposal.

4. APPLYING SOCIOCRACY TO LARGE-SCALE AGILE DEVELOPMENT
Scaling agile requires also scaling self-organization. For many teams self-organization at a small scale is already challenging. There are various reasons for that – sometimes it is the lack of trust from i.e. management in the team or from the team members in themselves, and at other times it is "just" a matter of habit [3]. In practice, often people believe that these reasons are all based on the wrong mindset or rather that this is a "people problem". According to Pieter van der Meché from The Sociocracy Group [14], Sociocracy suggests instead, that challenges like these are rather based on problems in the structure and not in the people or their culture, mindset, and the like.

Especially deciding by consent and double-linking provide great means to implement self-organization even in large-scale agile development. Both help to create an alignment across everyone involved and making hierarchies a supportive and not a hindering structure.

4.1 Using Consent for Team Decisions

Now for large-scale agile development, implementing Sociocracy helps to enable shared decision making also on the team level and fosters there self-organization [9]. Thus, a single team can already benefit if "policy" decisions in a retrospective are based on consent and ensure this way the buy-in from the whole team. Consent decisions can be easily combined with other approaches, e.g. appointing an expert for making an autocratic decision for a framework to be used or asking the team for its consent after dot-voting in a retrospective.

In large-scale agile development, the buy-in from the whole team is even more important in a cross-team retrospective, where decisions have an impact to all teams of this development effort. Thus, both the decision by consent and the election of the representative standing in for his or her team in the retrospective, increase the buy-in from everyone involved.

Shared decision making is extremely helpful for the Product Owner(s) work in a large setting. Often there is a frequent and regular synchronization between different business domains necessary and also a tight collaboration with the stakeholders including sales and the customer is important for developing the right product. Using decisions based on consent for these groups, helps making better decisions and therefore better products, because objections have to be reasoned and aligned at the joint goal which is the product under development.

Not only a large setting, yet also a small one can benefit from consent decisions, especially once the development team understands the product. Then product decisions aren't made autocratically by the Product Owner only but jointly based on consent with the whole team.

4.2 Aligning Teams

The organizational structure of a really large project (this is in "LeSS terms" called LeSS Huge [6]) can benefit from double-linking. For example, for large-scale agile where the development effort is split in different business domains (also called requirement areas), not only is it necessary to connect the teams inside a business domain, but one business domain to another one, too [3, 6]. Double-linking provides a simple but powerful means to do so. The connection via the top-down link can be accomplished by the Product Owners whereas the bottom-up link can be provided by representatives that are elected by the respective teams. The Scrum Masters might be predestinated for doing so, however –according to Sociocracy– only if they are elected into this position by consent.

Scrum of Scrums and Communities of Practice – both forums are often used for alignment in large-scale agile development – are another area for the application of electing people to functions and tasks. So every team can elect the delegates who are best qualified to represent the team in the Scrum of Scrums and in each Community of Practice. Nowadays representing a team in one of these forums is most often done on volunteer basis. This is fine, yet it also means that team members with less self-esteem will most likely never represent their team, although they might be qualified perfectly well. As mentioned above, the experience has shown that by using the sociocratic way of electing people to functions and tasks the people elected wouldn't have been courageous enough to volunteer for the position necessarily. Yet the confirmation of the whole team raised their confidence for being capable for the responsibility.

4.3 Connecting Agile Development to the Organization

Sociocracy leverages existing hierarchies to being supportive to the agile structure by double-linking. Thus, the agile development effort can be connected to the whole organization by implementing double-linking. Given, it is a Scrum Master who would be elected into this position then this would empower him or her to provide the service to the organization that the Scrum Guide requests [12]:

- Leading and coaching the organization in its Scrum adoption;
- Planning Scrum implementations within the organization;
- Helping employees and stakeholders understand and enact Scrum and empirical product development;

However, without such a structure in place it is difficult –if not impossible– for a Scrum Master to provide that service, because the agile effort isn't inherently connected to the organization or in other words the Scrum Master is not embedded in the hierarchical structure and has therefore no say in the organization. Yet, if the Scrum Master is elected as the representative for the team then he would have the same say as all other persons (mostly known as managers) one hierarchy level higher-up the team, because he would be a regular member of that circle.

5. RELATION AND DEMARCATION TO OTHER MODELS

In the agile community there are currently different discussions going on which can be observed by looking at the program of diverse conferences (as diverse as Agile[1] in the USA, XP[2] in Europe, or AgileIndia[3]). On the one hand many different approaches (or frameworks) are suggested for how to best scale up agile development. And on the other hand different organizational models are examined for their fitness to the agile culture and values. Thus, below I want to discuss how these different discussions relate to what Sociocracy is offering.

5.1 Sociocracy and other Large-Scale Agile Approaches

More and more approaches for scaling agile are currently discussed [6, 7, 8, 12]. Although there are many (different) suggestions what kind of teams are needed, what kind of structure might be helpful (as Scrum of Scrums, Communities of Practice and the like), or which approach is best suited, i.e. Scrum from top to bottom (as in LeSS or Nexus [6, 12]) or Kanban for more coarse grained longer-term and Scrum for shorter term efforts (as in SAFe [7]) – there isn't any discussion about how to interconnect the different groups, teams, hierarchy levels or how to come to decisions which have the full buy-in of the large-scale effort.

Thus, Sociocracy provides principles that are orthogonal to the current large-scale agile approaches. Sociocracy is not a substitute for those approaches, but with its emphasis on self-organization it

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[1] https://www.agilealliance.org/agile2016/

[2] http://conf.xp2016.org/

[3] http://agileindia.org/

supports the agile values in general and at large-scale in particular.

5.2 Sociocracy and other Organization Models based on Self-Organization

Certainly there exists a huge amount of different organization models that are focusing on participation, too. Here, I want to focus on the most recent discussions which are Holacracy [11] and more general so-called Teal Organizations [5] both of these are sometimes labeled as "No Managers". Robertson [11] studied Sociocracy with John Buck [2] before he made additions to Sociocracy and called it Holacracy. Thus, Sociocracy is the main building block of Holacracy. A few things have been renamed, so instead of double-linking Robertson talks about a lead link and a rep (for representative) link. And as a rule for deciding on consent, Robertson defines objection as if the proposal under discussion would cause harm, or move the group backward [11]. The additions are focusing for example on the differentiation of people and roles (labeled as: role and soul) which requests no job descriptions but people taking responsibility as needed. Moreover, Robertson defines very strict rules for so-called governance and tactical meetings. For example, all participants are asked to speak from and about the tensions they're experiencing only. The goal is in the meeting to resolve that person's tension (testing it by asking "Did you get what you need?") – and not to resolve the general issue at hand. This also means to not look for buy-in from all participants, but for the resolution of the person's tension (if this creates a tension for somebody else, that person has to raise that one) [11].

Teal Organizations as presented in Reinventing Organizations [5] are actual organizations experimenting with different participatory organization structures. Some of them apply Holacracy. Thus, Holacracy provides a model for a Teal Organization and Teal Organizations have no common organization model yet apply similar principles.

Teal Organizations (thus also Holacracy) have in common to implement or request replacing hierarchies with a network of self-managed teams [5]. While this is working for some organizations (with Zappos as probably the most prominent example [10]), fact is that most corporation (i.e. GE, Siemens, et al.) today have some sort of hierarchy and giving up on them is not their next step. However, these corporations discuss changing toward a more agile structure, too. Thus, Teal Organizations and therefore also Holacracy might be great goals, yet they are not within (quick) reach for a lot of enterprises. Contrariwise Sociocracy suggests leaving the hierarchies in place, but add a feedback structure with a double-link [2]. Thus, Sociocracy starts where the enterprises are and offers a way to self-organization from there.

6. CONCLUSIONS

As with many other challenges in the small, they tend to get bigger when scaling up. The same is true for scaling self-organization. In this paper I explained the four principles of Sociocracy that can provide a means for implementing self-organization at a larger scale – both within a single large project or product development effort and within an organization.

In the agile field there are currently many discussions about new organization models. And also several of these models are promising, yet many of them ask for a radical change. Sociocracy instead provides a step-by-step approach that allows organizations to change gradually. Yet despite the fact that Sociocracy has been invented already in the 70ties with the growing acceptance of agile development only now is Sociocracy becoming more and

more discussed as a possible organization model. This means as well, that much more research and practical experiences is needed in order to tell how agile and Sociocracy can really benefit each other. So this paper is only one step in this direction.

7. ACKNOWLEDGEMENTS

8. REFERENCES

[1] Agile Manifesto http://agilemanifesto.org.

[2] Buck, J.and Villines, S. 2007. *We the people: Consenting to a deeper democracy*. Sociocracy.info, Washington D.C.

[3] Eckstein, J. 2004. *Agile Software Development in the Large: Diving into the Deep*. Dorset House, New York, NY

[4] Endenburg, G. 1998. *Sociocracy. The organization of decision-making 'no objection' as the principle of Sociocracy.* Eburon, Delft, Netherlands.

[5] Laloux, F. and Wilber, K. 2014. *Reinventing Organizations: A Guide to Creating Organizations Inspired by the Next Stage of Human Consciousness.* Nelson Parker.

[6] Larman, C. and Vodde, B. 2010. *Practices for Scaling Lean & Agile Development: Large, Multisite, and Offshore Product Development with Large-Scale Scrum*. Addison-Wesley, Upper Saddle River, NJ.

[7] Leffingwell, D. 2007. *Scaling Software Agility: Best Practices for Large Enterprises.* Addison-Wesley, Upper Saddle River, NJ.

[8] Lines, M. and Scott W. Ambler, S.W. 2015. *Introduction to Disciplined Agile Delivery: A Small Agile Team's Journey from Scrum to Continuous Delivery*. CreateSpace Indep. Publishing

[9] van der Meché, P. and Eckstein, J. 2015. *Connect Agile Teams to Organizational Hierarchy: A Sociocratic Solution*. InfoQ. http://www.infoq.com/articles/agile-teams-sociocratic-solution.

[10] Reingold, J. 2016. How a Radical Shift Left Zappos Reeling. http://fortune.com/zappos-tony-hsieh-holacracy/

[11] Robertson, B.J. 2014. *Holacracy: The New Management System for a Rapidly Changing World*. Henry Holt & Co.

[12] Schwaber, K. and Sutherland, J. 2013. *The Scrum Guide. The Definitive Guide to Scrum: The Rules of the Game*. http://www.scrumguides.org/.

[13] Schwaber, K. 2015. *Nexus Guide. The Definitive Guide to Nexus: The exoskeleton of scaled Scrum development.* https://www.scrum.org/Portals/0/NexusGuide%20v1.1.pdf

[14] Sociocracy.com. http://Sociocracy.com Home page of the Sociocracy.