

**Flow - A Theory of Optimal Experience:
History and Critical Evaluation**

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Abstract

This paper is a critical examination of a theory of optimal experience called “Flow” by researcher Mihaly Csikszentmihalyi. It begins with a background, history, and review of literature of the theory and then continues to lay out its basic assumptions and principles. It then describes the characteristics of the flow experience and gives practical applications of the theory. The theory is then critically evaluated by applying Littlejohn’s five criteria for the evaluation of a theory: theoretical scope, appropriateness, heuristic value, validity, and parsimony. The paper concludes with a summary of questions left unanswered by the theory, and with two recommendations for further study.

Have you ever been involved in an activity where you felt alert, in effortless control, unselfconscious, performing at your best? A sense of time and emotional problems seem to disappear, and maybe there is a feeling of transcendence, or oneness with the activity? This state was probably characterized by enjoyment, complete concentration, and deep involvement in the activity. Maybe you were reading your favorite book, talking with someone, doing your favorite hobby, playing your favorite sport, having sex, or smoking a joint. If you answered “yes” to any of these questions, you were in a state of optimal experience called “flow” by Mihaly Csikszentmihalyi.

Mihaly Csikszentmihalyi (Me-hee Chick-sent-mi-hee) began studying what would be known as flow during his doctoral research of male artists in the mid-sixties. He noticed that while the artists were painting, they were completely immersed in their work, enjoying it immensely. However, as soon as the artists finished a painting, they would set it aside and lose interest in it. This puzzled Csikszentmihalyi, and led him to seek out an explanation (Csikszentmihalyi 1988).

The artists had very little extrinsic rewards to motivate them to do this work in the first place (money, recognition, fame, etc.), and the typical explanation offered by the field of psychology to account for this was a form of “sublimation” (Csikszentmihalyi 1988). This explanation concluded that artists enjoyed their painting because “it is the closest socially acceptable symbolic expression of the artist’s true desires, which are repressed instinctual cravings” (Csikszentmihalyi 1988, p. 4). This did not satisfy Csikszentmihalyi and it could not account for the amount of enjoyment the artists received from their work, and the fact that the artists continually sought after more complex challenges. It became clear that the artists’ activity was an end in and of itself (Csikszentmihalyi 1988).

At the time of this study, very little emphasis was placed on intrinsic motivation, which appeared to be able to partially explain this phenomenon. The leading researcher in this field was Abraham Maslow. Maslow (1968) concluded from his research that people, like the artists Csikszentmihalyi was studying, worked hard not for external rewards, but because they found the work itself rewarding. Maslow dubbed this type of motivation as a desire for “self-actualization” which was “a need to discover one’s potentialities and limitations through intense activity and experience” (Csikszentmihalyi 1988, p. 5). Maslow felt that this stage could only be reached a few times in one’s life, and only after more basic needs like survival and security were met (Stacks, Hill, & Hickson 1991). This explanation however did not indicate if any kind of activity could be considered intrinsically rewarding, how these experiences felt, or if any person had the potential to experience this phenomenon (Csikszentmihalyi 1988).

Although limited early in its explanations, intrinsic motivation seemed to be on the right track to account for Csikszentmihalyi’s questions. In the early seventies, research in this field picked up some pace. It was found in laboratory experiments that rats were not exclusively extrinsically motivated, but that they were driven by novelty, curiosity and competence “drives” (Csikszentmihalyi 1988). One of the first researchers at this time to focus on intrinsic motivation was Richard deCharms. deCharms noticed that in schoolchildren, differences existed in terms of how much control they had over their own lives. Those who were intrinsically motivated felt they “owned” their behavior and enjoyed their work a great deal even though there was no outside recognition. Those who did not feel in control of their lives felt that their lives were being dictated to them by outside forces. Also, deCharms discovered, in contrast to earlier drive theories, those people who were rewarded for activities they originally

chose spontaneously, decreased in the amount of intrinsic motivation they received after being externally rewarded (Csikszentmihalyi 1988).

Edward Deci, who conducted research at the University of Rochester, found similar conclusions. He noticed that when people were given money for activities they enjoyed, they lost interest in those things faster than if they were not rewarded. Deci also found that people who were externally rewarded saw their involvement in an activity as instrumental, controlled by outside forces, as opposed to them being able to choose for themselves (Csikszentmihalyi 1988).

All of the research done on intrinsic motivation in the early seventies was done in laboratory settings as opposed to a natural environment. Therefore, this research was still unable to answer the question about whether the experience the artists had was one that occurred in other aspects of life. Also, this research was concerned with intrinsically motivated *behavior*; what made it happen and its consequences. Csikszentmihalyi was interested in this, but he wanted to focus on the quality of the subjective experience that made the behavior intrinsically rewarding. Also, he wanted to know how it felt and why it was rewarding (Csikszentmihalyi 1988).

This led him to conduct research on individuals who spent a lot of time in strenuous activities for which they received no external rewards such as money or recognition. He studied amateur athletes, chess masters, rock climbers, dancers, high school basketball players, and composers of music (Csikszentmihalyi 1988). He wanted to focus on how people described the activity when it was going well. This led to the first coherent statement about flow in Csikszentmihalyi's book *Boredom and Anxiety* (Csikszentmihalyi 1975). This research concluded that there was a common autotelic, or rewarding in and of itself, experience by all of the participants. This was called "flow".

A more precise term would be autotelic experience, but respondents seemed to prefer “flow” when describing the feelings while involved in their favorite activities (Csikszentmihalyi 1988). A common set of structural characteristics was found that distinguished the patterns of actions that comprised flow from everyday life. It was also found that these intrinsic rewards could be built into any activity, including work (Csikszentmihalyi 1988).

After *Boredom and Anxiety* was published in 1975, it did not attract a lot of initial attention from researchers in the field of intrinsic motivation. However, it generated a lot of research among those who studied the psychological and sociological implications of free time (play, sports, leisure, and recreation). The findings that came out of this research were that work and play are not necessarily opposites. Instead of focusing on the nature of the activity to define leisure, the quality of the experience may be more accurate because many obtain more satisfaction from their work than from their play (Csikszentmihalyi 1988).

The conclusions reached in *Boredom and Anxiety* were based on a very select group of people and was primarily in a laboratory setting. To study flow in a natural context, the Experience Sampling Method (ESM) was developed (Csikszentmihalyi & Larson 1987). They provided respondents with an electronic pager, or beeper, and a survey questionnaire booklet. The investigators beeped the respondents randomly via radio signals seven times a day between 8 AM and 10 PM for a one week period. Each time the respondents were beeped, they filled out a survey form. By the end of the week, the researchers were able to compile a systematic description of the respondent’s activities for the day, as well as the personal experiences and dimensions of consciousness of the respondents (Csikszentmihalyi 1988).

The results of this study showed that almost any activity in daily life can produce a flow like experience. Also, it showed that activities like studying and schoolwork were conducive to flow the same as typical leisure activities were. It was also shown that television viewing was the activity that produced the greatest amount of apathy in an individual (Csikszentmihalyi 1988).

The two main locations for the study of flow is in Csikszentmihalyi's backyard, the University of Chicago, and in Milan, Italy. Fausto Massimini is the leading researcher in Italy, and has contributed to the flow theory a great deal. Massimini and Csikszentmihalyi have coordinated their activities very closely and have published many papers on flow, especially the structure, dynamics, and the biocultural evolution of flow, as well as contributing to the definition of the autotelic personality (Csikszentmihalyi 1988). Flow has also been studied by Sato (1984) with Japanese teenagers, and Han with Korean elderly (Csikszentmihalyi 1988).

In the past decade, flow has also been utilized in mystical and religious contexts (Csikszentmihalyi 1987), sociology (Mitchell 1983), and psychology (Deci & Ryan 1985). In 1991, Csikszentmihalyi published *Flow - The Psychology of Optimal Experience*. This is the first book on flow that was written with the lay person in mind, in non-technical terms.

Assumptions and Principles of Flow

The flow theory holds that humans have certain basic drives that can influence a person to do something. An example of this occurs when the sugar level in a person's blood falls below a certain point, that person will begin to search for food. Or, a person will quickly learn to do something if that person is rewarded for an action, and will tend

to not do those things for which they are punished. However, this alone does not explain why people fast and starve themselves to death, or do exactly the opposite of what they were rewarded for (Csikszentmihalyi 1988).

In reality, people will do what they want to do, and this is not necessarily dependent directly on outside forces; it depends on priorities established by the needs of the self (Csikszentmihalyi 1988). In general, people will act in terms of the instructions they receive from these drives. Usually, people want to eat when they are hungry, and will do something if they are rewarded for it. These drives determine the organization of the self, but as soon as the self is operational, it acts on its own to direct behavior. The function of the self is to “mediate between the genetic instructions that manifest themselves as ‘instinctual drives’ and the cultural instructions that appear as norms and rules” (Csikszentmihalyi 1988, p. 17). The self will prioritize the different behavioral instructions and then select the ones it wants to use.

The self mediates between these sometimes conflicting instructions by means of the consciousness. It is composed of attention, which notices the information available; awareness, which interprets this information; and memory, which stores the information (Csikszentmihalyi 1988). The content of consciousness is experience, which is “the sum of all the information that enters it, and its interpretation by awareness” (Csikszentmihalyi 1988, p. 17.)

Attention is the means by which information appears in consciousness. However, humans are limited in the amount of information that can be discriminated. Attention is the medium that makes events occur in consciousness, and can be thought of as “psychic energy” (Csikszentmihalyi 1988). Each conscious activity a person does requires a certain amount of this psychic energy.

Awareness designates all those processes that occur after a bit of information is attended to. It includes recognizing the stimulus, categorizing it in terms of previous information, and disposing of it by remembering it or forgetting it (Csikszentmihalyi 1988). The more important processes of awareness include thought or cognition, feeling or emotion, and conation or volition. Cognition recognizes the information and relates it to each other; emotion defines the attitude that is taken to the information that is being processed; and volition is what keeps the attention focused on the information instead of moving on to other targets (Csikszentmihalyi 1988).

Memory is simply the process that stores the information that passes through consciousness so that it can again be recalled. These three subsystems of consciousness - attention, awareness, and memory - act as a buffer between the genetic and cultural instructions received and behavior (Csikszentmihalyi 1988). Because of this transformation of physiological processes into subjective experience, consciousness makes it possible to “gain control over the anonymous instinctual forces” (Csikszentmihalyi 1988, p. 20).

As soon as the self has established itself in consciousness, its main goal is to ensure its own survival (Csikszentmihalyi 1988). To this end, “attention, awareness, and memory are directed to replicate those states of consciousness that is congenial to the self, and to eliminate those that threaten its existence” (Csikszentmihalyi 1988, p. 22). Therefore, the self has its own set of goals that are placed in a hierarchy, and in effect become the structure of the self (Csikszentmihalyi 1988). Each new bit of information that makes its way into a person’s awareness is prioritized by this hierarchy. Most of the goals are established based on genetic and social instructions, but the consciousness has some degree of autonomy in this regard.

Any state that conflicts with an individual's goals is termed psychic entropy (Csikszentmihalyi 1988). It is similar to the role that noise plays in the basic communication model. It can be experienced as fear, boredom, apathy, anxiety, confusion, jealousy, etc. depending on the kind of goals the information is in conflict with (Csikszentmihalyi 1991). This state of psychic entropy is similar to Festinger's cognitive dissonance, but Festinger does not include the concept of the self, and it only refers to the cognitive aspects of an individual (Csikszentmihalyi 1988).

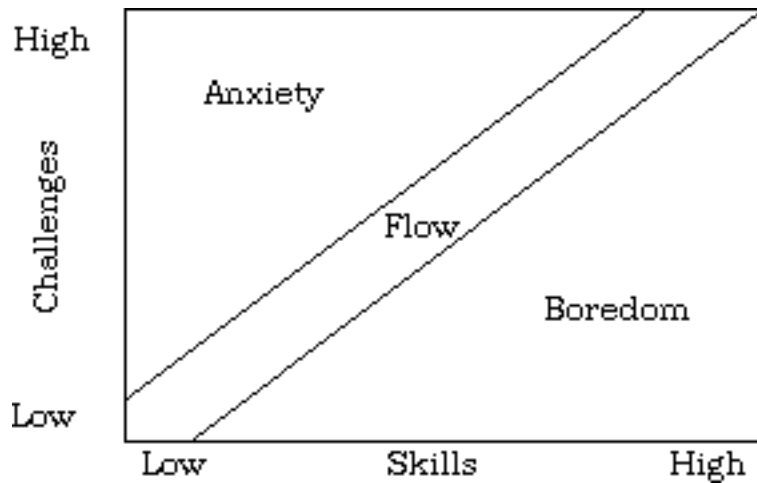
The state that results when all the contents of consciousness are in harmony with each other, and with the individual's goals that define the self, is called psychic negentropy, optimal experience, or flow (Csikszentmihalyi 1975). The subjective experiences of pleasure, happiness, satisfaction, and enjoyment are manifestations of flow. Because the self sets up goals to maintain itself, and because flow is a state where a self is most congruent with its own goal-directed structure, flow becomes one of the central goals of the self (Csikszentmihalyi 1988). This is referred to as the "teleonomy of the self", or the goal seeking tendency that shapes the choices that are made among the alternatives (Csikszentmihalyi 1988, p. 24).

The Flow Experience

The autotelic experience, or engaging in an activity for intrinsic rewards, is very similar regardless of its context (Csikszentmihalyi 1975). Those people who have been studied for the flow experience have described it in very similar ways even though one may be fastening screws on an assembly line, or performing the most complex heart surgery (Csikszentmihalyi 1991). This experience is so desirable that one wishes to repeat it as often as possible.

To achieve optimal experience, a balance is required between the challenges perceived in a given situation and the skills a person brings to that situation. A challenge includes “any opportunity for action that humans are able to respond to” (Csikszentmihalyi 1988). Any possibility to which a skill corresponds can produce flow. Some classic examples of this are winning the friendship of another person, writing poetry, closing a business deal, doing a favorite hobby, or playing a favorite sport, etc.

To remain in flow, one must increase the complexity of the activity by developing new skills to meet new challenges. Example: a tennis player just beginning can be in a flow experience just by hitting the ball over the net. The challenge is not that great, but neither are her skills. As she plays more and more, and increases her skills, she will have to take on greater challenges to attain a flow experience again. If the perceived challenge is greater than her skill (ex. her playing Andre Agassi when she can barely keep the ball in play), she will perceive anxiety. If however, her skills are greater than her challenge (ex. playing her little sister after she has already won the state championship), she will perceive boredom. The following diagram (Csikszentmihalyi 1991) will help illustrate this:



It is this feature that makes flow such a dynamic force in the evolution or growth of consciousness (Csikszentmihalyi 1988). Because flow is perceived as an optimal experience, a person will want to continue in that state as often as possible. The flow state can become an addiction, and often does. However, it drives the self to higher and higher levels of complexity. It forces people to stretch themselves, take on more and more challenges, and improve their skills and abilities (Csikszentmihalyi 1988).

The flow experience usually occurs in structured activities such as games, ritual events, sports, artistic performances, etc. (Csikszentmihalyi 1988). It does not normally occur in everyday life because challenges and skills are rarely balanced. However, even if skills and challenges are balanced, it does not guarantee a flow experience occurring.

This is due to the fact that activities only provides the challenges; it is still up to the individual to recognize the challenge, provide the skills, and extract enjoyment from the activity. Also, the complexity of a flow activity is limited by the degree of challenge it can provide, and by the willingness and “creativity” of the person to create challenges in an activity. A person who can do this well, one who has the ability to enter a flow state relatively easy, is said to have an “autotelic personality” (Csikszentmihalyi 1988).

Dimensions of the Flow Experience

As stated before, when a person’s skill matches the challenges of the situation the quality of experience improves noticeably. Also, an activity that has relatively clear goals and that provides rather quick and unambiguous feedback is a likely candidate for flow (Csikszentmihalyi 1988). This allows the person who is involved in the activity to know what needs to be done, and how they are doing. A game without rules or a way to assess performance is impossible to play (Csikszentmihalyi 1988).

People who have experienced flow also mention that they are completely immersed in the activity. All of their attention is so focused on the task at hand, that they do not have anything left to become distracted with (Csikszentmihalyi 1988). Also, there is a sense of control over the outcome of the activity, a distortion of time, a loss of the awareness of self and everyday problems, and a feeling of transcendence, or oneness with the activity (Csikszentmihalyi 1988).

When goals are clear, above-average challenges are matched to skills, and when there is accurate feedback, a person becomes involved in the activity. When this occurs, all attention is focused on what needs to be done. There is no room for anything else to enter the conscious, or for the self to become self-conscious - the worry of how we look

to others. This is the negentropic experience that is called flow. Because it is so rewarding, people will strive to replicate it as much as possible. From this tendency to want to repeat a flow experience, emerges the teleonomy of the self. Also, this leads to a selective process by the consciousness to seek out those experiences that provide flow. This state of optimal experience is one that humans have developed “in order to recognize patterns of action that are worth preserving and transmitting over time” (Csikszentmihalyi 1988, p. 34).

The last stage of the flow experience involves the transforming the entirety of one’s life into a single flow activity, with unified goals that provide a constant purpose (Csikszentmihalyi 1991). Living one’s life from flow experience to flow experience may be enjoyable during the actual flow experience, but one will probably still not be assured of optimal experience. If enjoyment is not linked to an overall meaning or purpose in life, one is still subject to psychic entropy, or chaos (Csikszentmihalyi 1991). If a person invests all of her psychic energy to reach this goal, all the parts of consciousness, as well as all actions and feelings, will be in harmony with each other. These isolated flow experiences will mesh into activities that “make sense” in the present, as well as the in view of the past and future. By doing this, it is possible to give meaning to one’s entire life, and therefore achieve, as close is as humanly possible, optimal experience (Csikszentmihalyi 1991).

Applications of Flow

Csikszentmihalyi began his research on flow out of sheer curiosity; in this sense it was “pure” research (Csikszentmihalyi 1988). However, because so much time is spent in the school and the work environment, these are the places of the most urgent

applications of flow (Csikszentmihalyi 1975). Often times, people are either bored or in a high state of anxiety in these situations. One of the first areas flow was practically applied was education. In an unpublished doctoral dissertation out of the University of Chicago, Mayers (1978), it was shown that the amount of enjoyment a student received from a class was a better indicator of their final grade than scholastic achievement or the student's aptitude (Csikszentmihalyi 1988). From the teacher's side of things, it was shown by Phlihal (1982), another unpublished doctoral dissertation, that the more attentive the students are in class, the greater the enjoyment a teacher receives from teaching them (Csikszentmihalyi 1988).

Through personal communication with I. Vitanyi and M. Sagi, Csikszentmihalyi (1988) learned that studies of industrial factory workers in Hungary found that bored workers had a tendency to take unreasonable risks, and those who felt anxious complained of imaginary illnesses. Also, those workers who enjoyed their jobs were more personally satisfied and contributed more to the goals of the factory.

One of the largest areas flow theory has been utilized is in the context of play and leisure (Csikszentmihalyi 1988). However, it has also permeated the field of leadership and management training seminars (Csikszentmihalyi 1988) and in determining consumer behavior (Bloch 1986). Csikszentmihalyi (1988) also describes how flow has been applied in psychotherapy, in anti-drug campaigns, ways to deal with juvenile delinquency, crime, vandalism, and social deviance. Other applications include advertising research, the redesign of museums, and Davis (1988) wrote a book on how to help audiences become involved in the theater. Csikszentmihalyi concludes that anywhere the quality of human experience is an issue, flow becomes relevant.

Critique and Evaluation of Flow

I did not come across any formal criticism of flow except those referenced by Csikszentmihalyi in his books and Sun's (1987) comparison of Yu philosophy and Csikszentmihalyi's theory of flow. Some critics argue that the flow theory is too much of a Western concept, and that it applies more to men than women. By this, they imply that it is too active and goal directed to represent a panhuman trait (Csikszentmihalyi 1988). Another early criticism is that it was too ethereal, bordering on mystical, for it to be considered something worthy to be studied in the social sciences (Csikszentmihalyi 1988). Also, the flow theory as discussed in Csikszentmihalyi's book, *Flow - The Psychology of Optimal Experience*, only gives indicators of the flow experience, but does not explicitly explain how to achieve this state.

Applying Littlejohn's five criteria of scope, appropriateness, heuristic value, validity, and parsimony, I will evaluate this theory, as well as expand on these criticisms of the theory.

Scope

The flow theory has made its way into many different disciplines from its early beginnings rooted in psychology. It has permeated sociology, education, advertising, work-related activities, cultural anthropology, religion, and most obviously in the context of play and leisure. Its contribution to psychology, especially internal motivation, has been profound, as well as the field of intrapersonal communication. However, with the exception of Davis' book (1988), I do not see how this theory relates directly to the context of mass media. Also, I was unable to find any references to any studies done in the field of interpersonal communication, but I see this as a field where

flow theory may also surface.

However, one heavy criticism of flow, relating to scope, is that it is too Western a psychic phenomenon (Sun 1987) and it was more applicable to men than women (Csikszentmihalyi 1988). Although Csikszentmihalyi (1988) admits that the context of the flow experience varies from culture to culture, it is the dynamic of the flow experience that is universal. Han's research on Korean men and women, and a study on American working women by Wells (1985) have responded to this criticism (Csikszentmihalyi 1988).

Appropriateness

The flow theory assumes that the world is essentially in a state of chaos and that humans are intrinsically motivated to seek out those experiences that add order to consciousness to account for this chaos. Therefore, humans will tend to seek out those experiences with the most opportunity to achieve a flow experience. Also, it assumes that it is within the ability of the subjective conscious to control, or provide order to, external stimuli. It claims that a flow state occurs when the challenges of a situation match the skills of the participant. If the challenges of a certain situation are above the participant's skills, then anxiety will be perceived by the participant. Conversely, when the skills of the person are higher than that of the challenges of the situation, boredom results.

However, just because a person's skills match the challenges of a given situation, does not guarantee a flow state will result. An example to illustrate this is a tennis match in which both players have equal skills and are involved in a game (challenge), but are not attaining a level of optimal experience, or flow. Although an opportunity for a flow state is present, the participants have to recognize this, and then consciously act on this information.

This theory is appropriate in that its claims appear to be consistent with its assumptions. However, an exception to this may be that it assumes a person will want to provide order to this information that is being perceived as chaos. This theory may be stretching itself a little too much to assume this. It does not appear to be able to account for a person who feels controlled by the external environment, one who perceives no ability to provide order to this chaos.

Heuristic Value

When the flow theory was first introduced in the late 60's and early 70's, it did not receive much attention from researchers, except in the study of intrinsic motivation. It was thought of as being too ethereal, almost mystic, and lacking any hard data to support its claims. In the beginning this was accurate, but over the past twenty years, the flow theory has provided mountains of empirical support, as well as many practical applications. Also, these studies have accumulated to generate a great deal of future research, as well as provide additional theories, especially by Fausto Massimini.

Validity

The validity of this theory is one of the strongest arguments to give it high

marks according to Littlejohn's criteria. According to Csikszentmihalyi (1988), anywhere the quality of human experience is an issue, flow becomes relevant. It has been demonstrated by empirical studies that flow is a panhuman phenomenon and can be generalized across many situations. Flow has offered a reason for why some people can become completely engrossed in their "work", but be completely bored in their "leisure". In fact it has given new definitions to the concepts of work and leisure.

It also helps to explain some of people's motivations for their actions and thoughts, or stated more simply, why people do the things they do. Csikszentmihalyi (1988) feels that flow theory is not so much concerned with why people do the things they do, but with how flow feels and how it can be controlled. It has switched attention away from the issue of causality to issues of consequence; the purpose now is not so much to understand what accounts for a behavior, but to know what psychic rewards bring it about (Csikszentmihalyi 1988).

Parsimony

When flow theory is viewed in terms of challenges matching skills, thus producing flow, it is quite parsimonious. It may become a little confusing when the physiological and psychological terminology of the three subsystems of consciousness are discussed, but even then Csikszentmihalyi is quite easy to follow. Csikszentmihalyi seems to have opted for a more simple approach to explain the flow theory, unlike Kenneth Burke who chooses a more difficult route. However, Csikszentmihalyi has written a book in a non-scholarly work with the lay person in mind. Its title is *Flow: The Psychology of Optimal Experience*. I would recommend reading this book first because he does provide an extensive notes section, which is like a scholarly report in itself.

Conclusion

At first glance, this theory makes a lot of sense. It helps to explain why people do the things they do, and why they enjoy what they enjoy. Before, it was not really understood how a person could be a workaholic and still be content in life. Now the separateness of work and leisure is not so pronounced.

However, some may argue: “Come on Csikszentmihalyi, or whatever your name is, this thing sounds great, but it isn’t practical. You’re telling me I can enjoy my crappy job that I have now, and enjoy any activity I want to, even insurance seminars?, and on top of that, find an overall purpose and meaning to my life?” Well, this is what Csikszentmihalyi claims. It may be slightly idealistic, but it may be able to be achieved. However, Csikszentmihalyi does not tell you how to do it, he only gives indicators of the flow experience. There is no 10 point program on how to add flow to your life.

Although some may criticize him for this, it may not be warranted. Because the content of flow can be as various as there are people in the world, it is the dynamic of the flow experience that has been found to be almost universal. Since he does give the indications of the dynamics of flow, one can read into it and extract what is necessary to achieve flow, thus not placing too heavy of a cultural bias on the theory.

However, some questions are still left unanswered. Sometimes, although one can derive great enjoyment from their “flow” experiences, a person will just want to sit back and take a nap. I did not come across any studies that offer as an explanation that sleep as a flow experience. Also, it seems that this theory is very similar to the experience of Zen. It seems that there a lot of books on the practical applications of Zen, just as there are on the practical applications of flow. I would like to see a comparison of flow and Zen, similar to the study Sun (1987) did with a comparison of flow and Yu, to see if Zen has not just been converted into an empirical theory.

Another question that I feel deserves more attention relates to psychic energy and the flow state. Flow has been described as an optimal state that completely consumes all of the participant’s attention. It has been shown that attention is limited, and thus psychic energy is limited as well. It would appear that because so much psychic energy is being invested, that a person would “fatigue”, not necessarily physically, but mentally. According to the studies however, respondents did not indicate a period of mental fatigue after experiencing a flow state. In fact, Csikszentmihalyi argues that because a “higher” state of mind has been achieved, the connections in the brain become more complex, thus experiencing growth. Does this mean that a person could experience a flow state all day, all week, all one’s life, providing that one can continually focus attention? Also, if psychic energy is depleted,

how is it restored?, and what effect does sleep have on a possible restoration process?

I would like to conclude this paper with two recommendations for further study. The first has been mentioned before: How does sleep relate to optimal experience? Is sleep considered a flow experience? How does the flow theory account for sleep? The second area I would like to see more research conducted is interpersonal communication. Studies have already indicated that conversation has the potential to become a flow experience. Do people seek out who they will interact with because they provide them with the potential for a flow experience? Do people seek flow experiences to feel in control of their life, to provide order to it, and thus to control others, or their relationships with others?

Hopefully, more research will be conducted to answer these and other questions. Flow has made a definite impact in the past twenty years in many different areas, and looks to be able to continue to do so in the next decade as well.

References

- Bloch, P. H. (1986). Product enthusiasm: many questions, a few answers. *Advances in Consumer Research*, 6, 539-543.
- Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco: Jossey-Bass.
- Csikszentmihalyi, M. (1987). The flow experience. In M. Eliade (Ed.), *The Encyclopedia of Religion* (Vol. 5, pp. 361-363). New York: Macmillan.
- Csikszentmihalyi, I. and Csikszentmihalyi M. (1988). *Optimal experience: Psychological studies of flow in consciousness*. New York: Cambridge University Press.
- Csikszentmihalyi M., & Larson, R. (1987). Validity and reliability of the Experience-Sampling Method. *The Journal of Nervous and Mental Disease*, 175 (9), 526-536.
- Csikszentmihalyi M. (1991). *Flow: The psychology of optimal experience*. New York: Harper & Row, Publishers.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Maslow A. (1968). *Toward a psychology of being*. New York: Van Nostrand.
- Mayers, P. (1978). *Flow in adolescence and its relation to the school experience*. Unpublished doctoral dissertation, University of Chicago.
- Mitchell, R. G., Jr. (1983). *Mountain experience: the psychology and sociology of adventure*. Chicago: University of Chicago Press.
- Plihal, J. E. (1982). *Intrinsic rewards in teaching*. Unpublished doctoral dissertation, University of Chicago.
- Sato, I. (1984). *Bosozoku no Esunographi [An ethnography of motorcycle gangs]*. Tokyo: Keiso Shobo.
- Stacks D., Hill, S. R., & Hickson M. (1991). *Introduction to communication theory*. Fort

Worth, TX: Harcourt Brace Jovanovich College Publishers.

Sun, W. (1987). *Flow and Yu: comparison of Csikszentmihalyi's theory and Chuang-tzu's philosophy*. Paper presented at the meetings of the Anthropological Association for the Study of Play. Montreal, March.

Wells, A. (1985). *Variations in self-esteem in the daily life of mothers: theoretical and methodological issues*. Unpublished doctoral dissertation, University of Chicago.