Career Onion: Peeling off the layers for Occupational Preferences and Career Aspirations

Samiah Ahmed1*, Alia Ahmed2
National College of Business Administration and Economics, Lahore, Pakistan1 & 2

Abstract - Vocational psychology carts away the vocational behavior regarding the occupational preferences of every individual, which commences at the period of adolescence. These occupational or vocational preferences are shaped or crystallized through career guidance and theories, which further help an adolescent to climb the career ladder towards achieving career aspirations and success. This research article, focuses mainly on five theories, self-concept development theory, valence-instrumentality-expectancy theory, theory of work adjustment, tournament theory and Maslow hierarchy of needs theory, which help the adolescents with the occupational preferences, assist in climbing the career ladder from growth stage to retirement stage, ultimately resulting in achieving career aspirations. Furthermore, researchers reveal the differences among these theories highlighting unique features of every theory in predicting occupational or career preferences. Researchers also draw the career onion, where every layer of the career onion depicts that every adolescent peels off each career layer (starting from the growth stage until he eventually peels off the last layer of the retirement age) to achieve career self-actualization.

Keywords - career onion; occupational preference; career theories; adolescence

1. INTRODUCTION

Vocational psychology, also known as counseling psychology, carts away the vocational behavior of individuals, with respect to choosing and adjusting to career, job or an occupation [1] by identifying how, when and why people using abilities, preferences and values, thrive in displaying efficient output in their working environments[2]. In vocational psychology, the study of vocational behavior begins at the period of adolescence. Adolescence is a development process where an individual prepares himself or herself, after completing many years of schooling and attaining formal education, starts sorting out his or her thoughts and feelings and aligns them with his or her career choice, occupation or a job, so that he could could fit into a professional world[3] and belong to a society and fit in[4]. Following adulthood, adolescence gives birth to occupational preferences. Occupational preferences refer to an attraction, interest and favorite tendency of choosing among various occupations and jobs[5], whereby considering the set of factors and assessment of job attributes, which contribute to the person’s desire to work in an environment over another with regard to these attributes[6]. During adolescence, vocational preferences are shaped through career guidance and counseling techniques. These techniques serve to assist individuals of any age, at any point throughout their lives to make educational, occupational and career choices, thereby acting as a decision tree and a ladder portraying the decision points encountered by an individual to transmit into the professional world[7]. To further study vocational preferences during adulthood, career guidance techniques require a study of theories which definitely crystallize individual vocational preferences, ultimately determining a career. Therefore, there has been considerable movement and vitality in theories and research on career development over the past 20 years[8]. During this time, several theories have been introduced [9] refined and expanded [10] or have faded in career inquiry and practice[11].

Hence, career theories and vocational guidance techniques had discovered personal characteristics and secured jobs in bounded organizations, with fixed sequence of stages. These career stages need to be studied as they are based on stability, whereas the purpose of reaching each career stage is career progression and achieving career aspirations [12]. Therefore, the focus of this research paper is to study five theories that are critical over the life span of every individual towards the ladder of career success where the unique combination of these career models shall support relevant interventions for growth, also increasing the richness of these five theories in accumulation. The important notion of studying these theories will be in a unique way where each theory will precede the next theory in the career ladder, pivotal for career effectiveness. The five theories of our focus are (a) Self-concept theory (b) Valence –Instrumentality-Expectancy theory (c) Theory of work adjustment (d) Tournament theory, crucial for every individual for each career ladder.
Furthermore, at each career ladder, each theory either formulates occupational preferences or career preferences. In a career ladder, an individual has to go through career stages. These career stages play a progressively fundamental role, at first, in formulating occupational preferences and then in finalization of a career or a career preference. These career stages occur at different rates in different individuals whereby these adolescents transform as they develop older further accumulating experiences in their work and non-work lives. The career stages contain biological growth and decay curves, where at each stage adolescents successfully perform tasks in the chronological age order[13]. Therefore, this research shall peel off the career stages essential for every individual where each career theory will play a very important part in the development of the next career stage.

1.1 Growth stage (birth-14)
This is the first stage that every individual needs to go through. Self-concept is a dose where identification is done through interacting with key figures in school and family, where fantasy and needs surface early at this stage.

1.2 Exploration stage (age 15-24)
The second career stage of every adolescent is the exploration stage. Here self-examination, leisure activities, needs, interests, values and occupational exploration are assessed with teachers and career counselors in schools. Also, fantasy dreams play a very important role in the tentative vocational choices.

1.3 Establishment stage (age 25-44)
After the discovery of an appropriate occupational preference among the alternatives, actual steps are implemented by engaging oneself in training and job positions to establish a permanent holding in the preferred occupation.

1.4 Advancement stage (31-44)
Adolescents, after deliberately crystallizing their occupational preference, heed in an effort to stabilize and to secure a place in their desired occupation.

1.5 Maintenance stage (age 45-64)
At this stage, adolescents’ main concern is to maintain or hold his desired/preferred occupation.

Tournament theory remain fiddling at the maintenance stage

1.6 Decline stage (age 65 on)
Reaching this stage, adults’ physical and mental faculties deteriorate and eventually work activities slackens, duties are either removed or the nature of the work is changed to match declining faculties. Sometimes at this stage, part time jobs are opted for.

1.7 Retirement (71 on)
At this final stage of the career ladder, complete cessation of the preferred vocation arises to some pleasantly and without difficulty and to others with disappointment and difficulty, and to some only with bereavement.

Source: Career stages are derived from[13].

The ladder to each career stage is characterized by changing patterns of activities, career concerns, values and needs which surface as the individual ages and passes through various age ranges.

2. REVIEW OF LITERATURE

2.1 Self-concept theory of career development
According to[15], self-concept is an adolescent’s perception of himself or herself where an individual views himself and his environment, together with the situational and personal factors, establishing an identity with the occupation[16][17]. Self-concept is realized through interactions among a set of factors, including mental faculties and physical growth, environment and personal experiences which are further affected by evaluations by others and one’s evaluations for own behavior[18]. Conceptualization of self can be referred to as personal construct theory as the dual focus of an individual is on situation and self [19].

Research suggests that reconnoitering self-concept is the implementation in occupational preferences [20], where the vocational development goes through the process of an interaction among inherited aptitudes, neural and endocrine make-up, and the opportunity to make various roles[21] during growth and exploration stage. [21] discovered three self-concepts, namely actual self-concept, ideal self-concept and occupational self-concept. Actual-Self-Concept is when individuals picture themselves which are relevant to work experience. Ideal-Self-Concept is when individuals idealize to have occupationally relevant qualities for the occupation. Occupational Concept is when individuals’ picture the qualities required by them in the preferred occupation they are thinking of entering into and hence referred to as occupational preferences.

Sometimes, self-concept is organized and structured in a way where adolescents examine their self-identity characteristics. Sometimes, the general self-concept is steady and becomes progressively multifaceted as it
descends the hierarchy, travelling from infancy to adulthood [17].

2.2 Valence–Instrumentality-Expectancy theory
Expectancy theory has held a major position in the study of work motivation and has been the subject of numerous empirical studies [23], thereby a rich source for theoretical innovations in the fields like organizational behavior [24], leadership [26], compensation [27] and training motivation [28].

This expectancy theory should be combined with other motivation theories [29] and hence the question arises whether this theory still promises other fields and how to combine expectancy theory with other fields including vocational psychology. The theory and its components are abstract and susceptible to different interpretations. In the field of vocational psychology, occupational preferences and actual job choice depend both on an individual’s attraction to the job and his confidence that struggles to enter the job will be fruitful. The notion that the expectancy model of occupational preference and choice is supported in diverse occupations [30] [31] and therefore this model foretells occupational preferences and preliminary work choices.

To begin with, expectancy is a concept of all affective orientations towards results, where significance, desirability or fulfillments with outcomes are anticipated. This theory developed by [32] represents the first attempt to use one’s cognitive abilities for work motivation whereby adolescents explain the process to reach numerous behavioral alternatives [33]. The motivational force for a behavior is a product of three distinct observations: Valence, instrumentality and Expectancy. Motivation consists of energetic forces which instigate within an individual and is an intention to behave [34] where furthermore; motivation consists of behavioral elements such as, initiation, direction and persistence [35].

Expectancy refers to the relationship perceived between level of effort expended and level of resulting outcome and performance [36]. Instrumentality is the perceived probability that remarkable performance in an occupation will chipping in to desired reward which shall maximize a person’s pleasure [36] predicting occupational choice and preferences. Valence refers to the perceived desirability of potential occupational outcomes, like intrinsic rewards such as promotion, recognition, etc., which is a function of goals, needs, preferences and values. During the exploration stage of the career ladder, a person evaluates an occupation (an attitude) and selects an occupation which is (a behavioral decision), and his actual attainment of the occupation. Occupational attainment results in expected or resultant rewards or outcome eventually leading to attainment of pleasure. During the exploration stage, as per expectancy theory, individuals go through the decision making process [37] where adolescents, in order to attain their place in their preferred occupation (motive force) expend optimal effort to attain certain level of goal performance, which is (preferred occupation) for an adolescent [37].

2.3 The Minnesota Theory of Work Adjustment
The theory of work adjustment was initially introduced by [38] and predicted on P-E (Person-environment) fit, an example of trait and factor psychology. This theory is geared for the occupational preferences and vocational behavior as a continual process of adjustment of a person with the environment. According to this theory, ability requirements and motivators emerge from the environment [39] [40], while according to [43], people determine the environment. While deliberating occupational preferences, a person would look for environment and organizations which would match his psychological and physical needs whereas the organization or the environment looks for individuals who have the abilities to meet the requirements of the organization [39] [42]. This correspondence/match between the individual and the environment (occupational reinforcers) leads to outcomes in terms of satisfactoriness and satisfaction. Satisfactoriness is the organization, when it requires the skills and abilities of a satisfactory employee and assesses the employee’s role performance and attains contentment from his performance, whereas an individual receives satisfaction when his role performance is assessed positively by the organization’s environment and himself [44]. Summing up, this theory elicits work or occupational preferences [44].

During the establishment stage of the career ladder, every individual requires four adjustment styles, including perseverance, activeness, flexibility and reactivity. Flexibility means P’s tolerance to Person-Environment. Activeness refers to an adolescent’s rapid response to the changing environment, whereas reactivity refers to an individual’s resort to self-adjustment and establishment at this phase of the career stage without any hassle occurring in the organization. Lastly, perseverance means an individual’s persistence to adjust and getting established in the occupation, in the organization [44].

2.4 Tournaments theory
Tournament theory, also known as economics theory [45] commenced out of literature of labor economics almost 30 years ago [46]. Since then, it has stretched out to a wide range of fields including law [47], ecology [48], psychology [49] and finance [50] and more recently it has extended and fanned out to management literature, to help explain compensation structures [51]. In gaming literature, there has been a positive relationship between the prize and the player’s performance in golf [52] and car racing [53] and it is useful for describing behaviors of winning and losing [54] where the competing structure motivate the broader base of employees rather than focusing on a single adolescent [54].

As the name suggests, a tournament refers to a contest where players play for a prize that is bestowed based on relative rank [47] [55] rather than on the absolute performance of the actors in the competition [56],
sometimes, a two player model[57] or sometimes incorporating multiple players in the organization. The rewards are extrinsic in nature i.e. monetary rewards[57] and are a function of losers and winners, where winners are assessed on the relative performance and trivial differences in tasks can produce enormous differences in payouts. Under the tournament, sometimes a two player contest[46][57], a competition can be in the form of promotion contests, innovation contests where an incentive is given to each participant to rise above others[58], creating more opportunities for development and networking and further promotion opportunities and creating more career velocity. Sometimes, the prize contests are in the form of building reputation, peer recognition, bonuses, higher fringe benefits and recognition, associated higher pay raise, deferred compensation, stock options, insurance and pension[59][60].

Tournaments define the ranking of employees/players thereby assigning them to a particular level in the hierarchy and remuneration is awarded that corresponds to it. Promotions and contests may be the most common form of mobility and changes in occupational statuses of every individual to the next career stage. The mobility is of two types; contest and sponsored mobility. Under contest mobility, delays of selections can occur and allow individuals complete freedom for mobility, whereas sponsored mobility select individuals for their ultimate careers and allow no freedom for departures from these early preferred occupations or selected careers. The sponsored mobility is the form of intergenerational career mobility, where it focuses more on patterns of mobility within occupations, the most common form of mobility, a certainly important event in the career ladder.

Likewise, in an advancement stage of the career ladder, career tournaments are posed to result in winners and losers [61] for subsequent series of progressively more selective competitions which becomes a social label that might enhance an individual’s authority over other individuals or subordinates. Winners proceed to the next round and need the pace to win the next rounds to advance in the career stage of the ladder to career success. Assessments occur repeatedly and an employee must continue to pass these contests in order to advance the career stage or maintenance stage and this relationship becomes stronger during the maintenance and retirement age[50].

Career tournaments also create some dysfunctional consequences. It is likely to create self-fulfilling prophecies [62] where winners are seen as high potential people, who are given additional opportunities and challenges while those who do not win in the early competition are given little or no chance to prove themselves again. The early winners shall further benefit from socialization process, helping them to develop further for the maintenance stage. The changes in the winning and losing behavior, as adolescents climb the advancement stage to the maintenance stage in their career ladder have been noted [63].

There are two types of tournaments. Symmetric tournaments come about when players are similar or homogeneous thereby are tested by the competition rules, equally [64] whereas asymmetric tournaments can be unfair or unequal wherein when actors are homogenous, but the competition rules favor one and discriminate the other. Because of this asymmetric career tournament, the difference in the ability occurs between or among the players increase. Further than that, the player with higher expected ability exerts less effort because he is likely to win anyway and the player with lower ability exerts less effort because he is likely to lose even if he works hard. Under the career umbrella, in many preferred occupations, change of level and status in an organization or professional hierarchy is the main kind of advancement. In reference to this point, a career tournaments are most likely to occur in pyramid shape organizations with declining numbers of individuals at higher levels, wherein sometimes higher level positions could be partially filled from outside, thereby maintaining a fierce competition at lower levels, where the organization structure is at the macro level with employee perceptions, attitudes and behaviors at the micro level. In the advancement of the career ladder, a tournament model acts as a historical model, probing information about an adolescent’s history with himself which definitely travels along with the person wherever he goes and if a single organization did not keep career history or did not value it or is not known to new employers, then the tournament model might be less likely to extend to inter organizational careers.

2.5 Maslow’s need hierarchy theory

Human beings are pushed by stimuli, reinforcements or due to unconscious impulses or instincts. Therefore,[65]提出了 that there are five basic needs essential for every human being. The theory is based on two premises. The first premise is that an adolescent is a wanting animal rarely reaching a state of complete contentment except for a tiny duration. All his basic needs are based on instincts, which is equivalent of instincts depicted in animals. Adolescents flinch with a very weak disposition, which is molded as the individual grows. The needs are arranged from low to high in a hierarchy, where lower order needs comprise of physiological and safety needs, followed by social needs. Higher order needs embrace esteem and self-actualization. The hierarchy is in the order where an adolescent does not feel the second need until the first need has not been gratified and the third until the second has been fulfilled and so on.

Maslow’s hierarchy of needs is need awareness, a continuing process, where an adolescent could be stirred by more than one need at a single point in time and would continue to be encouraged until it is fulfilled. If a lower order need comes under a threat, it would arise into
dominance again and would assume an important locus in an adolescent’s motivation system.

i. Physiological needs
These are biological needs, comprising of essential needs such as food, oxygen, water and a constant body temperature. These needs are demanded first because if a person were deprived of all such needs, he will search these ones first to climb the next level of need of safety.

ii. Safety needs
When the previous needs are gratified, the needs for security come into limelight. Safety needs include a familiar and safe environment and protection from harm, which is non-threatening and comfortable.

iii. Needs of Love, Affection and Belongingness
When prior needs are satisfied, the next level of needs for affection, belongingness and love shall emerge.

iv. Need for self-Esteem
As the previous need are attained, need for esteem fiddles with an individual. Self-esteem includes receiving praise, recognition and promotion.

v. Needs for Self-Actualization
When all the previous needs are gratified, only then the engine of self-actualization gets revved. Self-actualization is the person’s need to be and to do what the person was born to do. Self-actualization fulfills spiritual needs as well.

2.6 Maslow Hierarchy of needs and career stages
The hierarchy of needs had influenced a number of different fields including vocational psychology. Therefore we shall now look at the five basic needs pivotal to climb the career stages developed by [13] which definitely shape occupational preferences ultimately fulfilling career aspirations.

2.6.1 Growth stage (birth-14)
At this career ladder, adolescents need to fulfill basic needs like food, water and oxygen, so that an individual could start identifying his vocational identity or self-concept. Nourishing the physiological needs at the growth stage will make an individual to adequately identify his self-concept so that he could easily move to the next level of the career ladder. Here, during the self-concept, a growing adolescent assesses his intellectual strengths and weaknesses, a pure reflection or an inner mirror to his own reality[67], reality of his own key goods of ethical deliberation, social justice and equality of respect or care for certain others, which is much of a higher psychological priority. An individual ponders over the big question here: what am I going to make out of my life? [11] and it is this question that leads an adolescent to the next stage of exploration.

2.6.2 Exploration stage (age 15-24)
After the identification of self-concept at the previous stage, an individual would look for these physiological needs in the form of exploring preferred occupations and the urge satisfied by being selected in his or her preferred occupation, so that in turn he could thwart his basic need of food water and shelter at the career exploration stage.

Safety is being sought in the preferred occupation, so that he could nourish his physiological needs. The physiological ones would come first for an individual, as getting hired in the preferred occupation, is foremost, in the search for satisfaction at this career stage.

2.6.3 Establishment stage (age 25-44)
After fulfilling the physiological needs at the previous stage, an individual would want to get established by expecting security from the work environment, as it is essential for him to fit into the organization so that he could participate in the tournament in the next stage of advancement, so that he could win more security in the preferred organization. According to [65], without safety, people feel anxious and uncertain in the chosen organization and this higher order need is essential for an individual to the next career stage [68].

2.6.4 Advancement stage (31-44)
When safety and physiological needs are satisfied, the next order of needs like belongingness, affection and love can transpire. This level of need is achieved through adjusting to the environment of the organization through winning tournaments as well, which also paves way towards the career ladder and success. With the advancement stage, the level of work needs becomes stronger as humans urge the intrinsic and extrinsic job satisfaction, organizational and professional commitment [69].

2.6.5 Maintenance stage (age 45-64)
At the maintenance stage, an individual would further strive for respect and esteem which he can get from others. During the maintenance stage, an individual gains further respect, whereby he then feels self-confident and valuable as a person in his occupation or a secured position that he has earned over the years after going through previous career stages. Research suggests that older workers at this stage yearn for security and respect towards their end of working ladder rather than availing the opportunity for promotion[70] and it is during the last stage of maintenance that the prepotency of security needs [71] and occupational satisfaction increase among people over the age of 60[72][73] and the need for social needs decrease by the time an individual reaches this stage. It is during this stage that the workers have generally been practicing their preferred occupation longer and have eventually accomplished higher professional and socio economic status than those at earlier stages of the career [69]. Sometimes, at this point of stage, individuals go through the concept of mid-career change [74], where they redefine their present statuses (through some motivational forces or expectancy outcomes) develop some new skills to tune into new job assignments. Yet, the career ladder is limited, where it usually provides two forward steps to the final stage. For instance, a full professor , in a mid-career change, aspires to an alternative job assignments, such as the administration position of department chairman, which is a strong force toward remaining in the traditional career channel.
2.6.6 Retirement (71 on)
Maslow describes self-actualization as a person’s desire to be and which an adolescent was “born to do.” Self-actualization refers to feeling an adolescent goes through after reaching his/her career potential[75]. An individual towards the peak of career ladder must have achieved what he was born to do at this stage.

TABLE 1: Summary: Climbing career ladder through fulfillment of human needs

| Maslow’s Five levels | Major Tenants | Career ladder |
|----------------------|---------------|---------------|
| Level 5: Self actualization | Achieving potential | Retirement |
| Level 4: Self Esteem | Acceptance | Maintenance |
| Level 3: Relationships | Belonging to a group | Advancement |
| Level 2: Safety | Safe environment | Establishment |
| Level 1: Physiological | Food, shelter and Heath | Growth, Exploration |

![Figure 1: Climbing the career ladder towards career aspirations](Source: Author)

TABLE 2: Comparing the Career Theories

| Basis | Self-concept theory | Valence Instrumentality-Expectancy theory | Theory of work adjustment | Tournament theory | Maslow Hierarchy of needs |
|-------|---------------------|------------------------------------------|---------------------------|------------------|--------------------------|
| Focus | Identification of interests with a preferred job | Expectancy/ motivation | Adjustment of an individual in occupation to gain occupational satisfaction | Participating in prize contests or series of tournaments | Satisfy all human needs one by one |
| Time Horizon | Short term | Short term | Short term | Long term | Long term |
| Main theme | Self –identity / Personal construction | Effort expended to reach the expected outcome | Person to environment adjustment | Winning prizes and contests for the career ladder | To achieve self-actualization |
| Motivated by | Intrinsic | Intrinsic/ Extrinsic | Intrinsic | Intrinsic/ Extrinsic | Intrinsic |
| Preference | Occupational/job preference | Occupational/job preference | Occupational/job preference | Career Aspirations | Career Aspirations |
| Rooted | Vocational | Organizational | Trait and factor | Economics | Humanistic |
3. CONCLUSION

This research article has applied[64] hierarchical model and five career theories to [13] career stages which are highly pivotal in the development of occupational preferences and fulfillment of career aspirations. In this research, the five career theories namely self-concept development theory, valence instrumentality-expectancy theory, theory of work adjustment, tournament theory and Maslow hierarchy of needs theory are reviewed and compared among each other, distinguishing and highlighting unique features of every theory in predicting occupational or career preferences. These theories are important to study together as they help adolescents to climb the career ladders to the career success and effectiveness. These five theories are a unique combination and a collection of framework on which adolescents could anchor and advance in the career stages locally and globally. Therefore, the sole purpose is the awareness for occupational preferences ultimately resulting in career aspirations. An examination of career choice theories indicates a very definite place for a vocational development services in the elementary or high school. The theories of self-concept development theory, valence-instrumentality-expectancy theory, theory of work adjustment, tournament theory and Maslow hierarchy of needs theory stress the developmental nature of career choice. These theories serve as counseling for self-understanding and personal development and for occupational information which serve as the foundation of career ladder to career success and effectiveness.

There is no indication that the elementary school should encourage children to make specific occupational choices, majority of the time the job of the grade school is to focus the attention of children on the general meaning of work rather than to assist them in gaining information about the total range of occupational opportunities. Career theories are important because they assist us in crystallizing occupational preferences. This is important because if children wait until they leave the elementary school to receive professional help for occupational preferences, many will base important career decisions on inaccurate and inadequate information and will fail to utilize educational opportunities that are prerequisite to vocational success in the long run.
4. REFERENCES

[1] Adler, S., & Aranya, N. (1984). A comparison of the work needs, attitudes, and preferences of professional accountants at different career stages. Journal of Vocational Behavior, 25(1), 45-57.

[2] Adler, S., & Aranya, N. (1984). A comparison of the work needs, attitudes, and preferences of professional accountants at different career stages. Journal of Vocational Behavior, 25(1), 45-57.

[3] Anabtawi, I. 2005. Explaining pay without performance: The tournament alternative. Emory Law Journal, 54, 1557-1602.

[4] Başlevent, C., & Kirmanoğlu, H. (2013). Do Preferences for Job Attributes Provide Evidence of ‘Hierarchy of Needs’? Social indicators research, 111(2), 549-560.

[5] Becker, B. & Huselid, M. 1992. The incentive effects of tournament compensation systems. Administrative Science Quarterly, 37, 336–350.

[6] Betz, N. E. (1994). Self-concept theory in career development and counseling. The Career Development Quarterly, 43(1), 32-42.

[7] Blau, G. (1993). Work adjustment theory: A critique and suggestions for future research and application. Journal of Vocational Behavior, 43(1), 105-112.

[8] Bugg, C. A. (1969). Implications of some major theories of career choice for Elementary School Guidance Programs. Elementary School Guidance Counseling, 3(3), 164-173.

[9] Campion, M. A., Lord, R. G., & Pursell, E. D. (1981). Individual and organizational correlates of promotion refusal. Journal of Vocational Behavior, 19(1), 42-49.

[10] Connelly, B. L., Tihanyi, L., Crook, T. R., & Gangloff, K. A. (2014). Tournament theory thirty years of contests and competitions. Journal of Management, 40(1), 16-47.

[11] Crites, J.O.: The Maturity of Vocational Attitudes in Adolescence. Iowa City: University of Iowa, 1969.

[12] Davis, R. V. (2005). The Minnesota Theory of Work Adjustment.

[13] Davis, R.V. (1964). A theory of work adjustment. Minnesota studies in vocational rehabilitation, 15

[14] Englander, M. E. A psychological analysis of vocational choice: Teaching. Journal of Counseling Psychology, 1960, 7(4), 257-264.

[15] Flanagan, J. C., & Cooley, W. W. Project Talent: One-year follow-up studies. Pittsburgh: School of Education, University of Pittsburgh, 1966.

[16] Fredrickson, J. W., Davis-Blake, A., & Sanders, W. M. (2010). Sharing the wealth: social comparisons and pay dispersion in the CEO’s top team. Strategic Management Journal, 31(10), 1031-1053.

[17] Furnham, A., Hyde, G., & Trickey, G. (2014). Do your dark side traits fit? Dysfunctional personalities in different work sectors. Applied Psychology, 63(4), 589-606.

[18] Hackett, G., Lent, R. W., & Greenhaus, J. H. (1991). Advances in vocational theory and research: A 20-year retrospective. Journal of vocational Behavior, 38(1), 3-38.

[19] Hall, D. T., & Mansfield, R. (1975). Relationship of age and seniority with career variables of engineers and scientists. Journal of Applied Psychology, 60(2), 201-210.

[20] Hesketh, B., McLachlan, K., & Gardner, D. (1992). Work adjustment theory: An empirical test using a fuzzy rating scale. Journal of Vocational Behavior, 40(3), 318-337.

[21] Holland, J.L. (1997). Making vocational choices (3rd ed.). Odessa, FL: PAR.

[22] House, R. J. (1971). A path goal theory of leader effectiveness. Administrative Science Quarterly, 16(3), 321-328.

[23] Jansen, P.G.W. (2002), Organisatie en mensen: inleiding in de bedrijfspsychologie voor economen en bedrijfskundigen (Organization and people: introduction in business psychology for economists and business economists), Nelissen, Soest.

[24] Kale, J. R., Reis, E., & Venkateswaran, A. 2009. Rank-order tournaments and incentive alignment: The effect on firm performance. Journal of Finance, 64(3), 1479-1512.

[25] Kalleberg, A. L., & Losocco, K. A. (1983). Aging, values, and rewards: Explaining age differences in job satisfaction. American Sociological Review, 48(1), 78-90.

[26] Kelly, E. L. (1955). Consistency of the adult personality. American Psychologist, 10(11), 659-681.

[27] Kidd, J. M. (1984). The relationship of self and occupational concepts to the occupational preferences of adolescents. Journal of Vocational Behavior, 24(1), 48-65.

[28] Knoeber, C. R., & Thurman, W. N. 1994. Testing the theory of tournaments: An empirical analysis of broiler production. Journal of Labor Economics, 12(2), 155-179.

[29] Krumboltz, J. D., Mitchell, A. M., & Jones, G. B. (1976). A social learning theory of career selection. The counseling psychologist, 6(1), 71-81.

[30] Kunaviktikul, W., Chitpakdee, B., Srisuphan, W., & Bossert, T. (2015). Preferred choice of work setting among nurses in Thailand: A discrete choice experiment. Nursing & health sciences, 17(1), 126-133.

[31] Landy, F. J., & Becker, W. S. (1990). Motivation theory reconsidered. In B. M. Staw & L. L. Cummings (Eds.), Work in organizations (pp. 1-38). Greenwich, CT: JAI Press.

[32] Landy, F.J. and Becker, W.S. (1987), “Motivation theory reconsidered”, Research in Organizational Behavior, 9(1), 1-38.
[33] Lawler, E. E., III, Kuleck, W. J., Jr., Rhode, J. G., & Sorensen, J. E. (1975). Job choice and post-decision dissonance. Organizational Behavior and Human Performance, 13(1), 133-145.

[34] Lazear, E. & Rosen, S. (1981). Rank-order tournaments as optimum labor contracts. Journal of Political Economy, 89(5), 841-864.

[35] Levinson, D. (1978). The seasons of a man's life. Random House Digital, Inc.

[36] Marsden, D. (2010). The growth of extended entry tournaments and the decline of institutionalised occupational labour markets in Britain.

[37] Maslow, A. H. (1943). A theory of human motivation. Psychological review, 50(4), 370-396.

[38] Maslow, A. H., Frager, R., & Cox, R. (1970). Motivation and personality (Vol. 2, pp. 1887-1904). J. Fadiman, & C. McReynolds (Eds.). New York: Harper & Row.

[39] Mathieu, J. E., Tannenbaum, S. I., & Salas, E. (1992). Influences of individual and situational characteristics on measures of training effectiveness. Academy of Management Journal, 35(4), 828-847.

[40] Mayes, B.T. (1978). Incorporating time-lag effects into the expectancy model of motivation: a reformulation of the model. Academy of management review, 3(2), 374-380.

[41] McLaughlin, K. J. 1988. Aspects of tournament models: A survey. Research in Labor Economics, 9(1), 225-256.

[42] Melton, M. & Zorn, T. 2000. Risk taking in tournaments. Managerial Finance, 26(7), 52-62.

[43] Messersmith, J. G., Guthrie, J. P., Ji, Y. Y., & Lee, J. Y. 2011. Executive turnover: The influence of dispersion and other pay system characteristics. Journal of Applied Psychology, 96(3) 457-469.

[44] Mitchell, T. R., & Knudsen, B. W. (1973). Instrumentality theory predictions of students' attitudes towards business and their choice of business as an occupation. Academy of Management Journal, 16(1), 41-52.

[45] Mitchell, T. R., & Pollard, W. E. (1973). Instrumentality theory predictions of academic behavior. The Journal of Social Psychology, 89(1), 35-45.

[46] Naylor, J. C., Pritchard, R. D., & Ilgen, D. R. (1980). A theory of behavior in organizations. New York: Academic Press.

[47] Nieken, P., & Sliwka, D. 2010. Risk-taking tournaments: Theory and experimental evidence. Journal of Economic Psychology, 31(3), 254-268.

[48] O'Reilly, C., Main, B. & Crystal, G. 1988. CEO Compensation as tournament and social comparison: A tale of two theories. Administrative Science Quarterly, 33, 257-274.

[49] Osiopw, S. H., & Schweikert, D. (1981). The Career Decision Scale: A test of concurrent validity. Psychological Reports, 48(3), 759-761.

[50] Rhodes, S. R. (1983). Age-related differences in work attitudes and behavior: A review and conceptual analysis. Psychological Bulletin, 93(2), 328-367.

[51] Roe, A. (1956). The psychology of occupations.

[52] Rosen, S. 1986. Prizes and incentives in elimination tournaments. American Economic Review, 76(4), 701-715.

[53] Rosenbaum, M. E. (1990). Learned resourcefulness: On coping skills, self-control, and adaptive behavior. Springer Publishing Co.

[54] Rosenthal, R., & Jacobson, L. Pygmalion in the classroom: Teacher ex ectatiun and psip7.10 intellectual development. New York: Holt, Rinehart and Winston, 1968.

[55] Rounds, J. B. (1990). The comparative and combined utility of work value and interest data in career counseling with adults. Journal of Vocational Behavior, 37(1), 32-45.

[56] Rounds, J. B., Dawis, R., & Lofquist, L. H. (1987). Measurement of person-environment fit and prediction of satisfaction in the theory of work adjustment. Journal of Vocational Behavior, 31(3), 297-318.

[57] Saleh, S. D. (1964). A study of attitude change in the pre-retirement period. Journal of Applied Psychology, 48(5), 310-312.

[58] Sarason, S. B. Work, aging, and social change. New York: The Free Press, 1977.

[59] Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J. P., Duarte, M. E., Guichard, J., ... & Van Vianen, A. E. (2009). Life designing: A paradigm for career construction in the 21st century. Journal of vocational behavior, 75(3), 239-250.

[60] Schmidt, F. L., & Johnson, R. H. (1973). Effect of race on peer ratings in an industrial situation. Journal of Applied Psychology, 57(3), 237-241.

[61] Schotter, Andrew, and Keith Weigelt. 1992. Asymmetric tournaments, equal opportunity laws, and affirmative actions: Some experimental results. The Quarterly Journal of Economics, 107(2), 511-539.

[62] Shavelson, R. J., & Bolus, R. (1982). Self concept: The interplay of theory and methods. Journal of educational Psychology, 74(1), 3-41.

[63] Snyder, R. A., Howard, A., & Hammer, T. H. (1978). Mid-career change in academia: The decision to become an administrator. Journal of Vocational Behavior, 13(2), 229-241.

[64] Stumpf, S. A., & Rabinowitz, S. (1981). Career stage as a moderator of performance relationships with facets of job satisfaction and role perceptions. Journal of Vocational Behavior, 18(2), 202-218.

[65] Super, D. E. (1963). Self-concepts in vocational development. In D. E. Super (Ed.), Career development: Self-concept Theory (pp. 1-16). New York: College Entrance Examination Board.
[66] Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown & L. Brooks (Eds.), Career choice and development (2nd ed., pp. 197–261). San Francisco, CA: Jossey-Bas.

[67] Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown & L. Brooks (Eds.), Career choice and development (2nd ed., pp. 197–261). San Francisco, CA: Jossey-Bas.

[68] Super, D. E. The psychology of careers. New York: Harper & Row, 1957.

[69] Super, D. E., & Jordaan, J. P. (1973). Career development theory. British Journal of Guidance and Counselling, 1(1), 3-16.

[70] Trautwein, U., & Möller, J. (2016). Self-Concept: Determinants and Consequences of Academic Self-Concept in School Contexts. In Psychosocial Skills and School Systems in the 21st Century (pp. 187-214). Springer International Publishing.

[71] Van Eerde, W., & Thierry, H. (1996). Vroom's expectancy models and work-related criteria: A meta-analysis. Journal of applied psychology, 81(5), 575-586.

[72] Vieito, J. P. T. (2012). Gender, top management compensation gap, and company performance: Tournament versus behavioral theory. Corporate Governance: An International Review, 20(1), 46-63.

[73] Vijaykumar, S. D., & Lavanya, T. (2015). Vocational Identity and Ego Strengths in Late Adolescence. Anamalai International Journal of Business Studies & Research, 52-59.

[74] Vroom, v. h. (1964). Work and motivation. New york: Wiley.

[75] Yun, S., & Min, S. (2015). Analysis on Occupational Preference, Career, Aspiration and Career Attitude Maturity of Middle & High School Students. Indian Journal of Science and Technology, 8(7), 664-673.

[76] Zabel, A., & Roe, B. 2009. Optimal design of pro-conservation incentives. Ecological Economics, 69(1), 126-134.