When leadership style matches one's regulatory orientation: a regulatory fit effect

Loes E. van der Kolk

S4016165

[1]Faculty of Behavioral and Social Sciences, Department of Psychology

University of Groningen, The Netherlands

PSB3E-BT15: Bachelor Thesis

GR23

Supervisor: dr. Ben Gützkow

Second Evaluator: dr. Yasin Koc

In Collaboration with Constance Tournier, Cleo A. Vasilda, Ivan D. Pickman, Luicija Pliaukstaite, Radost T. Pezhgorska

January 17, 2022

A thesis is an aptitude test for students. The approval of the thesis is proof that the student has sufficient research and reporting skills to graduate, but does not guarantee the quality of the research and the results of the research as such, and the thesis is therefore not necessarily suitable to be used as an academic source to refer to. If you would like to know more about the research discussed in this thesis and any publications based on it, to which you could refer, please contact the supervisor mentioned.

Abstract

The current study focuses on the effects of a leader matching a person's regulatory orientation on regulatory fit. The study concentrates on two regulatory orientations, namely assessors (people that want to do good and be actively involved) and locomotors (people who prefer quick work with less thinking) and two leadership styles: authoritarian and participatory. The first can be described as forceful and directive, and the second as more advisory. When the regulatory orientation is combined with the right leader that increases the feelings of satisfaction and effectiveness, a state of regulatory fit is realized. To examine this effect, the participants in the study made a word anagram task. Beforehand, they received instructions from either an authoritarian or a participatory leader that both came with a specific script. Expectations were that more regulatory fit would be experienced when assessors were assigned to a participatory leader and locomotors to an authoritarian leader. Second, it was hypothesized that assessors would spend more time on the task and write down more words than locomotors. According to the results, no evidence is found for none of these expectations. However, further exploratory analysis display that being assigned to the participatory condition provoked an assessment orientation and that either higher scores on locomotion or more time spent on the task increased the experienced regulatory fit.

Keywords: regulatory orientation, assessment and locomotion, leadership styles, regulatory fit

When leadership style matches one's regulatory orientation: a regulatory fit effect

Motivation, a word we all know and with which we all have a particular relationship. There are times when we wish to have more of it, such as when maintaining a healthy lifestyle or when an important deadline is approaching, and times our bodies seem to be filled with motivation, and we achieve great things. People can either do something because they "have to" or because they "want to" but work equally hard for both (Converse et al., 2019). Even though the intensity of work is equal to both of these two different qualities of motivation, both require different modes of regulation (Converse et al., 2019). According to Deci et al. (1994), the social context influences which regulatory style occurs depending on the focus on self-determination (the personal decision to do something or to think a certain way) or not. When a social situation promotes self-determination, people tend to use the regulatory style, integration (undergoing the process in alignment with one's core sense of self). In contrast, when the situation does not promote this, a regulatory state of introjection (undergoing the process but not accepting it as ones' own) occurs. So, motivation plays an essential role in our daily lives, but what exactly fuels our motivation?

According to Higgins (2013), multiple aspects influence people's motivation. From an evolutionary perspective, we say that people's behavior is motivated by the need to survive. We make decisions that increase our opportunities in life. In addition, we want to know the truth about things, so we know where we are in life. Finally, motivation is about maximizing pleasure and minimizing pain (Higgins, 2013). Nevertheless, besides the desire to survive and experience pleasure, what is the underlying motivation for all these? According to Higgins, the underlying motivation for people is the need to be effective. He makes the distinction between three ways of being effective. First, people want to be successful in achieving what is desired. Second, people want to successfully control what happens. Third, people want to be

effective at knowing what is real. When successful in these three manners, we are most likely to be effective in our life pursuits (Higgins, 2013). But what factors influence our feelings of effectiveness?

Kruglanski et al. (2000) identified two strategies people use to control or direct their activities: assessment and locomotion. When using the assessment strategy, people tend to extensively determine what is right to do. They emphasize value and want to be actively involved. On the other hand, the locomotion strategy implies quick work without really focusing on quality and is more focused on moving from state to state (Kruglanski et al., 2000). When looking at the task approach, locomotors pay more attention to tasks that require quick movement because they feel like an attainable goal. They display a faster pace regarding tasks in contrast with assessors. Assessors may pay more attention to the value or importance of the task due to their drive to perform well (Kruglanski et al., 2000). According to Kunda (1990), people with this goal (to perform well and be accurate) spend more time on a task, use more cognitive effort, process things more deeply, and use more complex strategies. So, these two regulatory orientations represent different approaches in being effective, either in critical evaluation or in keeping up the movement.

Not all strategies or orientations are equally effective across situations. Kruglanski et al. (2007) looked at a situation where a leader was present. They examined whether the presence of a leader affects the experienced effectiveness of people. If this experienced effectiveness changed positively due to the presents of a leader, a state of regulatory fit was met. They looked at two styles of leadership: authoritarian and democratic. The authoritarian leadership style can be characterized with words like “force-full” and “strong”. An authoritarian leader is demanding, directive, and gives clear instructions to his followers. In contrast, a democratic leader is more participative and counsel. Words like “soft” and

"advisory" describe this type of leadership well. They found that assessors prefer the democratic leadership style and locomotors the authoritarian style. Both assessors and locomotors reported increased job satisfaction when this regulatory fit was met. In addition, directive authoritarian leadership encourages team efficacy at the cost of team creativity, while participative leadership encourages team creativity and does not support team efficacy (Guiquan et al., 2018). So, former research focused on regulatory fit and job satisfaction, which opens doors to further investigate the effects of high regulatory fit on satisfaction. Because now we know its effect on job satisfaction, but what about all the other aspects of daily life? And is regulatory fit an influential factor in feeling effective? In this study, we will examine if high regulatory fit increases overall happiness and the feeling of effectiveness.

If we link the earlier named strategies from the previous studies together, we can say that across different findings in Psychology, there seem to be two essential concepts within this subject: a motivational and a cognitive concept. The motivational concept is characterized by a "speed-accuracy" trade-off expressed as Locomotion and Assessment. The cognitive concept implies that there is quick and rational thinking. People either use the assessment strategy, characterized by the "accuracy" trade-off, while using rational thinking (Kruglanski et al., 2000 & Kunda, 1990). Moreover, these assessment-oriented people spend more time on tasks and use more cognitive effort to achieve their goals (Kunda, 1990). Alternatively, people use the locomotion strategy characterized by the "speed" trade-off and use quick thinking (Kruglanski et al., 2000). The first group would prefer a participatory leader that gives them the space to be actively involved. The second group prefers an authoritarian leader who is more directive, leading to less self-thinking. When this regulatory fit is met for both groups, it shows excellent outcomes, like higher job satisfaction (Kruglanski et al., 2007). This suggests that regulatory fit produces the best results and increases satisfaction.

Given all these previous findings, we conducted this study among Psychology students to provide new insights. In this study, we let participants come to the Faculty of Behavioral and Social Sciences laboratory at the University of Groningen. They were assigned to the authoritarian or participatory leader condition where the researcher gave them instructions according to the corresponding leader script about an anagram task they were supposed to make. After the task, they filled in two additional questionnaires: the English version of the 'Regulatory Mode Questionnaire' (Kruglanski et al., 2000) to determine whether the participant was a more assessment or locomotion-oriented person, and a questionnaire with some general questions that measured their feelings of satisfaction and effectiveness. Based on the previous findings of Kruglanski et al. (2007) and Kunda (1990), two hypotheses were formulated to investigate the relationship between leadership style and regulatory orientation on the experience of regulatory fit:

> H1: Assessors will feel more effective and satisfied with a participatory leader, whereas locomotors will feel more effective and satisfied with an authoritarian leader.

> H2: Assessors will write down more words and spend more time on the task, while locomotors write down few words and spend little time on the task.

Method

Participants

We recruited 99 (female = 79, male = 19, non-binary = 1) international students from the University of Groningen. The participants were first-year psychology students between 18 and 33 years old (M=19.82, SD= 2.33). The only prerequisite for participating was that people were awake and alert. Participating was voluntary and in exchange for 0.5-course credits. Personal information was kept anonymous.

Procedure

We invited the participants to come to the laboratory for psychological research at the faculty of Psychology in Groningen. The participants were randomly assigned to two conditions: authoritarian leader condition or participatory leader condition. There were 49 participants in condition 1 and 51 participants in condition 2. The researcher at the laboratory played the role of both the authoritarian and democratic leader in the specific condition and handled every participant on an individual basis. The difference between the two conditions is characterized by the participants making choices themselves or choices made for the participants. There were multiple steps to the manipulation in both conditions to create this distinction in reality.

Condition 1 was the authoritarian condition where the leader followed the authoritarian script. In this condition, there were multiple components to the manipulation. The first component was the leader choosing the room the participant would be in. The second component was choosing the condition for the participant on the computer while the participant watched the leader choose for them. The leader chose between the numbers 1,3,4,5, and 6. The numbers represented a different version of the task. In reality, all those numbers led to the same task, the participant only thought they were getting a specific version. The leader told the participants about their task and told them they could receive points for each correct answer, and if they ended among our top performers, they would receive extra course credits. They were also told that the items varied in difficulty and were encouraged to keep the time in mind. All statements were untrue and part of the manipulation.

Condition 2 was the participative condition. The leader, in this condition, used the participatory script. Beforehand, the leader chose task number 2, so the participant would not see that a choice was made for them when entering the room. The participants in this condition were also allowed to choose their room themselves after the leader told them so.

The next component is another choice: the leader explained the task, telling them they could choose between hard or easy anagrams. The easy anagrams would give them 1 point per correct answer, while the hard anagrams would give them two. They were encouraged to choose wisely, while in truth, there was no difference between the easy and hard versions. They were also told they would receive extra course credits if they made it to the top performers, which was also a manipulation.

The goal of both conditions was for the participants to complete a word anagram task. The word anagram task consists of six items in total. After this task, the participants filled in the Regulatory Mode Questionnaire (RMQ) from Kruglanski et al. (2000) to assess individual differences in preference for locomotion or assessment. Finally, they completed a short questionnaire about their feelings of satisfaction, effectiveness, enjoyment, the task's difficulty, an evaluation of the leader, and their personal importance of a good performance. On average, the participants spent 17,9 minutes in the room to complete the whole study.

Design and materials

We used a laboratory with five rooms, each of them had a computer. Two rooms on the left were meant for condition 1, and two rooms on the right for condition 2. The researcher used the middle room. Scripts for different condition manipulations were created based on keywords that guided the leaders in instructing the participants about the task (see appendix A). The leaders consisted of the four female researchers of this study. They were aged between 21 and 22 and spoke fluently in English.

Our study was an experimental study, manipulating the conditions assigned to the participants. We used a between-subjects design, namely two conditions for the type of leadership (authoritarian vs. participative) and two orientations (locomotion vs. assessment). The independent variables to test the first hypothesis were the types of leadership conditions and the regulatory orientations. The dependent variables were the level of satisfaction and

effectiveness of the participants. Additionally, the interaction between the independent variables was going to be analyzed on the dependent variables to assess the regulatory fit effect. For the second hypothesis, the independent variables consisted of assessment and locomotion scores, and the dependent variables consisted of the average time they spent on the task and the number of words written down. The interaction between the independent variables was assessed on both dependent variables.

Results

Preliminary analysis

The assumptions of normality, linearity, and homoscedasticity were assessed. Concerning the assumption of normality, we examined the variables of locomotion, assessment, and log time average. Using the Shapiro Wilk test, we found out that locomotion scores were not normally distributed ($W(99)= .973$, $p= .041$). Additionally, the Shapiro-Wilk test indicated that assessment scores were normally distributed ($W(99)= .986$, $p= .40$). Furthermore, the scores will be skewed concerning the variable Time because Time has a zero point and cannot be negative. We used the Log transformation to control this, resulting in the variable "LogTimeAverage". Nevertheless, we reported evidence of non-normality for the “LogTimeAverage” scores ($W(99) = .932$, $p<.001$). We also examined the assumption of homoscedasticity by using Levene’s test. For the Assessment scores ($F= .062$, $p= .804$) and the Locomotion scores ($F= .160$, $p= .690$), we concluded that the homoscedasticity assumption was met. The assumption of homogeneity of variances was met both for the assessment and locomotion variables ($p>.05$), as well as the linearity assumption which was checked with the Q-Q plots.

Our dependent variables involved the level of satisfaction, effectiveness, enjoyment, and importance regarding the task. It became clear that these variables overlapped a lot. Therefore, we decided to measure the internal consistency with Cronbach's alpha ($\alpha = .759$).

Due to the high correlation, one variable called Regulatory Fit (RegFit) was created based on these four dependent variables. One crucial point is that we controlled the variables' gender' and 'condition' (authoritarian or participative) for all the results. Furthermore, we looked at all the individual items' internal consistency for measuring Locomotion ($\alpha = 0.745$) and Assessment ($\alpha = 0.703$). The items for both Locomotion and Assessment scored high on the Cronbach's alpha, which confirms that the items were an adequate measurement for the regulatory orientations.

While running the primary analysis, we saw an effect of the conditions on the assessment and locomotion scores. Participants assigned to the democratic condition scored significantly higher on assessment scores than the authoritarian condition ($F(1, 97) = 6.924$, $p = .010$). Thus, being assigned to the democratic condition might have elicited an assessment orientation. Therefore, we must interpret the following results with caution and this thought in mind. All the tables and the graphs providing the results can be found in the chapter ‘Tables and graphs’ on page 20.

Hypothesis testing

The aim of this experiment was to investigate the effect of regulatory fit by assessing whether a leadership style matches individuals’ regulatory orientations. Hypotheses were drawn up. Our first expectation was that assessors would feel more effective and satisfied with a participative leader, whereas locomotors would feel more effective and satisfied with an authoritarian leader. In other words, if this hypothesis was found in the results, there is a regulatory fit. We also speculated that assessors would write down more words and spend more time on the anagram task compared to the locomotors.

Concerning the first hypothesis, no significant results were discovered. Indeed, we speculated that participants categorized as assessors would feel more satisfied with a participative leader. Our results suggest that no difference exists between the level of

regulatory fit of an assessor in condition 1 or 2 ($F(1, 88) = 2.110$, $p = .150$) (Table 1, Figure 1). Additionally, figure 2 shows the same result regarding the variable locomotor, namely no difference in the level of regulatory fit between the two conditions ($F(1, 88) = .025$, $p = .876$) (Table 1). It was not statistically significant, thus there exists no statistical difference between the level of regulatory fit of a participant who is locomotor in the participative or the authoritarian condition. We conclude that taking into account these regulatory fit scores, no difference was found between the regulatory orientations and the leadership style. However, one interesting finding emerged: we found evidence that a higher score on the variable locomotion increased the variable of Regulatory Fit significantly ($F(1, 88) = 7.306$, $p = .008$) (Table 1). In other words, this correlation explains that every time a participant scored higher on the locomotion scale, the experience of regulatory fit was strengthened.

We also hypothesized that assessors, due to their focus to do the "right" thing, will write down more words compared to assessors. We found no results that were statistically significant between the number of words written by participants high in locomotion or assessment score ($F(1, 92) = 1{,}317$, $p = .254$) (Table 2, Figure 3). Another hypothesis concerned the time spent on the word anagram task. Due to their high involvement and drive to do well, we posited that assessors would spend more time on the tasks than locomotors. Contrary to our speculation, the data suggest that there exists no evidence of a difference between locomotors and assessors in the amount of time they spent on the task ($F(1, 92) = 1.072$, $p = .303$) (Table 3, Figure 4). However, we observed something different. Indeed, when we focused on the variable "LogTimeAvg" and identified that when these variable increases, the scores on Regulatory Fit increases as well. The results were significant ($F(1, 88) = 4.121$, $p = .045$). So, you could either say that the more time a participant spent on the task the more he or she enjoyed it, or that people that genuinely liked the task spent more time on it.

Exploratory analysis

In general, we did not find any significant results supporting our hypotheses. Therefore, we decided to look into more details at our data set, and additional findings were discovered. Indeed, we manipulated the variable "condition" (participative vs. authoritarian) and found that this manipulation had an influence on the participants.

First of all, we looked at the condition of the participants and the time spent on the word anagram task. Interestingly, participants assigned to the "authoritarian" condition spent significantly less time on the task ($M = 4.3$, $SD = .25$) compared to participants allocated to the "participative" condition ($M = 4.5$, $SD = .24$). In other words, the difference between the two conditions is significant regarding the average time spent, which is shown in figure 5 ($F(1, 97) = 4.888$, $p = .029$). Afterward, we examined the condition of the participants' effect on the assessment and locomotion scores. Participants assigned to the participatory condition scored significantly higher on assessment scores compared to the authoritarian condition ($F(1, 97) = 6.924$, $p = .010$). Figure 6 illustrates this. It can be said that being assigned to the participative condition might have elicited an assessment orientation. Figure 7 shows that there is no significant difference between the scores on locomotion in the two conditions ($F(1, 97) = .499$, $p = .482$).

Discussion

This study aimed to investigate whether assessors and locomotors would feel more satisfaction and effectiveness when assigned to a relatable leader: authoritarian or participative. This regulatory fit consisted of satisfaction, effectiveness, enjoyment, importance, and experienced difficultness. The first hypothesis was as follows: Assessors will feel more effective and satisfied with a participative leader, whereas locomotors will feel more effective and satisfied with an authoritarian leader. Our findings show no difference

between the scores of assessors on regulatory fit when assigned to an authoritarian or participative leader. The same applies to locomotors, which rejects our first hypothesis. For our second hypothesis, we expected that assessors would write down more words and spend more time on the task than locomotors. The results show no significant difference between the number of words written down and the time spent on the task between assessors and locomotors. Therefore, this hypothesis is rejected as well.

Implications

First of all, the intentional manipulation of this study did not work out. Instead, there were two unintended manipulations with two effects on our participants. The first effect was that participants in the authoritarian condition spent less time on the task than the participants in the participative condition. The authoritarian leaders' emphasis on the fact that there was a time limit could be a possible explanation for this. When we look at it from that point of view, it can be said that our participants were good listeners. Besides this, another condition effect was found, namely that participants in the participatory condition scored higher on assessment scores than locomotor scores. Therefore, you could say that the participatory leader provoked assessment-oriented behavior. A possible explanation could be the presence of choice in this condition. Participants in the participatory condition were able to choose the room they wanted to be in and choose between an easy or hard version of the task. In the description from Kruglanski et al. (2000) of assessors, it is said, among other things, that assessors want to be actively involved. Giving the participant the freedom to choose gives them the space to take actions in their own hands and makes them feel more in charge of their progress on the task. So, our intentional manipulation did not go as planned. Instead, there was a spontaneous manipulation that we had no control over. Because of this, the most accurate way to describe the results as a whole is probably to say it is all inconclusive. Due to the lack of control on the accidental manipulation, we cannot be sure that there were any other effects on our

participants and our dataset. Therefore, we must interpret the results of this study with caution.

When looking at the first hypothesis, we found no significant evidence, meaning that assessors and locomotors experience no difference in their regulatory fit with an authoritarian or participative leader. However, previous research from Kruglanski et al. (2007) did find significant results about assessors preferring a participatory leader and locomotors preferring an authoritarian leader. They claimed that assessors and locomotors experienced regulatory fit when they were assigned to their preferred leader. A possible explanation for our nonsignificant results could be the strength of the leader scripts. We used a short script with minor alterations between the leader conditions (see appendix A). In addition, the leaders in the laboratory consisted of four females. We did not control for this possible gender effect by using some male leaders. Therefore, it is not clear whether that might have influenced the effect. Finally, the current study provides no evidence for our last hypothesis: assessors would write down more words and spend more time on the task than locomotors. Kruglanski et al. (2000) stated that assessors give more value or importance to the task due to their drive to perform well and spend more time on a task by using more cognitive effort because of this accuracy goal (Kunda, 1990). Despite this evidence, our study does not provide the same results.

Besides the analysis for the hypothesis testing, we also conducted some exploratory analyses. First, a higher score on Locomotion increased scores on the regulatory fit indicators. As Kruglanski et al. (2007) proved before, locomotors prefer short tasks that require quick movement while not really focusing on quality. During participant recruitment, prior to the actual study, participants could view the duration of the study (20 min) in a list of other available studies from which to choose. Compared to the other studies where the duration could be 40 minutes or more, the duration of our study was not much, which possibly made

our study a 'short' one compared to others. Besides, the participant could not make any mistakes. Their instructions were to write down as many words as they could find and get rewarded for the correct answers. The short time and the focus on the correct answers instead of their mistakes could be possible characteristics of our study that were of the Locomotors preference.

Another finding concerned the effect of the amount of time spent on the task. Despite the nonsignificant effect for the difference between time spent on the task between assessors and locomotors, we did find that the more time participants spent on the task, the more regulatory fit they experienced. Because a correlation between two variables does not provide evidence for a causal relation and its direction, it is possible to interpret this in two ways. First, participants that genuinely liked the task spent more time on the task, which explains the high regulatory fit scores for this group of participants. Second, participants that gave more of their precious time reported higher scores of regulatory fit to act consistently with their reported behavior (time spent). This phenomenon, placing greater value on things we work hardest for, has been studied before by Festinger (1957). This tendency can be associated with cognitive dissonance, which is a state of psychological discomfort that appears when there is a discrepancy between a person’s attitude and behavior. When this happens, people try to diminish this dissonance by altering their attitudes to align with their behavior (Lydall et al., 2010). This could be why people who spend more time on the task felt better afterward because it complements their shown behavior on the task.

Limitations

Unfortunately, the current study does not provide significant results regarding the hypothesis. If we look at possible influences that could have affected our study, the first thing to mention is the small sample size. The sample size of 99 participants could have influenced

the strength of the effects. The practice of our study took place during COVID-19. We decided to continue our study physically, which could have been a barrier to people who did not feel comfortable leaving their house. Second, as previously mentioned, the manipulation by the leader scripts could be too weak given that it was quite short and maybe not that different from each other. It is fair to question the scripts' operationalization because they did not manipulate for the leader effect but showed some other unintended manipulations. Besides that, the leaders existed of four females. As we did not control for a possible gender effect by including some male leaders, we cannot exclude this as a possible influence on the manipulation. A third limitation could be the noise in the answer patterns of the participants. Some participants mentioned afterward that they were not aware they could write down multiple words at once before pressing enter. Furthermore, some participants did not know the definition of the word anagram at the start, and the data showed some people answering differently than asked. Even though the definition of a word anagram was explained at the start of the task by giving multiple example solutions of varying lengths, it was clear that perhaps the definition of a word anagram was not common knowledge.

Further research

In conclusion, this study examined if regulatory fit increased when an assessor was assigned to a participatory leader and a locomotor to an authoritarian leader. Unfortunately, this study could not provide any significant results, which on the other hand, takes some positive news with it: there is room for more research concerning regulatory fit. In our study there was a clear condition effect. As a result, no effect on regulatory fit was found between these two groups combined with a specific leader. Given that our study could not find significant effects, but Kruglanski et al. (2007) could when looking at job satisfaction, it is now interesting to look where and when assessment/locomotion comes into play. What characteristics does a situation or a leader need to have to provoke an assessment or

locomotion orientation? Locomotion and Assessment are assumed to be relatively stable concepts, yet our study suggests that manipulation might evoke at least an assessment orientation. So, what possible factors or circumstances could influence the provocation of assessment or locomotion behavior? In our study, maybe the presence of a leader gave the participant the feeling they needed to perform well and therefore served as a manipulation. Answering these questions would improve our knowledge about achieving a state of regulatory fit and stimulating and motivating people. Then the next step is to provide these two types of people with their most suitable leader so their satisfaction level increases.

Our study already provided one part of a possible answer to the previously named questions: it is possible to provoke assessment-oriented behavior. Approaching people in a participative way and giving them room to make decisions themselves elicits assessment behavior. So, the questions that remain are: what stimulates locomotion behavior? Are assessment and locomotion stable traits, or are they variable? Our study could not provide significant breakthroughs regarding regulatory fit, but it still gave insides to the other side of the tail where effects will not occur. As motivating others to be effective is something we all benefit from in life, it remains an exciting subject to investigate further. We knew from previous research when the effect occurred, and now we know when it will not, so where between these two borders begins the onset?

References

Converse, B.A., Juarez, L., & Hennecke, M. (2019). Self-control and the reason behind our goals. *Journal of Personality and Social Psychology, 116*(5), 860-883. https://doi.org/10.1037/pspp0000188

Deci, E. L., Eghrari, H., Patrick, B. C., & Leone, D.R. (1994). Facilitating internalization: the self-determination theory perspective. *Journal of personality, 62*(1), 119-119.

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.

Guiquan, L., Haixin, L., & Yaxuan, L. (2018). Directive versus participative leadership: Dispositional antecedents and team consequences. *Journal of Occupational and Organizational Psychology, 91*(3), 645-664. https://doi.org/10.1111/joop.12213

Higgins, E.T. (2013). Truth motivation. In K.D. Markman, T. Proulx, & M.J. Lindberg (Eds.), *The Psychology of Meaning.* (pp. 91-114).

Lydall, E. S., Gilmour, G., & Dwyer, D.M. (2010). Rats place greater value on rewards produced by high effort: An animal analogue of the "effort justification" effect. *Journal of Experimental Social Psychology, 46*(6), 1134-1137. https://doi.org/10.1016/j.jesp.2010.05.011

Kunda, Z. (1990). The Case for Motivated Reasoning. *Psychological Bulletin, 108*(3)*, 480-489.*

Kruglanski, A.W., Higgins, E.T., Pierro, A., Thompson, E.P., Atash, M.N., & Shah, J.Y. To "do the right thing" or to "just do it": Locomotion and Assessment as distinct self-regulator imperatives. (2000). *Journal of Personality and Social Psychology, 79*(5), 793-815.

Kruglanski, A.W., Pierro, A., & Higgins, E.T. (2007). Regulatory mode and preferred leadership styles: How fit increases job satisfaction. *Basic and applied social psychology: 29*(2), 137-149.

Tables and figures

Hypothesis testing

Table 1

ANOVA Omnibus tests

	SS	df	F	p	η^2p
Model	228.7713	10	2.65059	0.007	0.231
AsScore	30.0912	1	2.40561	0.124	0.054
LocScore	91.3874	1	7.30589	0.008	0.075
CONDITION	-4.55e−13	0	NaN	NaN	0.002
Gender	28.6726	1	2.29221	0.134	0.080
AsScore ✻ CONDITION	26.3971	1	2.11029	0.150	0.024
LocScore ✻ CONDITION	0.3065	1	0.02450	0.876	0.000
AsScore ✻ LocScore	0.0158	1	0.00126	0.972	0.000
CONDITION ✻ Gender	0.3581	1	0.02863	0.866	0.000
Residuals	1100.7681	88			
Total	1329.5394	96			

Note. This interaction model shows the interaction of the independent variables on the dependent variable: Regulatory Fit (RegFit)

Figure 1

Relation between Assessment Score and Regulatory Fit in the two conditions

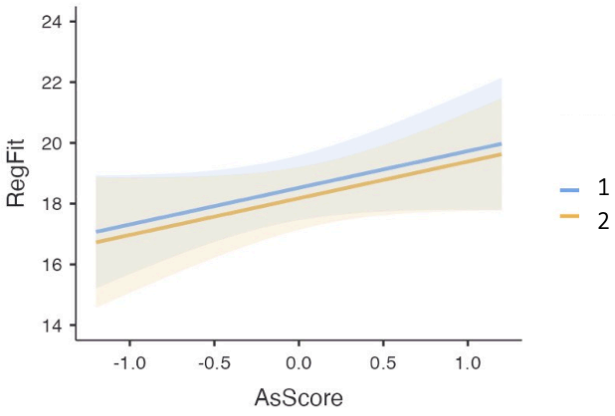
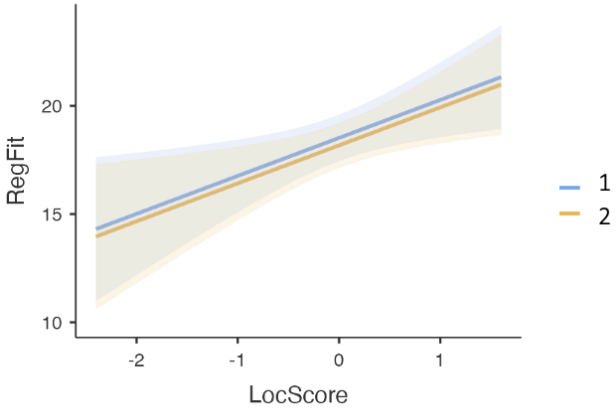


Figure 2

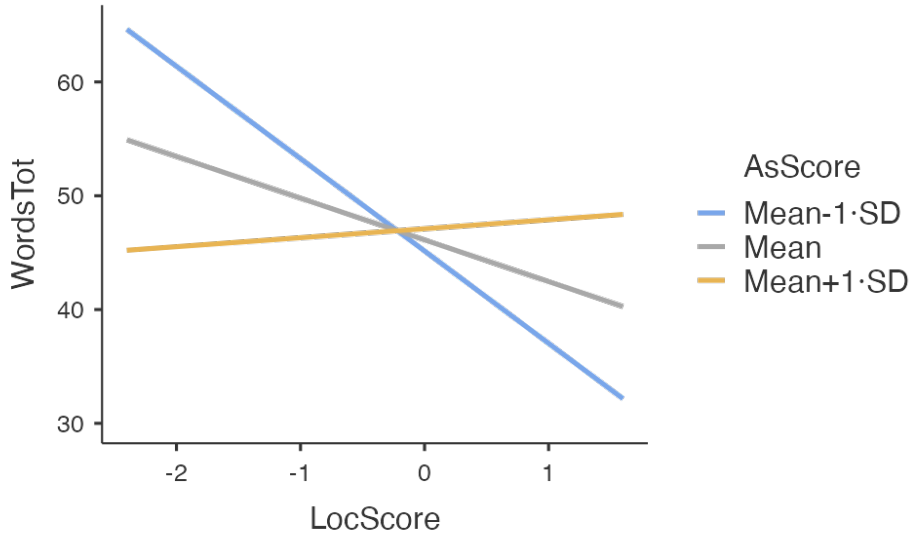
Relation between Locomotion Score and Regulatory Fit in the two conditions



Note. Condition 1 = authoritarian, condition 2 = participatory condition

Figure 3

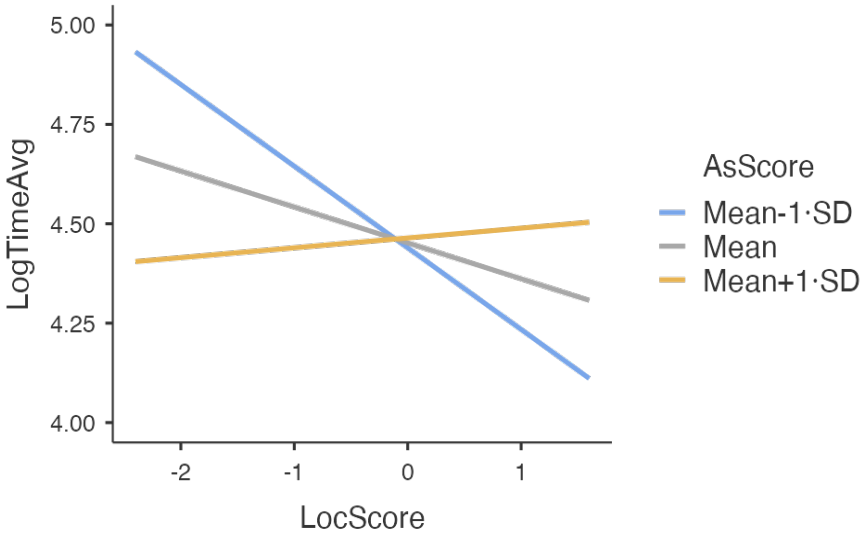
Interaction between Assessment and Locomotion



Note. DV = total number of words

Figure 4

Interaction between Assessment and Locomotion



Note. DV = average time spend on the task

Table 2

ANOVA Omnibus tests

	SS	df	F	p	η^2p
Model	1798.1	6	0.672	0.672	0.042
LocScore	392.3	1	0.717	0.399	0.006
AsScore	78.9	1	0.144	0.705	0.010
CONDITION	405.0	1	0.741	0.392	0.008
Gender	201.6	2	0.184	0.832	0.005
LocScore ✻ AsScore	720.3	1	1.317	0.254	0.014
Residuals	50306.9	92			
Total	69400.3	99			

Note. This interaction model shows the interaction of the independent variables on the dependent variable: total number of words (WordsTotal)

Table 3

ANOVA Omnibus tests

	SS	df	F	p	η^2p
Model	2.9685	6	1.2686	0.280	0.076
LocScore	0.2383	1	0.5311	0.468	0.004
AsScore	0.0127	1	0.0282	0.867	0.012
CONDITION	1.8570	1	4.1383	0.045	0.043
Gender	0.3795	2	0.4229	0.656	0.010
LocScore ✻ AsScore	0.4811	1	1.0720	0.303	0.012
Residuals	41.2830	92			
Total	205.3804	99			

Note. This interaction model shows the interaction of the independent variables on the dependent variable: average time spend on the task (LogTimeAvg)

Exploratory analysis

Table 4

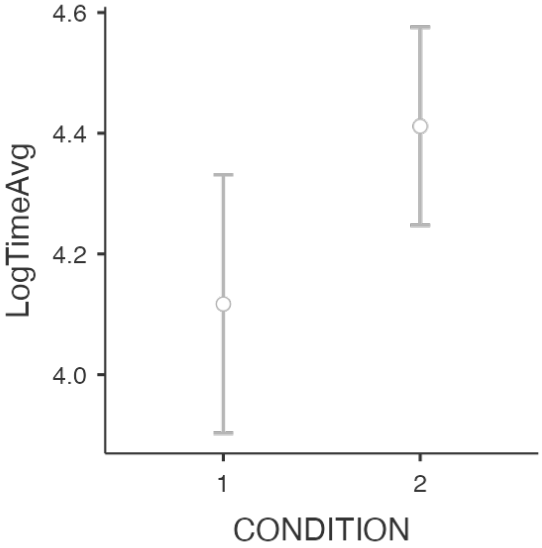
One-Way ANOVA (Fisher's)

	F	df1	df2	p
LocScore	0.499	1	97	0.482
AsScore	6.924	1	97	0.010
LogTimeAvg	4.888	1	97	0.029
RegFit	0.363	1	97	0.548
WordsTot	1.041	1	97	0.310

Note. This model tests the difference between the two conditions. Grouping variable = Condition

Figure 5

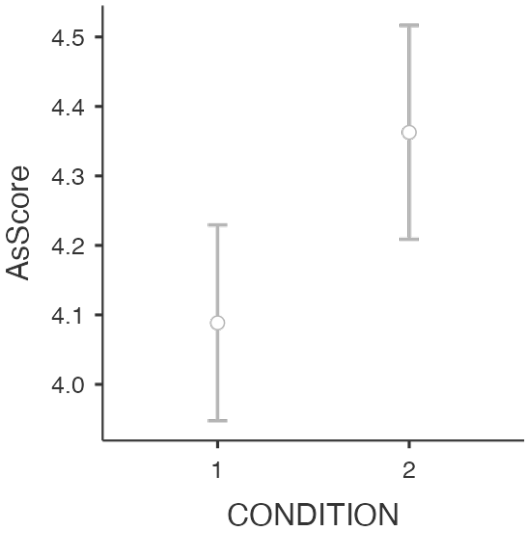
Difference between the conditions on the average time spent on the task



Note. Condition 1 = authoritarian, condition 2 = participatory condition

Figure 6

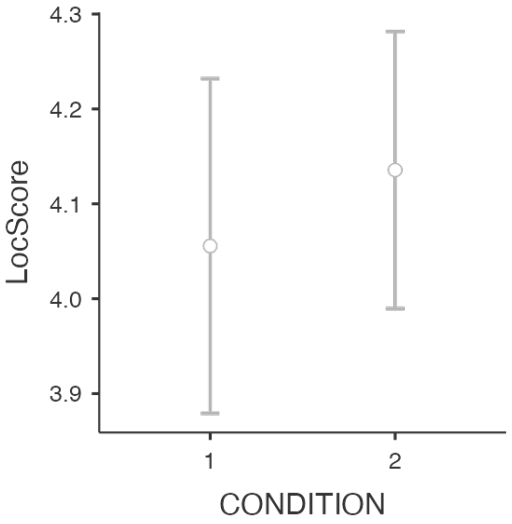
Assessment score difference between authoritarian and participatory condition



Note. Condition 1 = authoritarian, condition 2 = participatory condition

Figure 7

Locomotion score difference between authoritarian and participatory condition



Note. Condition 1 = authoritarian,

Condition 2 = participatory condition

Appendix A

Leader Script

Democratic

"Welcome!

Thanks for participating in this study. You will get a seat in one of the rooms here.

Your goal is to complete a word anagram task. **You may choose between two different tasks: 1) an easier one that earns one point** for every correct solution and 2) **a harder one that earns two points for every correct solution.** You will receive a bonus of 0.3 additional SONA credits if you are among the top performers, so **choose** your task wisely.

Finally, when you are done with the tasks, two more questionnaires will follow on the screen. After that, you are done and you can call me.

Good luck!"

Authoritarian

"Welcome!

Thanks for participating in this study. **I would want you to take place in this room.**

Your goal is to complete a word anagram from **a list of different versions. I am going to choose your version when we enter the room.** For every correct solution you find, you will receive one point. The items vary in difficulty - **you will start with easier ones and then move on to more difficult ones.** You will receive a bonus of 0.3 additional SONA credits if you are among the top performers, **so don't forget about the time limit you have**.

Finally, when you are done with the tasks, two more questionnaires will follow on the screen. After that, you are done and you can call me.

After the time limit runs out:
"Yada yada yada, I will tabulate your results and let you know later whether you met the goal and earned the bonus…"

Good luck!"