

# Work Locus of Control – Eastern European Managers *versus* Western Managers - Ten years later

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## Abstract

The aim of our studies of work locus of control was to examine whether external work locus of control among Estonian managers had increased or decreased over past 10 years. We did not find the relationship between work locus of control and age, and gender. Managers' internal control beliefs were associated with higher job satisfaction, as well as better physical and psychological well-being, and higher satisfaction with their quality of life. In general, Eastern European managers were more external in their work locus of control than their Western colleagues. However, our results suggested that Estonian managers work locus of control became increasingly internal over time.

## Introduction

Locus of control theory is a concept which distinguishes between two types of people – internals, who attribute events to their own control, and externals, who attribute events in their life to external circumstances.

Rotter's original (1966) locus of control formulation classified generalized beliefs concerning who or what influences things along a bipolar dimension from internal to external control: "Internal control" is the term used to describe the belief that control of future outcomes resides primarily within oneself, while "external control" refers to the expectancy that control is outside of oneself, either in the hands of powerful other people or due to fate / chance.

Work locus of control concerns beliefs about control specifically in the job domain (Spector, 1982; 1988). Work locus of control reflects the individual's tendency to believe that he or she controls events in his or her working life (internality) or that such control resides elsewhere, for example with powerful others (externality).

From empirical findings perspective, there have been found several differences between people with internal or external control beliefs, however, empirical findings have been ambiguous.

**Locus of control and age.** It is assumed that as people age, they will become less internal and more external. Longitudinal data collected by Gatz and Karel (1993) imply that internality may increase up to middle age, and thereafter decrease.

**Locus of control and gender.** As Schultz and Schultz (2005) pointed out, significant differences in locus of control have not been found for adults in a USA population.

**Locus of control and job satisfaction.** Internals are more satisfied with their job than externals (Moyle & Parkes, 1999). The Collaborative International Study of Managerial Stress

(CISMS; Spector, et al., 2001; 2002) showed strong relationship between work locus of control and job satisfaction.

**Locus of control and physical health, mental well-being and quality of life.** Internals enjoy better physical health, mental health and quality of life (Maltby, Day & Macaskill, 2007). The CISMS study shows the relationship between work locus of control and psychological well-being. Relations with physical well-being, however, failed to show up in the CISMS study. Relationship between work locus of control and quality of life was proved in the works of Teichmann (2007, 2006 (1), 2006 (2), 2006 (3), 2005 (1), 2005 (2), 2004).

**Cultural differences in locus of control.** The question of whether people from different cultures and economic background vary in locus of control has been of interest to researchers. There have been several studies of locus of control in cross-cultural domains, but findings have been inconsistent. Studies highlighted that, in general, Confucian Asians (such as Chinese and Japanese) are more external in their locus of control than Americans and other Western nationals (Hamid, 1994). The CISMS study pointed to quite similar findings. Evidence exists that the described situation has been changed with the enlargement of European Union. Therefore, it has been argued that people of the former Soviet block in Eastern Europe should be more external in their locus of control than people of Western nations. Arguments have been demurred that the state-dominated economic system in Eastern Europe has led to the development of an external locus of control at work (Frese et al., 1996; Kaufmann, 1995; Tobacyk et al., 1992). After the enlargement of European Union, twelve former Soviet block Eastern European countries are now member states of the European Union. Inspection of the CISMS findings (see Table 1 below) suggests that this it was the case (Spector et al., 2001; 2002).

**Table 1. Managers Work Locus of Control in Eastern versus Western Europe**

<i>Eastern European Countries</i>	<i>N</i>	<i>Work Locus of Control</i>	<i>USA and Western European Countries</i>	<i>N</i>	<i>Work Locus of Control</i>
			USA	119	37.5 (mn)
Romania	135	45.3 (h)	Germany	85	40.4 (kl)
Estonia	163	47.1 (f-h)	Sweden	210	41.5 (jk)
Poland	263	48.0 (e-g)	Belgium	185	43.4 (ij)
Slovenia	488	49.1 (d-f)	France	61	45.1 (hi)
Ukraine	219	52.6 (b)	Spain	180	46.6 (gh)
Bulgaria	165	53.3 (b)	UK	201	46.8 (f-h)

\* Lower scores of Work Locus of Control represent internality

*Note:* Within the columns, different letters indicate significant mean differences among samples for work locus of control. If samples are sharing the same letter they are not significantly different. For example, Bulgaria and Ukraine are not significantly different from one another.

Likewise, having already internal or external locus of control the question arises how stable this construct is. It is a critical question for Eastern European countries. We failed to find longitudinal research providing an answer to the question of stability of locus of control.

## Method

### Country-specific background

Estonian society is undergoing a transformation of industrial structures from labour-intensive to knowledge-based society. The economy benefits from strong electronics and telecommunication sectors. Estonia is building up a modern market-based economy with strong ties to the West. Estonia is a WTO and EU member. Estonian GDP has increased 4 – 6% per year during the past decade and GDP real growth rate is 9.8% (2006). The economic development does not automatically improve the quality of life of the population or person's

perception of their quality of life. GDP composition by sector is: agriculture (3.4%), industry (28%), and services (68.9%). The population of Estonia is 1,315,912 (June, 2007) and unemployment rate is 4.5% (2006). In a small high-tech country such as Estonia, the internet is vital – 65% of population using internet every day, as virtually is offered the large scale of services by public and commercial organizations.

## Participants and Procedure

**Sample 1.** Our first study was held in 1995-1996 (Teichmann, 2003, 1; 2003, 2). It was part of the CISMS conducted as a cross-national research of 24 nations. The data were collected from 163 managers; 58% were males and 42% females. The mean age was 38.6 years (SD = 6.4). 10% of the participants were college graduates and 72% were married.

**Sample 2.** The data were obtained from managers (N = 164) in 2002. The average age of the sample was 40.42 years (SD = 11.42); 129 were males (79 %) and 35 females (21%). No questions about other demographic parameters were put to this sample.

**Sample 3.** The data was obtained from managers in Estonia in 2004 – 2005 participants were managers randomly selected from the member organizations of the Estonian Chamber of Commerce and Industry, a total of 309 people. They were all managers, ranging from the first level to the top of their organizations. The total sample consisted of 190 males (61%) and 119 females (39%) with an average age of 39.1 years (SD=10.37). The participants' educational level was: primary education 1 (0.3%), secondary education 28 (9.2%), vocational education 32 (10.5%), college graduates 243 (79.9%). Their marital status was: single 49 (15.9%), married 187 (60.5%), cohabiting 55 (17.8%), separated 4 (1.3%), divorced 9 (2.9%), and widowed 5 (1.6%).

The majority of the managers were male, educated and married. Since there were demographic differences between the three samples, we checked to see if these differences affected the results as is described in the results section.

All participants were personally contacted by masters or doctoral students of Tallinn University of Technology. Each manager was asked to complete an anonymous questionnaire and return it in a prepaid envelope within two weeks. All participants completed the questionnaire voluntarily and for no compensation. The answer rate of the survey was 100%; in all three samples, there were a few incomplete questionnaires.

## Instruments

**Occupational Stress Indicator – 2 (OSI-2).** For the purposes of the current study, we used three OSI-2 measures (factors), namely job satisfaction, psychological well-being, physical health and two sources of pressure in job (personal responsibility at work and not enough recognition at work) in order to describe achievement motivation. Job satisfaction was assessed by 12 items that asked respondents to indicate their satisfaction with each item, with six response choices ranging from “very much dissatisfaction” to “very much satisfaction”. Psychological well-being was assessed with 12 items that asked about psychological distress at work. All items had six response choices varied across items. Physical health was assessed by six items asking response choices ranging from “never” to “very frequently”. All of the scales were responded to on a 6-point Likert-type scale. The reliability of OSI-2 has been reported about in various CISMS publications.

**Work Locus of Control Scale (WLOC).** WLOC (Spector, 1988) assesses the employee's beliefs about their control at work in general. WLOC is a 16-item scale. Half of the items indicate external locus of control, whereas the other half indicates internal locus of control. For all the items, six response choices range from “I strongly disagree” to “I strongly agree”. High scores represent externality and low scores, internality.

**WHO Quality of Life Instrument (WHOQOL-100).** We used the quality of life research instrument cross-culturally developed by the World Health Organization (WHO, 1997). The total of 96 WHOQOL-100 questionnaire items were employed, but for the current paper we picked out seven of the subscales focusing primarily the person's work context, namely, positive and negative feelings, self-esteem, thinking, learning, memory and attention concentration abilities, work capacity, financial resources, opportunities for acquiring new information and skills. Four

items were included for each subscale. All items were rated on a five-point scale (1-5), but the choices varied across the items. The WHOQOL-100 questionnaire produces scores related to the following six broad quality of life domains: physical health, psychological well-being, level of independence, social relationships, environment and spirituality/personal beliefs. As a result, it produces an index representing the overall quality of life (the WHOQOL Index). Each domain has several subscales. Four items were included for each subscale. All items were rated on a five-point scale (1-5), but the choices varied across the items. In the WHOQOL Index and in all six domains, the high scores represent higher quality of life whereas low scores represent lower quality of life. WHOQOL-100 reliability has been tested and reported about in previous publications (Teichmann et al., 2006). Additional questions on demographic parameters were added.

The data analyses employed various standard techniques including frequency distributions, means, ranges, standard deviations and significance tests such as Chi Square and t-Test. A statistical analysis was conducted using the SPSS software program. The significance of correlations was calculated by using the two-tailed t-test. The paired t-test was used to assess the differences between specific parameters.

## Results and Discussion

Three Estonian samples were compared on their work locus of control scores. To test how stable the work locus of control is, we used the data of all three samples and estimated the mean scores of work locus of control. We took the mean score of Sample 1 as a standard and compared it with the corresponding mean scores of the other samples to see if there was any significant difference. Inspection of results reveals an important finding.

**Table 2. Mean Scores of Work Locus of Control of in Samples 1, 2 and 3**

<i>OSI-2 factors</i>	<i>Sample 1 (1996)</i>	<i>Sample 2 (2002)</i>	<i>Sample 3 (2004)</i>
Work locus of control	47.1	45.9 *	45.1 *

\* Significantly different from the Sample 1 at  $p < 0.05$

Across the three samples of the Estonian managers, internal work locus of control has become more influential but not significantly so comparing the respective mean scores of Sample 1 with those of Sample 2 and Sample 3). The means became increasingly internal over time (see Table 2). Therefore, the difference between Samples 2 and 3 was not significant. Thus, we can conclude that the managers' work locus of control has been changing towards internality but these changes have taken place slowly over 10 years.

**Work locus of control and age.** Since there were some demographical differences between the three samples, we checked to see if age and sex affected the results. Significant correlations were not found between work locus of control and age. Only in Sample 2, there was a tendency (not significant) of the younger Estonian managers to have higher scores for internality and internal way of thinking and acting than the older managers.

**Work locus of control and gender.** Significant correlation between work locus of control and sex were not found.

**Work locus of control and job satisfaction.** What is intriguing about findings regarding job satisfaction is that Estonian managers show a specific tendency of their responses. Managers show higher satisfaction with their managerial work itself than with organising work. For example, in Sample 3 the mean of satisfaction with the managerial job itself was 27.2 (SD = 3.6) and the mean of satisfaction with organisation of work was 24.6 (SD = 4.4). A similar tendency existed in all samples. On the other hand, correlations between work locus of control and job satisfaction were significant, negative in all three samples meaning that locus of control, specifically, internal work locus of control occupy an important influence in relationship with the job satisfaction (see Table 3 below).

**Table 3. Correlations between Work locus of Control and Job Satisfaction in Samples 1, 2 and 3**

<i>OSI-2 factor: Job satisfaction</i>	<i>Sample 1 (1996)</i>	<i>Sample 2 (2002)</i>	<i>Sample 3 (2004)</i>
Job satisfaction	-.24 *	-.23 *	-.30 *
Subfactor: Satisfaction with job itself	-.22*	-.24*	-.30*
Subfactor: Satisfaction with organisation of work	-.16*	-.17*	-.17*

\* p < 0.05

Thus, we found that the relation between work locus of control and job satisfaction was consistent across all three samples in our study. Internal control beliefs or locus of control were associated with higher job satisfaction.

**Work locus of control and physical health and psychological well-being.** The correlations between work locus of control on the one hand and physical health as well as psychological well-being on the other hand were computed in the scores of OSI-2 as well as WHOQOL-100. We found, that the relation of work locus of control to physical health as well as to psychological well-being was consistent in all three samples using OSI-2 method (see Table 4 below).

**Table 4. Correlations between Work Locus of Control and Measures of Well-being in Samples 1, 2 and 3**

<i>OSI-2 factors</i>	<i>Sample 1 (1996)</i>	<i>Sample 2 (2002)</i>	<i>Sample 3 (2004)</i>
Physical health	-.15 *	-.16 *	-.22 *
Psychological well-being	-.28 *	-.23 *	-.29 *

\* p < 0.05.

There was no difference in our findings when we used the WHOQOL-100 instrument (see Table 5). The inter-correlation between the OSI-2 physical health factor and the WHOQOL-100 physical health domain was high ( $r = .52$ ;  $p < 0.001$ ). The inter-correlation between the psychological well-being factor in OSI-2 and the WHOQOL-100 psychological well-being domain was also high ( $r = .56$ ;  $p < 0.001$ ). Our findings support the contention that internal work locus of control is an important parameter in physical health and psychological well-being.

**Work locus of control and quality of life.** When focusing on the work locus of control relation with quality of life as it is measured by the World Health Organisation WHOQOL-100 instrument, all six domains of quality of life had significant negative correlations on work locus of control, meaning that internal work locus of control is associated with higher quality of life (see Table 5). Furthermore, managers with internal work locus of control have better physical health, better psychological well-being, higher level of independence, better social relationships. They are more satisfied with their environment, and their spirituality/ religion/ personal beliefs help them to cope with the difficulties of life.

**Table 5. Correlations between Work Locus of Control and Quality of Life**

	<i>Work LOC</i>	<i>Index</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
Work Locus of Control (Work LOC)	1							
WHOQOL-100 Index (Index)	-.39*	1						
1. Physical health	-.31*	.73*	1					
2. Psychological well-being	-.35*	.81*	.59*	1				
2. Level of Independence	-.24*	.71*	.57*	.60*	1			
4. Social relationships	-.26*	.74*	.47*	.59*	.43*	1		
5. Environment	-.38*	.67*	.49*	.58*	.48*	.46*	1	
6. Spirituality/ Religion/ Personal beliefs	-.22*	.64*	.22*	.35*	.23*	.27*	.18*	1

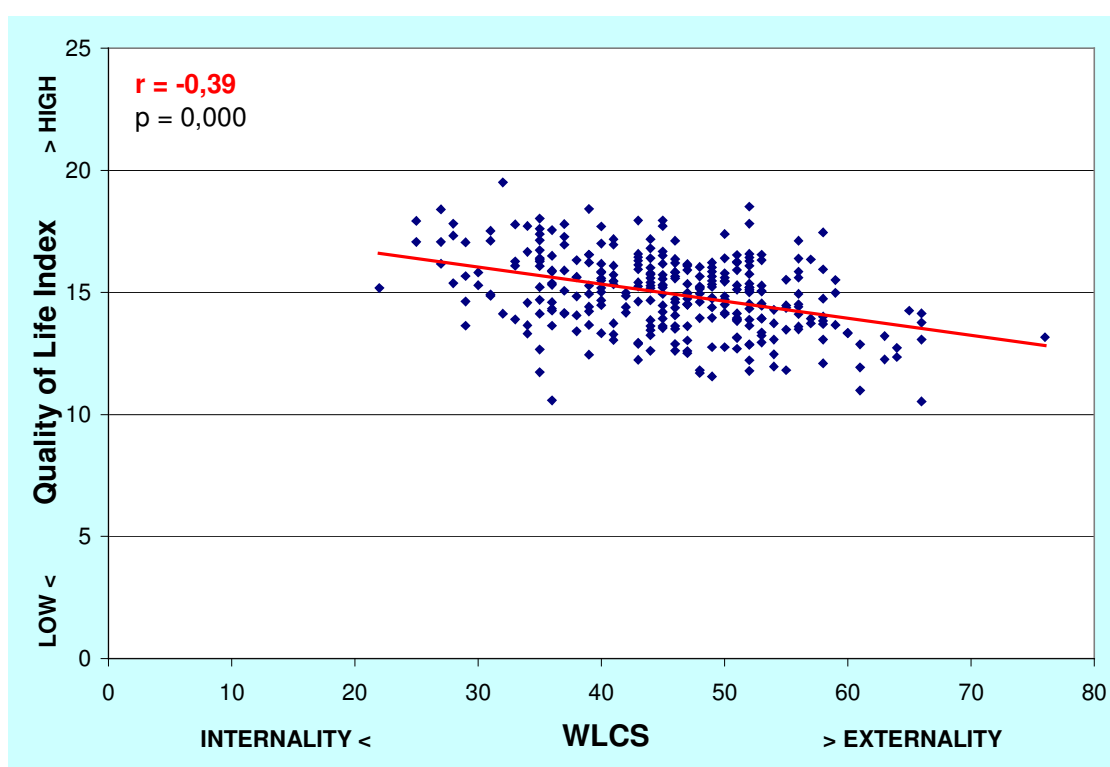
\* p < .001

The inspection of correlations between work locus of control and the quality of life domains shows that the highest correlations was found with the quality of life domains of environment, psychological well-being and physical health. This is an important finding because it shows that work locus of control contributes to quality of life mainly through the domains of environment, psychological well-being, and physical health.

The results show clearly that work locus of control occupies an important place in the managers' perception of their quality of life. The findings provide support to the idea that the person's internal control beliefs are important not only for one's psychological and physical well-being – but also for the relations with others, as well as persons satisfaction with the environment.

To further investigate the relationship between work locus of control and the quality of life, we calculated the WHOQOL Index and correlated it with the work locus of control score. The most consistent correlation was between work locus of control and overall WHOQOL Index (see Fig. 1 overleaf).

**Fig. 1. Work Locus of Control and Quality of Life**



Summing up, the results support the idea that internal control beliefs are associated with managers' satisfaction with their quality of life.

To further investigate the relationship between work locus of control and some work related measures in managers quality of life, we picked some directly work related subscales from the WHOQOL-100 instrument and correlated work locus of control score with the scores of subscales, namely self-esteem, thinking, learning, memory and attention concentration abilities, work capacity, financial resources, and opportunities for acquiring new information and skills (see Table 6.).

The correlations were between -.23 to -.36, and each was significant. Our results suggested that internal work locus of control has stronger relation to managers' financial resources, and opportunities for acquiring new information and skills. This is an important finding because it shows that internal control belief contributes to different work related effects.

**Table 6. Correlations between Work Locus of Control and Work Related Measures of Quality of Life**

<i>WHO Quality of Life Instrument (WHOQOL-100) work related subscales</i>	<i>Work Locus of Control</i>
Self-esteem	- .23 *
Thinking, learning, memory and attention concentration abilities	- .25 *
Work capacity	- .23 *
Financial resources	- .29 *
Opportunities for acquiring new information and skills	- .36 *

\*  $p < 0.05$ .

## Conclusions

**From theory and empirical findings to practice.** Our study focused on work locus of control and its relation with different work aspects, e.g. job satisfaction, physical health, psychological well-being, and quality of life, as well as cultural differences of work locus of control. In the present paper, we attempt to present a brief overview of three studies carried out in Estonia in 1996, 2002 and 2004. There are some final considerations that are relevant for practitioners in the field of work and organisational psychology, as well as to managers, especially managers from Eastern Europe.

**Locus of control and age.** On the base of previous research findings in literature we expected a significant relation between work locus of control and age, that older managers have more external work control beliefs than younger managers. Thus, we failed to find a significant correlation between work locus of control and age. Only in Sample 2, there was a low tendency (not significant) for the younger Estonian managers to have higher scores for internal work locus of control.

**Work locus of control and gender.** There were no significant correlation between work locus of control and sex. This finding is in harmony with relevant literature.

In summary, our findings demonstrate that person's age and gender are not relevant to predict internal or external work locus of control. It is just widely disseminated myth, especially in personnel selection processes, that younger male managers are more internal in their control beliefs than older managers.

**Work locus of control and job satisfaction.** It was found that external control beliefs at work were negatively related to job satisfaction across all samples of managers. These results corroborated previous studies (Spector, 2006). The reasons why internals are more satisfied with their job than externals are not well delineated. For example, Spector (1982) hypothesised that one reason for the higher satisfaction of internals is their higher job performance. Persons who perform better might be better rewarded and thus like their jobs better. Our results partly support this hypothesis; internals had higher work capacity, financial resources and better opportunities for acquiring new information and skills.

**Locus of control and physical health, psychological well-being, and quality of life.** In health psychology, there is some agreement to link internal locus of control with improved physical health, mental health and quality of life. These issues are important because the close relationship with occupational stress and even physical or mental illness.

The relation of work locus of control with physical well-being, however, failed to show up in the CISMS study. Moreover, the physical well-being results were an unpredictable variable across nations. In fact, Eastern European samples did not differ from the United States in CISMS study. Our results demonstrate a strong relationship between managers work locus of control and physical health, as measured in OSI-2 and WHOQOL-100. This issue is particularly important since it is the physical well-being that relates perhaps most closely with employees physical health and illness.

The CISMS study found a relation of work locus of control with psychological well-being. Our results fully support this finding. Both research methods (OSI-2 and WHOQOL-100) we used

show constant negative and significant relationship between work locus of control and psychological well-being. Thus, we can conclude that managers with internal control beliefs at work have better psychological well-being. There is some evidence in literature that the level of psychological well-being is determined more by non-work, rather than by work domains of persons' lives (Hart et al., 1995; Hart, 1999; Hart, Cooper, 2001). The inspection of our data shows the similar tendency - the correlations between psychological well-being and quality of life of non-work domains, as measured by WHOQOL-100, were significantly higher than correlations between psychological well-being and work domains. Clearly, more research and analysis is needed to determine how psychological well-being of employees relates to work and non-work domains. This is of extremely practical impact for the organisational health perspective.

Accordingly, by integrating the concepts of locus of control and quality of life into a broader view of employee well-being, it may be possible for practitioners to demonstrate a strong link between employees' well-being and performance. Our results show that work locus of control occupies an important place in the managers' perception of their quality of life. Work locus of control contributes to quality of life mainly through the domains of environment, psychological well-being and physical health. These findings demonstrate that internal work locus of control associated with managers' satisfaction with their quality of life. Additionally, our results hint at internal control beliefs having a strong relation with manager's work related domains like higher work capacity, higher self-esteem, better thinking, learning, memory and attention concentration abilities, financial resources, and better opportunities for acquiring new information and skills. That is, stimulating internal control beliefs among managers is not only a healthy organisational strategy but also a strategy for having an efficient and productive organisation.

**Cultural differences in locus of control.** As noted, according to the CISMS study managers vary in work locus of control across the cultures. Managers from Asian countries were more external in their work locus of control than USA and Western managers (Siu et al. 2001; Spector et al., 2002 1; Siu et al., 2002). In the European Union enlargement situation our main interest, however, is on the differences between Western and Eastern European managers in their work locus of control. Inspection of CISMS findings shows, in general, that Eastern European managers are more external in their work locus of control than their Western colleagues. When focusing Eastern European managers, the question of stability of managers' work locus of control arises immediately. There are at least three really practical reasons for focusing this phenomenon.

First, Rotter (1966) believed that internals tend to be higher in achievement motivation than externals. This assumption has generally been accepted as "given" in literature despite contrary evidence being found.

Second, if the locus of control is a personality construct, then it has to be quite stable and the development or change of persons' locus of control is difficult or even not possible. Certainly more studies are needed to determine why personality relates to job satisfaction, moreover, personality relates to well-being and quality of life. Otherwise, if the internal control beliefs were mainly influenced by an environmental factor e.g. a plethora of cultural, economic and social factors, then the change of thus factors or some of them leads to change of internal/external control beliefs. Our results suggested that Estonian managers' work locus of control became increasingly internal over time. On the other hand, our study is not without limitations. The results presented here might be specific to Estonia and not be generalised to other European countries. In this direction more cross-European longitudinal studies with the focus of Eastern European countries are needed. Finally, we analysed the data of three different random samples of managers over 10 years. Clearly, longitudinal study is needed for these purposes.

Third, empirical findings suggested the strong link between internal locus of control and employee well-being as well as quality of life. As already noted, if the control beliefs are causal agents in producing the employee's well-being, the opposite is also possible. It may be that employees who are well adapted to their culture have experienced certain successes that enhance beliefs about control. These successes contribute to well-being so that control beliefs are the effect rather than cause.



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