MODES OF REPRESENTATION

If you look in old chemistry books vou see all those line cuts of laboratory experiments in cross-section. The sign for water is a containing line, the meniscus (which rarely curls up the walls of the beaker), and below it a sea of straight horizontal dashes carefully unaligned vertically. Every cork or rubber stopper is cutaway. You can see inside every vessel without reflections, without getting wet, and explore every kink in a copper condenser. Flames are outlined cypresses or a tulip at dawn, and some Klee arrows help to move gases and liquids the right way. Sometimes a disembodied hand holds up a flask. Sometimes there is an unblinking observer's eye. Around 1920 photoengraving became economically feasible and took over. Seven-story distillation columns (polished up for the occasion), like giant clarinets, rose in every text, along with heaps of chemicals, eventually in color. Suddenly water and glass, all reflection became difficult. One had to worry about light, about the sex and length of dress or cut of suit of the person sitting at the controls of this impressive instrument. Car models and hairstyles

dated the books more than the chemistry in them. Around that time teachers noted a deterioration in the students' ability to follow a simple experimental procedure.