

Professing: Stages, Motivation, and Meaning

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It is both an honor and a pleasure to be here today. To the Faculty Senate, thanks for your selection which gives me this opportunity. Thanks also go to Vice President for Academic Affairs John Trefny for his support, both philosophical and financial of this annual lecture series. Finally thank you for taking time from the end of a busy semester, to come today.

There are three objectives to my address today:

- (1) to discuss the stages of faculty development,
- (2) to discuss the motivating factors in a professor's life, and
- (3) to ask the question, "Can we profess meaning?"

To address such a topic deals with many difficult and individual factors, including psychological waters, which I am neither qualified nor anxious to navigate. Initially the studies of Wergin, Mason and Munson (1976) and Bess (1982) both indicate that the factor most predictive of success in faculty motivation is depth of knowledge about the faculty members and their personal characteristics. We begin with the intuition that an academic's motivation may differ significantly from an industrial or governmental worker. With such a difficult and diverse subject, we hope to draw upon the sparse existing literature about faculty, causing us to paint the faculty silhouette in a broad brush, and to accept any evaluations as tentative until further evidence appears. Your reaction to these thoughts are welcomed; send them to esloan@mines.edu.

We first ask, "What are Stages?" There seems to be agreement that stages consist of stable periods with clear goals, during which we integrate our life experiences, and turbulent periods during which we reorder, change, and differentiate our life. For example, A.N. Whitehead's three stages of learning in The Aims of Education (1929) are:

- (1) Romance during which the learning becomes enthralled with the potential of the subject area, but has only a fragmentary knowledge of what is involved in reaching that potential,
- (2) Precision is the second stage, in which the learner fill in the detailed learning required to achieve the potential, followed later by
- (3) Generalization in which both the precise principles and romance are incorporated and connected to other areas in the learner's knowledge and life.

While Whitehead's model of education was intended to describe learning stages during the college years, similar stages may be postulated for other learners, such as faculty who encounter the field of teaching for which they have no formal training. Other

evidence for Stages in Life have been studied by Freud (1900-1921) for childhood influences, Jung (1913-1946) for the adult life cycle, and Erickson (1950-1980) in the general life cycle.

The popularization of the “Life Stages” concept in the general literature was done by Sheehy in Passages (1976), Levinson et al. in Seasons of a Man’s Life (1978), Vaillant in Adaptation to Life (1995), and Borysenko in A Woman’s Book of Life (1996). From these publications, we can safely conclude that changes and developments occur throughout the adult life cycle. It is appropriate to ask the question, “Is there a Life Cycle for professors?”, recognizing that such a question is fraught with traps such as anecdotal information, individual circumstances, and attending difficulties from extrapolating such a small sample.

There is a growing body of evidence that there are faculty career phases, especially in teaching and research components. Twenty per cent (only 10 people – ages 35-45) of the Levinson group’s longitudinal sample were university professors. Blackburn, Behymer, and Hall (1978) did a research productivity study of 1,216 faculty, which included 24 independent scholarship variables, and three dependent variables (articles, books and citations). Baldwin and Blackburn (1981) had a sample of 106 faculty for a study on teaching productivity. Some tentative ideas emerge from those three studies.

Both research and teaching productivity appears to be bimodal. Productivity appears to increase from the entry level until the ages between 35 and 39, during which time faculty normally strive to obtain tenure and full professor status. There is a slight decline in productivity between the ages of 35-39 and 40-44, while faculty go through Levinson’s mid-life transition period. Productivity increases again with the resolution of the mid-life transition until the early fifties, and then there is a slow decline until retirement. Senior faculty still produce significantly more writings than junior faculty, even with this last decline. These findings are supported by Cole (1979) who determined that roughly the same proportion of scientists in different age groups makes important discoveries. This is in direct refutation of the theory by Lehman (1953), brought about by questionable sampling, that most of the important discoveries are made by those faculty under thirty years of age.

Difficult times generally arise twice during a career. Teachers have difficulty during the early years when they are first learning how to teach. In this respect the increase in teaching productivity lags the research productivity by 2-3 years. The second difficult period occurs with senior state and periods of new or added responsibility which involves new coursework, additional committee work, administrative duties, etc.

Normally career re-assessment also occurs twice. The first period is in the late assistant professor period when the faculty must explore contingency options in case tenure is not achieved. In the full professor period, there is also a time when he/she must decide whether to remain a classroom teacher or to try to diversify as a means of maintaining professional vitality.

Factors in Faculty Motivation

While there is a sizeable amount of data on other motivational theories, e.g. the behavioral modification theory of Skinner, one of the clearest and most applicable motivation theories is the so-called “Needs Theory,” derived from the work of Maslow (1943, 1954) and extended by Erickson (1982). These two authors proposed a hierarchy of needs for the individual shown below in successive degrees of fundamental needs:

1. Generativity
2. Self Actualization
3. Esteem Needs
4. Belongingness
5. Safety
6. Physiological Needs

The Needs Theory suggests that the lower needs on the hierarchy (levels 5 and 6) are the first ones encountered, and the higher needs are realized only after the lower needs are gratified. The stronger the deprivation of a need, the more it dominates; the more a need is gratified, the less important it is and the more important the next higher need becomes. Schneider and Zalesny (1982) suggest that faculty, by their autonomous nature, appear to have the needs which are the most mature. The academic environment attracts people who tend to be oriented to self-initiated, creative behavior. Aldefer (1972) indicates that frustration of growth (generativity and self-actualization) needs increase the desires of relatedness satisfaction, and frustration of related needs leads to the desire for existence gratification. For example, frustrated researchers might turn to affiliation available through teaching, frustrated teachers might move to another institution, extend their education, or participate more in administration.

MacKeachie (1982), Csikszentmihalyi (1982) and Deci and Ryan (1982) all suggest that faculty are intrinsically motivated and have limited positive extrinsic motivation possibilities. Intrinsic motivation is coincident with the higher levels of Maslow’s need hierarchy, while extrinsic motivators are appropriate for the lower levels of the hierarchy.

Organizational structure, external rewards, (such as promotion and pay) and feedback are examples of extrinsic rewards – which are seen as somewhat self-defeating when used in a controlling manner. If extrinsic rewards are used, then faculty may slacken their efforts once full professorship and tenure have been obtained; such administration may build in a never-ending spiral of salary increases in hopes of continuing faculty motivation. However, providing external evaluation in an informational way can lead to motivation. Slight discrepancies from a faculty’s self-image may motivate change; however, large external evaluation discrepancies are rejected. Finally to little extrinsic feedback can lead to de-motivation.

Centra (1973) suggests that when self-actualized people encounter a slight discrepancy between their self image and other evidence, there is motivation to take action. Csikszentmihalyi (1982), McClelland et al., (1953), and Litwin and Stringer (1968) all indicate that intrinsic motivation is reinforced by a slight imbalance in (a) the challenges to the faculty with (b) the skills the faculty have to meet the challenge. If the challenge severely outweighs the skills, then anxiety and frustration occurs; if the challenge (such as teaching a course multiple time) does not require slightly stretching the skills, then boredom can occur. Optimally there is an opportunity for growth by continual slight imbalances between challenges and skills, as shown by Csikszentmihalyi (1991) so that the skill level can evolve to meet a growing level of challenges.

Deci and Ryan (1982) indicate that intrinsic motivation appears to work equally well for both teachers and learners. A teacher who is intrinsically motivated seems to enjoy the activity for its own sake and has a good chance to get the student to seek the intrinsic rewards of learning. If a teacher is extrinsically motivated, students might conclude that learning is worthless in and of itself, and lacks inherent value. Whitehead (1929) says that the ideal of a technical education is to be “.. a commonwealth in which work is play, and play is life.”

It appears that education largely succeeds or fails via motivation. Professing means to live a way of life, almost in a religious sense of devotion. Csikszentmihalyi (1982) suggests that education is the process whereby the young agree to become adults – not just behaving like adults – enjoying being an educated adult. We can help students enjoy learning if their professors enjoy learning. If the professor does not enjoy learning, should the young emulate the alienated?

At the heart of all classroom experiences, Csikszentmihalyi (1982) indicates there is a subliminal question in the students’ minds, “Does it make any sense to become an educated adult like this person at the front of the classroom?”

In additional work, Csikszentmihalyi (1991) suggests enjoyable intellectual experiences, such as learning, have eight characteristics:

1. the work is bounded, it can be completed
2. there is time to concentrate on the task at hand
3. there are clear goals
4. there is immediate feedback for self-assessment
5. there is deep involvement and stretching
6. there is a sense of control over the activity
7. self-concern disappears, but growth occurs
8. the sense of time duration is altered.

Heroism and the Transmission of Meaning

The classical definition of a Greek Hero (Whitman, 1982) is a person who exhibits super-mortal behavior or mastery, while retaining man-like accessibility. As examples, in the ancient sense heroism was exhibited on the physical level by Achilles killing Hector at Troy, on the combined physical-mental level by Odysseus lying to the Cyclops to escape the cave, and on the mental level by Socrates defining Love in The Symposium.

Heroism has cultural underpinnings. For example, in Japan heroism is downplayed, for example with their saying, “The nail that rises up get beaten down,” perhaps indicating the sacrifice of individual desires for cultural advancement. In a modern, western society sense, Nugent (1992) suggests that heroism is more distributed throughout the population, as with the grandmother of color in the ghetto, providing for her grandchildren because her own children are dysfunctional.

In a fundamental sense however, heroism may be considered as ensuring the culture. Broadly, that is what Achilles, Socrates, and the grandmother are all doing - providing for means that their culture might continue. So that might be the question for us as Colorado School of Mines educators – “Is it possible to ensure our culture through education?”

We get some sense of such heroism from Csikszentmihalyi (1982): “Higher education succeeds or fails in terms of motivation, not cognitive transfer of information. To teach implies a transfer of information, and that is not the main purpose of higher education. To profess means to confess one’s faith in, or allegiance to, some idea or goal. An effective professor is one who is intrinsically motivated to learn, because he/she will have the best chance to educate others.”

So that comes to the final and most important question for us today. Can we transmit Meaning to ensure the culture? We might begin by taking moderate risks in enhancing our own learning to illustrate the pleasure of learning as a convincing argument for knowledge in and of itself.

As a final illustration, consider the application of the myth of Tiresias to the Colorado School of Mines faculty. Tiresias was the world’s first Transvestite, who lived in Greek Mythology, first as a man, then as a woman, and then as a man again. Tiresias was called in as an engineering consultant to settle an argument between the chief Greek gods Juno and Jupiter.

The question the gods asked of Tiresias was, “Who has the most fun in bed, men or women?” It was Juno’s contention that men do, mostly due to her eternal irritation at Jupiter, who was perpetually, sexually attracted by anything that moved. Since Tiresias had experiences as both genders, he was a qualified consultant in the matter.

After some reflection Tiresias said, “Why of course, women have the most fun in bed.” Upon hearing that, Juno flew into a rage and struck poor Tiresias blind. In partial compensation, Jupiter rewarded Tiresias with the gift of inner vision, so that Tiresias became a prophet in much of Greek literature. Both Sophocles and Homer for example, have the blind prophet wandering through their literature, foretelling the future, sometimes in a way which was slightly more obscure to comprehend, perhaps due to Tiresias’ previous learning experience with Juno.

For example, Narcissus’ mother came to Tiresias while her son was still a baby, saying, “I have this beautiful boy, tell me what will be his fate?” Tiresias’ response must have sounded very strange to Greek ears, who were used to having the enjoinder “Know Thyself,” as the measure of conduct – for example it was inscribed on the Temple of Delphi.

Tiresias’ response to Narcissus’s mother to forecast her son’s fate was, “He will be happy so long as he Doesn’t Know Himself,” a forecast which went against the wisdom in Greek culture. But we know what happened to the beautiful Narcissus. After the unfortunate incident with Echo, Narcissus fell in love with his own image, and wasted away from idolizing his own image in the reflection pool.

We might reflect that Tiresias still speaks to us on the Colorado School of Mines faculty, almost 4000 years later. Tiresias still calls to us to get beyond the narcissism of our own learning, to model learning as being very enjoyable to the younger members of our learning community. In this way Tiresias is calling us to become heroic to ensure the culture with the young learners.

Thank you for your attention.

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