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A COMPARATIVE STUDY BETWEEN DEVELOPMENTAL LEADERSHIP AND LEAN LEADERSHIP – SIMILARITIES AND DIFFERENCIES

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ABSTRACT

The purpose of the study is to compare Developmental leadership with Lean leadership; document the differences and similarities and examine if you can combine these theories to achieve better results in the organization. A literature review is used. The result indicates more similarities than differences between Developmental leadership and Lean leadership behavior. The major difference is that Developmental leadership focuses on making the leader conscious of their own behavior and develop (possibly change) their behavior. Through new behaviors their co-workers and organization also gain developmental advantages. There is no further purpose described in Development leadership theory. Lean leadership also concentrates on behaviors, but clearly declares an override purpose; continuous improvement with focus on eliminating waste in the value stream. Lean leadership behaviors share a similar purpose, and focus on making leaders aware of what incorrect behaviors can cost or cause the organization. Even if Lean leadership does not have this clear and distinct relationship it is an underlying element in one of the two key principles – *respect for people,* which permeates both models. The two studied models seem to be quite similar and both focus on role models and frequency of developmental/value creating behaviors.

The proposed comparative study should be oriented towards practical application in management positions.

KEYWORDS

Behavior, Lean manufacturing, Management, Social and behavioral sciences.

Introduction

Substantial empirical evidence from at least the past 20 years shows that leadership matters [1–4] and there is wide consensus that leadership is important or in fact essential to achieve organizational success [2–7]. During the same time, several different theories and models have evolved that describe what a leader should or should not do to achieve best results for the organization [1, 5, 6]. During the 1980's and 1990's leadership development was strongly influenced by the direction of leadership called transformational leadership, a leadership style that enhances the motivation, morale, and performance of co-workers through a variety of mechanisms – for example by understanding the strengths and weaknesses of followers and acting as their role model [1, 4]. Parallel to the leadership stream, Toyota attracted world attention by producing better cars than others [2, 8] and Lean management – a product developed by Toyota Production Systems – started to gain increasing interest.

At the end of 1990's the Swedish National Defense College introduced a new leadership model called Developmental leadership [14] developed from Transformational leadership.

As a military officer I worked with and used Developmental leadership over several years, often with mixed success. When I started to study at the university I encountered Lean leadership and was told that it, the Lean way to lead people, was new and special.

I did not perceive the new method differently, since I recognized many similarities with the leadership model I was accustomed to.

I wanted to investigate if there were elements of Lean leadership that could be useful for a developmental leader, and my own leadership, and that was the basis for my research.

The general purpose of the study is to compare Developmental leadership with Lean leadership and evaluate differences and similarities of the two theories to achieve better results in the organization. To accomplish this, two leadership behavior models are used; Developmental leadership (the 66 item rating questionnaire) and Emiliani's Lean leadership behaviors.

Theory background

What is leadership?

There are several definitions of leadership. Bass [10] expressed that there are the same number of definitions of leadership as that of people who have tried to define it. However, most definitions of leadership seem to involve an intentional process to influence other people in order to guide, structure and facilitate activities and relationships in a group and/or an organization [4].

Thompson's [11] definition is "leadership is the ability to influence people to achieve the goals of a team". Another definition is claimed by Forsyth [12] "leadership is the process by which an individual guides others in their pursuits, often by organizing, directing, coordinating, supporting and motivating their efforts". Kotter [13] in turn describes leadership as the ability to persuade a group of people to move in a certain direction without coercion. Kotter [13] also states that leadership is about developing and communicating visions as well as inspiring co-workers to identify themselves with these visions. Forsyth's [12] definition includes another part of leading definition management. Thompson [11] as well argues that there is a difference between leadership and management. Management is about function, planning, budgeting, evaluating and facilitating while leadership is about relationship, selecting talent, motivating, coaching and building trust. In the perspectives described above, management could be seen to belong to the organizational perspective and leadership to the human perspective – the latter more related to behavior and psychology. But the study of Lean leadership shows that management is not separated from leadership by definitions. Emiliani [8] for example claims "Beliefs, behaviors, and competencies that demonstrate respect for people, motivate people, improve business conditions, minimize or eliminate organizational politics, ensure effective utilization of resources, and eliminate confusion and rework". The definition includes critical aspects of leadership that other definitions have not considered.

Next I will describe two leadership models, Transformational leadership and Transactional leadership. Differences between the two approaches occur when the leader rewards or disciplines the follower, depending on the adequacy of the followers' performance [1, 15].

It is therefore necessary to describe a part of Transformational leadership and its values, to help understand the Swedish model.

Transactional leadership

Transactional leadership, also called managerial leadership, is a leadership method in which the leader promotes obligingness of his or her co-workers through both rewards and punishments. The leader is telling others what is required, specifying the settings and the rewards they will receive if they complete the requirements. Transactional leadership also focuses on the role of supervision organization and group performance. Leaders using the transactional approach are not looking to change the future; they want to keep things the same. These leaders pay attention to co-workers' efforts in order to find faults and deviations. This type of leadership can be effective in crisis and emergency situations [1, 15].

Transformational leaders motivate their followers to accomplish more than they normally intended and also often more than they thought possible by setting more challenging expectations. The outcomes they achieve are increased or improved performance.

Transformational leadership is based on four components [15]:

- *Charismatic leadership* – transformational leaders behave as role models. They are admired, respected, trusted and followers identify with the leaders and want to be like them.
- *Inspirational Motivation* – transformational leaders behave in ways that inspire and motivate their followers, by providing meaningful work. Followers are involved in goals, expectations, and a shared vision. The team spirit is stimulated and optimism and enthusiasm are displayed.

- *Intellectual Stimulation* – transformational leaders stimulate their followers' efforts to be innovative and creative by making assumptions, reframing problems, and approaching old situations in new ways. Creativity is encouraged and there is no public criticism of individual followers' mistakes. Followers are welcome with their new ideas and creative solutions, and they are all included in the process of addressing problems and finding actual solutions suitable to the situation and not expressions of perceived management wishes.
- *Individualized Consideration* – transformational leader behaviors demonstrate acceptance of individual differences[1] and they pay special attention to each follower's need for growth and achievement by acting as a mentor or coach. Communication is structured by two-way exchange, the leader listens effectively, and interaction by followers and colleagues are personalized[2].

Developmental leadership

Developmental leadership is characterized by the leader acting as a *role model* and raising questions of morals and ethics while observing perceptible core values [16]. This type of leader also provides *inspiration and motivation* to promote participation and creativity. A developmental leader shows *personal consideration* by providing support. Three characteristic behaviors form the Developmental leadership's three components – *Exemplary acting, Individual consideration*, and Inspiration *and motivation.* The Swedish model has merged Bass's [15] *Charismatic leadership* and *Intellectual Stimulation* to one component – *Exemplary Acting.*

The development resulted in differences between the two models – primarily the part of Transformational leadership's components. In Transformational leadership there are four components, and in Developmental leadership three. Both theories are based on the distinction between leadership and transactional leadership (Developmental leadership uses the name Conventional leadership) where the transformational is an expansion of the other.

Developmental leadership is described in a model (see Fig. 1) combining the leading styles described and the inspiration of "A full range of leadership model" [1] from Bass [15]. The model places different leading styles in a coordinate system with two axels – organizational results, and individual development – and describes a relation between different leader be-

haviors where the leaders differ through shown *frequencies of behavior over time* [1]. All leaders use different styles more or less, and the situation matters of cause.
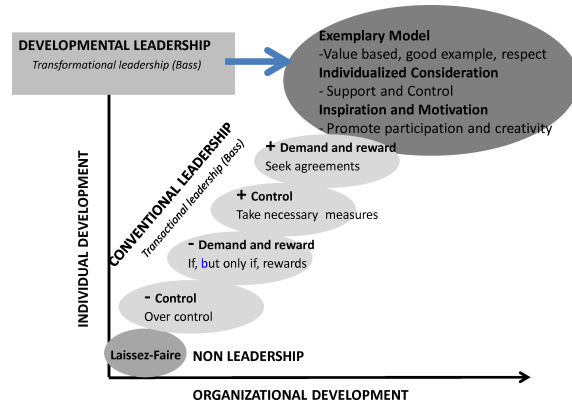

Fig. 1. The leadership style model, adapted from Larsson and Kallenberg [1, 16].

In the end of 1990'the Swedish National Defense College was given a task by the Swedish Armed Forces to chart current scientific publications about leadership with the purpose to see what seemed to be the most suitable and most effective leadership model – but also a model with scientific relevance [14]. The Swedish National Defense College established that the model with the most scientific relevance was Transformational leadership. The scientific relevance portion includes studies where improved effectiveness inside organizations and transformational leadership has high presence. The Swedish National Defense College continued the studies through international contacts with researchers and practitioners, resulting in a new leadership model, developed for Swedish circumstances – Developmental leadership.

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[1]Some employees need more encouragement, others more task structure, some firmer standards, and still others more autonomy [15].

[2]The leader is aware of individual concerns, remembers earlier discussions, and sees the individual as a complete person rather than as just an employee.

and describes a relation between different leader behaviors where the leaders differ through shown *frequencies of behavior over time* [1]. All leaders use different styles more or less, and the situation matters of cause.

Developmental leadership is a mental approach (a state of mind) and is consequently related to behaviors [1]. The aspect of approach is especially important when talking about the component *Exemplary acting* which has three sub-components:

- **Value base** – includes behaviors where the leader shows humanistic values, demanding loyal, moral and ethical behavior by co-workers.
- The second sub component is **Good example**. To act like you talk and to have courage to lead the group, even in difficult situations.
- The third one is **Responsibility** which means to be responsible to solve the organization's tasks, to the co-workers' health and well-being, and to ensure values are adhered to. The third sub component also means that the leader assumes full responsibility when mistakes are made, and shares the responsibility for successful measures.

Leaders who act in an exemplary fashion as described above gain the respect and approval of their co-workers. The acts of the leader are characterized by trust and create trust in the co-workers.

The second component, *Individual consideration*, is similar, or mostly the same as Transformational leadership's *Individualized Consideration*. Thus Developmental leadership contains two sub components which differ and are more clearly described as:

- **Support** – means *emotional* but also practical support (with more weight on the emotional part). A prerequisite is that the leader shows interest in both *privacy* and work conditions.
- The other component is to be direct and clear – here it is named **Confront**. It is necessary to be able to confront co-workers who have underachieved, handle and communicate so the result is edifying rather than counter-productive.

Even the third component *Inspiration and motivation* is similar, or comparable to the Transformational leadership component *Inspirational Motivation*. Like the two other components described, this one also contains sub-components – two to be exact; *promote participation* and *promote creativity* [1]. Different from Transformational leadership however is charisma. In Transformational leadership charisma and charismatic leadership are necessary [15] and an important element of development and achievement.

In Developmental leadership charisma can be helpful, but is not compulsory – even a quiet and reserved leader, can inspire by enthusiasm [1]. Larsson and Kallenberg [1] state that if charisma is combined with the sub-component basic value and based on a humanistic value base, charisma can be useful and even required (on the other hand, charisma combined with an egocentric or a totalistic value base can be problematic):

- The first sub component **promote participation** is about pro-active engagement and forming attractive future status giving responsibility to co-workers etc.
- The second sub component **promote creativity** is about encouraging co-workers for new ideas, to promote different ways to process problems and also to challenge the processes and behaviors that are in current use.

Along with the three components of Developmental leadership, are the components of Transactional leadership, called Conventional leadership, and all their elements (Developmental and Conventional). The type of leadership named Conventional leadership has two components [1]. The first one contains leader behaviors that recognize demands and rewards. The second element is focused on leader behaviors that are controlling.

Demand and reward

The core part of a leadership built on demands and rewards can be summarized as *I'm kind to you, if you are kind to me.* This component is called *Contingent Reward* in Bass's [15] model.

In Developed leadership the component is split into two sub components, where the first one has a more positive approach than the other, and is named *Seek agreements*. The second one is named *If, but only if, reward* (Fig. 2):

- Seek agreements. An example:
- The leader says – Can we do it like this? You do X and I do Y? One of the co-workers answers – it is ok, but we need more time to handle task X. The leader answers Ok – it's a deal.
- Leaders who often practice that type of leader behavior more often use the leader behavior, Developmental leadership.
- The second sub component has a more negative outlook and is named If, but only if, reward. Some examples:
- The ones who are failing the test must take it again on Saturday. . . and the ones who are most successful get a Friday off!
- The ones who are slow do the dishes in the afternoon.

Leaders who often use this model of leader behavior more often appear to use the leadership behavior Controlling leadership, described next.
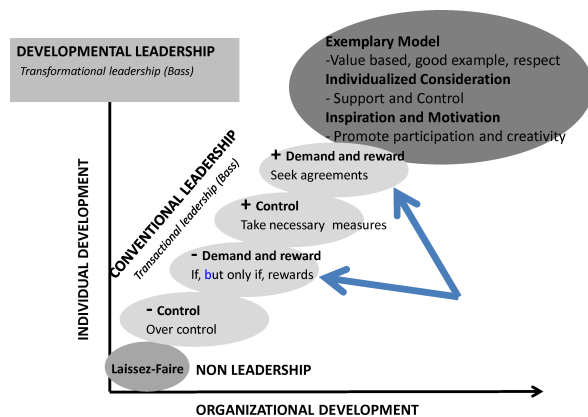
Fig. 2. Conventional leadership – the two types, Demand and reward, adapted from Larsson and Kallenberg [1, 16].

Control

The controlling leadership is based on the leader's behavior to study and monitor the way co-workers approach work, and correct deviations from the plan. The rules must be followed to make sure that there will be no mistakes. Common thoughts about this style are that it encourages pedantry and focuses too much on negative and diverging behavior. Swedish research [1] supports these results and also illustrates that controlling leadership often has a goal focus combined with a lack of the component Individual *consideration.* Even this behavior is split into two modes – a more positive look and a negative one (Fig. 3).
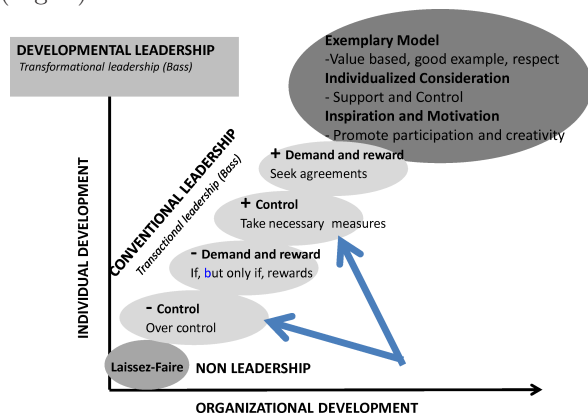

Fig. 3. Conventional leadership – the two types of Control, adapted from Larsson and Kallenberg [1, 16].

In conventional leadership there are the two types of Control (adapted from Larsson and Kallenberg [1, 16]):

- The positive one is named take necessary measures – for example be sure that routines are followed, that it is safe to work and so on.
- The negative one is named to over control.

Laissez-Faire leadership

This leadership style has its roots in Lewin's [1] classical theory and Bass [15] suggests that it is an absence of leadership. This leadership style is the most inactive, as well as the most ineffective. Laissez-faire represents a non-transaction and necessary decisions are not made, actions are delayed, and leadership responsibilities are ignored.

More about the model

Developmental leadership and Conventional leadership can be seen as complements to each other rather than opposites. A' common feature is that both are focused on goal achievement [1]. However there is an important difference between them – motivation. The conventional leader uses more of the *If, but only if, reward*, and often refers to duties, laws and policies rather than to collective values, goals and interests. Conventional behaviors often result in co-workers doing their tasks, but without motivation to do more than that. The goal and the goal achievement are exclusively for the leader.

The developmental leader, however, can motivate his or hers co-workers to reach the goal together and the competence to do this comes from the co-worker himself.

The relation between different leading styles and the effectivity of the organization can be seen in the model.

By studying the model it appears that for leadership to develop it is important to change the frequency of leadership behaviors and to use developmental leadership more than conventional leadership and Laissez-Faire. "Leadership that is working well and that is characterized by requirements and rewards, as well as controls, enables you to achieve objectives agreed upon in the short term. In the long term, developmental leadership enables individuals to progress further" [16].

The 66 item rating questionnaire

The Developmental leadership concept includes an assessment tool for personal feedback [16], and can be viewed as an inventory of the leaders' actual leadership behavior. The assessment tool is a 66 item rating questionnaire (appendix 1), and is only used for developmental purposes [16]. The questionnaire looks at 66 behaviors, of which 42 are included in the various leadership styles in the leadership model (see Fig. 1, 2 and 3).

Twenty behaviors are concerned with professional competence, managerial competence, social competence, and stress management capability. The last

four outcomes from the questionnaire are about cost awareness and job satisfaction [16].

Emiliani's Lean leadership behaviors

In the late 1980's, the manufacturing industry started to become curious and eventually even familiar with Toyota's unique practices [2, 16]. Later on, senior managers have also become familiar enough to try to implement the principles as well [18]. Toyota's management principles – through names like *Toyota Production System, Toyota Management System, and different Lean combinations* – became later known as the *Lean Management System* [7, 17]. The *Lean Management System* is rooted in two key principles – *continuous improvement* and *respect for people*, and both strive to eliminate waste while adding value to customers/stakeholders. The principle, *respect for people*, includes leadership behaviors [10, 17].

There are five fundamental concepts in lean philosophy; specify value, identify the value stream, flow, pull, and perfection [7, 9], the same as in a behavioral context [9]:

- Specify value means, in interpersonal relationships, to understand the needs and expectations of the people we work with. Expectations in terms of how the leader should behave with regard to what the people want to hear, see, say or do. It is the behaviors that others judge to be acceptable in certain environments.
- Secondly, to identify the value stream in individual or group behaviors means to understand what people do and why they do it. Recognize behaviors that add value and notice these while discouraging those that are unproductive. Inefficiency appears in the value stream when people do not talk to each other for example, a counter-productive behavior.
- Flow, the third concept, refers to behavior that minimizes delays in work performance. Any inconsistent behavior will create backlogs that will threaten responsiveness to changing conditions. The leader's inability to *walk the talk* is the most obvious form of waste in this concept.
- The fourth concept, Pull, applied in a behavioral context means to recognize that people operate under many different mental models. This requires the leader to adjust the leading style often so that he or she can meet expectations from workers and stakeholders.
- Fifth is Perfection, which in a behavioral context means to take advantage of the transparency brought about by the four first concepts (steps) in order to easily identify and eliminate values that

do not create value. In a transparent organization the leader (and workers also) delivers more immediate feedback for example [9].

Lean leadership behaviors

Lean behaviors are analogous to lean principals and defined as "simply as behaviors that add or create value" [9]. Emiliani [8] argues that successful lean leaders know that they need to be consistent, "if they tell the employees to eliminate process waste", then the leaders must not behave in wasteful ways [8].

If the leaders fail, it sends a contradictory, demotivating message that workers can identify with, and in other ways use to avoid investing themselves into the daily application of lean principles and practices. Emiliani [9] categorizes behaviors in three different parts – Waste, behaviors that add no value but cannot be avoided, and behaviors that add value (Fig. 4).
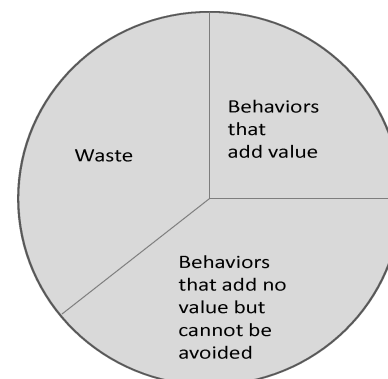

Fig. 4. Different types of behaviors, and how often they are used in an organization, not using Lean management [9].

Table 1 illustrates some examples of the differences between the three types of behaviors.

Lean behaviors are those that add or create value, such as; trust, generosity, patience, objectivity, discipline, and reflection behaviors. People using those value creating behaviors are often seen as role models.

The opposite of behaviors that create value is waste behaviors which are behaviors that inhibit work flow. Here you can recognize behaviors such as ego, inaction, blame, revenge, demeaning, and elitism. Waste behaviors are also called fat behaviors [9]. Fat behaviors can also be recognizable as talking but no action, creativity waste, underutilizing workers' talents or mismanagement of people [8]. Behavioral waste is not some abstraction related

Table 1
Examples of lean behaviours [8].

Value-added behaviors	Non-value-added but necessary (or unavoidable) Behaviors	Behaviorial waste
Humility	Gossip	Blame
Calmness	Short-term thinking	Office Politics
Wisdom	Ignorance	Confusion
Patience	Inconstancy	Inconstancy
Objectivity	Negative thoughts	Unknown expectations
Balance	Biases	Revenge
Trust	Stereotypes	Elitism

Note: Items listed in each column are not intended to correspond to items listed in other columns.

Table 2
Comparison of behavior attributes [9].

Fat behaviors	Lean behaviors
Confusion	Self-awareness
Unnecessary commentary	Humility
Irrelevant observations	Compassion
Random thoughts	Suspension
Self-imposed barriers	Deference
Ego	Calmness
Irrationality	Quietude
Revenge	Reflection
Inaction	Honesty
Positions	Benevolence
Interpretations	Consistency
Uncertainty	Generosity
Negativity	Patience
Excess	Humor
Gossip	Understanding
Sarcasm	Respect
Preoccupation	Listening
Ambiguity	Observation
Extreme flattery	Trust
Cynicism	Sincerity
Subjectivity	Equanimity
Bias/prejudice	Objectivity
Deception	Discipline
Selfishness	Rectitude
Pride	Wisdom
Criticism	Balance

to theories of leadership, it is a real phenomenon that will cause harm if efforts are not taken to identify and eliminate it. Fat behaviors would not exist if the organization consciously used one of the two key principles – *respect for people*. If we do not eliminate fat behaviors the organization risks to "block the flow of information, undermines teamwork, causes delay and re-work, focuses people's attention on problem avoidance and obfuscation, lowers job satisfaction, and makes it much more difficult to satisfy customers" [8].

Behaviors that add no value but cannot be avoided are in between the two opposites [8] and can be recognizable as behaviors such as biases, negativity, and gossip. Those behaviors exist, because people are not perfect [8]. Inconstancy exists in two columns (Table 1) – since leaders may exhibit minor inconsistencies that do not influence other people. But often the minor inconsistencies become great or are great from the beginning, and will create problems that consume resources and add no value.

More leadership behaviors are found in Appendix 2.

If the leader recognizes behaviors in her/his leadership there are ways to avoid them. Emiliani [8] has constructed a table as an example (Table 2).

As a starting point, literature and articles about Developmental leadership and Lean leadership behaviors were identified. My sampled criteria were origin sourced from currently dated literature. Developmental leadership originated at the Swedish National Defense College and it is the reason I use themas one of my origin sources. Lean leadership behaviors were created by Emiliani, and I use him and his work as the other origin source. To learn more about both models, I also studied the foundation theories of Transformational leadership and Lean leadership.

To select this literature I did not use the same criterion earlier described, the assault approach was rather to use the most common literature and articles in management.

In Developmental leadership there are two different *66 item rating questionnaires* available. One is a self-evaluating questionnaire for the leader and one is for co-workers to evaluate the leader. I have chosen to use the self-evaluating one. It was difficult to obtain a specialized list with Emiliani's [8] lean leadership behaviors, but in Emiliani [8] I found three published tables: Value-added behaviors [8], Lean behaviors [8], and Continuous personal improvement [8]. Emiliani [9] also describes *fifty errors to avoid* [8] which I have chosen to identify as [8, 9] so called waste behaviors – in other words behaviors to avoid. I then merged the three tables and the *fifty errors to avoid* into a single Lean leader behavior model (Appendix 2).

Additionally I conducted a qualitative analysis by comparing the two models with focus on Developmental leaderships *66 item rating questionnaire* and Emiliani's *Lean leadership behaviors*.

Research findings

An assessment of the two leadership behavior models indicates they contain both similarities and differences. The major difference is that Developmental leadership focuses on making the leaders conscious of their own behavior and to develop (maybe change) it. By using the new behaviors both co-workers and the organization gain developmental advantages. Lean leadership also concentrates on behaviors, but clearly announces an overriding purpose; i.e., one of continuous improvement with focus on eliminating waste in the value stream. Lean leadership behaviors have the same goals, and focus on making leaders aware of what wrong behaviors can cost or cause the organization. Even if Lean does not have this as a distinct or clear focus it is fundamental in one of the two key principles – *respect for people*, which characterizes both models.

Although the two studied models have different purposes they seem to be quite similar and are both focused on role models and frequency of developmental/value creating behaviors.

A similarity is that both use the word *role model* [1, 8, 9, 16] to describe a leader with skills useful for the organization. In Developmental leadership the role model behaviors are called developmental [1, 16] while in Lean leadership they are called behaviors that create value [8, 9]. However, the meaning is the same – behaviors that make people grow, work more efficiently, and make them feel content.

Another allied factor is the relationship between different leader behaviors and frequencies of behavior over time [1, 8, 9, 16]. There are some differences however. Developmental leadership argues that the leader becomes more developmental when frequently using behaviors in the apex of the described model (Fig. 1), but it is natural and necessary sometimes to use Conventional leadership and even Laissez-Faire behaviors [1, 16]. In lean leadership behaviors Emiliani [8, 9] states that it is ruinous for the leader to use waste (fat) behaviors.

Another difference is that the Lean leadership behavior model is also grounded in workers'[3] view that it is important for a leader to ensure workers use the right behavior – to influence the workers to do right and avoid wrong behaviors [8, 9]. Developmental leadership also recognizes this although not as well emphasized as in Lean [1, 16].

Developmental leadership uses the word co-workers [16] indicating that as a leader it is important to make sure the workers use the right behavior

– to influence workers to do right and avoid wrong behaviors [8, 9].

Developmental leadership also considers right and wrong behaviors, but not with the same emphasis as Lean [1, 16].

Both theories similarly highlight inspiration and motivation behaviors – Developmental leadership more directly than Lean leadership. Developmental leadership uses inspiration and motivation when describing the leader, corresponding to theories about Lean behaviors [1, 8, 9, 16].

The differences appear in the behavioral questionnaires. The two words inspiration and motivation are frequently used in the 66 item rating questionnaire (Appendix 1), but they are not described at all in Emiliani's [9] behaviors (Appendix 2).

Comparing the two models (questionnaire and behavior table, appendices 1 and 2) it is evident they are totally different. The questionnaire is designed to ask specified questions that evaluate the leader and value his or her developmental skills. The higher the frequency of developmental behaviors, the more developmental the leader is. The Lean behaviors table is more a list of what to do and what to avoid which makes it more difficult to measure.

The two compared behavior examples (questionnaire and Table 3, Appendices 1 and 2) are similar yet different at the same time. They are comparable since the behaviors handling behaviors add development or value to the co-worker. A question can be as "I aim to reach agreements on what must be done" (Appendix 1: item 26). The questionnaire also has questions (about 30%) specifying professional competence, managerial competence, social competence, and stress management capability as in for example "I show insight into people's needs" (Appendix 1: item 10). There are also specified specific questions (about 5%) about cost awareness and job satisfaction "I act cost-effectively" (Appendix 1: item 64).

Some of the Lean leadership behaviors do not specify how the behaviors will be applied (40%), rather it is a list with seven different behaviors. The others are statements on how to act as a leader. Some items in the questionnaire are asked in a negative way such as in "I show anger towards others in stressful situations" (Appendix 1: item 57). In Lean leadership behavior this negative question can be compared with the fat behaviors from Lean like "Thinking that blame is helpful" (Appendix 2, number 15).

In Table 3, value adding Lean behaviors are compared with the questionnaire (Appendix 1). Each lean behavior is matched with items from the questionnaire, if there is a correspondent value.

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[3]The term used for employees is also different, Developmental leadership uses the word co-workers [16].

Table 3
Lean behaviors matched with items from the questionnaire.

	Lean behaviors -– value adding	Developmental leadership item number
1	Humility	15. I treat people appropriately who have not carried out tasks well 19. I even delegate prestigious tasks 26. I aim to reach agreements on what must be done
2	Calmness	58. I keep calm in stressful situations 59. I demonstrate positive thinking in stressful situations
3	Wisdom	10. I show insight into people's needs 17. I can deal with troublesome co-workers 60. I make good decisions under pressure, even when lacking full information
4	Patience	11. I take time to listen 61. I am good at dealing with diffuse and unclear situations
5	Objectivity	12. I give others constructive feedback 16. I tackle relationship problems 64. I act cost-effectively 66. I contribute to the good reputation of the unit in the organization
6	Balance	
7	Trust	14. I take co-workers opinions into consideration 20. I contribute to others enjoyment of their job, which encourages them to work harder 21. I make others feel they share responsibility for the unit's development 44. I am the person to turn to for advice on issues in my field of work
8	I seek to understand the expectations of people I interact with regardless of position or status. I consider the perspectives of key stakeholders	2. I display an ethical and moral attitude 3. I express values that have a humanistic basis 13. I make others feel significant. 27. I tell others what to expect when a goal is attained 28. I discuss with co-workers how to carry out tasks 52. I communicate easily with others
9	I understand which of my behaviors add value and which are waste, and how my behaviors impact business processes and value creation for end-customers. I strive to achieve non-zero-sum gains.	1. I discuss what values are important before making decisions 7. I accept responsibility for the operations – even in hard times 22. I create a sense of participation in the future goals of my unit 43. I follow the development in my area of work with interest
10	I understand how my leadership behaviors can create errors, delays, confusion, and re-work. I think about how to do my work in less time to help improve work flows. I am not an impediment to do information flow.	8. I exercise my managerial responsibility in an exemplary way 45. I demonstrate knowledge in my area of work
11	I understand the pull signals that my key stakeholders give me. I strive to do what is wanted, when it is wanted, in the amount wanted, and where it is wanted.	9. I accept responsibility for ensuring that started tasks are completed 25. I inspire others to try new working methods 51. I am quick to discover external conditions that may affect our organization
12	I work to eliminate behavioral waste. I continuously improve my understanding of behavioral waste and strive to eliminate it to facilitate information flow.	6. I admit to my own mistakes without trying to find excuses 46. I follow up how the operation's goals are attained 47. I ensure that co-workers are kept informed
13	I understand the value-added part of my work. I am able to perform my work as it comes to me, mostly without delay. I think how to eliminate waste in my own daily activities.	48. I structure operations effectively 50. I affect the organization in the long term 54. I can disagree without being unpleasant
14	I am consistent in my words and my actions. I strive to reduce variation in interpretation of my intent. I treat people in same regardless of level.	4. I act in accordance with the opinions I express 49. I express my opinion on what external events mean for our own organization 53. I am flexible in contact with others adapt my communication to different people
15	I respond to signals from stakeholders to provide what they needed, when it is needed, in the amount needed, and where it is needed.	18. I create enthusiasm for 15 I respond to signals from 18. I create enthusiasm fora task 23. I encourage others to develop their abilities 63. I contribute to job satisfaction in the group 65. I help significantly to increase others efficiency
16	My mind, work habits, and workplace are well organized.	62. I am able to do several tasks simultaneously
17	I seek to eliminate facial expressions and body language that signal disinterest or distrust.	5. I represent the unit to external parties in an exemplary way
18	The tone, volume, pace, inflection, and timing of my voice is used effectively to signal positive interest of support.	24. I inspire others to think creatively
19	I try to improve my personal effectiveness by maintaining my mind and body. I achieve good balance between work, family, and personal interests.	–

Note: I have not included items 29–42, and 55–57 since I identify them as fat behaviors.

Table 3 demonstrates that most of the developmental questions match Lean leadership behaviors' value adding behaviors. This match indicates similarity between the two models. The two examples (1 and 14) can be seen as typical matches – Lean leadership behaviors state that the leader needs humility (1) as a behavior adding value to processes. To be humble could mean to *appropriately treat people who have not carried out tasks well* or to *delegate prestigious tasks*. In the same way being consistent in word and actions can be described as to *act in accordance with the opinions the leader expresses* or *the leader expresses her or his opinions based on what external events mean for their organization*.

Table 3 also shows there are two Lean leadership behaviors' with no matches – 6: balance and 19: I try to improve my personal effectiveness by maintaining my mind and body. I achieve good balance between work, family, and personal interests. There are also items from Developmental leadership not included (items 29–42 and 55–57 since I recognize them as fat behaviors, and I only use value added behaviors in Table 3.

Conclusion

The study of the two leadership behavior models shows there are mostly similarities but also differences.

The major difference is that Developmental leadership focuses on making the leaders conscious about their own behavior and development (maybe change) of their behavior. By using the new behaviors their co-workers and the organization also gain developmental advantages. Lean leadership also concentrates on behaviors, but has clearly announced an override purpose, i.e., one of continuous improvement with focus on eliminating waste in the value stream. Lean leadership behaviors have the same objective and focus on making leaders aware of what wrong behaviors can cost or cause the organization. Even if Lean does not have this distinct or clear focus it is fundamental in promoting one of the two key principles – *respect for people*, which characterizes both models.

Discussion

The two studied models seem to be quite similar in most ways and they are both focused on role models and frequency of developmental/value creating behaviors. Behaviors exist that benefit both the leader and the organization, behaviors that ruin trust and loyalty and it is important to highlight these behaviors rather than develop or avoid them.

The general purpose of the study was to compare the Developmental leadership with the Lean leadership behavior table and to compare differences and similarities, using the two behavior models. The goal was also to explore if it is possible to use these two theories together to achieve better results.

Developmental leadership focuses on relationships and Lean leadership on the value stream, and what I see in similarity is that they both always return to their theory base and starting-point.

The main differences between them are Lean's focus on the value stream; production, waste, stakeholders etc., while Developmental leadership is more clearly focused on the relationship between leader and co-worker. Even if Lean does not have this distinct or clear focus it is fundamental in promoting one of the two key principles – *respect for people*, which characterizes both models. Could the differences become assets and possibilities for developmental issues?
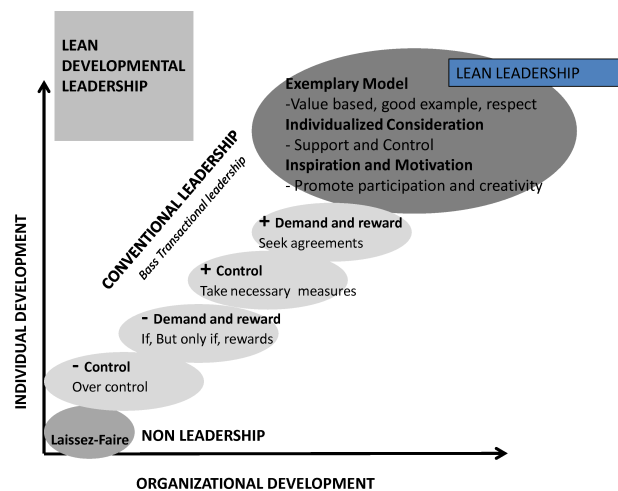

Fig. 5. Model of Lean Developmental leadership.

Is it possible to use the experience based material from the Swedish National Defense College self-evaluated questionnaires to develop and measure (self-evaluating) our Lean leaders? Could Developmental leadership be a tool to improve Lean leadership generally? Since the Lean Management System is rooted in two key principles – *continuous improvement* and *respect for people*, and both aim to eliminate waste and add value, could the Developmental leadership be used to accomplish continuous improvement also within the Lean leadership?

Could Lean leadership behaviors help Developmental leaders to become more conscious of how fat behaviors can affect production, costs and flow?

The second objective of the study was to explore if these two theories can be used together to achieve

better results in the organization? The results show that the theories focus on different segments. Developmental leadership focus is on developing the leader to better manage co-workers and achieve better results. Lean leadership is focused on eliminating waste to achieve better results. So I could contribute to success if the leader can merge these two theories together – a Lean Developmental leadership.

To merge the two models further into research in practice would be challenging for future research.

Appendix 1

SWEDISH NATIONAL DEFENCE COLLEGE	**Leaders name:**	**Tommi Tormala 12172**
Department of leadership and management		
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Number of people in the organization as a whole:	**I am:** ☐ Woman ☐ Man	**Nationality** ☐ Swedish
☐ 1 - 10	**Age:** ☐ 29 or younger	☐ Norwegian
☐ 11 - 30	☐ 30 – 50 years old	☐ Danish
☐ 31 - 100	☐ 51 or older	☐ Other
☐ 101 - 300		
☐ More than 300	**Education** (indicate the highest)	**My position**
Main activity of the organization:	☐ **Secondary school or equivalent**	☐ **Supervisor or**
☐ Defense Forces	☐ High School/ 6th Form College	☐ Middle manager
☐ Police		
☐ Rescue Service	☐ College/University	☐ Upper manager
☐ Medical/Health Service		
☐ School / Education	Can an acutely hazardous situation for people or property arise if you make a mistake in your job?	
☐ Another service sector		
☐ Industry/Production		
☐ Business	☐ **Yes** ☐ **No**	
☐ Other, if so, what:		

Rate to what extent each statement is applicable to you. Use the scale below. Mark your answers by circling the appropriate number.

1 = Never or …………9 = Very often

1	I discuss what values are important before making decisions	1 2 3 4 5 6 7 8 9 ☐
2	I display an ethical and moral attitude	1 2 3 4 5 6 7 8 9 ☐
3	I express values that have a humanistic basis	1 2 3 4 5 6 7 8 9 ☐
4	I act in accordance with the opinions I express	1 2 3 4 5 6 7 8 9 ☐
5	I represent the unit to external parties in an exemplary way	1 2 3 4 5 6 7 8 9 ☐
6	I admit to my own mistakes without trying to find excuses	1 2 3 4 5 6 7 8 9 ☐
7	I accept responsibility for the operations – even in hard times	1 2 3 4 5 6 7 8 9 ☐
8	I exercise my managerial responsibility in an exemplary way	1 2 3 4 5 6 7 8 9 ☐
9	**I accept responsibility for ensuring that started tasks are completed**	1 2 3 4 5 6 7 8 9 ☐
10	I show insight into people's needs	1 2 3 4 5 6 7 8 9 ☐
11	I take time to listen	1 2 3 4 5 6 7 8 9 ☐
12	I give others constructive feedback	1 2 3 4 5 6 7 8 9 ☐

13	I make others feel significant	1 2 3 4 5 6 7 8 9	☐
14	I take co-workers opinions into consideration	1 2 3 4 5 6 7 8 9	☐
15	I treat people appropriately who have not carried out tasks well	1 2 3 4 5 6 7 8 9	☐
16	I tackle relationship problems	1 2 3 4 5 6 7 8 9	☐
17	I can deal with troublesome co-workers	1 2 3 4 5 6 7 8 9	☐
18	I create enthusiasm for a task	1 2 3 4 5 6 7 8 9	☐
19	I even delegate prestigious tasks	1 2 3 4 5 6 7 8 9	☐
20	I contribute to others enjoyment of their job, which encourages them to work harder	1 2 3 4 5 6 7 8 9	☐
21	I make others feel they share responsibility for the unit's development	1 2 3 4 5 6 7 8 9	☐
22	I create a sense of participation in the future goals of my unit	1 2 3 4 5 6 7 8 9	☐
23	I encourage others to develop their abilities	1 2 3 4 5 6 7 8 9	☐
24	I inspire others to think creatively	1 2 3 4 5 6 7 8 9	☐
25	I inspire others to try new working methods	1 2 3 4 5 6 7 8 9	☐

		1 = Never or .... 9 = Very often know Almost never or always	Don't
26	I aim to reach agreements on what must be done	1 2 3 4 5 6 7 8 9	☐
27	I tell others what to expect when a goal is attained	1 2 3 4 5 6 7 8 9	☐
28	**I discuss with co-workers how to carry out tasks**	1 2 3 4 5 6 7 8 9	☐
29	I pay attention to only the co-workers who perform tasks well	1 2 3 4 5 6 7 8 9	☐
30	I behave critically towards co-workers who haven't fulfilled tasks well	1 2 3 4 5 6 7 8 9	☐
31	**I use a clear punishment and reward system**	1 2 3 4 5 6 7 8 9	☐
32	I take necessary action when required	1 2 3 4 5 6 7 8 9	☐
33	I do not hesitate to intervene if something starts to go wrong	1 2 3 4 5 6 7 8 9	☐
34	I aim to keep me well informed of what is happening	1 2 3 4 5 6 7 8 9	☐
35	I "Keep a log" of other people's mistakes	1 2 3 4 5 6 7 8 9	☐
36	I look for mistakes	1 2 3 4 5 6 7 8 9	☐
37	I rarely comment when something is good, but complain immediately if something is done incorrectly	1 2 3 4 5 6 7 8 9	☐
38	I devote a lot of energy to checking co-workers	1 2 3 4 5 6 7 8 9	☐
39	I am indifferent, carry out my tasks without caring about them	1 2 3 4 5 6 7 8 9	☐
40	I find reasons to avoid responsibility when a task must be done	1 2 3 4 5 6 7 8 9	☐
41	I avoid making necessary decisions	1 2 3 4 5 6 7 8 9	☐
42	**I do not take responsibility for decisions**	1 2 3 4 5 6 7 8 9	☐
43	I follow the development in my area of work with interest	1 2 3 4 5 6 7 8 9	☐
44	I am the person to turn to for advice on issues in my field of work	1 2 3 4 5 6 7 8 9	☐
45	I demonstrate knowledge in my area of work	1 2 3 4 5 6 7 8 9	☐
46	**I follow up how the operation's goals are attained**	1 2 3 4 5 6 7 8 9	☐
47	I ensure that co-workers are kept informed	1 2 3 4 5 6 7 8 9	☐

48	I structure operations effectively	1 2 3 4 5 6 7 8 9 ☐
49	I express my opinion on what external events mean for our own organisation	1 2 3 4 5 6 7 8 9 ☐
50	**I affect the organisation in the long term**	1 2 3 4 5 6 7 8 9 ☐
51	**I am quick to discover external conditions that may affect our organisation**	1 2 3 4 5 6 7 8 9 ☐
52	I communicate easily with others	1 2 3 4 5 6 7 8 9 ☐
53	I am flexible in contact with others – adapt my communication to different people	1 2 3 4 5 6 7 8 9 ☐
54	I can disagree without being unpleasant	1 2 3 4 5 6 7 8 9 ☐
55	I am insensitive and loutish	1 2 3 4 5 6 7 8 9 ☐
56	I tend to become reckless after a series of successes	1 2 3 4 5 6 7 8 9 ☐
57	I show anger towards others in stressful situations	1 2 3 4 5 6 7 8 9 ☐
58	I keep calm in stressful situations	1 2 3 4 5 6 7 8 9 ☐
59	**I demonstrate positive thinking in stressful situations**	1 2 3 4 5 6 7 8 9 ☐
60	I make good decisions under pressure, even when lacking full information	1 2 3 4 5 6 7 8 9 ☐
61	I am good at dealing with diffuse and unclear situations	1 2 3 4 5 6 7 8 9 ☐
62	I am able to do several tasks simultaneously	1 2 3 4 5 6 7 8 9 ☐
63	I contribute to job satisfaction in the group	1 2 3 4 5 6 7 8 9 ☐
64	I act cost-effectively	1 2 3 4 5 6 7 8 9 ☐
65	I help significantly to increase others efficiency	1 2 3 4 5 6 7 8 9 ☐
66	I contribute to the good reputation of the unit in the organisation	1 2 3 4 5 6 7 8 9 ☐

Appendix 2

Lean behaviors – value adding	NON-VALUE-ADDED BUT NECESSARY (or unavoidable) BEHAVIORS	BEHAVORIAL WASTE (nr of errors)
Humility	Gossip	Blame
Calmness	Short-term thinking	Office Politics
Wisdom	Ignorance	Confusion
Patience	Inconstancy	Inconstancy
Objectivity	Negative thoughts	Unknown expectations
Balance	Biases	Revenge
Trust	Stereotypes	Elitism
I seek to understand the expectations of people I interact with regardless of position or status. I consider the perspectives of key stakeholders.	–	14. Blaming middle managers for resisting Lean. 31. Mandating levels of Lean accomplishment. 35. Confusing internal policies with externally mandated requirements. 38. Leaving out "the respect of people" principle. 39. Thinking you know what "the respect of people" principle means. 48. Inability to relinquish power to subordinates. 49. Isolate one's self from employees.
I understand which of my behaviors add value and which are waste, and how my behaviors impact business processes and value creation for end-costumers. I strive to achieve non-zero-sum gains.	–	9. Mistaking a little Lean knowledge for a lot of Lean knowledge 12. Applying zero-sum thinking and habits in the application of Lean. 13. Thinking the leadership skills that you got you to where you are will work in a Lean environment. 24. Confused who is the end-use customer. 36. Confusing the financial term "value" with the word "value" in Lean management.

I understand how my leadership behaviors can create errors, delays, confusion, and re-work. I think about how to do my work in less time to help improve work flows. I am not an impediment to do information flow.	–	1. Incorrectly characterizing the Lean management system 3. Doing Kaizen without the tree principles of Kaizen 7. Confusing Lean management principles 16. Not acknowledging the existence of behavioral waste. 18. Failing to recognize that the core competency concept is incompatible with Lean thinking. 22. Remaining fixated on unit costs and not understanding total costs. 28. Poor ability to comprehend cause-and-effect. 45. Thinking that Lean management does not apply to me/us.
I understand the pull signals that my key stakeholders give me. I strive to do what is wanted, when it is wanted, in the amount wanted, and where it is wanted.	–	19. Denying the existence of stakeholders. 32. Leading the Lean transformation from your office.
I work to eliminate behavioral waste. I continuously improve my understanding of behavioral waste and strive to eliminate it to facilitate information flow.	–	11. Assuming you can become good at Lean management without having to practice every day. 27. Poor ability to process non-quantitative information. 30. Thinking new behaviors is the key to creating Lean leaders.
I understand the value-added part of my work. I am able to perform my work as it comes to me, mostly without delay. I think how to eliminate waste in my own daily activities.	–	5. Confusing the types of waste. 37. Thinking than leaders can opt-out of Lean. 43. Cherry picking the Lean management system to obtain short-term gains.
I am consistent in my words and my actions. I strive to reduce variation in interpretation of my intent. I treat people in same regardless of level.	–	4. Confusing terms used in Lean management with terms in conventional management 23. Remaining fixated of finding new tools to help correct current business problems.
I respond to signals from stakeholders to provide what they needed, when it is needed, in the amount needed, and where it is needed.	–	25. Not establishing a no-blame policy. 26. Not establishing a qualified job guarantee. 44. Using Lean management to perpetuate a seller's market view.
My mind, work habits, and workplace are well organized.	–	29. Thinking that Lean management can work in a political workplace. 46. Lacking commitment to merit, logic, knowledge, detail, facts, and reality.
I seek to eliminate facial expressions and body language that signal disinterest or distrust.	–	33. Not sharing profits with employee.
The tone, volume, pace, inflection, and timing of my voice is used effectively to signal positive interest of support.	–	15. Thinking that blame is helpful.
I try to improve my personal effectiveness by maintaining my mind and body. I achieve good balance between work, family, and personal interests.	–	–

Non-matched errors:
1. Incorrectly characterizing kaizen.
6. Thinking that your conception of teamwork is the same as teamwork in a Lean environment.
8. Not knowing the difference between real Lean and fake Lean.
10. Adding new Lean knowledge without eliminating old conventional management knowledge.
17. Thinking that books of Lean management are theory.
20. Operating a business without a purpose.
21. Adopting Lean but not changing performance measurements settings.
34. Making Lean complex.
40. Thinking that Lean will one day stick.
41. Not planning for changes in leadership or ownership.
42. Keeping the same metrics and accounting system.
47. Using Lean tools to fine-tune the status quo.
50. Hiring the wrong consultancy.

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