Warnings and Instructions: How to Write Clearly

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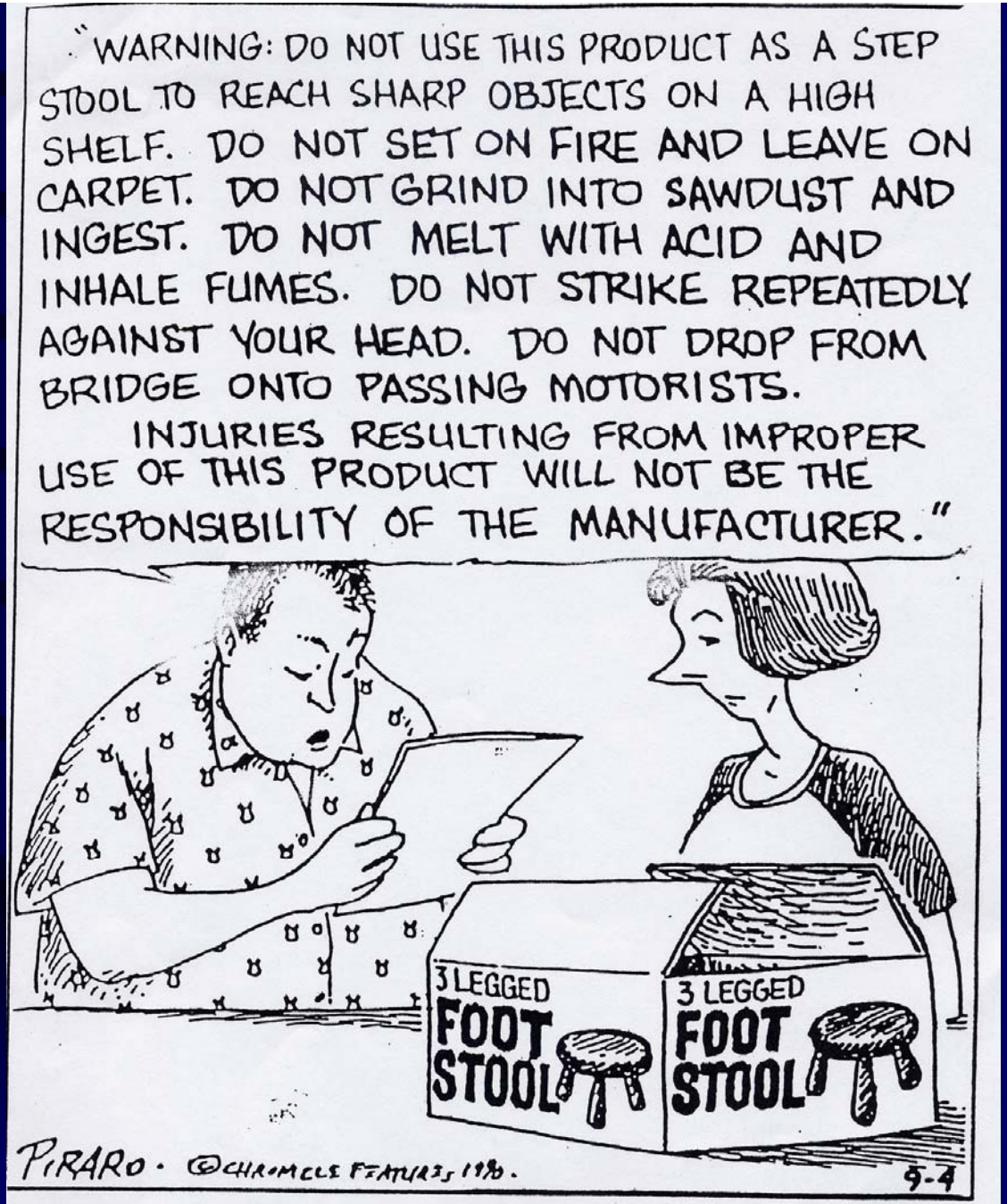

The Mechanical Design Process, ULLMAN, 1992, Mcgraw Hill

Writing must be:

- Clear
- Precise
- Specific

Example - clarity

- “Remove threaded end shown from spring”
- Should be: “Remove threaded end (A) from spring (B)

Example - terminology

- “Throttle engine to slow idle”

- Suggest: “Don’t use “throttle.”
- Try “Decrease (reduce) engine speed to slow idle

Example - punctuation

- “If stop engine indicator flashes”
- Suggest “If STOP ENGINE indicator flashes”

Example - precision

- “Never energize heater in air”

Suggest “Never energize heater when it is not immersed”

Example - precision

- “Install new hoses periodically. Tighten hose clamps regularly”
- Suggest: “Always install new hoses when changing coolant. Tighten hose clamps every six months of operation.”

Symbols, Wording, and Conspicuity

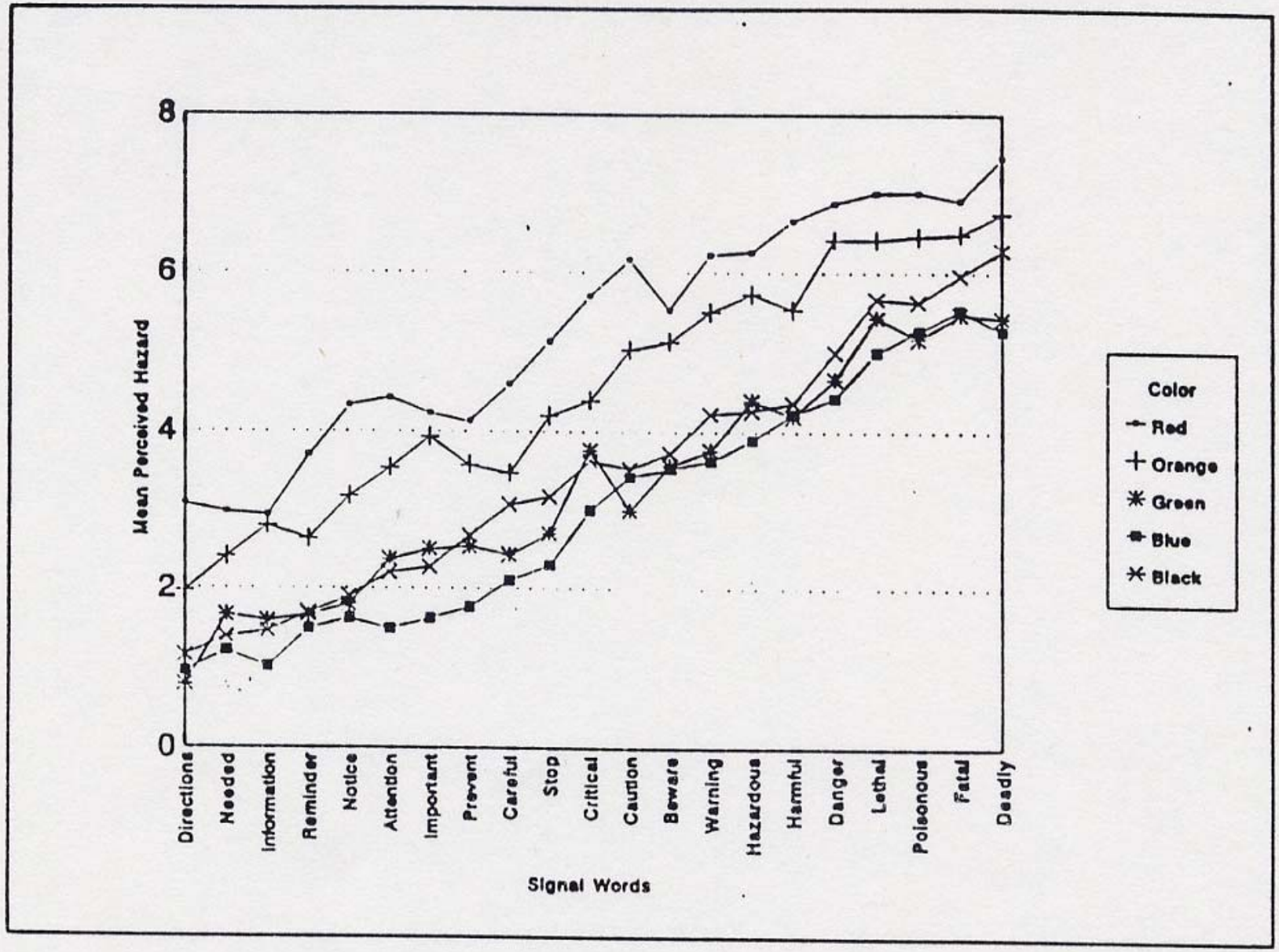

Figure 2.2 Mean perceived hazard for the combination of 21 signal words and 5 colours

Unintelligible Symbols

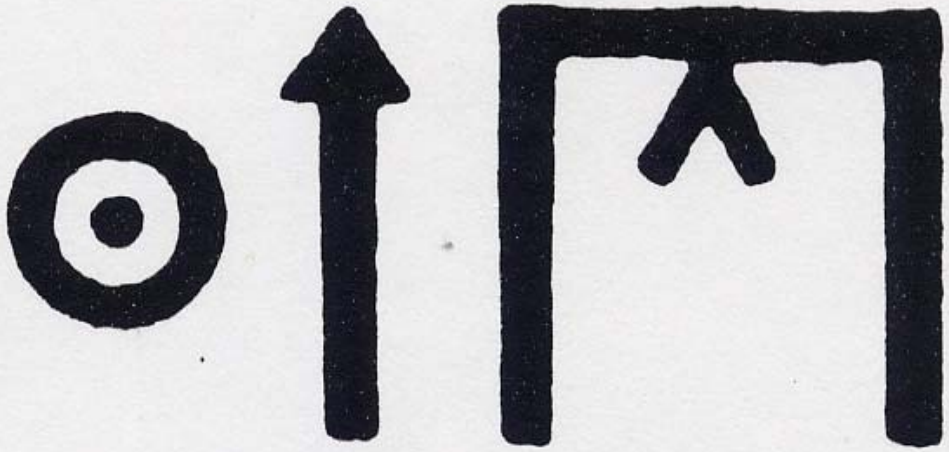

Figure 3.2 An example of a sentence using Blissymbolics. The sentence is intended to mean 'Look up! Low door!'

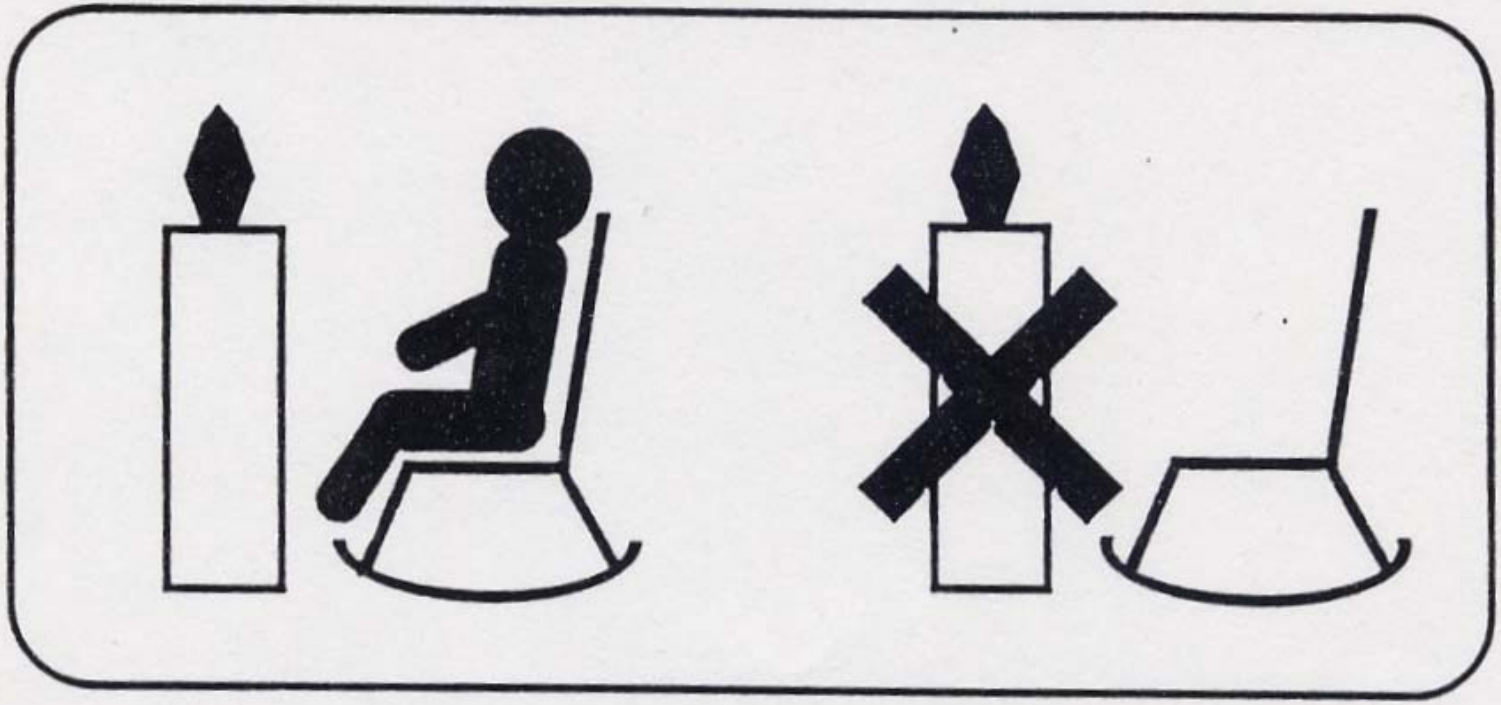

Figure 3.3 An example of the use of more than one symbol to convey warning information. ('Never leave burning candles unattended', from Zwaga *et al.* 1991).

Do not block—keep passageway clear (19%)

Do not use water (63%)

Do not lock (59%)

Figure 3.4 Examples of poorly understood symbols, from Collins and Pierman (1979). The figures in parentheses are the per cent correct figures the authors obtained from a sample of 143 students, retirees and fire station workers.

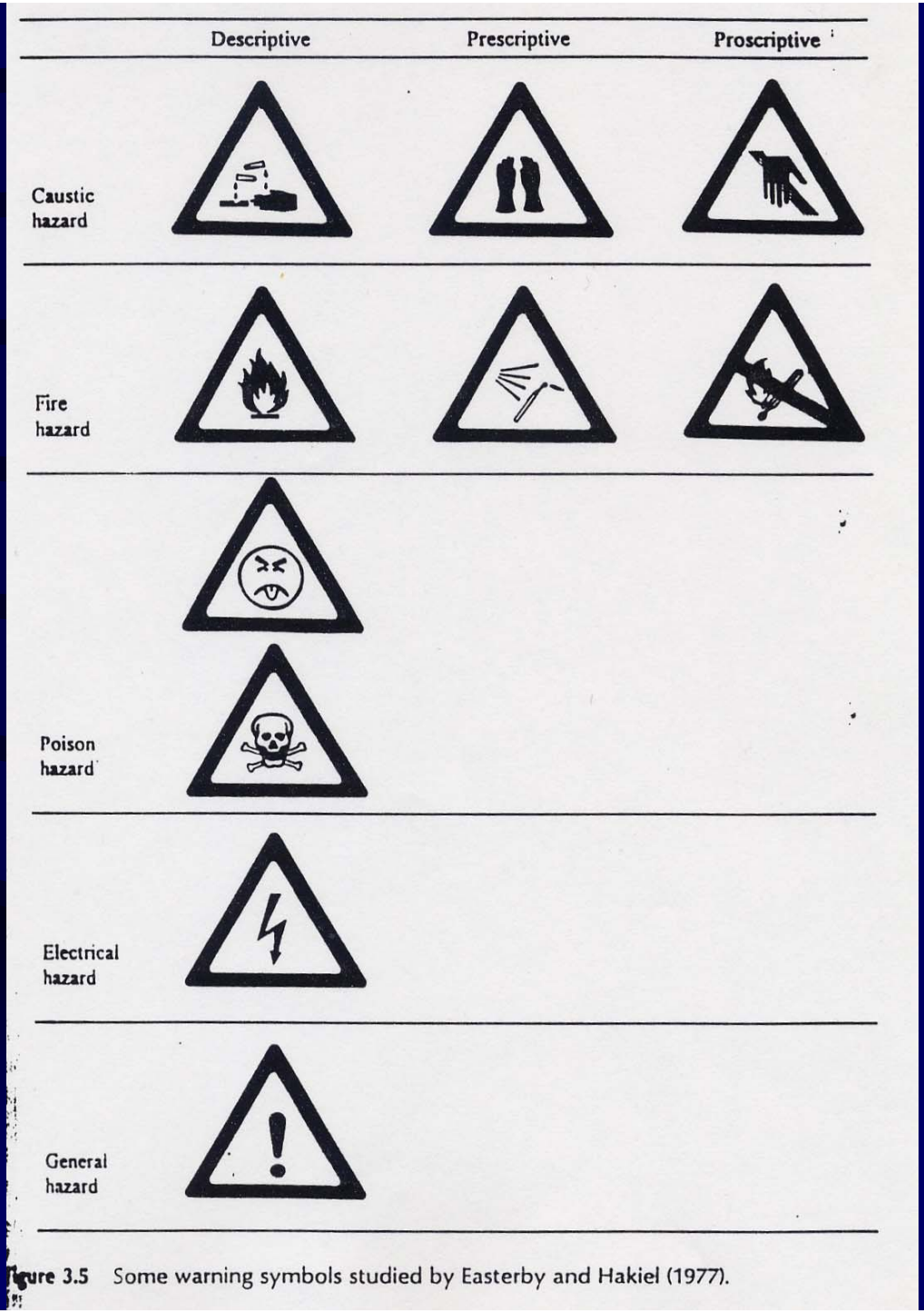

Figure 3.5 Some warning symbols studied by Easterby and Hakiel (1977).

Sensory Overload

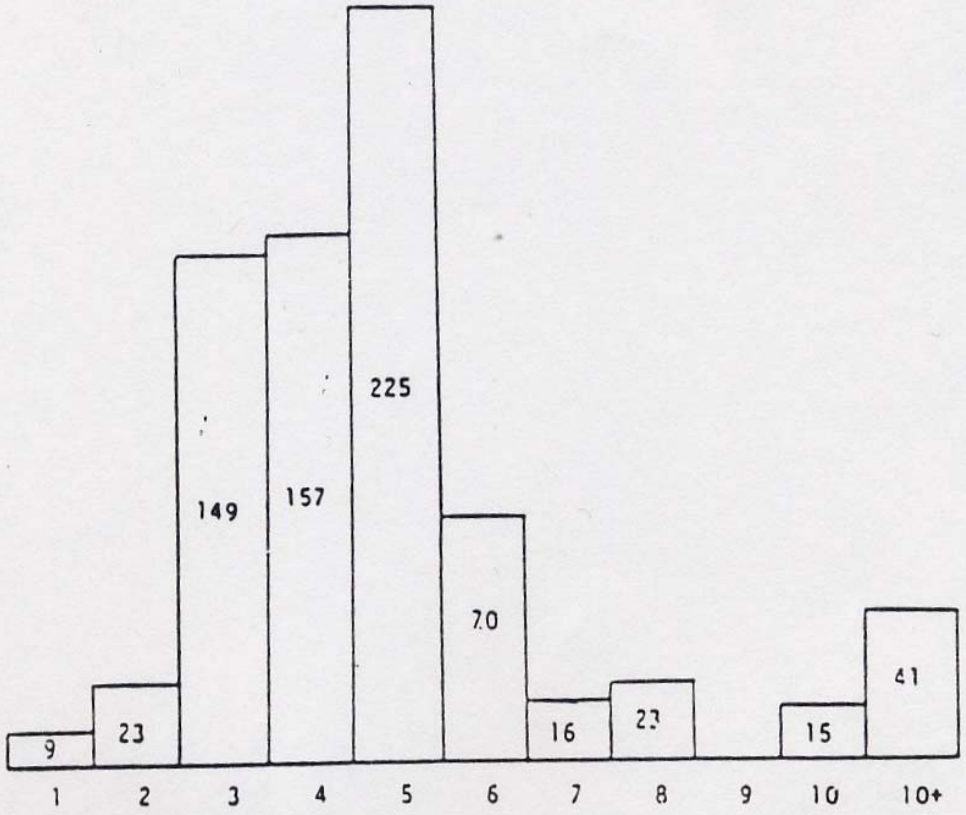

Figure 4.1 Number of individually recognisable alarms anaesthetists say they can cope with (from McIntyre, 1985).