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The aromachology and possibilities of its application in a selected business entity

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ABSTRACT

Aromachology studies the influence of odours on human behaviour and examines the relationship between feelings and emotions. The submitted paper deals with implementing a new marketing communication tool into practice and the possibilities of its use. Our research deals with the use of the human senses in marketing, where we take a closer look at the sense of smell because it has an important position in the human mind and life. It can awaken our memories and create emotions and improve the mood and often unconsciously influence consumer behaviour. The paper is divided into two parts. The first one aims at the theoretical introduction devoted to basic concepts such as aromachology and aroma marketing. This knowledge was subsequently applied directly to the surveyed company in the results part. The research subject is the influence of aromas on the emotional side of consumer behaviour which is influenced by all stimuli around us. Based on the research, we identified the most suitable aroma category that the company could use in the future. We have developed proposals and recommendations that could help increase awareness of a new product in the company's portfolio through unconscious communication at the point of sale, which will bring the gradual implementation of this marketing tool into practice. Two questionnaires were used – the first one aimed to gain basic information about consumers and their consumer behaviour. The second one was realized as a blind review of selected aromas using facial biometrics. Based on both surveys, we can conclude that introducing a specific aroma in the company certainly could influence the sale of a new product, a chocolate cake.

Keywords: aromachology, aroma marketing, consumer behaviour, smell, marketing tool

INTRODUCTION

The sense organs are used to get to know the external environment we live in. These organs can mediate information between the external environment and the internal organs of the human body and its nervous centre. Nowadays, our sensory organs are also becoming more and more involved in marketing.

The submitted paper takes a closer look at the olfactory sensory organ. First of all, we consider smell to be a sense that we use all the time, and it allows us to perceive different smells and odours. Of course, the smell can evoke different feelings and emotions in us. The relationship that can be created between memory and feelings can influence individuals in their shopping behaviour. When the smell is used correctly in marketing, it can also mean a competitive advantage for a given company because nowadays, shops or businesses are based on enormous competitiveness.

New directions of communicating with consumers in a way that has not been used before have become increasingly common. Here, for the first time, we encounter terms such as aroma marketing or aroma archaeology, also called smell marketing. It is marketing that influences the customer through smells. The first knowledge about the use of aroma in marketing dates back to France, where they were the first traders to use fragrances to promote the sale of their products, such as various types of tea, cosmetics or alcohol. According to [1], the marketing aroma uses knowledge about odours and smells. Aroma marketing can encourage the customer to buy goods and services and thus influences his behaviour and purchasing decisions. According to [2], customers who come to an environment exposed to pleasant smells can improve their mood by forty percent. Not only their mood will improve, but this effect can extend the time spent in the store by at least fifteen minutes. As for the impact of smells, they have a positive impact on customers and employees who are exposed to these smells throughout the

time they spend their work. Therefore, it is very important to think also about employees when choosing a smell so that it can positively influence their performance and, of course, their mood throughout working hours. [3] claims that there are about 10,000 smells that humans can recognize and remember in their unique way. Two people cannot feel the same, even if it is the same chemical with the same composition. It is also proven that more than half of what we perceive as taste passes through our olfactory senses. The benefits that aromas in marketing can bring: by effects of smells on a customer's emotional side, they can also contribute to sales growth; the smell can make the customer prefer products that are in the smelled rooms and look for them more and more often; fragrances can make a brand easy to remember, and this contributes to the company's reputation; the smell can support the feeling of quality, customers will get a feeling of a better product or service, and this can trigger the incentive that customers are willing to pay an even higher amount for a given product [4]. Even [5] argues that smell can be considered our strongest sense. When using a marketing strategy, a suitable smell can connect a brand with customers, especially at their emotional level, leading to the situation that customers even like the brand or product. The smell is also a good tool to attract new customers, support increased sales, as well as to expand brand knowledge. It can cause consumer satisfaction or evoke the memories associated with the smell. It can even establish a long-term connection between the brand and the customer. The aroma can directly affect our limbic system, which controls the memory segments in the brain as well as feelings. [6] claims that almost three quarters of the feelings and moods that we have during the day can be influenced by smells. Smell can influence consumer behaviour because it is tied to the brain's emotional centre. It can cause drooling in a person, change the heart rate, evoke attraction or perhaps even resistance to the person, or direct his thoughts to pleasant or even unpleasant moments in his life. Smells and odours are all around us, whether we are at home, on a visit, in a store, a store or a business, and have been shown to impact consumer behaviour at the time [7] significantly.

[8] states that more than 70% of decisions are made directly at the point of sale. An important aspect that influences this decision is air quality. When it comes to shopping, the environment has a significant impact on consumer behaviour, as consumers will not spend time somewhere where there is exhaled air or inappropriate temperatures. According to [9], marketers are increasingly using the surrounding smell as a tool to differentiate themselves from their competitors and thus attract more and more new customers and influence their moods and create pleasant experiences from shopping. The excellent aroma can cause a lot of effects concerning customers: the time spent in a store can be extended by a pleasant smell by 10 minutes; products or services can be perceived as better quality; the store is etched in their memory as a place where they felt good, evoked good memories in them and they will likely return there and repeat their purchase [10].

According to [11], the aromas themselves and their use can be divided into several categories:

- an *aroma that can influence the choice of customers* – a positive aroma can very quickly affect the activity of the brain. It is mainly the part of the brain responsible for the external environment, and so gradually begins to change the person's attitude. This can cause a fragrance that has a pleasant effect can attract more and more customers who want to stay in the store longer and thus spend more money;
- an *aroma that affects customers' emotions* – the smell is one of the most emotional senses. A pleasant smell will immediately improve the mood, but must also be paid attention to the other side of the smell because it can have the opposite effect on emotions. An important factor here is the intensity of the smell. A positive smell affects the brain by focusing only on the positive things and omitting the negative ones altogether. An ordinary clothing store, by using a positive smell, can turn into a stylish store that uses better services or prices;
- an *aroma that affects customers' memory* – smells work as a glue that can combine ideas and experiences with a brand. Marketers know how to take advantage of this fact by applying the smell to a commercial or directly to an advertising leaflet or brochure that creates a given sensory experience, thus creating a positive memory of the brand, and customers can remember it more easily;
- an *aroma you can imagine* – with advertisements on television, on the Internet or directly in the catalogue, it is challenging to combine the ad with the aroma. However, research has confirmed that if we tell someone just to imagine a given aroma, the brain can evoke the situation as if it happened. When a customer suspects a given aroma of food, it can lead to greater saliva production, desire, and, consequently, to consuming a certain type of food. The customer can immediately find a service that can satisfy his ideas and needs.
- *aroma and its knowledge of use do not discourage customers from shopping* – but deep care must be taken here because the knowledge that someone subconsciously wants to influence the senses of customers for a reason to spend more money can already discourage them. Attention needs to be paid to which aroma will be used, so the customers do not close themselves and leave the store.

According to [12], when using the aroma of marketing, it is good to follow these bits of advice: it is necessary to test the smell and get feedback from customers; the smell of the brand should be original and mainly associated with the company's brand; to advise on the choice of smell from experts, because an inappropriate smell can discourage customers; aroma marketing works best with a simple smell, complex smells should be avoided –

especially heavy smells, as this can cause health problems; The smell should be easy to remember for your customers. Neuromarketing is used to get feedback in aroma marketing. Customers often consider their purchasing decisions rational because they shop with "the heart". Therefore, it is important to focus on their emotions, which they use when deciding what to buy. Customers are often unaware of their emotions or do not want to reveal them for various reasons. Therefore, marketers decided to use the objective measurement of their physiological manifestations such as heart rate, pressure, dilated pupils or respiratory rate because they can identify and measure their intensity using neuromarketing [13]. Neuromarketing is a relatively new area of research. The term was first used in 2002 to refer to the intersection of neuroscience and marketing. Neuromarketing combines knowledge of neurology, psychology, sociology, and marketing. This concept has contributed to a significantly better understanding of human behaviour in recent years because a person can receive far more information than he can consciously process [14]. [15] states that neuromarketing combines three disciplines: traditional marketing, brain research, and medical technology. The first discipline of marketing is used mainly by the largest global companies. Brain research as a second discipline includes behavioural, primarily economics, neuroscience and psychology, gaining more and more prominence. The third discipline is medical technology, which can determine precisely what is happening in our brain. Various technologies such as EEG (electroencephalography) or fMRI (functional magnetic resonance imaging) are used. The primary use of these technologies is to make diagnoses, but these technologies can provide large amounts of data to help us determine exactly how a person's mind works. We can see exactly where the blood is flowing which parts are in charge of emotions such as anger, fear, joy, sadness, happiness or desire. Neuromarketing would not exist without these three disciplines.

Scientific Hypothesis

We established the following hypotheses, which were statistically tested:

1. To find out if there are differences in individual preferences by gender or if there are no statistically significant differences.
2. What percentage of employed respondents prefer to eat cake over other sweets.
3. Whether there exists a statistically significant difference between the frequency of cake consumption by women and by men.

The above-stated hypotheses were created hypotheses H_0 and H_1 , which were verified by statistical tests. Hypothesis H_0 states that there is no difference between the indicators, hypothesis H_1 states that there is a difference between the indicators. The results of the hypotheses are given in the results of the work.

MATERIAL AND METHODOLOGY

Before implementing the second questionnaire survey, we divided the individual aromas into test tubes then marked them as sample No. 1, sample No. 2, sample No. 3 and sample No. 4. Each sample was placed in an envelope. It was necessary to make 100 pieces of samples from each aroma together we needed to create 400 pieces of samples, which we sent to 100 respondents for implementation (Figures 1 – 3). The second questionnaire was compiled based on a blind test. We wanted to verify the smell of respondents and their feelings when smelling aromas, what the aromas are associated with, and especially whether they consider them suitable when selling cakes. We used biometric testing. Before conducting the questionnaire survey, the respondents did not know which aromas were under the given sample number.



Figure 1 Preparation, portioning and storage of aroma samples in test tubes. Note: Own processing 2021.



Figure 2 Portion of sample No. 1 into test tubes. Note: Own processing 2021.



Figure 3 Placing samples in envelopes and then sending them to the respondents to carry out a questionnaire survey. Note: Own processing 2021.

Subsequently, when the respondents received an envelope with aromas, their task was to open a link sent to them by email. After its opening, a questionnaire appeared via the Samolab.online platform. The tests were performed using a special platform, Samolab.online, which allows the whole spectrum to create specialized questions (e.g., association tests, A / B testing). Respondents can perform such testing using their home computers, tablets or even mobile devices outside the laboratory (Figures 4 and 5). Visible manifestations of mimic muscles are recorded through video recording, and these are then processed using analytical tools. The survey was conducted from March 15, 2021, to April 15, 2021.

Emotional feedback was analysed using the somatic biometric method FaceReader 7 from the Dutch company Noldus, which identifies the emotional feedback (valence, excitement) of respondents with maximum accuracy based on observable changes in mimic muscles and recognizes basic micro emotions (happy, sad, angry, disgusted, surprised, neutral) (Noldus Information Technology, 2021).

The validity of the recorded data is mainly influenced by the scanning angle, the brightness of the environment and the resolution of the recording device [16].

The course of the second questionnaire survey:

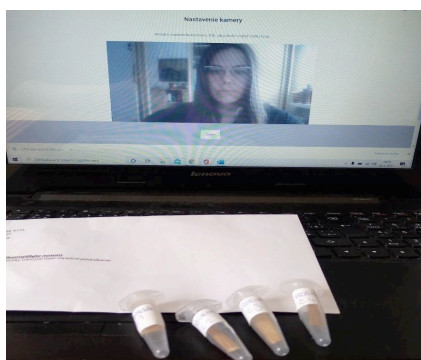


Figure 4 Opening the second questionnaire and setting up the camera. Note: Own processing 2021.

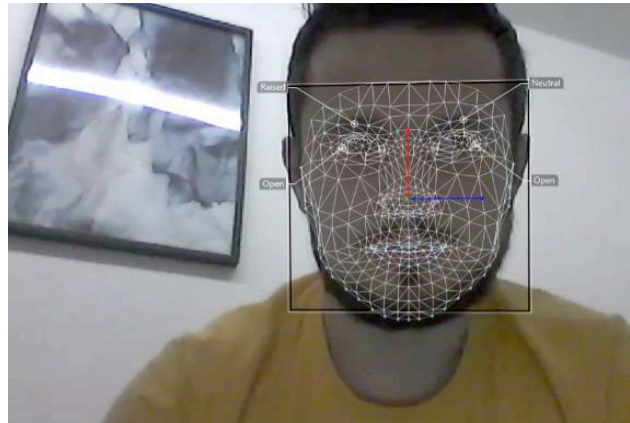


Figure 5 Analysis of the program during the implementation of the second questionnaire. Note: Own processing 2021.

Preparation and implementation of the first questionnaire survey

The first questionnaire survey aimed to obtain basic information about the preferred category of aroma during the purchase decision on the purchase of chocolate cake on primary sample respondents. It consisted of three parts: the questionnaire's introductory information and the inquirer, the classification questions and the research questions. The questionnaire was disseminated mainly through the social network Facebook, sharing in various Facebook groups and sending it to potential respondents directly in personal messages and via e-mails and the social network Instagram. The partial objectives of the first questionnaire were as follows:

1. To find out whether the respondent prefers cakes over other sweets in individual age categories and in what periodicity of consumption.
2. To find out which place respondent prefers when eating cake.
3. To find out what smell first comes to the respondent's mind when looking at the picture of the chocolate cake.
4. To find out what smell the respondents would prefer when entering the store selling cakes, and whether this smell would influence them when buying a cake or not at all.
5. To find out where, according to the respondent, the given smell should be placed so that the customer can feel it as best as possible.
6. To find out if there are differences in individual preferences by gender or if there are no statistically significant differences.

Together 153 respondents attended the first questionnaire survey. The first questionnaire survey resulted in 4 samples of smells that respondents most associated with the smell of cake: the smell of chocolate, coffee, vanilla, and citrus or fruit- and exactly these aromas were used in our second questionnaire survey.

Preparation and implementation of the second questionnaire survey

The second questionnaire survey was conducted three weeks after the first one. This survey consisted of monitoring the facial biometrics of the respondents. The software was borrowed from Samo Europe Ltd. The second questionnaire survey was used to verify the unconscious influence of aromas on human emotions. The implementation took place through the platform Samolab.online.

We cooperated with the company Aroma marketing, which offered us a choice of aromas for the marketing research implementation. Based on our requirements, the company Aroma marketing sent us 4 aromas that we chose based on the results of our first survey: Vanilla Orange - a balanced aroma of vanilla and citrus; Coffee and Cake - a pleasant aroma of coffee with a hint of sweet cake taste; Wildberry - the sensual and fresh smell of forest fruits; Chocolate - classic chocolate smell.

A total of 100 respondents took part in the second questionnaire survey, but we evaluated the data only for 51 respondents. The questionnaire itself consisted of three parts. The first was focused on the purpose of the questionnaire survey and introduced the interviewer. The second part consisted of questions that were the research subject, and the third part consisted of classification questions. The partial objectives of the second questionnaire were as follows:

1. The ability of respondents to recognize selected aromas based on a primary questionnaire survey.

- Determining the sample that would subconsciously most positively affect the respondent when buying a cake using facial biometrics.
- Comparison of conscious and unconscious perception.

Both questionnaire surveys were conducted online, as the pandemic situation did not allow testing in laboratory conditions.

The material used in this paper can be divided into several categories - characteristics of the business entity; preparation and implementation of the first questionnaire survey; preparation and implementation of the second questionnaire survey.

The business entity Sport Pub is focused on hospitality activities, located in the town of Brezno, specifically in the Mazornikovo district and was registered in the Business Register in 2006. In 2017, the company expanded its activities to include restaurant activities when it opened a new section called Sport Pub Restaurant and enriched its classic menu with a food menu.

We used the following software:

- MS Excel 365,
- Software from Samo Europe Ltd – Samolab.online,
- Analysis using Wordle software,
- FaceReader 7 from the Dutch company Noldus.

Statistical Analysis

For the analysis of the answers to the first questionnaire, we used the right-hand test of the agreement of the proportion with the known constant with the significance level alpha 0.05 (*p*-value 0.05), where we calculated three methods of calculation and also used the second test, namely the Chi-square test for two independent variables.

Right-hand test, resp. right-hand alternative hypothesis:

$H_1: Q > Q_0$; which defines the range of values of the parameter *Q* to the right of the value Q_0 .

The test of the null hypothesis H_0 against the alternative

H_1 is a procedure which, based on a random selection from a given distribution and at the chosen level of significance α (i.e., with the chosen reliability $1 - \alpha$) leads either to the rejection of the null hypothesis (i.e., to the acceptance of the alternative) or to the non-rejection. null hypothesis (i.e., to reject the alternative).

Chi-square test

The test consists in comparing empirical and theoretical frequencies, i.e. what would be empirical frequencies if the variables were independent.

Calculation of theoretical frequencies (1):

$$E_{ij} = \frac{(a_i) \cdot (b_j)}{n} \quad (1)$$

Where:

(a_i), (b_j) – single-stage frequencies; a_i – represents the number of statistical units with the *i*-th variant of the variable A; b_j – expresses the number of statistical units acquiring the *j*-th variant of the variable B; *n* – range of the sample.

The following hypotheses verify dependency testing:

H_0 – there is no dependence between A and B's qualitative variables, resp. there is no association with the alternative hypothesis.

H_1 – there is a dependence resp. association between characters A and B.

The test criterion can be calculated by using the formula (2):

$$\sum_{i=1}^m \sum_{j=1}^k \frac{((a_i b_j) - (a_i b_j)_0)^2}{(a_i b_j)_0} \quad (2)$$

Where:

m – number of categories of the first character; *k* – number of categories of the second character.

If calculated χ^2 is $\geq \chi^2_{1-\alpha}$ for the significance level α and the degrees of freedom $(m-1)*(k-1)$, we reject hypothesis H_0 , i.e. the characters A and B are dependent.

RESULTS AND DISCUSSION

Results of the first questionnaire survey

The first questionnaire survey, which was compiled to initially identify a suitable category of aroma that would be used in Sportsport Pub to introduce the sale of chocolate cake and increase its sales, was attended by 153 respondents of different ages. We used categorization by gender (Table 1), age (Table 2), economic activity, and place of residence to categorise respondents.

Table 1 Share of respondents by gender.

Gender	Absolute frequency	Relative frequency
Female	91	59.5%
Male	62	40.5%
Total	153	100.0%

Note: Own questionnaire survey 2021.

Table 2 Share of respondents by age.

Age	Absolute frequency	Relative frequency
17 – 24 years	61	39.9%
25 – 33 years	42	27.4%
34 – 41 years	14	9.1%
42 – 59 years	24	15.7%
60 years and over	12	7.9%
Total	153	100.0%

Note: Own questionnaire survey 2021.

The economic category of respondents was the following: the largest group consisted of employed persons (37%), the second group were students (29%), the third group were self-employed people (14%), and the smallest groups were women on maternity leave, pensioners and the unemployed.

The share of respondents by residence was as follows: 53.6% live in the city, and 46.4% of respondents come from the countryside.

Subsequently, it was necessary to determine how many of the respondents consume sweets (e.g., cakes). One hundred fifty respondents (98%) answered that they consume sweets, and only three respondents (2%) do not.

The second question of the research part of the questionnaire was intended to specify the respondents who, in the case of choosing a sweet, would prefer a cake. The question was asked as follows: "Do you consider yourself a type of person who would prefer cake over other sweets?" With the possibility of answering yes/no. The aim was to identify the target group that prefers cake consumption over other sweets in the situation there is a choice or to confirm the assumption that more than 55% of respondents who have economic activity as employees prefer cake consumption over other sweets. To confirm the given assumption, we used a right-hand test of the agreement of the proportion with a known constant with a significance level of $\alpha = 0.05$. From the questionnaire survey, we obtained 57 answers corresponding to the selection, of which 32 answers were marked "yes" and 25 answers "no". Other responses were from respondents with an economic activity other than employed (Table 3).

Table 3 Structure of responses corresponding to the survey selection.

Answers	Absolute frequency	Relative frequency
Yes	32	56.0%
Not	25	44.0%
Total	57	100.0%

Note: Own questionnaire survey 2021.

We implemented the method in three ways, namely by the value of p -value, interval detection and also by the standard way through TCH.

H_0 : At least 55% of employed people prefer to eat cake over other sweets ($\pi = 0.55$).

H_1 : More than 55% of employed people prefer to eat cake over other sweets ($\pi > 0.55$).

1. Results of detection by using P value
 $u = 3.90707$; p value = 0.00841344746; $\alpha = 0.05$; it means that p value $< \alpha$ and thus we reject H_0 .
2. Results of the determination by using the confidence interval and the tabular value
 centre of the interval $\pi = 0.55$; $\Delta = 0.061$; $HH = 0.421$; $p = 0.5614$; $p > HH$ and it means that we reject H_0 .
3. Test results by using the test characteristic
 $u = 3.90707$; $u_{tab} = 1.644853$ it means that $u_{tab} < u$ and therefore we reject H_0 .

Using the three methods of testing, we found that H_0 was rejected, and thus more than 55% of respondents in the selected target group prefer cake over other sweets.

It was important for the research to find out the periodicity of cake consumption by the respondents, while only 1.3% stated that they do not consume cakes at all. In this question, it is interesting to find out the difference between the behaviour of women and men. We performed a Chi-square test for two independent variables, in which we compared the behaviour of women and men.

H_0 : There is no statistically significant difference between the frequency of cake consumption by women and men.

H_1 : There is a statistically significant difference between the frequency of cake consumption by women and men.

Based on the calculations can be concluded that $X^2 >$ the degree of freedom, and we do not reject H_0 . The differences are not large in terms of statistics. Sport Pub does not have to target a range of cakes to just one gender of customers. The company should create a range of cakes in a design for both men and women. The results of the statistical testing are shown in Table 4.

Table 4 Chi-square test of goodness – the difference between cake consumption of women and men.

How often do you consume cakes?	Empirical frequencies			Theoretical frequencies		Calculation x^2	
	Men	Women	Total	Men2	Women2	(EM-Tm) ² /Tm	(EW-Tw) ² /Tw
Every day	3	6	9	3.57615894	5.423841	0.092825607	0.0612037
At least once a week	15	47	62	24.6357616	37.36424	3.768826106	2.48494029
At least once every two weeks	10	20	30	11.9205298	18.07947	0.30941869	0.20401232
Less often	30	18	48	19.0728477	28.92715	6.260347682	4.12770177
I don't eat cakes	2	0	2	0.79470199	1.205298	1.82803532	1.20529801
Total	60	91	151	60	91		

Note: Own processing 2021.

The following question was perhaps a little unusual for the respondents: "When you look at the picture of the chocolate cake, what smell will come to your mind first?" The cake that the company wants to add to its offer and the answers should help us choose the aroma that will be used in the second questionnaire survey.

Increasingly more companies are dealing with an idea of what products and where to place them in the store to impact customers [17].



Figure 6 Picture of chocolate cake. Note: Own processing 2021.

A total of 151 respondents answered this question. The question was opened, and the respondents had to write one word that would come to mind first when looking at the picture of chocolate cake (Figure 6). These answers helped us carry out the second research, which focused on shape biometrics and our sense of smell. To evaluate this question, we used Wordle analysis, which can store words according to the size of the meaning. In other words, it is a visual representation of words, where the size of each word is directly proportional to the number of cases it appears in answers. In Figure 7, we can see that the most common word the respondents imagined when looking at the picture of the chocolate cake was the smell of chocolate, and therefore, this word is also the biggest. Ninety respondents wrote the smell of chocolate (we also included the smell of cocoa). The second most common word was the cinnamon smell, where up to twenty respondents stated they associate this smell with chocolate cake. The third most common word was the smell of coffee with 12 answers and in the fourth place was the smell of vanilla with ten answers. The other smells mentioned by the respondents were, for example, the smell of lemon, honey, nuts or the smell of orange.

According to [18], the use of aromas can also be included in the basic communication functions from the seller to the customer.

There exist products that represent a characteristic feature of a particular product, and the main reason for buying such product is primarily its smell [19].

According to [20], the customers' ability to smell creates sales opportunities and bring them into the shopping mood.



Figure 7 The most common smells associated with chocolate cake. Note: Based on own processing using Wordle analysis.

The next question was crucial in our questionnaire research, as the main purpose was to narrow down the selection of aromas suitable for use in the premises of Sport Pub. The question was similar to the previous one, but the difference was that the answer was no longer open, but the respondents had a choice of 7 options to choose from. The question was: “What smell would you prefer when entering a store where they sell cakes?”. Again, this question was to help us choose the right aromas to help us with the second research. There were these smells to choose from: chocolate, coconut, vanilla, cinnamon, fruit, citrus, coffee smell and others, where respondents could write their opinion and a smell that still occurs to them. 23% of respondents said they would prefer a fruity smell when entering stores where cakes are sold, and 22% said they would welcome the smell of coffee. We think that the reason for choosing the coffee aroma is that most respondents consume sweets with coffee, and in many cases, it may be a cake. This was followed by the vanilla smell, which 16% of respondents chose, followed immediately by the smell of chocolate by 15% of respondents. Other respondents chose the option of preferring the smell of cinnamon, coconut and gingerbread.

According to [21], aromatic marketing is a series of events in which smell can encourage customers to buy goods and services and increase employee activity.

[22] claims that choosing the right aroma is not always easy, e.g., even with cakes, the addition of a chocolate smell may not be enough.

Another question in the questionnaire survey was the following: “How much is your decision when choosing a cake influenced by the aroma of the space in which you are?” This question aimed to find out whether the respondents are aware that their purchasing decisions can influence aroma. The question was compiled using a linear scale. The scale was set up so that respondents had a choice on a scale from 0, which meant that aroma did not affect them at all, to 10, which represented that aroma greatly affected them. 90% of respondents chose numbers higher than five on the scale, indicating that they think aroma can affect them. Only 10% of respondents out of the total number said that aroma does not affect them, so they chose numbers lower than five on the scale. We believe that most respondents marked that aroma influences them because when customers are hungry and feel a pleasant smell somewhere in a store or the city, the subconscious will immediately convince them that they would like to try it and therefore buy it.

The use of aromas is a new generation of communication tools that measure the impact on the consumer that is created with interactivity in business [23], [24].

The penultimate question in the first questionnaire survey focused on the location of the appropriate aroma release. More than 53% of respondents said that the aroma should be released throughout the space. The reason may be that when the customer smells a pleasant smell in the whole space and all the time, he can unconsciously spend more time in the store because he feels comfortable there. 44% of respondents said that the smell should be released upon entering the store, which we can assume would make a good first impression for customers. Only 3% of respondents said that the smell should be released directly when choosing a cake at the check desk.

Also, [25] argues that for setting a good mood, promoting products or brand positions itself can be used the expression “smell marketing”.

The last question of the first questionnaire survey was of an informative nature. It concerned the factors that can influence the pleasant atmosphere of the store, with the respondents having a choice of factors and could choose just three of them. Respondents consider the staff, design of the store and its cleanliness to be the strongest factors influencing the pleasant atmosphere of the store. The least influencing factors influencing the pleasant atmosphere of the store are considered: people who are in the store, disposition and where the store is directly located and the air quality in the store.

Results of the second questionnaire survey

One hundred respondents attended the second questionnaire survey, but in reality, it was completed only by 51 respondents. In this survey, it was important for the respondent to be on a device that allows access to the camera, as the research was focused on examining the feelings of facial biometrics.

The first area of interest in the research part of the questionnaire was focused on the quality of the samples used in the research. Respondents had an open question: *“Please take sample No. open it, and smell it for at least 5 seconds. After smelling, write what aroma sample No.... reminds you.”* Respondents had to write a short answer. The question aimed to determine whether the respondents would correctly name the specific aroma they felt. During the smelling of the sample, the camera scanned them and evaluated their emotions and how long they answered the question. It is also possible to determine whether the respondents thought about what they felt or just wrote it. We categorized the respondents' answers according to whether the answers approached the correctness of the sample or at least the things that could remind them of the given sample.

Sample number 2, which represented the smell of coffee and cake, was the most successful. As many as 34 respondents out of 51 determined this aroma. Respondents most often stated that it was the smell of coffee or tiramisu cake. The reason could be that most respondents liked coffee, and therefore the smell was very easily identifiable and recognizable. The last sample used for the research, available to the respondents, was the smell of chocolate, marked as sample number 4. This sample was also easy for respondents to identify, and up to 32 (63%) respondents out of 51 were able to determine that it was chocolate correctly. Again, almost all people like chocolate and know its smell because we consume it and encounter this smell from an early age; therefore, it was not such a problem to identify what aroma it is. Sample number 1 also performed quite well, where it was a smell of vanilla and orange. 29 (57%) respondents out of 51 wrote that it was a citrus smell that managed to hit this aroma and even 4 (8%) hit that it was a vanilla smell. The reason may also be that the aroma is associated with the smell of exotic fruits and is often used in various air fresheners, whether they are room or car air fresheners.

The most difficult was determining sample number 3, the smell of forest fruits. Twenty-three respondents (45%) approached that it was the smell of fruit. The other answers were of the smell of liquorice, chewing gum, baby syrup or candies. The smell was completely different from the previous ones, and we think it was much harder to

recognize. This may also be because people encounter this scent little, as it is mostly used in dairy products, whether it is various yoghurts, milk or kefir, which many people cannot consume due to milk intolerance. Therefore this aroma is more difficult to recognize and less known.

According to [3], it is proven that two people will never feel the same, even though it is chemically the same substance. It is also remarkable that 80% of what we perceive as taste passes through the olfactory sense.

Using a webcam, we evaluated the emotions in the examined samples, so-called unconscious perception. The system captured via a webcam seven emotions that may have occurred to an individual respondent. These were: neutral emotions, happiness, sadness, anger, surprise, fright and disgust.

Figure 8 shows us on the horizontal axis what emotions are involved and the percentages of how the respondents reacted on the vertical axis. Regarding aroma sample number one, Vanilla Orange is dominated by neutral emotions in 70% of respondents, followed by the emotion of sadness, and the third was the emotion of happiness. In sample number 2, Coffee and Cake again dominated the neutral emotion (60%), then the emotion of happiness and emotion of sadness. The third aroma sample Wildberry also had the highest values in neutral emotion as well as the first aroma sample, followed by the emotion of sadness and emotion of happiness and anger that, were both on the same level. In the fourth sample of Chocolate aroma, we can see that there is a slightly smaller neutral emotion (only 55%) than in the other ones where it was higher and compared to the other three samples of aromas the emotion of happiness rose to 20% which may cause people to know this aroma and when smelling it, the idea of something sweet immediately arises inside them, and this can evoke an emotion of happiness in them at a given moment. All these emotions represent the micro emotions of the respondents – partial emotions.

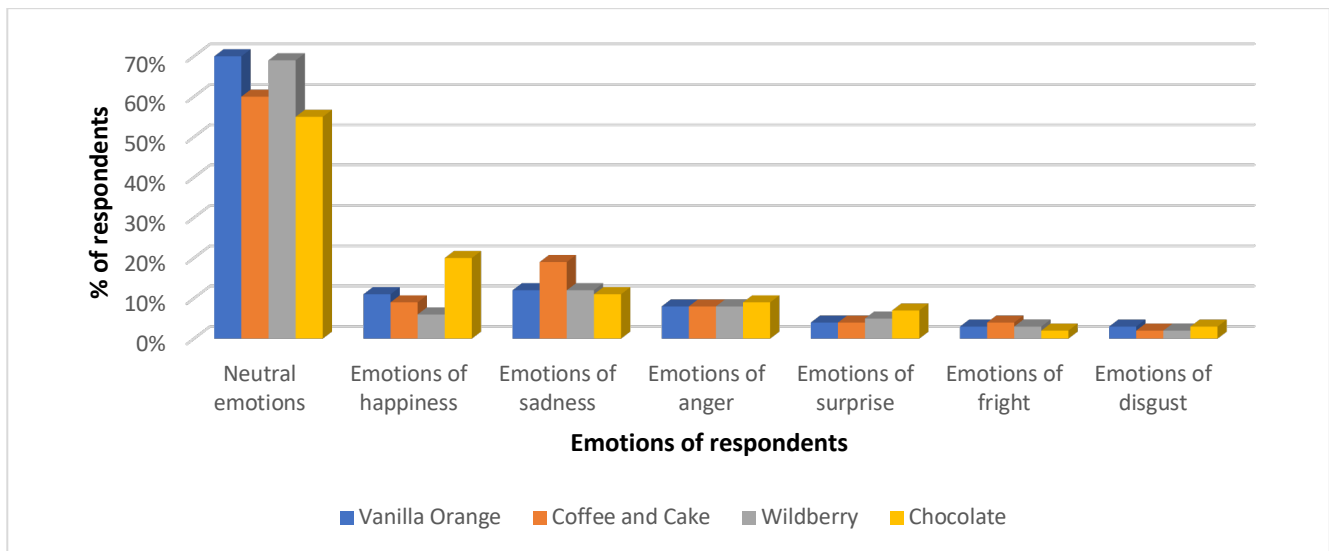


Figure 8 Unconscious perceptions of respondents' emotions when evaluating four samples. Note: Source: Own processing 2021.

The second area we addressed in the questionnaire focused on the aroma sample's suitability. The question was: "Please indicate on the scale from 0 – 10 the suitability of this aroma sample No. associated with the sale of cakes." In Figure 9, we can see that in conscious perception, respondents had to choose suitability on a scale from 0 – to 10, where 0 represented that the aroma sample is inappropriate and ten that the aroma sample is suitable in connection with the sale of the cake. Respondents chose aroma number 2, with a value of 7.8, as the most suitable one. In the second place, in terms of the suitability of the aroma in connection with the sale of cakes, sample number 4 with a value of 7.16 was placed, and we also consider this sample as a sample easily identifiable for the respondents. Sample number 1 and number 3 had similar ratings from respondents, and the value was around 6.50. All four aroma samples were evaluated as suitable and could be used in connection with the sale of cakes.

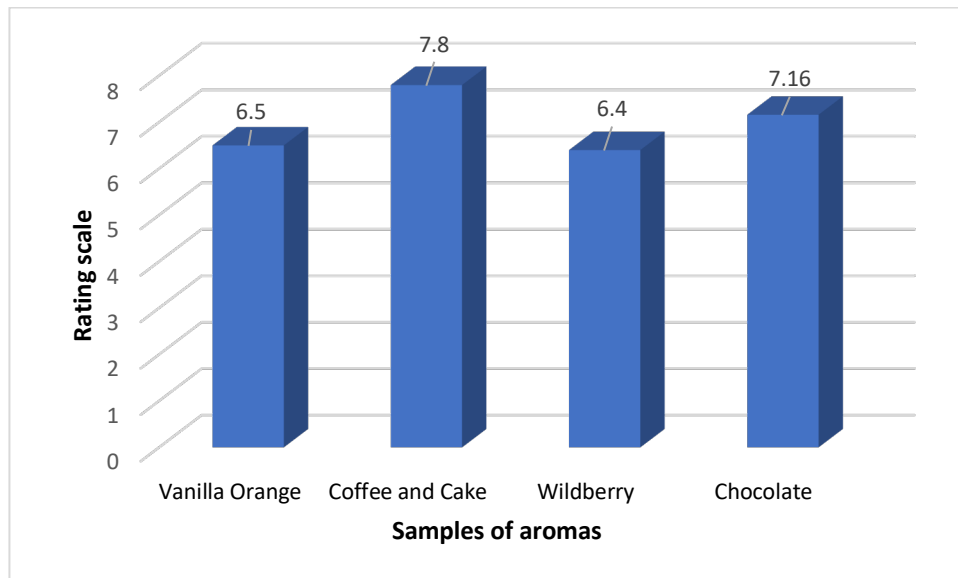


Figure 9 The suitability of a given aroma in connection with the sale of cakes – conscious perception. Note: Own processing 2021.

We also surveyed how the respondents unconsciously reacted to the suitability of the four aroma samples used in the research (Figure 10). From the data evaluated by the software from biometric perception, we focused on excitement, respectively, on the degree of concentration in the verification of aroma samples. The level of excitement already belongs to the group of main emotions and the polarity of emotions. The value of excitement, in other words, the value of concentration, is evaluated on a scale from 0 to 1, where the higher the value from 0, the higher the concentration level. According to the respondents' emotions, aroma sample number 4, i.e., the smell of chocolate, had the highest concentration value, up to 0.42. The reason may also be that most people like chocolate, and this smell is familiar to them, so they pay enough attention to it. Sample number 2, i.e., Coffee and Cake, and sample number 3, i.e., Wildberry, had a slightly lower concentration level, 0.37, based on measurements by facial biometrics. The smallest concentration value, namely 0.34, had sample number 1, namely Vanilla Orange, where we can say that the respondents were the least concentrated in determining this aroma sample. The reason may also be that the smell was uninteresting for them and could remind the smell of cleaning products.

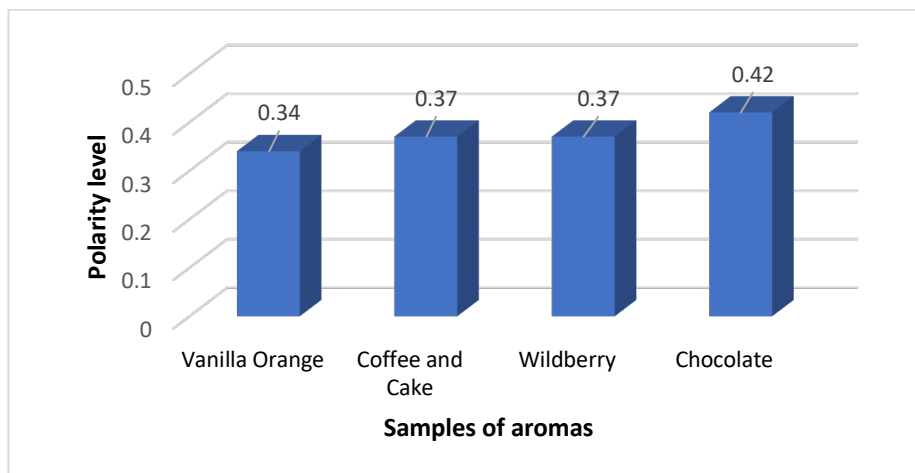


Figure 10 Concentration (excitement) of respondents in the evaluation of aromas. Note: Own processing 2021.

When comparing the conscious and unconscious perceptions, these are a little different. Respondents chose Coffee and Cake as the most suitable aroma in connection with the sale of cake number 2, namely Coffee and Cake, but in unconscious perception won Chocolate aroma sample number 4, which may be due to respondents concentrating best when smelling this aroma sample because they were able to identify it immediately and it made them feel happy.

According to [26], the smell of a product creates a characteristic feature and can be easily identified by the customer. If the product smells pleasant, it acts positively and provides space for a favourable identity.

From the micro emotions we mentioned above, the software recorded the resulting emotions or the main emotions. These emotions include the polarity of the emotions and the excitement of the emotions. The polarity of the emotions determines whether the emotions are negative, positive, or neutral. If the polarity value is in negative numbers, i.e., the numbers are less than 0, then the emotions on the sample are negative. If the values are positive and higher than 0, the emotions in the sample are positive. It can also happen that the value of polarity will be equal to zero, and then we can say that the emotions in a given sample are neutral.

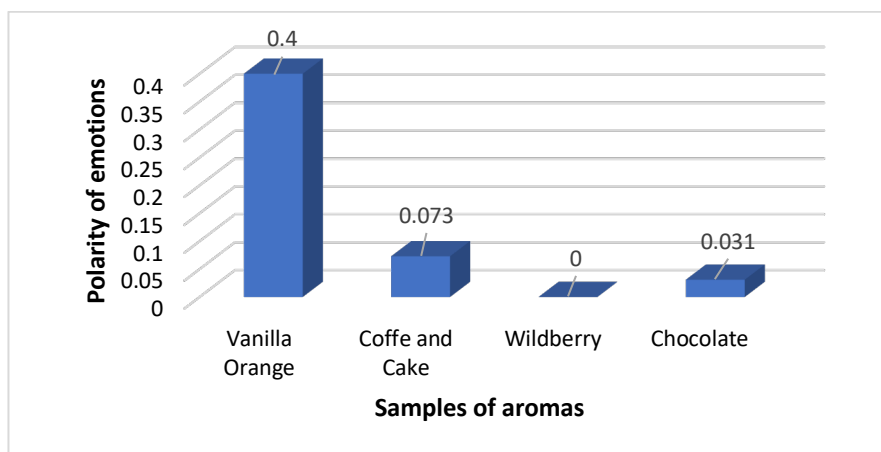


Figure 11 Unconscious perception of aroma samples – polarity of emotions. Note: Own processing 2021.

In Figure 11 can be seen the polarity of emotions of individual aroma samples. The first sample of Vanilla Orange had a polarity of 0.400, and this means that the sample had a positive emotion in the respondents. The second Coffee and Cake sample had lower polarity (0.073), which still represents a positive but low positive emotion. The third sample of Wildberry aroma had zero polarity. It is a neutral emotion. The fourth sample of Chocolate aroma had a very low level of polarity (0.031), which is close to neutral emotions. This result is also interesting because when we found out in the previous part about the excitement (focus) of the respondents, sample number 4, Chocolate, had the highest value and the respondents were able to concentrate on this sample the most and when the value of polarity represented almost neutral emotions, while these mutually do not exclude.

Subsequently, we compared the respondents' answers and their real emotions, which was also served by the question "How do you feel today?". Respondents chose four answers – very good, good, bad and very bad. 66.6% of respondents said they felt good, and even 29.4% of respondents said they felt very well. Only 2% answered that they felt bad, and also 2% chose the option very bad. We think that the answers were certainly influenced by the environment in which they were, as well as the weather as it was on the day we conducted the research.

Thanks to the results evaluated by the system, we were able to look at the micro emotions of the respondents or how they felt from the point of view of biometric measurement.

Comparing the answers and biometric measurements, we found that 66.6% of respondents answered that they felt good, but 63% of respondents had a neutral emotion on this question when we took the results from the software. 29.4% of respondents said they felt very well, but only 11% of respondents had a happy emotion, according to the software. 2% of respondents said they felt bad, and we can confirm from the results of the software that 6% of respondents had angry emotions, and even another 2% were disgusted. As for the other emotions that the software evaluated, as many as 9% of respondents were sad, 6% were even surprised by this question, and 3% were frightened. Here we can see how the human body responds unconsciously to various circumstances.

The following question was: "Do you think that the aroma of the environment when choosing a cake could influence you?" "This question was aimed at whether respondents are willing to admit the influence of the aroma of the environment on purchasing decisions. We found that 90.2% of respondents said that the aroma of the environment would affect their choice of cake. The reason may be that the human senses suddenly feel something that smells good and immediately wants to buy it. 3.9% of respondents admitted that the aroma of the environment does not affect them when choosing a cake. The other 5.9% said they could not judge.

Olfactory marketing (smell marketing) is increasingly getting into the practice of companies that want to improve their economic situation through research and the use of aromas [27].

The aroma should be selected and applied in a way that corresponds and perfectly adapts to the environment and context (Naščáková and Danková, 2017) [1]. Aroma marketing increases commercial results, creates the setting for a pleasant stay in private and public areas, and enhances consumer response, loyalty and trust in the brand (E2 Aroma, 2020) [28].

Table 7 Share of respondents by economic activity in the second questionnaire survey.

Economic activity	Absolute frequency	Relative frequency
Student	14	27.5 %
Employed	32	62.8 %
Self-employed	1	1.9 %
Unemployed	1	1.9 %
Maternity leave	1	1.9 %
Retired	2	4 %
Total	51	100 %

Note: Own questionnaire survey 2021.

Table 8 Share of respondents by residence in the second questionnaire survey.

Residence	Absolute frequency	Relative frequency
City	13	25.49 %
Countryside	38	74.51 %
Total	51	100 %

Note: Own questionnaire survey 2021.

Based on the evaluation of two questionnaires, we recommend introducing aroma marketing into its operation over time, i.e., by introducing aroma into the entire company. The questionnaires concluded that the most suitable aroma in connection with the sale of the cake would be the smell of chocolate or the smell of coffee. This is mainly because both aromas are easy for people to remember and have been known to them since early childhood. It was these two smells that the respondents had no problem recognizing, and they are aromas that people immediately remember when imagining a chocolate cake. The questionnaires showed that the influence of aroma could influence respondents to buy a cake, which could economically support the company.

However, the seller must also appeal to other senses by which he can support sales [29].

At Sport Pub, they can choose a separate aroma diffuser unit or add aroma directly into the company's air conditioning. In the case of an aroma diffuser, they must consider the purchase of the device itself and the operating costs. These costs include aroma fillings that need to be changed regularly and staff maintenance or training costs. After communication with the company Aroma Marketing, we can state that the prices of the aroma diffuser range from 55 € to 2,999 €. With the fact that every month it is necessary to fill the device with new fillings, the prices of which range from 50 € to 150 € per month. It all depends on the equipment that the business owner chooses and its parameters. There is also the possibility of renting the device, where the price would represent monthly costs from € 19.90 to € 109.90 for the Sport Pub. Again, the price depends on the type of device and its performance. However, every month the device must be filled with new fillings, where prices range from € 50 to € 150 per month, and as with the purchase of the device, it is also necessary to count on aroma fillings every month service and staff training. A huge advantage when renting is that the business owner can try a modern form of marketing for a few months and decide whether this service is suitable for the company and especially how it affects customers. The owner must realize that with the right aroma, the return on investment is almost certain in the case of purchase and lease. The return on this investment could be reflected in sales, which could increase, given that the satisfied customers who feel good in this environment spend more time here and therefore spend more money.

Sensory marketing helps to understand customer behaviour and purchasing decisions [30].

We recommend Sport Pub to continue focusing on this marketing in the future and also try other aromas over time, such as the smell of fruit or vanilla, because even these samples can be combined with the sale of cakes. However, it is also necessary to try the aromas at different times of the year as we can get the most out of them for the company. For example, in the cold winter, customers would certainly welcome the scent of cinnamon or punch, which could positively influence them to buy the cakes.

Knowing consumers' behaviour, preferences, and reactions provides the company with a better chance of establishing itself in trade [31].

Emotions and memory are affected by the power of smell in very close ties. Find the right smell, and you can bypass the rational ideas [32].

Merchants are increasingly using the surrounding smell as a strategic tool to differentiate themselves from the competition, attract customers, stimulate sales, influence moods, and create an overall enjoyable and memorable shopping experience [9].

Aroma marketing, or so-called Smell marketing, can be used in two areas. The first is ambient smelling, this term means filling the space with a suitable type of smell, and the other area is smell branding, which can be used to create a specific smell. It identifies a brand, product, institution, company, or environment [33].

The COVID-19 pandemic, which is currently here, must also be taken into account. For this reason, antibacterial aromas have also been developed that reduce viruses and fungi in the air. Essential oils have been developed that have antibacterial effects and reduce the risk of infection in wounds. These aromas are mainly used in spaces such as schools, kindergartens, nursing homes or various clinics. Therefore, we can confirm that aroma marketing moves with the times and its use will even benefit society and businesses. Therefore, we also recommend Sport Pub using aroma marketing.

Based on the questionnaires' results, we recommend choosing the aroma by a biometric test for other companies of various specializations. The cost of the survey would, in this case, be more expensive than research using the standard questionnaire, but the costs can be reimbursed in the form of a suitable choice of aroma and higher sales. Because, in case of the wrong choice of aroma, this would cause negative associations and a decrease in sales.

The relationship between the sense of smell and the ability to retrieve memories and evoke emotions is a proven fact and an established marketing tool resulting in increasing sales [34].

By using a suitable aroma, it is possible and proven to force customers to look around the store longer, spend more money, and return more often [32].

As [35], consumer behaviour has an increasing role in launching products on the market. Although the brand has a huge impact on the consumer's purchasing decision, it is closely related to the products placed in the stores because the final purchase decision by the consumer is made in the store or point of sale [36].

Also, [1] argues that especially smell accompanies the company's image. Companies, businesses or various institutions such as banks, post offices, shops, hotels, waiting rooms, insurance companies, travel agencies or public transport have characteristic smells for their customers that influence them to return there constantly.

[37] also claims that it is important to search for and use new forms of marketing, as we are increasingly saturated with advertising, and this has caused greater immunity to traditional marketing. When selling as well as buying, we always use and need all five senses, which can be used in modern marketing [38].

CONCLUSION

The submitted paper paid attention to introducing the aroma of marketing as a modern tool in practice. Our research was focused on the business entity Sport Pub, located in the town of Brezno, Mazorníkovo district, focusing on hospitality and restaurant services, which has been operating on the market for 15 years.

The use of aroma in marketing is gaining more and more prominence. Many people do not even realize how the aroma can affect their subconscious. Therefore, we decided to focus on how the company Sport Pub could use the aroma of marketing for its operation so that our research would bring benefits to the surveyed company and, of course, higher sales. Introducing the aroma of marketing to the company can cause innovation in its communication with its customers. These facts can contribute not only to the company's competitiveness but also to the development of the company and increase market share.

Two questionnaires were used – the first one was aimed to gain the basic information about consumers and their consumer behaviour and the second one was realized as a blind review of selected aromas by using facial biometrics. Based on both surveys, we can conclude that introducing the specific aroma in the company certainly could influence the sale of the new product- the chocolate cake.

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