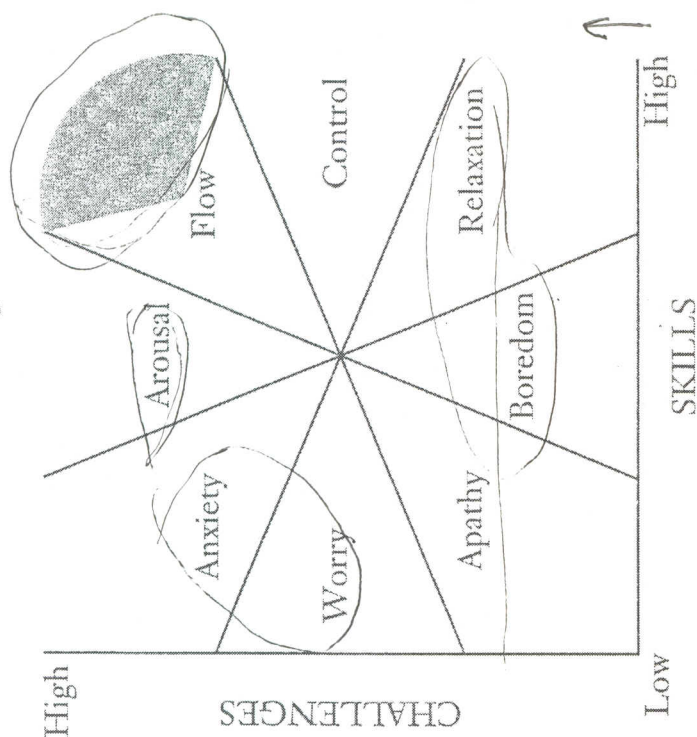


the quantity of experience as a function of the relationship between challenges and skills. Optimal experience, or flow, occurs when both variables are high.



Sources: Adapted from Massimini & Carli 1988; Csikszentmihalyi 1990.

gram, climb a mountain, or perform surgery. Activities that induce flow could be called "flow activities" because they make it more likely for the experience to occur. In contrast to normal life, flow activities allow a person to focus on goals that are clear and compatible.

Another characteristic of flow activities is that they provide immediate feedback. They make it clear how well you are doing. After each move of a game you can tell whether you have improved your position or not. With each step, the climber knows that he has inched higher. After each bar of a song you can hear whether the notes you sang matched the score. The weaver can see whether the last row of stitches fits the pattern of the tapestry as it should. The surgeon can see as she cuts whether the knife has avoided cutting any arteries, or whether there is sudden bleeding. On the job or at home we might go for long periods without a clue as to how we stand, while in flow we can usually tell.

Flow tends to occur when a person's skills are fully involved in overcoming a challenge that is just about manageable. Optimal experiences usually involve a fine balance between one's ability to act, and the available opportunities for action (see figure 1). If challenges are too high one gets frustrated, then worried, and eventually anxious. If challenges are too low relative to one's skills one gets relaxed, then bored. If both challenges and skills are perceived to be low, one gets to feel apathetic. But when high challenges are matched with high skills, then the deep involvement that sets flow apart from ordinary life is likely to occur. The climber will feel it when the mountain demands all his strength, the singer when the song demands the full range of her vocal ability, the weaver when the design of the tapestry is more complex than anything attempted before, and the surgeon when the operation involves new procedures or requires an unexpected variation. A typical day is full of anxiety and

boredom. Flow experiences provide the flashes of intense living against this dull background.

When goals are clear, feedback relevant, and challenges and skills are in balance, attention becomes ordered and fully invested. Because of the total demand on psychic energy, a person in flow is completely focused. There is no space in consciousness for distracting thoughts, irrelevant feelings. Self-consciousness disappears, yet one feels stronger than usual. The sense of time is distorted: hours seem to pass by in minutes. When a person's entire being is stretched in the full