BIRKMAN

2020 EDITION

The Birkman Method Technical Manual

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The Birkman Commitment

"The Birkman family is dedicated to enhancing relationships and the quality of life for individuals, teams, organizations, and cultures who experience The Birkman Method. We promise to keep this central in everything we do."

Roger W. Birkman (1919-2014)
Founder of Birkman International

Sharon Birkman
Birkman International (CEO)

Dedication

This newest release of the Birkman Technical Manual is dedicated to the social science legacy of Dr. Roger W. Birkman, whose lifetime passion was creating a relational language to clarify perceptions and deepen our appreciative understanding of each other's essential differences.

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Chapter One

Introduction to The Birkman Method

Dr. Roger Birkman developed his instrument, The Birkman Method, to measure human characteristics he saw influencing perceptions, behaviors, and motivations in normally functioning adults. The Birkman Method is a complex set of psychological instruments and interpretive reports that uses score profiles to predict significant behavioral and motivational patterns. These patterns are created by asking respondents about their perception of how "most people" view the world and comparing those responses with "self" perception responses. What Dr. Birkman discovered was that certain answer patterns consistently predicted unique motivations and behaviors in the respondents.

The Birkman Method is unique in that it integrates a full set of measures and reports into a comprehensive whole. Therefore, understanding The Birkman Method as an integrated system is the foundation for everything discussed in this manual.

What will be demonstrated in subsequent chapters is that The Birkman Method:

- Assesses self-perception, social perception, and occupational interests for typical adults in many different cultures

IN THIS CHAPTER:

"Everyone has a native gift. If we find our purpose and acceptance of who we are and then are able to see that kind of potential in everybody we meet. That would be a legacy that I would dream about."

–Roger W. Birkman

- Is non-clinical, online, valid, and reliable
- Identifies personal, interpersonal, and situational motivators
- Identifies "effective" and "less than effective" behaviors
- Identifies practical interventions to improve relationship effectiveness
- Identifies the career choices most likely to appeal to the respondent
- Provides respondents with a unique problem-solving approach that can be applied to many situations

The Birkman Method is a multifaceted self-report tool that provides practical insights into everyday issues confronting adults as they live and work. It provides a unique way of discovering how their perceptions about themselves and others affect how they accomplish goals, pursue opportunities, and establish relationships, including job/career relationships.

The Birkman Method as an Integrated System

The Birkman Method consists of ten scales describing occupational preferences (Interests), nine scales describing effective behaviors (Usual Behaviors) and nine scales describing interpersonal and environmental expectations (Needs). A corresponding set of nine scale values was derived to describe less than effective behaviors (Stress Behavior). Together, these sets of nine scales are titled Components. Each of the Components' descriptors (Usual Behaviors, Needs, and Stress Behaviors) have been derived from interviews aimed at identifying the most frequent behaviors and motivations that described positive and negative aspects of interpersonal relationships.

In terms of reporting, two sets of scales describe motivators (Interests and Needs) and two describe behaviors (Usual and Stress). Interests and Needs, as motivators, are internal to the individual and thus not directly observable. Usual Behaviors and Stress Behaviors, as behaviors, are observable. Together, these four scales comprise the integrative engine that is The Birkman Method.

Typically, the Interests scales are presented in one distinct section of a report and the Component scales (Usual Behaviors, Needs, and Stress Behaviors) are presented together. This format is used because the Component scales are intrinsically related to one another and should be interpreted together.

Usual Behavior Scales

Usual Behavior is expressed in a variety of situations and is readily observable by others. Usual Behavior is also those behaviors typically displayed when an individual's expectations are being realized. These represent their "best me" behaviors; the most socially desirable self that they reveal to others. It is the behavior typically exhibited in new relationships or in unfamiliar or formal social and work circumstances.

The Usual Behavior scales describe an individual's effective style of dealing with relationships and tasks. These behaviors are typically described as positive or effective in manner (though not necessarily in result). Dr. Birkman hypothesized that reward effectiveness was impacted more by the target of the motivation than by the skills of the one motivating. Regardless of personal skills, the target of the reward motivation is to seek and be persuaded by motivators that align with their Needs. Theoretically, this is similar to the behavior-based assessment of Schultz's Fundamental Interpersonal Relations Orientation (Schutz, 1994), which assumes that an individual's behavior is independent of their desired environmental conditions.

Each scale is constructed as a bidirectional descriptor of style so that individuals with a low scale value are described as approaching relationships or tasks in one manner, and those with a high scale value are described as approaching them in a different manner.

An individual will judge Usual Behavior as positive and effective in many situations. This judged effectiveness will occur for Usual Behavior from both ends of the scale. However, the expectations of the observer (Needs) may affect the judgment of effectiveness of the individual in some situations.

The Usual Behavior scales are derived from self-description responses and are known to be influenced by perceptions of social desirability. The scaling technique compares "self" perception responses against the evenly distributed "most people" percentiles. Thus, **the instrument draws both a distinction and a comparison between the "socially correct" behaviors an individual exhibits in formal or early contact situations (Usual Behavior) and how the individual wants to be treated by others on an ongoing basis (Needs).** This distinction recognizes that significant numbers of people "know how to act" in a relationship (Usual Behavior) or task but would prefer not being required to exhibit that (Need) particular style or behavior for extended periods of time.

Needs/Expectations Scales

The Needs scales were derived to identify which set of conditions predicted Needs fulfillment (expectations) or Needs frustration (unmet expectations) for the respondent. Dr. Birkman could not directly observe another's Needs, but he was able to identify the positive or negative behaviors associated with Needs fulfillment or Needs frustration. Baumeister, Heatherton, and Tice (1994) and others have a long-standing interest in studying the related topic of Self-Regulation and the attending behavioral implications. Through interviews with paired associates, spouses, and friends, Dr. Birkman found that when an individual was in a situation or relationship that proceeded in a manner that was consistent with their underlying Needs or expectations (Needs fulfillment), that individual felt good about self, was adaptable, and exhibited positive, productive behavior (Usual). Dr. Birkman reasoned that Needs were fulfilled when the relationship or situation treated the individual in a manner consistent with the individual's Needs and required the individual to frequently behave in a manner that was consistent with the individual's underlying expectations. By understanding the productive behaviors, Dr. Birkman was able to explore the expectations (Needs) necessary to create them. Conversely, Dr. Birkman also found that individuals tended to exhibit less-than-effective behaviors (Stress Behavior) when these individuals were in important relationships or situations that proceeded in a manner that was inconsistent with their own Needs (Needs frustration). When this occurred, the paired associate, spouse, or friend often described the individuals as "stressed," "frustrated," or "upset" in their behaviors. While Dr. Birkman recognized the affect state, he focused on the behaviors associated with that affect because he wanted to help individuals understand and manage their behaviors with better results.

Ultimately, Dr. Birkman found that the conditions resulting in less-than-effective behaviors varied greatly across individuals. The only precise way for Dr. Birkman to define the frustrating conditions was by noting that they were not the fulfillment conditions. In other words, there were many ways to express frustration of needs, but very few ways to fulfill the same.

Through knowledge of psychological processes and the dynamic between Needs and behavior, Dr. Birkman established the logical relationships of his system. Productive behaviors resulted from an individual receiving sufficient fulfillment conditions. If an individual did not exhibit productive behaviors, it was a result of not obtaining sufficient fulfillment conditions. Equally important, Dr. Birkman was able to identify these Needs-fulfilling conditions through the "most people" responses in the questionnaire.

Dr. Birkman crafted the scales so that individuals with low scale values need situations and relationships that call for one style of response and those with high scale values need situations and relationships that call for a very different style of response. No value judgment is attached to

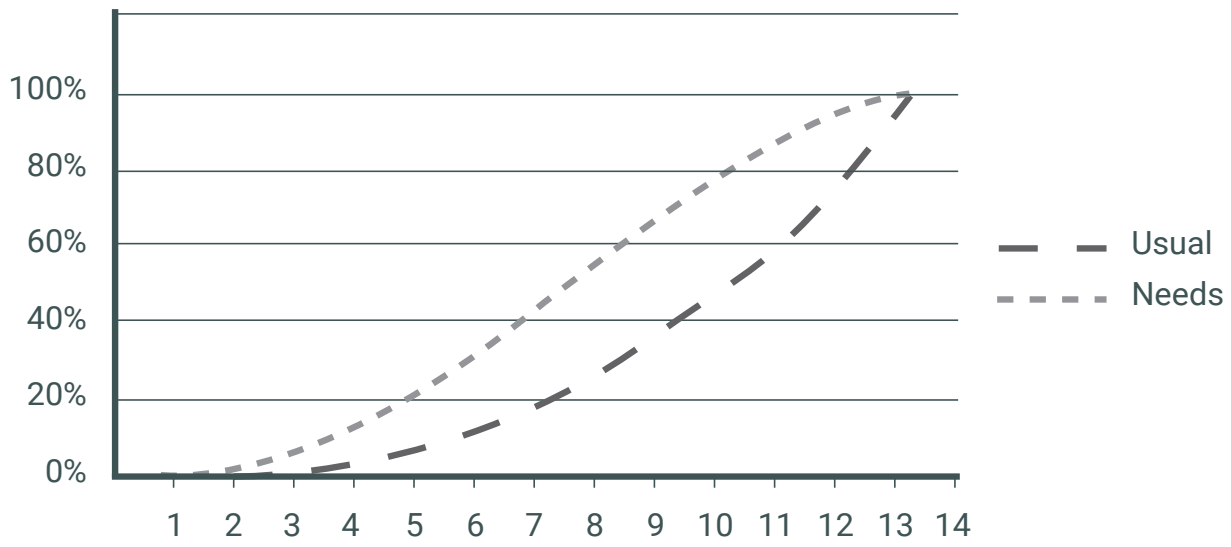
direction; therefore, Needs at both ends of the scale have equal value. The scale values describe how an individual expects to be treated or what type of situation an individual prefers, not intensity or frequency of expectations alone.

The Needs scales are the statistical anchors for the behavioral Component scales (Usual Behavior and Stress Behavior). They are the anchors because they represent scales unaffected by social desirability. This is reasonable, given the following points:

First, because the Needs scales are derived from "most people" responses, they cannot measure the inclination to present "oneself" in a manner that will be viewed favorably (or unfavorably) by others.

Second, after aggregating data from thousands of respondents, it is found that Needs scores are distributed evenly across all possible responses. The lack of skew across each scale suggests that the scales for Needs are less likely influenced by social bias. The relatively flat distribution of Social Energy Needs scores, for example, illustrates a lack of bias, particularly when compared to the curvature of the Usual scores (see Figure 1.1).

FIGURE 1.1 Distribution of Usual Behavior and Needs Scores for a Representative Component



Each Needs scale has percentile values assigned to create a scale value for all possible raw scores. These same Needs item percentiles are used to scale the corresponding Usual Behavior Component. By using the non-biased Needs percentiles as the base, the Usual Behavior score profiles demonstrate the degree to which they are sensitive to social desirability.

Stress Behavior Scales

Scale values presented in this grouping are bidirectional and describe an individual's ineffective style of dealing with relationships or tasks. The Stress Behaviors are typically described as "how an individual acts when under stress," "how an individual behaves when frustrated," or in similar terms. Within The Birkman Method, Stress Behavior is described as ineffective, negative, and non-productive behavior (or practically productive, but costly in terms of relationships). The Birkman Method integrates less-than-productive behavioral interventions into the reports.

When exhibiting Stress Behavior, people are less productive. Individuals with low scale values tend to act out their frustrations with one style of ineffective behavior, and individuals with high scale values act out in a different but equally ineffective manner. The scale values describe style of behavior, not level of ineffectiveness. Further insights into the causes of Stress Behavior and descriptions of various less-than-productive behaviors have been studied by many researchers (e.g., Baumann & Kuhl, 2005; Baumeister & Vohs, 2004; Higgins, 1997; Muraven & Baumeister, 2000; Vohs & Heatherton, 2000) within the self-regulation literature.

Stress Behavior describes the style of behavior that an individual exhibits when the individual does not feel good about oneself or the situation. This type of behavior occurs more often when the individual is with close friends or family members (socially safer situations) and less often in formal situations, especially work situations where an individual higher in the power hierarchy is present. Stress Behavior is observable often enough that many might describe it as characteristic of the individual, particularly by those closest to the individual. These scales are derived from the relationship between the Usual Behavior value and the underlying Needs value for a given construct. The scaling method used is very closely related to the method for measuring the underlying Needs but differs somewhat based on internal indicators that predict typical or atypical Stress Behaviors.

Birkman Interests

The Interests section of The Birkman Method measures broad interest themes that are characteristic of many occupations. Interest scales summarize what the respondent likes to do and preferences for directing work-related energies. As such, Birkman Interests are motivational constructs. Dr. Birkman began investigating interests in the 1950s. Based on his earlier work and drawing on

the work of other experts such as Holland (1976), Dr. Birkman identified ten Interests that together cover much of the domain of work. These scales provide insight into the fit of an individual with a specific job.

Interest tests generally involve asking respondents to indicate whether they would like or dislike an activity or occupation. Responses tend to be indicators of the types of occupations the individual will likely seek, given adequate opportunity. Edward K. Strong was one of the earliest to investigate interest measurement. The original development of the Strong Vocational Interest Bank (Strong, 1927) included contrasting items administered to men leaving the military. Frederick Kuder (1946) constructed scales based on general interest areas he identified. Kuder investigated differences among people within the actual occupational groups, as opposed to a general population group. Kuder's methodology also differed from Strong's in that he used a forced-choice format for items, asking respondents to choose the most and least preferred from a set of three items. The Birkman Method utilizes a similar forced-choice methodology for the Interests section of the report.

General interest patterns can be inferred from a pattern of occupational choices, as with the Birkman Interests; and occupations can be inferred from a pattern of interests in general activities, as with the Kuder or Strong surveys. Reliable measurements of occupational interests can be obtained from either type of instrument. The occupational approach, however, yields a direct non-inferential statement about occupational interests, one that is based not only on mere positive selection of specific occupations, but also on the rejection of other specific occupations. For example, one need not infer an interest in the health professions based on a generalized vocational interest such as reading books. Many people of many occupations other than the health professions may also choose to read a book instead of taking part in other activities. On the other hand, even before high school, children know in general what physicians, nurses, dentists, veterinarians, and other vocational practitioners do, and whether this kind of vocational activity interests them.

People spend a great deal of their youth considering a range of occupational choices. Even in the face of these differing levels of vocational integration, a high degree of familiarity with specific activities does not appear to be required for the determination of interest patterns. Someone need not know what a forest ranger does in detail to know that he is interested in general in Outdoors occupations.

Birkman Interests stand apart from behavior in that they directly indicate preference of activities but do not indicate how an individual will go about engaging in these activities. Scores are meant to indicate one's preference for job-related activities or tasks; they are not meant to measure skill or competence with those activities. When Interest scale scores are particularly high or low, they strongly influence an individual's choices of recreational activities and certainly career choices.

Birkman Interests are created using an individual's expressed preference for job titles based on instructions to assume equal pay, prestige, and opportunities across all jobs. Scores are determined by comparing an individual's interests with the level of interest indicated by most others in that particular work area. Birkman Interests scale values measure intensity of desire to be involved in these activities; however, they do not measure the level of expected skill or proficiency with job responsibilities.

Individuals with high scale values tend to prefer to be engaged in activities consistent with the activities and responsibilities associated with a particular interest scale. When Interest scores are particularly high, the scores strongly influence how individuals choose to spend their leisure hours as well as their choice of work. Likewise, individuals with a very low Interest score will prefer not engaging in work or recreational activities associated with that interest.

Mindset

Our mindset impacts everything we do. It shapes how we view ourselves, how we see the people around us, and our understanding and interpretation of how others interact with us. Mindset is our aggregated perspectives on how the world "is," and how we fit into that world. It is our unique perceptual filter through which we view the world. Mindset helps us frame situations and filter information (Klein, 2016). **In short, our mindset is our personal reality.**

Throughout our lives, we look for confirmation and validation of what we believe is true (Nickerson, 1998). By examining our mindset, we are prompted to begin noticing things that do not align with our personal belief systems. While still relatively stable and enduring, transformational experiences can lead to revised evaluations or interpretations of the world which are then reflected in our mindset.

Birkman Mindset is a unique report that uses certain items from the Birkman Questionnaire to gather meta-level data on six Perspectives about a person. Rather than looking at specific answers to each item, Birkman Mindset is programmed to examine answering patterns that differ from, or align with, patterns that are seen in the general population. These answering patterns expose differences in mindset that, in turn, reveal how the individual is processing the world around them.

Our own mindset can impact how effective we are. Knowledge of our mindset can help us open our minds and challenge us to leverage perspectives that are different from ours. Leaders can leverage the strengths of differing mindsets to produce the best solutions.

Because mindset is an internal state, it is difficult to describe for an individual. The impact on how a person acts in a situation, however, is visible evidence for an underlying mindset. Thus, the Birkman Mindset report references behaviors. Birkman Components inform us regarding the what and how of our personality, behaviorally speaking. Birkman Mindset helps us understand the why behind our behavior (Goodfriend, 2018). It does so by providing insights about some of the perceptual filters that every individual carries around as unseen, often subconscious baggage.

In the past, three of the Perspectives scales were reported as Challenge (now called Image Management); Freedom Usual (now called Alignment); and Freedom Need (now called Social Acuity). The Freedom construct was derived by comparing a respondent's answers with those of "most people," and were therefore not truly behavioral in nature. Both Freedom and Challenge were adapted into the Component paradigm, even though the information provided did not really fit with a behavioral model. For that reason, it was decided to segregate them from Component-level reporting and describe them with attitudinal language rather than behavioral.

Scale Dynamics

Building on the independently functioning single scales, the interactions of the scales make The Birkman Method a dynamic, integrated system. Dr. Birkman knew that occupational interests motivated individuals, but interest alone does not move individuals closer to occupations of their choice. Behaviors (Usual and Stress) move individuals closer to, or farther away from, their Interests.

Dr. Birkman also found that individuals operate at their most productive (Usual Behavior) until an environmental factor violates their expectations (Needs). The idea is that, "I use my most productive behaviors to accomplish that which is most important to me. If my Needs are not being met, then I am likely to switch to less productive methods (Stress Behavior) to accomplish that which is most important to me". Needs fulfillment prevents or mitigates Stress Behaviors in the normal adult population. When Needs are not fulfilled, people, either consciously or unconsciously, begin to use their less-than-effective Stress behaviors.

In short, the four types of constructs (Interests, Usual, Needs, and Stress) are linked into a dynamic system that primarily responds to Needs fulfillment or Needs frustration. Once activated by fulfillment or frustration, individuals tend to react in predictable, effective or less-than-effective behaviors. Underlying those scales are our Mindset, deeply held beliefs that guide and shape how we view ourselves, others, and society at large.

Application

In application, The Birkman Method provides a method of improving personal and interpersonal effectiveness, articulating issues and resolving them, and revealing hidden assumptions that directly affect interpersonal effectiveness. A common application for The Birkman Method is development, both personal and professional. The Birkman Method is a powerful tool for augmenting both self- and others-awareness and guiding an individual towards self-reflection and change. As such, it is useful in many situations. When transitioning an employee to a management position, The Birkman Method can be used to help a new manager understand the differing Needs of their direct reports. Recent graduates and those in career transition find the Method invaluable in providing useful insight into career possibilities.

The initial use of The Birkman Method was for selecting new employees. While still a legitimate use of the Method, Birkman International does not recommend using The Method as a screening tool and Birkman International does not publish validity coefficients associated with selection. If used as part of the selection process, users must remain aware of this and ensure that their usage is consistent with valid selection practices.

Over the decades, the focus has enlarged to include teams as well as individuals. Team reports summarizing Birkman results are a powerful tool for building and maintaining cohesive, effective teams. Additionally, the High-Performing Teams workshop integrates Birkman results into custom workbooks complete with reflection questions and activities. As team members go through the workshop, they understand their individual and collective strengths, motivators, and expectations.

Chapter Summary

The Birkman Method is an assessment that uses "self" and "most people" perceptions and interests to gather important motivational and behavioral insights. Dr. Birkman discovered how to identify Needs requirements and how Needs fulfillment or frustration predicted either productive or less-than-productive behaviors. His work eventually led to developing ways to understand, manage, and improve Needs fulfillment within a complex, integrated, and dynamic system. In application, The Birkman Method provides a method of improving personal and interpersonal effectiveness, articulating issues and resolving them, and revealing hidden assumptions that directly affect interpersonal effectiveness. Its application varies from general to specific and from individual to team, while encompassing virtually any situation involving human interaction.

Chapter Two

Development and Theory

This chapter discusses the development of The Birkman Method, including how the original assessment was developed, changes that have been made, recent revisions to the instrument, and the current structure of The Birkman Method. A discussion of the theories that influenced Dr. Birkman throughout the development of the instrument follows.

IN THIS CHAPTER:

- Development of The Birkman Method
- Major Birkman Milestones by Decade
- Theoretical Background
  - Theory of Personality Structure
  - Theories and Research in the 1950s
  - Groups and Conformity
  - Self vs Others Views

"The ability to break beyond surfaces of behavior and see the depths of complex potential within each person – that is what captured my imagination and became my life consuming passion."

–Roger W. Birkman

Development of The Birkman Method

1940s through 1950s

Roger Birkman, the developer of The Birkman Method, began his exploration of individual differences in the 1940s while a pilot and pilot instructor for the US. Army Air Forces (precursor to the US Air Force). His experience with the impact of misperceptions (both visual and interpersonal) on pilot performance and student learning led him to the study of psychology. Based on his observations, Dr. Birkman developed The Birkman Method to measure the human characteristics that influence perceptions, behaviors, and motivations in normally functioning adults.

Before the first form of The Birkman Method was developed, an extensive literature review was conducted on assessing personality and the most widely used questionnaires considered effective in

discriminating between personality groups were identified. Dr. Birkman was particularly interested in developing items relating to deeper attitudes and experiences not easily identifiable as true or false by casual observation. The less that items reflected factual, definite, or easily observable attitudes and motives, the more respondents would be required to rely upon their own experiences and inferences in order to arrive at a definitive true or false response. He determined that items constructed along this line would make possible a deeper probing of the basic organization and structure of the individual's personality.

Birkman additionally focused on describing behaviors important for understanding work relationships, differences in approach for common work functions, and career preferences. Items were phrased to sample a well-recognized psychological attribute such as Self-Consciousness or Sociability. The scales were not intended to be all-inclusive or to describe a person's behavior completely. Consideration was given to how respondents' patterns of answers matched or failed to match group patterns of a variety of types and occupations. One of the most important attributes of The Birkman Method is that it describes aspects of behaviors that are related to everyday life situations (Justice & Birkman, 1972).

Thousands of possible items were considered suitable for the questionnaire. Factor analyses were conducted, and preference was given to items with high loadings on well-defined factors. Consideration was given to Cattell's (1946) 16 primary personality source factors. Items with high factor loadings were analyzed for general content, rather than exact wording, to gain insight into the feelings and attitudes expressed. Factor analysis was only an initial guide, as items were further developed from the content of statements and general themes identified through factor analysis results. Selection or exclusion of items for the instrument relied on brevity, simplicity in wording, ease of interpretation, ease of classification, and general suitability.

Dr. Birkman developed the scales empirically by comparing self-report item results with descriptions of likes, dislikes, and behaviors provided by third parties. The scale development efforts occurred primarily with supervisor/direct report pairs in business environments. These individuals completed the questionnaire and then took part in one-on-one interviews. During the private interviews, each member of the pair was asked to describe the behaviors as well as the perceived likes and perceived dislikes of the other member of the pair. Birkman then matched self-report results, item by item, with these third-party behavioral descriptions. Selected items ultimately became The Test of Social Comprehension. With the addition of Interests later in the 1950s, the scales and the relationships between the scales became the working model of perceptual and interest interactions.

After many items were developed and analyzed, 100 of the most promising items were selected for field testing in the first of a series of forms. Two provisional forms were first administered to 160 participants: 24 graduate and 136 undergraduate students at universities located in central Texas. The results from the initial field testing demonstrated that students generally described "most people" much more negatively than they did themselves. For example, a shift on the same item from "True" on The Test of Social Comprehension to "False" on the Self-Inventory was usually in the more socially desirable direction. Items having a stronger social stigma caused the change in response style more consistently than other items. The more an item appeared to have an apparent social stigma, the more respondents consistently changed the response from the socially less desirable on the Test of Social Comprehension to a more socially desirable response on the Self-Inventory. Collectively, responses for "most people" were generally less socially desirable than for self-descriptive items. This supported the assumption that defensiveness (faking) could be minimized, to some extent, by presenting "most people" items before self-report items.

As an added bonus, items were deemed less ambiguous to respondents when asked first about "most people." Respondents raised more questions as to the full meaning or intent behind particular items in the self-descriptive form, even though the exact wording remained the same from one form to the other (with the exception of substituting "you" for "most people").

Following the original field testing of the forms, seven successive revisions of the instrument were performed to improve the accuracy, reliability, and validity. Each version was administered to more than 1,000 people, ranging from professional and non-professional employees selected from a business or industrial setting. After each testing, responses were recorded and analyzed for compatibility. Each new form represented an improvement and variation of the previous form. After these rigorous revisions, the initial operational form was introduced in 1957. The items in this operational form were determined to be sensitive to personality differences.

Data gathered from field testing enabled further item analyses, which, in turn, allowed for item revisions and further provisional form development. Comparing total group responses of the same item, from self to most, revealed information regarding the sensitivity of items. More discriminant items elicited a greater response shift. Response trends were observed with items causing a greater shift in response from "most" to "self," whether it was a change from "True" to "False" or vice versa. Items not causing significant changes in response patterns were considered neutral and were eliminated from further forms. Items characterizing a marked response shift were kept because it was believed that the shift indicated the respondents had a conscious understanding of the intent of the item and an effort to try to obscure any negative implications of endorsing such an item. Items were also analyzed to ensure they were not skewed, either positively or negatively. The inclusion of items which involved a strong social stigma, along with those which most persons

would consider complimentary, was intended to add to the scope of the questionnaire and increase the sensitivity of the instrument.

Rigorous sets of factor analysis studies were ongoing throughout the development of The Birkman Method, but no effort was made to hypothesize direct causal relationships. There were two reasons for this non-traditional approach. First, Dr. Birkman was interested in application rather than academic study. While other researchers seemed to be more interested in why respondents behaved the way they did, Dr. Birkman believed that the greater contribution would come from identifying which behaviors resulted from the respondents' "self" and "most people" (other) responses, making certain that core human dynamics were captured in his instrument. As he was focused on application, scale development was not driven by a particular theory of personality structure (or personality development). Second, Dr. Birkman knew he was working on fundamental human factors because much of his work was based on that of leading psychologists of his time, factor analysis, and current studies relating to psychiatric disorders (schizophrenia, bipolar disorder, depression, etc.).

Unique to Dr. Birkman was his self-other perceptual orientation and his focus on normal functioning adults at a time when most research was focused on behavioral health issues. Initially, Dr. Birkman simply assumed he captured the essential human factors; an assumption which has been validated over the decades. Even today, the comparison of self and other perspectives is overlooked. Specifically, in the last few decades, researchers have studied many aspects of self and other perceptions (Biernat, Manis, & Kobrynowicz, 1997; Cho & Knowles, 2013; Sande, Goethals, & Radloff, 1988; Sala, 2003; Karniol, 2003) without fully exploring the implications of the self and other perceptions on the individual having these perceptions.

The scale development process resulted in nine scales describing more effective behaviors (Usual Behavior) and nine scales describing interpersonal and environmental preferences or expectations (Needs). A corresponding set of nine scale values was derived to describe less effective behaviors (Stress Behavior). Ten scales describing occupational preferences (Interest) were also developed.

1960s through 1990s

In the 1960s, the name of the assessment was changed to The Birkman Method, a name that has remained constant ever since. The construct structures of the scales were established in the early development of the instrument and have not changed over the years. Re-standardization efforts have occurred periodically, and criterion-referenced scales were added as criterion data could be accumulated and utilized.

The advent of computers enabled the largest change to The Birkman Method during this period. Computerized scoring began in the 1960s. This greatly increased the number of reports that could be completed in a day and contributed to increased use of The Birkman Method, especially in the corporate arena. The scoring process was moved to a mainframe computer early in the 1980s. and later that same decade to desktop computers.

In the 1990s, technological advances continued with the introduction of the Birkman2000 platform, the first client-facing software. This platform allowed consultants to dial into the Birkman database and download client reports, taking advantage of the emerging Internet. Also during this decade, Birkman & Associates became Birkman International in recognition of the worldwide spread of The Birkman Method. The scales and associated reporting mechanisms were first translated into Spanish, and subsequently have been translated into many other languages.

2000s through 2010s

A systematic reevaluation of the basic scales was undertaken in 2000 and the item structure of each scale was reexamined. The item content of the instrument has remained essentially constant over the years except for minor and subtle rewordings of a few items from time to time to account for shifts in language usage. Throughout the years, however, a set of non-scored items was distributed throughout the instrument. These items were changed from time to time (sometimes subtly and sometimes totally) as data accumulated so that new items, which would contribute to the measurement of the original constructs, would be available for later use. The 2000 revisions utilized these items as well as original items to revise the scales throughout. Revision included adding items, shifting items, and deleting items.

These revisions were intended to improve the existing constructs, not replace them or add new constructs. The revised scales are in most instances extremely close to the original scales in construct meaning (see 2008 Technical Manual). The correlations between the original scales and the scales as revised in 2000 are quite high. Most revised scales are essentially identical with their original scale (correlations in the range of .90). Others are extremely close in meaning (correlations in the .80 range). Thus, the revisions increased internal consistency but, by design, did not alter the basic construct meaning of the scales.

The 2000 revisions were, of necessity, accompanied by re-norming of the scales. For these purposes, a sample of 10,033 persons who had completed The Birkman Method during the years 1993 to 1999 and who were between the ages of 25 and 65 were utilized. These persons completed the instrument in the United States and were presumed to be primarily representative of the US culture. They completed the questionnaire in paper form or desktop computer-based administration.

Instructions and items were the same for all administrations. The normative sample was selected from the larger database utilizing reported education level to build a sample closely representing the educational accomplishments reported from the 1990 census in the US. This balancing effort was deemed necessary because the general database was heavily loaded with persons reporting advanced educational attainment, and earlier research with the instrument has indicated that level of education and level of organizational responsibility may be associated with different scale results. See chapter 6 for demographic information for the sample used for re-norming purposes.

Concurrently with the re-norming and improvement efforts, technological advances made possible the advent of an online delivery system, which was launched in late 2000 and introduced to the consultant community as BirkmanDirect. Consultants could distribute questionnaires via the Internet, which would be scored by centralized computers, and then retrieve and print reports within minutes.

After the 2000 revisions, re-standardization occurred two more times in the intervening twenty years. Periodic re-standardization adjusts for drifting due to changes in language uses and societal shifts. Scales were re-standardized again in 2008 using a stratified sample representative of the US workforce, including 15 of the 22 US Department of Labor categories (N = 4,300). Re-standardization efforts undertaken in 2019 were implemented in early 2020. Details regarding the 2019 normative sample are discussed in chapter 6.

Standardization of the scales establishes a percentile form score for each scale. For the underlying Need scales and the Interest scales, the result is a direct percentile score based on the frequency distributions for each of these scales. The Usual Behavior and Stress Behavior scales are standardized in relation to the Need scale. All scores are intended to be interpreted with 50 as the central tendency scale value, though the Usual Behavior scales are notably skewed for most constructs and the Stress Behavior scales are somewhat skewed for these same constructs.

More recently, the Mindset was formed from six new or revised Perspectives scales, which were developed to capture deeply held beliefs that act as a lens through which we interpret the world around us and how we "fit" into that world. Together, these scales represent a set of descriptors chosen to be useful in understanding behaviors, motivations, and beliefs frequently discussed when describing positive and negative aspects of relationships, teamwork, career success, and the like.

TABLE 2.1 Major Milestones in the History of Birkman Instrument Development

Initial (Phase 1) Development (late 1940s to early 1960s)
Roger Birkman
Birkman created the instrument from insight he gained by interviewing hundreds of employees. Major contributions included:
• Creation of the theoretical framework for Usual Behaviors, Needs, and Stress Behaviors
• Creation of the Component scales in the form of a social comprehension instrument (1st version of The Birkman Method)
• Creation of patterns for personality profiles

Phase 2 Development (mid-1960s to 1994)
Roger Birkman, Roy B. Mefferd, Jr., and Timothy G. Sadler
Mefferd and Sadler worked as researchers examining and revising the instrument as far as psychometric properties. Major contributions included:
• Development of new items
• Established construct validity
• Clarification of the factor structure
• Development of career-focused scales

Phase 3 Development (1995 to 2002)
Roger Birkman and Timothy G. Sadler
Sadler worked as the lead researcher examining and revising the instrument as far as psychometric properties. Major contributions included:
• Revision of Component and Interest scales
• Creation of the career report based on profiling methodology
• Creation of managerial styles
• Cross validation of career profiling

TABLE 2.1 Major Milestones in the History of Birkman Instrument Development *(continued)*

Phase 4 Development (2003 to 2005)
Roger Birkman, Frank Larkey, Jennifer L. Knight, and Paul Cruz
Larkey worked as the lead researcher examining and revising the instrument. The Research and Development department continued the validation and documentation of the utility of the Birkman instrument. Major contributions included:
• Revision of the reliability and validity summary report
• Conducted additional criterion-related and construct validity studies in support of the instrument
• Creation of Research and Development archives

Phase 5 Development (2006 to 2019)
Roger Birkman, Larry G. Lee, Patrick L. Wadlington, and Fabian Elizondo Chakrapani Bommaraju and Kelley J. Slack
These teams have made several improvements to the psychometric and theoretical properties of the Birkman instrument. Major contributions include:
• Establishment of construct validity aligning the Components with the FFM constructs
• Establishment of criterion-related validity to job performance, job satisfaction, retention, and management/leadership development
• Creation of a pre-equated item pool via Item Response Theory
• Conducted 2018 and 2019 reliability and validity studies
• Development of 2008 and 2019 national norms

Plans for the 2020s

At present, all items in The Birkman Method questionnaire are being reviewed in light of societal shifts and changes in language usage over the past two decades. The job titles found in the Interests section of the questionnaire are being updated to remove job titles nearing obsoletion and to add emerging job titles. These changes will further strengthen the reliability and validity of the instrument. Care is being taken throughout the process to ensure the questionnaire remains true to Dr. Birkman's conceptualization.

Theoretical Background

Dr. Birkman hoped to contribute a unique approach to the measurement of personality. The central problem appeared to be one of developing a theory for understanding the structure and dynamics of personality, which would lend itself to the construction of a more sensitive psychometric instrument and to a more meaningful analysis and interpretation of data obtained from the instrument.

Prior to 1961, questionnaires were most widely used for the study of individual differences in personality. Few studies had been conducted to identify the usefulness of personality measures in the workplace. In fact, in 1965, Guion and Gottier published an article criticizing the validity of personality measures in personnel selection, which led to a decline in their use for that purpose for several decades. According to Dr. Birkman, most of the existing personality instruments at that time were based on an inadequate theoretical framework. Clearly, there was a need for understanding the structure and dynamics of personality. At the time, there was no general consensus on five factors of personality as there is now (Digman, 1990; Goldberg, 1992); and there was no discrimination between groups based on differences in personality, unless they represented clinical extremes.

Dr. Birkman also noted that most personality assessments at that time had significant limitations. For example, assessments were prone to defensiveness and falsification of responses (i.e., faking). Individuals tended to respond to items in a particularly defensive way, so as to present themselves in a positive light. Another notable problem was that most instruments did not account for social desirability, or they used methods to "detect" faking or falsification of responses, and some even opted to develop "correcting" algorithms to ostensibly minimize or at least reduce the "noise" associated with positive self-reporting tendencies. Dr. Birkman also noted that many assessments used discrete categories to measure behavior, which failed to fully convey the dynamics of personality. Further, Dr. Birkman found that the use of discrete data lost valuable information that was necessary to make assessments more accurate. This was an important issue because the personality traits still needed to be determined and defined. Dr. Birkman addressed these two limitations by integrating social desirability into his test. In doing so, it effectively addresses the issue of individuals tending to perceive others in a negative way, yet themselves in a positive way, and the issue of "faking" that is overlooked in many personality assessments available today. He also used continuous data rather than artificially dichotomizing the data. Creating "types" by dichotomizing the data treats every score in that type as equivalent and effectively ignores the behavioral continuum. For example, a person is not either introverted or extraverted. One person can be more extraverted, or introverted, than another.

Discussion of the Theory of Personality Structure

After a thorough consideration of the then-current literature and his own observations, Dr. Birkman believed that a more sensitive analysis of individual personality differences could be obtained by creating an instrument that measured both social and self-perceptions. He suggested a new approach to the assessment of personality differences, proposing that behavior is a function of the meaning the individual assigns to stimuli. During his research, Dr. Birkman found that individuals tended to view other people's attitudes, motives, and behavior more critically than any series of statements they made concerning their own attitudes and beliefs. The hypothesis implicit in this theoretical position is that a close relationship exists between the way individuals judge the motives, attitudes, and behavior of others on the one hand and their characteristic mode of thinking and performing on the other. Each person attributes to others their own thoughts, attitudes, and motives for action. Essentially, individuals are as they see others; a theoretical position that has since been supported through research on self-other correspondence (e.g., Cho & Knowles, 2013).

Dr. Birkman made two further observations. The first is that behavior is not determined so much by objective facts as by the particular meanings the individual attaches to these facts. The individual's reaction to meanings of events, rather than the events themselves, comprises the most significant data concerning their behavior. The second was that the perceptions of some individuals may actually be illusory, irrational, and unreal. Nevertheless, these perceptions are real and reasonable to the individual, and greatly influence their behavior. They are constantly reacting to an environment distinctly and uniquely their own in a manner which, at the instant of behavior, appears to them most logical, effective, and desirable.

Birkman's theoretical framework and methodology were similar to projective methods used at the time for measuring personality. The difference was that the stimuli presented consisted of word descriptors of the attitudes, feelings, and actions of "most people" presented as true or false statements in the questionnaire. Judgments that individuals made concerning the feelings, attitudes, and behaviors of the "average" person, "people in general," the "majority of people," "almost everyone," etc. were found to be more crucial and relevant for insights into the way an individual performed than any statements made by them concerning their own attitudes, sentiments, behaviors, or needs, regardless of how skillfully statements were phrased or presented. After many questionnaire iterations, the phrase "most people" was considered particularly effective in this technique of personality measurement. Judgments made about the behavior of "most people" were found to be the best means of obtaining the examinee's perception of the social environment to which they were constantly seeking to orient their own behavior.

Furthermore, by thinking in terms of "most people" rather than "everyone" or some similar all-inclusive term, individuals could make allowances for those whom they knew would be exceptions in the general population. Thus, the individual's responses were not distorted because of some sweeping statements. At the same time, the "most people" phrase was sufficiently broad to obtain the subject's general, consistent, and compelling attitudinal and behavioral orientation in the form of their social expectancy. It was also found that judgments made concerning "most people" were likely to elicit the most discriminating responses since this phrase was frequently used in everyday conversation.

Measuring differences in perception of "most people" was thought to have the following advantages:

1. The individual was challenged to answer to the best of their ability, since questions concerning "most people" take the form of an objective task, in which there was conceivably a right answer.

2. Intentional and unintentional defensiveness in responding to questionnaire items about "most people" was likely to be minimized. The meaning of an item would be less subject to the distortion of defensive reasoning.

3. Errors resulting from the examinee's inability to assess themselves and their own behavior accurately in self-inventory type questionnaires would, in all probability, be reduced.

4. The questionnaire itself could be made more discriminating and meaningful in analyzing performance differences among the normal population. Items could be phrased simply and briefly. They needed not be phrased in a manner intended to conceal their real purpose and meaning. It was therefore probable that their discriminative and diagnostic value would be proportionately increased.

5. The questionnaire itself could be made brief yet permit a wide latitude of responses. There would be no necessity to stress length and add to the number of questions in order to encourage more accurate reporting by the individual.

6. The questionnaire would have the merit of more rational construction throughout because of the intelligibility and comparative simplicity of the theoretical assumptions on which it was based. This approach was in contrast to items constructed and validated according to clinical phraseology and norms that appeared to lose their discriminative power because of frequent obscurity and complexity.

Personality differences were likely to emerge more clearly in a social perception type of questionnaire. One of the problems of self-description questionnaires was that every individual was successful to some extent in controlling their behavior in order to adapt more effectively to environmental influences. As a result, both their observable behavior and their responses to questionnaires could be misleading, since their true nature was often concealed, even to themselves, on a conscious level. As a result, underlying personality dynamics tended to be at least partially concealed.

A study of personality differences in terms of social perception made it possible to clarify and verify theoretical concepts, which found widespread acceptance among leading theoreticians and a way to develop items taken from common speech. The goal was to develop a social perception questionnaire that would shed new light upon those motivational aspects of personality by which people could be compared. As a result, major personality differences, initially identified through logic and observation and only partially verified by psychometric devices, could become more susceptible to measurement.

One of the basic findings of the study was that there were two pivotal points around which personality and perception seemed to organize both related to needs. People needed to see "most people" in a socially acceptable light, but not as socially acceptable as they viewed themselves. Social acceptability, operationally defined, was determined by noting the direction of change after groups respond first to items describing "most people" and then respond to the same items in terms of self-description. For example, if the majority in a norm group tended to assume a particular trait to be "true" for others, and simultaneously "false" for self, the false for self was taken to be the more socially desirable answer. If an item was answered false for others and true for self by the majority in a group, the true for self-answer was then considered the socially desirable response, indicating a positive perception, and the false for self-answer the socially undesirable response, indicating a negative perception.

There are then two key assumptions in play: 1) social perception can be used to discriminate differences among "normal" personalities; and 2) the perceptual variables of social acceptability or unacceptability are, in fact, a basic and valid categorization of opposing forces within personality. However, these assumptions introduce special requirements in the area of scoring. Any study conducted along this line is best directed toward examining the functional interdependence of traits. The comparison of one personality with another could be facilitated by an exhaustive analysis of relationships between combinations of variables rather than between single variables. The theoretical construct combining (1) social and self-perception as a basis for building a questionnaire and (2) the analysis of social and self-perception in terms of two basic points of view suggested the possibility of developing a pattern analysis with the application of statistical techniques.

Research findings subsequent to these original assumptions, concepts, and theses affirm the value and contribution of the resulting self-other assessment approach, and, in particular, The Birkman Method as it has evolved.

Overview of General Theoretical Viewpoints and Research Available in the 1950s

Attributing one's own thoughts, attitudes, and actions to others is a social mechanism that has been the subject of considerable theoretical speculation. George Mead (1934) considered this mechanism essential and basic to personality development. He introduced the concept of role taking, in which the individual takes on roles and attitudes of others in the community. With this view, personality is influenced by attitudes of those around us. As individuals develop, they take on different roles according to what is observed through social roles. An individual then acquires a "generalized other" concept, which represents the general norm within the social environment. The "generalized other" represents what kind of behavior is expected within a social setting. Personality, in turn, arises through social interactions. For Mead, behavior arises through social experiences.

Alfred Adler (1917) recognized that there is a relationship between the feelings one has towards oneself and the feelings one has towards others. Feelings of inferiority that arise in individuals become impelling forces for the development of their psyches. Feelings of inferiority, according to Adler, cause a derogatory tendency to disparage others. Fromm (1939) observed that the failure to love the self is accompanied by a basic hostility toward others, that self-love and love of others go hand in hand.

Harry Stack Sullivan (1940) gave this phenomenon clear and explicit expression in *Conceptions of Modern Psychiatry*:

> "...as one respects oneself, so one can respect others. That is one of the peculiarities of personality that can always be depended on. If there is a valid and real attitude toward the self, that attitude will manifest as valid and real toward others. It is not that as ye judge so shall ye be judged, but as you judge yourself so shall you judge others; strange but true so far as I know, and with no exception" (p. 244).

Sears (1937) and Healy, Bronner, and Bowers (1930) defined this phenomenon in terms of "ideas of reference", which are essentially projections of feelings of self-criticism or guilt or the false idea that others are noticing or speaking of them. McDougall (1926) advanced a sensitization theory. According to this theory, sensitization of the sentiments of self-regard occurs when the individual

seeks to repress some weakness or guilt of which he is aware. Murray and Morgan (1945) theorized that so-called projection is, in fact, a tendency to use existing stimuli to express thoughts or feelings.

Groups and Conformity

Regarding estimates of group opinion and social norms, there is considerable research on the ability to judge others. As early as 1929, Sweet found that boys' estimates of group opinions were valuable in diagnostic adjustment problems.

Asch (1940), Moore (1921), Marple (1933), and Sherif (1936) have each observed that individuals tend to modify their opinions to make them conform to those of the group with whom they identify themselves. The roles of personal values and needs are organizing factors in perception (Bruner & Postman, 1948; Bruner & Goodman, 1947; Bruner & Postman, 1947; Goodman, 1953; Hanfmann, Stein, & Bruner, 1947; Postman, Bruner, & McGinnies, 1948).

Asch (1940) noted that the views individuals have of groups (whether positive or negative) have effects on their judgment and behavior and are often used as standards for arriving at conclusions. Studies on group opinions go as far back as Moore (1921), Marple (1933), and Sherif (1935; 1936) who found that group majority opinion was more effective in changing individuals' judgments than expert opinions.

Previous Questionnaires on Self Versus Others Views

Carl Rogers (1949) mentioned two studies his students were conducting (Sheerer, 1949; Stock, 1949) in which attitudes towards oneself were compared with attitudes towards others, in a search to increase understanding about "the self" in therapy and personality. Sheerer and Stock gathered data using behavioral observations during patient therapy sessions in a clinical setting. Phillips (1951) noted their findings and took it a step further by devising a brief questionnaire in which patients in a clinical setting were asked to answer questions about their attitudes towards themselves, as compared to their attitudes towards others. In this analysis, attitudes towards self and others were very highly correlated, and the author noted further research was needed to investigate the implications for personality measurement (Phillips, 1951). Similar findings using this questionnaire were found by Berger (1952) and McIntyre (1952). Omwake (1954) compared these relationships using three personality inventories. Although the inventories did not delve deeply into personality dynamics.

> "there is evidence that in a normal population, as well as in those undergoing therapy, attitudes toward the self appear to be reflected in attitudes toward other people: the lower the opinion of the self, the lower the opinion of others. The results support the hypothesis in that there is a marked relation between the way an individual sees himself and the way he sees others; those who accept themselves tend to be acceptant of others and to perceive others as accepting themselves; those who reject themselves hold a correspondingly low opinion of others, and perceive others as being self-rejectant" (pp 445-446).

Suinn (1961) found that there is a relationship between self-acceptance and acceptance of others using a learning theory analysis. Though these studies were conducted on adults, similar results have been found in children (Epstein & Feist, 1988).

Travers (1941), Wallen (1943), and Goodman (1953) noted a persistent and surprisingly strong correlation between a person's own attitude and their estimate of group opinion. Gage and Suci (1951), Tobolski and Kerr (1952), Van Zelst (1952), Kelly and Fiske (1951), Chowdhry and Newcomb (1952), and Newcomb (1943) all confirmed that a general relationship exists between the individual's estimate of group opinion and their own performance in various settings.

The foregoing studies have a bearing on social perception, but the specific hypotheses involving "the generalized other concept" advanced by Mead were not tested. Most of the foregoing studies employed as the frame of reference a particular, specific group.

The small amount of research which had been carried out to investigate the "generalized other" concept as an approach to measuring differences in personality was surprising in view of the plausibility of the concept. One possible explanation was that the full significance of the relationship existing between individuals and their social environment had been, to some overlooked. Attention apparently had been centered largely on the individual, without due regard to the dynamics operating in the external world as they see it. Most experimental examinations involving "others concepts" placed primary emphasis on mass empathy and self-regarding attitudes, perhaps largely as a result of the established research trend.

A study investigating the relationships between scores for self and projected "average" scores on the Test of Personality by George Lehner was reported in the September 1949 issue of *American Psychologist*. Lehner (1949) found that women tended to devalue the personality of others more than men. Furthermore, he noted that these differences in social perceptions were paralleled by differences in scores reported for self.

In their "Sentiments" examination, Murray and Morgan (1945) asked subjects to guess what the majority of people believe or prefer, e.g. "What are the three most popular things to do?" Norman and Ainsworth (1954) investigated hypotheses concerning the measurement of empathic abilities by requiring the individual to judge "most people." But again, attention was directed away from perceptual differences between groups. Instead, factors of empathy and other correlates were given primary consideration in their investigation.

Hillson and Worchel (1957) used the Self-Activity Inventory developed by Worchel in connection with US Air Force research. The Self-Activity Inventory is designed to give measures of the individual's "others concepts" in addition to their "self-concepts" and "ideal concepts." Here again the discrepancies between self and ideal concepts were noted primarily, and only incidental attention was given to "others concepts" scores.

In rather stark contrast to the vast majority of studies on social perception, The Birkman Method focuses equally on both the individual's perceptions of self and of others. Its unique contribution is that it takes into consideration a person's own self-perceptions and the same person's perceptions of most people.

Chapter Summary

The prototype of The Birkman Method began in 1951; it has clear lineage and professional oversight up to the present time. The original item pool for the instrument was similar in general content to pools of items others were using in scale development at the time. The structure of the instrument from the inception included the combination of perception of self and perception of social context. Early in development, the third section (Interest) was added. The resulting scales offer a description of two types of behavioral styles (effective and ineffective behavior) and two types of motivational style (interpersonal and occupational). Over the years, The Birkman Method has been constantly reviewed, updated, and improved by qualified psychometricians and organizational psychologists.

The Birkman Method is based on, and supported by, many different theories of social perception and personality. The Test of Social Comprehension takes into consideration a person's own perspectives and the same person's perceptions of most people. Dr. Birkman's efforts have begun the development of a theory for understanding the structure and dynamics of personality by way of a psychometric instrument. The perceptions a person has, however normal or abnormal, are real to that person and influence behavior in the context of the social environment. Research has shown a strong relationship between a person's view of self and view of others. Carefully and systematically comparing these two perspectives provides insight into the behaviors and motivations of typical, everyday people.

Chapter Three

Birkman Scales

The Birkman scales are comprised of nine Components scales, ten occupational Interests scales, and six Perspectives meta-scales. The nine Component scales are further delineated into Usual Behavior, Needs, and Stress Behavior. As described in Chapter 1, together these provide a rich, multidimensional examination of an individual.

Components

The nine Components identified by Dr. Birkman offer insight into an individual's behavior and motivators. Each Component is presented in light of two behavioral dimensions (Usual and Stress) and one motivational dimension (Needs). Our Usual Behavior is the behavior we typically exhibit when our Needs are generally being met; our expectations generally being realized. It is our most productive and effective behavior. Needs reflect what we expect from our environment and others in it. It is how we want to be treated and how we prefer to approach tasks. Our Stress Behaviors may occur when our Needs are not met. It is our less productive, frustrated behavior.

Social Energy (formerly Need for **Acceptance**) is one of three Components that can be conceptualized as a form of energy. This particular scale measures a sociability-based construct that includes

IN THIS CHAPTER:

- Components
- Interests
- Mindset

"Impressive scientific advances have been made in every field of endeavor. But nowhere seemingly is there a greater challenge to the creativity and ingenuity of man than that which personality measurement presents."

–Roger W. Birkman

talkativeness, enjoyment of people in groups, enjoyment of social laughter (even at one's own expense), approachability, and their opposites. Similar to the concept of Extraversion, this construct addresses the manner of relating to people in groups, and to individuals in work and in more casual or informal settings.

High Usual Behavior scores reflect outgoing, gregarious behavior. High Need scores manifest as a desire to be included and accepted by groups of people and as an easy involvement in group activities. Those with a high Stress Behavior score for Social Energy are more likely to be too easily swayed by group opinion when feeling the stress of loneliness or being left out.

In contrast, low Social Energy Usual Behavior scores reflect quiet, independent and one-on-one interactions. Those with low Social Energy Needs require time away from social engagements to recharge and have and a seeming facility with individual assignments. When those Needs are frustrated, these individuals have a tendency to withdraw from a perceived demand for sociability.

Physical Energy (formerly Need for **Activity**) measures action orientation, quick thinking, physical expression of energy, and their opposites. This construct addresses preferred pace of action and aspects of style of planning and decision-making. It is opposite in meaning to the construct of Negative Emotionality and is related somewhat to the impulsivity often associated with extraversion.

High Usual Behavior scores reflect energetic, decisive, and results driven behavior. High Needs scorers tend to need a busy schedule and opportunities for physical activities and are comfortable with activities requiring quick action and practical results. Those with high Physical Energy Stress Behavior scores are likely to be impulsive and impatient when a stressed by perceived need to wait or to delay important decisions.

Low Usual Behavior scores reflect a thoughtful, paced approach to tasks, and being intellectually or emotionally, involved in tasks. Low Needs score individuals need personal control over their own schedule and the freedom to set their own pace When under stress, those with low Physical Energy Stress Behavior scores tend to become indecisive, lose energy and have trouble "moving forward."

Emotional Energy (formerly Need for **Empathy**) measures emotions involving sadness, anger, emotional volatility and their opposites. It addresses comfort with emotional expression and involvement of feelings and, on one end of the scale, is close in meaning to the construct of Negative Emotionality with involvement of "feelings of sadness" or depression.

High Usual Behavior scores reflect emotionally expressive, emotionally creative behaviors. Individuals with high Emotional Energy Needs scores expect an outlet for their feelings and

opportunities to be heard on a personal level or to be involved with the emotional needs of others. They have a tendency towards open expression of emotions, and open involvement with emotional issues. High Emotional Energy Stress Behaviors can appear overly emotional when stressed by perceived lack of attention to emotions or excessive demands for pragmatism.

Low Usual Behavior scores reflect practical, solution-oriented behavior. Low Needs individuals need emotional issues to be kept to a minimum and gravitate to logical solutions, pragmatic tasks, and low-emotional relationships. Those with low Stress Behaviors scores can appear to be unfeeling or avoiding emotional issues when stressed by encounters with too many or too intense emotional behaviors or issues.

Self-Consciousness (formerly Need for **Esteem**) measures a sensitivity-based construct that includes shyness, sensitivity about correcting others or being corrected by others, and concerns about embarrassing or being embarrassed, and their opposites. This Self-Consciousness related construct addresses how a person may deal with (or prefers others deal with) approval related topics and how they relate to individuals. Self-Consciousness is negatively related to extraversion.

High Usual Behavior scores reflect diplomatic, sensitive behavior. Those with high Needs scores expect personalized approval and for others to have a tactful approach to broaching sensitive topics. They look for more personal, supportive relationships. Those with high Stress Behavior scores also tend to appear overly sensitive or insecure when others are perceived to be too direct.

Low Usual Behavior scores reflect getting to the point in conversations and not mincing words. Those with low Self-Consciousness Needs want others to be straightforward, candid, and direct in their communication. These individuals with low Stress Behavior scores might come across as being overly blunt when they perceive others as evasive or not being totally honest with them.

Assertiveness (formerly Need for **Authority**) measures a dominance-based construct that includes persuasive interaction, speaking up, expressing opinions openly, forceful approach to ideas, and their opposites. This construct addresses the approach to directing and controlling or persuading others in verbal exchanges and is negatively related to the Big Five personality factor agreeableness.

High Usual Behavior scores reflect persuasive, competitive, forceful behavior, and have a strong give and take about issues when at their best. Individuals with high Needs scores expect opportunities to express their opinions, regardless of lines of organizational authority. Those with high Assertiveness Stress Behavior scores might become argumentative and domineering.

Low Usual Behavior scores are associated with agreeable, "easygoing" behavior and are low-key and non-aggressive in their interactions. Those with low Assertiveness Needs scores have a facility for agreeable relationships with minimal conflict. They like knowing who and where the "real" authority resides, and typically are very respectful of titles and organizational authority. At the same time, low Stress Behaviors are likely to appear to give in or disengage when stressed by perceived aggression or argumentativeness from others.

Insistence (formerly Need for **Structure**) measures an orderliness-based construct that includes following plans, finishing tasks, dealing with detailed tasks, using a systematic approach, and their opposites. Related to conscientiousness, this construct addresses the manner of dealing with systems and procedures.

High Usual Behavior scores reflect orderly, systematic, detail-oriented behavior and a tendency to rely on rules and regulations (process) for maintaining order. High Needs individuals prefer planned and controlled tasks with clearly defined rules and procedures. High Needs tend to become overly constrained by existing plans, procedures, or ways of doing things when stressed by rapid change or approach, lack of predictability, or feelings that tasks are out of control.

Low Usual Behavior scores reflect flexible, adaptable behavior, and an easy facility with tasks that do not require rigid adherence to "instructions." Those with low scores in Insistence Needs prefer an environment with minimal routine and options for how to accomplish their goals. Low Need might become disorganized, disjointed in giving instructions, and producing "last minute" behavior when stressed by perceptions of too much control by others or overly detailed and controlling procedures.

Incentives (formerly Need for **Advantage**) measures another dominance-based construct that addresses trust and idealism issues more than the approach to forceful give and take addressed by the Assertiveness scales. The Incentives Component includes a strong drive for personal advancement (as opposed to team), cautiousness about giving trust, involvement with money (as incentive), and their opposites. It addresses the approach to idealism and team versus individual approaches to winning competitions and incentives. Like Assertiveness, Incentives is negatively related to the Big Five factor of agreeableness.

High Usual Behavior scores reflect openly competitive, opportunity-minded and money-conscious behavior. Those with high Needs scores are more likely to need awareness of how performance is being tracked, and personalized incentives when goals are met. High scores also reflect a tendency to become overly self-protective, self-promoting, distrusting, and focused on winning at all

costs when stressed by perceptions that others may take advantage or win rewards coveted by the individual.

Low Usual Behavior scores reflect team-oriented, idealistic behavior and creating environments based on trust. Low Incentives Needs indicates an expectation that everyone will work together and put group reward ahead of personal reward. The less effective Incentives Stress Behaviors include a tendency to appear naive and excessively self-sacrificing under stress when perceiving that others are not being trustworthy or that self-interest (especially monetary self-interest) will control a relationship or interaction.

Restlessness (formerly Need for **Change**) measures a construct based on distractibility and excitability. It involves changeable interests, quickly changing focus, working fast, and their opposites. Restlessness addresses dealing with change of current focus or shifting of attention in the moment, but not resistance to or comfort with structural or organizational change. It is most closely related to the Big Five factor of openness.

High Restlessness Usual Behavior scores reflect responsiveness and quickly shifting attention. Needs associated with high Restlessness include a preference for variety in workload and many quick, attention-shifting tasks instead of set routines in daily work. High Stress scores for this Component can indicate a tendency to be excessively restless and unfocused when stressed by tasks perceived to be boring or that require focusing on one goal for long periods of time.

Low scores in Restlessness Usual Behavior reflect patient attention to the task at hand and a dogged resistance to distraction. Low Needs prefer tasks or environments that provide protection from interruption. When pushed, those scoring low in Restlessness (Stress Behavior) may appear to be resistant to demands for shifts of attention, and can become rigidly adherent to their current focus and appear to be ignoring others.

Thought involves a cautious approach to decisions, concern for making the right decision the first time, worry about consequences, and their opposites. The Thought Component addresses an approach to making decisions and taking action. It is related to the negative emotionality concept as well as being negatively correlated to the Physical Energy Component.

Those high in Thought Usual Behavior are cautious decision makers who consider many options and their consequences. High Needs individuals prefer having what they perceive as all of the information to think things through thoroughly with plenty of opportunity to consider both the pros and cons of issues. When not at their most effective, those high in Thought Stress Behavior could

appear indecisive and anxious when stressed by perceived pressure to decide (or act) without sufficient information.

Low scores in Thought Usual Behavior reflect quick decision making accompanied by relative ease of changing decisions. Low Needs want to take action as quickly as possible without the burden of examining too many options. When stressed, those low in Thought might appear to be rash or impulsive in the face of perceived lack of action by others or when having to deal with complicated risk factors and options.

Birkman Interests

The original development of Birkman Interests resulted in the identification of ten areas of interest, commonly found in other interest measures (e.g., Kuder Preference Record). Table 3.1 lists the ten Birkman Interests scales and their definitions. These scales describe an individual's expressed preference for job titles based on instructions to assume equal pay across all job titles. The Interests survey comprises 48 items consisting of groups of four occupations each. The respondent is asked to reorder each group of four job titles from most preferred job to least preferred.

Individuals have interests that result in their selection of occupations in characteristic clusters. The specific occupations often may appear to be unrelated. Each occupational interest cluster is composed of several different occupations (e.g., there are approximately two dozen occupations involving *persuasion* and *public contact* which are individually contrasted with six dozen or so non-persuasive and non-public contact occupations, and so on). Failure to choose a few critical occupations in a cluster for whatever reason, as well as the selection of a few contraindicated occupations, may be compensated for by the selection of other pertinent occupations. Uncertainty or unfamiliarity about the parameters of one, or even of several occupational titles, is compensated for by the selection of other related common occupations.

TABLE 3.1 The Birkman Method Interests Scales and Descriptions

Scale	Description
Administrative	The Administrative Interest scale measures a preference for career opportunities involving internal administrative support, and public contact administrative or service activities. It is characterized by systems, order, and reliability. Sample activities include system tracking, recordkeeping, and categorizing.
Artistic	The Artistic Interest scale measures a preference for career opportunities involving photography, architecture, design, and representational art endeavors. It is characterized by creation, appreciation for arts, aesthetics. Sample activities include painting, appreciating art, and designing.
Literary	The Literary Interest scale measures a preference for career opportunities involving writing, editing, reporting, and general involvement with books and the literary arts. It is characterized by an appreciation for language. Sample activities include writing, reading, and editing.
Musical	The Musical Interest scale measures a preference for career opportunities involving performing music, working with musical instruments or general involvement with music and the musical arts. It is characterized by playing, singing, or listening to music. Sample activities include playing an instrument, attending concerts, and collecting and appreciating music.
Numerical	The Numerical Interest scale measures a preference for career opportunities involving bookkeeping and accounting, auditing, financial and statistical analysis, and mathematics. It is characterized by working with numbers and data. Sample activities include accounting, investing, and analyzing.
Outdoor	The Outdoor Interest scale indicates measures a preference for career opportunities involving agricultural and building activities, adventure-oriented activities (performed outside), and working with animals. It is characterized by work in an outdoor environment. Activities include playing outdoor sports, farming, gardening.
Persuasive	The Persuasive Interest scale measures a preference for career opportunities involving persuading, selling, communicating, and various influencing responsibilities such as management. It is characterized by persuading, motivating, and selling. Sample activities include debating, influencing, and promoting.

Table 3.1 The Birkman Method Interests Scales and Descriptions *(continued)*

Scale	Description
Scientific	The Scientific Interest scale measures preference for career opportunities involving medicine and allied applications, research, and applied sciences. It is characterized by research, analysis, intellectual curiosity. Sample activities include investigating, exploring, medicine, and experimentation.
Social Service	The Social Service Interest scale measures a preference for career opportunities involving counseling, supporting, guiding, educating, and ministering to others. It is characterized by helping, advocating for people. Sample activities include teaching, counseling, and volunteering.
Technical	The Technical Interest scale measures a preference for career opportunities involving skilled and semi-skilled mechanical crafts, repair and troubleshooting responsibilities, hands-on electronics work, and engineering. It is characterized by hands-on work with technology and machinery. Sample activities include programming, assembling, and using product manufacturing or repair.

Mindset

The Birkman Mindset report is comprised of six meta-scales which are collectively referred to as Perspectives. The six scales provide insights about respondents' belief systems concerning themselves and others. Birkman cannot—indeed does not—measure every possible mindset or facet of the entirety of belief systems. Due to the unique nature of the data The Birkman Method collects, we are able to address a few specific elements of mindset. Because The Birkman Method is primarily a business-application tool, the aspects measured deal with the interpersonal, intrapersonal, and work alignment of individuals. On a macro-level, these six Perspectives scales allow respondents to learn new ways of thinking and confront the pros and cons their mindset adds situationally. Each Perspective scale is scored directly from selected items on the Birkman questionnaire that have proven statistically to reveal important distinctions in the population. Table 3.2 summarizes the source for the items in each meta-scale and its corresponding comparison group.

TABLE 3.2 Focus and Comparison Group for the Six Perspectives

		Focus		
		Self	**Most People**	**Both**
Comparison Group	**Respondent Data**	Self-Affirming	Others-Affirming	Image Management Distinctiveness
	Normative Data	Alignment	Social Acuity	n/a

Notes. *1. Focus references about whom the respondent is answering.*
2. For Alignment and Social Acuity, the respondent's answers are compared against normative data.

Self-Affirming and Others-Affirming deal directly with *social desirability* and are underlying levers that impact the other Perspectives scales. Self-Affirming reveals the extent to which a person attributes socially desirable and favorable characteristics to themselves. High Self-Affirming individuals attribute behaviors to themselves that are seen as "favorable" by society. They are likely to show up in a socially desirable manner most of the time. Given this self-image, they can be uncomfortable with negative conversations about their performance. At the other end of the continuum, low Self-Affirming Individuals attribute fewer behaviors to themselves that are seen as favorable by society and thus are not consciously concerned about showing up in a socially desirable manner. One consequence of such a self-image is more of a willingness to engage in critical or difficult conversations about their performance. Indeed, they are likely to speak of their faults in public with relative aplomb.

Whereas Self-Affirming is focused on an individual's expectations for oneself, Others-Affirming reveals the extent to which a person expects others to show up in a socially desirable and appropriate way. Individuals who score high on Others-Affirming naturally expect others to behave in a socially acceptable way. These individuals may be surprised or judgmental when others do not conform to their beliefs about how others are "supposed" to behave. In contrast, those who are low on Others-Affirming have no pre-conceived expectations that others always behave socially appropriately, certainly with respect to some socially desirable norm. As such, they are far less inclined to be surprised and judgmental when people do not behave in a socially desirable way.

Image Management reveals the extent to which a person devotes energy to managing and maintaining a favorable public image. The ratio of Self-Affirming to Others-Affirming is the engine that directly drives Image Management.

Those highest in Image Management have a higher Self-Affirming than Others-Affirming score, with a large gap between those two scores. These individuals put a great deal of energy into maintaining a more socially desirable public image, thus often making it harder for others to get to know who they really are. Under social pressure, those high in Image Management may deflect blame to protect their image and may not be willing to place any blame for failure on themselves.

Those who score Others-Affirming higher than Self-Affirming have a very low Image Management score. These individuals devote energy into creating a public image that is different from societal expectation. They may feel misunderstood by others, and under social pressure may take on more than is reasonable to "prove" themselves. Very low Image Management individuals may accept total responsibility for their shortcomings and work harder on themselves to "fix" what is wrong when experiencing personal failure.

Those individuals who have very similar Others-Affirming and Self-Affirming scores likely do not actively experience the phenomenon of managing their image from a socially desirable perspective, and this can happen with both those who score on the high and low side of the Affirming scales. These individuals will have a low Image Management score, yet not as low as if the Others-Affirming is higher than Self-Affirming.

Image Management is a refined version of the previous Challenge scale. The relationship of the two scales are inversed such that high Image Management would be low Challenge and vice versa. Included in the refinement of the scale was an updated set of items that replaced items that had become less discriminating over time and thus helped improve the clarity of the Image Management scale. Because these new items were not all available on older versions of the questionnaire, the Image Management scale cannot be generated from older versions of the assessment.

Distinctiveness provides individuals with information about how differently they see themselves from others, or how differently they see others from themselves. Individuals with High Distinctiveness are aware that other people may think differently than they do and are open to changing their position when they receive additional information. This may result in them getting carried away with their own enthusiasm at the expense of other priorities, resulting in them appearing spontaneous and unpredictable. Individuals with Low Distinctiveness have a set, well-defined mindset and outlook, are more comfortable with the familiar, and rarely appear out out of character. When pushed, they can be strong willed on issues they deem important and may have difficulty accepting approaches or opinions which differ from their own.

The previous four Perspectives scales are largely based on how respondents view themselves; although they may also involve social perceptions. The final two Perspectives scales, however, compare the respondent's scores to how the majority of people answered the same items. These two scales were both formerly a part of the Freedom construct and were presented in a Usual Behavior/Needs format with emphasis on agreeing or disagreeing with conventional, socially desirable responses. This linkage made it difficult to interpret, as this construct was often confused with a behavioral Component. Alignment uses the Self section of the questionnaire and Social Acuity uses the Most People section. In addition to being separated, items in both sets of data were refined to reflect social desirability shifts over time.

Alignment provides the respondent with information that shows how their mindset about Self differs from the way other people see themselves. As such, Alignment reveals the extent to which a person presents themselves in a traditional or conventional way. Individuals with high Alignment act according to established societal standards and norms and are naturally inclined towards a conventional approach to both relationships and tasks. At times, those with high Alignment may be perceived as too cautious or risk averse. They can appear too concerned with doing what is acceptable at the expense of their individuality. Those with low Alignment act according to their own standards, not society's, and thus usually display nontraditional behavioral patterns around others. They may sometimes be perceived as different just for the sake of being different.

Social Acuity reveals the extent to which a person has realistic expectations of other people's behaviors and attitudes. The higher the score, the more likely a person is to accurately interpret social dynamics. Individuals with high Social Acuity intuitively understand social norms and have a strong sense of behavioral right and wrong based on what society deems appropriate. Individuals with low Social Acuity are likely to interpret social situations in a unique way and interpret behavioral right and wrong based on personal judgment. There are two ways to have low Social Acuity. Individuals with Social Acuity that is too critical do not have the expectation that others will necessarily behave in a socially appropriate way. They may overestimate how sensitive and emotional other people are and may be comfortable in situations where others may feel uneasy. In contrast, individuals with Social Acuity that is too optimistic tend to expect that others will behave in a socially appropriate way; so much so that their mindset here is somewhat naive. They may underestimate how sensitive and emotional other people are and may be blindsided or judgmental when others are not socially appropriate.

TABLE 3.3 The Six Perspectives in the Birkman Mindset

Perspective	Definition
Self-Affirming	How much I see *myself* as having favorable characteristics and behaving in a socially desirable way.
Others-Affirming	How much I *see others* as having favorable characteristics and behaving in a socially desirable way.
Image Management	The extent to which I devote energy to managing and maintaining a favorable public image. Is driven by Self-Affirming and Others-Affirming.
Distinctiveness	How different or unique I *see myself* in contrast with other people.
Alignment	How different or unique my *self-perception* is from the norm of other people's self-perception.
Social Acuity	How accurate *my perception of others' behavior* is compared to the norm of other people's social perceptions.

Chapter Summary

There are nine Birkman Components, with each Component being described in terms of Usual and Stress Behaviors and the unseen Needs or expectations. Interests in The Birkman Method measure ten general interest themes indicating one's preference for activities or occupations. The Birkman Mindset report is based on six Perspectives that afford individuals the opportunity to learn how their mindsets impact their interactions. Together, these comprise the dynamic system that is The Birkman Method.

Chapter Four
Reliability

Reliability refers to the consistency or stability of an instrument. Several methods exist for estimating reliability. Here, we report reliability estimates from the most common approaches: a) (Cronbach's alpha) internal consistency as estimated through coefficient alpha and b) temporal stability utilizing a test-retest study.

Internal Consistency

A good scale measures all aspects of a construct as it is defined. Internal consistency assumes that a scale has multiple items measuring the same underlying construct. This type of reliability looks for homogeneity or consistency of different items within a scale.

The internal consistency of The Birkman Method scales was analyzed by use of the coefficient alpha (Cronbach, 1951). A stratified random sample of 9,056 persons who completed the instrument between August 2008 and July 2015 was used for this purpose. Sample demographics were matched to the US working population for gender, age, ethnicity, and job family. (See Chapter 6 for more detailed information regarding the sample.)

As evident in Tables 4.1 and 4.2, internal consistency for Birkman Usual Behavior, Needs, and

IN THIS CHAPTER:

"Our conclusion is that people don't change, but under certain circumstances that we could not begin to explain from a psychological point of view, they do sometimes seem to be transformed."

–Roger W. Birkman

Interests is adequate. Alpha ranges from moderate (Restlessness) to very good (Technical). For the most part, reliability coefficients are moderately high. The few exceptions can be accounted for by the low number of items in these scales (Fried & Ferris, 1987).

For both Components and Interests, Birkman International is in the process of updating items which will further increase internal consistency. These updates are targeted to be implemented by mid-2021. As the Perspectives in the Birkman Mindset are meta-scales, a measure of internal consistency is not appropriate.

TABLE 4.1 Internal Consistency of Birkman Components

	Cronbach's Alpha	
	Usual Behavior	**Needs**
Social Energy	.80	.73
Physical Energy	.75	.75
Emotional Energy	.84	.83
Self-Consciousness	.78	.74
Assertiveness	.70	.63
Insistence	.71	.77
Incentives	.67	.84
Restlessness	.66	.62
Thought	.71	.73

Source: 2019 Birkman Normative Sample (N=9,056).

TABLE 4.2 Internal Consistency of Birkman Interests

	Cronbach's Alpha
Administrative	.89
Artistic	.84
Literary	.85
Musical	.87
Numerical	.89
Outdoor	.88
Persuasive	.78
Scientific	.73
Social Service	.86
Technical	.90

Source: 2019 Birkman Normative Sample (N=9,056).

Test-Retest

Another form of reliability is called test-retest reliability and measures stability over time. To measure test-retest reliability, individuals are administered the same test at two different times, and the results are compared. The test is considered to have temporal consistency if similar scores are found for the two administrations. Theoretically, individuals should receive essentially the same scores upon multiple administrations of the same instrument.

Over the decades, Birkman International has conducted multiple test-retest studies. The test-retest statistics consistently provide evidence that the Birkman scales and constructs reported are stable across time.

Two test-retest studies were conducted recently. For the 2018 study, Birkman International hired a third-party market research firm to recruit working adults matching the demographics of workers in the United States. A link to the assessment was forwarded to the chosen test takers (583), out of which 422 test takers successfully completed the assessment in return for a monetary incentive. After 15 days, a link to the assessment was forwarded again to those who completed the

first time. Successful completion yielded higher incentive. A very high percentage of test takers completed the retest, resulting in 414 respondents who took the assessment twice. To eliminate the respondents who more likely participated in the study for incentives alone, respondents who did not complete each iteration of the instrument between the 15 to 45 minutes typically taken to complete the assessment were filtered out of further analyses. This yielded a final sample size of 120 respondents. Demographics are provided in Table 4.3.

A second study was conducted in 2019 as part of a larger reliability and validity study. Working adults were recruited from across the United States . Potential respondents received an email with a link to the assessment. Approximately two weeks later, a second email with another link was sent. In return for participating, they received a complementary Birkman report after they completed the Birkman assessment for the second time or at the completion of the study. Demographics are in Table 4.3.

TABLE 4.3 Demographics for 2018 and 2019 Birkman Test-Retest Studies

	2018 Study N=120	2019 Study N=132
Age		
Mean	51.55	40.07
Std. Deviation	13.23	11.59
Ethnicity (%)		
Asian (e.g., Indian, Chinese, Japanese, Filipino, Vietnamese)	3.49	5.30
Black or African American	9.30	3.79
Hispanic, Latino, or Latin American	4.65	10.61
Native American, Alaskan, Hawaiian, or Other Pacific Islander	2.32	.76
White / Caucasian (Not Hispanic or Latino)	77.91	75.76
Other	2.33	3.79
	100.00	100.00

TABLE 4.3 Demographics for 2018 and 2019 Birkman Test-Retest Studies *(continued)*

	2018 Study N=120	2019 Study N=132
Gender (%)		
Male	47.57	32.58
Female	52.43	67.42
	100.00	100.00

Sources: 2018 Birkman Test-Retest Reliability Study; 2019 Birkman Reliability Study.

In line with previous studies, results indicate reasonable reliability coefficients for Birkman scales. Reliability over time was calculated using Spearman correlations. This methodology was chosen because the scales are not continuous and are of polytomous nature.

As shown in Table 4.4, test-retest reliabilities for Components ranged from .65 to .86 for 2018, and from .60 to .89 in 2019. With a single exception, reliabilities across time were higher for Usual Behavior than those for Needs, as is expected since Usual Behavior is what is deemed acceptable by society. Birkman International has consistently seen this pattern across multiple reliability studies. In part, this pattern is a result of Usual Behavior generally being more constricted by what is deemed acceptable by society. Another factor is that traditional personality tests ask respondents to rate themselves. Needs rely on our perceptions of others, and as such is a more cognitively difficult task.

TABLE 4.4 Two Week Test-Retest Reliability of Birkman Components

	2018 Study		2019 Study	
	Usual Behavior	Needs	Usual Behavior	Needs
Social Energy	.84	.78	.89	.63
Physical Energy	.85	.65	.84	.80
Emotional Energy	.86	.75	.85	.79
Self-Consciousness	.83	.67	.87	.65

TABLE 4.4 Two Week Test-Retest Reliability of Birkman Components *(continued)*

	2018 Study		2019 Study	
	Usual Behavior	Needs	Usual Behavior	Needs
Assertiveness	.79	.74	.78	.60
Insistence	.70	.76	.80	.70
Incentives	.77	.74	.75	.68
Restlessness	.72	.71	.84	.66
Thought	.80	.65	.84	.61

Sources: 2018 Birkman Test-Retest Reliability Study (N=120); 2019 Birkman Reliability Study (N=132);

Reliability coefficients over time for Birkman Interests are summarized in Table 4.5. These ranged from .84 for Persuasive to a high of .92 for Numerical for the 2019 study, and from .72 for Scientific to .89 for Musical for the 2018 Study.

TABLE 4.5 Two Week Test-Retest Reliability of Birkman Interests

	2018 Study	2019 Study
Administrative	.84	.89
Artistic	.82	.90
Literary	.83	.88
Musical	.89	.91
Numerical	.83	.91
Outdoor	.88	.92
Persuasive	.78	.85
Scientific	.72	.84
Social Service	.85	.91
Technical	.83	.90

Sources: 2018 Birkman Test-Retest Reliability Study (N=120); 2019 Birkman Reliability Study (N=132).

The temporal stability of Birkman Mindset is presented in Table 4.6. Test-retest reliabilities ranged from .72 for Distinctiveness to .86 for Self-Affirming for the 2018 study, and from .68 for Distinctiveness to .86 for Self-Affirming for the 2019 study. The relative magnitude of the test-retest reliabilities for Mindset appeared stable across samples.

TABLE 4.6 Two Week Test-Retest Reliability of Birkman Mindset

Perspective	2018 Study	2019 Study
Self-Affirming	.86	.86
Others-Affirming	.80	.81
Image Management	.82	.76
Distinctiveness	.72	.68
Alignment	.85	.85
Social Acuity	.76	.69

Sources: 2018 Birkman Test-Retest Reliability Study (N=120); 2019 Birkman Reliability Study (N=132).

Chapter Summary

The Birkman Method demonstrates reliability both in terms of internal consistency and test-retest reliability. Internal consistency analyses provided evidence that the items measure different aspects of the same underlying construct. The stability of the Birkman scales has been empirically determined with a two-week period between repeated measures of the instrument. The results for short-term test-retest are comparable to those found for similar instruments.

Chapter Five
Validity

With respect to psychological measures, validity refers to the degree to which a questionnaire, test, or psychological instrument measures what it claims to measure. This chapter will discuss the different types of validity related to The Birkman Method.

IN THIS CHAPTER:

- Face Validity
- Construct Validity
  - Convergent Validity
  - Discriminant Validity

"As you know, if it's not valid, then nothing else matters. Throughout our history, we have been engaged in validation studies and cultural comparisons. It is very clear now that The Birkman Method is consistent with other measures, and it brings something unique to the domain. Ultimately, "self" and "other" perspectives help individuals see themselves, their teams, and organizations in their own distinctive perceptual context."

–Roger W. Birkman

Face Validity

Face validity is the most basic type of validity, and it is defined as the mere appearance that the results are relevant, important, or make sense to the test taker. While not based on psychometrics, this validity is nevertheless critical since it is a measure of the perceived accuracy of the test. Whether a test can demonstrate validity based on psychometrics is irrelevant if users do not feel the results are accurate.

The Birkman Method has always received positive feedback on its face validity by both individuals and groups. A large measure of the success consultants experience during feedback sessions using The Birkman Method is attributed to face validity. Perhaps the strongest case for face validity is the large number of organizations that have perceived that the instrument is relevant, important, and makes sense. For almost 70 years, The Birkman Method has been used as a major

tool in organizational analysis, promotion, team building, selection, manager/leader development, coaching, mergers and acquisitions, and cultural assessment, just to name a few of the pertinent applications.

The Birkman items and scales were developed and validated using employees from a multitude of organizations. The item content uses everyday, non-clinical language. The instrument has been used throughout six decades within thousands of organizations across most industries within the United States and globally. These industries include but are not limited to: telecommunications, utilities, insurance, education, petrochemical, engineering, finance, healthcare, government, retail, manufacturing, aerospace, service, and energy. Various Birkman clients in these industries have used The Birkman Method and endorsed it as valid, meaning they consider it relevant, accurate, and useful.

Construct Validity

Construct validity is defined as the extent to which a test measures the construct (e.g., attribute, characteristic, trait) that it is designed to measure. When comparing psychological/sociological instruments, construct validity deals with the strength of the relationship between similar and non-similar constructs.

Construct validity can be established through *convergent* and *discriminant validity*. Convergent construct validity is conducted when instruments purporting to measure similar constructs are compared. Examples include comparing one intelligence test with another intelligence test. When comparing different instruments that measure similar constructs, the correlations between each respective construct should be relatively high.

Measuring dissimilar constructs can provide evidence of discriminant construct validity. Evidence of discriminant validity exists when two constructs not expected to be related are indeed not related. For example, the FFM factor of Conscientiousness would not be expected to, nor does it, relate significantly to The Birkman Method construct of Social Energy Usual Behavior or Needs.

To align The Birkman Method constructs with other personality factors, Birkman scales have been correlated with other instruments that assess personality-related characteristics or traits. The Birkman assesses both the perceptions individuals have about themselves (Self items/Usual Behavior) and also the perceptions they hold about others (Most people items/Needs). For completeness, relationships with both Usual Behavior and Needs are reported. However, as other personality assessments do not address the “most people” perspective, examining only the Birkman

Usual Behavior scales for construct validity when comparing to non-Birkman instruments is more appropriate.

This chapter reports the findings of the 2019 validity study. The 2019 study included the NEO-PI-3 (McCrae & Costa, 2010), the 16PF Questionnaire-IPIP (IPIP; Goldberg, 1999; Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough, 2006), and the O*NET Interest Profiler Short Form (Rounds, Su, Lewis, & Rivkin, 2010). Results of previous validity studies can be found in earlier editions of the Birkman technical manual.

Respondents for the 2019 validity study were recruited from across the United States. To be eligible, respondents had to be fluent in English, working at least part-time, and a minimum of 18 years old. Potential respondents received an email with links to the Birkman instrument and to other instruments. They were asked to follow the links to complete each assessment. In return for participating, they received a complementary Birkman report.

Validity coefficients were calculated using Spearman correlations. This methodology was chosen because the scales are not continuous and are of polytomous nature.

Comparison of Birkman Components and Interests Scales

The Birkman Method contains measures of personality and measures of occupational interest. This allows us to evaluate these two different sets of data for the purposes of determining convergent and discriminant validity.

The correlations between The Birkman Method Components and Birkman Interests are based on the 2019 normative sample (see Chapter 6) and are shown in Table 5.1. Many of the scales display significant and distinct profiles. This is consistent with expectations. The Persuasion Interest scale has multiple indicators for Usual Behavior with the strongest being a positive relationship with Social Energy and a negative relationship with Self-Consciousness. The pattern of higher Social Energy and lower Self-Consciousness holds for Social Service as well. A theme holds across the three more creative Birkman Interests of Artistic, Literary, and Musical such that those higher in these Interests are more likely to be higher in Usual Behavior for Emotional Energy and Thought, and lower for both Usual Behavior and Needs in Physical Energy and Insistence. For both Usual Behavior and Needs, the Component Insistence is positively related to an occupational interest in Administrative and Numerical.

TABLE 5.1 Correlations between Birkman Scales

		Birkman Interests				
		Administrative	Artistic	Literary	Musical	Numerical
USUAL BEHAVIOR	Social Energy	-.12	-.01	-.01	.09	-.16
	Physical Energy	-.03	-.18	-.16	-.11	.09
	Emotional Energy	.03	.13	.14	.13	-.06
	Self-Consciousness	.13	.14	.08	.04	.05
	Assertiveness	-.10	-.07	-.02	.02	.02
	Insistence	.18	-.19	-.21	-.17	.19
	Incentives	.02	.04	.06	.06	.00
	Restlessness	-.06	.05	.03	.04	-.08
	Thought	.03	.16	.14	.12	-.07
NEEDS	Social Energy	.04	-.02	-.08	-.05	.03
	Physical Energy	.07	-.10	-.14	-.11	.07
	Emotional Energy	.02	.04	.08	.08	-.04
	Self-Consciousness	-.05	.04	.09	.08	-.06
	Assertiveness	.03	-.05	-.04	.00	.04
	Insistence	.11	-.14	-.18	-.14	.10
	Incentives	.03	.03	.04	.05	-.01
	Restlessness	.05	.00	.00	.01	-.03
	Thought	.00	.05	.07	.07	-.05

Note: *Correlation coefficients equal to or greater than the absolute value of .03 are significant at p≤.01.*

Source: 2019 Birkman Normative Sample (N=9,056).

TABLE 5.1 Correlations between Birkman Scales *(continued)*

		Birkman Interests				
		Outdoor	Persuasive	Scientific	Social Service	Technical
USUAL BEHAVIOR	Social Energy	-.06	.36	-.08	.21	-.19
	Physical Energy	-.02	.19	.00	.06	.06
	Emotional Energy	-.02	-.10	-.01	-.08	-.04
	Self-Consciousness	-.03	-.32	.05	-.12	.00
	Assertiveness	.03	.19	.02	-.07	.05
	Insistence	-.03	-.06	.04	-.02	.08
	Incentives	-.05	.09	.00	-.08	-.01
	Restlessness	.03	.11	-.03	-.01	-.06
	Thought	-.03	-.12	-.02	-.03	-.06
NEEDS	Social Energy	-.03	.04	.03	.00	-.01
	Physical Energy	-.03	.06	.01	.04	.02
	Emotional Energy	-.03	-.02	-.04	.00	-.04
	Self-Consciousness	.01	-.01	-.04	.02	-.03
	Assertiveness	-.02	.04	-.02	-.02	.04
	Insistence	-.02	.04	.02	.02	.03
	Incentives	-.03	-.01	-.02	-.03	-.02
	Restlessness	-.03	.04	-.06	.04	-.06
	Thought	-.02	.00	-.04	.01	-.05

Note: *Correlation coefficients equal to or greater than the absolute value of .03 are significant at p≤.01.*

Source: 2019 Birkman Normative Sample (N=9,056).

Cattell's 16PF (IPIP Version)

A total of 272 people participated in the Birkman validity study. The majority of people who take the Birkman spend 15 to 45 minutes to complete the assessment, with an average of around 30 minutes. Because respondents were offered the incentive of a free report, it was deemed better to remove those respondents whose total time was outside of the normal time range. This left a total of 167 adults who also completed the 16PF-IPIP. Respondent mean age post-filtering was 39.3 (sd 11.8), with 59.3 percentage female. Aligned with the US working population (US Bureau of Labor Statistics, 2019), the majority of the respondents were White, non-Hispanic, although at 76.0 percent Whites were overrepresented in this sample. Asians comprised 4.8 percent, Black or African Americans 4.2 percent, Hispanic and Latinos 10.8 percent, and 4.2 percent comprising all other ethnicities. The overrepresentation of White females is an apparent weakness. However, results obtained were comparable to those obtained in earlier studies (c.f. Birkman et al., 2000; 2008), suggesting that evidence of validity is robust even in the face of a skewed sample.

As expected, multiple patterns of relationships between The Birkman Method scales and the 16PF-IPIP can be seen. The Birkman Social Energy Usual Behavior scale is related to the 16PF secondary (or global) factor of extraversion/introversion, which consists of the 16PF primary factors of Warmth, Liveliness, Social Boldness, Privateness, and Self-Reliance. The highest correlations for Social Energy Usual Behavior are with these five primary factors of the 16PF that are associated with extraversion. Both Birkman Social Energy and 16PF's global factor of extraversion/introversion are measuring an individual's tendency to move towards or away from social situations.

The triad of Birkman Physical Energy, Emotional Energy, and Thought provide deep insight into an individual's approach to emotional situations and issues. And indeed, these three are related to the 16PF secondary factor of High Anxiety/Low Anxiety, which consists of 16PF primary factors of Emotional Stability, Vigilance, Apprehension, and Tension. Additionally, the Assertiveness Usual Behavior component is positively correlated with the Dominance scale of the 16PF. Insistence Usual Behavior aligns with the 16PF Dutifulness/Rule-Consciousness scale. These relationships are expected due to the constructs they both are purporting to measure. Other relationships between The Birkman Method and 16 Personality Factor Questionnaire - International Personality Item Pool (16PF-IPIP) (Cattell & Mead, 2008; Conn & Rieke, 1994) can be seen in Table 5.2.

TABLE 5.2 Comparison of Cattell's 16PF (IPIP Version) Factors with the Birkman Component Scales

		Warmth	Reasoning	Emotional Stability	Dominance
USUAL BEHAVIOR	Social Energy	.49	.17	.29	.24
	Physical Energy	.09	.27	.50	.34
	Emotional Energy	-.11	-.26	-.70	-.27
	Self-Consciousness	-.19	-.32	-.49	-.53
	Assertiveness	-.08	.28	.05	.45
	Insistence	-.12	-.06	-.06	-.09
	Incentives	-.12	-.03	-.22	-.07
	Restlessness	-.02	-.13	-.31	.01
	Thought	-.07	-.24	-.56	-.38
NEEDS	Social Energy	.11	.08	.11	.05
	Physical Energy	-.01	-.05	.18	.03
	Emotional Energy	-.07	-.10	-.37	-.11
	Self-Consciousness	-.01	-.09	-.16	-.06
	Assertiveness	-.06	.00	-.24	-.03
	Insistence	-.02	-.17	.07	-.03
	Incentives	-.06	-.03	-.26	-.06
	Restlessness	-.02	-.12	-.22	-.10
	Thought	-.15	-.15	-.29	-.17

Notes: *1. Correlations greater than the absolute value of .202 are significant at p≤.01.*
2. Cattell's 16PF nomenclature is used rather than that of the 16PF-IPIP.

Source: 2019 Birkman Validity Study.

TABLE 5.2 Comparison of Cattell's 16PF (IPIP Version) Factors with the Birkman Component Scales *(continued)*

		Liveliness	Rule-Conscious-ness	Social Boldness	Sensitivity
USUAL BEHAVIOR	Social Energy	.66	.04	.85	.15
	Physical Energy	.22	.02	.39	.03
	Emotional Energy	-.06	-.20	-.25	-.05
	Self-Consciousness	-.33	.04	-.55	-.02
	Assertiveness	.25	-.27	.12	-.26
	Insistence	-.14	.42	-.08	-.04
	Incentives	.08	-.30	-.08	-.19
	Restlessness	-.06	-.11	-.06	-.12
	Thought	-.14	-.12	-.33	-.09
NEEDS	Social Energy	.02	-.13	.13	.11
	Physical Energy	.09	.09	.08	.01
	Emotional Energy	-.13	-.03	-.18	-.06
	Self-Consciousness	-.04	-.02	-.02	-.14
	Assertiveness	-.07	.10	-.12	-.16
	Insistence	.08	.10	.03	-.10
	Incentives	-.07	-.06	-.14	-.06
	Restlessness	-.13	.12	-.12	-.11
	Thought	-.08	.01	-.14	-.13

Notes: *1. Correlations greater than the absolute value of .202 are significant at p≤.01.*
2. Cattell's 16PF nomenclature is used rather than that of the 16PF-IPIP.

Source: 2019 Birkman Validity Study.

TABLE 5.2 Comparison of Cattell's 16PF (IPIP Version) Factors with the Birkman Component Scales *(continued)*

		Vigilance	Abstracted-ness	Privateness	Apprehension
USUAL BEHAVIOR	Social Energy	-.30	.15	-.60	-.28
	Physical Energy	-.36	-.04	-.15	-.45
	Emotional Energy	.44	.26	.08	.60
	Self-Consciousness	.29	.00	.24	.61
	Assertiveness	.12	.27	-.11	-.19
	Insistence	.18	-.31	.18	.10
	Incentives	.23	.27	-.01	.14
	Restlessness	.14	.16	.01	.30
	Thought	.39	.16	.09	.55
NEEDS	Social Energy	-.24	.07	-.06	-.14
	Physical Energy	-.28	-.11	-.01	-.15
	Emotional Energy	.50	.11	.10	.36
	Self-Consciousness	.21	.03	-.03	.18
	Assertiveness	.45	-.01	.11	.26
	Insistence	-.11	-.02	.06	-.07
	Incentives	.45	.10	.04	.19
	Restlessness	.22	.06	.05	.28
	Thought	.35	.06	.12	.27

Notes: *1. Correlations greater than the absolute value of .202 are significant at p≤.01.*
2. Cattell's 16PF nomenclature is used rather than that of the 16PF-IPIP.

Source: 2019 Birkman Validity Study.

TABLE 5.2 Comparison of Cattell's 16PF (IPIP Version) Factors with the Birkman Component Scales *(continued)*

		Openness to Change	Self-Reliance	Perfectionism	Tension
USUAL BEHAVIOR	Social Energy	.26	-.45	-.04	-.32
	Physical Energy	.18	-.24	.12	-.35
	Emotional Energy	-.14	.21	-.09	.54
	Self-Consciousness	-.28	.15	-.06	.30
	Assertiveness	.15	.00	.02	.28
	Insistence	-.18	.17	.49	-.07
	Incentives	-.02	.10	-.08	.33
	Restlessness	-.03	.03	.07	.34
	Thought	-.13	.21	-.14	.37
NEEDS	Social Energy	.10	-.13	-.01	-.14
	Physical Energy	.07	-.18	.07	-.30
	Emotional Energy	-.08	.27	-.01	.33
	Self-Consciousness	-.13	.07	-.06	.23
	Assertiveness	-.10	.16	.07	.25
	Insistence	-.07	-.13	.00	-.15
	Incentives	-.08	.24	.00	.29
	Restlessness	-.09	.19	.11	.16
	Thought	-.16	.26	.02	.21

Notes: *1. Correlations greater than the absolute value of .202 are significant at p≤.01.*
2. Cattell's 16PF nomenclature is used rather than that of the 16PF-IPIP.

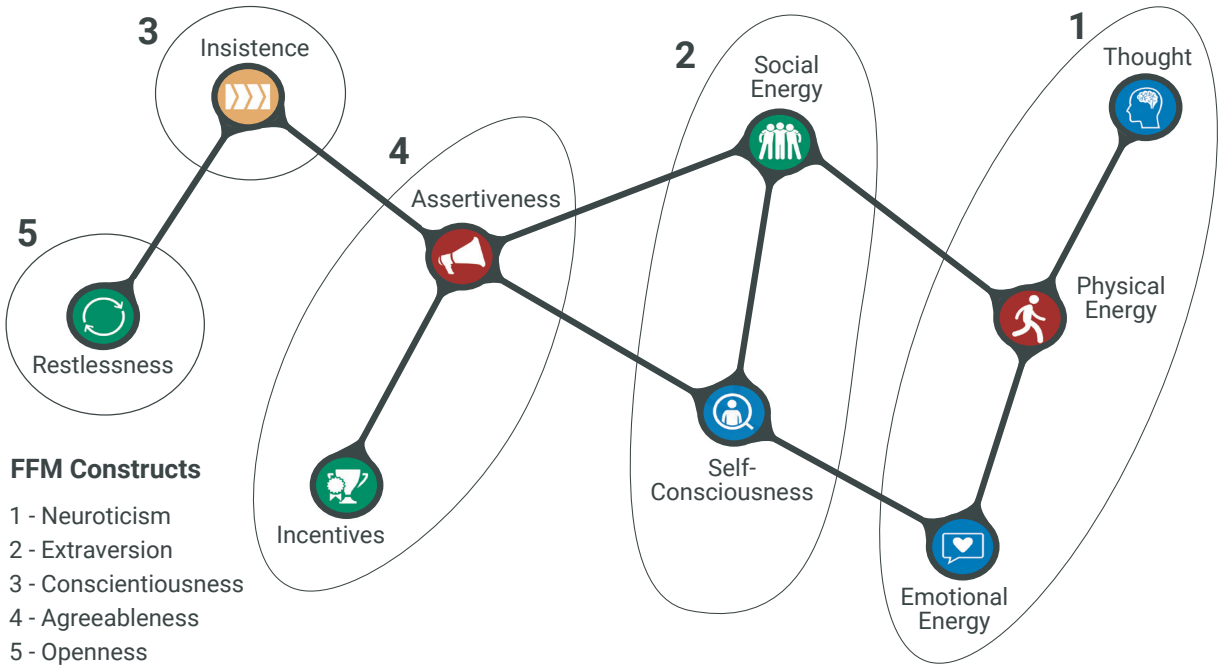
Source: 2019 Birkman Validity Study.

The Big Five (NEO-PI-3)

A total of 199 respondents took the NEO-PI-3 as part of the 2019 Birkman validity study. Of these, 153 remained after filtering for time to complete the assessment. Respondent mean age post-filtering was 39.3 (sd 11.4). Females comprised 64.1 percent of the valid sample. Asians comprised 3.9 percent, Black or African Americans 6.5 percent, Hispanic and Latinos 14.4 percent, and 4.6 percent comprised all other ethnicities. As for the other instruments used in the validity study, results were comparable with previous studies suggesting a robustness of validity despite skew in the current sample.

Like Cattell's 16PF, Birkman researchers have always used oblique rotation methods when evaluating the potential factor structure of The Birkman Method since we have agreed with Cattell that personality traits naturally share variance. Indeed, The Birkman Method was not constructed using factor analytic methods, and Roger Birkman chose to preserve the naturally occurring relationships within his set of Components. As such, The Method measures at the facet level rather than the trait level of personality measurement. Regardless, the higher order factor structure of the Birkman Components can be fit to the Big Five personality factors (Birkman et al., 2008). Figure 5.1 illustrates these relationships, which hold both for Usual Behavior and Needs.

FIGURE 5.1 The Relationship of the Birkman Molecule with the Five Factor Model



Source: Adapted from the 2008 Manual.

High Neuroticism is often considered a less desirable personality characteristic. Birkman distinguishes between the more productive Usual Behavior and less productive Stress Behavior for each of the nine Birkman Components. It is therefore not surprising that Neuroticism correlates with multiple Components (see Table 5.3). The Birkman triad of Emotional Energy, Physical Energy, and Thought that combine to provide a well-rounded view of approaches to emotional situations and issues within normal populations are positively related to Neuroticism. Regarding facets, NEO Depression (N3) is strongly related to Emotional Energy. The Self-Consciousness facet (N4) on the NEO drives the relationship between Birkman Self-Consciousness and Neuroticism. NEO Vulnerability (N6), a measure of reaction to stress, is positively related to Thought, which is concerned with ease of making decisions.

The strongest correlation with Social Energy Usual Behavior is the NEO factor of Extraversion, indicating converging evidence that both are measuring the degree to which someone is sociable, friendly, and outgoing. Social Energy also incorporates negative characteristics of being social. This is evident with the negative correlations between Neuroticism and Social Energy. These relationships better explain the less effective Social Energy Stress Behavior reactions to social situations that sometimes occur.

Openness traditionally has been the factor least captured by Birkman (Birkman et al, 2008). This is evident by the pattern of correlations. Openness is considered the weakest factor of the Five Factor Model (Eysenck, 1992) and is a broad construct of which the two scales may be accounting for variance from different construct space (Aluja, García, & García, 2003; Zuckerman, 1994). Social Energy is positively related and Insistence negatively related. On a facet level, Self-Consciousness Usual Behavior is negatively related to the Openness facet of Feelings (o4).

Agreeableness is negatively correlated with Emotional Energy, Assertiveness, and Incentives. Those individuals who are more emotionally expressive, forceful, and focused on personal gain are more likely to be lower on Agreeableness. The Compliance (a4) facet of Agreeableness, which deals with reactions to interpersonal conflict, is negatively related to Incentives such that those who are acquiescing and mild in the face of conflict are typically lower on Assertiveness. Those higher on Thought tend to be less trusting (Trust – a1), and those who are humbler and more self-effacing (Modesty – a5) tend to be more focused on individual rather than team rewards (Incentives).

Conscientiousness is positively related to Physical Energy and Insistence, and negatively related to Incentives and Thought. Those higher in Conscientiousness are more likely to have a higher energy level and be more detail-oriented and more likely to follow through. Higher Conscientious people are more likely to be focused on the team rather them themselves and do not let a desire to reflect impede their ability to make decisions quickly. On a facet level, Thought is positively

related to a tendency to think carefully before acting (Deliberation – c6). Incentives and Thought are negatively related to the Self-Discipline (c5) required to stay with tasks from beginning to completion. Thinking or worrying about making the right decision (Thought) is negatively related to the Conscientiousness facet of Competence, a sense people have about their own capability.

TABLE 5.3 Comparison of the NEO-PI-3 with the Birkman Component Scales

		Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness
USUAL BEHAVIOR	Social Energy	-.38	.75	.28	.10	.11
	Physical Energy	-.57	.44	.06	.09	.42
	Emotional Energy	.75	-.28	.04	-.36	-.41
	Self-Consciousness	.69	-.46	-.18	-.14	-.35
	Assertiveness	-.04	.09	.11	-.40	-.04
	Insistence	-.13	.02	-.20	.05	.52
	Incentives	.30	-.11	.06	-.43	-.38
	Restlessness	.49	-.08	-.13	-.20	-.22
	Thought	.71	-.36	-.10	-.21	-.49
NEEDS	Social Energy	-.24	.24	.22	.04	.05
	Physical Energy	-.28	.23	.04	.22	.15
	Emotional Energy	.47	-.24	-.02	-.34	-.15
	Self-Consciousness	.27	-.18	-.20	-.21	-.16
	Assertiveness	.28	-.11	-.08	-.28	-.03
	Insistence	-.14	.10	-.04	.09	.01
	Incentives	.36	-.15	-.02	-.39	-.17
	Restlessness	.30	-.16	-.15	-.13	-.13
	Thought	.36	-.17	-.15	-.27	-.14

Note: *Correlations greater than the absolute value of .207 are significant at p≤.01.*

Source: 2019 Birkman Validity Study.

TABLE 5.3 Comparison of the NEO-PI-3 with the Birkman Component Scales *(continued)*

		Neuroticism					
		Anxiety	Angry Hostility	Depression	Self-Consciousness	Impulsiveness	Vulnerability
USUAL BEHAVIOR	Social Energy	-.30	-.21	-.34	-.50	-.09	-.31
	Physical Energy	-.47	-.35	-.53	-.48	-.35	-.49
	Emotional Energy	.59	.54	.75	.57	.52	.58
	Self-Consciousness	.56	.33	.55	.75	.39	.63
	Assertiveness	-.15	.18	-.04	-.09	.21	-.19
	Insistence	.00	-.11	-.07	-.04	-.34	-.11
	Incentives	.13	.27	.24	.20	.35	.22
	Restlessness	.40	.42	.47	.34	.42	.37
	Thought	.57	.37	.68	.63	.42	.66
NEEDS	Social Energy	-.18	-.17	-.22	-.16	-.17	-.17
	Physical Energy	-.21	-.20	-.32	-.19	-.22	-.21
	Emotional Energy	.38	.32	.49	.36	.27	.39
	Self-Consciousness	.12	.25	.32	.21	.22	.23
	Assertiveness	.20	.24	.33	.16	.24	.20
	Insistence	-.12	-.13	-.14	-.05	-.15	-.08
	Incentives	.22	.37	.36	.17	.31	.24
	Restlessness	.26	.19	.29	.25	.20	.30
	Thought	.26	.27	.37	.29	.15	.34

Note: *Correlations greater than the absolute value of .207 are significant at p≤.01.*

Source: 2019 Birkman Validity Study.

TABLE 5.3 Comparison of the NEO-PI-3 with the Birkman Component Scales *(continued)*

		Extraversion					
		Warmth	Gregari-ousness	Assertive-ness	Activity	Excite-ment-Seeking	Positive Emotions
USUAL BEHAVIOR	Social Energy	.65	.65	.40	.40	.33	.63
	Physical Energy	.24	.23	.36	.43	.27	.29
	Emotional Energy	-.21	-.17	-.26	-.20	-.18	-.16
	Self-Consciousness	-.32	-.24	-.60	-.33	-.29	-.22
	Assertiveness	-.09	-.02	.31	.15	.26	-.11
	Insistence	-.01	-.05	.04	.05	-.01	-.02
	Incentives	-.16	-.11	-.09	-.11	.10	-.04
	Restlessness	-.12	-.04	-.07	.10	-.08	-.08
	Thought	-.23	-.15	-.43	-.36	-.23	-.19
NEEDS	Social Energy	.16	.22	.08	.06	.24	.20
	Physical Energy	.10	.22	.06	.10	.26	.15
	Emotional Energy	-.14	-.21	-.10	-.23	-.16	-.14
	Self-Consciousness	-.13	-.16	.01	-.06	-.16	-.19
	Assertiveness	-.12	-.10	.08	-.07	-.03	-.18
	Insistence	.02	.10	-.01	-.04	.26	.08
	Incentives	-.15	-.15	.01	-.09	-.09	-.11
	Restlessness	-.12	-.13	-.08	-.10	-.11	-.15
	Thought	-.13	-.14	-.10	-.14	-.19	-.11

Note: *Correlations greater than the absolute value of .207 are significant at p≤.01.*

Source: 2019 Birkman Validity Study.

TABLE 5.3 Comparison of the NEO-PI-3 with the Birkman Component Scales *(continued)*

		Openness					
		Fantasy	Aesthetics	Feelings	Action	Ideas	Values
USUAL BEHAVIOR	Social Energy	.21	.16	.21	.33	.22	.11
	Physical Energy	-.10	.07	-.19	.22	.18	.00
	Emotional Energy	.23	-.02	.32	-.25	-.09	.03
	Self-Consciousness	-.03	-.06	.13	-.46	-.28	-.14
	Assertiveness	.22	-.07	.10	-.01	.19	-.01
	Insistence	-.28	-.06	-.20	-.13	-.02	-.20
	Incentives	.20	-.08	.17	-.01	-.03	.11
	Restlessness	.03	-.13	.18	-.20	-.17	-.15
	Thought	.11	-.09	.19	-.27	-.19	-.09
NEEDS	Social Energy	.08	.15	-.01	.33	.18	.24
	Physical Energy	-.04	.11	-.13	.18	.09	-.02
	Emotional Energy	.12	-.08	.23	-.18	-.07	-.02
	Self-Consciousness	-.01	-.22	.06	-.21	-.19	-.24
	Assertiveness	.07	-.11	.09	-.18	-.04	-.18
	Insistence	-.11	.08	-.17	.03	.03	-.04
	Incentives	.20	-.10	.15	-.21	-.06	-.03
	Restlessness	.04	-.17	.06	-.21	-.15	-.18
	Thought	.05	-.17	.06	-.18	-.19	-.18

Note: *Correlations greater than the absolute value of .207 are significant at p≤.01.*

Source: 2019 Birkman Validity Study.

TABLE 5.3 Comparison of the NEO-PI-3 with the Birkman Component Scales *(continued)*

		Agreeableness					
		Trust	Straight-forward-ness	Altruism	Compli-ance	Modesty	Tender-Minded-ness
USUAL BEHAVIOR	Social Energy	.26	-.11	.40	.00	-.16	.05
	Physical Energy	.24	.03	.13	-.02	-.11	.03
	Emotional Energy	-.42	-.25	-.20	-.16	-.10	-.10
	Self-Consciousness	-.29	.04	-.27	.00	.01	.00
	Assertiveness	-.11	-.39	-.21	-.54	-.24	-.15
	Insistence	-.08	.17	-.01	.08	.16	-.15
	Incentives	-.18	-.45	-.19	-.23	-.33	-.17
	Restlessness	-.20	-.04	-.05	-.15	-.11	-.11
	Thought	-.38	-.10	-.17	-.03	.02	-.06
NEEDS	Social Energy	.21	-.13	.07	.02	-.11	.09
	Physical Energy	.29	.16	.01	.05	.06	.14
	Emotional Energy	-.46	-.26	-.08	-.09	-.08	-.15
	Self-Consciousness	-.31	-.15	-.10	-.08	-.01	-.01
	Assertiveness	-.33	-.15	-.10	-.20	-.04	-.16
	Insistence	.11	.06	-.03	.04	.09	.02
	Incentives	-.44	-.29	-.12	-.22	-.13	-.11
	Restlessness	-.23	-.01	-.06	-.01	-.08	.00
	Thought	-.36	-.15	-.08	-.10	-.04	-.18

Note: *Correlations greater than the absolute value of .207 are significant at p≤.01.*

Source: 2019 Birkman Validity Study.

TABLE 5.3 Comparison of the NEO-PI-3 with the Birkman Component Scales *(continued)*

		Conscientiousness					
		Compe-tence	Order	Dutiful-ness	Achieve-ment Striving	Self-Discipline	Delibera-tion
USUAL BEHAVIOR	Social Energy	.15	.01	.09	.22	.11	-.07
	Physical Energy	.38	.16	.31	.43	.47	.20
	Emotional Energy	-.40	-.16	-.26	-.30	-.43	-.33
	Self-Consciousness	-.45	-.20	-.20	-.35	-.35	-.09
	Assertiveness	.04	-.01	-.05	.13	-.08	-.15
	Insistence	.27	.31	.49	.35	.48	.50
	Incentives	-.23	-.14	-.36	-.22	-.40	-.32
	Restlessness	-.22	-.04	-.17	-.10	-.23	-.23
	Thought	-.51	-.24	-.36	-.42	-.56	-.24
NEEDS	Social Energy	.06	-.06	.05	.09	.07	.01
	Physical Energy	.10	-.05	.12	.22	.23	.08
	Emotional Energy	-.16	.02	-.10	-.09	-.25	-.09
	Self-Consciousness	-.16	-.03	-.13	-.12	-.17	-.08
	Assertiveness	-.08	.08	-.02	.05	-.12	-.04
	Insistence	-.04	-.16	.02	.10	.10	.00
	Incentives	-.17	.08	-.15	-.14	-.26	-.15
	Restlessness	-.21	-.09	-.04	-.05	-.20	-.02
	Thought	-.19	.00	-.08	-.11	-.24	-.01

Note: *Correlations greater than the absolute value of .207 are significant at p≤.01.*

Source: 2019 Birkman Validity Study.

O*NET's Interest Profiler Short Form

Convergent validity evidence for Birkman Interests was demonstrated using O*NET's Interest Profiler Short Form (Rounds, et al., 2010), based on John Holland's (1976) identified "types." The six types represent general interest areas that are widely used by many in the field of interest measurement. These areas are termed Realistic, Investigative, Artistic, Social, Enterprising, and Conventional.

For the Interests portion of the 2019 Birkman validity study, a total of 272 respondents participated, with 168 respondents remaining after filtering for time to complete the assessment. Respondent mean age post-filtering was 39.1 (sd 11.7), with 59.5 percentage female. The majority (75.0 percent) of the respondents were White, non-Hispanic, with Asians comprising 4.8 percent, Black or African Americans 4.2 percent, Hispanic and Latinos 11.9 percent, and 4.2 percent comprising all other ethnicities. Again, although the demographic are somewhat skewed towards White females, the comparability of previous results to current results indicate a robustness of validity.

The correlations between the Birkman Interests scales and the Interest Profiler constructs suggest that the Birkman Interests align with the types suggested by Holland. Correlations are shown in Table 5.4. Scientific, Technical, and Outdoor Interests are most strongly associated with the Realistic type. Numerical and Administrative represent the Conventional type. Holland's Artistic type is related strongly with Birkman's three more creatively focused Interests of Artistic, Musical, and Literary. Birkman Persuasive Interests is strongly correlated to Holland's Enterprising type. Birkman's Social Service Interest and Holland's Social type also are related.

TABLE 5.4 Comparison of the O*NET Interest Profiler with the Birkman Interests Scales

	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Administrative	-0.22	-0.25	-0.35	-0.06	0.08	0.49
Artistic	-0.16	0.04	0.64	0.00	-0.15	-0.21
Literary	-0.25	-0.02	0.64	0.00	-0.21	-0.19
Musical	-0.21	0.02	0.79	0.12	-0.05	-0.23
Numerical	0.08	0.16	-0.34	-0.13	0.07	0.54
Outdoor	0.40	0.11	-0.23	-0.23	-0.28	-0.30
Persuasive	-0.20	-0.20	0.07	0.16	0.53	-0.09
Scientific	0.29	0.56	-0.10	-0.09	-0.09	-0.02
Social Service	-0.30	-0.26	-0.09	0.63	0.27	-0.11
Technical	0.58	0.28	-0.31	-0.44	-0.28	-0.01

Note: *Correlation coefficients equal to or greater than the absolute value of .205 are significant at p≤.01.*

Source: 2019 Birkman validity study.

Chapter Summary

From its beginnings almost 70 years ago, The Birkman Method has had strong face validity. The use of the assessment has grown over the decades, providing strong, continuing evidence that people perceive The Birkman Method to be accurate and useful.

The 2019 validity study provided further evidence of the construct validity of The Birkman Method. This most recent study compared Birkman Components to the IPIP version of Cattell's 16PF and to the NEO-PI-3. Birkman Interests were compared to the Short Form of O*NET's Interest Profiler. Comparisons with other instruments are in prior versions of this manual.

Usual Behavior is more salient than Needs when examining convergent construct validity for the Birkman Components. Other personality instruments focus solely on the issues of self-description or self-perception. This is akin to Birkman's Usual Behavior. The Birkman Method goes beyond self-description. Needs are informed by our perceptions of others and do not have an equivalent on

other personality assessments. Thus, while Usual Behavior can be compared to other self-report personality instruments, comparing those instruments to Birkman Needs can be misleading and potentially incorrect.

Birkman Interests correlated as expected with Holland's taxonomy. The Interests clustered predictably into Holland's six types.

Chapter Six

Determination of Norms

Norms in psychological testing allow individuals to be compared to a group. Knowing the score an individual receives on an assessment is important but provides little information unless one also has a reference point. A student scoring 70 out of 100 on a test, for example, when the class as a whole scored 50 is very different from scoring a 70 when the class mean is 80. Birkman norms allow us to understand where one individual fits with respect to the rest of the population.

Development of National Normative Dataset

The first step in the psychometric procedure for distributional projection is to collect a large (i.e., n>1,500) sample on an operational anchor form of an instrument for which there are known parameter estimates for the population of interest. The number of individuals needed for a representative sample depends on the heterogeneity of the population, the amount of variance in the instrument, and the latent traits of interest.

A norming sample representative of the US workforce was drawn from working adults who had been administered The Birkman Method from 2008 through 2015. The final sample contained 9,056 working adults matched for age, gender, ethnicity,

IN THIS CHAPTER:

"The reality of life is that your perceptions – right or wrong – influence everything else you do. When you get a proper perspective of your perceptions, you may be surprised how many other things fall into place."

–Roger W. Birkman

and job family with that of the US Bureau of Labor Statistics (2019). Comparisons of these are provided in Tables 6.1 through 6.4. The average age of the individuals was 37.18 years old (sd 13.6), with 44.6 percent female, 56.4 percent male. By ethnicity, the data set was made up of 5.8 percent Asian/Pacific Islanders, 12.6 percent Blacks, 15.8 percent Hispanics, 3.3 percent Native Americans/Alaskan Natives and Other ethnicities, and 62.6 percent Whites of non-Hispanic origin.

TABLE 6.1 Percentile Comparisons of Birkman Normative Sample with the US Bureau of Labor Statistics Data for Age

	Birkman		BLS
	N	%	%
Under 25	1,159	12.80	12.95
25-34	2,157	23.82	22.69
35-44	1,939	21.41	20.74
45-54	1,906	21.05	20.55
55-64	1,476	16.30	16.88
65 or older	419	4.63	6.19
Total	9,056	100.00	100.00

Sources: 2019 Birkman normative sample; https://www.bls.gov/cps/cpsa2018.xlsx

TABLE 6.2 Percentile Comparisons of Birkman Normative Sample with the US Bureau of Labor Statistics Data for Gender

	Birkman		BLS
	N	%	%
Female	4,042	44.63	46.88
Male	5,014	55.37	53.12
Total	9,056	100.00	100.00

Sources: 2019 Birkman normative sample; https://www.bls.gov/cps/cpsa2018.xlsx

TABLE 6.3 Percentile Comparisons of Birkman Normative Sample with the US Bureau of Labor Statistics Data for Ethnicity

	Birkman		BLS
	N	%	%
Asian / Pacific Islander	524	5.79	6.25
African American / Black	1,137	12.56	12.59
Hispanic	1,434	15.84	17.48
Other ethnicity	296	3.27	3.52
White, Non-Hispanic	5,665	62.56	60.14
Total	9,056	100.00	100.00

Sources: 2019 Birkman normative sample; https://www.bls.gov/cps/cpsa2018.xlsx

TABLE 6.4 Percentile Comparisons of Birkman Normative Sample with the US Bureau of Labor Statistics Data for Job Family

	Birkman		BLS
	N	%	%
Architecture and engineering occupations	207	2.29	2.10
Arts, design, entertainment, sports, and media occupations	212	2.34	2.16
Building and grounds cleaning and maintenance occupations	244	2.69	3.76
Business and financial operations occupations	485	5.36	4.87
Community and social service occupations	168	1.86	1.72
Computer and mathematical occupations	328	3.62	3.29
Construction and extraction occupations	316	3.49	5.35
Education, training, and library occupations	593	6.55	5.98
Farming, fishing, and forestry occupations	51	0.56	0.72

TABLE 6.4 Percentile comparisons of Birkman Normative Sample with the US Bureau of Labor Statistics Data for Job Family *(continued)*

	Birkman		BLS
	N	%	%
Food preparation and serving related occupations	396	4.37	5.28
Healthcare practitioners and technical occupations	592	6.54	6.05
Healthcare support occupations	214	2.36	2.33
Installation, maintenance, and repair occupations	256	2.83	3.22
Legal occupations	115	1.27	1.21
Life, physical, and social science occupations	93	1.03	0.98
Management occupations	1,163	12.84	11.73
Office and administrative support occupations	1,099	12.14	11.34
Personal care and service occupations	325	3.59	3.82
Production occupations	517	5.71	5.53
Protective service occupations	182	2.01	2.06
Sales and related occupations	998	11.02	10.15
Transportation and material moving occupations	502	5.54	6.37
Total	9,056	100.00	100.00

Sources: 2019 Birkman normative sample; https://www.bls.gov/cps/cpsa2018.xlsx

Drawing a representative sample for a single demographic variable, such as gender, is relatively simple. However, matching across gender, age, ethnicity, and most especially across job families, with its almost two dozen options, is challenging. The Birkman normative sample fits the Bureau of Labor Statistics population data well, particularly considering the Birkman sample is aligned across four demographics.

Birkman Scale Norms

Table 6.5 presents the descriptive statistics for the Birkman Components. Needs demonstrate fairly normal curves with means closer to the midpoint of 50, representing the wide range of

personality values seen within an entire population (especially when measured through "perceptions of others"). The distributions for Usual Behavior, in contrast, tend to be skewed in the direction that society deems to be more socially desirable. Such results are expected. For instance, society believes that it is generally preferable to be social in nature. Attributing socially desirable characteristics to themselves, individuals thus tend to see themselves as being more social (higher Social Energy Usual Behavior) than they see others.

Social Energy, Physical Energy, and Insistence are all deemed to be socially desirable characteristics, as reflected by their mean Usual Behavior being higher than the mean of their Needs. For the remaining six Components, lower scores are considered to be more socially desirable. The Components vary with respect to the degree to which they are affected by social desirability.

Over time, norms drift due to shifts in societal mores. In response, norms for psychological assessments and other standardized tests are correspondingly updated periodically. See Table 6.5. Birkman norms are scheduled to be updated in 2020, which will bring the norms for Needs closer to 50, with corresponding adjustments in Usual Behavior norms.

TABLE 6.5 Norms for Birkman Components

	Usual Behavior		Needs	
	Mean	**SD**	**Mean**	**SD**
Social Energy	72.74	27.24	52.30	28.73
Physical Energy	75.49	23.30	52.09	28.67
Emotional Energy	34.57	27.90	51.37	29.26
Self-Consciousness	25.84	25.97	50.08	28.76
Assertiveness	42.98	28.52	51.97	26.49
Insistence	72.93	22.19	51.28	28.51
Incentives	16.03	14.57	50.68	28.20
Restlessness	44.27	25.64	50.79	24.83
Thought	29.34	26.02	50.26	29.87

Source: 2019 Birkman normative sample (N=9,056).

For Birkman Interests (see Table 6.6), norms are centered around 50. Again, there has been some drift over the past decade which will be adjusted in 2020 when new norms are implemented. In general, more people indicate an interest in Scientific occupations, with the fewest people indicating an interest in Outdoor occupations. This could be due in part to the underlying Birkman database which contains a large number of respondents in STEM-related fields.

TABLE 6.6 Norms for Birkman Interests

	Mean	SD
Administrative	54.46	27.37
Artistic	50.93	29.46
Literary	49.61	29.34
Musical	54.77	28.51
Numerical	52.95	26.09
Outdoor	47.03	29.16
Persuasive	50.50	28.00
Scientific	59.62	27.99
Social Service	53.75	28.66
Technical	55.40	27.18

Source: 2019 Birkman normative sample (N=9,056).

Together, six Perspectives comprise the Birkman Mindset. The descriptive statistics for the Perspectives are furnished in Table 6.7. The means of all except Self-Affirming hover around the 50 mark. The mean score for Self-Affirming is higher because it is both a reflection of the human inclination to view themselves more favorably than they view others and a result of social desirability, which affects people's need to be viewed in a culturally appropriate manner (Crowne & Marlow, 1960).

TABLE 6.7 Norms for Birkman Mindset

	Mean	SD
Self-Affirming	79.25	19.78
Others-Affirming	49.05	28.75
Image Management	50.43	28.78
Distinctiveness	50.59	29.01
Alignment	49.93	31.19
Social Acuity	49.39	27.32

Source: 2019 Birkman normative sample (N=9,056).

Current Norms for Birkman Scales

Age

For ease of interpretation, age has been condensed into six groups (see Tables 6.8 and 6.9). A pattern of relationships across multiple Components shows the youngest and oldest of respondents as most disparate, with the others falling somewhere in between. Regarding Usual Behavior, it generally appears that as people age, they become more selectively social, prefer to stay busy, are more practical and more candid, yet more easy-going and less competitive, are less distracted, and quicker to make decisions. Usual Behavior for Insistence did not differ significantly by age.

Self-Consciousness Need stayed relatively stable across age categories. While Usual Behavior for Insistence did not vary by age, the Need for Insistence did. Younger respondents generally expected organizations and systems to change rapidly and are more comfortable with adapting to new situations. With the two noted exceptions, the other Needs by age followed the patterns seen for Usual Behavior.

A study with pre-college aged students conducted by Mefferd in the 1970s indicated similar but definite deviations from the "adult" norms. The disparity with older adults is confounded in part by the tendency to sample higher levels of "influence" or "authority" in organizations. Older adults are more likely to be in positions of leadership.

Regarding Birkman Interests, Artistic and Musical appeared to be the most stable across age. Older respondents also tend to be less interested in Administrative, Persuasive, and Scientific. Scores in Literary and Outdoors Interests are more likely to be higher for older respondents.

Regarding Birkman Mindset, older respondents are less likely to view themselves as having a unique viewpoint and more likely to see themselves as others do. They tend to put less effort into Image Management and be better at reading social situations. The older respondents view themselves more favorably than younger respondents view themselves and, at the same time, they expect more from others than the younger respondents do.

TABLE 6.8 Comparison of Scale Descriptives by Age for Usual Behavior and Needs

		Ages 24 and Under		Ages 25 - 34		Ages 35 - 44	
		N=1,159		N=2,157		N=1,939	
		Mean	SD	Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	76.28	26.33	75.46	26.83	72.22	27.78
	Physical Energy	73.07	23.21	74.37	24.46	75.24	23.66
	Emotional Energy	46.02	28.64	38.50	28.87	33.53	27.63
	Self-Consciousness	29.18	26.95	26.90	26.66	25.10	26.12
	Assertiveness	49.69	28.73	46.82	28.89	43.65	28.28
	Insistence	73.74	22.52	73.43	22.56	72.33	22.13
	Incentives	23.23	18.95	17.92	15.06	15.09	13.76
	Restlessness	54.21	23.49	48.94	25.10	44.47	25.57
	Thought	37.23	28.01	32.72	27.74	28.53	25.26
NEEDS	Social Energy	54.14	28.13	52.94	29.10	51.92	28.92
	Physical Energy	47.77	27.51	48.79	29.33	52.12	29.21
	Emotional Energy	65.81	25.48	56.71	28.45	49.27	29.35
	Self-Consciousness	51.59	27.56	50.24	29.00	48.35	28.53
	Assertiveness	61.82	24.89	55.84	25.63	51.04	26.05
	Insistence	47.02	28.74	47.73	28.80	51.05	28.73
	Incentives	60.52	25.70	55.60	27.36	49.11	28.27
	Restlessness	62.28	22.63	55.81	24.02	48.79	24.57
	Thought	61.35	28.22	55.09	29.63	48.84	30.06

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.8 Comparison of Scale Descriptives by Age for Usual Behavior and Needs *(continued)*

		Ages 45 - 54		Ages 55 - 64		Ages 65 and Older	
		N=1,906		N=1,476		N=419	
		Mean	SD	Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	71.08	26.96	70.08	27.50	68.27	27.42
	Physical Energy	76.21	23.09	77.84	21.88	77.54	20.47
	Emotional Energy	30.41	26.47	28.61	25.23	27.33	24.68
	Self-Consciousness	24.95	25.52	24.19	24.80	24.47	24.00
	Assertiveness	39.78	27.82	36.94	27.00	37.34	28.43
	Insistence	72.53	21.96	73.36	21.49	71.19	23.12
	Incentives	13.44	12.26	13.15	11.81	12.63	11.77
	Restlessness	40.63	25.43	36.06	24.68	37.27	24.36
	Thought	26.24	24.52	24.50	23.28	24.99	23.06
NEEDS	Social Energy	51.43	28.79	52.08	28.60	50.40	27.66
	Physical Energy	53.92	28.50	56.88	27.28	55.59	27.85
	Emotional Energy	46.08	28.92	43.92	28.16	43.92	29.05
	Self-Consciousness	50.61	29.09	50.24	29.01	50.07	29.26
	Assertiveness	48.24	26.58	46.41	26.40	45.66	26.48
	Insistence	53.36	27.89	56.13	27.42	55.82	27.94
	Incentives	46.34	28.25	45.20	28.18	44.39	27.56
	Restlessness	46.63	24.31	44.11	24.37	44.96	24.32
	Thought	45.76	29.28	43.75	28.74	44.70	28.99

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.9 Comparison of Scale Descriptives by Age for Interests and Mindset

		Ages 24 and Under		Ages 25 - 34		Ages 35 - 44	
		N=1,159		N=2,157		N=1,939	
		Mean	SD	Mean	SD	Mean	SD
INTERESTS	Administrative	59.76	24.97	54.72	26.68	54.35	27.65
	Artistic	48.78	28.92	52.12	29.56	50.75	29.25
	Literary	44.16	28.36	48.68	29.54	49.20	29.16
	Musical	55.23	28.36	55.47	28.65	53.36	28.27
	Numerical	55.88	23.85	53.04	25.10	52.62	26.07
	Outdoor	42.03	28.94	45.41	29.27	46.84	29.43
	Persuasive	54.90	27.36	51.68	27.68	51.22	28.25
	Scientific	60.75	27.93	61.25	27.37	60.16	28.06
	Social Service	53.90	27.84	54.23	28.00	54.00	28.61
	Technical	53.67	27.91	54.79	27.29	55.19	26.68
MINDSET	Self-Affirming	73.01	23.10	77.43	21.04	79.45	19.51
	Others-Affirming	38.92	27.11	44.64	28.78	50.40	28.94
	Image Management	54.99	28.71	53.40	28.99	48.91	28.78
	Distinctiveness	54.70	28.18	54.02	29.33	50.15	29.36
	Alignment	39.78	31.62	46.61	31.65	50.16	30.82
	Social Acuity	41.01	27.07	46.61	27.11	50.82	27.34

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.9 Comparison of Scale Descriptives by Age for Interests and Mindset *(continued)*

		Ages 45 - 54		Ages 55 - 64		Ages 65 and Older	
		N=1,906		N=1,476		N=419	
		Mean	SD	Mean	SD	Mean	SD
INTERESTS	Administrative	53.03	27.68	52.33	28.52	52.93	28.62
	Artistic	50.54	29.51	51.97	29.75	49.77	29.94
	Literary	49.97	29.17	53.78	29.79	55.11	28.13
	Musical	54.06	28.38	56.15	28.68	54.84	29.06
	Numerical	51.83	26.81	52.10	27.54	53.92	27.91
	Outdoor	49.74	29.03	49.83	28.47	47.89	28.54
	Persuasive	49.04	27.96	46.61	27.91	49.33	28.64
	Scientific	59.88	27.85	57.11	28.04	53.27	30.07
	Social Service	53.00	29.25	53.28	29.23	54.66	29.87
	Technical	56.63	27.07	56.54	26.79	54.75	28.41
MINDSET	Self-Affirming	81.31	18.07	82.86	17.32	82.91	14.19
	Others-Affirming	52.84	28.34	55.18	27.72	54.77	26.89
	Image Management	48.64	28.49	47.62	28.50	47.64	27.36
	Distinctiveness	48.90	28.72	46.73	28.56	45.00	27.46
	Alignment	53.80	30.29	56.25	30.10	54.16	28.00
	Social Acuity	52.47	27.51	53.10	26.07	53.18	26.08

Sources: 2019 Birkman normative sample (N=9,056)

Gender

Some differences between males and females across The Birkman Method® are apparent, with the largest differences being seen in Birkman Interests (see Tables 6.10 and 6.11). Regarding the Components, females are less likely to see themselves as assertive. The pattern of lower Assertiveness for females holds across both Usual Behavior and Needs. However, the difference between females and males is less for Needs, suggesting that assertive Usual Behavior for females could be at least partially a result of societal expectations. Females are higher in Thought for Usual Behavior as well, although that difference disappears when comparing Thought Need for males and females.

In general, the observed differences in Usual Behavior (though small themselves) essentially disappear when looking at Needs. Needs are less sensitive to societal pressures and issues of social desirability, resulting in a gap between Usual Behavior and Needs. The lack of social desirability in Needs is indicative of the power of the Needs construct.

Birkman Interests tend to diverge based on gender. Males are more likely to score higher on Interests in Outdoor, Technical, Scientific, and Persuasive. Strongest Interests for females tend to be Administrative, Artistic, and Literary. Males report interest in STEM-related occupations, while females lean towards helping and creative occupations. Whether self-reported gender preferences are a reflection of true differences between genders or is a result of expectations placed on each gender is both unclear and untested.

Birkman Mindset remained fairly consistent across gender both in terms of the mean and the standard deviation.

TABLE 6.10 Comparison of Scale Descriptives by Gender for Usual Behavior and Needs

		Female		Male	
		N=4,042		N=5,014	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	74.11	26.35	71.63	27.90
	Physical Energy	72.61	24.10	77.81	22.37
	Emotional Energy	36.25	27.97	33.21	27.78
	Self-Consciousness	29.42	26.94	22.96	24.79
	Assertiveness	37.35	28.04	47.52	28.09
	Insistence	71.97	22.53	73.70	21.89
	Incentives	14.67	13.21	17.12	15.49
	Restlessness	44.97	25.71	43.70	25.57
	Thought	31.92	26.88	27.25	25.12
NEEDS	Social Energy	54.14	28.77	50.82	28.62
	Physical Energy	52.38	28.14	51.85	29.09
	Emotional Energy	50.80	29.01	51.83	29.45
	Self-Consciousness	48.91	28.22	51.02	29.16
	Assertiveness	48.65	27.14	54.65	25.64
	Insistence	50.38	28.51	52.00	28.50
	Incentives	50.07	27.81	51.17	28.51
	Restlessness	50.89	25.25	50.71	24.50
	Thought	50.39	29.81	50.15	29.92

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.11 Comparison of Scale Descriptives by Gender for Interests and Mindset

		Female		Male	
		N=4,042		N=5,014	
		Mean	SD	Mean	SD
INTERESTS	Administrative	61.39	26.51	48.87	26.77
	Artistic	62.42	28.45	41.67	26.89
	Literary	55.79	28.45	44.64	29.11
	Musical	57.96	28.65	52.21	28.14
	Numerical	52.46	26.61	53.34	25.65
	Outdoor	38.21	27.45	54.14	28.55
	Persuasive	44.77	26.88	55.13	28.03
	Scientific	57.10	28.49	61.66	27.42
	Social Service	56.92	27.75	51.19	29.13
	Technical	41.97	24.73	66.23	24.05
MINDSET	Self-Affirming	79.09	19.41	79.38	20.08
	Others-Affirming	50.31	28.38	48.04	29.01
	Image Management	48.92	28.21	51.65	29.17
	Distinctiveness	49.16	28.38	51.75	29.46
	Alignment	49.42	30.81	50.34	31.49
	Social Acuity	50.38	27.26	48.59	27.34

Sources: 2019 Birkman normative sample (N=9,056)

Ethnicity

Figures 6.12 and 6.13 detail Components, Interests, and Mindset differences by ethnicity. Self-Consciousness Usual Behavior is highest for Asian/Pacific Islanders and much lower for Black/African American. That difference disappears for Self-Consciousness Needs.

Regarding Birkman Interests, Black/African Americans have the lowest interest in Outdoor and highest in Social Service. The Black/African American sample does not appear to have been skewed by gender, as 55.1 percent of are male. Asians/Pacific Islanders are highest in Numerical, with Non-Hispanic Whites being the lowest in that category. In general, the small differences seen are much smaller or disappear when looking at Needs except for Assertiveness and Insistence.

Black/African Americans and Hispanics tended to be more Self-Affirming regarding Mindset. This pattern holds for Black/African Americans for Image Management. Social Acuity, in contrast, was highest for Whites. Asians/Pacific Islanders scored lower in Alignment than other ethnicities.

TABLE 6.12 Comparison of Scale Descriptives by Ethnicity for Usual Behavior and Needs

		Asian/ Pacific Islander		Black/ African American		Hispanic	
		N=524		N=1,137		N=1,434	
		Mean	SD	Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	67.64	27.31	74.80	24.57	74.70	25.96
	Physical Energy	75.79	23.42	81.17	20.04	80.06	21.22
	Emotional Energy	36.36	28.41	29.96	26.07	31.65	27.30
	Self-Consciousness	32.86	28.09	19.59	22.07	21.52	23.93
	Assertiveness	47.25	28.74	43.68	28.40	42.56	27.98
	Insistence	75.38	20.65	76.09	20.76	77.56	19.96
	Incentives	20.60	17.83	17.42	14.35	15.73	14.88
	Restlessness	42.76	25.58	35.96	24.76	42.80	24.19
	Thought	32.38	27.11	26.18	23.99	26.56	24.87
NEEDS	Social Energy	55.01	28.73	51.11	28.03	55.21	28.82
	Physical Energy	53.22	29.23	59.04	27.70	56.31	28.67
	Emotional Energy	52.06	30.24	53.25	29.83	50.18	30.78
	Self-Consciousness	48.11	28.63	47.28	29.56	45.81	29.00
	Assertiveness	56.01	26.76	57.84	26.74	53.08	27.08
	Insistence	56.12	29.37	57.51	27.77	56.70	27.99
	Incentives	53.52	28.02	53.06	28.89	49.51	28.61
	Restlessness	51.95	25.67	51.87	25.89	51.59	24.56
	Thought	52.72	29.94	50.86	30.74	49.50	29.74

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.12 Comparison of Scale Descriptives by Ethnicity for Usual Behavior and Needs *(continued)*

		Native American/Other		White, Not Hispanic	
		N=296		N=5,665	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	72.72	27.07	72.30	27.99
	Physical Energy	77.03	22.06	73.08	24.08
	Emotional Energy	36.86	29.07	35.95	28.15
	Self-Consciousness	23.63	25.20	27.66	26.63
	Assertiveness	46.28	29.14	42.38	28.59
	Insistence	71.94	23.25	70.95	22.82
	Incentives	18.35	16.98	15.28	13.94
	Restlessness	46.28	26.09	46.34	25.78
	Thought	30.81	26.70	30.32	26.45
NEEDS	Social Energy	52.36	28.92	51.55	28.79
	Physical Energy	52.29	28.85	49.51	28.44
	Emotional Energy	52.39	30.77	51.18	28.56
	Self-Consciousness	45.70	29.02	52.13	28.34
	Assertiveness	54.13	26.74	50.03	26.01
	Insistence	49.24	28.67	48.32	28.25
	Incentives	52.10	28.35	50.16	27.93
	Restlessness	49.47	25.16	50.33	24.58
	Thought	52.39	30.51	49.99	29.68

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.13 Comparison of Scale Descriptives by Gender for Interests and Mindset

		Asian/ Pacific Islander		Black/ African American		Hispanic	
		N=524		N=1,137		N=1,434	
		Mean	SD	Mean	SD	Mean	SD
INTERESTS	Administrative	57.23	27.23	62.03	26.34	57.15	26.62
	Artistic	55.21	29.94	43.78	28.41	50.80	28.77
	Literary	45.81	28.37	46.48	27.85	48.18	28.79
	Musical	56.93	28.95	55.18	28.01	55.64	28.86
	Numerical	61.50	24.38	59.63	24.84	55.47	24.73
	Outdoor	39.91	25.95	29.99	25.35	41.10	27.34
	Persuasive	48.37	27.55	59.74	25.88	51.50	26.92
	Scientific	61.76	27.50	56.00	28.45	60.90	27.89
	Social Service	50.74	26.60	62.62	26.75	53.76	27.69
	Technical	55.98	25.21	50.44	26.39	55.98	26.83
MINDSET	Self-Affirming	74.51	21.77	81.54	17.68	81.42	19.03
	Others-Affirming	47.32	28.38	47.37	29.52	50.39	29.23
	Image Management	46.92	29.26	54.09	29.70	50.93	29.30
	Distinctiveness	49.53	29.05	53.02	31.00	50.79	30.56
	Alignment	41.79	30.95	52.45	29.77	53.40	31.34
	Social Acuity	40.37	27.53	39.31	26.08	42.38	27.10

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.13 Comparison of Scale Descriptives by Gender for Interests and Mindset *(continued)*

		Native American/Other		White, Not Hispanic	
		N=296		N=5,665	
		Mean	SD	Mean	SD
INTERESTS	Administrative	53.07	27.6	52.07	27.41
	Artistic	54.14	28.9	51.84	29.61
	Literary	51.8	28.67	50.84	29.81
	Musical	57.09	28.76	54.15	28.45
	Numerical	52.61	25	50.19	26.4
	Outdoor	47.85	27.7	52.57	28.92
	Persuasive	51.71	27.72	48.53	28.35
	Scientific	59.15	27.48	59.85	27.94
	Social Service	51.69	28.07	52.35	29.17
	Technical	55.27	26.09	56.2	27.55
MINDSET	Self-Affirming	77.34	21.49	78.78	19.97
	Others-Affirming	48.24	29.13	49.26	28.47
	Image Management	49.74	28.65	49.93	28.35
	Distinctiveness	53.12	28.55	50.02	28.18
	Alignment	47.55	31.34	49.42	31.28
	Social Acuity	43.49	26.04	54.33	26.44

Sources: 2019 Birkman normative sample (N=9,056)

Job Families

Table 6.14 provides means and standard deviations by Component for each job family. Table 6.15 provides the same for Interests and Mindset. For Usual Behavior, Social Energy was highest for those in sales positions and lowest for those requiring less interaction, such as computer occupations and scientists. Most notable for Needs is the Component Insistence. Insistence is an indication of how one approaches details, routine, and follow-through. Insistence was lowest for legal professions and highest for healthcare and production.

As expected, the greatest differences between job families occurs for Birkman Interests. Scientific Interest, for example, was higher for those in architecture and engineering occupations and lower for those in community and social service occupations.

Birkman Mindset showed some variation across job families. Interestingly, Image Management was not notably higher for some job families such as legal occupations and sales occupations as might be expected. However, perhaps this pattern might be expected since Image Management is related to the size of the gap between Self-Affirming and Others-Affirming.

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs

		Architecture and engineering occupations		Arts, design, entertainment, sports, and media occupations	
		N=207		N=212	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	69.91	26.89	71.30	27.67
	Physical Energy	75.27	22.46	74.82	22.88
	Emotional Energy	33.77	27.11	38.29	26.38
	Self-Consciousness	29.58	27.01	29.05	26.87
	Assertiveness	45.41	27.49	43.15	28.35
	Insistence	73.06	20.90	63.24	25.23
	Incentives	15.71	14.03	18.01	16.27
	Restlessness	41.29	25.01	45.52	26.36
	Thought	29.45	25.12	32.71	27.49
NEEDS	Social Energy	50.96	27.88	49.44	28.45
	Physical Energy	52.34	27.33	47.04	27.95
	Emotional Energy	49.84	28.88	55.44	27.57
	Self-Consciousness	47.18	27.22	54.16	28.44
	Assertiveness	55.29	24.07	50.44	27.20
	Insistence	48.27	27.64	44.98	27.23
	Incentives	50.84	26.85	51.40	28.20
	Restlessness	48.00	25.06	51.05	25.82
	Thought	51.10	29.97	53.00	30.11

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs *(continued)*

		Building and grounds cleaning and maintenance occupations		Business and financial operations occupations	
		N=244		N=485	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	70.36	27.13	71.62	27.27
	Physical Energy	76.63	24.35	74.08	24.32
	Emotional Energy	34.27	29.69	33.13	27.37
	Self-Consciousness	22.57	24.61	26.45	25.02
	Assertiveness	40.32	29.92	45.87	27.59
	Insistence	78.04	19.80	72.08	21.46
	Incentives	15.69	13.81	16.57	15.22
	Restlessness	42.34	27.35	45.60	24.24
	Thought	29.91	27.09	28.33	26.09
NEEDS	Social Energy	54.21	30.30	50.52	28.19
	Physical Energy	56.24	30.69	50.68	28.46
	Emotional Energy	52.28	31.73	49.40	28.89
	Self-Consciousness	46.75	30.67	52.35	28.23
	Assertiveness	54.20	27.11	50.85	26.69
	Insistence	57.20	30.74	50.52	27.30
	Incentives	48.56	30.48	50.50	27.75
	Restlessness	48.76	25.32	50.69	24.07
	Thought	47.77	31.61	48.83	28.71

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs *(continued)*

		Community and social service occupations		Computer and mathematical occupations	
		N=168		N=328	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	71.79	26.69	64.29	29.56
	Physical Energy	70.91	24.22	70.58	24.35
	Emotional Energy	35.11	26.03	37.60	29.51
	Self-Consciousness	25.93	24.79	33.84	28.37
	Assertiveness	38.52	28.03	41.57	29.06
	Insistence	64.46	26.03	69.19	23.42
	Incentives	14.64	13.56	17.15	14.82
	Restlessness	46.09	26.23	42.66	26.26
	Thought	33.30	26.29	34.09	26.40
NEEDS	Social Energy	43.87	28.05	51.85	28.54
	Physical Energy	43.71	28.82	50.83	27.61
	Emotional Energy	60.04	27.00	50.35	28.13
	Self-Consciousness	56.32	30.11	50.03	28.09
	Assertiveness	54.64	25.16	51.13	25.53
	Insistence	41.75	28.66	47.98	27.55
	Incentives	56.01	27.78	51.62	27.36
	Restlessness	55.40	26.42	48.45	25.06
	Thought	57.36	30.72	48.90	27.99

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs *(continued)*

		Construction and extraction occupations		Education, training, and library occupations	
		N=316		N=593	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	74.74	26.40	72.85	27.35
	Physical Energy	80.17	21.14	74.43	22.91
	Emotional Energy	30.52	27.72	36.10	27.97
	Self-Consciousness	20.56	23.62	26.75	27.14
	Assertiveness	46.42	28.37	39.34	28.62
	Insistence	79.78	18.45	69.24	23.94
	Incentives	14.91	14.97	16.34	14.76
	Restlessness	43.98	24.46	43.87	26.82
	Thought	22.91	23.35	31.96	26.93
NEEDS	Social Energy	52.89	29.64	49.29	29.14
	Physical Energy	55.89	29.30	48.05	27.88
	Emotional Energy	48.69	29.38	54.40	28.84
	Self-Consciousness	45.93	29.38	52.79	28.55
	Assertiveness	52.93	26.13	51.30	26.47
	Insistence	56.61	29.19	45.61	28.75
	Incentives	49.55	29.83	52.93	27.65
	Restlessness	49.55	24.06	52.24	25.67
	Thought	47.05	30.54	53.44	29.27

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs *(continued)*

		Farming, fishing, and forestry occupations		Food preparation and serving related occupations	
		N=51		N=396	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	70.57	30.96	76.63	24.87
	Physical Energy	71.86	28.48	75.88	23.83
	Emotional Energy	45.06	30.73	38.85	29.54
	Self-Consciousness	31.43	30.80	24.37	25.94
	Assertiveness	43.33	28.14	45.30	28.14
	Insistence	68.20	25.73	75.68	21.39
	Incentives	15.78	13.93	17.28	15.47
	Restlessness	52.14	23.28	46.39	25.52
	Thought	37.29	29.98	31.22	28.14
NEEDS	Social Energy	54.35	30.90	54.68	29.43
	Physical Energy	48.47	31.62	51.55	29.55
	Emotional Energy	59.90	25.93	55.73	29.96
	Self-Consciousness	53.73	29.22	49.14	29.86
	Assertiveness	55.10	26.56	56.23	26.41
	Insistence	48.14	29.33	51.63	29.68
	Incentives	57.25	25.29	54.38	29.25
	Restlessness	52.96	21.46	54.95	25.05
	Thought	53.18	32.29	52.34	31.16

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs *(continued)*

		Healthcare practitioners and technical occupations		Healthcare support occupations	
		N=592		N=214	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	71.30	28.16	73.26	25.88
	Physical Energy	76.02	22.31	75.97	22.25
	Emotional Energy	35.22	27.20	37.48	29.23
	Self-Consciousness	28.22	26.39	27.95	27.82
	Assertiveness	43.04	28.79	38.78	28.64
	Insistence	72.83	21.85	77.57	19.83
	Incentives	15.27	14.26	17.42	15.46
	Restlessness	42.46	26.08	42.81	26.07
	Thought	29.90	25.81	31.64	26.71
NEEDS	Social Energy	49.35	27.92	55.34	27.08
	Physical Energy	46.70	29.23	54.09	29.80
	Emotional Energy	53.45	28.93	53.00	30.24
	Self-Consciousness	53.75	28.03	48.14	30.82
	Assertiveness	52.21	27.33	52.67	27.10
	Insistence	46.95	28.51	59.45	27.86
	Incentives	52.02	28.82	50.05	28.90
	Restlessness	49.46	25.37	51.28	25.89
	Thought	52.79	30.02	51.34	30.66

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs *(continued)*

		Installation, maintenance, and repair occupations		Legal occupations	
		N=256		N=115	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	71.87	28.01	65.60	29.46
	Physical Energy	75.75	23.12	65.92	26.39
	Emotional Energy	33.06	26.87	43.22	29.51
	Self-Consciousness	27.14	28.16	31.44	27.22
	Assertiveness	42.61	28.57	48.99	31.64
	Insistence	77.28	18.82	67.24	24.96
	Incentives	15.69	13.76	19.70	16.66
	Restlessness	41.27	25.33	47.08	26.86
	Thought	28.54	25.68	35.31	28.87
NEEDS	Social Energy	56.11	28.33	45.04	26.63
	Physical Energy	57.32	27.16	41.03	27.10
	Emotional Energy	50.13	29.38	58.35	24.98
	Self-Consciousness	47.96	29.77	53.77	26.40
	Assertiveness	54.31	26.65	47.73	25.89
	Insistence	57.09	26.60	37.62	25.25
	Incentives	51.22	28.40	56.43	24.56
	Restlessness	50.16	25.11	51.71	22.49
	Thought	49.23	30.76	58.42	26.60

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs *(continued)*

		Life, physical, and social science occupations		Management occupations	
		N=93		N=1,163	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	63.26	30.59	75.44	25.84
	Physical Energy	69.70	25.89	78.72	21.23
	Emotional Energy	38.24	26.28	29.77	25.23
	Self-Consciousness	34.94	28.25	22.66	23.68
	Assertiveness	43.76	26.35	44.70	27.66
	Insistence	69.46	24.45	68.39	23.33
	Incentives	19.98	16.22	15.00	14.14
	Restlessness	43.87	22.87	46.24	25.55
	Thought	29.97	23.82	25.82	23.38
NEEDS	Social Energy	49.66	26.45	52.93	27.59
	Physical Energy	42.40	26.00	53.35	27.91
	Emotional Energy	55.70	25.28	47.15	28.14
	Self-Consciousness	52.78	24.72	50.26	28.04
	Assertiveness	50.91	25.19	48.23	25.63
	Insistence	43.86	26.38	49.54	27.17
	Incentives	58.02	24.25	46.07	27.15
	Restlessness	47.75	23.05	48.77	23.59
	Thought	55.77	27.11	47.85	28.94

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs *(continued)*

		Office and administrative support occupations		Personal care and service occupations	
		N=1,099		N=325	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	67.51	28.79	73.97	26.33
	Physical Energy	72.34	24.64	71.28	25.37
	Emotional Energy	37.56	29.26	40.08	28.15
	Self-Consciousness	31.42	28.36	25.92	24.49
	Assertiveness	39.01	29.15	38.56	28.40
	Insistence	76.44	19.41	71.45	24.05
	Incentives	15.99	14.61	16.90	14.37
	Restlessness	42.37	25.22	45.76	26.17
	Thought	31.64	27.03	34.96	27.76
NEEDS	Social Energy	53.29	28.54	46.71	28.40
	Physical Energy	52.18	28.04	46.62	27.84
	Emotional Energy	52.52	29.47	60.15	28.29
	Self-Consciousness	48.94	28.71	56.65	28.03
	Assertiveness	52.14	27.62	55.69	26.09
	Insistence	54.04	28.07	46.37	29.80
	Incentives	52.13	28.11	56.45	26.96
	Restlessness	51.85	24.93	55.34	25.17
	Thought	50.16	29.72	57.46	28.52

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs *(continued)*

		Production occupations		Protective service occupations	
		N=517		N=182	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	69.57	27.63	70.18	29.95
	Physical Energy	77.72	21.25	74.82	24.60
	Emotional Energy	32.84	27.38	33.88	28.78
	Self-Consciousness	25.98	24.57	25.00	26.27
	Assertiveness	40.58	27.18	47.12	28.29
	Insistence	79.57	18.15	77.38	20.64
	Incentives	14.63	13.93	15.09	13.60
	Restlessness	41.09	23.92	40.70	27.86
	Thought	26.64	24.03	27.36	26.44
NEEDS	Social Energy	55.03	28.38	52.86	30.81
	Physical Energy	58.00	28.06	51.38	28.91
	Emotional Energy	50.00	29.60	51.31	31.54
	Self-Consciousness	46.63	27.47	49.82	28.94
	Assertiveness	53.40	26.64	54.62	25.57
	Insistence	60.54	27.47	51.19	30.17
	Incentives	48.45	28.28	52.28	30.72
	Restlessness	49.86	24.56	50.52	26.71
	Thought	46.35	29.16	50.01	31.71

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.14 Comparison of Scale Descriptives by Job Family for Usual Behavior and Needs *(continued)*

		Sales and related occupations		Transportation and material moving occupations	
		N=998		N=502	
		Mean	SD	Mean	SD
USUAL BEHAVIOR	Social Energy	82.28	22.57	73.27	26.55
	Physical Energy	77.73	22.52	77.74	23.01
	Emotional Energy	32.18	27.74	32.83	27.47
	Self-Consciousness	18.51	21.69	24.07	25.86
	Assertiveness	47.14	28.40	43.72	28.48
	Insistence	70.12	23.11	77.70	20.00
	Incentives	16.85	14.68	15.01	13.63
	Restlessness	47.93	25.65	42.85	24.95
	Thought	27.81	26.07	26.06	24.39
NEEDS	Social Energy	53.94	29.74	55.17	29.27
	Physical Energy	54.69	28.82	56.79	29.06
	Emotional Energy	47.94	29.68	48.19	29.71
	Self-Consciousness	48.86	29.15	46.77	29.46
	Assertiveness	51.24	26.05	51.74	26.65
	Insistence	50.42	28.21	58.30	27.75
	Incentives	49.27	27.79	47.59	29.17
	Restlessness	51.84	24.52	48.90	25.02
	Thought	49.93	30.22	46.27	30.67

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset

		Architecture and engineering occupations		Arts, design, entertainment, sports, and media occupations	
		N=207		N=212	
		Mean	SD	Mean	SD
INTERESTS	Administrative	48.59	26.80	43.01	25.27
	Artistic	53.21	29.74	73.23	26.92
	Literary	42.23	27.27	74.03	25.05
	Musical	51.89	27.98	72.02	25.74
	Numerical	61.40	22.87	40.51	23.11
	Outdoor	50.43	28.51	43.62	25.27
	Persuasive	37.00	26.18	48.49	25.34
	Scientific	72.56	23.79	57.80	24.92
	Social Service	42.82	26.72	46.34	26.49
	Technical	74.66	20.31	53.73	24.22
MINDSET	Self-Affirming	79.75	18.19	77.76	19.56
	Others-Affirming	50.08	27.97	46.54	27.80
	Image Management	49.40	28.57	52.01	28.94
	Distinctiveness	49.84	28.44	52.97	27.24
	Alignment	49.95	30.76	45.72	30.25
	Social Acuity	51.20	27.00	53.33	26.70

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Architecture and engineering occupations		Arts, design, entertainment, sports, and media occupations	
		N=207		N=212	
		Mean	SD	Mean	SD
INTERESTS	Administrative	48.59	26.80	43.01	25.27
	Artistic	53.21	29.74	73.23	26.92
	Literary	42.23	27.27	74.03	25.05
	Musical	51.89	27.98	72.02	25.74
	Numerical	61.40	22.87	40.51	23.11
	Outdoor	50.43	28.51	43.62	25.27
	Persuasive	37.00	26.18	48.49	25.34
	Scientific	72.56	23.79	57.80	24.92
	Social Service	42.82	26.72	46.34	26.49
	Technical	74.66	20.31	53.73	24.22
MINDSET	Self-Affirming	79.75	18.19	77.76	19.56
	Others-Affirming	50.08	27.97	46.54	27.80
	Image Management	49.40	28.57	52.01	28.94
	Distinctiveness	49.84	28.44	52.97	27.24
	Alignment	49.95	30.76	45.72	30.25
	Social Acuity	51.20	27.00	53.33	26.70

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Building and grounds cleaning and maintenance occupations		Business and financial operations occupations	
		N=244		N=485	
		Mean	SD	Mean	SD
INTERESTS	Administrative	52.54	28.31	59.32	27.33
	Artistic	45.36	27.64	48.36	29.86
	Literary	38.63	27.20	50.03	27.77
	Musical	47.15	26.94	53.66	27.96
	Numerical	50.11	26.38	70.30	24.79
	Outdoor	61.32	28.91	39.27	26.96
	Persuasive	47.41	26.67	51.48	27.50
	Scientific	55.32	28.66	53.07	28.50
	Social Service	51.61	29.13	51.74	28.27
	Technical	67.83	23.61	49.98	24.95
MINDSET	Self-Affirming	78.26	21.47	79.31	19.51
	Others-Affirming	50.89	32.09	49.61	27.55
	Image Management	47.06	29.28	50.16	27.42
	Distinctiveness	47.74	31.28	49.48	27.54
	Alignment	49.10	32.18	50.95	32.28
	Social Acuity	40.31	26.85	55.13	27.48

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Community and social service occupations		Computer and mathematical occupations	
		N=168		N=328	
		Mean	SD	Mean	SD
INTERESTS	Administrative	50.79	25.96	53.82	27.06
	Artistic	52.26	28.66	53.88	28.83
	Literary	57.27	29.72	53.63	29.35
	Musical	62.23	27.05	59.13	28.44
	Numerical	39.33	24.52	60.38	24.39
	Outdoor	43.84	28.12	42.35	27.97
	Persuasive	53.99	26.13	37.54	25.72
	Scientific	47.26	27.64	67.58	25.13
	Social Service	78.06	20.48	43.84	28.22
	Technical	44.89	25.72	65.73	24.66
MINDSET	Self-Affirming	78.80	16.65	74.59	21.11
	Others-Affirming	39.78	27.82	48.97	27.21
	Image Management	59.32	29.75	46.02	27.97
	Distinctiveness	58.26	28.13	51.15	27.08
	Alignment	45.27	28.62	43.69	29.84
	Social Acuity	48.23	27.34	52.41	26.39

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Construction and extraction occupations		Education, training, and library occupations	
		N=316		N=593	
		Mean	SD	Mean	SD
INTERESTS	Administrative	46.35	26.37	52.82	26.73
	Artistic	46.09	27.63	53.67	29.65
	Literary	34.45	26.63	61.00	28.03
	Musical	45.24	26.87	61.55	28.73
	Numerical	52.12	25.03	48.44	26.58
	Outdoor	64.62	27.65	42.41	27.66
	Persuasive	47.76	27.58	48.49	27.42
	Scientific	59.87	27.28	52.59	28.46
	Social Service	46.71	28.03	65.76	27.16
	Technical	75.11	21.98	47.67	26.71
MINDSET	Self-Affirming	82.08	19.83	78.60	21.10
	Others-Affirming	51.29	29.65	45.18	28.26
	Image Management	50.74	29.85	53.64	28.73
	Distinctiveness	48.73	31.12	53.47	28.11
	Alignment	56.57	31.46	49.20	30.85
	Social Acuity	46.06	26.53	50.85	27.34

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Farming, fishing, and forestry occupations		Food preparation and serving related occupations	
		N=51		N=396	
		Mean	SD	Mean	SD
INTERESTS	Administrative	45.53	28.32	52.88	28.67
	Artistic	48.71	33.32	53.65	28.20
	Literary	51.47	31.88	47.50	28.72
	Musical	46.82	28.40	54.67	28.07
	Numerical	49.41	26.59	48.49	25.26
	Outdoor	76.71	21.05	53.04	29.05
	Persuasive	44.31	25.94	50.73	27.82
	Scientific	61.18	26.37	57.30	28.01
	Social Service	40.12	26.48	53.29	28.36
	Technical	71.53	20.08	57.13	26.47
MINDSET	Self-Affirming	73.33	25.05	77.83	21.74
	Others-Affirming	43.94	30.81	46.42	30.02
	Image Management	50.90	27.25	51.67	29.88
	Distinctiveness	52.49	28.46	52.08	30.36
	Alignment	46.57	33.60	49.66	33.66
	Social Acuity	44.35	26.15	42.92	27.25

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Healthcare practitioners and technical occupations		Healthcare support occupations	
		N=592		N=214	
		Mean	SD	Mean	SD
INTERESTS	Administrative	47.14	26.25	58.70	26.53
	Artistic	54.12	28.57	49.12	27.97
	Literary	50.00	27.73	43.53	27.67
	Musical	60.21	27.85	54.92	28.24
	Numerical	51.45	25.20	49.33	25.39
	Outdoor	50.58	29.26	46.01	30.55
	Persuasive	40.34	25.27	48.80	26.20
	Scientific	79.12	22.42	69.74	27.24
	Social Service	52.53	27.52	59.59	25.92
	Technical	58.77	25.30	50.15	27.32
MINDSET	Self-Affirming	79.35	18.74	77.75	21.18
	Others-Affirming	46.01	28.74	49.92	29.33
	Image Management	53.99	29.02	47.95	30.15
	Distinctiveness	53.95	28.82	48.72	30.29
	Alignment	49.81	30.98	48.04	32.37
	Social Acuity	51.33	27.17	41.55	26.73

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Installation, maintenance, and repair occupations		Legal occupations	
		N=256		N=115	
		Mean	SD	Mean	SD
INTERESTS	Administrative	54.43	26.30	46.53	26.17
	Artistic	44.52	28.35	58.54	30.50
	Literary	37.37	29.08	69.90	26.86
	Musical	45.75	28.04	65.42	24.82
	Numerical	53.50	23.78	51.39	25.42
	Outdoor	58.13	28.82	45.76	28.13
	Persuasive	42.13	26.32	48.76	28.69
	Scientific	63.97	25.42	63.14	26.91
	Social Service	42.78	27.48	49.57	26.50
	Technical	75.24	24.28	47.52	25.11
MINDSET	Self-Affirming	79.57	20.01	70.77	22.94
	Others-Affirming	50.39	29.09	41.31	24.30
	Image Management	49.57	28.70	50.17	26.79
	Distinctiveness	49.04	29.78	55.90	23.25
	Alignment	50.86	30.80	37.74	29.41
	Social Acuity	45.71	26.86	58.71	26.01

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Life, physical, and social science occupations		Management occupations	
		N=93		N=1,163	
		Mean	SD	Mean	SD
INTERESTS	Administrative	47.10	26.50	52.54	26.70
	Artistic	53.86	29.81	53.37	29.42
	Literary	49.76	28.56	53.67	29.27
	Musical	55.99	25.92	56.78	27.95
	Numerical	53.80	24.92	53.35	25.59
	Outdoor	51.59	27.57	42.48	27.53
	Persuasive	34.53	27.58	56.10	26.82
	Scientific	82.08	20.72	57.78	27.03
	Social Service	47.58	30.23	57.59	27.88
	Technical	64.87	27.77	48.92	26.81
MINDSET	Self-Affirming	75.33	19.95	82.45	17.01
	Others-Affirming	43.29	23.71	52.85	27.30
	Image Management	52.88	27.75	49.86	27.46
	Distinctiveness	56.28	22.72	48.75	27.95
	Alignment	41.12	28.03	53.54	29.38
	Social Acuity	53.53	27.01	56.88	26.71

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Office and administrative support occupations		Personal care and service occupations	
		N=1,099		N=325	
		Mean	SD	Mean	SD
INTERESTS	Administrative	67.08	25.33	56.62	26.82
	Artistic	49.79	29.98	51.90	29.67
	Literary	50.79	29.41	53.35	27.89
	Musical	52.10	29.51	56.72	27.65
	Numerical	57.04	26.78	45.59	25.95
	Outdoor	39.34	27.81	44.67	28.66
	Persuasive	47.24	26.25	53.01	28.52
	Scientific	54.95	27.45	51.93	27.74
	Social Service	52.16	28.85	64.38	27.47
	Technical	51.38	26.20	45.80	26.69
MINDSET	Self-Affirming	76.67	20.94	77.27	19.79
	Others-Affirming	48.52	28.76	40.90	28.25
	Image Management	48.00	29.55	57.24	28.14
	Distinctiveness	49.96	29.00	57.73	29.02
	Alignment	46.32	31.04	45.47	31.09
	Social Acuity	46.44	26.91	44.58	26.55

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Production occupations		Protective service occupations	
		N=517		N=182	
		Mean	SD	Mean	SD
INTERESTS	Administrative	59.48	26.16	55.79	26.30
	Artistic	43.90	28.60	43.90	28.73
	Literary	36.14	26.95	40.41	26.13
	Musical	45.54	28.40	44.67	27.10
	Numerical	58.38	23.76	46.09	25.84
	Outdoor	52.98	30.22	57.47	30.23
	Persuasive	41.83	27.23	48.74	27.46
	Scientific	61.99	28.45	63.32	27.21
	Social Service	48.14	29.09	51.78	28.67
	Technical	67.03	24.50	60.20	26.63
MINDSET	Self-Affirming	80.49	18.58	78.46	20.71
	Others-Affirming	52.06	28.20	47.86	31.14
	Image Management	48.31	28.61	50.86	28.86
	Distinctiveness	47.92	29.58	48.62	31.02
	Alignment	52.41	30.67	50.39	31.71
	Social Acuity	44.53	27.01	46.55	27.68

Sources: 2019 Birkman normative sample (N=9,056)

TABLE 6.15 Comparison of Scale Descriptives by Job Family for Interests and Mindset *(continued)*

		Sales and related occupations		Transportation and material moving occupations	
		N=998		N=502	
		Mean	SD	Mean	SD
INTERESTS	Administrative	49.32	27.44	58.76	26.86
	Artistic	51.96	28.34	43.28	29.71
	Literary	53.23	27.51	38.99	27.92
	Musical	58.91	26.62	47.35	28.00
	Numerical	47.63	25.11	54.31	25.39
	Outdoor	43.98	27.11	53.47	31.51
	Persuasive	71.32	24.59	50.41	26.66
	Scientific	56.24	27.92	60.16	26.85
	Social Service	56.38	27.63	50.22	28.82
	Technical	45.99	25.58	61.07	26.89
MINDSET	Self-Affirming	81.54	19.26	81.00	18.84
	Others-Affirming	51.36	29.39	52.97	29.26
	Image Management	50.53	28.56	47.97	28.92
	Distinctiveness	50.34	29.53	46.24	30.03
	Alignment	52.92	31.82	52.63	31.30
	Social Acuity	50.42	26.93	46.50	27.06

Sources: 2019 Birkman normative sample (N=9,056)

Chapter Summary

Birkman norms are developed from a sample demographically matched to the Bureau of Labor Statistics Working Population for gender, age, ethnicity, and job family. The resulting normative sample was examined in terms of each of these demographic factors. Regardless of the demographic factor, the pattern of higher Usual Behavior scores compared to Need scores is seen for Social Energy, Physical Energy, and Insistence. Lower Usual Behavior and higher Need scores is the pattern for all other Components. This holds true across age, gender, ethnicity, and job family. As expected, the greatest differences seen on any demographic comparison is a difference in Birkman Interests across different job families.

Chapter Seven

Administration and Scoring

Today's organizations operate in a rapidly changing environment. Consequently, one of the most important assets for an organization is the ability to manage change. The Birkman Method provides ongoing organizational development and analyses, which, in turn, facilitates organizations in managing and adapting to change. As the organization compiles Birkman data, this information can be used repeatedly as people move through organizations.

Birkman Signature Certification Training

Birkman International trains and certifies professionals for usage of The Birkman Method. Training is administered by Birkman Authorized Trainers who have been vetted for their accurate application and interpretation of the instrument and facilitation skills. Signature Certification provides understanding and interpretation for the majority of Birkman reports. As of this printing, there are over 9,000 Birkman Certified Professionals around the world. For those organizations with immediate needs, Birkman International can craft a custom solution or connect them with the appropriate Birkman Certified Professional that best fits their program or developmental needs.

IN THIS CHAPTER:

"In essence, an individual is how he or she sees others."

-Roger W. Birkman

Completion of the certification program is required for all consultants who wish to use The Birkman Method Components scoring data. These courses are designed so that consultants become experts in the definition and interpretation of the Birkman scales and their multi-faceted applications to the real world.

Practitioners who are certified in The Birkman Method come from a variety of backgrounds, with most meeting one or more of the following criteria:

- Several years of management consulting experience either internally within an organization or externally as an independent practitioner
- Senior level organizational development or human resource position within an organization
- Ph.D., L.S.W., or C.S.W. in private practice
- A bachelor's or master's degree from an accredited college or university
- Certification through an accredited coaching program or organization

Non-Certified Usage

Any Birkman reporting that contains details of the Component scales and scoring requires a Birkman Certified Professional to deliver and interpret that report. However, Birkman International has designed many reports where the narrative and interpretation are provided in the report itself, and those reports can be used by non-certified consultants with their clients. This allows clients to use self-interpretive reports with larger audiences and use internal staff to manage the resulting conversations and group discussions.

Examples of the self-interpretive reports include "careertyping", which is designed for high school and college students to explore how they can find a fulfilling and successful career based on Birkman data, and The Birkman Map, which provides an intact team with summary data on how they might perceive each other and help drive conversations that head off potential miscommunication or misunderstandings. These products are supported with toolkits that provide facilitation information and online training resources for team leaders, human resources business partners, or corporate facilitators wanting to be more effective in using Birkman reporting with their organization.

Appropriate Populations

The Birkman Method is recommended for individuals who either have established themselves in the workforce and have gained life experiences beyond school or those in higher educational settings (e.g., colleges and universities). Typically, it is meant for individuals with workforce experience and 18 years of age or older. More reliable results from both Component scales and Interests scales are obtained using this age group. Personality traits are known to be relatively stable and are usually pretty well established by early adulthood. However, occupational interests may continue to evolve beyond high school and even college education. Therefore, caution should be taken in interpreting results for individuals under the age of 18, and administration of the instrument to individuals under the age of 16 is not allowed.

The Birkman Method is not designed for, nor does it measure, dysfunctional personality. It should not be used for such purposes. It was created for normally functioning adults in the general population. While some research has been conducted regarding its use with non-typical work populations, such as the neuro-diverse, application of The Birkman Method with such groups should be conducted with care and only by specially trained or experienced professionals.

The Birkman Method is written in simple, everyday language, and for readability, at the third grade reading level.

Mode of Administration and Obtaining Reports

The Birkman Method is administered online as part of a cloud-based scoring engine, which allows 24-hour worldwide access for both consultants and respondents. From within the system, certified consultants send clients emails containing links that allow for secure and confidential administration of all Birkman questionnaires. The questionnaire is currently available in 24 languages.

Consultants use BirkmanDirect to access and manage questionnaires and reports. The interface is straightforward, allowing consultants to work with one individual at a time or with a group of individuals. Report availability is a function of the type of account the consultant has established. BirkmanDirect dynamically generates over 40 reports available in various languages at the present time. Reports are available immediately after completion of the questionnaire.

The mobile platform application MyBirkman (currently scheduled to launch in 2020) allows both consultants and direct users to interface with their Birkman results. This system allows for the dynamic delivery of insights and information that can be triggered by calendar events, meeting planners, and direct query on specific topics. The mobile platform also will provide analytical

capabilities for organizational and cultural assessment, as well as database sorting and searching for strategically managing an organization's human capital.

TABLE 7.1 The Birkman Method Availability by Language

Language	Questionnaire	Reports
Arabic	✓	✓
Chinese - Simplified	✓	✓
Chinese - Traditional	✓	✓
Danish	✓	✓
Dutch	✓	✓
English - UK	✓	✓
English - US	✓	✓
Finnish	✓	✓
French - Canadian	✓	✓
French - European	✓	✓
German	✓	✓
Italian	✓	✓
Japanese	✓	✓
Korean	✓	✓
Malay	In Pilot	Limited
Norwegian	✓	✓
Polish	✓	✓
Portuguese - Brazilian	✓	✓
Russian	✓	✓
Spanish - Castilian	✓	✓
Spanish - LATAM	✓	✓
Swedish	✓	✓

TABLE 7.1 The Birkman Method Availability by Language *(continued)*

Language	Questionnaire	Reports
Thai	✓	✓
Turkish	✓	✓
Vietnamese	In Pilot	Limited

Instructions and Scoring

It is important that the individual taking the questionnaire follow instructions carefully in order to obtain accurate results. The questionnaire should be taken in a quiet place to allow the participant to complete it free of interruptions. A device (smartphone, tablet, or computer) with Internet access is required, and participants must have a valid email address in order to access the questionnaire. Typically, a Birkman Certified Professional authorizes the questionnaire and sends a link in an email to the participant. Upon clicking the link, participants are redirected to the Birkman site to complete the assessment. In some cases, the participant may access the questionnaire link after completing a payment process and receive limited amounts of data through the MyBirkman mobile application.

Individuals are asked to provide consent for Birkman to collect certain personally identifiable information (PII). Once consent is obtained, individuals continue to take the assessment. The questionnaire contains three parts and typically takes approximately 30-45 minutes to complete. Respondents are informed that it is not a test that they can pass or fail, that there are no "right" or "wrong" answers, and that all information provided is kept confidential.

The first section of the instrument contains statements about *Most People*, and participants are asked to indicate if they feel the statement is *true* or *false* for most people (Figure 7.1). Following this set of items, they are asked to read statements about themselves (i.e., *Yourself*) and to indicate whether they feel the statement is *true* or *false* for themselves (Figure 7.2). The last section is the Birkman Interests section, which asks participants to rank order the occupations that interest them the most to the least in each group of four job titles (Figure 7.3). All items must be answered to complete the assessment.

FIGURE 7.1 Sample Item Asking about *Most People*

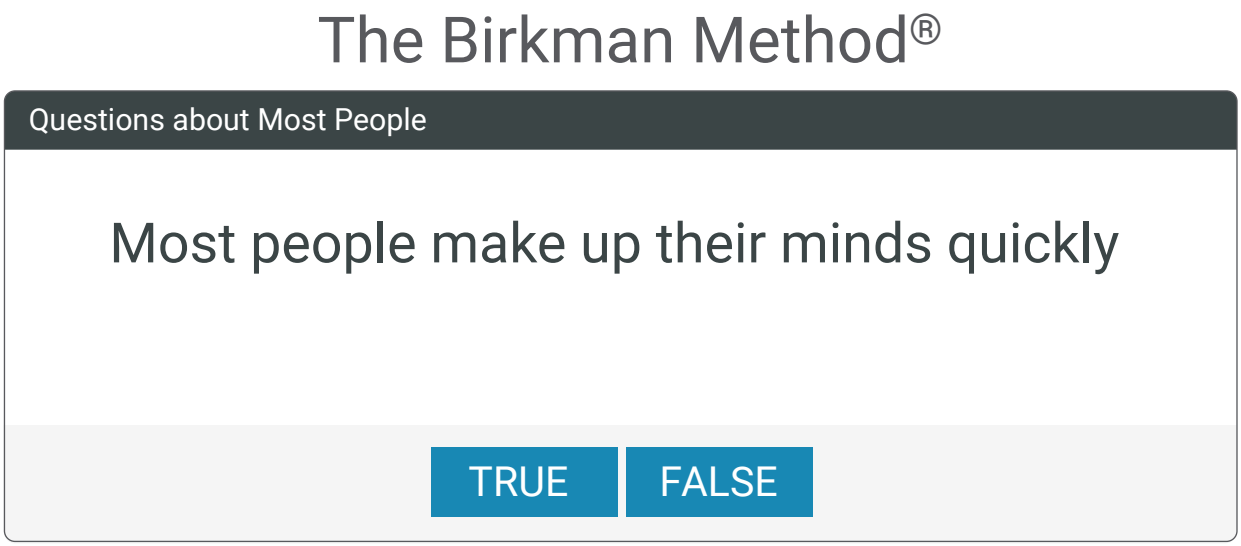


FIGURE 7.2 Sample Item Asking about *Yourself*

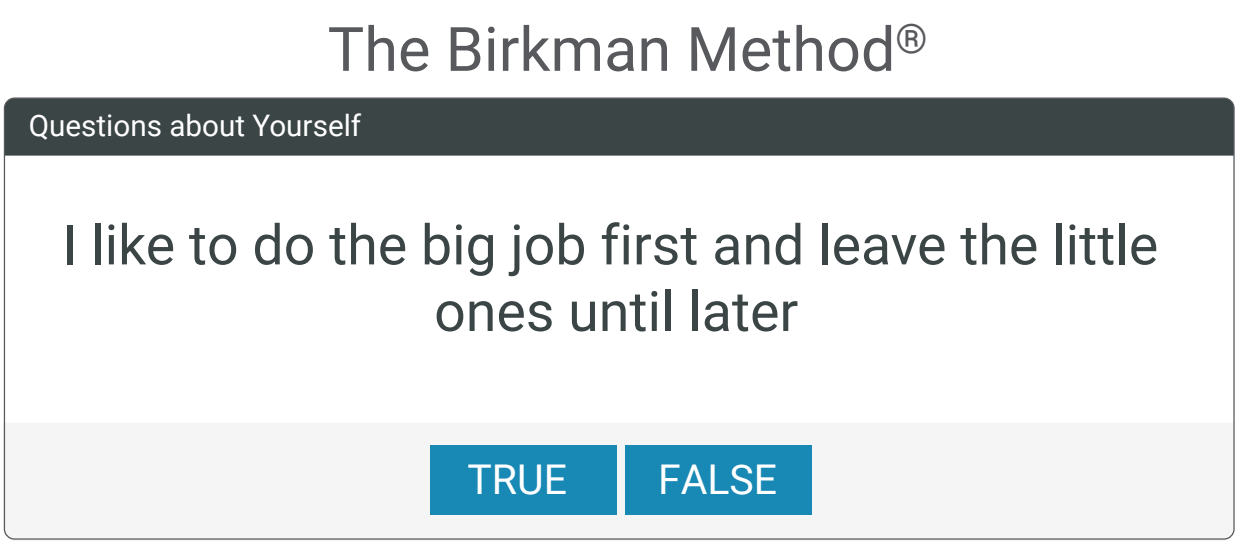
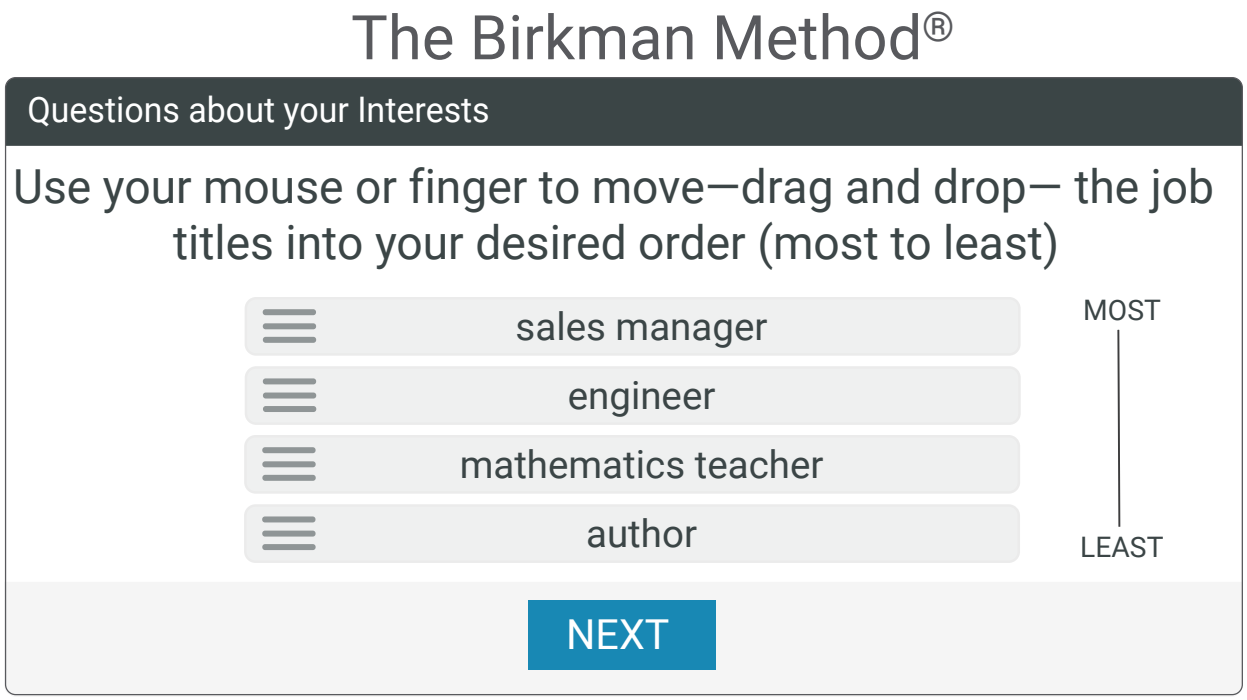


FIGURE 7.3 Sample Item Asking about *Your Interests*



The Birkman Method is scored immediately upon completion of the instrument. The scoring mechanism is proprietary to Birkman International, Inc., and The Birkman Method can only be scored by Birkman International, Inc. Results are available to Birkman consultants through BirkmanDirect upon a respondent's completion of the questionnaire.

Protecting Confidentiality

In accordance with the GDPR, Birkman must have a valid lawful basis in order to process personal data. Our lawful basis is consent. Respondents who complete The Birkman Method online assessment will be asked to consent explicitly to Birkman collecting certain personally identifiable information (PII) from them during the completion of the assessment. Respondents must, at a minimum, provide their consent for Birkman to collect the least amount of PII required to produce Birkman reports or they will not be allowed to complete the assessment.

All data from respondents of our assessment, including PII, are kept strictly confidential on AWS cloud servers. PII allows Birkman to gather information necessary for ensuring our assessment complies with GDPR regulations and does not contain bias based on gender, ethnicity, or age. Only aggregated research findings based on anonymized data are ever reported. Under no circumstances

does Birkman disclose a respondent's answers to the assessment unless the respondent provides written approval to Birkman. Occasionally, Birkman conducts reliability and validity studies to refine and update our algorithms. These results are published as white papers for public distribution; however, the results are always presented as an aggregate, and individual results are never disclosed.

Accommodations for Individuals with Disabilities

Birkman International can provide certified consultants and test administrators guidelines and recommendations for administering The Birkman Method to individuals with disabilities. In most cases, recommendations are provided on a case by case basis. Ultimately, it is the responsibility of the Birkman consultant to be familiar with the Americans with Disabilities Act of 1990 when using The Birkman Method for individuals with disabilities.

Chapter Summary

The Birkman Method is administered by Birkman Certified Professionals familiar with the application and interpretation of the instrument. It does not measure dysfunctional personality, nor probe for personality disorders. For the most reliable results, The Birkman Method is meant and intended for normally functioning individuals, preferably in the workforce, 18 years of age and older. It can also be used in educational settings. The Birkman Questionnaire is administered through a web-based platform and reports are generated either through BirkmanDirect or MyBirkman. Scores are computed by Birkman International and all data are kept strictly confidential in accordance with industry best practices and GDPR compliance. The administration and scoring of The Birkman Method are similar to and consistent with other instruments and best practices for assessments with similar applications.

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Glossary

Acceptance
Previously need for Acceptance. See Social Energy.

Activity
Previously need for Activity. See Physical Energy.

Administrative
The Administrative Interest scale measures a preference for career and/or opportunities involving internal administrative support, secretarial, and public contact administrative or service activities. Formerly known as Clerical.

Advantage
Previously need for Advantage. See Incentives.

Alignment
Alignment provides the respondent with information that shows how their mindset about Self differs from the way other people see themselves. As such, Alignment reveals the extent to which a person presents themselves in a traditional or conventional way.

Artistic
The Artistic Interest scale measures a preference for career and/or opportunities involving photography, architecture, design, and representational art endeavors.

Assertiveness
The Assertiveness scales address approaches to directing and influencing or persuading others in verbal exchanges. These scales describe a dominance-based construct that includes the degree to which an individual wants to persuade, speak up, express opinions openly and forcefully, and/or argue. Formerly known as need for Authority.

Authority
Previously need for Authority. See Assertiveness.

Big Five
See Five Factor Model (FFM).

BirkmanDirect
A proprietary, web-based platform for administering The Birkman Method and generating reports.

Challenge
See Image Management. Challenge has been replaced by Image Management. Challenge involved the way in which a person approaches and understands the issues of socially correct behavior and especially social image. The scale addressed issues on managing social image and social expectation, and impacts how one goes about imposing demands on self (and others).

Change
Previously need for Change. See Restlessness.

Clerical
See Administrative.

Coefficient alpha
A reliability statistic computed from average inter-item correlation conditional on the number of items for the scale. Also known as Cronbach's alpha.

Cronbach's alpha
See Coefficient alpha.

Components
One of the fundamental scales used within The Birkman Method system. Each Component is further differentiated into Usual Behavior, Needs, and Stress Behavior.

Construct validity
The validity that characterizes what a scale measures and does not measure. See also Convergent validity and Discriminant validity.

Continuum
The continuous range of a construct's magnitude on which examinees fall.

Convergent validity
A type of construct validity measure that establishes what construct a scale is describing.

Discriminant validity
A type of construct validity measure that establishes what construct a scale is not describing.

Distinctiveness
How different or unique a respondent sees self in contrast with other people.

Emotional Energy
The Emotional Energy scales describe a construct showing the degree to which an individual is comfortable with emotional expression and involvement of feelings. This construct involves emotional volatility, mood changes, and feelings for others. Formerly called need for Empathy.

Empathy
Previously need for Empathy. See Emotional Energy.

Esteem
Previously need for Esteem. See Self-Consciousness.

Expectations
See Needs.

Face validity
A type of validity used to describe whether a measure appears to be valid at first look.

Factor analysis
A statistical analysis technique to determine how latent constructs align.

FFM
See Five Factor Model (FFM).

Five Factor Model (FFM)
A popular model of personality that has five constructs which are commonly called neuroticism (or emotional stability), extraversion, openness (to experience), agreeableness, and conscientiousness.

Freedom
See Alignment and Social Acuity. Freedom Usual has been replaced by Alignment, and Freedom Need has been replaced by Social Acuity. The Freedom scales described a construct concerning the degree to which an individual provides conventional or unconventional answering patterns across the instrument. The scales involved content from several of the other constructs, with emphasis on agreeing or disagreeing with "conventional responses" to the content of these constructs.

GDPR
General Data Protection Regulation.

Image Management
The extent to which a person devotes energy to managing and maintaining a favorable public image. It is driven by Self-Affirming and Others-Affirming.

Incentives
The Incentives scales describe a dominance-based construct that includes the degree to which an individual prefers to drive for personal rewards or to share in team rewards. This construct addresses the approach to idealism, and team vs. individual approaches to winning competitions and incentives. It also encompasses cautiousness about giving trust, involvement with money (as incentive), placing money over friendship, and seeking personal advantage. Formerly known as need for Advantage.

Insistence
Insistence refers to creating and maintaining visible structures in order to achieve goals. These scales describe an orderliness-based construct that includes the degree to which an individual insists on giving or receiving clear direction, following instructions carefully, finishing tasks, dealing with detailed tasks, working for accuracy, and using systematic approaches. Formerly known as need for Structure.

Interests
Birkman Interests. Occupations and/or activities that attract or motivate individuals.

Item Pool
Database of items that can be drawn from to create constructs.

Literary
The Literary Interest scale measures a preference for career and/or opportunities involving writing, editing, reporting, and general involvement with books and the literary arts.

Mechanical
See Technical.

Mindset
Filters through which a person views the world. They are an established set of attitudes.

Most People
See Other items.

Musical
The Musical Interest scale measures a preference for career and/or opportunities involving performing music, working with musical instruments, or general involvement with music and the musical arts.

Needs
Environmental conditions necessary for effectiveness. Needs are the expectations which must be realized in order for the individual to behave in a natural, confident, and productive manner.

Normative Sample
A representative sample of the population of interest.

Norms
Distribution of scores in the normative sample.

Numerical
The Numerical Interest scale measures a preference for career and/or opportunities involving bookkeeping and accounting, auditing, financial and statistical analysis, and mathematics.

Other Items
Items in the questionnaire that ask the respondent to state whether an item applies to "most people."

Others-Affirming
How much I see others as having favorable characteristics and behaving in a socially desirable way.

Outdoor
The Outdoor Interest scale measures a preference for career and/or opportunities involving agricultural and building activities, adventure oriented activities (performed outside), and working with animals.

Persuasive
The Persuasive Interest scale measures a preference for career and/or opportunities involving persuading, selling, communicating, and various influencing responsibilities such as management.

Physical Energy
The Physical Energy scales describe a construct that addresses preferred pace of action and aspects of style of planning and decision making. This construct includes the degree to which an individual prefers action, quick thinking, and physical expression of energy. Formerly known as need for Activity.

Reliability
Reliability describes a scale's internal consistency and/or stability over time.

Restlessness
The Restlessness scales refers to openness to new personal experiences. Individuals who score low tend to prefer repetitive effort, minimal personal disruptions, and predictable responsibilities. Individuals who score high tend to seek new experiences and explore novel approaches, even within stable environments. Formerly known as need for Change.

Scientific
The Scientific Interest scale measures preference for career and/or opportunities involving medicine (and allied professions), research, and applied sciences.

Self-Consciousness
The Self-Consciousness scales describe a sensitivity-based construct that includes shyness, saying no, praising and being praised, sensitivity about correcting others or being corrected by others, getting one's feelings hurt, and concerns about embarrassing or being embarrassed. Formerly known as need for Esteem.

Self-Affirming
How much I see myself as having favorable characteristics and behaving in a socially desirable way.

Self Items
Items in the questionnaire that ask respondents to state whether the item holds true for them.

Social Acuity
Social acuity is the extent to which a person has realistic expectations of other people's behaviors and attitudes. It involves the accuracy of perception of others' behavior as compared to the norm of other people's social perceptions.

Social Energy
The Social Energy scales describe a sociability-based construct that addresses the manner of relating to people in groups. It includes the degree to which an individual wants to be talkative, enjoy people in groups, enjoy social laughter, comfort in talking to strangers, enjoy parties and group activities, and approachability. Formerly known as need for Acceptance.

Social Service
The Social Service Interest scale measures a preference for career and/or opportunities involving counseling, supporting, guiding, educating, and ministering to others.

SD
Standard deviation. A measure of spread of data from its mean.

STEM
Science, Technology, Engineering, and Mathematics.

Stress Behavior
Behaviors which is less than productive or undesirable.

Structure
Need for Structure. See Insistence.

Test-Retest
A type of reliability that describes the repeatability of scale results.

Thought
The Thought scales describe a construct concerning the degree to which an individual approaches forming conclusions and making decisions, concerns for making the right decision the first time, and concerns over consequences of decisions.

Usual Behavior
Behaviors which are productive and create few, if any, negative consequences, in and of themselves. Usual Behaviors can be natural or learned behaviors.

Validity
A term used to describe to what extent a scale measures what it is supposed to measure and that the resulting information is accurate.

Contributor Biographies

Present Contributors

Kelley J. Slack, Ph.D., joined Birkman International, Inc. in 2019 as Senior Industrial-Organizational Psychologist after almost twenty years working at NASA—Johnson Space Center. There, her work centered on the psychological and psychiatric selection of astronauts. At Birkman, Kelley focuses on maintaining the scientific rigor of the assessment and leading research to understand the complex relationships between personality and work. Kelley is a licensed psychologist in the State of Texas.

Chakrapani Bommaraju, Ph.D., M.B.A., joined Birkman International in 2017 as a Senior Data Scientist. His primary research areas include the fundamentals of The Birkman Method and optimizing the method using classical and state-of-the-art techniques in statistics and data science. He has over ten international publications in reputed journals and conferences and has several provisional patents/patents to his name. By utilizing advances in machine learning and artificial intelligence, he envisions that The Birkman Method will provide richer insights through deep analysis of our database.

Sharon Birkman, President and CEO of Birkman International since 2002, is the second generation at the helm of Birkman International. Her leadership has been instrumental with ushering in a new era of product development and training initiatives during a time of unprecedented growth. Sharon has an M.A. from the University of Texas and completed the Harvard Owner/President Management program. She is a proud regional winner of the 2016 *EY Entrepreneur of the Year* award, and Birkman has won both the local and national *Best and Brightest Companies to Work For* consecutively the past three years. In 2017, Sharon won both the *Mary Lehman MacLachlan Economic Empowerment Award* and *Houston Business Journal's Women Who Mean Business* award.

Timothy G. Sadler, Ph.D., worked for Roy Mefferd (beginning 1971) for over 20 years before taking over the directorship of Research and Development at Birkman International, Inc. from 1995 to 2002. During that time, he directed numerous research projects and applied projects, including the developing of training programs, revising scales of The Birkman Method, creating the 2000 Birkman scale norms, and working with consultants and clients across many business sectors.

After his retirement, Sadler continues to contribute to Birkman through his research, teaching, and consulting.

Lynn A. Greene was a staff member of Birkman International, Inc. from 1978 to 1987. He was involved in research, material development, consulting, and training activities. Presently, Mr. Greene works as a founding Member of Performance Enhancement Group, Ltd. Mr. Greene's expertise is in developing and facilitating a wide range of business development processes aimed at increasing individual, team, and organizational performance. He continues to work with Birkman International as a subject matter expert who created Perspectives scales.

Danny R. Perryman joined Birkman International, Inc. in 2017 as VP of Training and is now VP of Research and Innovation, the team responsible for the core message of Birkman from the data level to the content published in training materials, reports, and social media. He is a 20-year user of The Birkman Method and has successfully used the instrument as a facilitator with a global enterprise of over 1 million employees, as a consultant with clients on four continents, and as a Master Trainer of Birkman Signature Certification since 2008. Dan focuses on making sure the messaging of Birkman is consistent with the psychometrics and scientific basis of the instrument, and also applicable to the real-life situations that employees and leaders face in today's disruptive business environment.

Past Contributors

Biographies are in alphabetical order. With the exception of Dr. Roger Birkman, biographies of past contributors have not been updated since they appeared in previous editions.

The late **Roger W. Birkman, Ph.D.**, was the creator of The Birkman Method, the founder of Birkman International, Inc., and the chairman of the company's board until 2002. From 1951 until his death in 2014, Dr. Birkman dedicated himself to understanding how human behaviors and motivations can be revealed through "self" and "other" perceptual assessments. His goal was to improve the effectiveness of individuals, teams, organizations, and cultures through his work. In particular, Dr. Birkman was interested in serving faith communities worldwide.

Paul Cruz, Ph.D., served for several years as a research assistant for Birkman International, Inc., performing extensive statistical analyses of the validity and reliability of the instrument. He is currently an organizational development specialist for NASA.

Scott Davies, Ph.D., is a manager of psychometric services at Pearson Educational Measurement.

Fabian Elizondo, M.S., was a psychometrician in the Research and Development department at Birkman International, Inc., and specialized in psychological measurement and test development. He worked on various projects researching personality assessments and their applications in the workforce. These applications included developing personality profiles for companies for the purposes of employee selection, development, and succession planning. In addition, he assisted Spanish-speaking clients with the interpretation and translation of The Birkman Method.

Frank Larkey, Ph.D., has over 20 years' experience in the applied and academic psychology domains. He followed Tim Sadler as the next director of Research and Development at Birkman International, Inc. He performed a number of validity and reliability studies and provided leadership in translating The Birkman Method into a dozen languages. Currently, Larkey is the president of the Reed Larkey Research Group and continues to work with Birkman International, Inc. on joint projects.

Larry G. Lee, Ed.D., was the Senior Director of Research and Development at Birkman International, Inc. since 2006. He is a subject matter expert in The Birkman Method applications. In addition to his Birkman research and management responsibilities, he teaches and consults on Leadership Development and Executive Coaching. Prior to this role, Dr. Lee was the Leader of Instrument Assessment Practice and a senior executive coach at The Boeing Company corporate level. This dual position required him to evaluate and select assessments for the company based on reliability, validity, versatility, and applied effectiveness requirements.

The late **Roy B. Mefferd, Jr., Ph.D.**, was a man of many talents. He held professorships at a number of universities, including a period when he was a professor of both psychiatry and physiology at Baylor University. He was also the President and Director of Research for the Birkman-Mefferd Research Foundation. In that role, he published The Birkman Method for Manpower Selection, Classification, Assessment, Motivation, Counseling, and Training: Its Reliabilities and Validities as of March 1972. He led the research and development efforts at Birkman International, Inc. starting in the mid-1960s until 1995, when he retired from Birkman International, Inc.

Elizabeth A. Wadlington, Ph.D., is a professor of teaching and learning at Southeastern Louisiana University. She works with preschool through secondary teachers to help them effectively meet the needs of all students, including those with learning disabilities. She has published in ***Childhood Education***, ***Reading Research and Instruction***, ***the Reading Professor***, ***Reading Improvement, Preventing School Failure***, and various other respected journals. Recent works include ACEI Speaks: What Teachers Need to Know About Dyscalculia and Teachers with Dyslexia and Dyscalculia: Effects on Life.

Patrick L. Wadlington, Ph.D., was a senior psychometrician at Birkman International, Inc. and specializes in psychological measurement and test development. He works on various projects researching and developing quantitative methods for cognitive, social perception, and personality assessment development and validation. Dr. Wadlington specializes in integrating classical and item response test theory to produce web-based psychological instruments for personnel selection and development purposes.

Matthew Zamzow, M.A., was the Director of Training for Birkman International, Inc. He is responsible for the development and implementation of numerous programs targeted to support the interpretation, application, and integration of The Birkman Method in organizational development initiatives. Matt has worked with clients in the development of strategic competencies, developed programs to establish selection processes, and coached individuals to achieve success in their career.