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Virtue Resonance: Friendship in the Context of Adversity

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This capstone examines how adversity and challenge are favorable conditions for developing friendship. In Part I, I provide an overview of positive psychology, and how my capstone topic fits into the science of well being. In Part II I gather the research and literature on friendship from positive psychology, philosophy and evolutionary psychology and bring forward their wisdom on how adversity fosters connection. In Part III, I define adversity, distinguish it from trauma and discuss how friends could seek an appropriate amount of challenge in their shared experiences. Finally in Part IV, I build on several psychological theories to introduce the theoretical foundations for my own construct: Virtue Resonance. I outline the psychological theories and research to visualize how virtue can resonate and grow between friends.

Keywords

Friendship, virtue, adversity, philosophy, positivity resonance, positive psychology, positive relationships, character strengths

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Applied Ethics | Other Psychology | Social Psychology

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Preface: "Appalachian Aristotle"

July 13th 2022: The hikers approached in unison and placed their hands on the *Katahdin* sign at the same moment– signifying to each other and the audience at elevation on Baxter peak that they did this *together*, and that the meaning of it all had become collective over the 2,200+ miles on the Application Trail. The five of them (pictured above) didn't start together, or even know each other before departing in Georgia in late February. They hopscotched each other for 100 days before deciding to form a pod and complete the 300+ final trail miles in New Hampshire and Maine together. In three weeks, they progressed from trail acquaintances, using pseudonym trail names, to holding hands and saying "I love each of you so much," as they completed the hardest ordeal of their life together. The Appalachian trail is beyond challenging, with only a quarter of hopeful starters finishing in one attempt. The mud, miles, mountains,

mundanity and mosquitos may drive an individual hiker to quit, but become the catalyst of

meaningful friendships when shared. As one hiker put it:

> *"The mosquitos are much worse when you're by yourself, the mud is much worse when you're by yourself, the rocks, the roots, all of it. But when you get back to camp and start talking with the people that walked that same stretch, you can be mad at it all together, and it makes it suck a little bit less."*
> – AT thru-hiker

The full transcript of this anonymous audio interview is available in *Appendix A*, along with

information about how this interview reflects many ancient philosophical views on friendship,

including:

> *"Friendship improves happiness, and abates misery, by doubling our joys and dividing our grief."*
> – Cicero, 43 B.C.E./2018

> *"As the proverb says, men cannot know each other till they have eaten salt together'"*
> – Aristotle, 350 B.C.E./1998

What progresses a friendship from "we're strangers," to "I love you," in just three weeks?

Could adversity, when shared, forge strong friendships? Do friends that choose to do hard things

together experience growth and deeper fulfillment in their relationship? Philosophy, while not a

discipline of psychology, was one of the first fields to question what makes life worth living, and

ask what gives humankind its purpose and meaning. Thru-hiking groups are paragons of sharing

adversity and building strong friendships. This paper will explore psychological and philosophic

literatures to form arguments and recommendations for building friendships born from adversity

and introduce a new construct: *Virtue Resonance*.

Acknowledgements

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Virtue Resonance: Friendship in the Context of Adversity

Can adversity and challenge be favorable conditions for enhancing our friendships and present experiences for us to see the best in each other? I explore this question to search for knowledge & wisdom that helps reach a deeper understanding of what makes friendships great. In *Part I*, I provide a history and outline of positive psychology– the science of well being. In *Part II* I synthesize the literature on friendship from positive psychology, philosophy and evolutionary psychology – integrating ancient wisdom from Aristotle & Cicero with knowledge from modern science. In *Part III,* I define adversity, distinguish it from trauma and discuss how friends could seek an appropriate amount of challenge in their shared experiences. I provide examples of how goals and challenges can lead to growth. Finally in *Part IV*, I build on several psychological theories to introduce the theoretical foundations for my own construct: *Virtue Resonance.* I outline the psychological theories and research involved (shared emotional experience, awareness of character strengths, attribution, savoring & meaning making) to visualize how virtue can resonate and grow between friends.

Part I. Overview of Positive Psychology

This section will introduce positive psychology's history, key people, theories and the constructs that are most pertinent to this thesis. Friendship is one type of positive relationship. This section will describe the pillars of positive psychology that help place and describe virtue and friendship.

History of Positive Psychology

When I was born in 1992, positive psychology was highlighting the importance of well-being and transforming into its own discrete science – emerging into a distinct field from other psychology disciplines guided by the vision and intellectual leadership of Martin E.P.

Seligman at the University of Pennsylvania. Clinical psychology has traditionally been

concerned with understanding and treating psychological distress and mental illness

(Csikszentmihalyi & Seligman, 2000). To complement this stance, positive psychology began to

study how both languishing and thriving persons could flourish beyond their status quo and how

everyone could build on their existing strengths. Related fields, cognitive psychology outlined

how people think, attend to their environment and process what they know and evolutionary

psychology tracked how human behavior adapted to meet the changing demands of reproduction

and survival (Buss, 2019). Emerging as a new yet integrative discipline with other fields of

psychology, positive psychology is a descriptive science. This means that it gathers insights from

the disciplines of psychology and the humanities to describe all that goes right for humankind,

while not ignoring the importance of negative emotions and states (Pawelski, 2016). There is

significant interest in popular press books on happiness and self help pseudoscience offering

social and emotional advice. Therefore, it is important to distinguish positive psychology as a

science– a practice deliberate in using the scientific method to continually question the evidence

in science's critical, peer-reviewed tradition (Dienes, 2008).

In parallel with the emerging science of positive psychology, in the early 1990s, Mihaly

Csikszentmihalyi explained the good life through the lens of *engagement–* making a compelling

case that wellness and autotelic experiences (i.e., experiences that are inherently enjoyable and

fulling in themselves) result when our jobs, hobbies and activities challenge us to perform at the

upper edge of our skill (Csikszentmihalyi,1990). The early frameworks for positive psychology

roughed out a vision for the pleasant life, the engaged life, and ultimately the meaningful life.

Years later, in 2011 Seligman would publish the most famous framework for well-being: The

PERMA Model. The PERMA model states that *positive emotions, engagement* (or flow),

relationships, meaning (and purpose) and *achievement* are the prominent categories of

well-being science. Some argue that the PERMA model is missing a category, and that *vitality*

should be added to recognize the evidence that physical well-being has on human flourishing

(Seligman, 2018).

       Positive psychology had a major moment at the turn of the century, when Martin

Seligman and Mihaly Csikszentmihalyi introduced positivity psychology as the science of what

makes life worth living at the American Psychological Association conference, where Seligman

was inducted as president (Csikszentmihalyi & Seligman, 2000). In his eloquent address,

Seligman (2000) describes positive psychology as *"a reoriented science that emphasizes the*

understanding and building of the most positive qualities of an individual: optimism, courage,

work ethic, future-mindedness, interpersonal skill, the capacity for pleasure and insight, and

social responsibility" (p. 1). As president, Seligman would prioritize legitimizing and expanding

the science into the mainstream of psychology culture. Today, as both I and positive psychology

conclude our third decade and begin our fourth, the field is moving fast and gaining complexity.

The positive humanities is emerging as its own discipline within positive psychology, which

involves describing the positive phenomenology found in engaging with culture and the

humanities while working to understand and enhance wellness in increasingly complex

institutions and systems (Pawelski, 2021; Lomas et al., 2021).

Positive Traits, States, and Institutions

       The field can be segmented into three categories for describing the things that go right in

life: *positive states, positive traits and positive institutions* (Peterson, 2006). This capstone

positions itself solely in the first two categories. *Positive traits* describe the virtues and strengths

of humankind while *positive states* describe the positive subjective experiences such as

happiness, engagement and wholeness (Seligman & Csikszentmihalyi, 2000). The application

and development of these two categories grew when Peterson and Seligman (2004) embarked on

their character strengths project. The project set out to document a universally understood and

valued language of positive human traits. Their research ultimately created an entirely new field

within positive psychology that studies how cultivating these traits leads to fulfilling states and

stronger *positive institutions* (Peterson & Seligman, 2004). The team traveled high and low to

every accessible human culture to validate their list of character traits. From this inclusive

research, they constructed a list of 24 distinct strengths in six virtue categories. With this addition

of this broadly comprehended and valued language for traits that describe the innate good in

somebody, the applications of positive psychology exploded into the 21st century. The VIA

Character Institute now leads the education on and scientific advancement of character strength

applications and research (Niemiec, 2013b).

An equally scientifically rigorous exploration into positive states has been spearheaded

by Barbara Fredrickson. She leads the Positive Emotions & Psychophysiology lab at the

University of North Carolina, Chapel Hill and is the author of ingenious studies and elegant

books including:

1. *Positivity*: a book which defines positive emotions, organizes studies and the science of

   how experiencing positive emotions leads to psychological and physiological wellness

   (Fredrickson, 2009).

2. *Broaden and build theory*: Through her empirical studies, Fredrickson has brought

   together her work under the *Broaden and Build Theory,* which posits that experiencing

   positive emotions is the means to having awareness broadened and blossomed.

   Furthermore, positive emotions help us build new relationships and competencies– we

should ideally experience a ratio of positive to negative emotions of 3:1 (Fredrickson, 2004).

3. *Positivity Resonance:* Fredrickson holds one emotion in a category of its own– love. She argues that the phenomenon of love occurs when two people experience a positive emotion at the same time, but only when we are in safe environments. The micro-moment of positive affect bounces between people over time and repeated experience builds trust, loyalty and social bonds, even amongst people with weak ties (Fredrickson, 2013).

In fact, this capstone will expand on this idea of resonance and argue that it also happens at the positive trait, as well as positive state, level.

Positive Interventions

In addition to theory and research, positive psychology is also concerned with increasing wellness through *positive interventions*. A positive intervention is an intentional effort to enhance hedonia or eudaimonia through gaining greater meaning or purpose, engaging in an important task, building better relationships or accomplishing something challenging (Pawelski, 2020). Conditionally, positive interventions hinge on someone's desire to transport their life to a different and enhanced state. These statements, when verbalized, will include modal verbs, such as shall, will, should, could, that express possibility. Pawelski's (2020) outlines an *elemental model,* which makes it possible to both assemble and deconstruct highly specific positive intervention. Pawelski proposes five components of positive interventions: A desired outcome, a target system, a target change, an active ingredient and an activity. For example, a desired outcome is the reason for engaging in the intervention, such as enhancing a friendship. A target system is the space where the change will take place, in this case it is the relationship itself. A target change is the stock in which the intervention will change, such as mutual regard in a

relationship. The active ingredient is what causes the target change, such as seeking a shared challenge or goal. Finally there is the activity, which could be a shared goal to run the local 5k race series together with a friend. Instead of relying on a rigid positive intervention, the elemental model is designed to be personalized for a population or individual (Pawelski, 2020).

Therefore, the designer needs to be attuned to the needs and context of their population or client and needs to harness the best *phronesis*. Greek for situational awareness and practical wisdom, *phronesis* is essential for building an effective and ethically sound intervention (Schwartz, 2021). The measurement and rigor that accompany well-designed PPIs distinguish them from self-help exercises, and allow scientists to empirically determine the effect of the intervention or recognize that the intervention did not have a desired effect. In fact, studies show that when interventions are tailored to the individual they are more effective (Sin & Lyubomirsky, 2009), sometimes referred to as *person-activity fit* (Lyubomirsky, 2008). For example, in a meta-analysis of PPIs for treating depression, tailored interventions enhanced well-being and decreased depressive symptoms moderately (Sin & Lyubomirsky, 2009).

Consider an individual who benefits from a positive intervention, an individual turns and improves a relationship in their life, or begins to perform better at work, or becomes more engaged in their community. The bi-directional flow of wellness has societal implications– one could even imagine that the widespread adoption of positive psychology could tilt the world. The *telos*, or the end goal of positive psychology is to make the world a better, fair and more fulfilling place to be (Schwartz, 2021). Prilitensky (2020) explains how a world of wellness must prioritize fairness; in his vision for a fair world, people feel valued nearly as much as they perceive they add value to the world. So, there must be attention to adjusting the scales of fairness where systemic and demographic imbalances exist.

Research, Theory & Practice

In sum, positive psychology is a field of study with three ends: research, theory and practice. The research is completed in academia and produces the theories and evidence that informs an ethical positive psychology practice (Csikszentmihalyi & Seligman, 2000). Examples of positive psychology in practice include coaching, and organizational leaders building institutions that maximize wellness for their employees and customers. Positive institutions can be expansive– cities and even nations are striving to integrate wellness into governmental and education systems (Seligman & Adler, 2018). This capstone will focus on theory and practice by organizing the theories most pertinent to cultivating friendship through adversity. Friendship is a broad topic, and this paper will not cover the full picture of friendship dynamics. Topics like friendship formation, cessation, and all varieties of friendship experiences will not be discussed entirely. Instead, this paper will hone in on the specific experience of adversity and the resonance of trait-level virtues that occurs when adversity is shared.

<h3 align="center">Part II: Interdisciplinary Theories of Friendship</h3>

This section will collate the various literatures on friendship and organize the wisdom from each. Positive psychology, philosophy and evolutionary psychology offer perspectives and knowledge on this topic. Positive psychology describes how friendships, connection and well being are related. Philosophy illuminates a vision of the "perfect," friendship and how they come to be. Evolutionary psychology tells us why cooperation and kinship are essential for survival.

Positive Psychology & Friendship

Positive psychology is the science concerned with what makes life fulfilling and worth living and relationships have been long recognized as a source of wellness. Research shows that *extroverts* – those with a propensity to make friends easily and seek out social contact for

motivation – report happier lives than less extroverted peers (Pavot et al., 1990). Additionally, it

has been empirically demonstrated that extroverts participate in and enjoy more social activities

and this participation is what results in their increased happiness (Argyle & Lu, 1990). In fact,

happy people affect their community well-beyond their immediate network by experiencing

frequent positive emotions (Fowler & Christakis, 2008). A long-term study of 4,739 participants

tracked the well-being of each person in their social networks. The authors found that clusters of

happiness can radiate outwards to three degrees of separation. That is, your spouse's sister's best

friend is more likely to be happy or happier in the future when you are happy, and vice versa.

While happiness and a happy network of peers sounds nice, it doesn't indicate the *quality* or

fulfillment in the network. There is likely a difference between a person with 100 happy

acquaintances and a person with far fewer, but deeply connected, friends. Research has also

found that people report that their close friendships are the most meaningful parts of their life

and that people with positive close relationships report deeply satisfying lives (Diener &

Seligman, 2002).

     Understanding *love* – the ultimate positive emotion in some social scientist's eyes – is

important for understanding how relationships become close. Long-time positive emotion

researcher Barbara Fredrickson defines love not as a singular emotion but a context layered atop

any other positive emotions. When we experience a positive emotion, like awe, together in a safe

and close relationship (Fredrickson, 2009, p. 47-48). Positive psychology has the potential to

change societies, but perhaps more understandably, it can change how we interact with the

people we connect with. The relationship science described by positive psychology describes

how interacting with others impacts wellness. As discussed above, experiencing positive

emotions with another person is a prime example. Recall, positive emotions are feelings like joy,

awe, serenity, gratitude and amusement (Fredrickson, 2009). People who experience frequent

positive emotions, however and wherever they experience them, see numerous benefits. Highly

positive people live longer, especially when they have positive emotional content early in life

(Dannar et al., 2001). Gratitude interventions, which increase positive emotions through

expressing or reflecting on grateful thoughts, have been shown to lower depression (Seligman et

al., 2006). In fact, researchers have even found that loved ones can be a source of experiencing

the positive emotion of awe (Graziosi & Yaden, 2019).

The best description of love, the most potent of the positive emotions, is when two people

experience joy or any other positive emotion together in a safe and familiar context (Fredrickson,

2009). Love, then, is a momentary state, not a destination, and a prime example of how positive

emotions are the means to broadening attention and building relationships. Frequent states of

shared love-like emotional space, like smiling with a friend, tend to make people more social and

increase our well-being (Fredrickson, 2016). Fredrickson's (2016) study also finds that positivity

resonance (described above) impacts us biologically. When people share a positive experience

and the resultant positive emotion, there is synchrony in their chemical and neurological makeup.

Dyads and groups sharing a positive emotion show synchrony in oxytocin changes as well as

widespread neural synchrony– that is, our brains do the same thing at the same time in the same

portions of the brain (Fredrickson, 2004).

At friendship initiation, and at the initiation of relationships of all kinds there is a bout of

passionate love, which has high levels of intense attraction (Gable & Gosnell, 2011). Following

passionate love is companionate love. *Companionate love* is a hallmark of friendship. It is the

emotion that confirms that a secure attachment exists and the friend will attend to the other's

needs (Gable & Gosnell, 2011). The need for companionship can be seen through the social costs

of loneliness, which is the absence of companionate love. Lonely people experience low self

esteem, have a poor self image, and view the world negatively (Heinrich & Gullone, 2006).

Additionally, all-cause mortality is higher for lonely individuals, especially in men (Holt-Lunstad

et al., 2015). Therefore, it seems that the passionate emotion initiates a bond and connection,

while the companionate emotion maintains the exchange necessary for a sustainable partnership.

There are certain qualities and behaviors that correlate with closeness, including actual

and perceived support from a friend in stressful times and how a friend responds to the other

friend's disclosure of good news (Peters et al., 2018). The enthusiastic and constructive response

to a friend's good news is likely a disclosure of a deeper truth – an affirmation that they have

their friend's best interest and goal pursuits in mind. If friends have interdependent goals, or

goals that are partially and entirely correlated or reliant on each other, their closeness and success

will rise with each other's tide (Gable & Gosnell, 2011). Rusbult and colleagues (2009) offer the

"Michelangelo Effect", where the sculpture represents your friend, and your affirming words and

actions of their ideal self are the chisel. Their research indicates that having a friend help you in

the promotion of your ideal self may make the pursuit swifter and more meaningful if the

sculptor is talented, that is to say that friends that share a vision of our goals and interests help us

attain those things faster (Rusbult et al., 2009).

In the context of business and organizational relationships, positive psychology has a

construct called *high quality connection (HQC)*. HQC is a short-term interaction between two

people that is marked by three main attributes: positive regard, trust, and active engagement from

each individual (Stephens et al., 2012). HQC is noted to be important for developing

relationships and maximizing organizational potential (Dutton, 2003).

Overall, when it comes to friendship, positive psychology offers research around how friendship impacts individual well-being, how it is shared, how it spreads and ways in which to be a good friend. However, much of the research comes from the past few decades and is exclusively focused on friendships in the context of modernity. Are there enduring qualities of friendship that transcend *presentism* (i.e., the bias of viewing a topic from our own time periods; (J. Pawelski, personal communication, October 22, 2022). In the next section, I turn to philosophy, specifically the first writings on friendship to evaluate what endures.

Philosophy & Friendship

Friendship appears in the early philosophical texts and renowned philosophers covet friendship as the finest of human experiences. Aristotle and Cicero wrote and lived centuries apart, but aligned intently on the importance of friendship, or at least their friendship experiences affected them similarly. Their texts analyze friendship and put structure to describe its social phenomenology and agree that that phenomenon of friendship is the finest treasure of the human experience. The two wrote focused treatises on friendship. Aristotle wrote *Nicomachean Ethics* in 350 B.C.E. in Athens (Aristotle, 350 B.C.E./1998). Nicomachean Ethics included chapters focused on portions of the human condition, and the eighth book centers on friendship. Three centuries later, Cicero writes *De Amicitia* a year before his assassination in 43 B.C.E. (Cicero, 44 B.C.E/2018). Cicero agrees with Aristotle's framework on friendship. They both argue intensely that true friendship is impossible without virtue and goodness and expand on the various forms and roles of friendship in the human condition.

"For no one would choose to live without friends, but possessing all other good things."
-Aristotle, 350 B.C.E./1998

"All I can do is urge on you to regard friendship as the greatest thing in the world; for there is nothing which so fits in with our nature, or is so exactly what we want in prosperity or adversity."

Aristotle's primary discussion on friendship assembled a framework for discussing virtue and

friendship. Cicero expands on his themes and topics. They agree that friendship begins with

virtue and without virtue there is no true friendship (Aristotle, 350 B.C.E./1998; Cicero, 44

B.C.E/2018). They identify some pseudo friendship that appears to be true, but is either

unsustainable or sordid. These are important to identify before understanding true friendship.

Take, for example, two people who lack virtue entirely and are the worst criminals of mankind.

Schwartz (2022) warns to beware of those separated from goodness and having a corrupt

character. Despite their skillful criminality, and ability to accomplish great things these

individuals are not suitable for true friendship, they lack what I call *"friendworthiness":* the

display of and capacity for morally good attributes. Our philosophers argue that friendship is for

admiring goodness– in tyrannies and when fairness is absent the conditions of friendship do not

exist (Aristotle, 350 B.C.E./1998; Cicero, 44 B.C.E/2018). Justice and fairness impact well-being

on an interpersonal level, and broader at a community level (Prilleltensky, 2012). Aristotle

describes three levels of friendship (350 B.C.E./1998). Friendships of pleasure, which are

common in youthful friendships. Friendships of utility, which resemble business relationships

and the service relationships that sustain us. Aristotle declares that friendships of virtue

relationships that center on mutual regard of each other's goodness. In the following sections I

use this hierarchy to expand upon the idea of friendship and virtue.

      When Friendship is for Utility. The dynamics of usefulness and utility in friendship also

meddle in the conditions for friendship. Seeking a friendship for how it might benefit us

materially or otherwise can be easy to fall into, as our biological tendency of competitiveness

(Buss, 2019) and to accumulate resources predisposes us to value the utility that others offer us.

Aristotle warns that a friendship pursued for utility and usefulness will not sustain and is a signal that the friendship lacks virtue (Aristotle, 350 B.C.E./1998). Friendships of utility can be profitable and even enjoyable; however, when the friendship of utility ceases to be profitable the bond will dissolve. This is similar to how corporations maintain their partnerships. Corporations, from Latin's word for body: *corpus* (Merriam-Webster, n.d.)*,* seek partnerships and trade alliances that are most similar to friendships of utility. The other company has something to offer and the material benefit helps the other. The friendship, then, is not explored for the purpose of admiring the other's goodness, but for self promotion. These partnerships, like an employment contract, terminate when the partnership is no longer profitable and has little regard to the wellbeing of the terminated party. Aristotle warns that there are plenty of people who may be interested in your utility, and to beware of collecting friendships of these types (Aristotle, 350 B.C.E./1998).

When Friendship is for our Pleasure. Similar to friendships of utility, friendships of pleasure are not what our philosophers describe as the ideal, but they do place them in perspective (Aristotle, 350 B.C.E./1998; Cicero, 44 B.C.E/2018). Aristotle notes that children rightly pursue friendship for pleasure because it is fun and playful, and play is the root of childhood learning (Aristotle, 350 B.C.E./1998). Cicero writes a section on ending friendships, and notes that *"the warmest affections between boys are often laid aside with the boyish toga"* (Cicero, 44 B.C.E./2018, p. 67).

Friendships of pleasure cease when the friendship is no longer pleasurable, or when the friend no longer entertains. Cicero argues that the problem is that the friendship is rooted in a selfish quest for our entertainment or pleasure and not in the admiration of the friend's inherent

virtue (Cicero, 44 B.C.E/2018). For example, as people change, their wit or disposition may cease to align with a certain friend or group, making time spent together less satisfying.

  Perfect Friendship. The definition and description that Aristotle established and Cicero expanded is perfect in that it is simple, and leaves nothing to be removed. They say perfect friends know each other thoroughly, and because they know each other thoroughly and experience a variety of things together they can deeply admire their respective goodwill and virtue (Aristotle, 350 B.C.E./1998; Cicero, 44 B.C.E/2018). The perfect friendship, pursued for and from virtue is both useful, in that it creates eudaimonia (wellbeing) which sweetens life and compounds our social & experiential resources. Much like Fredrickson's (2009) broaden and build theory of emotion, it can be said that these philosophers argue that perfect friendship expands our character. The perfect friendship, centered on the virtue of our friends, creates a unidirectional phenomenon where the perfect friendship is pleasurable and provides utility, but friendships for utility or pleasure cannot be perfect (Aristotle, 350 B.C.E./1998). Virtue is a one way valve. When friendship is an end in and of itself, there is virtue. When friendship is a means to another end, it is imperfect (Cicero, 44 B.C.E./2018). Philosophy provides imagery and deep thought on how adversity helps create true friendship. Thankfully, branches of science like evolutionary psychology are exploring similar questions with the most modern scientific tools.

Evolutionary Psychology & Friendship

  Connection in Early Environments. Evolutionary psychology theorizes how the human mind and behavior evolved over the history of our species. Evolution is the process of change to a species and is contingent on three elements: random gene mutation, selection of advantageous traits and repetition over multiple generations of a species (Shubin, 2008). The resultant biodiversity grants the necessary contrast for a historical comparison of these traits. Physical

traits are found in the fossil record, but psychological traits leave no physical artifact. Therefore,

evolutionary psychologists have to use the current and recent observed behaviors to make

inference on which patterns in behavior were adaptive and pervasive to the species. Some

categories of evolutionary psychology, such as mating strategy, conflict between groups, social

hierarchy, and parenting dynamics stay close to the biological patterns of the species (Buss,

2019). In the present day, there is further insight than ever into kinship, cooperation, altruism and

theories on the advantages of and problems with these behavioral phenomena (Boyd &

Richardson, 2009).

Our evolutionary origins wired a need for intimate and collective relationships in us for

optimal well-being and physical health. The early seeds of connection that matter for survival,

grow as we age and manifest in how we communicate, live and thrive. A child that seeks

connection, and therefore safety, will survive (Peterson, 2006). This instinctual attraction keeps

the infant seeking its caretaker for nutrition and, it turns out, connection. Early on in

development, a child will develop an attachment style based on how consistently their needs for

food, warmth and physical contact are satisfied (Haidt, 2006). The attachment style, which can

be either secure, anxious, or in rarer cases a mixture, is a behavioral disposition that will translate

to how an individual will communicate, develop autonomy and thrive socially later in life

(Peterson, 2006).

The consequences of having not enough, or zero physical contact are horrid. In a study

about children in orphanages, where physical contact was forbidden to avoid contagious

diseases, 23 of the 88 children died by the end of the study (Van der Horst & Van der Veer,

2008). A researcher compared the orphanage group to a group of children at a prison nursery

where their mothers were incarcerated but allowed contact with their children. Zero of the

children died at the prison nursery. The children were dying from a lack of human contact, not germs and scientists later operationalized experiments with monkeys to show how critical contact is, even with a cloth replacement mother (Smith, 2017; Harlow & Zimmermann, 1959). Social and physical connection, then, are necessary ingredients for survival in childhood. Attachment style translates to adulthood too. People with secure attachment styles are more likely to display prosocial behaviors and less likely to have destructive relationships (Peterson, 2006).

Outcomes associated with connection. There are crucial psychological and health benefits of having close relationships in adulthood. A long-term study of 4,739 participants tracked the well-being of each of their social networks. It found clusters of happiness can radiate outwards to three degrees of separation (Fowler & Christakis, 2008). That is, your spouse's sister's best friend is more likely to be happy or happier in the future when you are happy. The study posits that the proximity and types of relationship matter too – a nearby relationship will have a greater impact. Additionally, people with broad networks report greater well-being than those with small networks. Having more ties and a sense that your community will support you results in feeling less stressed, too (Gable & Gosnell, 2011). Higher quality connections, even if the interaction is brief, matter more than accruing numerous acquaintances with little interaction. Poor-quality relationships or a lack of social ties are associated with poorer physiological health (Gable & Gosnell, 2011). In addition to how many and what kinds of people we are connected with, it seems that what we do together also impacts our well-being. Celebrating and participating in ritual, drumming or dance seems to result in a transcendent experience and a deep sense of unity (Haidt et al., 2008). Anyone who felt the deep longing for a wedding

reception, concert, or a packed sports arena during the COVID-19 pandemic lockdown can understand the power of that social unity by contrast (Mull, 2021).

   Cooperation & Altruism. Cooperation is especially interesting since natural selection is a competitive process. Why would it be advantageous to share resources and why do we make sacrifices for others? In the context of near relatives, the answer is still selfish. A sibling or first cousin carries a high percentage of shared genetic makeup, so sharing resources with them and helping their efforts in advancing a new generation is good for our genes too. This quid pro quo amongst relatives is called *inclusive fitness theory* (Nowak et al., 2010). There is evidence of cooperation and social exchanges between non-kin hunter gatherer communities (Buss, 2019), but for friends that are not near relatives, the benefits of cooperation are directed less to reproduction. Primate species cooperate, and vampire bats share food with those who shared food with them in the past (Wilkinson, 1984). These zoological friendships are adaptive, and depend on the past emotions and experiences with their peers (Seyfarth & Cheney 2012). Research is emerging on how trees share nutrients and communicate between each other, even across species, and are likely more perceptive and complex than visible to our eye (Grant, 2018).

   Reciprocal altruism is the behavior in evolutionary science of interest for understanding friendship. It is when an animal behaves in a way that is not good for their fitness in the immediate sense, and instead benefits a peer's fitness (Trivers, 1971). Consider a hunter thousands of years ago who is successful this week, but unsuccessful for the next two. It behooves him to share his bounty when he is successful as long as the successful hunters on his off weeks return the favor. When birds sound a warning cry, they expend their energy to alert others of danger even when they themselves are already on the move. There are gains to be made by helping, and this is the root of reciprocal altruism (Trivers, 1971). Humans have five key

cognitive capacities and systems for keeping track of this endless exchange of help (Buss, 2019).

These capacities help us keep our allies and cooperators close, while recognizing and evaluating

cheaters. Buss (2019) outlines the five capacities:

1. We are really good at recognizing faces; one study measured that humans recognize 90% of faces after 34 years (Bahrick et al., 1975).

2. We remember histories of interactions, especially attuned to who is a cooperator and who is a cheater.

3. We have the ability to communicate our own and others values and needs. If you don't know what I want, how can you know to give it to me?

4. We have the ability to anticipate when people need things.

5. We have the ability to represent costs and benefits independent of the items exchanged– a mental currency tracker.

Our competencies for detecting cheaters and keeping track of good friends can also be excellent

for detecting character and virtue in others. There are far more people who need our help than we

have the resources to aid, so the dilemma is to whom we extend help and resources too (Bloom,

2017). The people who are least likely to return the favor are most likely the ones in the greatest

need, so we rely on our cognitive capacities to make the decision on who to help and how much.

Evolutionary Psychology's Advice. There is an economy for our friendship energy, with

unlimited demand but finite supply. Evolutionary psychology suggests a series of practical,

hardly emotional things that we should consider the following when selecting friends (Buss,

2019):

1. Number of active friendship slots – costs having too many or too few friendly relationships include overextension or being left without key social resources

2. Who has "positive externalities," these passive benefits of being friends people with talents or abilities, better at getting resources

3. Select friends who are good at reading your mind and anticipating your needs. These friends cooperate more efficiently and effectively.

4. Select those who you consider you to be irreplaceable. The best predictor of who you value as a friend is who values you as a friend (DeScioli & Kurzban, 2009)

5. Select friends with common interests and goals

There is a clear thread from our need to seek safety through contact as infants to the need for other people in our lives as adults. We are fundamentally social creatures that thrive and survive by way of connection and attachment – predisposed to enjoy social immersion and find meaning through connection with other people. It seems, ironically, that we are our most secure, joyful and meaningful selves when we are experiencing life with other people. Today, we live in conditions that are much safer, healthier and stable– we have laws and social systems that have taken the place of gossip and reputation based systems for maintaining social order and, unfortunately, we are less dependent on our friends for material and emotional support (Buss, 2019). With far fewer colossal tragedies, and less interdependence than before, we see our friends in action less and therefore – we lack the perspective that allows us to *truly* evaluate the goodness of our friends. And therefore we lack some of the events that allow us to truly evaluate the goodness of our friends. A founder of evolutionary psychology as a science posits this:

"It is possible that the sense of alienation and loneliness felt in modern living, a lack of deep social connectedness, might stem from the lack of critical assessment events that tell us who is deeply engaged in our welfare."

- Buss, 2019

Part III: Friendship & Contexts of Adversity

The final portion of this capstone will evaluate and recommend how adversity can be a fruitful condition for developing authentic friendship. In this section I will qualify and define what the term adversity means within the context of clinical psychology. Furthermore in this section, adversity and challenge are considered in the context of positive psychology. Finally I discuss how adverse conditions can be important for growth.

Defining "Contexts of Adversity"

Mountaineers and adventure athletes have an informal gradual scale to describe the types of fun that will serve as a good analogy for what psychology has to say about types of adversity. There is "type I fun", "type II fun" and "type III fun". Consider these three examples that could occur on the same mountain. Type I fun is easy, entirely pleasurable and would be done again and again, like walking along the ridgeline and having a summit coffee with friends overlooking the autumn colors in the valley. Type II fun is stressful, with moderate trepidation and some fear, like breaking trail through waist-deep snow with 5 miles to go as daylight expires– all is well that ends well, and the experience shines in retrospect but it is not constantly enjoyable during the activity, in fact it may be miserable during the ordeal. Then there's Type III fun, a 300 foot fall down a ravine, a broken bone, a rearranged smile and a sketchy rescue from your underqualified buddy– it's not fun while you're doing it, probably a scarring experience physically and psychologically and you're happy to escape with your life. Never again.

Krupnik (2019) operationalizes and defines the psychological constructs of adversity versus trauma eloquently in a similar three category framework. Stressors can increase in severity, like they did in the mountain adversity examples. The operationalized model proposed by Krupnik (2019) borrows from the *theory of stress*, which outlines stress as a dynamic system of load and recovery from that load to homeostasis (Goldstien & McEwen, 2002). Our internal resources and ability to self-regulate act as an antidote to counteract the psychological disruption caused by the stress response, so the higher our regulatory abilities, more stressful events can be handled and diffused. In their model, Krupnik (2019) calls everyday stress responses normative and are healthy, in that the organism returns to a homeostatic state quickly after being perturbed. The second type of stress response is a pathogenic stress response. It shares the root word with

pathogen because it can cause harm and there is some breakdown in self-regulation abilities. In

Krupnik's (2019) model, this is called *adversity*. Adversity is front and center in discussions

about *resilience*, which is the ability and capacity to adapt and carry on in the face of threats and

adverse conditions (Cutuli et al., 2021). Protective factors are qualities of an individual that

predict a resilient response to adversity. Having strong social resources, like friendships, we

know are protective factors (Van Harmelon et al., 2017).

In Krupnik's (2019) model, the third response beyond the pathogenic response (i.e.,

adversity) is referred to as *trauma.* The experience of trauma is one where the stress response

breaks down self-regulation ability. In summary, a traumatic stress response can occur whenever

the severity of stressors exceeds the self-regulation functions. There is subjectivity on this scale,

since the stress response to some event will vary by individual and by context (Krupnik, 2019).

Assigning criteria to qualify adversity as a finite or consistent set or type of event or scenario

would be impossible – what you can handle in life without it becoming adverse will always be

different than what would qualify for another. See *Table 1* for an integration of Krupnik's (2019)

model alongside the Fun Types described above.

Table 1. *Chart of adversity types and example activities,*

	Psychological Adversity or Trauma	**Adventure Fun**	**Friendship Example**
Type I	Normative: Every-day stressors	A gentle alpine hike	Intense Quizzo match
Type II	Adversity: A pathogenic stress response	Rock climbing at your physical and cognitive limit	Co-leading a large community service project
Type III	Trauma: Marked breakdown of self-regulation abilities	Crash landing a hang glider in Alaska	Experiencing a disaster together

In the search for high quality friendship, the goal is not to traumatize ourselves, or our friends.

So the question becomes, what is a situationally wise way to seek out experiences that can heed

Aristotle's (350 B.C.E./1998) advice to eat *the proverbial amount of salt together,* to experience

virtuous friendship? For insight into this question, we turn next to positive psychology and

friendship in the context of adversity and challenge.

Positive Psychology, Adversity & Friendship

Type I or Type II adversities (refer again to Table 1) can be good for developing mastery

and performance experiences since there needs to be some amount of stress to spur growth and

expansion of our skills and ability (Krupnik, 2019). Research suggests that to develop mastery or

competence in any physical or intellectual domain, though, we need challenges (Bloom, 2021).

Surviving a moderate or intense ordeal can demonstrate to an individual that they are capable of

doing something, like managing a health crisis of a loved one, that they previously believed to be

beyond their skill– the experience helps them discover and believe in their own efficacy

(Maddux & Kleiman, 2021). Discomfort or struggle can also provide contrast to the pleasant

features of life and prepare us for unknown futures. People seek horror films, spicy foods and

engage in behaviors like pressing on bruises – Bloom (2021) calls this *benign masochism*.

Testing our comfort and boundaries may be a form of preparation– consuming a scary story

engenders thinking about how we would react if it happened to us. Haidt (2006) has suggested

that it is important to get hurt in small doses in play so that we can learn not how to get hurt.

Importantly, it is benign in that it doesn't produce a psychopathology or a serious injury, or what

Krupnik (2019) would classify as *trauma*. So how can we find the point at which one is

physically and cognitively challenged, yet in control. This experience is strikingly similar to the

phenomenon outlined to describe *flow* – the engagement and self-loss in an activity

(Csikszentmihalyi, 1990). Flow is said to occur when the challenge is a perfect match and ever

so slightly above our current ability, when the challenge far exceeds our skill we are anxious and

when our skill far exceeds the challenge at hand, we are bored (Csikszentmihalyi, 1990).

Struggling together could be as benign as setting a common goal to be accomplished

together. A *goal* is a mental image of a future state – it is an idea paired with an action plan to

fulfill the idea (Deci & Ryan, 2012). Goals can vary in scope, complexity and specificity. Goals

that are very challenging will require high commitment and the more committed an individual is

t, the higher their performance (Locke, 1996). Commitment is driven by how much the

individual believes they can accomplish a goal and how important it is to them. In other words,

the higher we aim, the more we accomplish (Locke, 1996). Hope is a positive emotion that

individuals feel when projecting favorable future conditions or circumstances. *Hope theory* is an

empirical approach *to* how individuals conceptualize and strive toward goals, and maintain

motivation to sustain the goal pursuit (Magyar-Moe & Lopez, 2015). Hope theory provides

practical advice for accomplishing goals through enhancing, finding, bonding over and

reminding of hope (Magyar-Moe & Lopez, 2015). With a common goal or challenge in mind,

friends share the planning and determination to accomplish the task. The common and finite task

at hand allows each friend to understand something specific about each other. Aristotle

comments that spending time and becoming intimate with a friend is necessary for perfect

friendship, and sharing hopeful emotions around a common goal is an especially intimate way to

understand your friend (Aristotle, 350 B.C.E./1998).

In extreme situations and when tragedy strikes, communities often rally and friends rise

to assist. This can cause a social renaissance for an individual or a group and may cause them to

focus on the collective and community more. Social connectivity, especially when it is close in

physical proximity and of high quality has strong connections to well-being (Peterson, 2006).

Once again, Aristotle's wisdom aids by suggesting *phronesis*, or practical wisdom for guiding

our choices in life and advises us to seek a *golden mean* in our decisions (Schwartz, 2021). The

golden mean is the middle between two extremes. For example, I have a propensity to be

humorous, but sometimes this humor can be overdone in certain situations, like a somber or

serious conversation– a strength overdone can become a weakness. Or, in more recent proverbs:

not too hot, not too cold; but just right. Combining the psychological terminology with our

philosophic guidance, I submit that friends should find their golden mean of *struggle* – activities

and goals that they can toil over together and through which become intimate with each other's

virtue and goodwill.

The final portion of this capstone will evaluate how adversity can be a fruitful condition

for developing authentic friendship. The suffering induced from difficult activities can be

consuming to the point of losing track of time, losing self consciousness and can produce a

transcendent feeling (Csikszentmihalyi, 1990). It can take the mind off of the nagging thoughts

and vigilant anxieties that crouch in idle thinking. Recall that suffering has the power to unite.

This is true for both chosen and unchosen suffering (Bloom, 2021). In choosing a highly

connected, experience-rich lifestyle there will be unchosen suffering that comes in turn – for

instance, the more time we spend in nature benefiting from its beauty and bounty, the more likely

we are to get struck by lightning, sunburnt, bitten by a snake or ditched by our hiking

companion. I conclude that it's better to choose richness of experience, abundant relationships

and difficult goals at the price of both chosen and unchosen suffering.

Part IV: Putting it all together: Virtue Resonance

Finally, this section presents the theoretical foundation for a new construct called *Virtue Resonance.* The theoretical constituents of the construct rest upon research informed psychological phenomena or processes. In this section I provide a heuristic that illustrates how these research informed phenomena (awareness, appraisal of character strengths & virtues, meaning making and savoring) may contribute to the experience of virtue resonance. The aim of this section is to create a framework that can be empirically studied in the future.
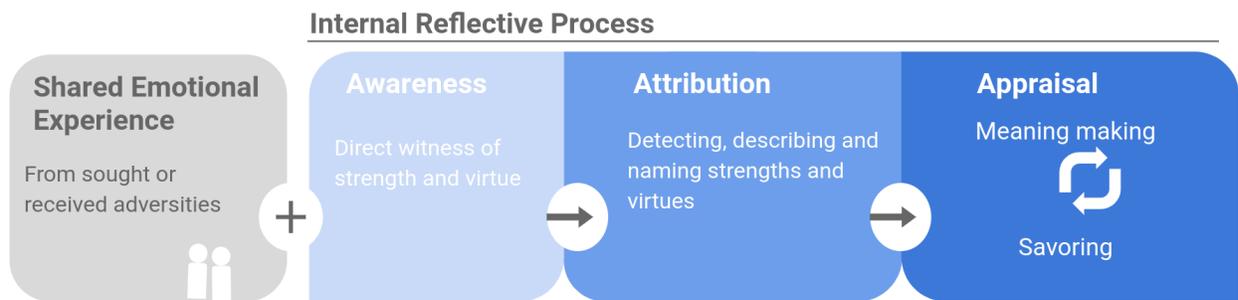
Defining Virtue Resonance

Aristotle and Cicero claim that the perfect form of friendship is the one that regards each other's virtue (Aristotle, 350 B.C.E./1998; Cicero, 44 B.C.E/2018). Evolutionary psychology posits that seeing a friend's response to hardship exposes their strength (Buss, 2019; Tooby & Cosmides, 1996). Together, we can deduce that some amount of adversity, or at least a challenge, creates a good environment for growing friendship if it highlights each friend's virtue. Ideally, these adverse situations allow friends to both showcase their virtue and recognize it in their friend. *Positivity resonance* – Fredrickson's (2016) construct of how micro-moments of shared positive emotion fosters connection – provides an analogous model of how witnessing moments of virtue and goodness can spark greater admiration and kinship. Standing on the shoulders of positivity resonance, I propose a new construct to describe the echoing of virtue between friends: *Virtue Resonance.* You may have experienced this in a challenging situation where you and a friend were immersed and engaged in a task and then reached a breakthrough together. Or a time when you experienced something new with a friend, and witnessed each other's ability and skill in a novel way. Virtue resonance could be a real-time, momentary evaluation of dyadic virtue or

discovered through a reflective process. *Figure 1* below represents how virtue can be said to resonate between friends dealing with contexts of adversity and challenge.

Figure 1

Adversity to Virtue Resonance Heuristic

Note: The rightward arrows represent the "growing" recognition and communication of virtue in shared emotional experiences of adversity that culminate in "resonance" (i.e., the circular arrows).

The Adversity to Virtue Resonance Heuristic Explained

In this section of the paper, I explain each element of the Adversity to Resonance Heuristic (Figure 1) and then provide examples from my own life to illustrate how the heuristic translates to real life.

Shared Emotional Experiences

A shared emotional experience can be either planned for, like the chosen challenges outlined in Table 1 above. However, it is also true that we don't have total control over the challenges and adversities that arise in life and in friendship. These two modes off challenge can be divided into adversity or challenge that is sought (i.e., "seeking mode"), versus adversity or

challenge that comes as a consequence of fate (i.e., "receiving mode"). In either mode, the

content of the shared experience leads to deeper friendship or mutual regard.

   Seeking Mode. Seeking adversity and challenge safely is key for experiencing virtue

resonance. A common goal, like the group on the Appalachian trail had (see Appendix A), may

help promote virtue resonance since there was an omnipresent challenge and task at hand.

Service groups that bring people together for a common service-oriented task could also be a

reliable source of sought adversity and challenge. Organizations like *Bike & Build* (Bike &

Build, 2022), or *Habitat for Humanity* (Habitat for Humanity, 2022)*,* where groups travel to

build affordable housing provide a forum for groups to build something together with both

physical and intellectual challenges. Categorically, friends should aim to target endeavors in

which they have at least partial agentic power, which is an ability to participate and determine

the outcome of the activity. In these situations, they are likely to maintain some self-regulatory

ability greater than the challenge (Krupnik, 1990). Many adults socialize over entertainment

events, such as a shared fanship of a professional or collegiate sports team. While the passionate

fan may argue that their fanship, cheering and prayers may impact the outcome of the game, I

would suggest that participating in a recreational sports league or co-coaching a team would

provide a better forum for growing friendship through virtue resonance. Similarly, commensality

is the act of sharing a meal together. Participating in the planning, preparation and hosting of a

meal would present a better forum for virtue resonance than eating out because the effort

required to produce the meal will present some challenges and more emotional experiences (M.

Levison, personal communication, July 13, 2022).

   Receiving Mode. Invariably, adversity may find its way into a relationship in the form of

an illness, crisis or any other form of unrequested hardship. In the context of sought adversity, an

additional layer or escalation of received adversity can also strike– a violent thunderstorm on an already difficult rock-climbing pitch, for example. Received adversity and challenge can force change or new chapters in friendships, which has the potential to reveal merits and virtue previously unwitnessed. *Moral elevation* has been described as a complex emotion involved in witnessing virtue (Haidt, 2003) and *interpersonal awe* involves feeling awe in the witnessing of virtue in a close relationship (Graziosi & Yaden, 2021). Often these experiences occur in the context of hardship (Haidt, 2003; Graziosi & Yaden, 2021). Virtue resonance involves the added layer of witnessing, labeling, as well as savoring and meaning-making processes that are shared. Therefore, unchosen adversity, might produce some of the strongest "critical assessment events," that psychologists say provide insight into how we are "engaged in each other's welfare" (Buss, 2019).

Internal Reflective Processes: The Three A's

      Awareness (Direct Witness of Strength and Virtue). William James - a 19th century philosopher and early teacher of psychology in America - placed value on how our awareness is central to our lived experience, saying "my experience is what I agree to attend to," (James, 1892/1984). James, Aristotle & Cicero would agree that it is necessary to draw our attention to the virtuous qualities of our friends in order to produce a resonant experience (James, 1892/1984; Aristotle, 350 B.C.E./1998; Cicero, 44 B.C.E./2018). A mindfulness practice can help us direct our attention pointedly. *Mindfulness* is a quality of mind and process of being aware of the present moment (Kabat-Zinn, 2015). Cognitive neuroscientists have deduced that mindfulness works, in part, by the ability to detect and label emotions or affect – validating the ancient wisdom of Buddhism (Creswel et al., 2007). This is to say that the more aware we are of our shared experiences and the emotions they produce, the more opportunity there is to reflect on and

build friendship and mutual regard. Perhaps this is why Aristotle was keen to mention proximity

and intimacy in building friendship, knowing that bearing witness to virtue and sharing

experience is more likely to happen when friends are physically together (Aristotle, 350

B.C.E./1998). Perhaps my first manager after college summarized the benefits of heightened

awareness and attention the best: *"You'll be amazed at what you'll see when you live life with

your eyes open"* (M. Costolo, personal communication, January 17, 2017).

   Attribution (Detecting Strength and Virtue). In either mode, the ability to name and

detect the strength of others and ourselves is critical for understanding the virtues in our friends.

If friendship grows by identifying the goodness and virtue in our friends (Aristotle, 350

B.C.E./1998), then we need a language to describe their goodness. Conveniently, there is the

language of character strengths – the universally valued list of strengths that describe the good in

us (Peterson & Seligman, 2004). Learning the language of character strengths can help friends

point to and understand the goodness of their peers. As the thru-hikers (return to Appendix A) set

out every morning for another 15 to 25 miles of movement, they witnessed perseverance, zest,

and bravery– three character strengths found in the VIA classifications "courage" virtue category

(Niemiec, 2017). Using the terms and strengths outlined by the VIA institute, friends can define

the meritis for their friends in color and dimension. One category of character strengths

interventions is called *strengths spotting*, where the goal is to name the strengths in either oneself

or others (Niemiec, 2017). Again, the ability to spot strengths is aided by the mindfulness

process (Niemiec, 2013a).

   Language and vocabulary are the only tools to name and associate strength and virtues

with our experience, and this is why the language of Character Strengths is so convenient. The

language already exists, has been psychometrically validated (Peterson & Seligman, 2004) and

there are *already* interventions that exist to facilitate this sort of attribution. I will borrow some wisdom from my neurologist, who clued me into one of the challenges of her field – when it comes to understanding some of her patients' symptoms and neurological phenomena. She said: "*I can only know what you can tell me in words*" (Anonymous, personal communication, February 18, 2020).

  Appraisal (Savoring & Meaning-making). The final step in the virtue resonance heuristic cycles between *savoring* and *meaning making* and is categorized as the appraisal step. *Appraisal* is a process where cognitive evaluation is involved with each and every feeling (Smith & Kirby, 2001). A specific example of appraisal is savoring. *Savoring* is the propensity to stop and notice past, current or future positive states (Hurley & Kwon, 2012). Savoring has temporal varieties and can be further described as: reminiscing (past), anticipating (future), and those special people who chew their food with their eyes closed, savoring each bite (present). Kidding aside, in a study of older adults researchers found that those with a greater ability to savor experienced greater subjective well-being and satisfaction with life (Smith & Hollinger-Smith, 2015). Savoring can even be measured using the S*avoring Beliefs Inventory (SBI)* which measures a person's perception of their ability to feel good through anticipating savoring the present or reminiscing about the past (Bryant, 2003). Bring to mind a time when you and a friend paused in the moment to savor an accomplishment, like during a long embrace at a graduation ceremony or reminiscing on a work collaboration that turned out well.

  Another cognitive step in the appraisal process is *meaning making*. In a given situation, such as a shared adversity or challenge, the meaning making process is both deliberate and automatic processing of a stressful situation (Park, 2010). At its root, meaning made about a stressful situation is a belief. A larger global meaning can be made of aggregating many

situational meaning beliefs, including beliefs about ourselves, others and how we see the world

(Park, 2010). In the interest of friendship, the small moments of meaning made about the

adversities and emotional experience become the regard and admiration we have, or don't have,

for them. These beliefs are analogous to the mutual regard that Aristotle claims to be critical for

true friendship (Aristotle, 350 B.C.E./1998). Having meaning in life is sometimes described as

feeling like you are part of something bigger than yourself. Measuring this feeling is difficult, but

there are several methods developed to glean one's perception of how meaningful their life is

(Duckworth et al., 2005). Emily Esfahani Smith (2017) posits that the four "pillars" of meaning

are: belonging, purpose, storytelling & transcendence and that cultivating meaning in our lives

and cultures leads to deeper satisfaction and wellness.

Illustrative Examples: Virtue Resonance in My Life

To illustrate what this virtue resonance looks like in friendships, I am going to borrow

salient and profound examples from my own life. The sought and received challenge and

adversity I explain below has been made into a film and a film companion organized around the

Adversity to virtue heuristic (Appendix B).

Receiving Mode: Brain Cancer. In December of 2019 I was diagnosed with a brain

tumor and have been undergoing surgeries and treatments since (unchosen adversity). While this

circumstance is not something I want – and wouldn't wish on anybody – it has been a window to

so many of my friend's virtues. I am fortunate to receive more than enough support and

companionship from my extended network of friends, so much so that I was struck by it. The

magnitude of the emotional experiences heightened my awareness of the merit and virtue of my

friends and augmented my value system to be more other-focused (appraisal of character

strengths in self and others). A neighbor summarized the phenomenon to me once as "when

tragedy like this strikes, sometimes you get to see the best of humanity" (M. Sikora, personal communication, April 12, 2021). During that time, the number and proximity of my friends stayed the same. The largest change was that I became aware of their love and kindness and dwelled on it routinely (savoring & meaning making). For more on virtue resonance in the condition of received adversity, see Appendix B.

Seeking Mode: Leadville 100. The night before my first brain surgery, a few bike racing friends visited me in the hospital. I turned to them and said "when I'm out of here, let's race Leadville together." The Leadville 100 is a 106 mile mountain bike race high in the Colorado Rocky Mountains. The morning after surgery we all entered the lottery for entry (sought adversity). The race was delayed a year due to the pandemic, but we raced together finally in August 2021. We focused on experiencing the race together instead of maximizing our personal results (awareness; attending to a shared goal). This presented novel, challenging and intimate settings to witness each other's strengths and virtues (appraisal). Interestingly, we had a film crew with us and were doing real-time interviews and reflection on the experience, which likely increased the volume of savoring and meaning-making. The experience galvanized our friendships. To see the virtue resonance in the condition of sought adversity, return to Appendix B.

Part V. Concluding Remarks

This paper attempts to expose why friendship flourishes when we do challenging things together. The positive psychology literature, with an emphasis on the "R" in PERMA showed how connection and positive relationships increase physical and mental well being. Philosophy and evolutionary psychology uncovered an array of thought and science that describes why friendship is so sought after and necessary. Research on the differences between challenge,

adversity and trauma helped to delineate the appropriate types of challenge to seek out. Furthermore, this capstone shines a light on adversity as a potential arena for friendship to grow in. Finally, these literatures were synthesized to propose the theoretical foundations for a new construct: *virtue resonance*.

Friendship is arguably life's sweetest fruit, a treasure shared between two people even (and perhaps especially) during hard times. During this capstone research and writing process, my mind kept returning to a term that I used during my dive into Aristotle's *Nicomachean Ethics*: "friendworthiness." I think friendworthiness (my term) is a better vision to strive for than friendliness. *Friendliness*, though important for maintaining a kind demeanor between acquaintances, is low effort, low stakes and can be exchanged with anyone. *Friendworthiness* is a moral pursuit to bring virtue into our closest relationships. We may only have the energy to be "friendworthy" for a select few. Still, cultivating the quality of our own friendworthiness may grow our virtue and increase our opportunity to notice, appraise and savor the friendworthiness of others. Contexts of adversity, when chosen or not, may provide the opportunity for virtue to resonance the loudest - especially among the friendworthy.

Appendix A

Appalachian Aristotle

The photos in the prologue to this capstone come from an experience I witnessed while hiking that serendipitously expressed some of the major philosophical themes addressed in my capstone. I approached the hikers and engaged in a conversation with them, which they agreed to let me record on my phone. The transcript of that conversation is below.

Appalachian Trail Thru-Hiker 1: "I was now around people who had endured and gone through as much as I have for, as long as I have. And they could understand how hungry I was, how tired I was, how dumb I was and no judgment about any of it because we'd all walk the same walk. And that's something you just can't do at the beginning of this because everybody's trying to figure it all out at the same time. And so towards the end there it was good to share the end of experience with people that can relate. I love you guys. I love you guys, seriously. It's from the heart."

Appalachian Trail Thru-Hiker 2: "It's been a wild ride. But it was awesome. Worth every second."

Appalachian Trail Thru-Hiker 3: "Being alone sucked. Being alone sucked!"

Appalachian Trail Thru-Hiker 2: "Yeah in the end, looking back, being alone sucked. This group here – we got together about a month ago. I don't know, mentally where I would have went, no idea. By far, this group made the ending worth every second."

Interviewer: "How long have you guys been hiking together?"

Appalachian Trail Thru-Hiker 2: "For three weeks. Since the end of Vermont. We all met down south. And we all stuck to the group into Vermont and New Hampshire."

Interviewer: "So you did all of New Hampshire together?"

Appalachian Trail Thru-Hiker 2: "Yeah, New Hampshire and Maine." The tough part. Yeah. There were some days where we needed teamwork for sure."

Appalachian Trail Thru-Hiker 4:"I think it's all about people. Yeah, all about people. But the main problem is your pace is slower if you're hiking in trail groups."

Appalachian Trail Thru-Hiker 5: "Not necessarily, I was slower when I was by myself."
"Yeah, for sure. I didn't have the motivation."

    Interviewer: 'So it's interesting. You said the motivation was greater when you're with other people?"

Appalachian Trail Thru-Hiker 4: "Yeah definitely."

    Interviewer: "Somebody to wake up in the morning for, right?"

Appalachian Trail Thru-Hiker 2: "Yeah, you know, every once and a while hiking by yourself, being alone for a couple days. Yeah, it's fine. You know, you can still walk a couple big days or whatever and enjoy it. But in the end, going to a camp where you know who's gonna be there and what you're gonna do. Like last night we had a crossword puzzle party. Things like that are what makes the trail for me. Cause after a while the hiking gets boring and annoying."

    Interviewer: "Yeah, (the hiking) is gonna be a constant." "This is the flavor."

Appalachian Trail Thru-Hiker 1: "You gotta, you gotta find a way to continue to keep the capacity to enjoy the experience and when you're alone, you're kind of by yourself doing it. ***The mosquitos are much worse when you're by yourself, the mud is much worse when you're by yourself, the rocks, the roots, all of it. But when you get back to camp and start talking with the people that walked that same stretch, you can be mad at it all together, and it makes it suck a little bit less.***"

    Interviewer: "It's validation! It's interesting – in our research we know that positive emotions when shared together– it resonates, it resonates like you're in a canyon. And that positive resonance actually makes the experience even more emotionally charged. Maybe negative emotions, like you said there too, work a bit the same way. But you also get to divvy up the adversity and, you know, share the load a little bit."I don't want to take up any more of your time, guys. But I really appreciate you doing this. I learned a lot from you and if I can say, I'm just really proud of you. Congrats guys."

Appendix B

Mountains We Climb Film Companion

Mountains we Climb is a documentary film that follows my life from September, 2019 - August 2021. In that time span the film covers the height of my bicycle racing career, my brain cancer diagnosis, surgeries and decision to return to bike racing with a friendship-based focus. The film premiered in Doylestown Pennsylvania in April 2022, in front of my friends, family, classmates and may more. In this appendix, *Mountains we Climb* is analyzed through the Adversity Virtue Resonance Heuristic and moments that represent the heuristics elements are tagged and timestamped. A link to view the film is below.

Private Link for Film: https://youtu.be/MDxXJSVwJNI

Internal Reflective Process

| Shared Emotional Experience — From sought or received adversities | Awareness — Direct witness of strength and virtue | Attribution — Detecting, describing and naming strengths and virtues | Appraisal — Meaning making / Savoring |
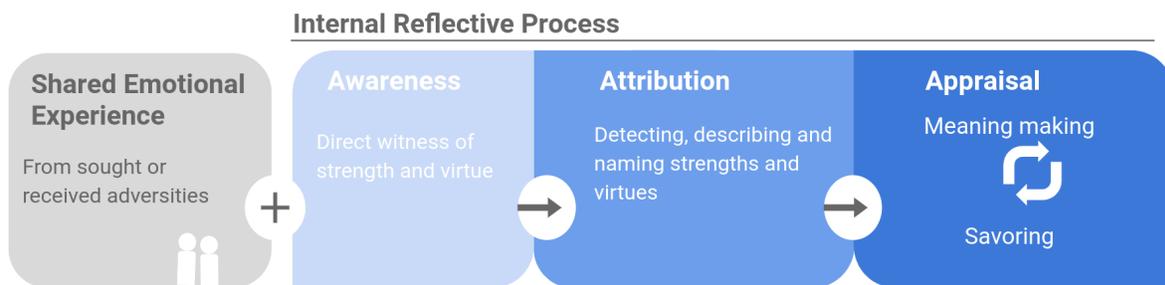
	Time	Description
Seeking Adversity Mode		
	05:10	Leadville 100 Cycling Race – chose the register the day after surgery, with some registration help from friends.
Receiving Adversity Mode		
	03:00	Landing in the emergency room after having a seizure, major disruption to life.
	04:45	Being told that brain surgery would be necessary.
	11:19	The global pandemic delays the race one year into 2021.
Shared Emotional Experience		
	0:50	The Bucks County Classic is the professional bike race in my team's hometown, an emotionally charged race for the team

	02:33	Post road race Interview: *"doing some races that get the team pumped up… longer harder… doing it together as a team."*
	07:15	*"The bike is so central to my friendships and core experiences and I think I want more of that, I'll do Leadville, but it's not going to be for myself or some top result, this will be for and with my people"*
	12:50	A neighborhood kid knocked on my door to ask me if he and his friends could fundraise and walk on my behalf for Relay-for-life.
	18:40	Choosing to complete finish the race together
Awareness		
	7:00	*"The best of humanity was at my door"*
	12:40	*"for whatever reason it helped"* – When I agreed to be part of his fundraiser, I became aware of his kindness and social intelligence, or in other words, the strengths of my friend.
	15:34	Awareness of Jason's bike handling skill.
Attribution		
	10:58	I trusted Dan to be in charge of the medical emergency kit. Acknowledging his his trustworthiness.
	12:30	*"Yeah, I have that [cancer]… that's the power of telling the truth, it's easier when you tell the truth"* – The encounter brought out a moment of honesty from me and I attributed the connection to my neighbor's courage to initiate the encounter.
	15:34	Jason's bike handling attribution to his virtue as a teammate to race alongside
Appraisal (Savoring & Meaning Making)		
	05:50	Meaning making: *"Something like this could happen to any of us…what are you doing today?"*
	11:19	Savoring: Brian's comments encourage the team to race fully in the present moment.

	11:58	Savoring: Fran's reminiscing on starting a business with his best friend and how it has enabled the current experience.
	12:40	*"it was one of the few times I had to outwardly identify as a cancer patient"* – The connection with my neighbor was strong enough that I found myself reminiscing and making meaning of it months later when we recorded the film.
	16:55	Training montage - future savoring and visualization, reminiscing.
	18:15	Savoring: Aide station interview, savoring how well the descent went, thanks to Jason's bike handling skill.
	19:12	Meaning Making: *"Everybody is rooting for me to get back to thriving, but I **am** thriving. This experience is going to change how I approach everyday"*
	19:16	Savoring*: All the hugs.*

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