**Hartley & Adams (1974)**

N = Noise

Q = Quiet

E = Experiment

C = Control

Ss = Subjects

Decibel Examples

0 dB – Threshold of hearing

20 dB – Very quiet room

40 dB – Quiet room

60 dB – Conversational level

80 dB – Loud (traffic, industrial)

100 dB – Very loud (power saw)

120 dB – Immediate damage potential

140 dB – Threshold of pain

Experiment 1:

“Comparing tests in the N and Q conditions independently, N increased the time taken to sort the E pack by about 3% and decreased the time taken to sort the C pack by about 1%” (p. 63).

“The difference in time taken to sort E and C packs was nearly twice as large in N (22.97 sec.) as in Q (14.69 sec), *F* (1, 17) = 4.55, *p* < .05” (p. 63).

Experiment 2:

Group 1 = 10 minute exposure of sound

Group 2 = 30 minute exposure, Stroop in last 10 minutes

“The Ss worked faster on their second test than on their first on E sheets (*p* < .001) and on C sheets (*p* < .02)” (p. 64).

“Every S worked more slowly on the E than the C test in every condition” (p. 64).

**“There was however, a strong interaction between Interference and Duration of Exposure to N and Q, *F* (1, 30) = 15.81, *p* < .001. This interaction occurred because the interference, or difference between C and E tests, was less in the N condition (45.13) than in the Q condition (55.50) in the first 10 min. exposure, *F* = (1, 30) = 7.46, *p* < .025”** (p. 64). \*\*see below

“The effect of noise on this interference depends on duration of exposure; interference was reduced by the short exposure” (p. 65).

*\*\**The difference between C and E is bigger in the Q condition than is the difference between C and E in the N condition. This is how we see the interaction coming into play… Every experimental condition took more time than every control condition, but that difference is even bigger (the difference is heightened) in the quite condition than in the noise condition.

“Hartley and Adams (1974) utilized the Stroop test to observe the effects of sound on performance efficiency. They hypothesized that the addition of intense noise would extend the amount of time it takes a participant to complete the Stroop task due to overstimulation while a small amount of noise would cause improvement (Hartley & Adams, 1974). They achieved this by exposing participants to a set level of noise for different intervals of time. Hartley and Adams (1974) also introduced alternative methods of responding to the Stroop test. Participants sorted cards in one experiment and ticked a box with pencil in another as oppose to verbal response. Their data was not significance but it did point towards short periods of noise exposure as being beneficial while longer periods increased impairment (Hartley & Adams, 1974). They also support previous work that suggests that interference may be amplified by a participant verbally reporting the Stroop test. The Hartley and Adams (1974) paper preceded a large amount of research which focused on using the Stroop test as a baseline measurement for factors that interfere with cognitive abilities. This opened the door to studies of other distractors and gave future researchers a starting point for noise-related research.”