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## 18.1 Introduction

The concept of eudaimonia is not widely understood outside of the positive psychology and philosophy fields and not consistently defined within them. As noted by Huta and Waterman (2014), eudaimonia is often loosely or vaguely defined, “without clear identification of the concepts believed to be a core part of the definition and concepts believed to be correlates” (p. 1426). Perhaps, what is understood by most is the idea of individual progress and development towards the “good life” (e.g., Maslow, 1999; Rogers, 1961). This idea of progress on a path to the good life makes intuitive sense based on theories of human development and plays on our understanding of ourselves as teleological beings in process towards an end goal. For example, Rogers’ view of the meaning of the good life was based on his conception of the “fully functioning” person – that is, a person-in-process, a person continually changing in growth oriented ways.

Similarly, Maslow (1954) suggested that once our basic needs are met, human beings have an innate tendency towards constant betterment – “metamotivation” towards satisfaction of higher needs and self-actualization.

Philosophers, most notably Aristotle (c. 330 BCE/1925), argued that there needs to be more to living than just being; that is, that there must be some ultimate function of human beings, and that exercising this function is what gives meaning to our being. The exact nature of Aristotle’s meaning regarding this ultimate function is less clear. In particular, the meaning of living well or exercising the eudaimon life (i.e., human flourishing) as presented by Aristotle remains in dispute (e.g., Huta & Waterman, 2014).

Even though details of Aristotle’s meaning remain in dispute, some elements of his intention seem clear from his writings. In particular, Aristotle wished to convey that eudaimonia is achieved through the pursuit and exercising of virtue or excellence. Eudaimonia is good moral activity (moral excellence) or good intellectual activity (intellectual excellence). Activities that produce excellence are virtuous – that is, avoid excess and deficit. According to Aristotle (c. 330 BCE/1925), what must be sought is the mean or intermediate relative to us – acts must be done “at the right times, with reference to the right objects, towards the right people, with the right motive, and in the right way” (p. 38). Indeed, Aristotle suggests that in doing virtuous acts we become

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virtuous, but this is hinged on doing such acts with the knowledge and desire to do them *because* they are virtuous and to carry them out *as* a virtuous person of good character would do them (see Aristotle, c. 330 BCE/1925, p. 35). That is, Aristotle acknowledges that it is possible to do acts that appear to be virtuous, but are carried out without being “good”. He also makes clear that one cannot carry out immoral or “bad” acts “at the right time, and in the right way” because “to do any of them is to go wrong” – “there is no mean nor any excess and deficiency, but however they are done they are wrong” (Aristotle, c. 330 BCE/1925, p. 39).

According to Aristotle (c. 330 BCE/1925), virtue also has an essential connection with pleasure and pain. Indeed, Aristotle notes that “virtuous actions must be in themselves pleasant” (p. 17). He said this because he believed that doing apparently virtuous actions out of painful duty indicates that the underlying virtue has not yet been attained: “the man who does not rejoice in noble actions is not even good; since no one would call a man just who did not enjoy acting justly, nor any man liberal who did not enjoy liberal actions” (p. 16). Initially, therefore, actions that appear virtuous may require the type of self-control or willpower that Baumeister and Tierney (2011) have argued is the greatest human strength. According to Aristotle, once virtue has been attained, the behavioral manifestations will not be difficult or painful. He believed that virtue, in contrast, is pained by vice, so we can “measure even our actions, some of us more and others less, by the rule of pleasure and pain. For this reason then, our whole inquiry must be about these; for to feel delight and pain rightly or wrongly has no small effect on our actions” (p. 33). This ideal outcome of taking pleasure in the right cannot be attained quickly. In fact, he defined eudaimonia as the ultimate end, but noted that it is a process that requires habituation. Much like Rogers (1961) concept of “becoming” a fully functioning person, Aristotle espoused habituating into virtue (i.e., becoming virtuous) as a means of working towards the objectively desirable life – to know and experience oneself as living well. Similarly, Maslow’s (1999) concept of the hierar-

chy of needs that describe human growth towards “self-actualization” – is another concept or construct that involves striving towards an ultimate end, but also involves a progressive enhancement of our being. Similarly, eudaimonia is an ongoing process during one’s life – a process of pleasures and pains associated with the actions and passions of life (Aristotle, c. 330 BCE/1925).

In contrast, pleasure or hedonia, according to Aristotle, is not a transition or process (Aristotle, c. 330 BCE/1925). Therefore, pleasure is not an ultimate function of human beings or an end in itself, because it is complete in the time that it occurs. However, pleasure is a *good*, which differs in kind according to different activities, and may even be the *summum bonum* or essential element of eudaimonia.

Even though eudaimonia and hedonia are distinct – eudaimonia is a process and hedonia is not – the two are related. Indeed, Aristotle believed that the eudaimonic process will enhance pleasure and transform other activities to make them pleasurable. In particular, Aristotle particularly argued that for someone who has not made steps toward a eudaimonic character, it will be difficult to exert self-control (or willpower) when engaging in particular acts of good; for example, abstaining from unhealthy bodily pleasures to become temperate. For this person, restraining unhealthy bodily desires will be frustrating – such a person is, in accordance with Plato, being pained by virtue instead of being “pained by the things that we ought [i.e., vice]” (Aristotle, c. 330 BCE/1925, p. 32). In contrast, the person who has made steps toward eudaimonia will find pleasure in acts of good; for example, when we have abstained from unhealthy bodily pleasures and become temperate, we are more easily able to abstain and take pleasure in doing so. Thus, both pleasure and pain result from eudaimonia – indeed “[n]ow for most men their pleasures are in conflict with one another...but the lovers of what is noble find pleasant the things that are by nature pleasant; and virtuous actions are such, so that these are pleasant for such men...Their life, therefore, has no further need of pleasure as a sort of adventitious charm, but has its pleasure in itself” (Aristotle, c. 330 BCE/1925, p. 16).



In this chapter we define eudaimonia based on Aristotle's definition and philosophical conceptualization. Aristotle was concerned with what the ultimate good was for humans – what the most enviable life was. According to Aristotle, life consists of the pursuit of ends. Ends are goods that can be aimed at, activities themselves, or products of activities. However, for Aristotle there is one end that is most desirable – an end in itself – eudaimonia. He believed that this end must be chosen for itself, for its own sake, and be satisfying with no need for supplementation. By Aristotle's definition, eudaimonia is:

[A]ctivity of soul [(i.e., virtuous or intellectual activity)] exhibiting excellence, and if there are more than one excellence [(or virtue)], in accordance with the best and most complete. But we must add 'in a complete life'. For one swallow does not make a summer, nor does one day; and so too one day, or a short time, does not make a man blessed and happy. (Aristotle, c. 330 BCE/1925, p. 14)

The purpose of this chapter is to provide a brief review of the concept of eudaimonia, explore the challenges associated with its measurement, and offer suggestions for researchers currently choosing measures of eudaimonia. In terms of measurement challenges, we consider the extent to which the heterogeneous conceptualizations of eudaimonia as the "ultimate good" might inherently make it difficult to measure. Also, even if we achieve consensus on a concept of eudaimonia, the concept may be difficult to measure because of issues related to measuring virtue. We posit that a defining factor in the measurement of eudaimonia that makes it different from the assessment of other related constructs, is the inclusion of the assessment of virtue. The lack of virtue measurement in a number of common assessments of eudaimonic well-being given Aristotle's definition is presented.

## 18.2 Measurement Challenges

Measuring eudaimonia appears to be inherently challenging, this is due in part to the majority of research and discussions of eudaimonia placing

minimal emphasis on the heart of Aristotle's original intended meaning. Admittedly, language and definitions change over time; therefore, if modern researchers and philosophers were to replace Aristotle's definition with a widely agreed upon definition that facilitated research and communication, then departing from Aristotle's definition might make sense. However, departing into a variety of distinct definitions and assumptions is problematic because these distinct definitions become barriers to communication and research. At times, it seems that the main consensus regarding eudaimonia, is what eudaimonia does not mean. Indeed, among modern users of this term, "eudaimonia" would possibly be defined with most consensus when defined negatively. In particular, eudaimonia is well-being that is not mere pleasure. Other definitions have been offered, but the varieties of definitions are hard to reconcile, therefore eudaimonia is often defined most simply by saying what it is not. This negative definition alone lacks satisfactory value however because a negative definition like this could allow the concept of eudaimonia to grow to encompass almost all positively valued human variables, thus losing its distinctive value.

Historical precedent exists for using negative definitions for complex concepts. For example, ancient writers, such as Dionysius the Pseudo-Areopagite, proposed that negative definitions have value when something is too difficult to describe. Dionysius reasoned that the divine was too difficult to understand, and therefore it was best described by saying what it was not. This type of approach, despite re-appearing occasionally throughout history (e.g., *The Cloud of Unknowing*), has proved problematic and failed to solve problems of scholarly debate. Thus, possibly there is value in departing from negative definitions of eudaimonia and seeking a return to a greater emphasis on Aristotle's ideas concerning virtue and excellence. Within our discussion, we hope to demonstrate, not a rejection of modern definitions, but a proposition that modern definitions are more firmly rooted when related to virtue and excellence.



### 18.2.1 The Lack of Attention to the Virtue Hypothesis

Admittedly, Aristotle's emphasis on virtue as central to well-being is echoed in some modern work discussing well-being. For example, as noted by Robbins (2008), "the virtue hypothesis predicts that happiness is derived from the cultivation of virtue" (p. 103).

One of the most surprising characteristics of measures of eudaimonia, however, is the glaring absence or at least minimal representation of virtue-related constructs. Admittedly, some scholars have expanded the definition of eudaimonia to encompass more than the pursuit of virtue and excellence, and therefore, it may make sense from their perspective, to include additional elements in their operationalization of eudaimonia. For example, Huta and Waterman (2014) argue that the modern concept of eudaimonia should not be limited to the original concept from Aristotle, but be expanded to include both ways of functioning and subjective states that result from the pursuit of virtue and excellence (see also Huta, Chap. 15, this volume).

Nonetheless, the pursuit of virtue and excellence are central to the original definition of eudaimonia, so one would expect virtue to at least have a strong representation within measures of eudaimonia. Yet, virtue is minimally present or even absent in most measures currently used to assess eudaimonia.

This tendency suggests that currently used measures of eudaimonia are incomplete because of their minimal representation of virtue. The construct of personal meaning illustrates this tendency. Measures of personal meaning have been suggested as indicators of eudaimonia (Huta & Waterman, 2014) with reasonable justification (Huta & Ryan, 2010; Wong, 2011). The most common self-report measure of meaning is perhaps the Meaning in Life Questionnaire (MLQ) created by Steger and Shin (2010). This scale has many desirable aspects, including good internal consistency and evidence of convergent and discriminant validity (Steger & Shin, 2010) – its use by various scholars also suggests its value in testing other hypotheses. The MLQ assesses whether

one is experiencing a sense of meaning and whether one is searching for meaning. However, as the scale does not assess virtue, there is no means of determining from what ends meaning is being derived. We do not mean to demean the utility of Steger and Shin's excellent measure, nor the reasonable suggestion that personal meaning can have a role in assessing eudaimonia (Huta & Waterman, 2014), but instead intend to point out that a complete measure of eudaimonia would need to also assess whether meaning is being derived from virtuous ends. Similarly, one could consider the Flourishing Scale (FS; Diener et al., 2009). The measurement of flourishing was proposed as a measure of well-being distinct from assessment of positive and negative emotions (hedonia), and it is often used as an indicator of eudaimonic well-being. However, only two of the items assess whether the experience of flourishing is derived from virtuous ends, those being "I actively contribute to the happiness and well-being of others" and "I am a good person and live a good life" (Diener et al., 2009). Our conclusion about the Flourishing Scale is similar to that about the meaning items of the MLQ: The measure seems to serve its intended purpose fairly well, but would not be complete as solitary indicator of eudaimonia.

Indeed, in order to be in keeping with Aristotle's notion of virtue, scales would need to not only consider virtue, but also to distinguish from vice:

For instance, both fear and confidence and appetite and anger and pity and in general pleasure and pain maybe felt both too much and too little, and in both cases not well; but to feel them at the right times, with reference to the right objects, towards the right people, with the right motive, and in the right way, is what is both intermediate and best, and this is characteristic of virtue...Virtue, then, is a state of character concerned with choice, lying in a mean, i.e., the mean relative to us, | this being determined by rational principle, and by that principle by which the man of practical wisdom would determine it. Now it is a mean between two vices, that which depends on excess and that which depends on defect; and again it is a mean because the vices respectively fall short of or exceed what is right in both passions and actions, while virtue both finds and chooses that which is intermediate. (Aristotle, c. 330 BCE/1925, p. 38–39)



The minimal presence of virtue or vice in most operationalizations of eudaimonia is surprising given the fact that moral rectitude is at the very root of the concept of eudaimonia. As discussed earlier, the term eudaimonia is inextricably linked to virtue. Nevertheless, as noted by Robbins (2008), "positive psychology engages in the activity of normative ethics to the extent that it aspires to a eudaimonic concept of ethics, which identifies the state of happiness with the acquisition of virtue", but does not admit to being "engaged in the activity of *prescriptive* valuation" (p. 103).

One might question why the virtue aspect is largely absent from the measures of eudaimonia. Possibly, researchers are swayed by the view of science as value-free, and therefore avoid discussion of virtue. Perhaps researchers are uncomfortable discussing virtue because they know they fall short of their own virtue ideal. Perhaps virtue is difficult to assess because respondents, in our experience, even those engaged in behavior that society judges as immoral, often perceive themselves as relatively virtuous (e.g., criminal offenders who seem to devote significant attention to thinking about their own virtue compared to others who commit worse crimes, or compared to others who fail to adhere to particular standards for social interaction). Nevertheless, as suggested by Robbins (2008), the "value neutral position is not a realistic aspiration for a researcher or therapist" (p. 104).

We too know that it can be difficult to write about virtue when we know we are not exemplars of complete virtuous achievement. Aristotle, likewise, believed complete virtue is a target that is never completely achieved. Nonetheless, unless one proposes a radically different definition of eudaimonia, discussion of eudaimonia requires discussion of virtue.

One of the few exceptions to this principle is the work of Wong (2011). Wong has defined eudaimonia as meaning plus virtue. "A meaning orientation with a focus on virtues becomes a eudaimonic orientation" (Wong, 2011, p. 75). Wong has refused to give up his strong convictions in order to follow the prevailing trends in research. He has highlighted an important ele-

ment that deserves more inclusion in measures of eudaimonia. According to Wong, "[w]hat is good, depends on the purpose it serves. *Good* must mean good for *something*...[t]he good life demands the presence of virtue" (p. 73). Some others have agreed. For example, Sandstrom and Dunn (2011) have spoken of a blind spot of psychology being the relative absence of a focus on virtue.

Because efforts toward virtue can become misguided, Aristotle also suggested a role for practical wisdom. In fact, a genuinely Aristotelian perspective of eudaimonia demands the use of virtues in everyday life with the guidance of practical wisdom, or *phronesis* – having the knowledge of the rules of morality, as well as "an intelligent understanding of the reason for them" (Aristotle, c. 330 BCE/1925, p. xvi; Robbins, 2008). In keeping with Aristotle, Schwartz and Sharpe (2006) define practical wisdom as the "master virtue", "essential for orchestrating the other virtues into an effective and happy life" (p. 383). Indeed, according to Aristotle, the essential nature of practical wisdom in living a eudaimon life is self-evident (Schwartz & Sharpe, 2006).

Huta and Waterman (2014) suggest an expansion of the modern concept of eudaimonia. Accordingly, we argue for researchers to include virtue as an essential element. To that end, measures of eudaimonia could treat eudaimonia as a conjunctive construct – Wong's (2011) ideas illustrate this point. He argued that virtue must be present for eudaimonia to be genuine. If a person has some elements of eudaimonia, but not virtue, the person does not have 50 % of eudaimonia; instead one is completely lacking eudaimonic well-being.

Perhaps an analogy of a well-functioning vehicle will further help illustrate the concept of a conjunctive construct. Imagine a person renting a car to drive from Beijing to Shanghai. Imagine if the renter asks the owner whether the car works well, and the owner says, "Oh yes, the car works pretty well". But then the passenger finds out that the transmission has seized up and won't operate. Even though almost all parts of the car work well, the driver would be wrong to say the car works pretty well. No, a well-functioning car is a



conjunctive construct that requires all the essential elements to be operating. The absence of any essential element means the car is not functioning. Similarly, eudaimonia, according to traditional definitions, would require one's behavior to be virtuous. Virtue is not merely a desirable element that makes eudaimonia even better: Virtue is essential for eudaimonia to be present.

This does not mean that existing measures are lacking utility; instead, to be complete, they would need to be supplemented by an implementation that treats virtue as an essential element of virtue. In other words, the researcher would need to treat eudaimonia as conjunctive.

## 18.3 Measurement of Eudaimonia

In light of the prior discussion, it is worth considering some current measures that can be used to assess eudaimonia. The organization of this brief review of measures of eudaimonia is designed to quickly help researchers find a measure that may match their research needs. There are many possible measures of eudaimonia, and this review is not intended to be comprehensive. Our method of organizing this review of measures relies heavily on Huta and Waterman's (2014) insightful classification for organizing the concept of eudaimonia. They differentiate definitions of eudaimonia into four types, those focused on: (1) orientations or motives, (2) behaviors, (3) experiences, and (4) functioning. For the purposes of this review, the last two categories are combined, so the review examines measures of eudaimonic motives, behaviors, and outcomes. Additionally, because most measures of eudaimonia put less emphasis on virtue than Aristotle in his original discussion, virtue receives little emphasis in this section. Thus, possible strategies for assessing this element are discussed separately.

### 18.3.1 Measuring Eudaimonic Motivation

One fascinating aspect of eudaimonia is that some behaviors could be lacking eudaimonia for

one person, but be eudaimonic for another person. For example, consider a person playing a cello, perhaps playing a Bach solo on their cello. The playing may be purely hedonic and lacking eudaimonia; for example, the person may be playing the song early in the morning to gain amusement by annoying a neighbor (hedonic, not eudaimonic). But another person may play the song while seeking self-improvement, or while seeking to bring joy to someone else, or simply as part of habit of daily practice. Any one of these could be considered eudaimonic as long as the playing is being done at the right time for a right purpose. For a third person, the behavior may be both eudaimonic and hedonic. In particular, the person could be playing at an appropriate time, place, and purpose while also gaining pleasure by doing so. The person may simply enjoy playing, or could be playing in an effort to forget the emotional tribulation of a painful relationship. Within the Aristotelian framework, seeking pleasure is not antithetical to virtue; therefore, eudaimonia and hedonia often co-occur.

The cello example illustrates that motivation can be one factor determining whether a behavior is eudaimonic (i.e., has a virtuous motive) and/or hedonic (motivated by pursuit of positive emotions or avoidance of painful emotions). Some researchers have put great emphasis on this motivational aspect in their theory and measurement (e.g., Huta, 2013). Researchers seeking to assess this motivational aspect of eudaimonia (i.e., eudaimonic orientation) will want to select a related measure, such as the Hedonic and Eudaimonic Motives for Activities (Huta & Ryan, 2010).

### Hedonic and Eudaimonic Motives for Activities (HEMA; Huta & Ryan, 2010)

The HEMA, as its name implies, was designed to assess eudaimonic and hedonic motives. In the short history of this scale, research of impressive quality has helped to explore the structure of the scale and the relation of these constructs to other variables. The items assess eudaimonic orientation and also two types of hedonic orientation (seeking pleasure and seeking comfort, i.e.,



avoidance of pain) (Huta, Pelletier, Baxter, & Thompson, 2012). The eudaimonic items assess an orientation toward authenticity, excellence, or growth, which seems to capture the excellence component of Aristotle's ideal. All the items can be reworded to assess short-term *state* motivations or long-term *trait* motivations. The items have also been used to have a third person rate the participant (Huta et al., 2012). People scoring high on the eudaimonic subscale tend to have high sense of personal meaning, more frequent experiences of awe, and a feeling of connection with something larger than themselves. In a fascinating intervention study, people nudged toward a eudaimonic orientation had elevated well-being 3 months later, as opposed to a shorter term benefit for those nudged toward a hedonic orientation (Huta & Ryan, 2010). The intervention was conducted by asking participants to add one activity to each day for 10 days. They were assigned to add either all eudaimonic activities or all hedonic activities, but were required to vary the specific activity (eudaimonic or hedonic) across the 10 days. One advantage of the HEMA is that it uses the same format to provide scores for eudaimonia and hedonia, so the two orientations can be directly compared as predictors and outcomes in larger studies. The items are currently available at <http://veronikahuta.weebly.com/>.

### 18.3.2 Measuring Eudaimonic Behavior

The prior section focused on eudaimonic motives, but as Huta and Ryan (2010) suggest, a researcher could instead choose to focus on assessing the presence of eudaimonic behavior. Admittedly, defining whether behavior is eudaimonic can be challenging. As suggested above, eudaimonic behavior is focused on pursuit of excellence and virtue, but that definition can include many possible behaviors. Pursuit of excellence and virtue could include behavior that is personally expressive or altruistic, but then again, choosing to relax and be content is a reasonable part of a virtuous life, so even that could be considered eudaimonic if done at the right time. In spite of these chal-

lenges, some measures have been designed to assess eudaimonic behavior.

#### Personally Expressive Activities Questionnaire (PEAQ; Waterman, 1993)

The PEAQ asks respondents to identify five of their own behaviors that demonstrate what they are like. The respondents then rate each behavior on 12 items assessing the extent to which the behavior is engaging or expresses their true self (eudaimonia) and is pleasurable (hedonia). The PEAQ, thus, allows any behavior to be considered eudaimonic, as long as the participant rates it to be such.

#### Daily Behaviors Scale (DBS; Steger, Kashdan, & Oishi, 2008)

The DBS was designed to assess the frequency of behaviors that are particularly associated with eudaimonia. The behaviors were selected in part by five experts who had published on eudaimonia and hedonia. The scale was originally used to serve the purposes of a larger study, and therefore the authors may not have expected any more widespread use. The scale is interesting however, and has potential for broader use as long as users are aware of the limitations in labeling only a small subset of behaviors as eudaimonic. The DBS asks participants how often they engage in each of seven eudaimonic behaviors, such as giving money, volunteering, writing out goals, persevering, and building relationships. The internal consistency was not high in the original study (e.g., Cronbach's Alpha = 0.62), but one could debate whether internal consistency is an appropriate expectation for this type of behavior frequency rating. In particular, engaging in one type of eudaimonic behavior does not necessarily predispose a person to engage in other types of eudaimonic behaviors (as opposed to attitudinal surveys for which researchers usually expect internal consistency within each construct), unless one believes that virtue is a truly unified construct, such that all virtues will be developed simultaneously (see Annas, 2011 for a discussion). The complete DBS also includes items to assess frequency of hedonic behaviors, providing a basis for comparing eudaimonic and hedonic



behavior. In the original study, eudaimonic behaviors were associated with scores on other measures of hedonic and eudaimonic well-being concurrently, but similar effects for hedonic behaviors were largely absent or smaller. The eudaimonic behaviors also predicted an increased sense of meaning (sometimes treated as an outcome of eudaimonia) on the subsequent day. As stated above, any precise identification of certain behaviors as eudaimonic will be problematic because of the large influence of context. Nonetheless, the DBS was carefully constructed to be consistent with expert opinions, and also underwent further refinement through empirical testing. Also, the findings of that original study were consistent with theoretical expectations. These factors suggest that the DBS may be a useful measure of eudaimonic and hedonic behavior. The items on the DBS are reported in the original article (Steger et al., 2008).

### 18.3.3 Measuring Eudaimonic Outcome

Living eudaimonically could be expected to create particular outcomes. Thus, one way of assessing eudaimonic living would be to assess whether the participant has achieved outcomes that one would expect to emerge from eudaimonic living.

#### Personal Growth Composite (PGC; Vitterso, Oelmann, & Wang, 2009)

Perhaps the most intuitively obvious outcome of pursuing excellence and virtue (i.e., living eudaimonically) is an experience of personal growth. In other words, a person who seeks excellence and virtue could be expected to experience positive personal change and the subjective experiences that accompany this. Some research justifies this emphasis on personal growth as distinct from hedonia (Compton, Smith, Cornish, & Qualls, 1996; Ryff, Chap. 6, this volume; Schmutte & Ryff, 1997). Theoretical roots for this personal growth construct can be found in Maslow's (1943) work.

Vitterso, Oelmann, et al. (2009) have called this emphasis on experiences that accompany

growth, a subjective approach to eudaimonia. They have argued that personal growth will be accompanied by three experiences: (1) interest, (2) engagement, and (3) curiosity. If they are correct, then one could use measures of these as indicators of eudaimonia. They systematized this approach by using four distinct psychological measures as indicators of growth: A measure of (1) curiosity (Amabile, Hill, Hennessey, & Tighe, 1994), (2) flow (Kashdan, 2004), (3) complexity (using the IPIP (2002) items for Cattell's 16 Personality Factor Questionnaire (16PF; Cattell, Eber, & Tatsuoka, 1970 construct of "openness to change"), and (4) competence (using the IPIP (2002) items for Cloninger's Temperament and Character Inventory (TCI; Cloninger, 1994)). They also provided evidence that the resulting composite has reasonable internal consistency and seems to be quite distinct from life satisfaction (Vitterso, Oelmann, et al., 2009). A recent incarnation of the scale includes three items per subscale (Vitterso & Soholt, 2011). We have included the PGC in this section on outcomes of eudaimonia, but one could reasonably debate whether this measure instead deserves a different categorization because of the constituent subscales – it could be argued, that emphasis is placed on traits rather than outcomes.

One concern with this growth-focused approach to eudaimonic outcome is that self-evaluations of personal growth may often be strongly related to the personality trait of openness (Compton et al., 1996; Schmutte & Ryff, 1997). In fact, one element of the PGC scale is called "complexity", but is derived from a construct originally called "openness to change" (IPIP, 2002). This close relation to personality is potentially problematic because many researchers assessing eudaimonia will be more interested in measuring an outcome (well-being), even if that outcome becomes stable and trait-like, rather than a cause (personality). Conceptually, the emphasis on growth as an indicator of eudaimonia makes sense, and admittedly other measures of eudaimonia will also have relationships with personality. Nonetheless, future research using growth-oriented measures could consider statistically controlling for the personality traits



openness to assess the role of personal growth experiences beyond those predictable from the personality trait of openness.

### **Basic Emotions State Test: Interestingness (BEST-I; Vitterso, Overwien, & Martinsen, 2009)**

The BEST, like the PGC, builds on a personal growth oriented understanding of eudaimonia, but is focused on short-term state emotions during a particular activity and is very brief (three-items). The BEST uses three emotion-related terms (engagement, inspiration, interest) to assess short-term emotional states theorized to result from experiences of eudaimonia. Participants report the extent to which a particular activity produced each of these emotions. This scale has good internal consistency and produces correlations that make sense (e.g., associated with personal growth, but not life satisfaction (Vitterso, Oelmann, et al., 2009); may also predict personal growth (Vitterso & Soholt, 2011); associated with analyzing, but not replaying happy moments (Vitterso, Overwien, et al., 2009)). The full scale not only includes a eudaimonia-related subscale called the interestingness subscale, but also subscales assessing pleasantness and negative emotions. A related trait-oriented measure is also available that assesses the related constructs of engagement, pleasure, and negative emotions (Vitterso, Oelmann, et al., 2009).

### **Meaning in Life Questionnaire: Presence (MLQ-P; Steger, Frazier, Oishi, & Kaler, 2006)**

If a researcher is seeking to assess a eudaimonic outcome, and minimize confounding with hedonia, a measure of personal meaning or purpose might be appropriate. Theoretically, this link between eudaimonia and meaning makes sense because seeking to live a life consistent with one's own values could be expected to create a sense that one is living a meaningful life (Huta & Ryan, 2010; Wong, 2011). Also, empirically, there is evidence that a sense of meaning clearly fits the negative definition of eudaimonia addressed above: Having a sense of meaning is

minimally related to mere pleasure. In particular, in a recent analysis of well-being measures, presence of meaning showed the greatest independence from hedonic elements, such as short-term affect and happiness (Proctor, Tweed, & Morris, 2015a). Further, evidence also suggests that even though meaning is distinct from hedonia, it is central to well-being. For example, in a measure of flourishing (Diener et al., 2009), the meaning item had the highest item-total correlation.

The presence subscale of the MLQ provides the advantage of having good internal consistency, reliability, widespread use, and clear face validity. Alongside the good face validity comes transparency. Thus, the questionnaire has value in research contexts, but probably less so in environments in which participants are motivated to bias their own responding (e.g., personnel selection contexts). The search subscale of the same scale assesses a distinct construct that represents not merely an absence of meaning, but instead something that may often be representative of dysphoria (e.g., Proctor et al., 2015a). Steger et al. (2008) have also developed a much shorter, two-item meaning presence indicator that may be useful for daily diary studies for which extreme brevity is essential. The many advantages of the MLQ explain its widespread use.

One disadvantage of the MLQ questionnaire is that it allows participants to use their own definition of meaning. Thus, each participant may be scoring himself or herself on a different concept of what it is to have meaning in one's life, though a similar criticism could be made of many psychological scales. The items are currently available at [http://www.michaelfsteger.com/?page\\_id=13](http://www.michaelfsteger.com/?page_id=13).

### **The Brief Personal Meaning Profile (PMP-B; McDonald, Wong, & Gingras, 2012)**

If one instead desires a more consistent and theoretically-based construct to be used among all participants, one could select one of Paul Wong's measures. Wong has written voluminously on meaning, and provided a helpful review of measures of meaning including his own *Personal Meaning Profile* which has now been reduced to 21 items (see McDonald et al., 2012).



This questionnaire assesses meaning in the domains of achievement, relationships, religion, self-transcendence, self-acceptance, intimacy, and fair treatment. One further advantage of the PMP-B (Wong, 1998) is that virtue has a central role. In particular, according to Wong's conceptualization, meaning is not real unless it is integrated with responsible action (see McDonald et al., 2012). However, once one defines the nature of meaning as extensively and precisely as Wong has, room for disagreement sets in; thus researches will need to examine the specific items and his justifications to see whether they agree with Wong's conceptualization of meaning. The items are available in the original chapter (see McDonald et al., 2012).

### **Sources of Meaning and Meaning in Life Questionnaire (SoMe; Schnell, 2009)**

Another interesting scale is the SoMe. The SoMe is quite long at 151 items, and thus may not be appropriate unless meaning is a central part of any given study. However, the SoMe provides an interesting combination of the advantages of the Steger scale (Steger et al., 2006, 2008) and the Wong scale (Wong, 1998). Like the Steger scale (Steger et al., 2006), the SoMe provides an assessment of whether life as a whole is meaningful. The SoMe also provides a fine-grained analysis of the extent to which the person's meaning is derived from each of 26 different possible sources of meaning, thus reflecting some of the advantages of the PMP-B. Because the number of subscales is so large, it would take significant research efforts to validate each subscale, but there is some support for validity of the major subscales (Schnell, 2009). For a study with a major focus on eudaimonia, as manifested in a sense of meaning, the SoMe may be appropriate.

### **Basic Psychological Needs Scale (BPNS; Gagne, 2003; Kasser, Davey, & Ryan, 1992)**

Based on prior theory, one would expect eudaimonic living to produce more than growth and personal meaning. In particular, a sense of autonomy may result from eudaimonic living because

eudaimonic living may require rejection of cultural norms and instead a conscious choice of an alternate lifestyle. Similarly, eudaimonic living may produce a sense of relatedness because the allocentrism of eudaimonic living may tend to improve relationships. Also, one could expect eudaimonic living to produce a sense of competence, because pursuit of excellence is central to eudaimonia, and this pursuit would increase one's competence, admittedly however, the growth construct of the PGC already includes elements of self-perceived competence (Vitterso & Soholt, 2011). These three hypothesized outcomes (autonomy, relatedness, competence) would fulfill the needs that self-determination theory suggests are central to human well-being (Deci & Ryan, 2000, 2008). The BPNS assesses the extent to which one has fulfilled these needs for autonomy, competence, and relatedness, and thus may have relevance as a measure of eudaimonic outcome. A qualification deserves mention, because a recent analysis suggests that a sense of personal meaning may provide a more pure measure of eudaimonic outcome than would fulfillment of the needs for autonomy, relatedness, and competence (Proctor et al., 2015a). In particular, there may be more overlap between hedonic measures and fulfillment of the relatedness and autonomy needs, than there is between hedonia and meaning. Nonetheless, the 21-item BPNS assesses the extent to which one has met the need for autonomy, competence, and relatedness and, when combined with a measure of personal meaning, may provide a more complete picture of eudaimonic outcome than would a measure of meaning alone.

### **18.3.4 A Qualification Regarding Life Satisfaction**

Life satisfaction deserves brief mention here. A eudaimonic life might produce life satisfaction or a positive assessment of a person's quality of life (Shin & Johnson, 1978). Therefore, the life satisfaction construct might deserve a place in studies of eudaimonia. However, the relation between eudaimonia and life satisfaction is complex. For



example, life satisfaction should not be viewed solely as an outcome – that is, it is not only a related outcome of eudaimonia and hedonia, but also an important predictor of psychological states (Proctor et al., 2015a; Proctor, Linley, & Walitby, 2007). Thus, even though life satisfaction may result from eudaimonia, it is not in itself a pure measure of it. Indeed, Aristotle is clear in indicating that eudaimonic living may lead us to judge our lives positively, however he prescribed virtue as the normative standard against which this judgment is made (Diener, 1984). As a further indicator of the complexity, recent research has demonstrated that life satisfaction is associated with presence of meaning, positive affect (Proctor et al., 2015a), and pleasant experiences, but not personal growth (Vitterso, Oelmann, et al., 2009). Nonetheless, in keeping with Aristotelian theory, life satisfaction appears to be an outcome of the Rogerian personal growth orientation of the fully functioning person (Proctor, Tweed, & Morris, 2015b). Thus, the link between life satisfaction and eudaimonia is not a simple one.

### 18.3.5 Measures Combining More Than One Level (Orientation, Behavior, Outcome)

Some measures do not fit neatly into the Huta and Waterman (2014) categories we have discussed. These assess more than one of the different aspects of eudaimonia.

#### Psychological Well-Being (PWB; Ryff, 1989)

The Ryff scales of PWB have had value in efforts to highlight the importance of well-being that is not merely subjective well-being (SWB). We discuss the scale because of its wide usage and historical value, but other measures might be better for future researchers. The items, it has been argued, assess one's ability to successfully face the more existential demands of being (Keyes, Simotkin, & Ryff, 2002). Subscales assess self-acceptance, positive relations, autonomy,

environmental mastery, purpose in life, and personal growth.

There may be problems with the theorized structure of the scale. The scale was intended to assess PWB distinct from SWB, and three subscales (purpose in life, personal growth, and positive relations) are distinct from SWB as intended (Keyes et al., 2002). Two subscales (environmental mastery and self-acceptance), however, overlap with SWB, and one (autonomy) has only a weak relation to both SWB and the three internally consistent PWB scales (purpose in life, personal growth, positive relations). One report (Disabato, Goodman, Kashdan, Short, & Jarden, in press) suggests that the Ryff scales are almost completely confounded with hedonia. However, that analysis could deserve qualification because the statistical analysis treated depression as the opposite of hedonia, but not the opposite of eudaimonia (a theoretically debatable assumption), and treated the Ryff scales as unitary, in spite of evidence that they may not be (Keyes et al., 2002). The PWB scale does have stronger relations to some outcomes, such as finances and health, than do SWB measures (Ryff, 1989), suggesting it does have some value.

The original form of the inventory is quite long (120 items), and the briefest version (18 items) has problems with internal consistency possibly because the items for the shorter scales were selected to maximize conceptual breadth of each construct rather than internal consistency (Ryff & Keyes, 1995). Thus, the PWB has had an important role in the study of well-being, but problems with the scale suggest it would need refinement to justify continued widespread usage.

#### Comprehensive Inventory of Thriving (CIT; Su, Tay, & Diener, 2014)

One of the more comprehensive measures of well-being to emerge in recent years is the CIT. It includes subscales representing elements of eudaimonic motivation (community subscale), eudaimonic outcomes of personal growth (engagement, self-efficacy, skills, and accomplishment subscales), meaning, hedonia (positive and negative emotion subscales), life satisfaction,

and trust. The scale is interesting and has potential because of its breadth and relative brevity. A structural analysis is supportive of the theoretical framework, and correlational analyses suggest the scale is associated with a variety of measures of well-being including health-related outcomes (Su et al., 2014). The scale does not include simple summary scores of eudaimonia and hedonia that can be compared; therefore, the structure would hinder studies focused on simple comparisons of eudaimonia and hedonia. Furthermore, greater understanding of the validity and distinctiveness of its subscales is needed and could be derived in part by explorations of relations between them and some of the eudaimonia scales reviewed in this chapter. Nonetheless, the scale deserves further attention and possibly widespread use because of its comprehensiveness, brevity, and preliminary evidence of utility (Su et al., 2014). The items are currently available at [http://internal.psychology.illinois.edu/~ediener/CIT\\_BIT.html](http://internal.psychology.illinois.edu/~ediener/CIT_BIT.html).

### 18.3.6 Measures of Virtue Component of Eudaimonia

The measures of eudaimonia reviewed to this point, still leave virtue underemphasized. Measuring virtue is challenging for a variety of reasons, and currently a number of these challenges cannot be completely resolved. As a result, some challenges in the measurement of virtue are worth mentioning before describing potential measures.

Measurement challenges related to virtue include, but are not limited to: (1) bias introduced by socially desirable responding, (2) cultural variability in standards for virtue, (3) individual variability in level of habituation towards virtuous ends (e.g., as virtuous acts become habitual, they may require less conscious effort and possibly become less amenable to self-report), (4) standards for determining the degree of habituation attained and individual awareness of progress, (5) determining frequency, meaning, and utility of acts as they relate to virtuous ends, (6) assessing traits/behaviors as they relate to being

in excess or deficit rather than simply assuming that more of a particular desired trait is always better, and (7) development of a strategy for combining a virtue indicator with other indicators of eudaimonia: Psychological researchers often assume that combining multiple measures of a trait leads to a more valid score than using a single indicator. One strategy would be to simply create a composite score for eudaimonia that strongly weights a measure of virtue. That composite score approach may be the best strategy for empirical research. However, as we have argued, virtue is essential to eudaimonia; therefore, conceptually it would be best for any score to reflect the essential nature of virtue. Perhaps each other indicator (e.g., personal growth or meaning) could be multiplied by a virtue score in order that the score is moderated by the extent to which it is being experienced in a virtuous direction. However, before committing to any such strategy, it would be important to conduct empirical research assessing any proposed strategy for combining virtue with other indicators of eudaimonia. It is premature to prescribe exactly how to combine a virtue score with other indicators of eudaimonia to create an overall score.

Several possible measures of virtue will be described and evaluated, however further work is needed to improve measures of virtue and determine how to integrate them into studies of eudaimonia.

#### VIA Survey (VIA; Peterson & Park, 2009; Peterson & Seligman, 2004)

The VIA Survey was designed to assess 24 character strengths, each of which was thought to be an expression of one of six virtues: wisdom, courage, humanity, justice, temperance, and transcendence (Peterson & Seligman, 2004). The original title of this survey, the *Values in Action Inventory of Strengths* (Peterson & Park, 2009; Peterson & Seligman, 2004) shows the creators' assumption that character requires a combination of right values and active behavioral expression. The items are largely focused on behavior. The name of this survey was later changed to its acronym: VIA.



A structural analysis with over a million cases (McGrath, 2015b) found three higher order virtues explaining relations between the 24 strengths. The three categories were caring (e.g., kindness, teamwork, love, and gratitude), self-control (e.g., prudence, self-regulation, perseverance, and honesty), and inquisitiveness (e.g., creativity, curiosity, bravery, and love of learning). The analysis also suggested that the caring and self-control factors were more strongly related, but the inquisitiveness component somewhat distinct. This finding suggests that inquisitiveness items are prominent in this inventory. Inquisitiveness does fit with Aristotle's value placed on intellectual excellence and therefore may be appropriate, but does not tend to typically appear this prominently or even at all in other traditional lists of virtues. Thus, one could wonder whether inquisitiveness has such a prominent role in the VIA Survey because the designers, being academics, overrepresented intellectual strengths in this group of virtues. McGrath's evidence that the VIA Survey assesses mainly care, self-control, and inquisitiveness contrasts somewhat with the six originally intended overarching virtues (i.e., wisdom and knowledge, courage, humanity, justice, temperance, transcendence) thought to link these 24 character strengths (Peterson & Seligman, 2004).

Some evidence of convergent validity exists which means that there is evidence that VIA constructs have theoretically sensible relations with other indicators, such as vocational interests, that may be manifestations of the same underlying constructs (e.g., Proyer, Sidler, Weber, & Ruch, 2012). Also evidence of test-retest reliability exists (e.g., Ruch et al., 2010), and versions of the VIA Survey have been developed for youth (Park & Peterson, 2006) and children (Toner, Haslam, Robinson, & Williams, 2012).

The creators of the VIA Survey sought to overcome the problem of cultural specificity by including only character strengths that were valued across cultures, and they make a good case for a least partial success on that criterion (see Peterson & Park, 2004, 2009). The questionnaire has received use in a number of cultural contexts and has produced similar mean responses for the

various constructs across nations (McGrath, 2015a).

One disadvantage is that the questionnaire is transparent; the intended purpose of the questions is often somewhat obvious (e.g., in the youth version, gratitude is assessed in part with a question asking whether the participant is a grateful person); therefore a person wishing to fake good could easily do so. Thus, the questionnaire might have less value in a personnel selection task or other context in which participants might seek to create a particular impression and fool the tester. For instance, high scores across multiple scales on the VIA Survey could indicate a high level of virtue, faking good, or even very high self-esteem. Therefore, users of the survey often look, not at raw scores, but instead at the tops five (signature) strengths associated with a person's scores. Possibly, researchers could control for social desirability or self-esteem by simultaneously administering measures of these constructs (e.g., Crowne & Marlowe, 1964; Rosenberg, 1965), and then statistically control for them during analyses. Further, the VIA approach has also been criticized because it treats virtue as a collection of different traits, rather than as a single construct (cf. Annas, 2011). The scale can be used for personal development. Common practice in positive psychology tends to focus on developing existing strengths. In other words, people who are grateful would be told that they can work to use their gratitude strength more often (cf. Rust, Diessner, & Reade, 2009). A virtue approach, however, might focus on developing all virtues.

The possibility of using the VIA Survey as a measure of virtue deserves exploration. This approach admittedly deviates from Aristotle because his ideas about the mean suggest that more of a strength is not always better (see Schwartz & Sharpe 2006; Schwartz & Wrzesniewski, Chap. 8, this volume for a discussion).

Nonetheless, for psychometric purposes, this strategy of adding together virtue scores may have value. For example, there is a limit above which higher scores for self-esteem are probably are not desirable in terms of living successfully. Nonetheless, for research purposes, using a simple



linear analysis, assuming that more is better, can have utility, in analysis of self-esteem, and possibly also in analyses of virtue scales.

### **Character Strength Rating Form (CSRF; Ruch, Martinez-Marti, Proyer, & Harzer, 2014)**

This 24-item scale is a brief measure of these same strengths. The CSRF is available in English and German, and has acceptable correlations on many of its dimensions with the VIA Survey, at least for research purposes. For individual testing and assessment, the longer VIA Survey might be more appropriate because longer questionnaires can be more accurate. The CSRF items are available through a link within the original article (Ruch et al., 2014) that provides access to supplementary materials.

Even greater brevity in terms of a measure of virtue may be provided by selecting a subset of items from the previously mentioned DBS (Steger et al., 2008), which includes seven eudaimonic items, several of which assess virtue. It has the added advantage of not being correlated with socially desirable responding (Steger et al., 2008), however, a researcher would have to select a focused subset of virtue items. For example, the giving money and volunteering time items map well onto virtue, but the confiding in another person items possibly less so.

### **Measure of Vice: Short Dark Triad (SD3; Jones & Paulhus, 2014)**

Because virtue is so difficult to measure well, researchers could choose to measure part of the virtue construct by instead assessing vice, the opposite of virtue – fitting with Aristotle's ideas discussed above. They could then mathematically reverse the vice score and use it as an indicator of virtue. As previously stated, one of the three major VIA classification components (McGrath, 2015b) is care. The care component of virtue (McGrath, 2015b) could possibly be assessed with reversed scores from the SD3 (Jones & Paulhus, 2014) scale. The items are currently available at [http://www2.psych.ubc.ca/~dpaulhus/Paulhus\\_measures/](http://www2.psych.ubc.ca/~dpaulhus/Paulhus_measures/). The SD3 provides an assessment of the dark triad of

Machiavellianism, narcissism, and psychopathy (Jones & Paulhus, 2014), and therefore could potentially work well as a measure of what might be its opposite, care for others. The self-control component of the VIA Survey might not need this type of reverse approach, but if one were to try nonetheless, a scale such as the Barratt Impulsiveness Scale 11 (Patton & Stanford, 1995) might be appropriate, though admittedly that scale contains some items worded in the impulsive direction and some in the opposite direction. Giving prominence to impulsivity when measuring vice would fit well with Baumeister and Tierney's (2011) proposition that its opposite, willpower, is the greatest human strength. Whereas, the inquisitiveness component of virtue could be assessed with a scale that would not need to be reversed, such as a curiosity scale (e.g., PGC; Amabile et al., 1994; Vitterso, Oelmann, et al., 2009).

Another way to assess virtue would be to ask participants to rate the virtue of their own behavior. Participants could be asked to select a subset of behaviors important to them and rate those in terms of their adherence to their own virtue ideals and a prescribed list of virtues. However, effect sizes from this type of approach might be small due to the measurement difficulties associated with rating only a small subset of behavior. Nonetheless, the idea of having people rate virtue using their own values and a prescribed standard list of values might deserve further attention – and is more in keeping with subjective approaches. Alternatively, rather than rating their own behavior, the participants could rate the extent to which goals related to virtue are central to their daily lives. This could be done retrospectively, with daily diaries, or with smartphone-based experience sampling.

### **Berlin Wisdom Paradigm (Law & Staudinger, 2016)**

The focus here has been on measures that can be fairly easily added to an existing study. Those measures that require more extensive preparation or coding practice have not been included. Nonetheless, the Berlin Wisdom Paradigm (Law & Staudinger, 2016) is worth briefly mentioning.



Within this paradigm, wisdom is measured by coding participant responses to standardized stories of life dilemmas. The paradigm is interesting because the concept of wisdom requires not pure selflessness, but a practical wisdom that is able to balance the goals of others with one's own personal goals. In that sense, this paradigm closely matches the Aristotelian concept of virtue because it requires a balanced rather than extreme response and an ability to know the right response in the right situation. This view of wisdom also fits with other thinkers, such as Annas (2011), that decry simple lists of distinct virtues and argue that virtue requires not only extensive practice, but also deep personal transformation, rather than merely acting out a set of behaviors prescribed as virtuous. However, using the Berlin Wisdom Paradigm requires careful coding, and thus could not be as easily implemented as other measures mentioned here. For those willing to devote the time to implementing this measure in their research, the benefits might be significant.

Finally, if one wanted to assess eudaimonia at an organizational level, there also exists a measure of organizational virtue (Cameron, Bright, & Caza, 2004). In the earliest years of positive psychology, some of the leaders (e.g., Seligman, Steen, Park, & Peterson, 2005) aspired for this new discipline to study institutions that promote well-being and character strengths. Perhaps that focus on the positive psychology of institutions could be facilitated by efforts to assess the virtue of organizations. At an even higher level of measurement, efforts have also been attempted in regard to assessing the virtue of nations ([www.goodcountry.org](http://www.goodcountry.org)).

## 18.4 Conclusion

Various measures associated with the concept of eudaimonia have been presented and reviewed according to three categories of definitions: motives, behaviors, and outcomes. Reflections of commonalities and differences between the measures presented have been considered along with some of the conceptual challenges associated with measuring eudaimonia and the potential

benefits of different individual measures. The chapter presents Aristotle's conceptualization of eudaimonia and considers this based on modern conceptualizations and measurement.

We propose that what emerges from a review of this ancient concept is the embedded foundation of virtue in any conceptualization. Indeed, unless a new/modern definition of eudaimonia is proposed, it appears that positive psychological measures of eudaimonia require measurement of virtue. Moreover, measurement of virtue includes distinguishing it from vice – albeit, often a point of confusion, hedonia (or pleasure) can co-occur with and even result from eudaimonia, and yet pain will not be eradicated. Awareness of an injustice or other vice may produce pain for a person living eudaimonically. Finally, in keeping with Wong (2011), Aristotle suggests that the exercising of virtue provides meaning to being and thus is our ultimate function.

Overall, this review highlights that, not only is there lack of consensus with regards to the definition and measurement of eudaimonia, but also there is lack of understanding of Aristotle's original meaning. As noted by Diener (1984):

Aristotle wrote that eudaemonia is gained mainly by leading a virtuous life, he did not mean [merely] that virtue leads to feelings of joy. Rather, Aristotle was prescribing virtue as the normative standard against which people's lives can be judged. Therefore, eudaemonia is not happiness in the modern senses of the word, but a desirable state judged from a particular value framework.

Indeed, it is this value framework that appears to be missing in modern conceptualizations and measurements of eudaimonia. In fact, it appears that we are missing the heart of the matter. Aristotle's philosophy suggests, what we might call today, making a "lifestyle" choice. That is to say, adoption of a way of being, such that we become our choices. Said another way, Aristotle suggests that by choosing to practice virtue, we will become by nature the very thing for which we strive. For Aristotle, we must practice virtue to become virtuous – making virtuous characteristics our own. Doing so will involve both pleasure and pain, however neither will matter if we do not understand the rules of morality and



choose ourselves and our actions based on an intelligent understanding of the reason for them – that is, exercise practical wisdom. Modern research into the measurement of eudaimonia provides tools that enable us to further explore these ideas and larger questions about the causes, nature, and outcomes of well-being.

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