

# Adolescent Development, Adjustment and Behaviorism

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## Abstract

Skinner proclaimed Behaviorism as the fundamental learning theory of human and animal behavior based on discriminative stimuli and later introduced Radical Behaviorism which recognized private events as relevant behavioral antecedents. Skinner sets all human behavior within a cycle of stimulus response where any action can serve as either a response to or a stimulus for another behavior. Much research has examined aspects of adolescent development and found definite connections to behavior theory. But some that slightly breach the behavior theory barrier and still others that completely diverge from its reinforcing consequential confines. Parents can employ positive and negative reinforcement for mechanical functioning such as chores and curfews but there are biological and neurological processes occurring during adolescent development that reinforcement cannot address.

In the model proposed here reinforcement is central to adolescent development but an in-depth analysis reveals many associated constructs and phenomena that lie beyond Skinner's behavioral theoretical boundaries.

**Keywords:** Adolescent; Behaviorism; Dysfunction; Hyper-Accessibility; Questionnaires

Burrhus Frederic Skinner has presented a theory of behavior modification (behaviorism – behavior theory) that is basically functional [1]. The theory shows us how to change behavior without the regard for internal feelings and thoughts. Skinner denounces “mentalisms” such as self-development, self-concept, and self-esteem as factors in behavior analysis. Skinner's behavior theory is comparable to learning to cook without knowing anything about agriculture. Or becoming a clothing designer without learning how fabric is created. His theory is entirely useful for the momentary manipulation of acute situational dysfunction and applicable to educational and psychotherapeutic interventions [2]. However, we cannot discuss adolescent development without the topics of emotions and physiology. This is the period of human development where young people are immersed in a sea of hormones, neurological novelty and new plateaus that they must learn to navigate, adapt, and master [3].

In this paper I will present research that explored these novelties and plateaus and fit Skinner's concepts of reinforcement (positive and negative), punishment and extinction into the implications of the presented articles. I am compelled to integrate behavior theory into adolescent adjustment theory in an effort to design interventions that assist young people in their transition into emerging adulthood. The current social issues that young people face are daunting and research shows a need to address high suicide rates among this specific population. Via school or social settings adolescents can engage with supportive interactive media that encourages introspection and guidance toward autonomy and connectedness, self-worth and responsibility.

Adolescence is a period where parents can experience an abrupt disconnect from their children as physiological and psychological changes render them unrecognizable.

The fundamental problem parents of adolescents have understanding their teenagers could possibly stem from an emphasis on Skinner's theory of behavior change as opposed to some of the research topics here presented that go beyond the mere functionality of familial and social communication and cooperation. Behaviorism provides reinforcement schedules to shape behaviors toward personal and familial responsibility, for example, keeping the bedroom neat and washing dinner dishes. But behaviorism won't necessarily help a parent gain access to their adolescent's feelings about family time and their physical appearance which affects their self esteem.

I remember the "oceanic" feeling during my adolescence that Freud (1930) explains as a feeling of eternity - A feeling though difficult to analyze scientifically is an indissoluble bond of being one with the external world as a whole [4]. I experienced the "personal fable" believing that I was unique and special - able to elude all life's difficulties and problems. Not only was I unique but I was self-absorbed and totally convinced that life revolved around me. So self centered and empowered was I that risk-taking functioned as a propeller to carry me into the center of the life I desired to lead - full of excitement and endless possibilities. These seemingly psychotic symptoms are typical adolescent cognitions - the result of neurological development and the onset of advanced thinking ability [3].

### Detrimental thought Patterns

"In the social jungle of human existence, there is no feeling of being alive without a sense of identity" - Erikson [5]. Erikson's quote stresses the importance of developing a stable sense of identity, which he defines as "a coherent set of goals, values, and commitments that define who you are. (This) is of crucial importance for human well-being" [6]. From a behavioral perspective, not adhering to social reinforcements can cause a person to be out of step with their environment causing distress and poor behavior choices.

The essence, processes, and nature of thoughts during adolescence and emerging adulthood (ages 18 to 24) are of special interests to many researchers because they are intricately bound to the unconscious processes of human identity development [3]. They are mysterious because of their autonomous nature and are immensely important to the overall emotional stability and well-being of the individual [7,8]. Coping is one such mechanism that operates in the background until we learn strategies to employ it consciously. How do adolescents learn to cope

with identity-related anxiety stemming from questions they face, such as - What will my life be like? Will I be happy? Will I be able to overcome challenges that I face? Can adolescents learn such strategies from parents and is it beneficial to just suppress the uncertainty?

Behavior theory states that our environment supplies reinforcement for behavior and family members provide such reinforcement. Donnelly, et al. found intergenerational correlations between mother and student patterns of anxiety and self-esteem highlighting the importance of early social interactions relative to the development of schemas models) and automatic (reflexive) thoughts. Unconscious micro-processes are by nature difficult to explore [1]. Simple strategies such as suppression of negative thoughts may seem innocuous but as concluded from study participant nightly internet surveys, suppression can actually increase the frequency and intensity of the occurrence and response [9]. Such negative consequences' affecting emotional regulation as a result of hyper-accessibility has come to be known as "the rebound effect" in ironic process theory [10]. Investigations into other common coping strategies can shed light on practices that this age group can avoid.

Private events and emotions are viewed as non-essential to the functional relations that shape behavior [1]. An interesting line of inquiry on the topic of internal state language and well-being is the unconscious nature of emotions and their negative effects. Relevant to this issue is gender differences in various verbal communities. Analyzing stories told by participants and responses to questions about those stories, Bohanek and Fivush found significantly richer emotional and cognitive processing in female adolescents [11]. Listening for emotional, chronological, and factual content in adolescent narratives (personal interpretations of life events) stories is an interesting methodology that could be employed in a qualitative or quantitative format.

An added dimension to the study of the emotional aspect of self and identity is Robinson and Barrett [12]. These researchers investigated whether adolescents actually use general beliefs they have about themselves and the emotional judgments they make in short vs. long timeframes. The study highlighted the retrieval process (retrospectively or momentarily) involved in adolescent self-concept. Specifically, the use of these beliefs and their emotional components the researchers termed "semantic infusion", which could be investigated as a self-enhancing mechanism involved in the social acceptability aspect of self report methodology. Skinner would simply dismiss

this investigation as frivolous and look only to environmental reinforcement to address adolescent self esteem and identity distress (lack of exploration and commitment).

Social acceptability, which is based on environmental reinforcement, is a major concern for young people as peer pressure can cause depressive thoughts and a lack of confidence. Rumination (repetitive thoughts) and self-doubt are maladaptive thought patterns that can interfere with Marcia's Identity Status Model which is based on exploration and commitment process [6]. Brinol, Petty and Wheeler determined that adolescents actively seek to reduce discrepancies between their conscious and unconscious self doubt (termed - explicit and implicit, respectively) [13]. The reduction is attempted by engaging in more elaboration (attempted explanations) about a discrepancy topic which conflicts with their self-image. Effortful elaboration is defined by the research as argument manipulation. At what point does elaboration become rumination? That is an area of interest for clinical and counseling psychologists.

Educational psychologists strive to support mechanisms that promote academic achievement. In an academic setting Huang extended the elaboration process to include goal-setting and the enjoyment attached to those goals [14]. Huang's study suggests that achievement and mastery are closely associated with emotional experiences. When we project positive outcomes we preview the emotional experience in a cycle of achievement. The field of educational psychology can benefit from developing strategies that reinforce achievement with emotional well-being.

Healthy identity formation (explored and committed) occurs when individuals purposely seek out and take root in something that interests them and who they believe themselves to be. Marcia explains the absence of this formation as identity confusion (diffusion) status [15]. He describes this status as having no clear commitments or engagement with systematic exploration [6]. Learning to cope with identity related anxieties and alleviating detrimental thought patterns will enhance the identity formation process and increase well-being during adolescence. Identity achievement in behavioral terms allows the young person to escape the discomfort of negative familial and social feedback that often accompanies the exploration phase of adolescence [3].

Conditioned reinforcement is a process by which adolescents can learn coping skills. This can be

accomplished by strengthening behaviors that change the frequency of anxiety response behaviors. A subject will repeat responses that have pleasant (or satisfying) consequences [1]. It has been theorized that adolescents find pleasant that which enhances their personal and social competence and provides a sense of purpose.

## Behavior

Self concept is a major factor of adolescent adjustment which is exhibited through their behaviors. Such behaviors can be categorized into positive and negative, internalized and externalized behaviors. Examples of externalized are helping others, stealing and internalized are empathy and depression, respectively. As important in the study of adolescent adjustment are measured social skills (peer relations, self management, academics, compliance and assertion [16]. During adolescence social contexts influence adjustment and well-being outcomes. Economic status, neighborhoods, schools, peer-relations, and family processes independently and interactively impact these outcomes. Sealey listened to tape-recordings of the sample of 8 to 11 year olds which revealed what she delineated as three dimensions of Freud's id in three aspects a of social self [17]. They are the immediate actor, the individual self, and the self in wider social relations. Which dimension takes priority in a given situation? And which dimension's needs demand attention in any given circumstance? These questions lead to the basic idea of the Frimer and Walker [18] study where the researchers developed an instrument to measure moral centrality and the competitive association between moral sensibilities and self-interest. A negative correlation was found between the two.

Skinner states that individuals can use aversive stimuli to control their own behavior and escape an aversive guilt condition. He of course avoided using the word "feeling". He then states that we can accomplish this by arranging contingencies [1]. Roaten and Frimer and Walker reflect this concept in their studies of the coordination of agentic vs. communal values [18,19]. This simply means that we balance what is best for others with what we believe to be best for ourselves. Using narrative thought segments (pieces of taped stories) the researchers concluded that the ability to coordinate agentic and communal values positively predicted moral behavior. This indicates that self serving behaviors should be integrated into a social contract so that adolescents feel viable and visible as a respected individual [19]. Freud would call this sublimation of basic drives-Skinner would call it learning [4].

Skinner relates delinquent behavior to psychopathic personality disorder and discusses decision-making (pg. 242) in terms of choosing a course of action [1]. The impact of independent versus dependent decision-making on adjustment in terms of well-being and problem behavior was the focus of the Van Petegem et al. investigation into underlying motivations for decision-making [20]. The study showed a significant correlation between unguided independence making decisions without guidance from anyone) and decisions which lead to problem behaviors. The implication is that problem behaviors are in part a response of defiance (low value of parental advice) and independence. Independent non advised decision-making did not significantly predict adjustment or positive behavior. Learned behavior could be the cause of such low value for parental advice.

Transitioning into adult roles signals a time to move toward more appropriate behavior, away from the exploration explained in Marcia's model. The responsibility and respect awarded the adjusted adolescent serves as positive reinforcement to meet social expectations and conform to social mores [21]. Monahan, Steinberg, Cauffman, and Mulvey studied trajectories of specific antisocial behaviors and psychosocial maturity of serious offenders (felonies, weapons offenses and sexual assault) aged 14 and 17. Developmental patterns were evidenced from measured factors of future-focused orientation, impulse control, personal responsibility, peer resistance, and suppression of aggression [22]. Low ratings on these scales combined to produce varied trajectories toward antisocial behaviors. Skinner (1953) would support strategies that promote these factors with environmental reinforcement [1].

Skinner states that antisocial personality (Freud's "id") is the result/manifestation of competition for immediate primary reinforcements [1]. To the extent that the community culture finds this competition aversive their judgments form t Freud's "superego" as a unitary community [4].

Planned behavior theory states that intentions and behaviors are shaped by three factors: value of the behavior, value of significant others' opinion of said behavior and perceived control of the behavior. Manning sought to identify the mechanisms that allow average ideas of causation (normative perceptions) to affect behavior [23]. Distinguishing the influence of injunctive/planned from descriptive/actual norms he correlated the need to belong with perceptions of control vs. actual behaviors. Hierarchical linear modeling

produced a positive relation between increased social motivation and descriptive norms and a negative relation between increased social motivation and injunctive norms. So what this sample of adolescents believed to be proper/acceptable behavior and the way they evaluated their own planned behavior was socially motivated. That social motivation Skinner would say is environmentally reinforced [1].

Skinner asserted that research should explore the viability of intra-group "social units, forces, and laws" and their effect on the environment. He mentioned that the study of such group influence may require scientific methods. It can be assumed that Skinner was implying that such methods had not yet been developed in 1953 [1]. Here are several such studies that elucidate such social effects. With the premise that self-compassion functions as an adaptive strategy in the face of difficult circumstances and negative personal evaluations Neff and Pittman used a cross-sectional design to investigate adolescent well-being [24]. Using the Beck Depression Scale he compared cognitive and family factors in an emerging adult and adolescent sample [25]. The results showed that in both adults and adolescents well-being significantly correlated with self-compassion. Individual differences in self-compassion were predicted by family and cognitive factors. Parents must be careful to support self-compassion while balancing a sense of responsibility during adolescent development. Self-compassion should be reinforced as much as demonstrations of initiative.

Juvenile delinquency, as defined by Santrock, refers to criminal acts, status offenses, and socially unacceptable behavior [3]. "Status" offenses are distinguished from "Index" offense as less serious legal infractions committed by underage persons. When such offenses occur within a six month period the psychological diagnosis "conduct disorder" is attached and counseling is deemed an appropriate intervention [3]. The rising rate of juvenile delinquency reversed slightly after 1996 according to Puzanchera and Sickmund [26]. A contributing factor may have been increased technological access and preoccupation in the popular culture. Unfortunately, an increase in cyber-bullying was evidenced as new federal laws were enacted to address such criminal infractions among that age group.

Adolescents benefit greatly from active compassionate listeners who aren't necessarily friends and family, for various reasons [27]. Therapists provide supportive techniques that address conflicts and distressing aspects of our mental processes and emotions. The relationship

between therapist and client is the essential factor determining successful investigation and resolution of mental issues [27]. This empathic strategy used in a safe environment affords the adolescent increased self-understanding in a world viewed as more manageable and less complicated [28]. Art Counseling is a natural extension of this therapeutic self-expression approach which clarified self-concept in preadolescent boys who carried that strength into later adolescence with more positive outcomes [28].

Mayer provided a theoretical analysis of personal intelligence explaining that adolescents rely on and are motivated by personal memories which Skinner regards as emotional predispositions [29]. These memories require a specific skill to then support self-knowledge and direction toward external expression, and a better social contract. Positive experiences and residual memories support healthy identity development. Skinner holds that self-knowledge is a special repertoire of "suitable" reinforcements used as future discriminative stimuli [1].

The study of antisocial behavior does not lend itself well to reductionist theory. However, in a self-report study of adolescent anti-social behavior personal expressiveness and goal-directed behavior were significant predictors of well-being associated with activity-based identity experiences [30]. Skinner does not view "purpose as a final cause of behavior and does not view behavior as being under the control of an "incentive or goal" [1]. He sees purpose as a way of referring to controlling variables which to me is a conundrum. But is a goal a response to environmental stimuli, or intentional self-control?

Behavior and well-being are currently addressed innovatively. For example, a model that addresses school atmosphere consisting of organizational processes, social inclusion, and outside of the classroom participation can improve rates of negative externalized behaviors [31].

## Language

Skinner proposes that scientists' observations of their own and others' private (mental) events be studied in much the same fashion [1]. He holds that the mere observation of a private event is in fact a response to that event. I believe he is addressing the observer effect phenomenon which states that a mere observation changes the event being studied [3].

As young people progress through adolescence they become increasingly protective of their thoughts. Much to the dismay of their parents and teachers, adolescents typically keep their thoughts to themselves. But is this a protective strategy or an inability to articulate what is happening as a result of their developing neurological processes? The product of these processes, known as self-talk, internal state dialogue, narrative language, and so forth, are a key element to this research topic. Skinner states that new technologies may make it possible to detect events at the private level thereby making them accessible to scientists [1].

During the myelination and pruning processes of brain development the prefrontal cortex is not fully developed until the end of the emerging adulthood stage at approximately 24 years of age [32]. Roaten concluded that psychological therapy should engage adolescent clients in non-verbal therapeutic activities [19]. These activities should promote neural integration and classification of emotions, memory, and relational experiences toward regulation, insight, fear extinction, intuition, and moral development. At the core of this therapeutic intervention is the alliance formed between therapist and client based on a partnership bond of respect and shared control.

What do we say to ourselves about ourselves, our experiences and our circumstances? What meta-monitoring mechanisms (micro-processes) act to balance our perceptions with the perceptions of others? How can we adjust maladaptive inner speech in ways that lead to positive outcomes during adolescence and emerging adulthood? These questions were addressed by Brinthaup, Hein and Kramer, who determined that self is a product of this internal narration [33].

Future research would be extremely beneficial that could identify reliable indicators detectable by a vigilant listener that internal narration is functioning in a healthy or detrimental pattern during this life stage. Likewise research that clarifies the role that parental communication style plays in the development of a stable self-concept would be beneficial. Parenting and attachment during adolescence have direct and cascading effects on emotional maturity and coping skills during emerging adulthood (ages 18 -24) [3].

Narration is defined in the Dumas, Lawford, Tieu and Pratt self-talk research as a verbal formulation containing indications of value and meaning of important life experiences [34]. This longitudinal study found that adolescents who perceived themselves as a product of



“good parenting” narrated low point events (negative experiences) more coherently and with a more positive resolution at age 26 [34]. Similarly, Pasupathi and Hoyt highlighted the developmental influence of quality listening skills as parents and friends engage with adolescents [35]. The identity development level is evidenced in and measured by the factual content in the young person’s constructed personal memory narratives. Also focusing on this issue is Nelson, Bein, Huemer, Ryst, and Steiner [36]. The research concluded that parents and professionals can listen for linguistic clues of stress and avoidance in the conversations of adolescents. He defines narrative immersion as the extent to which adolescents include their feelings and beliefs as a useful conversational clue about their mental state. These authors highlight the important role of communication in the parent-adolescent relationship as adolescents seek meaning in their experiences and assign value to their unique characteristics.

### **Socio-Psychological Development and Adjustment**

Developmental psychologists Erikson originally defined human ego identity as a sense of uniqueness. Essentially, he considered identity development to be individuality with an emerging commitment to a particular place in society, also entailing a sense of continuity [5,35]. It has been long recognized that adolescent adjustment and well-being is related to successful identity formation [37]. Archer argued that identity achievement is a precursor to mental health and Meese examined the relationship between Marcia’s statuses and psychological well-being and determined identity achievement to be a healthy indicator of the capacity to environmentally adapt (respond to reinforcement according to Skinner [1,38,39]). Schwartz relays Erikson’s psychosocial theory that explains identity formation as the successful resolution of the individual’s identity crisis [5,40]. He described identity development as a series of psychosocial conflicts faced during adolescence, stemming from experiences between the growing individual and his or her social environment [5]. Erikson’s epigenetic principal is explained as successful conflict resolution in turn promoting similar future success. This is learning defined in behaviorists’ terms. These accumulated successful conflict resolutions allow the individual to evolve with a firmer sense of inner unity, good judgment, and self-efficacy [5]. With the increasing complexity of adolescent life, incumbent upon researchers is to strive more fervently to create

supportive practices that reduce adolescent maladjustment.

Marcia’s 1966 seminal adolescent identity formation theory categorizes Achieved, Moratorium, Foreclosed and Diffused as four statuses based on two factors - exploration and commitment. Measuring high on both factors the adolescent is labeled identity Achieved. Measuring low on both factors the adolescent is labeled identity Diffused. High on exploration and low on commitment results in the Moratorium status and high on commitment but low on exploration results in the Foreclosed status. Since 1987, identity research has been based on models, which have for the most part drawn on Marcia’s identity statuses in various ways by examining or extending the theory’s elements in greater detail or expanding on the identity construct [15]. These studies have reached beyond the original four-status concept attempting to reveal subtle nuances not captured by simply combining exploration and commitment.

Researchers have produced a vast, expansive literature base about adolescent identity formation. Recognized as an important developmental accomplishment, identity formation has been securely centered in psychological research by Marcia who established the seminal identity status theory [15]. Meese commends Marcia for augmenting Erikson’s conception of identity as mental vitality with the four status identity formation model (Achieved, Foreclosure, Moratorium and Diffused) based on adolescent exploration and commitment to values and roles that guide him or her toward fulfilling a purpose in life that expresses their personality [5,39]. The amassed literature on the topic of identity status theory and its methodologies and correlates makes an exhaustive review an impossible prospect. However, the Schwartz meta-study presents an historical overview that provides a foundation for understanding the evolution of identity formation theory and application [40].

In adolescence self awareness becomes more contextual and process-driven, such as academic studies which are more compartmentalized thereby allowing a separate academic self concept to serve as a major identity component [41]. In educational settings, students’ self-evaluation of academic competence is affected greatly by their classmates’ levels of achievement [42]. A series of experimental studies by McFarland and Buehler also indicated that the contrast effect was strongest when people had a weak bond with their social groups or when

they focused on their relative performance through comparison with others [43].

Many predictive variables have been combined to analyze the most essential components of well-being and identity achievement. The purpose of the Cheng study is to correlate three constructs with well-being in an attempt to discover which may contribute the most to adolescent adjustment in the current sample. The identity formation process encompasses many thought patterns, to the extent that adolescent development researchers have a broad palette to select an avenue of investigation [41]. The Cheng et al. study investigated self-monitoring (adjusting behavior according to the situation), self-appraisal (assessing one's own competence), and self-evaluation (comparing one's self to value standards) and the related perceptions of maturity and purpose. Cheng et al. concluded that these three constructs are demonstrated through open and varied conversations with parents signaling greater autonomy (another example of behaviorism and environmental learning). Self-monitoring, self-appraisal and self-evaluation play an important role in the identity formation process and subsequent adjustment and well-being of adolescents [41].

Within conversational retrospective reports, which denote aspects of narrative identity and self-learning, adolescents learn to manage negative emotions particularly from their mothers [44]. It is thereby suggested that mothers co-construct personal narratives with adolescents. As the adolescent takes ownership of his or her own narrative their identity developmentally shifts and other social relationships become engaged in this co-construction process [44]. Learning to author one's life story is a social project with many facets of personal insights and deep emotional expressions converging into a personal identity story of the self over time.

As Erikson theorized, a sense of purpose can facilitate adolescents' resolution of identity crises by offering a meaningful ideal to which they can dedicate themselves [5].

Research reveals that discerning meaning and purpose in life is associated with greater positive affect psychological well-being, resilience and self-efficacy. Therefore, establishing a purpose has been conceived as an asset for positive youth development [45]. If a sense of purpose is adaptive, individuals engaged with it early should be better suited to thrive as a result [46]. Skinner,

however, dismisses purpose as a non issue regarding behavior change and causation [1].

In a sense, purpose may be characterized as a form of identity capital, or a personal resource that individuals invest to build promising futures [47]. A principal benefit of identifying a purpose during adolescence may be its promotion of efficacious identities that help adolescents transition to adulthood in positive ways as well as successfully navigate developmental transitions by enhancing their recognition of obstacles and opportunities most relevant to them.

The process of resolving who one is may provide an essential context for identifying and pursuing goals that are meaningful to the self. Adolescents nominate a variety of purposes for themselves. Burrow, O'Dell and Hill documented that these purposes, apart from one's overall sense of identity, shape youths' personal and interpersonal experiences in everyday life [48].

A greater sense of purpose was linked to more deliberate individualization (i.e., selecting opportunities to enhance personal growth).

The following research topics would contribute to the understanding of well-being in adolescents:

1. classify subgroups of adolescents based on the relative salience of purpose in their lives
2. challenge traditional deficit based perspectives that youth are incapable of contributing in valuable ways to self and others.

Skinner asserted that individuality was the result of varied external stimuli [1]. Are individual differences in purpose exploration and commitment linked to adjustment? Or are the adaptive adjustment patterns proposed by the identity capital model accessible uniformly to youth regardless of their level of engagement with purpose? Exploring multiple configurations of purpose potentially offers a more nuanced understanding of the range of ways youth engage with this construct and yields more precise delineations of the adjustment correlates of unique profiles that may be inherent within this population [48].

According to identity formation theories youth construct a sense of self through actively exploring plausible self-definitions that lead to commitments to particular identities over time [5,6]. Research suggests that more advanced identity statuses (e.g., Achieved) are typically associated with greater individualization and

perceptions of agency [40]. Searching for and establishing a purpose represent related but distinct processes [48]. Whereas committing to a specific purpose may provide youth with a sense of stability, sustained exploration might signify individuals' difficulty in selecting meaningful goals. Considering that adolescence is a period of increased negative emotions, distinguishing and analyzing groups of youth who are able to countermand this normative trend by their commitment to purpose would contribute substantially to adolescent research. Overall, findings demonstrate the inherent complexity in adolescents' engagement with purpose and suggest a correspondence between stronger commitments to purpose and youths' sense of personal agency (initiative and competence) and well-being [6,49].

### Self-Concept

An interesting line of query is the role adolescents play in sustaining their developmental plateau. With a Swedish sample of adolescents Ybrandt used a battery of questionnaires to assess a communications aspect of their social functioning [50]. He determined that self-definitional bids were used to influence reactions from others that in turn confirm definitions held of self and others. These self-concept confirmations were determined to be the most salient factor in preventing problem behaviors stemming from anxiety and depression. He concluded from this study that positive self-esteem must be promoted in all psychosocial contexts. So it is clear that preventing adolescents from continuously portraying and promoting themselves as a troubled individual they can elicit positive responses from their environment (as in niche picking theory). They can begin to internalize these positive inputs and begin to see themselves as less affected and feel hopeful about their future.

Self-concept is constructed in childrearing, educational settings, peer groups and leisure activities [50]. Palen and Coatsworth correlated goal-directed behavior, personal expressiveness and flow (feeling timeless while engaged in an activity) with delinquency and well-being using a self and parent report questionnaire method [30]. Comparing youth outcomes with activity-based identity experiences the researcher found low correlations between parent and adolescent reports, and insignificant associations between parent reports of internalizing and externalizing behaviors. Palen et al. did, however, find adolescent reported goal-directed behavior to be a significant predictor of delinquency and well-being. [30] This highlights the unfortunate common occurrence that

parents have very little accurate information about their adolescents' thoughts and feelings.

As Donnelly, Renk, Sims, and McGuire asserted, children develop coping schemas from their maternal caretakers, so purports McLean et al. who investigated maternal scaffolding (guidance and encouragement toward a goal) [7,44]. Correlated with the meaning-making processes and subsequent narration (verbal formulation and assigned value) of adolescents his findings distinguished between the influence mothers' scaffolding can have on vulnerability and positive resolution as more significant than their influence on meaning-making. This reveals the possibility that the emotional connection is more important in that dyad and that meaning-making includes other factors namely social and intellectual influences.

Adolescent well-being is important to our families, communities and culture as a whole. Any resources known to educational administrators must be employed to protect and support young people in their developmental processes toward becoming healthy productive members of society prepared to direct the next generation. Listening is a first step in fulfilling this objective.

To Skinner the mind and mental processes are "metaphors and fictions," and that "behavior" is a function of the "biology" of the organism. He expressed no interest in understanding how the human mind functioned only how behavior is affected by external forces. Skinner believed that all human behavior is controlled by their experience, and that the "mind" had nothing to do with how people behaved. In Skinner's view thoughts, feelings, intentions, and mental processes, have no effect on human behavior [1].

Erikson's psychosocial theory explains identity formation as the successful resolution of the individual's identity crisis. He described identity development as a series of psychosocial conflicts faced during adolescence, stemming from experiences between the growing individual and his or her social environment [5].

According to Erikson, identity achievement has many implications for social functioning and self-presentation in contrast with the undue self-consciousness that is associated with identity confusion, Erikson argued that identity achievement confers self-assurance and confidence owing to the integration of a sense of self with purpose to a committed future course enabling social



leadership (rather than conformity alone), flexibility (rather than role fixation), and the intimacy that derives from a secure self-definition that permits personal disclosure. In social situations, identity-achieved adolescents are more likely to be genuine and consistent in their self-presentation to others-that is, to be low in self-monitoring. Self-monitoring describes the individual management of self-presentation [5].

The research presented here demonstrates that the study of adolescent development should not be subjected to an incorrect premise of separate mental-material dualism [51]. The topics of these studies which Skinner (1953) called *mentalism* are not phony fictional explanations for behavior Baum[1,51]. Adolescence is a time of life when ontological, biological and socio-cultural factors come together as an emerging adult is produced with a sense of uniqueness and identity unto his or her self. Young people wish to assert themselves as individuals not only conforming to mainstream culture [3]. This phenomenon can be viewed from a Darwinian perspective as the species selects for evermore beneficial characteristics while simultaneously discriminating stimuli within the environment of operant learning [51]. Categorized here are the research constructs included in this analysis. Based on Skinner's behavioral causal boundaries it is surprising to find so many that can be traced back to learning through environmental reinforcement. Still others can be included as eligible for a reasonable argument of traceability. But the final category would be difficult to justify in terms of simple consequential stimulus-response.

### Constructs Included in these Research Studies that are Traceable to Reinforcement

#### Behaviors Learned through Reinforcement

1. Coping Skills
2. Coping Schemes
3. Social Learning Constructs
4. Social Acceptability
5. Social skills
6. Social Functioning
7. Social competency
8. Social contract
9. Social Self
10. Values
11. Goals
12. Sublimation
13. Private Events

14. Inner Speech
15. Emotional Predispositions
16. Achievement Emotions
17. Identity Formation-Explored & Committed
18. Decisions/choices of Adult Roles
19. Identity Crises Resolution
20. Resilience
21. Adjustment

### Constructs included in these research studies that Skinner would deem marginally traceable to reinforcement

#### Marginal Discriminating Stimuli

1. Emotional Judgments
2. Moral Centrality
3. Self Esteem
4. Self Efficacy
5. Self Believes
6. Self Definitional Bids
7. Self Confirmations
8. Narrative of Personal Identity Story
9. Perceptions of Agency
10. Personal Agency (initiative & competence)

### Constructs Studied That Skinner Would Not View as Traceable to Reinforcement

#### Beyond Skinner's Theory of Behavior

1. Self-Concept
2. Meaning
3. Purpose
4. Personal Memories
5. Feelings
6. Well-Being
7. Sense of Inner Unity
8. Mental Health
9. Mental Vitality
10. Flow

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