

Original Research Paper

Investigating the Effects of Some Key Psychological and Behavioral Theories Across a Spectrum of Research Disciplines

Felix Kabwe and Jackson Phiri

Department of Computer Science, School of Natural Sciences, University of Zambia, Lusaka, Zambia

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Corresponding Author:

Felix Kabwe

Department of Computer

Science, School of Natural

Sciences, University of

Zambia, Lusaka, Zambia

Email: fmlkabwe@yahoo.co.uk

Abstract: This study examines key psychological and behavioral theories to understand their impact on individual learning, decision-making, and behavior across various contexts. The study addresses the need for deeper insights into how these frameworks shape human behavior and their applications in diverse research disciplines. The frameworks explored include the Technology Acceptance Model (TAM), which forecasts technology adoption through constructs like perceived usefulness and ease of use. The Theory of Reasoned Action (TRA) relates intentions to behavior with attitude as the major component while the Theory of Planned Behavior (TPB) builds on this and includes perceived control. Social Cognitive Theory examines how motivation and cognition, particularly self-efficacy, influence behavior. Maslow's Hierarchy of Needs categorizes human motivation hierarchically and Attachment Theory highlights the importance of early bonds in social-emotional development. Cognitive Dissonance Theory explores the discomfort from conflicting thoughts and Behaviorism focuses on observable actions and reinforcement. Social Identity Theory suggests that group affiliations shape behavior and self-concept, whereas Rational Choice Theory posits that decisions are made by weighing costs and benefits. The study reviews how these theories have profoundly shaped various disciplines. For example, TAM is crucial in evaluating technology acceptance and influencing fields such as human-computer interaction, cross-cultural research, mobile app development, e-learning, and education. Similarly, TRA, TPB, Social Cognitive Theory, Maslow's Hierarchy, Attachment Theory, Cognitive Dissonance, Behaviorism, Social Identity Theory, and Rational Choice Theory offer invaluable insights into human behavior and decision-making processes. Readers will learn about the distinct constructs of each theory, their applications, and the significant insights derived from their use. This study provides essential tools for understanding and managing human behavior in an ever-evolving technological world, making it crucial for researchers and practitioners across various fields.

Keywords: Frameworks, Technology Adoption, Psychological Theories, Behavioral Theories, Constructs, Behavior, Uses, Application

Introduction

This study aims to provide a comprehensive exploration of key psychological and behavioral theories and their profound impact across various research disciplines. The rationale behind this research is to address the critical need for a deeper understanding of how these influential frameworks shape our comprehension of human behavior in different contexts. By examining theories such as the Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), Theory of Planned Behavior

(TPB), Social Cognitive Theory, Maslow's Hierarchy of Needs, Attachment Theory, Cognitive Dissonance, Behaviorism, Social Identity Theory, and Rational Choice Theory, this study seeks to illuminate their practical relevance and application. The motivation for conducting this research stems from the increasing complexity of human behavior in the modern world, especially as it intersects with technology, social dynamics, and psychological processes. Understanding these theories is essential for both researchers and practitioners who aim to influence and manage human behavior effectively.

The study will delve into the core principles that define each psychological and behavioral framework. By understanding these foundational elements, readers can better grasp how these principles apply to individual learning, decision-making, and behavior. Highlighting the application of these theories across diverse fields such as human-computer interaction, cross-cultural research, mobile app development, learning, and education, this study will provide real-world examples of how these frameworks influence research and practice. Each theory offers distinct perspectives on cognitive processes, motivations, early relationships, belief conflicts, environmental stimuli, group affiliations, or rational decision-making. This study will elucidate these perspectives and their relevance to understanding and managing human behavior. By analyzing the collective impact of these theories, the study aims to help readers grasp their overall significance in contemporary research and practice. This includes discussing how these frameworks complement each other and provide a holistic view of human behavior.

The study will provide a brief narrative of each framework, review the findings from their applications, and conclude with an analysis of their collective impact. This structured approach will help readers quickly understand the relevance and significance of these theories in both academic research and practical applications. By the end of this study, readers will have a deep understanding of the key psychological and behavioral theories, their practical applications, and the invaluable insights they offer for various disciplines. This knowledge is essential for navigating and influencing human behavior in an ever-evolving technological world.

Frameworks

Technology Acceptance Model (TAM)

TAM has been widely employed as the theoretical foundation for examining and projecting the pattern that corresponds to the adoption of information technology (Brezavšek *et al.*, 2014).

TAM is a conceptual model that aids understanding of technology acceptance behavior. There are four factors in TAM including Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Perceived Security (PS), and Perceived Trust (PT) (Alloghani *et al.*, 2015).

These elements constitute the Technology Acceptance Model's core components. It is argued by Legris *et al.* (2003) that TAM is important when it comes to accepting and using IS especially in the process of using or implementing technology in organizations. It examines the frequency of system usage and can thus be used to measure the success of the system in this study. Figure (1)

gives an illustration of various variables in the Technology Acceptance Model collaborating in the application to accept technology by users.

Theory of Reasoned Action (TRA)

Weber *et al.* (2007) indicate that one's plan to perform a certain action is the most powerful determinant of how he or she will behave. It is important to point out that the fundamental postulates of the Theory of Reasoned Action stem from social psychology (Otieno *et al.*, 2015). Social psychologists' goal is to understand how and why attitudes affect behavior, which is a significant theory in information systems as well (Otieno *et al.*, 2015). Social psychologists explore attitudes' impact on behavior, this is crucial for Information Systems. The Theory of Reasoned Action (TRA) introduces three key constructs: This includes; (1) Behavioral intention, (2) Attitude, and (3) Subjective norms (Otieno *et al.*, 2015). Attitudes involve personal evaluations of behavior's implications, shaped by beliefs and values, while subjective norms represent social pressures and others' perceptions. They combine to influence behavioral intentions. The primary goals are to understand and therefore, predict social behavior (Godin, 1994). TRA involves grasping and subsequently anticipating social behaviors and patterns. Barr and Gilg (2005) postulate that TRA can be applied in predicting individual waste management behavior. According to Otieno *et al.* (2015), the Theory of Reasoned Action can also be applied in explaining the utilization of technology or any other technology for that matter. It has been applied in various conditions and is now described as one of the most important theories of purposeful human conduct (Trafimow and Finally, 2002). It has been applied in various conditions and is now described as one of the most important theories of purposeful human conduct (Brown *et al.*, 2002). Figure (2) depicted showcases the Theory of Reasoned Action and relationships among its constructs when an individual intends to perform a given behavior.

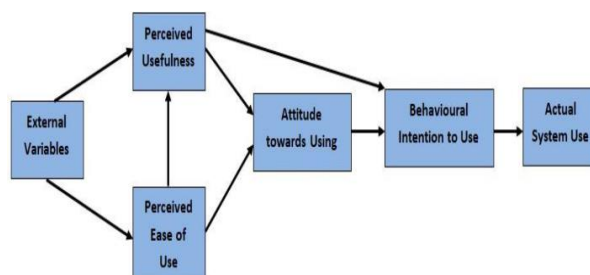


Fig. 1: Illustration of technology acceptance model (Legris *et al.*, 2003)

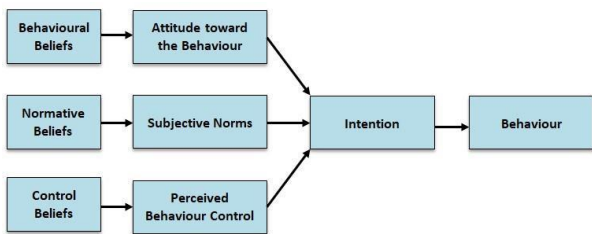


Fig. 2: An illustration of the theory of reasoned action (Miao *et al.*, 2017)

Theory of Planned Behavior

This is a theory that is designed to predict and explain human behavior in specific contexts. It is the individual's intention to perform a given behavior (Ajzen, 1991). They are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior (Ajzen, 1991). The probability of behavior change for any given behavior depends on how much control an individual has over the said behavior and/or their willingness to change (Kwame Ameade *et al.*, 2015). Behavior change depends on the control one has over the behavior and their motivation to change it. More control and determination increase the chance of successful change (Kwame Ameade *et al.*, 2015). Planned Behavior Theory has been used to explore environmental behavior, understand or predict recycling behavior, travel choice, energy consumption, water savings, food choice, and ethical investments (Stern, 2000). Some studies have been conducted to determine general attitudes on purchasing behaviors of environmentally sensitive products (Ajzen, 1991). Some of these studies focus on environmentally friendly transportation preferences (Abrahamse and Steg, 2011). The diagram in Fig. (3) portrays the Theory of Planned Behavior and its associated constructs in the prediction of human behavior.

Social Cognitive Theory

Motivation, primarily concerned with the activation and persistence of behavior, is partly rooted in cognitive activities (Bandura, 1977). It drives actions through willpower and mental processes, fueling determination. Reinforcement of behavior serves as a motivational device rather than an automatic response strengthener (Bandura, 1977). People process feedback from events over long intervals, synthesizing information about circumstances and action patterns necessary to produce specific outcomes (Bandura, 1977). Behavior that has been positively reinforced does not increase if individuals believe that similar actions will not be rewarded in the future (Estes, 1972). Individuals learn and develop behaviors through environmental interactions (Zsolnai, 2016). They observe others' actions and consequences, integrating these observations into their behaviors

(Zsolnai, 2016). This theory acknowledges cognitive processes like attention, memory, and motivation in learning (Zsolnai, 2016), emphasizing self-efficacy, or the belief in one's ability to perform tasks, as a central driver of behavior (Zsolnai, 2016). Key constructs of Social Cognitive Theory (SCT) include perceived self-efficacy and outcome expectancies (Luszczynska and Schwarzer, 2005). Related constructs encompass goals, socio-structural impediments, and facilitators (Luszczynska and Schwarzer, 2005). These elements concern beliefs about potential action consequences and their impact on behavior change (Luszczynska and Schwarzer, 2005). SCT highlights the interplay of goals and perceived impediments and facilitators throughout the behavior change process. Figure (4) provides a visual overview of SCT, illustrating how its components interrelate. It shows behavior as influenced by motivation and cognition, demonstrating the comprehensive nature of the theory in explaining how individuals learn, develop, and modify behaviors through a combination of observational learning, cognitive processes, and self-efficacy.

Attachment Theory

Attachment theory has been described as the dominant approach to understanding early social development (Crouch, 2015). Attachment processes probably facilitate emotional bonds (Crouch, 2015).

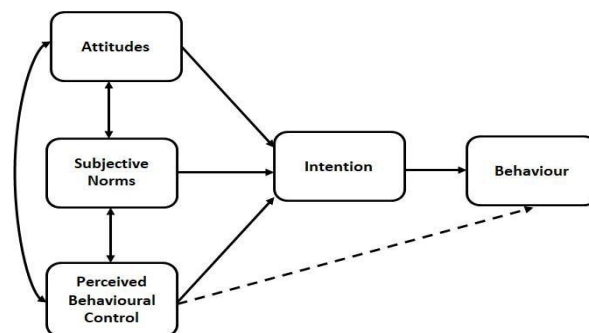


Fig. 3: Illustration of the theory of planned behavior (Sebastián *et al.*, 2022)

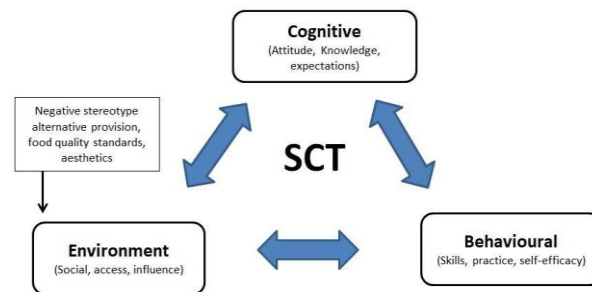


Fig. 4: An illustration of the social cognitive theory (Harris *et al.*, 2021)

Maslow's Hierarchy of Needs

Maslow's Hierarchy of Needs is used as a means to assist in understanding human behavior. It is approached as a model for understanding motivation and is used for understanding the needs of individuals (Benson and Dundis, 2003). Further, it is used for understanding what the driving forces are, or what is important to individuals (Benson and Dundis, 2003). Maslow's hierarchy of Needs model divides needs into five categories, which implies that the higher-level needs will not be met unless the lower-level needs have been met (Uysal *et al.*, 2017). Maslow's hierarchy of needs can be differentiated into three, which are "existence needs," "relationship needs," and "growth needs" (Uysal *et al.*, 2017). In the Hierarchy of Needs such needs are characterized by a focus on individual differences, beginning with the most basic biological drives and culminating in the more sophisticated social and psychological desires (Uysal *et al.*, 2017). The theory mentions some important elements, for instance, the safety need, freedom from stress, social attachment, self-esteem, self-actualization, transitions in various occupational or social settings, and ways for education and self-development. Basically, these are attributes that the youngest individuals possess and fall within the domains of certain hierarchy proposed by Maslow (Benson and Dundis, 2003). The graphic below, identified as Fig. (5), demonstrates Maslow's Hierarchy of Needs and the links between its constructs in the understanding of human behavior toward needs.

The processes play a significant role in nurturing and fostering emotional bonds between individuals. Jones (2015) argued that turning to others for help is an effective way of coping with stress. Seeking assistance from others is a beneficial approach to managing stress. Sharing burdens and receiving support can alleviate emotional strain and provide valuable insights and solutions. Behavioral tendencies that define insecurity might be more adaptive in harsh or unpredictable environments (Simpson *et al.*, 2020). Insecurity-related behaviors can adapt better to tough, unpredictable environments. Aviezer *et al.* (2002) postulate that there may be a connection between early attachment security and more adaptive functioning later in life. Attachment is a reciprocal process by which an emotional connection develops (Crouch, 2015). It becomes the basis for the development of basic trust or mistrust and shapes how the child will relate to the world, and learn and form relationships throughout life (Crouch, 2015). In Fig. (6), you can see the Attachment theory and how its various components are related underscoring the impact on social-emotional development.

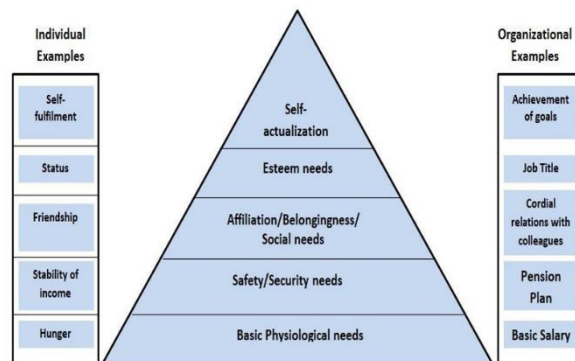


Fig. 5: An illustration of the Maslow's hierarchy of needs (McLeod, 2024)

The attachment styles

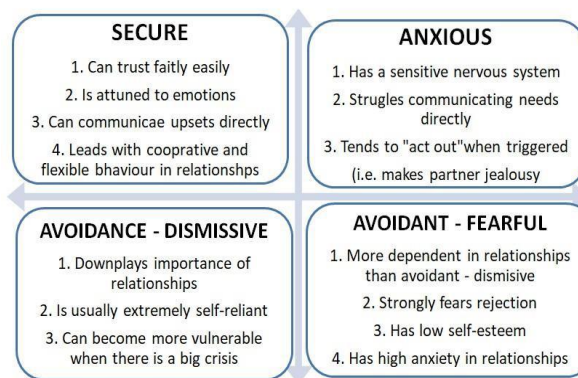


Fig. 6: Illustration of the attachment theory (Psychology, 2023)

Cognitive Dissonance Theory

Cognitive dissonance arises when a person experiences discomfort either from having two contrary ideas in his or her mind at the same time or from doing something contrarian to a belief (Oduh, 2016). It constitutes a condition characterized by discord or unease, manifested upon the occurrence of a discrepancy between an individual's belief system and their behavioral practices, exemplified by the scenario wherein a person espouses opposition to the act of animal slaughter while concurrently engaging in the consumption of meat products (Oduh, 2016). When people face inconsistencies between what they believe or do and what they stand for in life or when receiving new information that undermines old positions, they experience cognitive dissonance which can be quite disconcerting sometimes (Harmon-Jones and Mills, 2019). The discomfort with unexpected success indicates people's drive to achieve a self-relevant performance expectancy regardless of the performance being good or bad (Metin and Camgoz, 2011). A person's behavior and the surrounding cognitive environment infer the person's attitudes leading to a dissonance effect that does not involve motivation (Yahya and Sukmayai, 2020). Dissonance effects arise

when people unconsciously adjust their attitudes based on their actions and the context, without any deliberate motivation. People usually strengthen their pre-existing convictions whenever they come across pieces of information that are in opposition to such convictions (Yahya and Sukmayai, 2020). Cognitive dissonance theory has important implications in many real-life situations, mainly in decision-making, forced compliance, and selective exposure to information to ensure that a person's actions and attitudes are in harmony (Griffin, 2012). Some of the emotions that we experience resulting from cognitive dissonance are dread, guilt, anger, frustration, anxiety, stress, and other psychosomatic conditions (Fontanari *et al.*, 2012). The probability that a thought will change in order to attain a decrease in dissonance relies upon the extent to which that particular thought is inflexible in terms of alteration (Harmon-Jones and Mills, 2019). Because the connection between knowledge and actions is very strong, thus conflicts arising in an information system can interfere with performing activities successfully, causing discomfort or tension in a person (Montecinos, 2020). The diagram in Fig. (7) visually explains the Cognitive dissonance theory and its construct relationships which explore the discomfort arising from simultaneous conflicting thoughts.

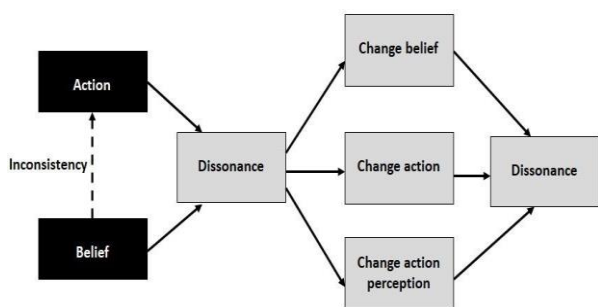


Fig. 7: An illustration of cognitive dissonance theory (Festinger, 1957)

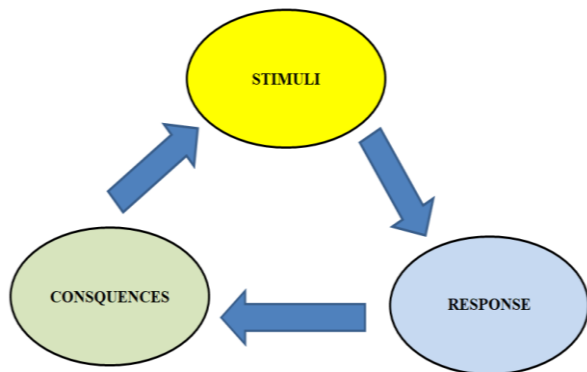


Fig. 8: An illustration of behaviorism (Centre, 2020)

Behaviorism

Behaviorism studies human actions not from consciousness but observes actions and behavior based on reality. The inner experiences are set aside and the movements of the body are studied (Salamah *et al.*, 2021). It looks for the simplest elements of nonconscious actions called reflexes. Reflex is an unconscious reaction to an author (Salamah *et al.*, 2021). Humans are only creatures that develop due to habits and education can affect the reflexes of the heart's desires (Salamah *et al.*, 2021). Behavior consists of reactions and movements that an organism gives and does in a certain situation (Akdeniz *et al.*, 2016). Behavior is mostly used for actions that can be observed from outside (Akdeniz *et al.*, 2016). The behaviorist learning approach mostly focuses on how behaviors are acquired (Akdeniz *et al.*, 2016). Learning can develop by means of establishing a connection between stimulus and behavior and any behavior can be changed through reinforcement (Akdeniz *et al.*, 2016). In desirable conduct constructive consequence is used and in undesirable conduct punitive penalty is utilized, Kadam (2022). Consistent repetition and reflection are essential for effectively reinforcing responses and ensuring the entire process is replicated (Bloom *et al.*, 1974). An individual's behavior is the result of an action previously done (Burhanuddin *et al.*, 2021). In case a certain type of behavior is followed by another type of behavior that is preceded by a prize, the learner will invariably imitate a certain desirable type of behavior (Burhanuddin *et al.*, 2021). Contrary to what is believed, reinforcers can increase the frequency of a learner's behavior. Negative reinforcement on the other hand happens when a person desists from a specific behavior due to elimination of a negative stimulus thus resulting in the same outcome (Burhanuddin *et al.*, 2021). On the other hand, punishment which is called reinforcement theory, aims at reducing behavior (Burhanuddin *et al.*, 2021). Behavior will then be shaped through positive/negative reinforcement or punishment (Watson, 1913). A person's internal psychological state of mind is not relevant when predicting a person's behavior (Burhanuddin *et al.*, 2021). All learned behaviors that are behaviors come from the external environment rather than the internal (Mekonnen, 2020). Behaviors found in people are a result of actions by external entities. The main stimuli of behavior are not internal (such as mental processes) but external and analytical (Akdeniz *et al.*, 2016). Figure (8), displayed below, delineates Behaviorism theory and the connections among its constructs on observable actions with a focus on the reinforcement of behavior.

Social Identity Theory

The social identity therefore means a person's perception of him or her as belonging to a particular social category (Hogg, 1988). A social group is made up of people who have a common social category they belong

to or are of the same perception (Stets and Burke, 2000). Identity theory primarily focuses on the elements of a structured society (Stets and Burke, 2000). A person's identities are made up of self-perceptions that arise from the process of self-categorization or identifying with specific groups or roles (Stets and Burke, 2000). Within a social structure, individuals recognize both themselves and others as holders of certain positions or roles (Stets and Burke, 2000). Classification changes individuals' perception of themselves by changing the aspects of their self-schema (Hornsey, 2008). An important aspect of identity formation is self-categorization since it involves a named and organized world (Stryker, 1980). At the intergroup level, self-concept is mainly defined by an individual's "social identity" which is parts of the self-image that are derived from the social categorizations, as well as the affective and evaluative responses to these categorizations (Hornsey, 2008). The like-minded people belong to the in-group while the dissimilar people are grouped under the out-group (Stets and Burke, 2000). Members within a group are usually passionate about the group and usually relate to it (Stets and Burke, 2000). Identification with a social category behavior refers to and reaffirms social structural arrangement (Stets and Burke, 2000). People change their behavior according to the norms that come along the social identity in order to enhance the level of identification with the group (Stets and Burke, 2000). Having a specific social role necessitates that; the individual understands that he or she is part of the group, identifies with other members, and regards reality as others in the group do (Stets and Burke, 2000). Since the work of Stets and Burke (2000), the foundation of the concept of social identity is built on the perception and behavior of the people in the group. For some social groups, particularly marginalized or minority groups, the ability to perceive positive distinctiveness is constrained by realities of social prejudice and discrimination (Harwood, 2017). The illustration in Fig. (9) highlights the social identity theory and its construct associations on human behavior on identity in their groups.

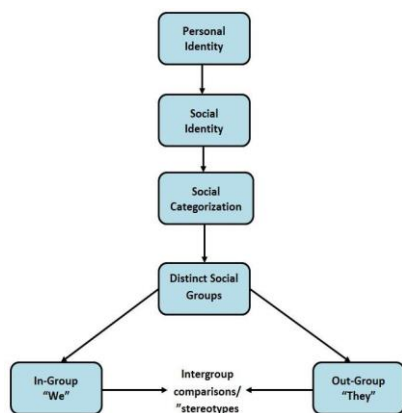


Fig. 9: Illustration of social identity theory (Baxter, 2016)

Rational Choice Theory

The Rational Choice Theory is used by social scientists for understanding how people behave (Kari, 2014). Choice is said to be rational when it is deliberative and consistent. The decision maker has thought about what he or she will do and can give a reasoned justification for the choice (Ulen, 2006). There exist in the world of social phenomena discrete entities capable of acting purposefully (Lovett, 2006). Rational choice theory is made up of different frameworks that view social happenings as a consequence of individual actions that are thought to be rational (Wittek, 2013). Rational behavior refers to acts done purposely with some specific goals in mind and taking into account different limitations posed by the situation (Wittek, 2013). This means that in making choices people weigh options based on their cost and value thus going for the one with higher anticipated satisfaction (Wittek, 2013). The theory mentions that human behavior is intentional since it stresses an individual's capacity to make decisions after weighing pros against cons (Wahab *et al.*, 2023). According to Wada *et al.* (2023), people are believed to be mindful of what they can do, so they act on their own behalf to achieve their objectives. Humans make their decisions based on some evidence that they collect from their interactions with other people in society (Wada *et al.*, 2023). Although these examples seem confusing at first glance, they help to understand why different individuals behave differently when faced with similar circumstances.

The rationality of an actor does not only depend on his preferences or cognitive competencies but also on his social background (Friedman, 1953). In regard to preferences, actors in a social situation assess various alternatives in terms of their utility and hence develop comparative rankings between them (Wittek, 2013). For instance, Mary may decide to join an organization whose president she knows while John may join another one just because he got free food during its meeting. Since action is always goal-oriented, such distinctions are important when determining the behaviors of individuals in different societies (Burns, 2008). Beliefs involve perceptions about how actions lead to outcomes or consequences (Wittek, 2013). These might include considering what application will yield good results compared to other ones (Elster, 1989). However, individuals present those choices that they associate with higher chances of obtaining desirable results (Friedman, 1953). Moreover, real life does not come in terms of probabilities but rather maybe ions which affect an infinite range of events that cannot all be enumerated even approximately (Burns, 2008). Constraints restrict possible decisions depending on social relations found within specific

situations (Wada *et al.*, 2023). For example, if Mark wants to leave college before graduating because he needs money urgently but realizes that this will hurt his mother who was supportive towards him at all times; hence she would be very disappointed if he did so indicating constraints acting upon Mark's choice to continue his education or not (Wittek, 2013). Individuals base their decisions on cost-benefit calculations and choose the alternative that generates the highest expected utility (Wittek, 2013). Figure (10), presented below, provides a visual representation of the Rational Choice Theory and its construct relationships on human behavior on costs and benefits.

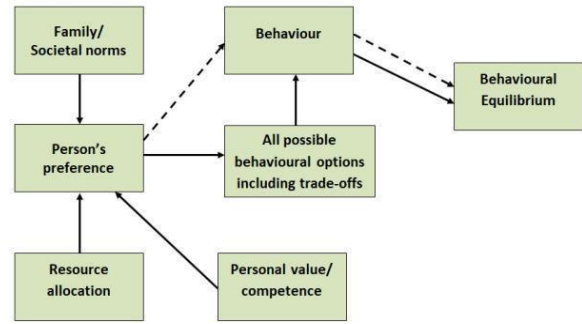


Fig. 10: An illustration of rational choice theory ("Understanding How Overweight," 2023)

Some Uses and Applications of the Frameworks

Table 1: Some psychological and behavioral frameworks, their uses and applications

Framework/theory	References	Key constructs	Domains of application	Some uses
Technology Acceptance Model (TAM)	Miao <i>et al.</i> , (2017); Legris <i>et al.</i> , (2003); Taherdoost (2018)	<ul style="list-style-type: none"> Perceived usefulness Perceived ease of use Attitude towards using Behavioral intention to use Actual use 	<ul style="list-style-type: none"> Evaluating user acceptance System design and improvement Technology adoption studies User training and support Measuring the impact of technology initiatives Predicting user behavior Technology procurement and investment decisions Human-computer interaction research Cross-cultural research Mobile app development E-learning and education 	<ul style="list-style-type: none"> Measuring and analyzing computer/technology user satisfaction Predicting factors that seem to influence the use of technology Information systems and technology adoption Businesses and organizations design Implementation of technologies
Theory of Reasoned Action (TRA)	Ajzen (1991); Taherdoost (2018)	<ul style="list-style-type: none"> Attitude Subjective norms Behavioral intention Behavior 	<ul style="list-style-type: none"> Health behavior Consumer behavior Environmental conservation Academic achievement Technology adoption Organizational behavior Political behavior Substance abuse prevention Donation and charity Entrepreneurship and business startups Risky behavior and decision-making Social change 	<ul style="list-style-type: none"> Understanding behavioral intentions: Reveals reasons for technology adoption Motivation and adoption factors: Offers insights into embracing new tech Attitudes and social norms: Emphasizes user attitudes and social influences in tech adoption Predicting adoption: Aids in anticipating user behavior by assessing perceptions and peer influence
Theory of Planned Behavior (TPB)	Ajzen (1991); Taherdoost (2018); Sebastián <i>et al.</i> (2022)	<ul style="list-style-type: none"> Attitude Subjective norms Perceived behavioral control Behavioral intention Behavior 	<ul style="list-style-type: none"> Health behavior Physical activity Environmental conservation Education Marketing and consumer behavior 	<ul style="list-style-type: none"> Behavior changes interventions To understand the individual acceptance and use of different technologies

Framework/ theory	References	Key constructs	Domains of application	Some uses
			<ul style="list-style-type: none"> • Social and Political Behavior • Donation and volunteering • Entrepreneurship • Risky behaviors • Technology adoption • Employee behavior • Public health interventions 	
Social cognitive theory	Govindaraju (2021) Maynard & Turowetz (2013); Stefanone <i>et al.</i> (2018); Stajkovic & Luthans (2002)	<ul style="list-style-type: none"> • Behavioural beliefs • Attitude toward the behavior • Normative beliefs • Subjective • Norm • Control Beliefs • Perceived behavioral control • Intention • Behavior 	<ul style="list-style-type: none"> • Education and learning • Behavioral change and health promotion • Psychology and Therapy • Leadership and organizational behavior • Media and Advertising • Criminal justice and rehabilitation • Parenting and child development • Sports and athletic performance • Conflict resolution and mediation • Career development and job training 	<ul style="list-style-type: none"> • Predictions inform, guide, and motivate people to adopt healthy habits and lifestyles • Communication interventions aimed at raising awareness, promoting behavioral changes • Predicting health habits and preventative measures • Predict specific health behaviors • Physicians use with patients • Used in modern health campaigns
Maslow's hierarchy of needs	Cao <i>et al.</i> (2022); Naaz & Khalid (2023); Uysal <i>et al.</i> (2017); Nguyen <i>et al.</i> (2024);	<ul style="list-style-type: none"> • Cognitive • Environment • Behavior 	<ul style="list-style-type: none"> • Psychology and counseling • Education • Business and management • Healthcare • Social services • Personal development • Community planning • Motivational seminars and workshops • Conflict resolution • Social and cultural • Analysis 	<ul style="list-style-type: none"> • Therapy and counseling benefit from this approach • It fosters a supportive learning environment. • Used to motivate and engage employees • Applied in advertising campaigns • Healthcare professionals can use it to understand patient needs and motivations. • Valuable for personal development • Empowers individuals and promotes social change • Essential in addiction treatment • Drives the development of more effective and user-friendly solutions
Attachment theory	Howe (2019); Wilson-Ali <i>et al.</i> (2019); Cassidy <i>et al.</i> (2013)	<ul style="list-style-type: none"> • Secure • Anxious • Avoidance-Dismissive • Avoidant-Fearful 	<ul style="list-style-type: none"> • Child development and parenting • Clinical psychology • Social Work • Education • Counseling and therapy • Criminal justice • Mental health 	<ul style="list-style-type: none"> • Attachment theory stresses the importance of secure, caring environments for emotional well-being • Used in interventions for attachment problems, trauma,

Framework/ theory	References	Key constructs	Domains of application	Some uses
			<ul style="list-style-type: none"> • Trauma recovery • Parent-Child attachment interventions • Adoption and foster care • Couple and family therapy • Neuroscience • Organizational psychology 	<ul style="list-style-type: none"> • anxiety, depression, and emotional disorders • Vital for evaluating and improving various relationships, such as parent-child, couples, and adoptive/foster families • Researchers employ attachment theory to explore the brain's role in emotional connections • Attachment theory guides rehabilitative programs for offenders with a focus on attachment
Cognitive dissonance theory	Harmon-Jones and Harmon-Jones (2007), Cooper (2007); Perlovsky (2013); Harmon-Jones and Mills (2019); Tueanrat and Alamanos (2023)	<ul style="list-style-type: none"> • Action • Belief • Dissonance • Change belief • Change action • Change action perception • Dissonance 	<ul style="list-style-type: none"> • Marketing and advertising • Behavior change • Attitude change • Decision-making • Education and learning • Conflict resolution • Employee motivation • Health and wellness • Political communication • Social change 	<ul style="list-style-type: none"> • Smoking cessation • Weight loss • Persuasion • Post-purchase dissonance • Encouraging critical thinking • Activism and advocacy • Behavior change campaigns • Employee motivation • Decision-making • Negotiation and mediation • Brand loyalty • Sustainable consumer choices
Behaviorism	Cooper (2019); Robbins <i>et al.</i> (2018)	<ul style="list-style-type: none"> • Stimuli • Response • Consequences 	<ul style="list-style-type: none"> • Behavioral therapy • Education • Parenting • Organizational management: • Marketing • Animal training • Sports and Fitness • Phobias and anxiety disorders • Criminal justice • Language acquisition 	<ul style="list-style-type: none"> • Behavior analysis • Classical conditioning in the classroom • Operant conditioning in education • Positive reinforcement employee performance management • Behavioral marketing • Operant conditioning in animal training • Athlete conditioning • Systematic desensitization • Behavior modification in corrections • Behaviorist views on language learning
Social identity theory	Brown <i>et al.</i> (2000); Huddy and Khatib	<ul style="list-style-type: none"> • Personal Identity • Social Identity • Social Categorization 	<ul style="list-style-type: none"> • Understanding prejudice and discrimination 	<ul style="list-style-type: none"> • Shed light on psychological processes behind

Framework/ theory	References	Key constructs	Domains of application	Some uses
	(2007); Thabet <i>et al.</i> (2023)	<ul style="list-style-type: none"> • Distinct Social Groups • In-Group “We” • Out-Group “They” • Intergroup comparisons 	<ul style="list-style-type: none"> • Conflict resolution and intergroup relations • Team building and group dynamics • Marketing and consumer behavior • Political behavior • Education and schools • Healthcare and public health • Sports and fan behavior • Online communities and social media • Law enforcement and criminal justice 	<ul style="list-style-type: none"> • stereotypes, bias, and discrimination. • Provide insights into intergroup conflicts • Enhance team cohesion • Create advertisements and products that resonate with consumers' social identities. • Understand political polarization and voting behavior • Analyze online communities and social media interactions
Rational choice theory	Lindenberg (1985); Becker (1976); Hoxby (2000)	<ul style="list-style-type: none"> • Family/ • Societal norms • Person’s preference • Resource allocation • Behavior • All possible behavioural options including trade-offs • Personal value/ competence • Behavioral equilibrium 	<ul style="list-style-type: none"> • Economics • Political science • Sociology • Environmental science • International relations • Healthcare • Education • Transportation planning • Business and marketing • Social policy 	<ul style="list-style-type: none"> • Consumer behavior • Labor market • Voting behavior • Political decision-making • Criminal Behavior • Family dynamics • Environmental policy • Foreign policy analysis • Healthcare choices • Educational choices • Transportation choices • Product development and pricing • Welfare and social assistance

Discussion

The application of psychological and behavioral theoretical frameworks has significantly enhanced our understanding of human behavior across various disciplines, offering new insights and broadening existing knowledge. The Technology Acceptance Model (TAM) has been pivotal in assessing user acceptance of technology, guiding system design, improvement, and adoption studies, which are essential in fields such as human-computer interaction, cross-cultural research, mobile app development, e-learning, and education. TAM's constructs, perceived usefulness, and ease of use provide a robust framework for predicting and enhancing technology adoption, allowing organizations to design systems that meet user needs and preferences. This connects to the core argument by demonstrating how technology acceptance shapes user interactions and adoption patterns, impacting behavior across various technological contexts.

TRA as well as TPB which may be considered two frameworks that have a relationship between them are invaluable for understanding behavioral intentions and predicting user behavior. TRA emphasizes the role of attitudes and subjective norms in shaping intentions, while TPB extends this by incorporating perceived behavioral control, making it particularly useful in behavior change interventions and technology acceptance studies. These theories help in designing interventions that effectively alter behavior by addressing the underlying beliefs and perceptions. By linking these developments. It guides rehabilitative programs and therapeutic interventions by emphasizing the role of secure attachments in promoting healthy development and resilience. This ties into the core argument by showing the long-term impact of early relationships on behavior and development.

Cognitive dissonance theory impacts marketing, education, and conflict resolution by addressing the discomfort that arises from conflicting thoughts,

influencing behaviors such as smoking cessation, weight loss, and sustainable consumer choices. By understanding and addressing cognitive dissonance, interventions can be designed to reduce dissonance and promote behavior change. This supports the core argument by demonstrating how cognitive discomfort can be leveraged to influence behavior.

Behaviorism focuses on observable actions and reinforcement, making it widely applicable in therapy, education, parenting, and organizational management. It provides a foundation for understanding how behavior is learned and maintained, offering strategies for behavior modification through reinforcement and punishment. This directly aligns with the core argument by showing the effectiveness of reinforcement strategies in shaping behavior. Theories to the core argument, we see how understanding intentions and perceived control can lead to more effective behavior modification strategies.

Social cognitive theory plays a vital role in health promotion, education, and organizational behavior by focusing on the interplay between motivation, self-efficacy, and behavior. It guides individuals toward healthier lifestyles and improved performance by emphasizing the importance of observational learning, imitation, and modeling. This theory is instrumental in developing programs that enhance self-efficacy and promote positive behavior change, aligning with the core argument by highlighting the importance of self-belief and observational learning in behavior development.

Maslow's hierarchy of needs empowers professionals across psychology, education, and business to create supportive environments and understand human motivations. By categorizing human needs into a hierarchical structure, it provides a framework for addressing the basic to complex needs of individuals, fostering environments that support growth, development, and well-being. This framework connects to the core argument by elucidating how understanding human needs can lead to more effective interventions and support systems.

Attachment theory is crucial in child development and clinical psychology, highlighting the importance of early relationships in shaping social and emotional Social Identity Theory provides insights into prejudice, discrimination, team dynamics, marketing, and political behavior, improving intergroup relations and team cohesion. It highlights the importance of group affiliations in shaping behavior and self-concept, offering strategies for enhancing team performance and reducing intergroup conflicts. This framework supports the core argument by emphasizing the role of group dynamics and identity in behavior.

Rational choice theory spans economics, political science, sociology, and environmental policy, guiding decision-making processes by positing that individuals make decisions based on a rational evaluation of costs and

benefits. It provides a framework for understanding and predicting behavior in various domains, from consumer choices to voting behavior. This framework ties into the core argument by showing how rational evaluation impacts decision-making processes.

A critical gap in the existing literature is the lack of an integrated approach to using these diverse frameworks to address mental health issues. This research bridges this gap by demonstrating how the combined application of TAM, TRA, TPB, Social Cognitive Theory, Maslow's Hierarchy of Needs, Attachment Theory, Cognitive Dissonance Theory, Behaviorism, Social Identity Theory, and Rational Choice Theory can offer a comprehensive understanding of mental health. By integrating these theories, the research provides new perspectives on designing interventions that address the complexities of mental health, such as motivation, self-efficacy, cognitive dissonance, and social identity, thus contributing significantly to the field of mental health research and practice.

This research integrates these frameworks, demonstrating their combined application for a holistic understanding of human behavior. It emphasizes their cross-disciplinary relevance, particularly in technological contexts, and contributes to developing effective behavioral interventions. By highlighting the significance of motivation, early relationships, and group dynamics, this study underscores the indispensable role of these frameworks in addressing the challenges and opportunities in our evolving world, enhancing both academic research and practical applications.

Conclusion

The study highlighted the profound impact of psychological and behavioral theoretical frameworks on various disciplines. The Technology Acceptance Model (TAM), the Theory of Reasoned Action (TRA), the Theory of Planned Behaviour (TPB), Social Cognitive Theory, Maslow's Hierarchy of Needs, Attachment Theory, Cognitive Dissonance Theory, Behaviorism, Social Identity Theory, and Rational Choice Theory each play crucial roles in diverse fields such as technology, health, education, marketing, and decision-making. These frameworks provide a structured and comprehensive approach to understanding and managing human behavior, addressing challenges and opportunities posed by technology in our dynamic world. The adaptability of these theories underscores their significance in contemporary research and practical applications. Researchers across disciplines find these frameworks indispensable for unraveling the complexities of technology-related phenomena and making informed decisions. As valuable tools, they contribute significantly to shaping our understanding of human behavior and guiding interventions across a wide range of contexts.

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Author's Contributions

Felix Kabwe: Conducted research, identified the journal topic, conducted the research, did the literature review, undertook an analytical assessment of the diverse frameworks, wrote the manuscript, prepared supplementary material like figures and table, revised and resubmitted the article.

Jackson Phiri: Identified the area of study, helped in the refining of the problem statement, helped in the framing of the conceptual and theoretical framework, provided supervision on the research project, and proofread the article.

Ethics

This article is unique and includes previously unreleased content. Ethical request was made to the University of Zambia to conduct the research and the approval was granted. Confidentiality and privacy of information have been kept to protect the interests of stakeholders. The corresponding author affirms that the co-author has reviewed and endorsed the manuscript, with no ethical concerns present.

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