

Chapter 8

The Psychology of Hope: A Diagnostic and Prescriptive Account



Anthony Scioli

Abstract In this chapter, I review psychology’s contributions to the study of hope. To close potential gaps in this interdisciplinary volume, I include work in psychiatry and nursing. The nearly 400-year history of psychological reflections on hope reveals extended stretches of neglect, alternating with brief flashes of interest. Shifting scientific paradigms are partly to blame. However, I suggest that the greatest challenge for investigators seeking scientific consensus on the topic may be cultural and sociopolitical. I begin with a review of the most significant writings and research on hope, dating back to the seventeenth century. I examine goal-related approaches in greater depth, due to their strong influence on the field of psychology. The latter half of this chapter is more critical and prescriptive. For a deeper commentary, I rely on Markus’s (Meas Interdisciplinary Res Perspect 6:54–77, 2008) distinction between constructs and concepts as well as Danziger’s (Naming the mind: How psychology found its language. Sage Publications, 1997) observation on how psychology found its lexicon. This middle, diagnostic section includes a review of philosophy of science criteria for evaluating theories. I transition to general prescriptions for achieving a better understanding of hope, organized around Bacon’s “four idols” of the mind, and add specific suggestions for future research. I conclude with a summary of recent work within our hope lab.

8.1 Introduction

In this chapter, I review psychology’s contributions to the study of hope. To close some potential gaps in this interdisciplinary volume, I include work in psychiatry and nursing. With little exception, the modern literature deals primarily with efforts

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to operationalize hope for measurement purposes. A more robust set of conceptual insights can be found in earlier publications, some predating the establishment of a scientific psychology. A few of these ideas find expression in twentieth-century accounts but many have remained untapped. The treatment of hope within the social and health sciences also reveals a curious pattern of brief periods of fascination, alternating with extended stretches of neglect. This perplexing trail of staggered inquiry is partly explained by shifting scientific paradigms which can accelerate or delay research on particular constructs. However, as I will suggest later, the greatest challenge for investigators seeking scientific consensus on the topic of hope may be cultural and sociopolitical, rather than conceptual or technological in nature.

I begin with a historical review of the most significant writings and research on hope in psychology, psychiatry, and nursing. To assure a balanced account, I crosschecked my initial outline against the PsycINFO database, the premier electronic collection of psychologically-oriented research, with over 4 million publications. I entered HOPE as a SUBJECT term, and added a second filter to parse the search into three historical frames. The earliest reference to hope dates to 1656. In previous reviews, I have cited Menninger's (1959) article as a significant milestone in the history of hope science. Taken together with Wundt's creation of the first psychological laboratory in the late nineteenth century, I arrive at three eras. I depart from a strict chronological order when introducing broader themes that may have received less attention in one era but more interest in a later period. My decision to highlight goal-oriented and metaphor-based analyses within the modern science of hope is designed to illustrate two recurring, but very different interpretations of hope from a cognitive perspective. I examine goal-related approaches in greater depth, particularly the works of Stotland (1969) and Snyder et al. (1991), due to their strong influence on the field of psychology.

The second half of this chapter is more critical and prescriptive. For a deeper commentary on the history of hope, I rely on Markus's (2008) distinction between constructs and concepts as well as Danziger's (1997) observation on how Psychology found its lexicon. This diagnostic section continues with a review of criteria in the philosophy of science for evaluating the adequacy of a scientific theory. I transition to general prescriptions for achieving a better understanding of hope, organized around Bacon's "four idols" of the mind, and add specific suggestions for future research. I conclude with a summary of recent work within our hope lab.

8.2 History of Hope Research

8.2.1 1656–1879: *Emerging Psychological Accounts*

Eighteen publications appear between 1656 and 1879. Hope is a potential virtue when aligned with the will of God (Bushnell 1858; Fowler 1854; Mahan 1875). Richards (1846) specified that hope must be built on trust and faith rather than "vain" philosophical inquiries. The more psychological accounts include Reynolds (1656), Nurse (1697), and Tucker (1805).

Philosophers will recognize the strong influence of Aquinas in Reynolds' approach to hope from the perspective of a good object that is difficult but possible to attain. Reynolds contrasts hope with despair (a good that is impossible to obtain). He divides despair into three kinds: sensual, due to forfeiture of the future; sluggish, from lack of effort; and sorrowful, a consequence of overwhelming fear. Reynolds adds four potential outcomes of hope; escape from weariness (stress relief), satisfaction of desire (goal attainment), contentment via realization of higher aims (fulfillment), and peace of mind from certainty of outcome (anxiety reduction).

Hale (1675) cautioned his reader to respect both the powers and perils of hope. Hope emerges from God-given imagination but this human capacity may lead to lofty and worth hopes or unworthy material goals that may spawn "vanity and vexation."

"Hope . . . is the great Wheel, or rather Weight that moves Man to all Actions and Undertakings. The Plough-man Ploughs in Hope; and the Merchant Adventures in Hope; and the Scholar Studies in Hope; and the Soldier Fights in Hope; and so for all Human Actions (p. 361)."

English preacher Tim Nurse (1697) reinforced earlier distinctions between hope and presumption. His perspective would be shared by twentieth century dynamic theorists (e.g., Capps 2001; Pruyser 1986) who challenged reductions of hope to "expectations."

Tucker (1805) spent 15 years drafting a psychology of human nature, which includes a long chapter on hope. Tucker highlighted humanity's unique capacity to project into the future but also listed characterological and environmental challenges that render earthly hopes more difficult to sustain as opposed to those which are focused on the next life. Tucker's greatest insights deal with the process of hoping and how it [hope] can positively impact motivation. "Hope has a natural tendency to smooth the ground for itself to walk on" (p. 116). Tucker suggests that a proper fixation on a worthy object will set in motion a train of consciousness that includes intermediate steps which function to increase the intensity of the hope experience via an accretion of successes. He invokes the metaphors of an anchor, a golden chain, and a spring. He suggests different "vehicles" or forms of [mental] transport when aiming at earthly versus heavenly endpoints; the former being more violent and the later filled with "steady serenity."

Upham (1828) argued that hope was a derived passion, emerging from desire. Hope was located in the middle of a probability continuum, between wishes (low odds) and expectations (high odds). Whereas wishes were languid, hope is more "vivid and enlivening." "It proffers its aid in the chambers of the sick and suffering. . . the victim of oppression, the captive in the dungeon" (p. 492).

For much of the latter half of the eighteenth century, psychology and moral philosophy are indistinguishable. Walker (1857) argued that God endowed humanity with hope and fear for the purpose of aligning human behavior with His will.

Fowler (1873) wrote a manual for families and children, emphasizing instruction in the moral sentiments, including hope. In *Elements of psychology*, Henry Day (1877) describes hope as one of the three comprehensive virtues. When the feeling tone of hope dominates, it may be considered merely a “grace” whereas if the moral dimension grows, it rises to a “virtue.”

8.2.2 1879–1959: *The Emergence of a Scientific Psychology*

Clarke (1880) distinguished true and false hope. True hope relies on thought, patience, and action. False hope rests on a perceived end without a means. Clarke grounded hope in faith, in both religion and science, in God and the laws of the universe, heralding a new science of Psychology.

McCosh (1887) included hope as one of several prospective emotions, which “cast sunshine on the landscape and stirs up motives which lead to exertion and activity” (p. 75). Quoting Cogan (1813), he adds that “Hope seems to give a life and spring to our whole nervous system so far as it is influenced by the gray matter of the brain. It is especially seen in the keen eye. It leads us to look forward as if to see, and lean forward, as if to reach, the object” (p. 120). “But it is also true that ill-grounded hopes, [creating] false security can lead to disappointment and despair” (p. 119).

McCosh also introduced different types of hope, including hope secured from praise, as well as public or collective hope. In contrast, he attributes dread to the steady press of “evil,” and terror to the sudden and immediate presence of harm. Despair occurs when there is no hope of escaping evil.

In *The uses of life*, Lubbock (1894) shares his recipe for living with hope. He urges patience, persistence, courage, and an equal reliance on memory and the inevitable future. Rejecting what would be called “mindfulness” today, Lubbock warned against becoming a prisoner-of-the-moment. Maudsley (1902) viewed desire as the basis of hope. As a psychiatrist and self-professed agnostic, Maudsley’s writings on hope reveal great ambivalence about hope; a recognition that many hopes are based on illusions that are nevertheless essential to human life.

Shand (1914) offered several laws of hope, including the proposition that the arousal of hope created a disposition towards anxiety. However, if hope was sufficient to destroy anxiety, there is a feeling of confidence. If anxiety destroys hope, then despair will replace both.

8.2.2.1 Psychodynamic Exceptions

Few references to hope appear in the psychological database between 1920 and 1950. One explanation is the rise of American behaviorism, which put inner states out of the scientific reach of its adherents. Psychodynamic theorists, on the periphery of North American academics, were less constricted by the learning theory paradigm. A good example is psychoanalyst Clifford Scott (1960), who offered an emergent sequence of four developmental stages that unfold when a child's present activities do not lead to satisfaction: waiting, anticipating, pining, and hoping. Hope incorporates elements of all three of the earlier states but takes into account a more complex relationship to the object (the object cares about the subject), and a more developed temporal component. Presumably, the child can now incorporate a sense of the time that is required for the fulfillment of hope.

8.2.2.2 Fundamental Hope

Two definitions of "hope" appear in the Oxford English Dictionary, both dating back to the eleventh century. From one perspective, hope is a stepping-stone to a higher elevation. A second meaning of hope is an island in the middle of a wasteland. In the twentieth century, the philosopher Marcel (1951) would label these ultimate and fundamental hope (desired endpoint and underlying character). In psychology, the most cited version of fundamental hope is Erikson's (1950) "basic hope." *To reiterate a point made in the overview to this chapter, I briefly depart here from a strict chronological ordering of hope eras to cover the few developmental analyses of hope that are primarily elaborations of Erikson's work in the fifties.*

Erikson (1950) linked hope to the experience of trust in the first stage of life. Erikson favored the notion of trust over Benedict's (1938) belief that the earliest derivative of good care is "confidence." For Erikson, trust more accurately captures the vulnerable state of the infant, the mutuality that must exist between the recipient and provider, and most importantly, the growing sense of separateness that brings the desire to try to reclaim a "paradise forfeited" (Erikson 1950, p. 250). According to Erikson, it is this basic trust that spawns an enduring belief in the attainability of the individual's deepest desires.

Erikson also noted that hope is frequently associated with a numinous experience and an elevated location in space. He traces this metaphorical representation of hope to the infant, wet or cold, hungry or frightened, and lying in a crib, shrouded in darkness, repeatedly attended to by a looming "higher power" emerging from a place of light. While he considered basic hope the most lasting human strength, Erikson believed that it might acquire new qualities as the individual ascended to higher stages of the lifecycle. Erikson asserted he could not be more specific or conceive of a way to measure hope. However, "he who has seen a hopeless child, knows what is not there" (Erikson 1964, p. 115).

Several decades would pass before Paul Pruyser (1986) and Donald Capps (2001) sought to extend Erikson's thoughts on hope. Pruyser's (1986) pastoral psychology of hope combines attachment concepts with spirituality, and a microanalysis of the imagination process. Pruyser agreed with Erikson that early attachment and care was central to the development of hope. He added that hope is anchored by a belief that a desired object will appear because "it is believed that the object desires this" and is also believed to be able to act on this desire (Capps 2001, p. 36). This latter premise, a belief in the adequate power of self or other to justify hope, would also be discussed by Godfrey (1987) in his philosophical defense of religious hope (in a higher power).

Pruyser collapsed Scott's four stages into two: wishing (waiting and anticipation) and hoping (pining and hoping). Unlike wishing, hoping involved a more controlled form of imagination. The images of hope are less detailed or goal-specific, the future is viewed as positive but unclear, an advance cannot be perfectly staged. Later experimental research by Averill et al. (1990) would show that at least in adults, wishes and hopes are distinguishable in terms of personal and cultural values.

In a chapter entitled "On the origins of the hopeful self," Capps (2001) integrates the earlier work of Erikson (1950), Scott (1960), and Pruyser (1986), and asserts that the foundation of hope is established in the first 3 years of life. Capps extends Erikson's model by clarifying the significance of verifications that engender trust and hope, widening the scope of these states, from early local care experiences to a more generalized "world-ready" hope. He writes, "the first verifier (care-taker) is not just a verifier of the world of persons but the world of things. . .to the human infant, the mother *is* nature. . .she provides a convincing pattern of providence. . ." (Capps 2001, p. 31).

Capps suggests that accumulating verifications, presumably feedback and evidence, inculcate a sense of self in early childhood whereby hoped-for events are not just desired but are actively pursued. "In infancy hope is based on specific hopes and is not yet an attitude independent of these specific hopes. . . [with development] our hopefulness does not depend on the realization of any particular hope. . .we become active agents of hope" (Capps 2001, pp. 32–33).

8.2.3 1959–2019: *The Modern Science of Hope*

8.2.3.1 Psychiatry

In the modern era of hope studies, Karl Menninger (1959) and Jerome Frank (1968) provided critical commentaries on the significance of hope. Menninger's (1959) address to a group of medical students remains one of the greatest presentations on the subject. He notes how little hope is found in the psychiatric literature, "our shelves are bare. . .the journals silent." (Menninger 1959, p. 481). Menninger dubbed hope the "major weapon" against suicide and the "indispensable flame" of psychiatry. A few years earlier, Eysenck's (1952) controversial publication, "The effects of

psychotherapy” initiated a two-decade debate on the merits of talk-based interventions. Eysenck’s data appeared to show there was little, if any, measurable gain from psychotherapy that could not be attributed to placebo or the mere passage of time. In this context, Jerome Frank (1968) published *Persuasion and healing*, a defense of psychotherapy, that highlighted common factors that spanned a wide range of therapeutic encounters, from tribal medicine work to western clinical science. Frank concluded that the activation of hope was a key ingredient in any form of effective healing.

Aaron Beck and his colleagues developed a measure of hopelessness (BHS; Beck et al. 1974). Approximately half of the 20 BHS items were obtained from a general measure of attitudes while the rest were taken from a pool of statements generated by psychiatric patients classified as hopeless by clinicians. In interpreting their factor analysis, Beck et al. suggested three components, feelings and expectations regarding the future, and loss of motivation. A review of the original factor loadings shows a more ambiguous structure, perhaps due to the selection of an orthogonal rotation which may not reflect the underlying (overlapping) relationships among these elements. Debates continue over the number of components required to address hopelessness (Aish and Wasserman 2001; Forintos et al. 2013; Szabó et al. 2016).

Gottschalk’s (1974) “Hope Scale,” unlike the BHS, requires a five-minute speech sample that is subjected to content analysis using a 7-point coding system. Individuals speak into a microphone, without pausing or interruption, about any interesting or dramatic experiences. Four positive themes are scored +1, whereas three negative themes are scored –1. The positive themes include references to obtaining help or support, feelings of optimism about the future, seeking favors or blessings, and hopes that lead to a constructive outcome. The negative themes consist of references to rejecting assistance or offered blessings, inability to secure help, and feelings of hopelessness, lack of confidence, or discouragement. This is an interesting approach that deserves further consideration, particularly in light of later work by McClelland et al. (1989) revealing how self-attributed (explicit) motives, assessed via self-report questionnaires, differ from data obtained on implicit need and drives that is collected from projective or associative methods.

Schrank et al. (2008) reviewed the psychiatric literature on hope and identified 49 definitions and 32 measures. Seven dimensions of hope were noted: time, an undesirable starting point, goals, likelihood of success, locus of control, relations, and personal characteristics. Shrank et al. excluded philosophical and religious writings, book chapters or “opinion” papers (hope apologetics), and purely conceptual articles. Approximately 70% of the 49 studies (definition sources) involved research with severely, chronically, or terminally ill patients. Nursing accounted for 88% of the studies. Their “synthesized” definition of hope acknowledges relationships and spirituality as the possible ends (but not means) of hope. The authors also highlight the significance of a perceived goal attainment (expectations). Their own Integrative Hope Scale (Schrank et al. 2011) is more questionable, created by reassembling three existing measures (Herth 1991; Miller and Powers 1988; Snyder et al. 1991). While it is not a common psychometric practice to publish a “new scale” with items from the existing scales of others, the greater problem is content validity.

Nearly 75% of the variance is explained by the first factor (Trust and Confidence), which does not include any questions about trust but reflects a heterogeneous combination of efficacy, agency, and purpose. A single item refers to “faith”; spirituality is otherwise absent.

8.2.3.2 The Cognitive Revolution in Psychology

In 1960, as the “cognitive revolution” swept in to challenge a half-century of dominance by learning theorists, O. Hobart Mowrer and Magda Arnold emerged with two very different accounts of hope. Mowrer (1960), the behaviorist, offered a two-factor theory of learning that defined hope as the expectation of fear reduction. When the laboratory rat is conditioned to associate the appearance of a colored light with the offset of a shock, this (light) become a “safety signal” that arouses hope. Arnold (1960), a pioneer of the modern cognitive approach to emotions, credited Aquinas as the inspiration for her work. For Arnold, hope was a basic, “contending” emotion, an action-tendency that increases when obstructed in some fashion. Like Reynolds and others influenced by Aquinas, hope is defined as a desire for a suitable or beneficial object that is difficult to obtain.

Wright and Shontz’s (1968) article, “Process and tasks in hoping,” was an important contribution to the literature on hope and coping. Their work focused on the hopes of families with a severely disabled child, “since these hopes would not glibly reflect ready-made hopes provided by culture” (p. 323). Wright and Shontz uncovered seven different “hope structures,” two child forms and five adult versions. The structures revealed different elements of the hoping process such as [maintaining a] positive valence, a present or future orientation, reality surveillance, and reality grounding. The two latter processes distinguished the adult structures from the child forms. Wright and Shontz also delineated 12 different reality-grounding methods used by parents of the children but emphasized that these were subjectively experienced reasons for hope (vs. objective reality).

Stotland (1969) defined hope as a product of perceived goal importance and probability of achievement. He provided seven propositions; four deal with hope, the last three address the formation, activation, and persistence of schemas (cognitive sets). These propositions include: motivation is a function of goal probability (A) and perceived importance (B); positive affect results from perceptions of a high probability of achieving an important goal; anxiety results from low probability of achieving an important goal; anxiety motivates escape or avoidance behavior. Stotland’s preference for a particular kind of hope is apparent in the first lines of chapter one, “people who are hopeful are usually described as active, vigorous, energetic” (p. 7). What might be labeled a “cognitive-expectancy” model, Stotland’s focus on goal estimations would overshadow other work on the topic and dominate approaches to both hope and hopelessness within and beyond psychology for the next five decades. For this reason, it is worth considering some of the limitations of this perspective.

Two contemporary reviews of Stotland are noteworthy. Merrifield (1970) was “dismayed by Stotland’s consistent usage of supportive reference and research data, whether the data referred to man, cat, dog, rat, or sheep, in a nondifferentiated fashion. This served to place undue emphasis on automatic, learned responses and to minimize certain human qualities” (p. 105). Sarnoff (1970) credited Stotland for addressing a topic [hope] “whose great psychological significance has been acknowledged by Everyman. . . except most scientific psychologists” (p. 323). However, he is also highly critical of Stotland’s approach, particularly Stotland’s failure to provide an operational definition of hope. “While tending to conceive of it as the expectation of attaining a goal, he uses hope primarily as a heuristic construct to tie together antecedent and consequent events” (p. 323). Sarnoff agreed with Merrifield in questioning Stotland’s determination to “confine himself only to those aspects of hope that may reach across species.” Sarnoff is also troubled by the societal implications of both Stotland’s inferences and research examples, which in his (Sarnoff) view appear to condone “social destructive values,” linking hopefulness to “vicissitudes in strivings for self-aggrandizement.”

8.2.3.3 Nursing

Between 1975 and 1991, a number of Nursing articles were published on the topic of hope. The focus was primarily on measurement. Dufault and Martocchio (1985) is an exception, and their work remains the most detailed account of hope within the nursing literature. Their methodology is not clearly explained but apparently involved a qualitative, participant-observer approach. Over several years, the authors observed 35 elderly cancer patients and 47 terminally ill individuals, with various diagnoses. They define hope in process terms, as a dynamic, multidimensional “life force” characterized by “a confident yet uncertain expectation of achieving a future good. . . [that is] realistically possible and personally significant” (1985, p. 380). They further describe two spheres, particularized and generalized. Within each sphere are six common dimensions: affective, cognitive, behavioral, affiliative, temporal, and contextual.

Dufault and Martocchio (1985) provide an excellent inventory of elements that may enter into the hoping process. Unlike many other nursing or psychological approaches to hope, they include affiliative and contextual factors. Their insights into the affective dimensions of hoping make a good case for viewing hope as an emotion (desire and attraction, personal significance, confidence but also uncertainty). The generalized sphere is presumed but barely discussed, and it is not clear if the six dimensions apply to the same degree, or in the same manner, to this aspect of hope. Moreover, they discount the potential significance of trait or dispositional hope.

Miller and Powers (1988) hypothesized ten elements of hope. Unfortunately, hope is not clearly delineated. They include concepts such as mutuality-affiliation, freedom, goal achievement, and reality negotiation, which are perennial favorites of hope theorists. However, the addition of wellbeing, meaning, mental and physical

activation, and avoidance of dichotomous thinking, reflects drifts into other conceptual domains. Predictably, the statistical analysis of such an eclectic set of items reveals a primary factor labeled “satisfaction with self, others, and life” that appears to encompass a blend of engagement, life satisfaction, and resilience. The remaining two factors are closer in content to elements of hope conceptualized by other theorists (Factor 2: trapped and overwhelmed; Factor 3: goal-setting and a positive future).

Nowotny (1989) sought a measure of hope applicable to cancer patients. From her review of the literature, Nowotny identified six dimensions: future orientation, active involvement, an internal resource related to trust, possibility, others (humans and/or higher power), and importance of the object. Along with Dufault and Martocchio (1985), this is one of the most compelling explications of the hope construct in the field of Nursing. Nevertheless, in translating these concepts into scale items, Nowotny may have overemphasized self-confidence (versus trust, general readiness, or openness).

Hinds (1984) has done the most research on hope in adolescents with cancer. Relying on a grounded theory method, her interviews of adolescents revealed four dimensions: forced effort to adopt a positive view; possibilities of a second chance; non-specific expectations of a better tomorrow; and anticipation of specific, personal possibilities. Hinds and Gattuso (1991) later developed a 24-item, visual analog scale from this model to assess adolescent hopefulness. Based on her grounded theory approach, the content validity is strong with respect to her selected population. However, in terms of reliability and sensitivity, visual analog scales may increase measurement error and decrease the ability to detect individual differences (McCormack et al. 1988).

The Herth (1991) Scale is the most cited measure of hope in nursing. Herth’s impetus for developing a new measure was to include general and specific aspects of hope. She tested her scale on four samples, cancer patients, healthy adults, the elderly, and bereaved elderly. Her data revealed three factors: temporality and future; positive readiness and expectancy; and interconnectedness. Overall, this is the best general measure in nursing. Nevertheless, the Herth scale does demonstrate an overemphasis on mastery, and only one item addresses spirituality.

8.2.3.4 Psychology Revisits Affect

Staats and Stassen (1985) defined hope as the sum of expected positive moods minus expected negative moods. Staat’s Hope Scale was derived from Bradburn’s Affective Balance Scale (ABS; Bradburn 1969). The original ABS measure consists of five positive and five negative mood states (e.g. excited, proud, bored, depressed, or unhappy). Respondents indicate whether or not they felt particular moods over the previous few weeks. The affective balance score is computed by subtracting the negative mood score from the positive mood value. Staats modified the ABS by changing the focus from the past to expectations for “the next few weeks”. There are two problems. First, I would concur with McCosh’s (1887) insight that emotion, including hope, should be distinguished from moods and basic “hedonic states” such

as interest, excitement, restlessness, or boredom. Secondly, the ABS measure also includes discrete emotions such as pride and depression.

This reduction of hope to a positive mood state may be understood in terms of the cognition-affect debates that dominated psychological inquiries in the 1980s. After three decades of a “cognitive revolution,” psychologists began to question the limits of computer-centric, serial-styled, information processing models. In an often-cited debate, Zajonc (1980) argued for the primacy of affect. Lazarus (1981), his counterpart, took the position that cognition was more fundamental but insisted on an alternative definition of this construct that highlighted “immediate features of the environment. . .attended and responded to selectively on the basis of needs, commitments, beliefs and cognitive styles” (p. 222).

8.2.3.5 Metaphors of Hope

The research of Breznitz (1986) and Averill et al. (1990) on hope may be understood as attempts to test the limits of a cognitive approach to emotion. A few years prior, In *Metaphors we live by*, Lakoff and Johnson (1980) proposed that that the study of metaphors is critical if cognitive science wishes to link body with mind, behavior with imagination. Lakoff and Kövecses (1987) would eventually follow with a more explicit theory of emotion in term of cognitive metaphors. Breznitz (1986) examined the “work of hope” (hoping processes) from the perspective of six metaphors: a protected area, a bridge (a means), intention (focused biased attention), performance (successful or unsuccessful intention), an illusion (maladaptive), and an end in itself (fear and worrying reduction). Breznitz (1986) also explored four possible states of mind, deriving from the presence or absence of hope and denial. The most maladaptive combination was the absence of both hope and denial, tantamount to “giving up,” whereas the best permutation was hope without denial.

Averill, Catlin, and Chon (1990) modeled their approach to hope on Lakoff and Koveces’ (1987) research on implicit theories of love and anger. Their research yielded 108 metaphors of hope, drawn primarily from maxims and thesauri, which they reduced to seven primary categories (e.g., a vital principle, a source of light and warmth, a form of support, elevated in space, a physical object or things, deception, and pressure). Within each primary category, subcategories of metaphors were identified. For examples, hope as a vital principle encompassed: hope as the basis for life, hope as food (not always nourishing), hope as a remedy or prescription, an environmental life-supporter, a form of life itself. A closer look reveals that each of the seven categories include references to ultimate hope (verb forms, or the process of “hoping”) and fundamental hope (noun forms or hopefulness), as well as allusions to both adaptive and maladaptive varieties. Averill et al. note that the most common metaphor of hope is a form of pressure, or a gas, which may either “burst” or provide a “lift”. The authors consider hope as an emotion on the basis of the following observations: it is difficult to control, affects thoughts and actions, motivates behavior, is a common or universal experience.

8.2.3.6 The Return of Goals in Psychology

Snyder and colleagues introduced a two-dimensional model of hope in terms of agency and pathways, tagged as the “wills and ways” [of hope] (Snyder et al. 1991). Firmly anchored in goal approaches to hope, Snyder distinguishes his model from previous work by adding “the perceived availability of successful pathways” (p. 571). To differentiate this “S-hope” [my abbreviation] from the constructs of optimism and self-efficacy, Snyder et al. suggest that the former (optimism) only relates to expectations regarding outcomes while the latter (self-efficacy) is limited to beliefs about the self. In contrast, S-Hope encompasses both self and outcome appraisals. The primary focus of the Snyder et al. (1991) paper was not theory development but measurement. The authors developed an eight-item agency and pathways trait hope scale.

Over a quarter-century, many psychologists, particularly in the United States, came to associate the concept [of hope] with S-Hope, and routinely incorporated the Snyder scale into their experimental protocols. After Snyder’s death, remaining members of his lab continued to utilize S-Hope, and in most recently publications, renamed it “hope theory.” In light of its popularity, a number of limitations are important to consider.

1. In selecting a goal approach, Snyder et al. draw on a narrow tradition with a similar bias, in favor of casting hope as a form of achievement or attainment expectation, that began with Stotland (1969). Moreover, by including in the “goal tradition,” writers such as Frank (1968) and Farber (1968), who focused on survival and healing, and Frankl (1963), who stressed existential and spiritual elements, Snyder et al. expand the concept of goals to a degree that makes the concept hard to distinguish from intentionality or directedness.
2. S-Hope is viewed as a form of expectation, similar to self-efficacy and optimism. Conceptualized in this manner, hope is no longer an emotion but a cold cognition, stripped of trust, a perennial reference in the philosophical literature, and also implied in Arnold’s (1960) reference to a “contending” element. Averill et al. (1990) found that individuals typically associate an experience of hope with a 50–50 probability of realization.
3. If S-hope is differentiated from optimism and self-efficacy because it encompasses both sets of expectations, then “hope” appears to be reduced to the sum of these constructs.
4. A focus on willpower and associated “way-power” locates hope firmly within the self, ignoring a voluminous literature on the attachment elements of hope.
5. From the perspective of content validity and psychometrics, items on the Snyder hope scale appear to cover the same conceptual space as the Schwarzer Generalized Self Efficacy Scale (GSE; Schwarzer and Jerusalem 1995). “I can think of many ways to get out of a jam” (S-Hope). “If I am in trouble, I can usually think of a solution” (GSE). “I energetically pursue my goals” (S-Hope). “It is easy for me to stick to my aims and accomplish my goals” (GSE).

Today, Psychology is still very “cognitive” but this perspective is joined by another revolution in the form of Neuroscience. In this context, the survival and coping aspects of hope are often a major focus.

Folkman (2010) examined the role of hope in the context of coping with serious illness, particularly cancer. She acknowledges two levels of hope: generalized, and specific to an immediate stressor such as a life-threatening illness. Regarding the former, trait or dispositional hope, she compares it to a “reserve,” perhaps attributable to faith, personality, or developmental coping experience, that is critical for preserving “physical, psychological, and spiritual health” (p. 905). However, her primary focus is on dimensions of the hoping process that may determine its level of adaptiveness. These dimensions include: odd estimations in the face of uncertainty, levels and kinds of denial processes, and how an individual manages uncertainty over time.

Denise Larsen and her colleagues at Hope Studies Central (University of Alberta) have conducted a series of interesting studies on the process of hoping within the context of education and counseling (Larsen and Stege 2012; Yohani and Larsen 2012). Her work has included different phases of the counseling process (e.g., early versus later sessions) as well as individuals and couples, chronic pain patients, and trauma survivors. In one study, Larsen and Stege (2012) found that goal attainment is typically a minor theme in counseling, trumped by client-therapist relationship-building and perspective change. Moreover, Larsen and Stege discovered that “supportive identity development,” including fostering a sense of worthiness, was more critical for instilling hope in counseling sessions than goal support.

8.3 Diagnosing the History of Hope Science

I turn now to a higher-level, meta-theoretical analysis, to distill the history of hope science into a more succinct diagnostic summary. Specifically, I draw upon Markus’s (2008) differentiation between concepts and constructs, and Danziger’s (1997) analysis of how psychology found its lexicon. Markus (2008) makes a useful distinction between concepts and constructs. Concepts cover the actual (focus of empirical studies), and the possible (all potential manifestations of an idea, across locations, times, populations, etc.). The latter [a construct] is population dependent, its meaning follows from the samples under investigation. Drawing on Scriven (2002), Markus believes that questions of “validity” should be directed towards concepts, whereas notions of “utility” are more appropriate for constructs.

Much of the research reviewed in this chapter reveals a panorama of constructs, each addressing one or more aspects of the hope concept. Psychologists have favored a view of hope as a mindset of probabilities attached to specific goals. Hope is a lightning bolt. In nursing and medicine, hope is a coping resource for contending with illness and stress. Hope is a buffer. Philosophers and theologians view hope as a foundation that is rooted in relationships or faith. Hope is a pillar.

This divergence in approach raises several important questions. How are concepts selected within a particular field? What factors affect the construct explication (elaboration) process? How are constructs applied and distributed within a particular discipline, time, or place? Danziger (1997) provides a provocative analysis in, *Naming the mind: How psychology found its language*. Danziger contrasts natural kinds (present in nature) with human kinds (created, not found in nature). Most psychological concepts, including hope, are human kinds. Danziger (1997) wonders, "Are they [truly] a mirror held up to the world that reflects the divisions to be found there?" (p. 187).

Danziger identifies a three-phase historical cycle in the development of psychological concepts: moral arguments, scientific pretensions, and the emergence of an expert class. The moral phase is clearly evident in the early writings of hope, particularly prior to 1879. Nevertheless, these publications contain important psychological insights into hope. The writings of Clarke, McCosh, and Lubbock represent an interesting confluence of a waning moral phase in psychology, an emerging focus on adaptation [the "science" of evolutionary biology], as well as a smattering of prescriptive or "self-help" advice (the "expert" phase). Three ideas from this period are worth further consideration; Clarke's distinction between true and false hope, McCosh's allusions to a collective hope, and Lubbock's appeal to future-mindedness which he contrasts with becoming a "prisoner-of the moment."

The rise of a scientific, positivist psychology, focusing on lab-centered observables, was given as one reason for the relative lack of scholarship on hope in the first half of the twentieth century. Following Danziger's approach, the "return of hope" in the late 1950s and early 1960s, exemplified by the writings of Menninger (1959) and Frank (1968), may be viewed as a new cycle of "moralizing"; hope *should* be a focus of psychological study. Much has been written about this hopeful period in American history, from the shift in demographics to a younger nation, the rapid development of interstate highways and television networks, to JFK's proclamation of a "new frontier."

Another cycle of hope "science" followed with the works of Mowrer (1960), Wright and Shontz (1968), and Stotland (1969), as well as the flurry of nursing publications in the seventies and early eighties. In the latter half of the 1980s, Cybernetic models caught the attention of psychologists. The predominant approach to hope for the next two decades would be a revision of Stotland (1969), advanced by Snyder et al. (1991), that stressed a closed self-system, of complementary wills and ways, directed at goal attainment.

Danziger (1997) warns that paradigm-driven appropriation of constructs under the guise of "science" may not only hinder understanding, but may also channel future inquiry, professional applications, as well as public consumption.

"Psychological categories...are not purely descriptive but also normative. Adopting a particular classification of psychological phenomena, and implicitly rejecting a myriad of possible alternative classifications, means establishing a certain form for the recognition of human conduct and human individuality" (Danziger 1997, p. 185).

The third predicted development, of an expert class, is most evident in the rise of “Positive Psychology” (PP), introduced at the start of the current millennium (Seligman and Csikszentmihalyi 2000), that I view as a proxy for hope distribution. Expertise is provided via social media, self-help books, life coaches, and well compensated lectures by celebrity psychologists (Chivers 2019). In one branch of PP, suggestions are made for increasing hope via interventions for extending happiness and life-satisfaction (Bryant and Veroff 2007). A second branch of PP seeks to address the cultivation of virtues, including those related to core hope needs: attachment in the guise of “compassionate love” (Hwang et al. 2008); survival through “post-traumatic growth” (Joseph and Linley 2008); and mastery via “grit” (Duckworth 2016). The primary challenges levied against this “new movement” parallel criticisms applicable to modern accounts of hope, namely individualism and instrumentalism. A more “specialized” expert class of [hope] providers may eventually emerge if sociocultural demands cannot be met in this more diffused fashion.

In the following section, I offer some suggestions for guiding future work in the psychology of hope. Toward this end, I review classic criteria for judging the adequacy of a scientific explanation. A possible set of corrective steps is offered, drawn from Francis Bacon’s “four idols” of the mind. I add specific recommendations for addressing the most obvious gaps in the hope literature, and conclude by summarizing some recent work in our hope lab.

8.3.1 *Philosophy of Science*

As Markus (2008) suggests, utility is a reasonable standard for judging scientific theories. Four criteria for evaluating the usefulness of a theory appear in the writings of Rychlak (1968) and Gelso (2006); description (clarity), delimitation (boundaries), generativity (explanatory power or heuristic value), and integration. Most psychological theories of hope may be considered “construct under-representations” (Cook and Campbell 1979). The construct explication process is too limited; the construct is under-defined. This includes the work of Stotland (1969), Staats and Stassen (1985), and Snyder et al. (1991). In contrast, a number of the Nursing publications offer an overly-inclusive view of hope, producing what Cook and Campbell (1979) label “surplus construct irrelevancies” (over-defined constructs). If a construct is either too narrowly or too broadly conceived, problems of clarity (what is hope) and delimitation (what is not hope) are inevitable.

The explanatory power (generativity) of Stotland and Snyder’s (cognitive-behavioral or “CB”) approach is more evident when studying healthy westerners, particularly younger adults in an academic or workplace environment. The nursing derived models of Dufault and Martocchio (1985), Herth (1991), and Nowotny (1989) appear most compelling when examining hope in the context of illness. Since both models (CB and Nursing) reflect specialized interests, integration with potentially associated concepts will be limited by the facets that define their respective constructs. For example, there is very little empirical work linking the CB hope

Table 8.1 Hope dimensions in light of Bacon's Four Idols

Idols	Definitions	Hope dimensions vulnerable to conceptual drift	Prescriptions
Tribe	Human nature	Attachment	Grounded theory
Cave	Age gender, SES, culture	Mastery	Ethnographic study
Market	Theoretical, professional	Survival	Interdisciplinary study
Theatre	Paradigms, worldviews	Religion and spirituality	Cross-cultural investigations

construct (goal estimations or wills and ways) to physical health outcomes (Scioli et al. 2016).

8.3.2 *Prescriptions for a Better Hope: Bacon's Four Idols*

Francis Bacon (1620/1902) identified four levels of potential bias that threaten truth-seeking. Idols of the tribe are defects in human nature. Idols of the cave are biases flowing from secondary human characteristics such as gender, age, and socioeconomic status (SES). Marketplace idols can be defined in terms of theoretical, professional, or guild-centered preoccupations. At the broadest level, idols of the theatre encompass scientific paradigms and cultural worldviews. A full discussion of all the ways in which these factors may influence psychological studies of hope is beyond the scope of this chapter. Instead, I will briefly highlight the dimensions of hope most vulnerable to bias by each idol. An outline appears in Table 8.1.

8.3.2.1 **Idols of the Tribe: Attachment Hope**

With the exception of Erikson and a few of his followers in pastoral psychology (e.g., Capps 2001; Pruyser 1986), attachment processes are minimized in psychological studies of hope. To some extent, it may be “natural” for human beings, highly social creatures, yet endowed with great self-regulatory capacities, to lose sight of the profound effects of early assistance. Kohut (1971), the most influential “self” theorist, describes the process by which healthy narcissism emerges from transmutation of self-objects. Individuals and groups attach to various self-objects (individuals, institutions, symbols with perceived power). Gradually these attachments are internalized and the individual experiences them as part of the [empowered] self. Psychologists are not immune from this natural process of mastery absorption. In fact, McClelland and his colleagues (cited in McClelland 1987) consistently found that psychologists ranked in the top three of all professions in their need for

perceived personal power, along with teachers and clergy. A classic study of the personality traits of psychologists by NIMH social psychologist Lauren Wispe (1965) revealed that eminent psychologists, those most likely to be theorists, were high in research commitment and professional commitment but low in social concerns or altruism.

8.3.2.2 Grounded Theory

Grounded theory is a method of qualitative research. It is an inductive process that begins with one or more questions, followed by categorization of content categories (themes).

Grounded theory was developed by two sociologists, Barney Glaser and Anselm Strauss (1967), initially for the purpose of better understanding the experience of dying hospital patients. Two reasons for developing this approach were to close the gap between theory and empirical research, and, most important, from the perspective of hope and attachment, to better understand complex social interactions.

A brief review of 21 scholarly publications using the subject terms “hope” and “grounded theory” showed that the majority (17) highlighted interpersonal aspects, including: ways to foster parental hope (Bally et al. 2014), inspiring psychotherapy client hopes (Chamodraka et al. 2017), promoting hope in the bereaved (Cutcliffe 2004), trust and hope in trauma survivors (Srivastava 2015), collective workplace hope (Barron 2015), and the promotion of hope in vulnerable or HIV affected youth (Thampanichawat 2008). Nevertheless, any grounded inquiry of hope must be tempered by Bloch’s (1995) central insight that a full understanding of hope must include the here and now as well as the “not-yet” manifested in time or space, awareness or belief.

8.3.2.3 Idols of the Cave: Mastery Hope

Mastery expectations have dominated the treatment of hope within American psychology. The proximate cause may be psychological science; the distal or ultimate explanation may be the western ethos. In Bacon’s model, idols of the cave are secondary characteristics of humanity such as age, gender, SES, and culture. A review of the psychological literature (PsycINFO) by HOPE (subject term) and AGE (filter) reveals that less than six percent of the research involves individuals over the age of 64; only one percent deals with children (birth to age 12). Filters by GENDER or CULTURE (and HOPE) account for one percent each; research on SES and HOPE is even less common (1 per 1000). Health is a fifth “idol in the cave,” yet is particularly relevant for the study of hope. Just five percent of the research deals with HOPE and ILLNESS.

Hope is not the only construct impacted by “cave elements.” In a widely cited article by Henrich, Heine, and Norenzayan (2010), the authors criticize the behavioral sciences for drawing “universal” conclusions about human characteristics from individuals residing in WEIRD societies (western, educated, industrialized, rich, and democratic). To some extent, issues of convenience, and challenges associated with the operationalization (i.e. measurement) of hope, may be blamed for eroding the truth-seeking process. This is not the whole story. Psychology, like any human activity, also resides within a cave [of culture]. Heike (2014) reflects on the “myths that made America;” four, in particular, may explain the recurring western emphasis on a privatized, mastery-directed hope: appeals to rugged individualism and the “self-made man,” belief in the discovery of a “new world,” search for the inevitable appearance of a “promised land,” and the call of “expansionism,” romanticized via the American West. As will be suggested later in this chapter, hope may be particularly vulnerable to “myth-loading.”

8.3.2.4 Ethnographic Studies

Ethnographic studies offer a way to counteract biases of the cave. More data must be collected on the initial and final stages of the lifecycle. Gender, culture, and SES differences should be explored in greater depth, ideally with interdisciplinary teams (e.g. psychologists working with sociologists and cultural anthropologists). Recent critiques of positive psychology from feminist and philosophically-oriented psychologists parallel the concerns raised in connection with hope, and may offer ways to achieve a more inclusive understanding (e.g., Becker and Marecek 2008; Lamb 2005). Nor can health status be ignored when investigating hope. Different insights about hope have emerged from studies of healthy young adults as compared to sick children or elderly patients confronting cancer. However, regardless of the focus (age, gender, culture, etc.), investigators must integrate their fieldwork with theoretical sophistication, or conceptual drifts will continue.

An excellent model of ethnographic research is provided by Rojas (2005) who investigated the relevance of seven conceptions of “happiness,” including stoic, virtue-ethics, enjoyment, utopian, etc., across levels of age, household income, education, and gender. A similar study could be done to explore the relevance of different hope formulations across these demographics, as well as culture and health.

8.3.2.5 Idols of the Market: Survival Hope

The bias of the “market” is apparent in the discipline-locked focus on survival or “coping hope.” Nursing has generated most of the work in this area, particularly with respect to measurement tools. As already noted, few exceptions are found in psychology. For example, empirical research on the coping aspects of hope tend to be singular and scattered, rather than programmatic; only one noteworthy article has appeared within the past three decades (Folkman 2010). Does this reflect a more

general bias towards mastery within psychology? A quick search of the PsycInfo database using “Subjects Terms” does not appear to support this hypothesis. Over the past 30 years, approximately 29,000 publications dealt with “mastery” or “goals” while more than 62,000 focused on “survival” or “coping”. Is it relevant that the dominant psychological accounts were developed by experimentalists, not clinicians? The answer is probably not, for this does not explain the traction or longevity of a goal-centered approach. Possibly, there is something unique about hope, the ultimate prospective emotion, which encourages its appropriation as a cultural transporter and perpetual guardian of a mystical future, as suggested by Heike (2014), leading to a greater focus on growth and expansion rather than coping, self-regulation, or more generally defined, survival. This imbalance is unfortunate because survival, not mastery, is the more pressing imperative addressed by hope. This insight is clear in the writings of Aquinas and Arnold (hope is a contending emotion), and supported by the metaphor research of Breznitz (stress and the work of hope), as well as Averill et al. (1990), who found that nearly 50 percent of all hope metaphors referred to a “vital principle,” “warmth or heat,” or “support”.

8.3.2.6 Interdisciplinary Collaboration

Greater interdisciplinary collaboration offers the most potential for understanding the survival (coping and health) implications of hope. Social and experimental psychologists are experts in behavior, especially goal-related action, and are increasingly moving towards a deeper understanding of attachment. Clinical psychologists have a better handle on coping, defense mechanisms, and real-life adaptations. A clinical-experimental collaboration is a first step in assembling collaborative hope teams. Going further, since antiquity, hope has been hailed as the “best medicine,” and has been likened to a second immune system. At least two tracks of mind-body collaboration are foreseeable: one focusing on immunology and the second on neuroscience. The needs underlying hope—attachment, mastery, and self-regulation—parallel the variables cited in the psychoneuroimmunology literature. Hope, unlike optimism or denial, is a “balancing act,” a metaphor applicable to multiple levels of the human immune system. Neuroscience, despite its risk of reductionism, is inherently an interdisciplinary activity. With increasing access to fMRI technology, a team of clinical psychologists, cognitive neuroscientists, and psychiatrists, might venture to identify the circuitry associated with states of low and high hope, potentially transforming both the understanding of depression and suicidal risk as well as the development of more effective psychoactive medications.

8.3.2.7 Idols of the Theatre: Religion and Spirituality

Psychology has intermittently embraced and rejected religion and spirituality. In a provocative article that remains relevant today, Jones (1994) cited data that showed

psychologists were among the least religious academicians. Moreover, “only a minority of clinical psychologists (33%) described religious faith as the most important influence in their lives as compared to 72% of the general population” (Jones 1994, p. 184). More recently, Ecklund and Scheitle (2007) surveyed academics from eight disciplines at 21 elite U.S. research universities. Responding to the question, “I have no doubts about God’s existence,” only 11% of psychologists agreed. In contrast, a Gallup poll conducted in 2017 indicated that 87% of Americans reported a belief in God (Hrynowski 2019).

A number of investigators have commented on the rise of a non-religious form of spirituality, particularly in the United States (Zinnbauer and Pargament 2005). However, supporting Jones’s (1994) earlier impressions, Ecklund and Scheitle (2007), found that only 7.7 percent of psychologists agreed with the statement, “I believe in a higher power, but it is not God”. This percentage was lower than physicists, chemists, and sociologists. Globally, a very different picture emerges. While identification with a formal religion has decreased in North America and western Europe, it is growing in many other parts of the world. Moreover, worldwide belief in God remains above 80%.

8.3.2.8 Cross-Cultural Studies

Pargament (2007) makes a compelling argument that ignoring the religious or spiritual background of an individual in psychotherapy constitutes unethical practice. In line with this thinking, American hospitals that seek accreditation by The Joint Commission must provide for the spiritual needs of their patients. By extension, ignoring the religious or spiritual aspects of hope may be considered a form of theoretical malpractice. First, it can be argued that for over two millennia, the primary source of ultimate hope for most of the world’s population has been religious or spiritually based. Secondly, a content analysis by Scioli and Biller (2009) of the world’s major religious and spiritual traditions reveal different patterns of hope, with varying emphasis on attachment (e.g. African or Native American spirituality), survival (Buddhism), mastery (Protestant), or combinations of such needs (e.g., Hindu attachment and mastery; Islam and Judaic attachment and survival). Thirdly, the attachment literature offers compelling accounts of how early relationships combine with religious or spiritual experiences to alter self-object developments (internal representations), impacting the nature of fundamental hope in ways that can shape a lifetime of corresponding and compensatory behaviors (Kirkpatrick 2012; Hall 2007). Fourthly, even if the overhyped claim is granted, that religion’s demise is imminent, the fullest experiences of hope will continue to require some form of spiritual foundation. Humans are connected but psychically alone, resourceful but vulnerable, powerful but not omnipotent. Unmet levels of attachment, survival, or mastery are inevitable, and hope, including a spiritualized component, will be needed to address these gaps. For some individuals, a different form of higher power may suffice. For others, spirituality may be centered on humanity, nature, science, or art (cf. Davis et al. 2015).

8.4 Additional Suggestions for Future Studies

Hope is complex. A fuller understanding will require refinements in theory and measurement, informed by additional historical, cultural, and ethnographic studies. Specifically, there are five primary issues that require attention. *First*, additional work is needed to distinguish between ultimate and fundamental hope. Within the philosophical literature, a single, overriding hope preoccupied thinkers from Kant to Marcel; securing a place in the Kingdom of God (Godfrey 1987). With the rise of atheism as well as non-religious forms of spirituality (Zinnbauer and Pargament 2005), psychologists need to consider other paramount hopes. What is the nature of such hopes and when more than one is deemed “ultimate,” how are these organized or prioritized? The work of Dufault and Martocchio (1985) as well as Folkman (2010) suggests an interaction between ultimate and fundamental hope. However, this topic has yet to be explored in a systematic fashion.

Secondly, there is a need for more research on the development of hope. The few commentaries on this topic derive from the brief sketches of Erikson (1950), nearly 70 years ago. There is a single measure of hope for children, a downward extension of the goal-oriented, Snyder hope scale (Snyder 2006). New research on future-oriented, mental time-travel (FMTT), coupled with fMRI has the potential for greatly enhancing our understanding of the hoping process across development stages (Atance and Mahy 2016).

Thirdly, there is a need to better understand hopelessness. The literature on this topic is scant; the most often cited measure was developed nearly a half-century ago (BHS; Beck et al. 1974). In light of the ongoing debates over the factor structure of the BHS, and the availability of multiple theoretical perspectives, it is worth asking if hopelessness is better viewed as a unidimensional or multidimensional construct.

Fourthly, more programs of research are needed to discern the limits and possibilities of hope in confronting physical illness, aging, and the dying process. As technological advances extend lives, they will likely prolong and complicate the hoping process. A three-way collaboration would be ideal, involving research on psychoneuroimmunology, imaging (e.g., fMRI), and hope theory.

Fifthly, interventions are needed to instill fundamental hope and guide the development of ultimate hopes. The few available publications on this topic are strongly goal-oriented, and focus primarily on the hoping process (Snyder 1994; Stotland 1969). The valuable but isolated clinical insights of Wright and Shontz (1968), Dufault and Martocchio (1985), Breznitz (1986), and Folkman (2010) deal primarily with ultimate hope.

8.4.1 Keene Hope Lab

For several decades, our lab has utilized a four-dimensional model of hope (Scioli et al. 2011). Hope is conceptualized as a four-part network, constituted from

attachment, survival, mastery, and spiritual subsystems, functioning to address inevitable gaps in meeting the first three needs—for connection, defense, and advancement. The primary focus of this work is on fundamental hope. However, in a number of studies we have explored the hoping process (For a review see Scioli and Biller 2009). With regards to health, our studies have tracked the positive impact of trait hope on immune functioning in HIV-affected individuals, and the practice of healthy habits by young adults, as well as the role of ultimate hope in recovery from breast cancer (Scioli et al. 2012; Scioli et al. 2016). Our lab has also published adult self-report, state and trait hope questionnaires (Scioli et al. 2011) as well as a Rorschach method for deriving hope, and coding systems for content analysis (Scioli et al. 2018). We have three lines of research in progress. We are validating a measure of hope for children and teens, ages seven to 17, as well as a multidimensional measure for detecting nine varieties of hopelessness (pure and blended disruptions in attachment, survival, and mastery). Since 2011 we have been refining a group intervention to instill fundamental hope in adolescents and young adults through a structured group workshop that targets the four, core building-blocks of hope (attachment through spirituality).

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