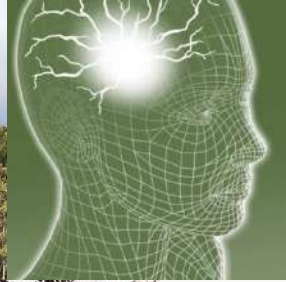


# PSYCHO-EMOTIONAL PERCEPTION PRINCIPLES OF GREEN SPACES



„LAS I ZDROWIE CZŁOWIEKA“ - 26.10.2023



KAUNO MIŠKŲ IR APLINKOS  
INŽINERIJOS KOLEGIJA

Vaida Vaitkutė Eidimtienė  
KMAIK 2023

# GREEN AREAS



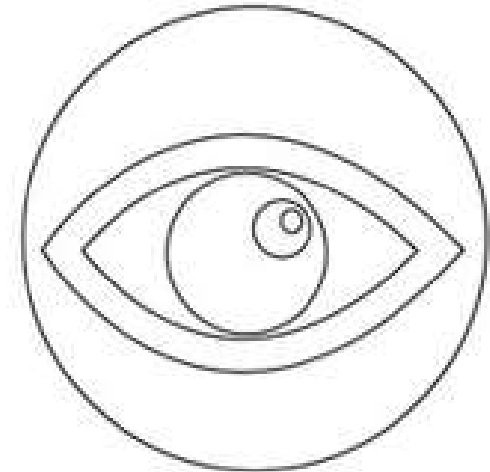
- The concept of "green space" is not legally defined in law. Because of this, anyone can interpret it in their own way. It is commonly understood that human-created green areas are emotionally perceived a part of the urban environment.
- The holistic model of the world, the city is a part of nature, not vice versa.

**NATURE IN THE CITY?**

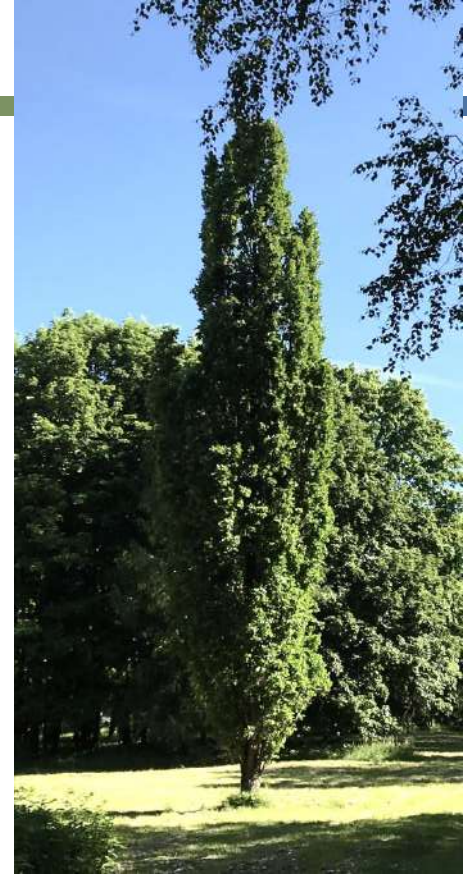
**CITY IN NATURE?**

# PSYCHOEMOTIONAL PERCEPTION OF THE LANDSCAPE. VISION

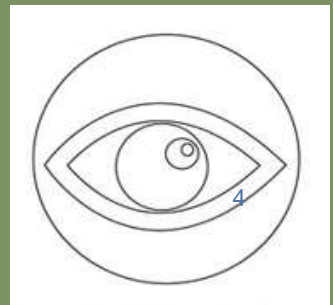
- **Vision.** Research has determined that about 80 percent of our environment is perceived through vision (Rock, Harris, 1967).
- Image (physical) – directly perceived (during visual contact).
- „Image (mental) experiential, emotionally significant to the individual, a product of direct sensation and perception, past experiences, and memory“ (Lynch, 1982).







# PSYCHOEMOTIONAL PERCEPTION OF THE LANDSCAPE









## EFFECTS OF PHYTONCIDES:

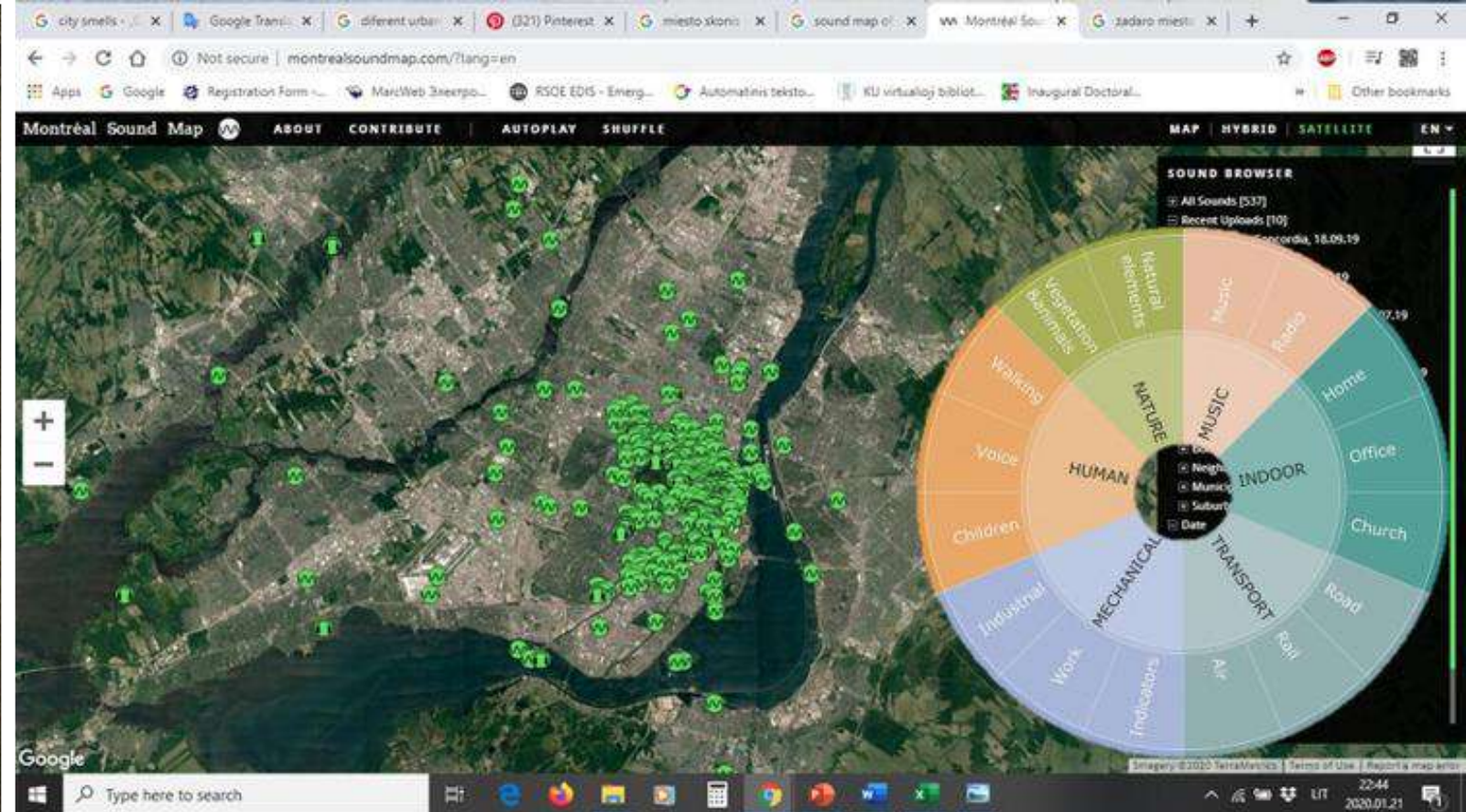
- Certain tree and shrub species during the vegetation period produce volatile essential oils - phytoncides which are substances that destroy microorganisms. During the vegetation period, 1 hectare of deciduous forest emits about 2 kg of phytoncides from trees with antibacterial properties, while 1 hectare of coniferous forest emits 5 kg (1 hectare of junipers can emit as much as 30 kg). The impact of phytoncides is highly effective, as, for example, pine phytoncides can kill microorganisms within 10 minutes, and juniper phytoncides within 5 minutes.







Nature Conservancy JAV



EGIDIJUS RYBAKOVAS  
LIETUVOS PAUKŠČIŲ BALSAI



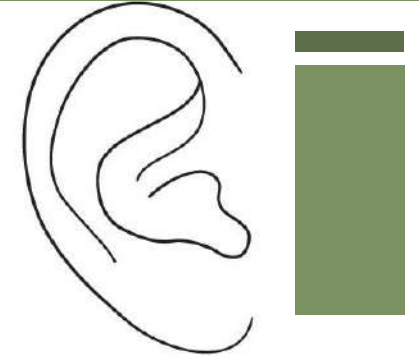
LIETUVOS FAUNA I-II

# PSYCHOEMOTIONAL PERCEPTION OF THE LANDSCAPE

- Geophony** - non-biological sounds.
- Biophony** - sounds produced by living organisms.
- Anthrophony** - human voices and sounds generated by human activities.



## THE EFFECTS OF SOUNDS:



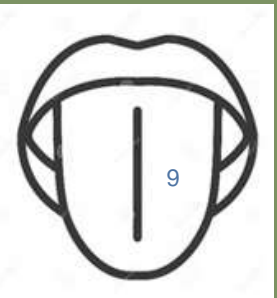
- Healing (sound therapy) aims to achieve physical, psychological, and spiritual harmony.
- Sounds of natural origin (geophony) – including the soothing effects of wind-induced rustling leaves, flowing water, falling water, waves, and rain. These sounds often have a positive and healing impact.
- Sounds of nature, have a calming effect: leaf rustling at 30 dB, rain at 50 dB, and calm sea at 50-60 dB.

The most common is colored hearing: sound evokes not only hearing, but also the sensation of color

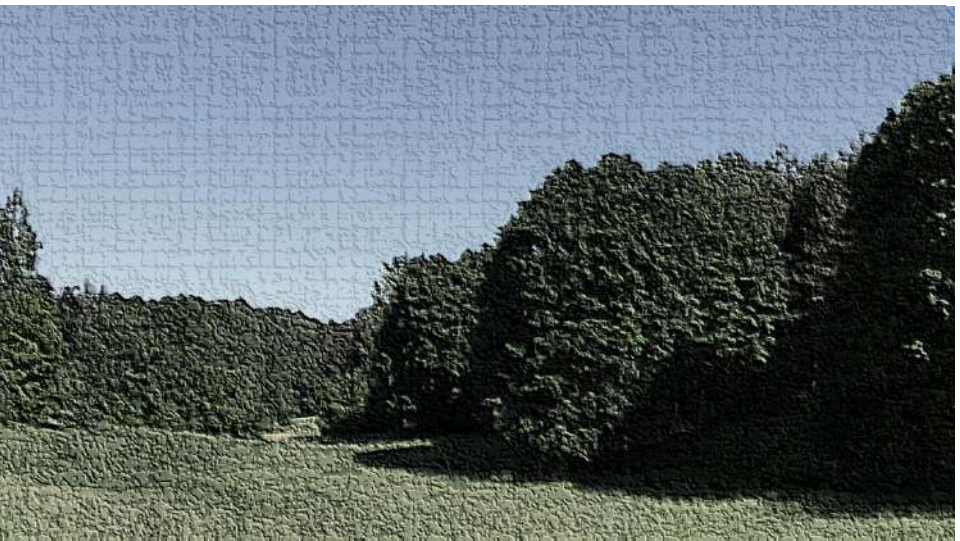




# PSYCHOEMOTIONAL PERCEPTION OF THE LANDSCAPE







# PSYCHOEMOTIONAL PERCEPTION OF THE LANDSCAPE





# EMOTIONAL EFFECTS OF FORM



a) kūgiška; b) koloniška; c) elipsiška; d) kiaušiniška; e) rutuliška; f) skėtinė; g) netaisyklinga; h) svyruoklinė.

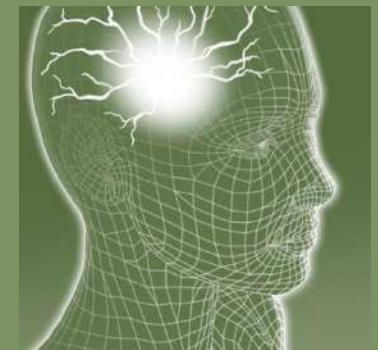


- Oval - a rounded, indistinct shape that helps evoke a sense of calm.
- Strict vertical - perceived as an accent, a distinct shape that creates a feeling of sharpness.
- Weeping form - often encountered near water, it evokes melancholy, sadness, and longing.



# SCALE

A landscape of a larger scale is perceived as majestic, while one of a smaller scale is seen as intimate and pleasant.







## OPEN AND CLOSED SPACES

- The human eye is attuned to infinity. To perceive an object, the visual mechanism adjusts the distance and proximity. In a spacious environment, people relax while in a confined space, they may feel tension. Heart rate quickens, breathing becomes faster, and fatigue sets in more rapidly in closed spaces.

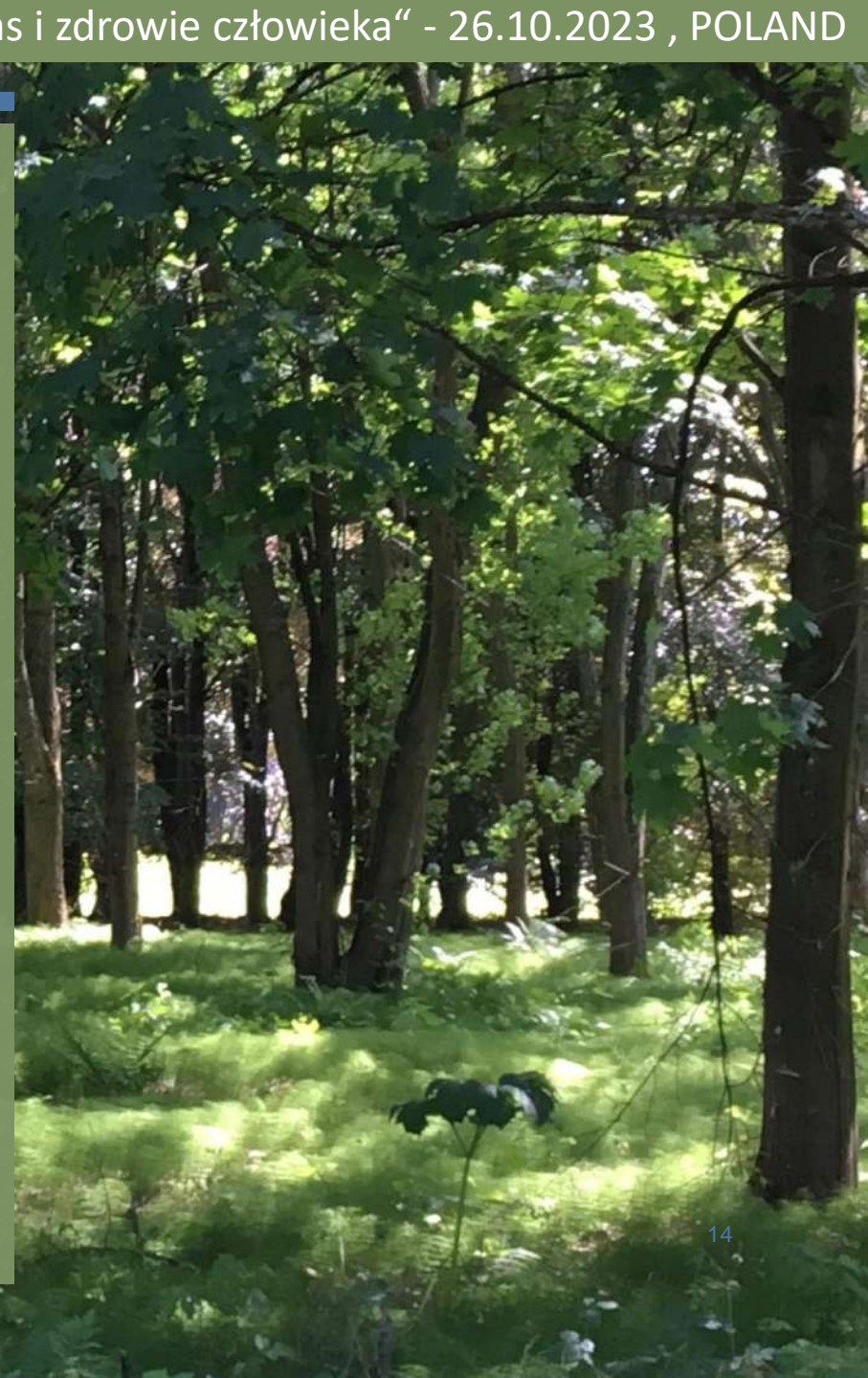
Grecevičius, P., Genys, J., R., Abromas, J., kt. 2013





# THE PSYCHOLOGICAL (AESTHETIC, EMOTIONAL) QUALITIES OF DIFFERENT SPATIAL STRUCTURES IN FOREST LANDSCAPES

- According to expert evaluation based on five psychological methods for determining the quality of forest landscape sites, from a psychological perspective, open forest landscapes close to clearings are the most favorable for recreation. Semi-open landscapes come next, and the least preferred are closed forest landscapes.
- Open forest landscapes sites, according to A. R. Budriūnas' methodology, are rated aesthetically three times better than closed landscapes. Semi-open forest landscapes sites are rated twice as favorably as closed ones but are about 40% less favored than open landscapes (E. Riepšas, 2012).







## COLOR PALETTE

- The predominant color of local landscape vegetation is green. The color palette can consist of more than 130 shades, and the overall landscape color changes at least 9 times per year. Lighting, time of day, season, and weather conditions are important factors for analyzing/perceiving the color palette.



# CHARACTERISTICS OF SENSORY PERCEPTION

The use of sensory perception depends on brain activity. The following features are characteristic of human (user) perception:

- First and foremost, humans do not notice the entirety of their surroundings. The brain has an amazing ability not to burden itself with unnecessary information. Unnecessary information is "filtered out," and individuals only notice what captures their attention. Attention is drawn to what relates to their needs or what is unexpected to them and stands out from the environment.
- The second characteristic of environmental perception is the tendency to "adjust" incoming information to fit one's desires and beliefs. Inaccurate information is either completely ignored or adjusted: people see what they want to see and hear what they want to hear.
- The third perceptual characteristic is the ability to remember only a portion of the received information. Bearing in mind that individuals may not have noticed everything, some things may have been distorted, and some might be forgotten - it is not advisable to rely too much on memory.



# STAGES OF THE PERCEPTION PROCESS

People's perception of the same thing can vary. Perception is highly subjective. Perception is the process by which stimuli are sensed, filtered, and interpreted into a meaningful and coherent external view of the world. The following stages of the perception process are distinguished into (Bakanauskas, 2006; Urbanskienė et al., 2000):

- First - contact. The perception process begins with contact with a stimulus. Sensation occurs when an individual encounters environmental stimuli either accidentally or consciously.
- Second - attention. Attention influences our choices. Attention is the scope of processing stimulus.
- Third - sensation. Perception is the process through which we receive information through the five senses. Sensation is the response of sensory receptors (eyes, ears, nose, mouth, fingers) to stimuli.
- Fourth - interpretation. Interpretation reveals what meaning the user assigns to sensory stimuli.



## CONCLUSION

- Perception of landscapes is a process where each individual personally receives information and responds to stimuli through the five senses (sight, hearing, smell, taste, and touch). The results can be perceived consciously or accidentally.
- Interpreting environmental information is a crucial step in the perception process because it indicates what meaning the observer assigns to sensory stimuli.
- Conscious observation of natural elements (landscape spaces, tree canopy shapes, colors, lines), listening to sounds, smelling fragrances, and touching natural textures establish connections that create physical and mental health benefits.
- All the principles mentioned above are applied in nature and forest therapy, leading to improved mood, reduced stress, normalized blood pressure, enhanced immune system function, improved sleep quality, and increased attention span...



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THANK YOU FOR YOUR ATTENTION!