2:45

5pNSa6. Predicting habituation/adaptation to aircraft noise. Julie Hatfield, RF Soames Job (Dept. of Psych., Univ. of Sydney, Sydney, Australia), Stephen Morrell, Norman L. Carter (Univ. of Sydney, Sydney, Australia), Peter Peploe (Natl. Acoust. Labs., Chatswood, Australia), and Richard Taylor (Univ. of Sydney, Sydney, Australia)

Whether or not people habituate and/or adapt to a negative soundscape remains a contentious issue. The Sydney Airport Health Study has involved interviews with residents before, soon after, and several years after the runways were reconfigured. Noise increased in some low-noise areas and decreased in some high-noise areas (while other areas remained highly exposed and unchanged, or minimally exposed to aircraft noise). Of the pre-reconfiguration sample, 23.6% reported getting used to the noise. This paper examines the factors which predict who will get used to the noise and who will not, by regression against a number of predictors: noise exposure, sensitivity, attitude, personality, age, gender. The post-reconfiguration studies also allow examination of the speed with which reaction changes with changed exposure, and the factors which predict changes in reaction. Underlying mechanisms other than adaptation and habituation are considered.

3:05–3:20 Break

3:20

5pNSa7. 1/*f* dynamics in the urban soundscape. Dick Botteldooren, Bert De Coensel, and Tom De Muer (Dept. of Information Technol., Ghent Univ., St. Pietersnieuwstraat 41, 9000 Gent, Belgium)

Urban soundscapes are characterized by much more than loudness alone. Subjective description has been used by many researchers to grasp these additional dimensions, but very little objective criteria are found in literature. In this paper the dynamics of the soundscape is proposed as a potential indicator. By analyzing loudness and pitch fluctuations in longer sound fragments recorded in urban environment, $1/f$ spectral behavior at frequencies ranging from 0.01 to 10 Hz was discovered. Such behavior is typical for complex systems and was found to be very common in (classical) music, already in the seventies. Some hypotheses will be given on the origin of this frequency dependence of urban-soundscape dynamics. The possibility of discriminating soundscapes on the basis of the frequency dependence of loudness and pitch fluctuation will be illustrated. For this purpose the urban soundscapes are compared to ''extreme'' soundscapes that have a very distinct character that is clear to every observer.

3:40

5pNSa8. Socioeconomic status and the experience of noise. Aslak Fyhri (Inst. of Transport Economics, P.O. Box 6110, N0602 Oslo, Norway)

In this study how road traffic noise is experienced in an affluent (western) and a more deprived (eastern) area of Oslo is compared. The results are based on interviews with 1400 people in Oslo, together with calculations of 24 h equivalent noise levels at each individual apartment's most exposed side (the Nordic calculation method). People in the western part of town report far more positive qualities in their neighborhood than those in the east. They are more satisfied with the visual aesthetics of the neighborhood, the quality of outdoor areas, the level of air pollution, and the central location of the city area. The only exception to this somewhat rosy picture is the exposure to road traffic noise. There are more people (31% of the respondents) exposed to noise levels above 65 dBA in the western area, than in the eastern area (11%). The respondents in the west are also more annoyed by road traffic noise, compared with those in the east. When controlling for individual noise levels, the results do not support the hypothesis.

4:00

5pNSa9. The neighborhood soundscape and the residents' perceptions of its quality. Ronny Klaeboe, Aslak Fyhri (Inst. of Transport Economics, P.O. Box 6110, N-0602 Oslo, Norway), and Sigurd Solberg (KILDE Akustikk, N-5701 Voss, Norway)

In autumn of 2001 a small socio-acoustic survey was undertaken in an affluent Oslo city area. A telephone survey provided data on neighborhood quality and environmental annoyances from 400 respondents after a response rate of 38%. The Nordic calculation method was employed to estimate 24h LA_{eq} noise exposure values in front of the most exposed facade of each resident's apartment, and for various neighborhood locations. The quality of the neighborhood soundscape of each dwelling (and respondent) was thereafter characterized by a simple indicator of the maximum of these exposure values within a radius of 75 meters. Ordinal logit models were used to model people's noise annoyance when at home as a function of the noise level outside the most exposed facade and the modifying impact of the neighborhood soundscape. The analyses using data from the Oslo West city area thus replicate previous analyses undertaken in Oslo East and Drammen. However, the Oslo West questionnaire also included simple questions about the residents' perceptions of their neighborhood soundscape, and their use of their neighborhood area. The inclusion of these questions made it possible to analyze the correspondence between the estimated neighborhood soundscape quality and people's assessment of their noise neighborhood.