horizontal size), and the other was a ratio of extent (E: a fraction of the observing area and the image area). In 10 subjects the relationship between D and E was linear. The subjects of this type tended to see the images with the invariant horizontal observing size. In another 5 subjects, E was constant regardless of D. The subjects of this type tended to keep the same area size in any observation. And the rest 6 subjects mediated between both.

2-13 Cardiovascular Responses of Type A and Type B in Stress and Recovery by Visual Stimulus
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Type A Behavior Pattern individuals (Type A) display greater cardiovascular sympathetic reactivity for stress and a slower cardiovascular recovery than Type B Behavior Pattern individuals (Type B). This study aims at investigating whether the passive visual viewing task also leads to those differences between Type A and Type B in the cardiovascular responses. 30 healthy undergraduates and graduates (14 females) participated in present study. All participants performed 6 times repetition of 3 conditions, rest, stress, and recovery conditions. All stimuli were presented during 3 minutes respectively, and grey screen on rest condition, displeasure-evoking images on stress condition, and video clip of forest on recovery condition. As a result of present study, although there was no difference between Type A and Type B in recovery responses by nature video, Type A showed greater CO increase in stress condition and shorter PEP in rest condition than Type B. These results suggest that enhanced cardiovascular reactivity of Type A may also appear in passive stress of visual viewing and in physiological baseline.

2-14 Physiological and Psychological Responses to Natural Moving Images: What Contributes to Differences in Responses?
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In this study, we investigated what contributes to differences in cardiovascular and psychological responses to natural moving images (NMs). Eight different NMs were presented to 15 participants. Cardiovascular indices were measured during presentations. Psychological responses and impressions were determined by questionnaire. Physical components of NMs (e.g. brightness, saturation, difference between frames, etc.) were extracted from their digital bitmap data. Based on ANOVA, NMs had main effect on thermal sensation (TS) and on the change of cardiac output (ΔCO). TS was mainly affected by hot and cold impressions. Multiple regression analysis revealed that hot and unpleasant impressions increased ΔCO. However, physical components of NMs had no significant correlation with TS and ΔCO. Pleasant and unpleasant impressions, on the other hand, were associated with saturation and difference between frames of NMs. These results suggest that cardiovascular and psychological responses are sensitive to impressions rather than to physical components of NMs. However, physical components of NMs may affect impressions, which can contribute to differences in cardiovascular and psychological responses.

2-15 Physiological Response to Visual Stimuli using a Large Screen—Measurement of the Absolute Hb Concentration of Prefrontal Region by Mulch-Channel Near Infrared Spectroscopy—
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The purpose of the present study was to clarify the localization of prefrontal activity by estimating the absolute Hb concentration at rest and change in the Hb concentration during stimulation at 10 measurement points (5 points each on right and left side) in the prefrontal region. The subjects were 19 male students (21.6±1.5 years old). Before visual stimulation, the absolute Hb concentrations at the 10 points in the prefrontal region at rest were measured (TRS-10, Hamamatsu Photonics K.K.). The visual stimulation was conducted by presenting three different pictures on a large-size high-resolution screen (3.40 m x 6.25 m). Changes in the Hb concentrations at the 10 points were monitored every 2 seconds during the stimulation, which lasted 90 seconds (C9866, Hamamatsu Photonics K.K.). As a result, there was a difference in time-course change in oxy-Hb concentration ([oxy-Hb]) among measurement points, which indicated that some points showed activation while other points showed deactivation during the same stimulus. A significant negative correlation between the baseline and change in [oxy-Hb] was observed in several measurement points. At particular points, [oxy-Hb] was increased by the stimulation when the baseline was low, while it was decreased when the baseline was high. The findings will help in the interpretation of the meaning of hemodynamics in the prefrontal region.

2-16 Effect of Oxygen Metabolism in Brain to an Audiovisual Stimulus and the Mental Scaling
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