Literature Review – Development of a Model to Promote and Measure Inspiration in Online Shops

Hieronymus STURM *
Hochschule Wismar, University of Technology, Business and Design, Germany

The aim of this article is to become an overview of how users can be inspired to search around in online webshops. For this it is necessary to have an insight into the inspiration research. This provides a number of factors that could have an impact. It seems sensible to trigger motivation, transcendence and evocation in the website. You should avoid inappropriate web design and usability errors, because it can cause negative emotions. The user is probably more inspired by positive activated affects. This applies to online, as well as the offline situation.

Keywords: Inspiration, Online shop, Design, Usability

JEL Classification: M31

1. Introduction

1.1. Problem Definition

Even if there is no intention to buy, people come to the centers of the cities, to go window shopping. The goal of consumers, is to be inspired and to rummage around. Customers enter a sales room, get information, may also get some good advice, inspect the goods visually, haptically and with olfactory senses, or even try the product without activating a specific purchase motive. Favorably, the seller recognizes the situation, identifies the customers motives and incentivizes purchase-triggering behavior through appropriate incentives. The time component also plays a key role. The longer a consumer stays in a sales room, the more likely impulse purchases will occur (Asuquo and Ukpong, 2015). The attractiveness of the sales area or its design positively influences various constructs such as satisfaction, customer loyalty and probably also the willingness to rummage around (Gustafsson, Johnson, and Roos, 2005; Singh and Khan, 2012). According to Asuquo and Ukpong (2015), the location also has an impact on the perception of the store. This means that the sales environment can also moderate creativity, inspiration and willingness to rummage around (Flath, Friesike, Wirth, and Thiesse, 2017).

In online shops, operators try to enable browsing behavior by showing suggestions under the actual products (Senecal and Nantel, 2004). An algorithm is used to calculate which other offers could be of interest to the user. Even if the consumer has already left the online shop, further product suggestions based on the Internet surfing behavior can be made via email. However, the success has so far been rather moderate. Spending time in online shops, funnel analyzes and researches shows that users tend to pursue a specific goal

* Corresponding Author:
Hieronymus Sturm, Hochschule Wismar, University of Technology, Business and Design, Germany

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and are less inspired to search around (Katawetawarak and Wang, 2011; Lim, Osman, Salahuddin, Romle, and Abdullah, 2016). This is where research should start in depth, using the previous theory of inspiration, creativity and usability as a starting point (Thrash, Moldovan, Oleynick and Maruskin, 2014; Leung and Qiu, 2017; Krampen, 2019). The focus is on linking previous knowledge with innovative technologies and the consumers behavior on the Internet (Flath et al., 2017).

1.2. Objective
The aim of this article is to process the relevant inspiration research and consumer behavior in online shops and to gain insights from both areas to unite. It is hypothetically derived whether the same mechanisms can apply in virtual sales rooms as in offline stores. Finally, possibilities for measuring and increasing the inspiration of online shops for the subsequent research are shown. The work ends in a theoretically required structural equation model.

2. Theoretical Review

2.1. Overview of the Analyzed Literature
A literature review is carried out in this article. Inclusion or exclusion criteria are not necessary. Table 1 shows the tabular overview of the studies analyzed in detail.

<table>
<thead>
<tr>
<th>Author</th>
<th>Abstract</th>
<th>Method</th>
<th>Validation</th>
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<tbody>
<tr>
<td>Thrash et al. (2014)</td>
<td>Overview and summary of the inspiration research of the past 20 years</td>
<td>Literature review</td>
<td>-</td>
<td>Inspiration is described through transcendence, evocation and motivation</td>
</tr>
<tr>
<td>Thrash and Elliot (2004)</td>
<td>Development of a model for inspiration. Identification of key characteristics, causes and functions of the inspiration</td>
<td>Three studies: Qualitative and quantitative designs. PANAS, ANOVA, hierarchical linear modeling, CFA, narrative analysis etc.</td>
<td>Use of tested inventories. Accordingly good Alpha-values.</td>
<td>Inspirational conditions can be seen in the task involvement, avoidance of negative emotions and the activation of positive affects.</td>
</tr>
<tr>
<td>Thrash and Elliot (2003)</td>
<td>Development and validation of the inspiration scale</td>
<td>The questionnaire is operationalized, tested, validated and the reliability determined via three studies.</td>
<td>Reliability is tested using common constructs. Construction validation to motivation and emotion scales.</td>
<td>Inspiration Scale consists of 4 questions, each with 2 subscales. The questionnaire is based on motivation, transcendence and evocation.</td>
</tr>
<tr>
<td>Karlsson (2007)</td>
<td>Investigate the relation between design elements of a web interface, usability and emotional responses.</td>
<td>Experimental Study (n=20) to test difference in perception of websites. Analysis with Median values, Wilcoxon Test and Spearmann for correlation effects.</td>
<td>Use of three different questionnaires for assessment of semantic expression, emotional response and usability evaluation.</td>
<td>Three factors were identified for perceived expression of the websites: graphic design, content and perceived usability.</td>
</tr>
</tbody>
</table>

2.2. Literature Review of Inspiration
A prerequisite for inspiration is that people take the time to do it. The word muse is not only used in research in this context (Thrash and Elliot, 2004). However, Singh (2013) assumes that people increasingly
have to cope with hectic everyday life and enjoy the advantages of fast online shopping in such situations. The motive to be inspired probably still has to be incentivized to a greater extent by the online shop itself. Thrash et al. (2014) speak of evocation, in this context, f.e. one must be receptive to inspiration. This can happen through the situation, another object or even subject. Linguistically, such an inspiration is expressed, for example, with “I was inspired”. An epistemic transcendence should emerge, in which the user has a vision, idea or inspiration to want to create something new. Basically, the goal is to develop the future. This goes directly hand in hand with motivational disposition to be ready for change. In the concept of the personality factors of the “big five”, this could be translated and promoted with the above-average characteristic “openness to experiences” (McCrae and Costa, 1987). Conversely, not all users will be motivated to be inspired. Even if they were inspired, it does not have to result in action or motivation. Thrash and Elliot (2004, p. 958 f.) are speaking in this context of “inspired by and inspired to”. The basic problem for online shop owners is likely to be the incentive. The degree of inspiration probably depends on the intrinsic motivation of the user to create something new. Attempting to activate the action through extrinsic incentives (offering prices, discounts, saving on shipping costs, etc.) is likely to have a negative impact on the inspirational episode (Thrash et al., 2014; Wrzesniewski et al., 2014). Incentives should therefore be chosen carefully.

In the first study, Thrash and Elliot (2004) surveyed 172 psychology students about their inspirational experiences with the Positive and Negative Affect Schedule (PANAS). The inventory captures emotional sensations by adding 10 positive and 10 negative affects of which the test persons should be assessed (Watson, Clark and Tellegen, 1988). In addition, the test subjects had to describe a situation they had experienced and found inspiring. The field report was evaluated narratively with very good intercoding reliability (κ = 1). The statistical analysis was carried out using a one-way ANOVA. It was shown that the explanation of the variance of the inspiration through the task involvement is quite good (η² = .41; the value can be interpreted similarly to R²; p=.99) (Thrash and Elliot, 2004). A similar connection can be assumed in online shops.

**H1:** If the users feel a high level of task involvement, to combine the offered products of the online shop and to use them in a visionary way, this will have a positive effect on the inspiration.

The hypothetically required connection between the task involvement and the increased inspiration of the users would then also have a positive influence on the tendency towards browsing. As a more measurable indicator, the length of stay and page views should increase significantly. The task involvement probably does not even have to be developed through the creative work of the online shop operator. At least, however, a link should be made to corresponding and suitable inspirational representations on Pinterest, Instagram or similar social media platforms. A positive placement of the external sources of inspiration on the landing page and the invitation to participate in this via a call-to-action button could increase the effect. If the online shop operator wants to become active himself, he should think about the use of suitable influencers or testimonials in addition to an intrinsically motivating task. Lockwood and Kunda (1997) examined whether well-known role models / superstars are particularly inspiring to people. A strong positive effect could be determined if the success of the superstar was personally relevant and achievable (r=.63; p=.99) (Lockwood and Kunda, 1997). Bandura's Social Learning Theory (1977) could also help explain why these models could trigger a positive imitation effect and thus inspiration (Thrash and Elliot, 2003).

Another inspiring factor was developed by Thrash and Elliot (2004) amongst others, identified with the help of the narratively evaluated interviews. The subjects were more inspired when positive emotions were activated in the situation (η² = .33; p = .99). Well-being, as a source of inspiration, tends to give rise to the desire to realize oneself (Thrash et al., 2014). This could also be relevant for the design, structure and type of customer communication in online shops. The hypothesis H2 can be derived from this.

**H2:** If the design of the online shop triggers positive emotions among users, it has a positive effect on inspiration.

As with task involvement, appealing designs should contribute to being “inspired by” something (Thrash and Elliot, 2004). The approach of “design thinking” as a problem-solving method also rely on the fact that innovative ideas are more likely to be generated in attractive environments. Accordingly, users should feel comfortable in the virtual rooms and negative emotions should be avoided (Karlsson, 2007). A well-thought-out website can contribute to this. In particular, conventions should be adhered to, for example by linking the company logo to startup page. Grids help ensure that the shape is consistent and thus leads to a recognition effect, especially if the user uses different devices (Hussain and Mkpojiogu, 2015). For example however related information can also be arranged close together. A pronounced usability can help the user to navigate intuitively through the website (Hussain and Mkpojiogu, 2015). Karlsson (2007) shows a significant correlation between usability and sympathy of r=.61. The coordinated interplay of typographies, shapes and
colors will also have a positive effect on the perception of the user (Lindgaard, 2007). For example, blue should increase creativity and red should concentrate on a task (Mehta and Zhu, 2009). Pictograms can improve information reception and radiate positive wording on the emotional state of the user. However, it is assumed that the positive influence of professional design on inspiration is rather small. First, the emotional state of the user is influenced not only by the website, but also by the situation in which he finds himself. And secondly, flashes of inspiration seem to come more often, when people are not busy with a specific task, but the cognitive system is underused, such as in sports, in leisure time, before sleeping etc. (Füglistaller, 2005). It is therefore rather unlikely that inspiration can be significantly promoted through creative web designs, even if the user uses these offers primarily in their free time. Conversely, unprofessional websites will have a very negative impact on inspiration and browsing, create negative emotions and even decrease page impressions (Karlsson, 2007).

Another factor can be derived from the lambda hypothesis of perception. Accordingly, there is a parabolic relationship between the activation and the motorial and cognitive performance in humans. The level of activation should therefore also have a significant impact on the quantity and quality of the results which result from inspiration. In this context Thrash und Elliot (2004) investigated whether activated positive affects are detectable when people have had inspirational experiences. Positive affects are usually short emotional states that go hand in hand with high activation. In this context these will be to enthusiastic, interested, determined and excited operationalized in this context. (Thrash and Elliot, 2004; Dockray and Steptoe, 2010). Madrid, Patterson, Birdi, Leiva and Klausel (2014) investigated whether positive feelings have an impact on innovative work behavior and come to similar results. Innovative and creative ideas are more likely to be generated in the work context if, after the “big five” openness to experience, extraversion is strongly pronounced and positive feelings are activated. Based on a theoretically required multilevel structural equation model, a connection between persistent positive feeling and innovative work behavior could be confirmed significantly with \( b = .27 \) (n= 92; \( p=.99 \)) (Madrid, Patterson, Birdi, Leiva, and Klausel, 2014). The problem is to create a distinction between the activated positive affects and the emotion construct (see H2). Perhaps this is one of the reasons why it was hardly possible for the activated positive affects to contribute to explaining inspiration in the second study by Thrash and Elliot (2004) \( (\eta^2 = .04; \ p = .99) \). Commitment and temperament are hardly enough to explain inspiration, to bring creative solutions or to be innovative. But it can be identified as a motivational tendency to deal with a topic. This also applies to online shopping. Browsing time, decision-making and shortened information processing are related to positive affects (Zhou, Dai, and Zhang, 2007). If the three emotional dimensions of excitement, pleasure and dominance are present, the online shop is less often rejected and motivation to buy is more likely (Zhou et al., 2007). From all this it can be concluded that activated positive affects contribute to the motivation of the user to dedicate himself to inspiring tasks in online shops. But it says nothing about whether high-quality results are produced. A positive affect can be understood as initial motivation and may have a moderating function on inspiration.

\[ H3: \text{When activated positive affects of the user are awakened, the motivation to devote themselves to inspiring tasks increases.} \]

In order to promote activating positive affects, it seems cheap to take up current topics and to develop them further. So-called memes are currently an internet phenomenon (Leskovec, Backstrom and Kleinberg, 2009). These are Internet caricatures in which, for example, word jokes are combined with mostly well-known backgrounds and thus have a double meaning. The idea of surprising us in this way is not new, but through global networking, innovative memes can spread like viruses or even trigger hypses (i.e. vorg or “feudal sprache” in Germany) (Leskovec et al, 2009). It seems that user generated content seems to be able to trigger hypses more than professional content. Fridays for Future, Gangnam Style, Mannequin Challenge, Ice Bucket Challenge, beer nomination etc. were only used for marketing purposes after the virus-like distribution. Thrash and Elliot (2003) speak of experiencing elevation in this context, i.e. a positive emotion is triggered because people create something or develop a good feeling to participate in something. There is a feeling of virtue, moral beauty and a warm or radiant sensation behind your chest (Haidt, 2000).

Online shop owners should therefore deal with what causes or prevents hypses, how trends and elevations are ignited. There seems to be a fine line between enthusiasm and achieving marketing goals. Few will know that the “Johnnie Walker brand” was behind the “Moorhuhn hunting game”. The success of a promotion can be measured directly via the recommendation rate by tracking the referrer URL (Broxton, Interian, Vaver, and Wattenhofer, 2013). Videos on Youtube are rarely shared on the published website, but via other Internet channels (WhatsApp, Facebook, Instagram, social media in general) (Broxton et al., 2013), i.e. the virus-like distribution mostly takes place in the entire network and not on the source of origin. This
should also be considered when designing the inspiration-generating design or the task. It seems reasonable to publish the initialization outside of one's own website in social media channels.

2.3. Measuring Inspirational Behavior

The short Inspiration Scale by Thrash and Elliot (2003) can be used to measure user inspirational tendencies. The questionnaire is based on the three components of evocation, motivation and transcendence. The reliability has been checked and is confirmed by very good CFI, TLI, RMSEA values and Cronbach's Alpha ($\alpha = .95$). A construct validation was also carried out in relation to the usual motivation scales. Convergence was found when these scales operationalized evocation and transcendence. The Inspiration Scale also correlates positively with extraversion and positive emotionality (Thrash and Elliot, 2003). Table 2 shows the Items of the Inspiration Scale. The frequency is rated on a seven-point Likert scale from 1 (never) to 7 (very often) and the intensity is rated from 1 (not at all) to 7 (very low or strong)” (Norman, 2010). “An f in item numbers indicates that the item belongs to the Frequency subscale; an i indicates that it belongs to the Intensity subscale” (Thrash and Elliot, 2003, S. 889).

Table 2. The Inspiration Scale by Thrash and Elliot (2003)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Statement and Item</th>
<th>Subscale</th>
</tr>
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<tbody>
<tr>
<td>Statement 1</td>
<td>I experience inspiration</td>
<td></td>
</tr>
<tr>
<td>Item 1 f</td>
<td>How often does this happen?</td>
<td>Frequency</td>
</tr>
<tr>
<td>Item 1 i</td>
<td>How deeply or strongly (in general)?</td>
<td>Intensity</td>
</tr>
<tr>
<td>Statement 2</td>
<td>Something I encounter or experience inspires me.</td>
<td></td>
</tr>
<tr>
<td>Item 2 f</td>
<td>How often does this happen?</td>
<td>Frequency</td>
</tr>
<tr>
<td>Item 2 i</td>
<td>How deeply or strongly (in general)?</td>
<td>Intensity</td>
</tr>
<tr>
<td>Statement 3</td>
<td>I am inspired to do something</td>
<td></td>
</tr>
<tr>
<td>Item 3 f</td>
<td>How often does this happen?</td>
<td>Frequency</td>
</tr>
<tr>
<td>Item 3 i</td>
<td>How deeply or strongly (in general)?</td>
<td>Intensity</td>
</tr>
<tr>
<td>Statement 4</td>
<td>I feel inspired</td>
<td></td>
</tr>
<tr>
<td>Item 4 f</td>
<td>How often does this happen?</td>
<td>Frequency</td>
</tr>
<tr>
<td>Item 4 i</td>
<td>How deeply or strongly (in general)?</td>
<td>Intensity</td>
</tr>
</tbody>
</table>

To determine the degree of inspiration, the scores from the frequency and intensity are added individually. The two subscales i and f therefore each have an interval of [4 ; 28] (Thrash and Elliot, 2003).

The questionnaire can be used to evaluate the inspirational effect of certain measures in the online shop. An adaptation of the questions may be necessary for the context. Accordingly, a new reliability check and construct validation should be carried out. An experimental design with A / B tests can be selected from the sequence. Subjects are presented with two settings, an inspiring and a non-inspiring website. It can be a video embedding of an influencer or an inspiring task in the A setting. The inspiration scale score should increase in the long-term measurement and correlate significantly positively with the average time on site and page views. This leads to the hypothesis H4:

$H4$: An inspiring task is expressed by an increasing Inspiration Scale Score and correlates positively with the tendency to browse, which manifests itself through increased length of the average time on site and page views.

3. Modeling Inspiration in Online Shops

3.1. Development of a Structural Equation Modeling

Previous research has mainly worked on what inspiration is, how it can be triggered and promoted in working situations. As other psychological constructs like motivation, emotion, satisfaction, resilience, etc., the complexity is high and it is difficult to differentiate clearly. Accordingly, the structural equation modeling is hypothetically required in the context of user inspiration in online shops and requires a deductive falsification (Veronesi, 2014).
A difference to "offline research" may be that online shops are more likely to be visited during leisure time. In contrast to the professional promotion of inspiration in working situations, this has advantages. The user is not robbed of his intrinsic motivation by extrinsic incentives. In addition, he is more likely to go on an online shopping tour if he is not cognitively stressed. Accordingly, there is a greater likelihood that he will be inspired and generate creative ideas (Füglistaller, 2005). However, virtuality has the disadvantage that it currently has to get by with visual and acoustic stimuli. But here, too, the development continues and the distortions will be experienced ever smaller in the future. In the area of virtual reality, the term immersion is used when users experience the artificial environment as real (Slater, 2009). In particular, 3-D effects and realistic graphic resolutions can ensure an immersive experience in virtuality (Bangay and Preston, 1998). The effect of simulator sickness is proven, for example, when people with 3D glasses get sick during a virtual roller coaster ride (Bangay and Preston, 1998). In future online shops, simulator sickness should be excluded. However, the use of virtual reality can presumably increase the task involvement by presenting the products to avatars or car configurators that simulate realistic impressions of the future motor vehicle. The first approaches already exist, such as the "BMW X2 Holo Experience", "enter the sandbox" or "Audi quattro coaster" from Audi VW AG.

### 3.2. Operationalization by Creativity in the Context of an Online Shop

Inspiration is a motivational response to generate creative ideas. People are more creative when they are more inspired (Thrash et al., 2014). Inspiration can be viewed as a preliminary stage of creativity or as a motivational tendency or consequence. It is therefore not surprising that inspiration and creativity correlate positively according to (Thrash and Elliot, 2003). This should also be considered in the context of operationalization. A deductive case study design with direct A / B test and experimental field character is conceivable. The first independent variable H1, the task involvement, can itself be the result of an inspiration in the sense of a creative task, challenge or creative game (see Fig. 1). In order to operationalize a creative task involvement, it should have the following elements:

1. The inspiring task should be designed so that users forget space and time, that mean they are in a state of flow and be able to immerse yourself in the virtual reality (Bangay and Preston, 1998; Mirvis, 1991; Zhou et al., 2007).
2. This can be favored if the task is linked to a vision. Online shop operators could use the products, brands or services offered for an unusual purpose by the user and / or have them to combined (Thrash, Moldovan, Oleynick, and Maruskin, 2014). Divergent thinking can be stimulated by specifying unusual associations, analogies, non-conformism and changing perspectives (Funke, 2000).
3. Influencers should be used with whom the users can identify, create similarity, build sympathy and already have a large reach or a high number of followers (Lockwood and Kunda, 1997; De Veirman, Cauberghe and Hudders, 2017).
4. The inspiring task and in the online shop advertised products should have the valence that the users are intrinsically motivated to recommend them to others. Accordingly, an intuitive referral system should be implemented (Senecal and Nantel, 2004).
5. Leisure and fun should be in the foreground. The task should trigger intrinsically trigger motivation and creativity should not be destroyed by extrinsic incentives (Funke, 2000). In offline stores, customers are rarely rewarded by the retail company for browsing.

The second independent variable can also be operationalized in a variety of ways. From a purely linguistic point of view, creativity and design are close together. Accordingly, the design should radiate happiness in the inspiration condition and contain few rules. Thrash et al. (2014) speaks in this context of "wellbeing" and "being happy". Personal well-being is seen as the basis of inspiration to strive for self-fulfillment (Thrash et al., 2014). The design can accompany this trend. Probably there are also trust elements in the design, trust-inducing brands or a present trust area in a positive connection with "well being" and thus as a basis to be inspired (Funke, 2000; Katawetawaraks and Wang, 2011). The design should also support the possibilities to browse.

Usability is closely related to intuition and should be tested in advance under the inspiration condition (Chaparro, 2008). The website Analysis and Measurement Inventory can be used for this (Caglar and Mentes, 2012). The questionnaire consists 5 categories (attractiveness, controllability, helpfulness, efficiency, learnability), each with 4 questions. The reliability has been tested and reaches values of $\alpha > .9$. The goal is to measure user satisfaction (Caglar and Mentes, 2012). Roy, Pattnaik, and Mall (2014) propose the „Web Usability Evaluation Model“ (WUEM) questionnaire, which consists of the following five categories: website content, webpage design, navigation, page design layout and accessibility. Further indicators for determining usability lie in the success of the task (here it is determined whether the users are able to follow the website's goal), the time in which the website's goal is reached (collecting information, log in, check-out, etc.) and the clicks required for it (Roy et al., 2014). These and other usability tests (Loureiro et al., 2015) provide information on what to look for when creating a user-friendly web page so that inspirational motivation can arise.

Ultimately, the personal situation and the level of personality of the user should have a significant impact in whether he or she inspires despite the high task involvement (H1), an intuitive and positive design or usability (H2) and whether positive affects are activated (moderator variable H3). A deductive research should clarify whether and how strong the positively activated affects have a moderating effect. The PANAS already mentioned can be used to operationalize the construct (Thrash and Elliot, 2004).

4. Conclusion

4.1. Summary

Users visit online shops to satisfy activated purchase motives. Rarely are spontaneous purchases triggered. The users hardly use the possibilities to browse and or to be inspired. Thrash et al. (2003, 2004 und 2014) have shown which components have to be considered when people experience inspiration and show creative behavior.

In summary, three factors for inspiration in online shops could be extracted. First, the task involvement, i.e. the user should be captivated by the functionality that is presented to him in the online shop. Second, inspiration and the tendency to browse can probably be destroyed if design and usability failures are present. The third aspect to be examined is the positive mood of the user. Evocation in the sense of being ready or receptive to creativity and inspiration is not only triggered by the online shop, but also by the situation the user is in.

4.2. Summary Implications for Research and Practice

The model presented in Figure 1 should be tested in a deductive examination. However, the use of questionnaires could be substituted for large-scale interviews. The combination of deductive and inductive methods will rather lead to people revealing things that they themselves are not aware of or are self-evident, such as norms, (sub) cultures or rules. With the help of computer-aided content analysis, interviews could become tradable over a large sample. In magna spe, this has a positive impact on validity and informative value.

For the practitioner, there may be a hurdle in creating a creative task to trigger task involvement among the users. It could help that the entrepreneurs are inspired by the countless crowdsourcing projects, games, challenges, hypes and spontaneous activities on the Internet. However, “me-too” strategies should generally be avoided. It is very likely that the Internet community will notice this and punish copied ideas. The result of creative thinking should therefore be evaluated in advance. Possible indicators are degree of novelty, usefulness, enthusiasm, etc. (Funke, 2000).
It should be noted as a limitation that this theoretical literature analysis is a preliminary study and not a systematic review of the topics of inspiration, web design and usability. Statements made here should therefore be considered in the subjunctive and tested in further studies.

References


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