In the terminology that became accepted much later, we held a two-system view, which distinguished intuition from reasoning. Our research focused on errors of intuition, which we studied both for their intrinsic interest and for their value as diagnostic indicators of cognitive mechanisms.

The Two-System View

The distinction between intuition and reasoning has been a topic of considerable interest in the intervening decades (among many others, see Epstein, 1994; Hammond, 2000; Jacoby, 1991, 1996; and numerous models collected by Chaiken & Trope, 1999; for comprehensive reviews of intuition, see Hogarth, 2001; Myers, 2002). In particular, the differences between the two modes of thought have been invoked in attempts to organize seemingly contradictory results in studies of judgment under uncertainty (Kahneman & Frederick, 2002; Sloman, 1996, 2002; Stanovich, 1999; Stanovich & West, 2002). There is considerable agreement on the characteristics that distinguish the two types of cognitive processes, which Stanovich and West (2000) labeled System 1 and System 2.

The scheme shown in Figure 1 summarizes these characteristics: The operations of System 1 are typically fast, automatic, effortless, associative, implicit (not available to introspection), and often emotionally charged; they are also governed by habit and are therefore difficult to control or modify. The operations of System 2 are slower, serial, effortful, more likely to be consciously monitored and deliberately controlled; they are also relatively flexible and potentially rule governed. The effect of concurrent cognitive tasks provides the most useful indication of whether a given mental process belongs to System 1 or System 2. Because the overall capacity for mental effort is limited, effortful processes tend to disrupt each other, whereas effortless processes neither cause nor suffer much interference when combined with other tasks (Kahneman, 1973; Pashler, 1998).

As indicated in Figure 1, the operating characteristics of System 1 are similar to the features of perceptual processes. On the other hand, as Figure 1 also shows, the operations of System 1, like those of System 2, are not restricted to the processing of current stimulation. Intuitive judgments deal with concepts as well as with percepts and...