

# The university as an open platform? A critique of agility

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The agile organisation is a concept in a whole series of supposedly new organisational concepts of recent decades. The demand for agility in the organisational context is based on the assumption that the environment develops increasingly disruptively and that organisations must adapt agilely to these disruptive developments. However, the theory of disruptive development is fraught with problems, and, thus, the theoretical and empirical basis of justification for agile organisation is rather weak. The article discusses the dilemmas of agile universities in the form of nine theses. Agility does not solve the main problem of the lack of innovation. Agility, as defined by the majority, is a form of passivity towards the environment, yet it is not only about adaptation, but also about active transformation. We do not need more agility, but rather more innovation. The concluding remarks set out in four points what remains of agility for the university.<sup>1</sup>

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## 1 Introduction

The *agile organisation* is an organisational concept in an entire series of new concepts of the last decade such as the “flexible” (Toffler, 1971), the “innovative” (Vracking, 1990), the “learning” (Senge, 1990), the “intelligent” (Lambertz, 2018) and the “resilient” (Drath, 2018) organisation. I will clarify how the term has originated, what is meant by an agile organisation and what has previously been written about the agile university. Following this, I will draw a conclusion in the form of nine theses and explain how I perceive a promising development in universities against this backdrop. In my closing statement, I will present what, in my opinion, remains from the agility for a university.

Universities have long been accustomed to see themselves as institutions and not as organisations. Institutions are establishments that already fulfil their purpose with their establishment. Organisations, on the other hand, must explain themselves internally and externally and are in competition. Management is an organisation’s answer to the challenge of having to substantiate decisions while weighing the alternatives (Baecker, 2017, pp. 19f.). To the extent to which universities are compelled to contemplate profiling, governance and financing, they must also inevitably be thought of under the

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<sup>1</sup>The article is based on a presentation given by the author in Zurich in November 2018 at a conference on “Shaping the university with more agility”.

perceptions of the organisation and, therefore, the management. This is arguably still more uncommon for universities than for universities of applied sciences, which have always viewed themselves as an organisation and have also not anchored any democratic structures expressed in the rather curious term of the *conducted university of applied sciences*.

## **2 The agile organisation**

### **2.1 A concept from software development**

The principle of agility originated among software developers. Initial attempts at agile software development were detected at the beginning of the 1990s. The principle gained prominence with the publication "*Extreme Programming*" (Beck & Andres, 2004). The term *agile* was chosen in 2001 at a meeting of software developers in Utah, a replacement for the heretofore common term "lightweight". The starting point was the criticism that the development of software is other than simply executable knowledge (Cockburn & Highsmith, 2001; Dingsøyr et al., 2012). Knowledge cannot be developed from the engineering perspective in the way a bridge or a high-rise building can be. Knowledge is found in a creative process. One reason for this is that in software development both the objectives and the environment (that is, the persons involved, the market demands, the technical environment and the interfaces) are flexible and change over the course of time. The Agile Manifesto was formulated at the meeting in Utah. The Manifesto reads: "*We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value: "Individuals and interactions over processes and tools; Working software over comprehensive documentation; Customer collaboration over contract negotiation; Responding to change over following a plan."*" (Beck et al., 2001)

Agile processes and methods attempt to reduce the design phase to a minimum and to achieve executable software as early as possible in the development process which are then presented in regular, brief intervals – in so-called *sprints* – to the customer for collective coordination. This is a way to flexibly respond to customer requests at any time. Now there is a great number of agile processes and methods. Some of the most well-known are Adaptive Software Development (ASD), Crystal, Feature Driven Development (FDD), Extreme Programming (XP), Design Thinking, Kanban and Scrum.

### **2.2 Initial position: Theory of disruptive development**

The principle of agility was transferred from software development to the design and management of organisations (Laloux, 2015; Robertson, 2016). In the management sector, the term stands for new project management methods but also for new management principles and for new organisational structures and cultures. The require-

ment of agility in the organisational context is based on the assumption that the environment continues to develop disruptively and organisations must agilely adapt themselves to these disruptive external developments. The founder of disruption theory is Clayton M. Christensen (Christensen, 1997; Christensen & Raynor, 2003). In his book, *“The Innovator’s Dilemma”*, he demonstrates how businesses have slept through trends and thereby collapsed by using examples from the computer and steel industries. Disruptions will change entire business branches and products, and, according to Christensen, they force established businesses out of the market. Christensen has transferred the observation to the university and has written a voluminous book about the agile, or the innovative, university (Christensen & Eyring, 2011).

Christensen’s theory of disruptive development is beset with several problems (King & Baatartogtokh, 2015; Lepore, 2014). It is historiography based on deeply-rooted anxiety towards financial collapse, an apocalyptic fear and, ultimately, insufficient empirical results (Lepore, 2014).

Methodically, Christensen’s claims are not suitable for the assessment of successes and failures of businesses. His examples are, if anything, anecdotes. Selection criteria of the businesses and time periods studied are lacking. In many instances of his examples, long-operating businesses that capitalise on continuous development and stable structures have actually maintained their market share and even expanded when observed over a longer period of time, while disruptive, newly established businesses were able to attain success in their initial periods but were bought up or became insolvent over the mid- and long-term. The advantage of start-ups is not necessarily their agility but rather the fact that they do not have any previous activities to protect. They are not encumbered in their new activity by their previous financial, intellectual and emotional investments in their new activity.

### **2.3 Agility as a management concept**

Despite this rather problematic and empirically insufficiently justified starting point for the agile organisation, we shall look at what exactly is meant with agility in an organisational context.

Until now, there has not been a consistent and concise definition of agility, and a number of similar terms have been used to describe agility. For an overview of various definitions, see Jafarnejad & Shahaie, 2008. The discussion of the concept of flexibility, formerly termed elasticity, has already been going on for 90 years (Termer 2016, p. 16). Frank Termer makes a comparison of the definitions of agility and flexibility and explains that a distinct conceptual separation has not as yet been accomplished. There are great overlaps and both concepts are, in part, identical content-wise. Nevertheless,

I will henceforth attempt to outline which general derivations from the agile software development can be undertaken with respect to the organisational action under the concept of the agile organisation.

The *agilists* are eligible to fundamentally change the manner in which organisations function. Agility is the capability of a business to continuously adapt itself to its complex, turbulent and unstable environment (Goldman et al., 1996). In order to do so, it must develop the ability to anticipate these changes, to be ready to adapt, to constantly learn as an organisation and to make this knowledge available to all relevant persons (Dove, 2001). To achieve this, the organisation of the future is an extensive non-hierarchical, democratic organisation in which the well-being of the customers and the employees is priority (Kühl, 2015a, p. 17). A basic manual for this is the book "Reinventing Organizations" by Frederic Laloux (2015). Conventional organisational structures are process- or project-oriented or a combination of the two. The agility concept implies that organisations in the context of an inconstant and unstable environment with these structures cannot keep up with the transformation. The internal organisation of agile businesses orients itself on the maxim of absolute adaptability. Structures are, therefore, only loosely connected. It is consequently dehierarchised and decentralised (Kühl, 2015a, p. 23). The differentiation in divisions is increasingly dissipating. The new organisational structures require an intensive, informal, non-formalised communication. Temporary project groups secure the innovation process.

Jack Welch, former CEO of General Electric, already wonderfully expressed the agile principle in 1989, although not under the concept of agility:

*"Our dream for the 1990s is a boundary-less Company, a Company where we knock down the walls that separate us from each other on the inside and from our key constituencies on the outside. The boundary-less Company we envision will remove the barriers among engineering, manufacturing, marketing, sales and customer service; it will recognize no distinctions between «domestic» and «foreign» operations. We'll be as comfortable doing business in Budapest and Seoul as we are in Louisville and Schenectady. A boundary-less organization will ignore or erase group labels such as «management», «salaried» or «hourly», which get in the way of people working together. A boundary-less Company will level its external walls as well, reaching out to key suppliers to make them part of a single process in which they and we join hands and intellects in a common purpose – satisfying customers. This is an admittedly grand vision, requiring an unprecedented cultural change, and we are nowhere near achieving it. But we have an idea of how to get there – an idea that is rapidly becoming reality across the Company. It's called Work-Out. Work-Out is a fluid and adaptable concept, not a program."* (Welch, 1990)

Jack Welch's speech illustrates the direction of impact of agile businesses: In agile organisations, rigid structures are replaced with loosely coupled structures. This occurs with the termination of boundaries, internally and externally, the dissolution of functional differentiations, a dehierarchisation and decentralisation (Kühl, 2015a, pp. 52ff.).

Positively formulated, it is a merger, both internal and external, the integration of various areas of responsibility, the democratisation and sociocratisation and a grass-roots ensconced responsibility.

According to the agile approach, division of labour and specialisation lead to inflexibility and a lack of professional and personal flexibility. In agile organisations, diverse functions are merged. Employees are brought together around tasks. Job profiles are obsolete. Hierarchy is almost a curse word in agile organisations. The vertical differentiation is widely disassembled, and the permeability between the remaining levels is consequently strengthened. The dissolution of vertical and horizontal differentiation leads to a consequent decentralisation.

A common metaphor for agile organisations is the jazz band which is about the integration of creative transpositions. The harmony of the organisation is based on the ability of the employees to apply their competencies in the right moment and pass the topic along to the colleagues: Individuality and integration capacity are equally sought (Kühl, 2015a, p. 58). Jazz bands are examples for agile co-operations. According to Leue (as cited in Früh, 2015a):

*"There is no doubt about what music is played. Also, if only a few details are stipulated in written form – in the selection of the individuals, in the selected individual, in the pieces and in the collective style – it clearly indicates towards which guidelines the members of the band orient themselves. The prescribed arrangement allows for freedom for the individual. He creates his freedom, relying on familiar components, arranges them anew while inventing some in the process"* (Früh, 2015a, p. 59) (translation by the author)

Dissolution of boundaries from within and without, resolution of functional differentiation, decentralisation, dehierarchisation, deformalisation of communication: This is the objective of agile organisations. Unstable structures, loose couplings and composite systems of independent intensive training centres, temporary project groups and semi-autonomous work groups form its core (Kühl, 2015a, p. 67).

In the appendix of his book, Frederic Laloux explains (Laloux, 2015, pp. 318–322) how the structures, practices and processes of agile organisations (he calls them evolutionary organisations) look. It is a wonderful social and human prose: self-organised, spontaneous, radically simple, voluntary, reasonable, free, culture forming, flexible,

honest, fair, just, attentive, independent, completely decentralised, holacratic, vibrant, completely transparent, upright, beautiful, exempt of target and budget and so on and so on. It is not coincidental that the afterword is by Ken Wilber, the American consciousness researcher. It almost gives the book a biblical character.

### 3 The agile university

What exactly does all of this mean for a university? Until now, relatively little has been written about the agile university (Baecker, 2017; Masson, 2012; Twidale & Nichols, 2013).

The sociologist Dirk Baecker assumes in his article "Agility at the University" that universities have, in a sense, always been agile but that they must, nevertheless, continuously and increasingly orient themselves towards agility (Baecker, 2017). Under an agile university, Baecker understands a specific management concept, particularly, in which vertical structures are converted to horizontal structures. Admittedly, universities had always more or less practised this form of management as well because universities are oriented in their practice and in their knowledge towards the difference between internal and external and not towards the difference between top and bottom (Baecker, 2017, p. 22). The research practice of the professorships and the knowledge taught by the faculties are organised in a manner that defies every hierarchical ranking.

The still existing hierarchy must be replaced, states Baecker, by means of an agile discussion, with complexity in the form of projects. In the end, the university is both platform and technical infrastructure. An empty diagram, stage, interface, as Baecker writes, while at the same time: program, protocol and register. At this platform university *"projects that deserve the name agility prove, measure and apply how digital devices still allow us freedom for human initiatives"*. (Baecker, 2017, p. 26) In the end, Dirk Baecker even becomes dystopian. This time his contribution is rather impenetrable. Baecker offers us a few compatible fragments.

Patrick Masson, Director of the Open Education Consortium and Special Advisor at the University of Massachusetts, tells us that it is not a dystopia but rather a utopia (Masson, 2012). For him, the agile university is also, ultimately, only a platform which makes it easy for groups to gather. Patrick Masson views the platform "Wikipedia" as a possible ideal. The university becomes the "Agora" or a "hothouse" as defined by Barton Kunstler (2005): It offers an environment in which creative and innovative activities flourish. Its boundaries are permeable. The entry and exit of the participants are simple. The agile university as a platform is not familiar with any formal approval processes. The activities that take place within the platform are unplanned and are

defined by the interactions between the “inhabitants” of the platform. The platform is unstable (“protean”) and changeable. Activity clusters are born, thrive and die if necessary. Participation follows the power law: A few very active participants are followed by a large crowd of occasional participants.

The agile university consists of voluntary and self-organised associations of lecturers and students. The curricula are self-organised and fluid, based on the interests of the faculties and the needs of the students. The university no longer offers employment. Stability is determined by the entire community, which moves fluidly back and forth between the economy, society and university. There are no administrative rules, but rather protocols on which the values of the community are based. The agile university also does not award diplomas. However, the faculties award individual certificates. The agile university encourages play, failure and experiment and makes all knowledge created at the university available to all for free. It has a fluid temporal structure: There are no semesters, and the teaching and learning is a continuous activity. The agile university is not entirely free of management. It is not managed exclusively by planning but rather by coordination. The president is host and “Choice Architect” (Thaler et al., 2010). He or she is “Chief Organizer” or “Scrum Master”, eases communication, offers to coach and removes obstacles. The president leads with “cultivation and care” and not with “management and control”. And he or she loves surprises.

Furthermore, even this university utopia is not new in many aspects. For example, Clark Kerr, former president of the University of California (as cited in von Wissel, 2007, p. 277), had already drawn up the “multiversity” in the 1960s: a multiple, open, flexible, permanently international, entrepreneurial university.

While these texts have motivating potential about the agile university, the texts on agile teaching and learning at universities leave one rather irritatingly behind. The “Agile Teaching and Learning Methodology” (ATML) (Chun 2004) and “Just-in-Time-Teaching” (JiTT) (Novak 1999, 2011) assume that teaching and learning processes run just like software development processes (Chun, 2004, p. 2; Meissner & Stenger, 2014, p. 127). In agile teaching and learning, the students assume the role of the customer. The agile software development process in which the customers are involved is replaced by the learning/teaching process in which, one reads and is astonished, – the students are involved. The continuous growth in the students’ competences in the agile teaching and learning process conforms to the increments in which the sprints realise new functionality (Meissner & Stenger, 2014, p. 127). We have an odd backflow here: The agile software developers orient themselves towards the way in which knowledge originates, in other words, towards a process of knowledge creation. They in turn apply this same orientation towards agile teaching and learning. It is now called “Just-In-Time-Teaching” and “agile teaching and learning”, which, simply put, means

that one guides the students in their education process and, hopefully, gives them proper feedback.

There are other similarly absurd backflows of software development applied to teaching and learning, for example from Jörn Fahsel or Michael Twidale and David Nichols. For Fahsel, the agile theory must fulfil the following conditions: There must be a person who can provide and convey knowledge and experience; this person must be accessible as a contact person during the learning process and make relevant knowledge available. Once the students have dealt with the knowledge, they should purposefully ask the lecturer to clarify ambiguities and obtain new input (Fahsel et al., 2016). In their article “Agile Methods for Agile Universities”, Michael Twidale and David Nichols formulate an agile manifesto for the lectureship of a university or, as they call it, for a “Developing of Students”. By analogy to the Agile Manifesto for the software developers, they claim the following for universities: individuals and interactions prevail over processes and tools; demonstrable student achievements prevail over comprehensive documentation of these accomplishments, that dynamic learning discussions with students prevail over documents, metrics and policies, and that the reaction to changes is more important than following a plan (Twidale & Nichols, 2012, p. 10).

Convincing concepts for an agile university do not exist. The utopia of the “university as an open platform” (Masson, 2012) offers motivating ideas to be pursued further. However, the sifted articles on agile teaching and learning do not open new perspectives.

I will draw a personal conclusion in the form of nine theses and in a concluding final statement from my, at times, onerous analysis of agility, agile organisations, and agile universities. In doing so, I will take the liberty to go beyond agility and explain how, in my opinion, a university should position and transform itself in the future:

#### **4 The dilemmas of agile organisations: Conclusion in nine theses and closing statement**

- (1) *Both the feeling that the requirements are becoming more complex and the principles of agility are not new.* The dynamic of changes we observe here was also recognised by managers in the high phase of industrialisation at the end of the nineteenth century, in the 1920s and in the 1970s. The introduction of the railway and the telephone massively altered the perception of speed and complexity as well. The demand for agility is also based on a dramatisation of the dynamic of development. The regard for historical developments sets the current changes into perspective.



- (2) *The current management literature does not have convincing and consistent concepts for a new, agile organisational form.* In the case of the agility concept, it is a new packaging of post-bureaucratic organisational principles that have been known for a long, long time. Decades ago, semi-autonomous work and production groups that are continuously propagated as a new concept under new names in regular intervals were already being discussed (Fotilas, 1980; Antoni, 1996). The demand for the dehierarchisation of organisations is already found in the “Management Pioneer” Mary Parker Follett who, as cited in Kühl (2015a), in the 1940s, demanded that the vertical authority in organisations be replaced by a horizontal authority. Even the project-based work at universities in functionally mixed teams with iterative project methodology and spontaneous orientations in terms of “Scrum” is not at all new. I have been working almost exclusively in this manner parallel to the line management for two decades.
- (3) *There is no large organisation and no university that manages without a hierarchy.* Organisations and universities are still based, to a considerable extent, on the hierarchy principle and will do so in the future as well. Nevertheless, this is no defence of still existing, too steep hierarchical gradients at universities and the academic precarity but rather much more a plea for strong university management equipped with relevant competence that advocates and can advocate for the entire university campus.
- (4) *Organisations that decentralise decision-making abilities see themselves confronted with fundamental coordination problems* (Kühl, 2015b, p. 10). The more independent the entities of an organisation become the more urgent and, at the same time, the more complicated the integration of these entities into the whole organisation becomes. Integration becomes increasingly more difficult but, at the same time, increasingly more necessary with the growing differentiation in self-organised, semi-autonomous entities (Kühl, 2015b, p. 10). Employees lose a clear image of their organisation, which can result in an identity dilemma. Distribution in autonomous, small entities tends to lead to innovation policy being taken in small steps and includes the risk that the same competencies are being built at different points in an organization (Kühl, 2015a, p. 91). In my opinion, it would be wrong to decentralise universities more than this. In order to remain viable, decision-making abilities at universities must rather be centralised today. This is possible without undermining the specific cultures and goals of the different faculties or departments or the academic freedom of teaching and research.
- (5) *Agile Organisations will fail due to an excess of internal instability.* They are facing the dilemma of needing to stabilise themselves although flexibility is vital for them. The obligation to agility creates instability and new fields of power. Hierarchy and distinct distribution of competencies are no longer available as regulatory mechanisms in power struggles. Permanent negotiation processes which lead to a

constant politicisation of internal decisions are required (Kühl, 2015a, p. 23). Presumed simplification strategies lead to a growing complexity, which should not be perceived as such (dilemma of complexity) (Kühl, 2015a, p. 9).

- (6) *Agility does not solve the main problem of lack of innovation.* Agility, as it is predominantly defined, is essentially a form of passivity towards the environment. It is not only about adaptation but also about active transformation (Silberzahn, 2017). For example, the world to which Swatch should have adapted itself was a world in which 90 per cent of the world clocks were manufactured by low-cost manufacturers. The world to which ZARA had to adapt itself was a world in which it seemed apparent that no European low-cost textile manufacturer would survive. Rather than adapt to this world by being “agile”, these companies questioned this assumption. They did not adapt to the surroundings but changed them. They were not agile but transformative (Silberzahn, 2017).
- (7) *Thus, we do not need more agility but, first and foremost, more innovation.* We must determine the fields of the university that promote innovation and transformation. In my opinion, these are, above all, the fields of education and infrastructures. We must individualise and make the contents and formats of our educational opportunities flexible. Perhaps in the future, there will no longer be any degree programmes as in the contemporary understanding. In the field of infrastructures, alliances between various universities and industry will increase in significance. The universities must decide in which areas they will offer infrastructure and in which areas they will receive infrastructure.
- (8) *Development and maintenance of inter-organisational relations will become one of the most important tasks of university management.* Currently, competing means cleverly positioning one’s own university in a network. A functional division of labour among the universities and the prioritisation of universities become more relevant. Specific complimentary cooperation between the types of universities serves to raise their profile in the competitive international environment and to establish dual institutes that offer broad and in-depth educational and learning methods, a stronger integrated curriculum and collective research platforms. Universities will form more niche partnerships that are based on either collective visions or on complimentary capacities.
- (9) *The regional connection of a university is critical for the versatility and flexibility of the university profile.* The profile of a university or a university network thrives on symbiosis with the regional, social and economic realities. Regional innovation systems increase in significance such as, for example, the research association “Cyber Valley” that was recently founded in the region of Stuttgart-Tübingen. Intermediary knowledge-sharing institutions will gain in relevance. Application-oriented research will increasingly be for industry-driven application development

(via the product design for the development of a supply chain); the university will become a production site. Nevertheless, we must take care that, as a university, we do not lose the internal cohesion for all openings. A limitless transgression is not desirable. The basic research and the ivory tower as a metaphor for a safe haven of knowledge must be strongly defended.

## 5 Closing Statement: What remains from agility for the university

There are four aspects in my opinion:

First, the necessity of the delegation of selected decision-making functions downwards and, with it, the simplification and acceleration of specific processes. We can, in fact, learn this from the agilists. For example, it cannot be the case that new courses of study have to be examined and approved several times by university councils. The development of educational opportunities must be swifter and more spontaneous in the future.

Second, an understanding of strategy as a movement and not as a programme. A university strategy can no longer codify any programme today but rather must have the strength to initiate a movement. It must support and facilitate an explorative and experimental approach as long as it is long-term and evolutionary invested.

Third, the punctual experimenting with Masson's utopia. Patrick Masson's "University as an Open Platform" is, however, not a substitute but rather meant to be integrative. We must create more self-governing, explorative, and open sites and spaces. There are models for this in, for example, "Code University" in Berlin, "École 42" in Paris or the Media Lab of Massachusetts Institute of Technology in Boston.

Fourth and, in conclusion, all this requires a strongly developed, anticipative ability. A strategic observatory is indispensable for every university or every higher education area. It promotes the ability to expand and utilise the existing system capacity. Agility, understood in these terms, is a mode to create the environment rather than to adapt to it.

## References

- Antoni, C. H. (1996). *Teilautonome Arbeitsgruppen. Ein Königsweg zu mehr Produktivität und einer menschengerechten Arbeit?* Weinheim: Beltz.
- Baecker, D. (2017). *Agilität in der Hochschule. die hochschule 1*, 19–28.
- Beck, K et al. (2001): *Manifesto for Agile Software Development*. <https://agilemanifesto.org/>.
- Beck, K. & Andres, C. (2004). *Extreme Programming Explained*. Addison-Wesley.

Christensen, C. M. & Eyring, H. J. (2011). *The Innovative University. Changing the DNA of Higher Education from the Inside Out*. Hoboken, New Jersey: John Wiley & Sons, Inc.

Christensen, C. M. & Raynor, M. E. (2003). *The innovator's solution: creating and sustaining successful growth*. Boston, Massachusetts, USA: Harvard Business School Press.

Christensen, C. M. (1997). *The innovator's dilemma: when new technologies cause great firms to fail*. Boston, Massachusetts, USA: Harvard Business School Press.

Chun, A. H. W. (2004). *The Agile Teaching/Learning Methodology and its e-Learning Platform*. *Lecture Notes in Computer Science – Advances in Web-Based Learning*. Heidelberg: Springer Verlag, 3143, 11–18.

Cockburn, A. & Highsmith, J. (2001). *Agile Software Development: The People Factor*. *Computer* 34(11), 131–133.

Dingsøy, T., Sridhar, N., Balijepally, V. & Moe, N. B. (2012). *A Decade of Agile Methodologies: Towards Explaining Agile Software Development*. *Journal of Systems and Software* 85(6), 1213–1221.

Dove, R. (2001). *Response Ability. The Language, Structure, and Culture of the Agile Enterprise*. New York: Wiley.

Drath, K. (2018). *Die resiliente Organisation*. Freiburg im Breisgau: Haufe.

Fahsel, J., Rahmann, K. & Böhme, V. (2016). *Agile Lehre – Erfahrungsberichte Vom Konzept zur Agilen Lehre in Seminaren und Projekten*. *Workshop Lehre für Requirements Engineering (LehRE) auf der Software Engineering Konferenz 2016*. Vienna, 23rd February 2016.

Fotilas, P. (1980). *Arbeitshumanisierung und teilautonome Produktionsgruppen: wirtschaftliche, soziale und technische Aspekte*. Berlin: E. Schmidt.

Goldman, S. N., Nagel, R. N., Preiss, K. & Warnecke, H.-J. (1996). *Agil im Wettbewerb: Die Strategie der virtuellen Organisation zum Nutzen des Kunden*. Berlin, Heidelberg: Springer.

Jafarnejad, A. & Shahaie, B. (2008). *Evaluating and Improving Organizational Agility*. *Delhi Business Review* 9(1), 1–18.

Kerr, C. (2001). *The Uses of the University*. Cambridge: Harvard University Press.

King, A. A. & Baartogtokh, B. (2015). *How Useful Is the Theory of Disruptive Innovation?* *MIT Sloan Management Review* 57(1), 77–91.

Kühl, S. (2015a). *Wenn die Affen den Zoo regieren. Die Tücken der flachen Hierarchien*. Frankfurt am Main/New York: Campus Verlag.

Kühl, S. (2015b). *Sisiphos im Management. Die vergebliche Suche nach der optimalen Organisationsstruktur*. Frankfurt am Main/New York: Campus Verlag.

- Kunstler, B. (2005). The hothouse effect: a model for change in higher education. *On the Horizon* 13(3), 173–181.
- Laloux, F. (2015). *Reinventing Organizations: Ein Leifaden zur Gestaltung sinnstiftender Formen der Zusammenarbeit*. München: Verlag Franz Vahlen.
- Lambertz, Mark (2018). *Die intelligente Organisation. Das Playbook für organisatorische Komplexität*. Göttingen: BusinessVillage GmbH.
- Lepore, J. (2014). The Disruption Machine. What the gospel of innovation gets wrong. *The New Yorker*. 23rd of June.
- Leue, H. (1989). *Innovation und Zielorientierung. Analogien zwischen dem Geschehen in Jazzbands, Sinfonieorchestern und Unternehmen*. Quickborn: Metaplan.
- Masson, P. (2012). *The Agile University*. University of Massachusetts.
- Meissner, B. & Stenger, H.-J. (2014). *Agiles Lernen mit Just-in-Time-Teaching. Adaptive Lehre vor dem Hintergrund von Konstruktivismus und intrinsischer Motivation*. In Zawacki-Richter, O., Kergel, D., Kleinefeld, N., Muckel, P., Stöter, J. & Brinkmann, K. (Eds.). *Teaching Trends 2014. Offen für neue Wege: Digitale Medien in der Hochschule*, 121–136.
- Novak, G. (2011). Just-in-Time Teaching. *New Directions for Teaching and Learning* 128, 63–73.
- Novak, G. (Hrsg.) (1999). *Just-in-Time Teaching: Blending Active Learning with Web Technology*. Upper Saddle River, NJ: Prentice Hall.
- Parker Follett, M. (1941). *Dynamic Administration. The Collected Papers of Mary Parker Follett*. London: Sir Isaac Pitman and Sons.
- Robertson, B. J. (2016). *Holacracy. Ein revolutionäres Management-System für eine volatile Welt*. München: Verlag Franz Vahlen.
- Senge, P. M. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday.
- Silberzahn, P. (2017). *Innovation: Agility is Not What Your Organization Needs*. Retrieved 29.01.2019 from <https://philippesilberzahneng.wordpress.com>
- Termer, F. (2016). *Determinanten der IT-Agilität. Theoretische Konzeption, empirische Analyse und Implikationen*. Springer Gabler.
- Thaler, R., Sunstein, C. R. & Balz, J. P. (2010). *Choice Architecture*. Retrieved 29.01.2019 from <https://papers.ssrn.com>.
- Toffler, A. (1970). *Future Shock*. New York: Bantam Books.
- Twidale, M. B. & Nichols, D. M. (2013). *Agile methods for agile universities*. In Besley, T.A.C. & Peters, M.A. (Eds.). *Re-imagining the Creative University for the 21st Century*. Sense Publishers, pp. 27–48.

Von Wissel, C. (2007). Hochschule als Organisationsproblem. Neue Modi universitärer Selbstbeschreibung in Deutschland. Bielefeld: transcript Verlag.

Vracking, W. J. (1990). The Innovative Organization. Long Range Planning 23(2), 94–102.

Welch, J. (1989). To Our Share Owners. 1989 Annual Report of General Electric. Annual Letters 1980–2000. Retrieved from: <https://www.valuwalk.com/wp-content/uploads/2014/11/Jack-Welch-GE-Annual-Letters-1980-to-2000.pdf>

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