TOLERANCE TO URBAN WINDOW VIEWS IN REGARD TO VARIOUS VARIABLES

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ABSTRACT

Given that the trend of urbanization, sustainability goals and inward city growth surges urban densification, the access of daylight and the quality of window views is becoming increasingly challenging. The window view in relation to the social infrastructure can be considered above all relative to public space (squares, parks) but also art & culture (architecture and heritage), safety (maintenance, adaptation to climate changes), information (view of activities, weather) and other. Very importantly, several studies imply that it affects health and wellbeing. This study embraces this context in regard to various window views relative to responders' self-assessment, time spent at home and preferred contents in a view. A questionnaire survey is used to collect data and to determine the respondents' preferred window view and the motivation for gazing through the window. The results are processed with descriptive statistics. The contribution of the study is that, in addition to determining the reactions of the respondents, it directly determines the reasons of individual responses. Expectedly, the favourite view through the window is greenery, and the main reason for looking through the window is mental disconnection. However, the frequency of responses vary throughout various age groups.

KEYWORDS _ *Social infrastructure, Window view, Greenery, Questionnaire*

INTRODUCTION

A window is an important architectural element, as it must provide high-quality lighting of interior spaces with natural light. This is irreplaceable for a healthy and pleasant dwelling. An enclosed space without windows might trigger unpleasant feelings and emotions in people, lack of concentration, symptoms such as depression, insomnia and loss of sense of reality may appear (Yeom et al, 2020). In addition, the window provides a visual connection between the indoor and outdoor environments, thereby providing psychological comfort and personal satisfaction (Yeom et al, 2020; Veitch & Galasiu, 2012). During the long-term epidemic lockdown, looking outside allowed the only visual contact with the environment and also social connection with other people (Batool et al, 2021).

Looking outside provides information about the day's work, weather, location and activities of people in the area. Visual information supplemented with sounds provided by the location – pleasant birdsong, the sound of wind, bubbling water, a lively child... further trigger pleasant feelings (Deng et al, 2020). Many studies have shown that window views affect the health and psychological well-being of individuals (Kaplan and Kaplan, 1989; Kaplan, 1995; Abraham et al, 2010), reduce stress (Tyrväinen et al, 2014). The so-called restorative environments help people recover from mental fatigue (Li, Sullivan, 2016) and stress (Tyrväinen, et al., 2014), increase positive emotions, and improve mood (Kang and Kim 2019) and self-esteem (Jo et al., 2013).

In the recent years, a number of studies have established that the view of the near and far surroundings trigger diverse reactions in a person - these mainly depend on the contents in the view (Aries et al. 2010; Drobne et al. 2022). People respond positively to contents in views that allow a certain level of understanding, place attachment (Wilkie and Stavridou, 2013; Liu et al, 2021) and provide the possibility for exploration (Kaplan and Kaplan 1989). In addition, observers are drawn to views of natural environments that are complex, extensive and contain water bodies (Van Esch et al. 2019; Van der Jagt et al. 2014). Among the natural contents in the view, water motifs (e.g., lakes, sea and rivers) are more desirable than mountains or forests (Menardo and Brondino, 2021).

Due to urban densification, daylight levels and but the quality of the window view also sometimes limited. Often, urban views do not include elements that evoke a positive effect on the viewer. The aim of this study is to investigate viewers' perceptions and responses to window views of nearby facades with different visual qualities, and the motivations for doing so. The research question is:

- What is the main reason for looking out the window;
- Which elements of outward views are preferred in terms of dominant features;

Information is obtained using a questionnaire and descriptive statistics were used to evaluate the results. The analyses especially concentrate on the respondents' preferred window views and the motivations for their propensity to gaze out of windows.

METHODS

For collecting the quantitative data, an online questionnaire was used. The questionnaire consisted of a total of 59 questions in two parts. In the first part, the reactions to window views and the reasons for such reactions were processed, while in the second part, the information on the reasons for looking out the window, how the respondents see themselves, where they spend most of their time during the day (workplace), how they spend their days, gender, age, their status, and what kind of environment they live in was acquired. In this article only the second part that refers to the favourite window view and the main reason for gazing through the window is discussed. Most of the views that people see through the windows of their residences in densely built areas, especially if they live on higher floors, are limited to the cutout of the facade of the opposite building. Figure 1 shows some examples of window such views that were used in the survey. Facades can vary considerably in terms of maintenance and compositional qualities.

Figure 1: Typical window views in densely build residential areas

The survey was conducted in May 2023 via online tool 1KA. The targeted population was invited to participate with an e-mail message. The questionnaire survey was voluntary and anonymous and there was no time limit to complete it. Until now, in our work we mainly studied rather homogeneous respondent groups, such as students and school children (Zbašnik-Senegačnik et al., 2023). In this study, we concentrate on questions related to the status of the respondents, the environment in which they spend most of the day and preferred external views. For this reason, the studied population is general, i.e., quite heterogeneous. Due to the set of contacts through the faculty, the limitation is that most of the responders are rather highly educated.

RESULTS AND DISCUSSION

The survey is currently ongoing and results in over 100 completed questionnaires, about 40% are male and 60% are female respondents. As expected, currently the most represented age groups are 21 to 40 years and 41 to 60 years (the share amounts to approximately 40%), which can be defined as working population (employed). But the respondents also include a fair share of under 20 years and above 60 years with a minor share of retired persons. The group under 20 years are mostly students.
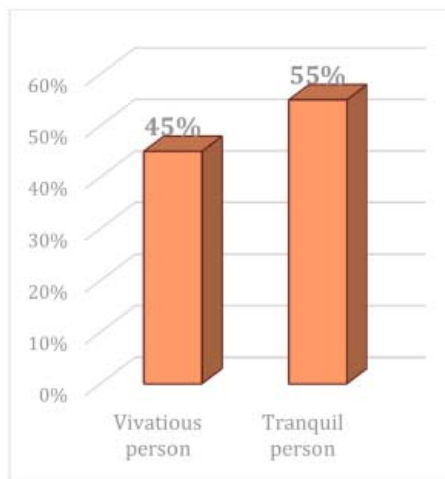

Figure 2: The ratio of respondents' answers to the question about character traits (vivacious person who appreciates good company and fun or tranquil person who appreciates privacy and peaceful life)

The respondents were primarily asked to self-evaluate their character traits (extroverted or introverted). The answers are split roughly in half. Slightly less than half of respondents (45%) see themselves as a lively person who values good company and fun, while 55% see themselves as a calm person who values privacy and peace. In the final analysis, it would be prudent to check whether

character traits influence the preferred window view and whether they are also related to the age of the respondents (Figure 2).

Further, the respondents were asked why they most often look through the window. For more than half of them, the main motivation is mental disconnection and the second most frequent reason are variations in environment. It is also interesting that for the majority of respondents, weather changes do not represent a sufficiently important reason for looking out the window (Figure 3).
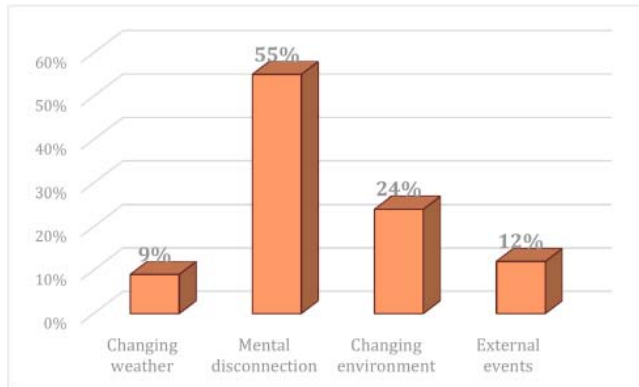

Figure 3: Respondents' main reason for looking through the window

One of the important questions was what their preferred window view was. For almost half of them, greenery (trees, shrubs, grassy areas, flowers) was the favoured window view, followed by rather equal but much smaller shares of built environment, water features and landscape (Figure 4). The respondents indicated greenery as the most desirable content of the window view, despite the fact that in the first part of the survey, reactions to facades were evaluated exclusively without greenery. This is in line with previous studies, ours and those of other researchers, finding that views of nature through windows are favoured and beneficial and can have the similar effect as actually being in nature (Kaplan and Kaplan 1989; Yeom et al., 2020; Veitch and Galasiu 2012; Drobne et al. 2022).

Furthermore, Liu et al (2021) note that attachment to a certain place encourages the individual's emotional ties to the location and has a restorative effect. We can observe this in the context of the preferred window view. Some studies (see e.g., Menardo and Brondino, 2021) find that among the natural contents in the view, water features (e.g., lakes, sea and rivers) are more desirable than mountains or forests. Our study, however, showed that the greenery was much more preferred than the water features.
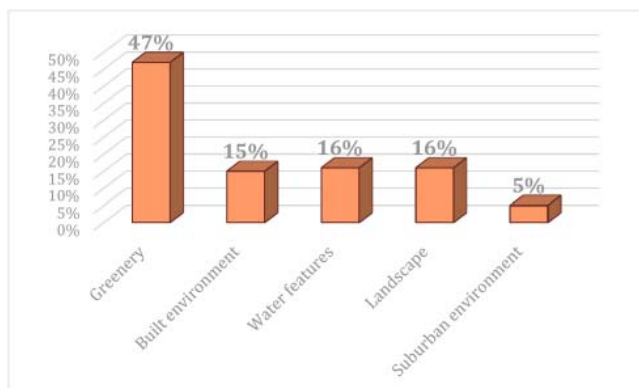

Figure 4: Respondents' favourite widow view

As the survey is still ongoing, the response ratios may still change, but the first analyses indicate some interesting differences between the age groups. The preliminary results imply that the population above 60 years is mainly in favour of window views that include nature, while among the other motives (albeit relatively small) suburban environment was indicated as a preferred choice. In the middle age segments (21-40 years and 41-60 years), the preferences are quite similar. The later segments of the respondents can be considered as a working population, which spends most of time in the working environment. Around half of the respondents in those segments chose greenery as their favourite view, while the other natural motifs (landscape, water features) reach approximately a fifth of the answers. Around half of the younger respondents (up to 20 years), however, surprisingly chose the built environment as their most preferred window view, followed by greenery in a much smaller portion.

Attentive work requires constant focused attention, which causes mental fatigue. Previous research shows that in such cases greenery provides psychological advantages, including the promotion of relaxation and the reduction of stress. For example, Kaplan (2001) notes that short and repeated breaks while looking out the window at nature improve subjective well-being and reduce stress. Expectedly the partial results of our investigation revealed that the most common reason for looking through the window was mental disconnection which offers a momentary escape or break from the current task or surroundings. This may be especially truth for respondent groups that spend most or half of the day in a work environment. The result is also in good agreement with several previous studies, which imply that visual contact with nature through the window can improve general life and work satisfaction (for instance Kaplan 1993, 2001; Kang and Kim 2019; Van Esch et al. 2019).
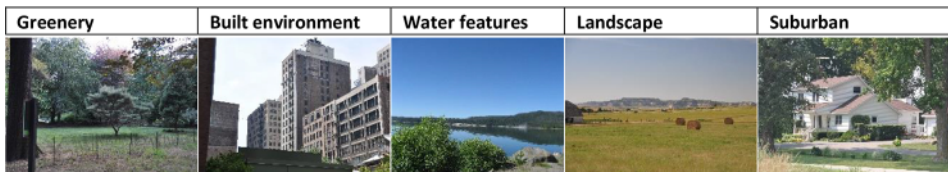

Figure 5: Examples of different proportions of greenery in the window view

Noticeably, the environmental features may also influence respondents. For instance, people who spend most of time in a monotonous environment or in same surroundings may seek visual stimulation in the window view. In our study, the respondents who spent most of their time at home might be so motivated. Noticeably, Wilkie and Stavridou (2013) find that by rating people as "urban" or "rural" it would be possible to determine their preference for the natural or urban environment - a person from a rural area would not rate an urban environment as restorative, while an urban person would evaluate the urban and natural environments equally. Although data in the study could also be used to evaluate this aspect of the answers, we do not plan to perform this comparison. Namely, we already found in a previous study (Zbašnik-Senegačnik et al., 2023) that most of the Slovenian living and working environments comprise greenery and that there are very few distinctly urban environments which would not allow a window view of at least some greenery (Figure 5). Thus, we would not have a sufficient portion of the dominantly urban population in the sample to conduct the analyses.

CONCLUSION

A number of studies have been published on the topic of window views in recent years, but only a few deals with motivational issues of window view in connection with the elements of views and the status of respondents. The results of this study were obtained with the help of a survey that is still ongoing, therefore preliminary results of the second part of the survey that refers to the favourite window view and the main reason for gazing outside are presented. Currently the share of respondents is quite balanced and adequately corresponds to the representation by gender in the general population. The

sample also represents the different age groups well. Given the structure of the respondents, the answers regarding the reasons for looking outward are expected - the main motivation is mental disconnection and the second most frequent reason are variations in environment. It is also indicative that weather changes are not perceived as an important motivation for looking out the window.

One of the important questions was what the preferred window view was. For almost half of respondents, greenery (trees, shrubs, grassy areas, flowers) is the favoured window view, followed by much smaller shares of built environment, water features and landscape. As attentive work requires constant focused attention, this may cause mental fatigue. Previous research shows that in such cases greenery provides psychological advantages, including the promotion of relaxation and the reduction of stress. Although some studies find that water motifs (e.g., lakes, sea and rivers) are more desirable than mountains or forests, our study, however, reveals a different result, namely, the greenery is much more preferred than the water features. This could be attributed to place attachment and the responders' expectations linked to it.

Due to the fact that values, preferences and interests are changing with age, they may also affect one's favourite window view. While elderly people can prefer peaceful and open scenery comprising nature, younger people might be more attracted to a lively environment that includes entertaining activities, like urban scenes. Furthermore, lifestyle, personal status and individual preferences may influence one's choice for a specific view, making them a potential consideration for further studies.

Noticeably, the building features may also influence respondents. For instance, people who spend most of time in same surroundings may seek visual stimulation in the window view. In our study, the respondents who spent most of their time at home (including those who frequently work from home) might be so motivated.

Findings regarding the respondents' preferences of window views are important, as they affect their well-being and concern a wide range of users. These findings, although currently partial, will serve as a welcome guide in the continuation of this study and as a direction for further work in the field. Equally, they show which research areas are currently underrepresented and can serve as a baseline for development of the field. In addition, for professionals it may show the main impacts of residential design in the field of daylighting features and can indicate pathways to mitigate the existing challenges as well as show direction toward the future practices. For policymakers, this research may prepare foundations for regulative measures.

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