In this essay the author challenges the standard origin story of cognitive therapy, namely, that its founder Aaron T. Beck broke with psychoanalysis to pursue a more pragmatic, parsimonious, and experimentalist cognitive model. It is true that Beck broke with psychoanalysis in large measure as a result of his experimental disconfirmation of key psychoanalytic ideas. His new school of cognitive therapy brought the experimental ethos into every corner of psychological life, extending outward into the largest multisite randomized controlled studies of psychotherapy ever attempted and inward into the deepest recesses of our private worlds. But newly discovered hand-sketched drawings from 1964 of the schema, a conceptual centerpiece of cognitive therapy, as well as unpublished personal correspondence show that Beck continued to think psychoanalytically even after he broke with psychoanalysis. The drawings urge us to consider an origin story much more complex than the one of inherited tradition. This new, multifaceted origin story of cognitive therapy reaches beyond sectarian disagreements and speaks to a broader understanding of the theoretical underpinnings of cognitive therapy.

Keywords: cognitive therapy, Beck, psychoanalysis, history

Prologue

1961 and 1962 were momentous years for Aaron T. Beck. They were the years he made a decisive break with his psychoanalytic past. He closed down his large psychoanalytic research project on depression, put to rest his application for membership in the American Psychoanalytic Association that had been rejected twice, and turned his back on the cornerstone of psychoanalytic theory, the unconscious. He took a sabbatical from the psychiatry department at the University of Pennsylvania following a destructive department-wide battle over the future of psychoanalysis in psychiatry. He began reading cognitive and developmental psychology and embarked on a completely new way of thinking about depression (American Psychoanalytic Association, undated; Beck, A. T., personal collection, A. T. Beck to I. Gregory, ca. April 1965, M. Stein, June 7, 1962, A. J. Stunkard, June 22, 1961; G. Piers to A. T. Beck, December 16, 1960; S. Schneyer to A. T. Beck, June 13, 1962; I. Sigel to A. T. Beck, March 13, 1963; Beck, 1967; Sigel, 1960; Weishaar, 1993). He presented his new cognitive theory to close friends and family as an alternative to classic psychoanalysis and psychiatry (Beck, A. T., personal collection, notes from “Meeting of the Three,” January 24, 1962, February 7,
1962; Weishaar, 1993). Two years later he showcased a new cognitive theory of depression in two articles in the Archives of General Psychiatry: “Thinking and depression: I. Idiosyncratic content and cognitive distortions” (TD1, Beck, 1963) and “Thinking and depression: II. Theory and therapy” (TD2, Beck, 1964). So marks the beginning of cognitive therapy, the most renowned form of psychotherapy to have emerged in the final decades of the 20th century and figurehead to a worldwide cognitive-behavior therapy movement. This origin story of Beck’s cognitive therapy is one that I have pieced together from archival and other primary sources and is fully documented.

A variant of this origin story is the one that Beck likes to tell. It is more abridged and emphasizes his conceptual break with the psychoanalytic unconscious. He made this decision after his experimental study of the psychodynamics of depression—which inspired the creation of the well-known Beck Depression Inventory—failed to confirm his analytic hypothesis that depression is a form of inverted hostility (Beck, 1967). He concluded that the wish fulfillment concept was untenable: “Once we took the wish fulfillment out of it,” he reported, “then there was nothing. If you could not depend on motivation, there is nothing in psychoanalytic theory that can hold any water” (Beck, 1979, p. 18). Between 1962 and 1964 he built a cognitive theory of depression with a new vocabulary taken from cognitive psychology well-suited to experimental investigation. This theory and therapy were closer to his clinical observations and bore none of the conceptual, linguistic, and technical markers of his psychoanalytic past (Weishaar, 1993, p. 21). This story encapsulates the moments between 1962 and 1964 when he crossed the bridge to a cognitive approach.

These two variations of the origin story are compatible; their differences are a matter of emphasis. But there is yet another origin story that Beck tells less frequently and that contradicts his assertion that psychoanalytic theory is untenable without the theory of motivation predicated on an unconscious. In this story Beck admits to intellectual descent from ego psychology, a school of psychoanalysis that flourished in the 1950s and 1960s and that focused on the functions of the ego. He not only admits to descent but speaks to continuity. Consider this excerpt from a letter from Beck to John Bowlby in 1981:

It might be a point of curiosity therefore for you to know that my psychiatric training was completely and exclusively psychoanalytic . . . I would consider my theoretical work as derivative from ego psychology rather than from cognitive psychology or learning theory. At the present time in fact I am trying to reformulate many of the basic psychoanalytic concepts into cognitive terms (Beck, A. T., personal collection, July 29, 1981).

These sentiments appear again in abridged form in an earlier letter to Marvin Goldfried (Beck, A. T., personal collection, November 9, 1978) and yet again in print in 1993: “It may be obvious to spectators in the therapeutic arena that cognitive therapy has coopted (or been coopted by) a large sector of the behavior therapy approaches to psychopathology. What may not be so readily discerned are many concepts derived initially from psychoanalysis . . . corresponding, in part, to Freudian notions of primary and secondary processing” (Beck, 1993, p. 197). What is this origin story doing here? How can he both break with psychoanalysis and admit to continuities?

My aim in this essay is to complicate the standard origin story of cognitive therapy by giving this continuity story a weight equal to the other two. The impetus is my discovery of a cache of hand-sketched drawings and notes in Beck’s personal files, drawn between May, 1964 and January 1965, tucked away inside one of the filing cabinets that line the walls of a climate-controlled room in his basement. The drawings tell the story of the schema, a theoretical centerpiece of the cognitive model that Beck first introduced publicly in TD2 in early 1964 (Beck, 1964). They depict what Beck calls a “bipolar schema” of manic-depression, a version of the schema Beck does not mention in any of the literature. And what is astonishing about the sketches is that they contain references to psychoanalysis. In other words, they show Beck drawing on psychoanalytic ideas after he had published a new cognitive approach that he himself claims—and that his records show—represented a clean break with psychoanalysis.

What are these drawings doing here? Are they merely a detour, a cul-de-sac as it were, in his otherwise linear movement away from psychoanalysis? Or did Beck’s commitment to psy-
choanalysis go underground in a split between the private world of science-in-the-making and the public world of science-as-justification, to invoke the discovery-justification distinction of philosophers of science like Bruno Latour (Latour, 1987)? In this scenario Beck omitted the psychoanalytic components of his discovery from his public narratives because they lacked a convincing truth value for the scientists whom he wanted to convince. Is this what Beck did? Or perhaps Beck folded his psychoanalytic skills into an intellectual sleeve so that he could continue to reason privately in a mode that no longer held currency. This idea would be analogous to what historian of science Peter Galison suggests happened to the physicist Paul Dirac, who "in-folded" his geometric reasoning while making public only his numerical reasoning (Galison, 2000). Galison’s story invites us to imagine that Beck had at his disposal two different modes of reasoning, one of which he played publicly and the other privately.

Both Dirac and Beck played in two modes simultaneously. In Beck’s case, however, there was no split between public and private. Beck clearly left classical psychoanalysis behind but he simultaneously continued to rely on its explanatory power both privately and publicly. We can think of his cognitive and psychoanalytic ideas as two strains of music, one dominant and the other more quiet and tentative, playing within the same composition. From the beginning of his research Beck had been working at the crossroads of two epistemic communities (Knorr Cetina, 1999): psychoanalytic psychiatrists and academic psychologists. Psychoanalytic psychiatrists privileged the subjectivist of psychoanalytic theory. They were clinicians, not scientists. Academic psychologists, on the other hand, were scientists (see Beck, 1991d, pp. 2–3 for a very clear description of the epistemic differences between the two groups). A small but influential number of academic psychologists in North America in the postwar period who were also clinicians, many affiliated with the Menninger Clinic, tried to marry the objectivist constraints of experimentalism with the subjectivist constraints of psychoanalysis (Rosner, 2005). Beck collaborated with several academic psychologists at Penn, including a graduate student named Marvin Hurvich1 and a social psychologist named Seymour Feshbach, to undertake a similar endeavor with the depression research project. By 1961 he had decided that the experimental ethos was more to his liking than classical Freudianism. He let go of the unconscious and intensified his faith in the greater power of experimentalism (Beck, A. T., personal collection, A. T. Beck to S. Feshbach, October 19, 1965, December 1, 1965; A. T. Beck to P. Meehl, March 13, 1968; P. Meehl to A. T. Beck, February 26, 1968).

This faith gave shape to the entire opus of his new cognitive model, from how he did his science to how he taught his patients to help themselves (that is, to become scientists in the laboratory of their own lives), to his idea of what good living should look like (rational, pragmatic, scientific). His experimental work ultimately earned him an Albert Lasker Award for Clinical Medical Research in 2006 (Lasker, 2006), an award similar to the Nobel Prize in Medicine. He has won or been nominated for some of the world’s most prestigious prizes.

At the same time, Beck continued to reason with what he calls the theoretically neutral elements of psychoanalysis not dependent on the existence of unconscious. This is the quieter strain. It appears as early as September 1961 when he writes to his psychoanalytic mentor Leon Saul that “grief, shame, anxiety, disgust, feeling of inferiority or deprivation, and self-rejection”—symptoms of depression—might be “relatively weak in motivational properties. Hence, they do not fit as readily into the motivational model as hostility or dependency.” He continues, “I feel that the model has to be revised to provide a position for these ‘states’ and to establish their relationships to the needs and drives. This is as far as I’ve gotten in my thinking, but I do hope that we will be able to further refine the theoretical structure of psychodynamics” (Beck, A. T., personal collection, September 28, 1961). This letter establishes the quieter strain of a motivation-free dynamic theory. The drawings of the schema are a continuation of that strain. They are a rare moment in his work—in the vast collection of his writings that now extend far beyond depression to a wide range of disorders including anxiety, phobias,

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1 Hurvich was also Beck’s first psychoanalytic patient at the Philadelphia Psychoanalytic Institute. They collaborated on Beck’s first dream study (Beck & Hurvich, 1959).
schizophrenia, and many others—in which both strains play at equal volume.

The Black Box of The Schema

Beck first introduced the idea of a schema in TD2 (1964). This definition of the schema remains the core of the concept in current practice:

The schemas are conceived as relatively stable cognitive structures which channel thought processes, irrespective of whether or not these are stimulated by the immediate environmental situation. When a particular set of stimuli impinge on the individual, a schema relevant to these stimuli is activated. The schema abstracts and molds the raw data into thoughts or cognitions... In the formation of a cognition the schema provides the conceptual framework while the particular details are 'filled-in' by the external stimuli (Beck, 1964, pp. 562–563).

A schema is a hypothetical mental structure containing a specific belief such as “life is hopeless” or “I never win” or “everyone is out to get me.” This belief is an enduring feature of a person’s cognitive makeup. It shapes the content of the temporary and fluctuating evaluative thoughts we experience in a given situation (such as “so-and-so doesn’t like me today”). Bruno Latour might call the schema a “black box” (Latour, 1987), an object employed by cognitive therapists whose usefulness is so self-evident that its mechanics are irrelevant.

When we look at the origins of the schema in the early 1960s, however, we find Beck still working out its mechanisms. In 1962 and 1963 for instance Beck tries to cluster schemas into “systems” such as “goals and standards,” “self-evaluation,” and “self-disciplinary” (Beck, A. T., personal collection, draft of Thinking and Depression, 2, ca. 1962). At one point he calls it a “concept,” drawing on cognitive psychologists Harvey, Hunt and Schroder (Beck, A. T., personal collection, handwritten notes June 6, 1962, June 24, 1962, July 7, 1962; Beck, 1964; Harvey, Hunt & Schroder, 1961); at another point he calls it a “construct” in a nod to George Kelly’s personal construct theory (Beck, A. T., personal collection, handwritten notes March 20, 1962, April 2, 1962; Beck, 1991c; Weishhaar, 1993). Finally he settles on the word schema, “extracting” it from Piaget’s developmental theory (Beck, 1979, p. 19; Piaget, 1948).

In 1962 Beck asked Hurwich, Feshbach, and a developmental psychologist named Irving Sigel to read first drafts of TD1 and TD2. Each of them independently advised him that a structural theory of the schema was inadequate. They asked him to explain why a patient’s symptoms would increase and decrease in severity, that is, to account for the dynamics of the symptoms. They urged him to reconsider his rejection of motivation (Beck, A. T., personal collection, S. Feshbach to A. T. Beck, January 17, 1963; M. Hurvich to A. T. Beck, February 25, 1963; I. Sigel to A. T. Beck, hand-written comments on draft of Thinking and Depression, ca. 1962). Indeed Beck faced a difficult theoretical problem. Since the schema was a structure that activated cognitions, it called for some kind of energy variable. What could he use if he did not posit a wish that compelled activation? The situation with energy variables in 1962 was tricky. The psychoanalysts, he knew, were in “sharp disagreement” over energy variables. Floyd Allport, in contrast, had used nonpsychoanalytic energy and structures (Allport, 1955; Beck, 1964). Beck detoured around this problem in TD2 by acknowledging the need for an energy variable without offering a solution of his own (Beck, 1964, p. 566). The six drawings that follow mark a return to this problem. They are visual reasoning exercises exploring a motivation-free dynamic theory of depression.

Transmutation and Topography

The first drawing (Figure 1) actually is not of a cognitive structure but rather of a volitional structure, that is to say a wish structure. It is a continuum between opposing wishes to aggress and regress in manic depression. Beck labels the structure “bipolar” because of the oppositional quality of manic depression. Observe how Beck brackets the manic and depressive ends to indicate where the wishes to aggress and to regress are extreme. A neutral area in the form of a small circle in the middle of the two arrows indicates a space on the continuum where neither of the wishes is activated.

Already we are alerted to a strange turn in Beck’s thinking. How could the bipolar schema begin with a structure not of thoughts but of wishes—the very concept Beck had rejected? To add to the confusion, there is nothing intrinsically psychoanalytic in the shape of the structure. It does not, for instance, recapitulate the shape of the ego and id that Freud sketched in
his 1923 monograph of the same title (Freud, 1923/1960). Nor does it resemble other drawings of hypothetical dynamic structures such as the “life space” drawings of Kurt Lewin (Lewin, 1938).

The answer may be found in a paper on psychodynamics that Beck wrote in 1960 with Marvin Stein, with whom he had studied at the Philadelphia Psychoanalytic Institute and taught at Penn (personal communication, Dr. Marvin Stein, April 24, 1997). This paper summarized material from their second-year course on psychodynamics for medical students. The idea of a continuum of wishes extending from aggression to regression appears here. Beck and Stein offer their own way of understanding the dynamics of passive needs (defined as “a wish to receive something” Beck & Stein, 1961, p. 422C): “For the purposes of explanation passivity may be regarded as a continuum, one pole of which is the wish for absolute rest and at the other end of the scale, aggressiveness, self-assertiveness, and productivity. The wish for passive participation or vicarious experience would be closer to the passive end of the continuum” (Beck & Stein, 1961, p. 422N). Beck invented the continuum to clarify the concept of passive needs.

The continuum idea does not appear in Beck’s schema in TD2. But it suddenly reappears in his notes of February 1964. Beck explores two “contradictory attitudes” with a faint overtone of Freud’s pleasure principle: “I should work day and night on the paper (because it will bring pleasure)” and “I should not work day and night on the paper (because it will bring pain)” (Beck, A. T., personal collection, handwritten note, February, 1964). He does not visualize them but writes that they are structuralized into a schema that clusters with others into “organizations.”

Let us assume that the volitional structure of Figure 1 visualizes this continuum idea. In Figure 2 we see the drawing that appears on the next page of his notes. It is a cognitive structure. Notice how the cognitive and volitional structures are identical except now we see two beliefs: “omnipotent” and “impotent.” Follow the drawings in sequence. The volitional and cognitive structures follow immediately the one from the other. The heading on the first page of
notes (“Volitional and Cognitive Structures”) suggests that they sit in relationship with each other. Look at Beck’s handwriting. We find Beck noting a possible similarity between his bipolar structure and bipolar structures of George Kelly’s personal construct theory. This sequence marks the beginning of what I believe was a transmutation of motivational psychodynamics into cognitive dynamics. Remember that Beck’s first visual act was to create a psychodynamic wish structure visualizing the continuum idea of 1961. Then he drew an identical cognitive structure. Beck never returned to the volitional structure, so we cannot know if he intended to develop the idea. He may have imagined the cognitive structure as an overlay on the wish structure. But the implication of this sequence is astounding. In two pages Beck constructed a new psychoanalytic wish structure, put aside the motivational model and installed a cognitive model in its place. To speak hyperbolically, where motivation once reigned cognition was now king.

Nonetheless, it is essential to see that the structure itself did not change. This continuity of structure (from wishes to cognitions) held open the possibility of dynamic continuities as well. The next two drawings, of May 19, 1964, are evidence of these continuities.

**Cathexis**

In both drawings of May 19, 1964 Beck cuts the schema in half and treats only the depressive side. The first drawing (Figure 3) is on a page entitled “Theory of Personalities.” Beck draws five schemas of similar content aligned vertically and connected by thick short black lines at equivalent points. The midpoint contains neutral thoughts: “I am equal,” “I can manage,” and “things are ok.” The extreme depressive end contains extreme thoughts: “I want desperately to die,” “I hate myself,” and “life is empty.” This drawing depicts in visual form the idea that schemas of similar content cluster into an “organization” or depressive personality. Note the cloud with diagonal shading hovering vertically on the far right end of the schemas. This cloud represents the spread of energy between the extreme ends. Beck postulates that when the extreme end of a schema is activated energy spills over into the extreme ends of neighboring schemas, provoking a cascade of activation that constitutes the depressive personality.
Two vertical arrows pointing in opposite directions appear on the far right side of the page. Note the two barely discernible words tucked between them: *cathexis spreads*. It is absolutely astonishing to see the word cathexis here. Cathexis is another word for energy and it is unequivocally a psychoanalytic term. Freud’s editor and translator James Strachey invented the word as a translation of Freud’s *Besetzung*, meaning “filling up” or “occupying” (R. E. Fancher, personal communication, May 22, 2010). With rare exceptions cathexis has currency only in psychoanalytic circles. I could find no evidence of Beck’s use of the word cathexis anywhere else in his work extending back to the mid 1950s. Clearly this was not a concept he employed regularly. So where does it come from and why is he using it here?

I propose that when Beck articulated a dynamics of the schema in early 1964 he tapped into a deep wellspring in his psychoanalytic past. There is remarkable similarity between this structure/cathexis exercise and the work of a midcentury, Hungarian-born psychoanalyst named David Rapaport. Rapaport was an intellectual leader of an influential group of American psychoanalysts known as ego psychologists (Gill, 1980; Rapaport, 1967). The ego psychologists wanted to expand the psychoanalytic theory of the ego to include cognitive functions like attention, learning, and memory. In the 1950s Rapaport had recently moved from the Menninger Clinic to a small private mental hospital in the Berkshire Mountains called Austen Riggs. Beck studied at Riggs on a psychiatry fellowship from 1950 to 1952 (Knight, 1950; Knight, 1951). He attended Rapaport’s seminar on ego psychology (Rapaport, 1951b; Wheelis, 1951) and studied with the entire clinical staff (some of whom had moved with Rapaport from the Menninger Clinic) including Erik Erikson, Robert Knight, Margaret Brennan, and Roy Schafer. They provided Beck with his first comprehensive exposure to psychoanalytic thinking (Rosner, 1999).

In the early 1950s Rapaport was systematizing theories of the ego to build a new psychoanalytic theory of thinking (Rapaport, 1951a).
His aim was to explain the ego’s “reality-adapted secondary processes (in) rational action and logical—reasonable thought” (Rapaport, 1952). Cathexis was a central element of this theory. Psychoanalysts traditionally emphasized cathexis as the energy of the id’s drives and the ego’s defenses against them. Rapaport believed that thinking was an ego function with absolutely no connection to the id. He proposed cordonning off some cathetic energy solely for thinking and memory. Rapaport, following Freud, called this energy attention cathexis. Beck does not mention Rapaport by name in his notes but Rapaport’s ideas were clearly on his mind at the time. He had been reading Rapaport in 1961 in preparation for a study of the clinical utility of the digit symbol test (Beck, Feshbach, & Legg, 1962). In 1963 he wrote a letter to Roy Schafer, one of Rapaport’s students, about a critique of ego psychology (Beck, A. T., personal collection, October 11, 1963). And Beck referenced in TD2 Rapaport’s Organization and Pathology of Thought (Beck, 1964). The evidence strongly suggests—given that Beck studied with Rapaport, was immersed in ego psychology, and had recently been reading him—that Beck, even in some nondeliberate way, drew on Rapaport’s influence at this moment of transmutation because his ideas best suited the problem Beck was trying to solve. Both are theories of thinking predicated on structure and energy; both privilege a reality-testing and adaptive structure that mediates between internal and external excitations; most importantly, both argue that the structure is completely independent of unconscious processes. Cognitive psychologist Nancy Nersessian has shown how scientists draw on deeply held understandings of source material to think creatively about a target problem even when the source and target domains are not immediately compatible (Nersessian, 2008). She also demonstrates the role of visual reasoning exercises, what she calls “imagistic representation,” in this process. Her research helps us to make sense of the sudden and simultaneous appearance of ideas reminiscent of Rapaport’s and imagistic representations in Beck’s theory.

The next drawing (Figure 4), also of May 19, 1964, articulates a threshold theory of activation of the schema in which the cognitive structure and cathexis interact. Let us begin by noticing the sequence of arrows. They indicate that this is a flow chart of the progression of cathetic activity within a single schema. The first drawing on the upper left side shows a moderate amount of cathexis in the midrange of the structure. The shading is light to indicate a moderate degree of charge. The subsequent drawings illustrate how repeated stimulation lowers the activation threshold and shifts cathexis toward the extreme end. This leads to a circular feedback where thoughts themselves begin to evoke the schema and lower the threshold of activation. The thick black lines at the extreme end of the schema in the final drawing constitute the energetic expression of extreme negative thoughts in depression.

This interaction of psychoanalytic and cognitive elements appears again in Figure 5, which is an undated drawing, circa 1964. Beck now adds a vertical axis to his horizontal topography that links the cognitive structures to emotions and rational thought. We can articulate three distinct strata by noticing differences in the shading. The bottom level of emotion is shaded like a deep subterranean sea; the middle level has distinct regions of cognitive function; the rational level has a uniform layer of diagonal lines that cuts across all compartments of the schema. Beck also draws the cognitive functions in a vertical fashion; the more primitive and destructive cognitions are in the lower region of the stratum on the left side closer to emotions. He places the more optimistic cognitions in the upper region closer to the rational faculties.

This drawing also introduces a new role for cathexis. In the preceding drawings the schema was completely passive in the excitation and flow of cathexis. In this drawing Beck endows the rational faculties of the schema with the ability to manipulate cathexis. Note his handwriting in capital letters just above the drawing. Beck writes, “through use of rational can transfer cathexis from sad to happy schemas.” Here we see a new mixture of psychoanalytic and cognitive sensibilities. A rational agent has entered the structure to harness and control the energies that otherwise accumulate reflexively in response to stimuli.

Geometry

A final set of drawings appear on January 5, 1965 (Figure 6). There are three drawings on a page entitled “Cognitive Structures and Affect.”
All the ideas contained in the previous drawings appear in integrated fashion and are combined with a new geometric element: The tubular structure morphs into squares, rectangles, arcs, vertical lines, diagonal lines, and dashed lines that allow Beck more specificity of function.

By way of orientation, follow the three drawings in sequence from top to bottom. This sequence depicts the development of the schema itself. Beck had cultivated a developmental theory of the schema in previous notes that resembled those of Freud and Jean Piaget. On a page entitled “Developmental Theory” from May 19, 1964, for instance, he wrote:

1. Originally the schemas were dichotomous.
2. As child developed he superimposed checkpoints so that stimulation did not go to the extreme.
3. However the (more recent) acquisition was more vulnerable and easily cut through.
4. It is less automatic and involves imposition of judgment.
5. In other words there is a tendency to make an extreme judgment of every situation but the interjection of judgment tends to arrest the rating at a particular checkpoint.
6. In psychopathology, however, the following may happen: (a) the checkpoint has been disrupted as in the case of an extreme reaction to trivial stimulus (anxiety, phobia), (b) it is more difficult to impose judgments, (c) the primitive egocentric pole of schema is hyperactive.

(By Beck, A. T., personal collection, handwritten note, May 19, 1964)

These six statements find visual expression in the sequence of drawings in Figure 6.2 The top drawing shows the dichotomous “good”

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Figure 4. Second drawing of the depressive half of the schema (Beck, A. T., personal collection, handwritten note May 19, 1964). This is a flow chart tracking the accumulation and shift of cathexis toward the depressive end of a single schema.
and “bad” of the childhood form. The bottom two drawings show how they have separated to the right and left to make room for an arc. This arc represents many things at once. Beck has taken the midrange of the continuum and reshaped it from a vertical line into an upward-facing arc. Beck endows this midrange with the rational faculties that appeared as a separate stratum in the schema of Figure 4. Finally, he reconfigures it as a mature outgrowth out of the primitive structures, the location of the “checkpoints” not present in the primitive childhood structures to which he refers above.

Each of the geometric forms speaks to a quality either of primitive or mature thinking in this more complex structure. For instance, note the squares/rectangles of the primitive “good”—“bad” dichotomy. Here Beck has transmuted the extreme end of the tubular structure from a curve into squares and rectangles. What are squares and rectangles if not a combination of straight lines at right angles? They are rigid and fixed and represent visually a key concept in contemporary cognitive therapy: Primitive thinking in content and in style is fixed and inflexible.

Consider the arc-bridge in the bottom two drawings. It represents the capacity of our rational faculties to rise above those primitive evaluations. And what does an arc symbolize? It is the opposite of a square. An arc connotes flexibility, plasticity, and resiliency. The arc is a visual representation of another key element of the mature cognitive model. Mature thinking not only is less rigid in content but also more flexible and resilient in style.

Notice how Beck has taken the emotional substratum of the schema of Figure 5 and given it its own separate structure. The feelings “sad”
and “happy” are now within their own rectangular boxes. The dark lines that run vertically between the cognitive and emotional structures are of varying widths to connote greater or lesser strength of connection. Thicker lines indicate a strong and close connection to emotions. Thinner lines indicate a weak link. The dashed line indicates no connection. The lines articulate the idea that primitive thoughts give rise to strong emotions; rational thoughts evoke less emotion because they literally are further removed. Notice too that the midpoint of the arc is exactly neutral with no connection at all to affect. Beck visualizes this neutrality in the middle drawing with a vertical dashed line extending downward. The apex is a neutral cognitive high ground entirely free from affect.3

There are many questions that can be asked of these drawings. For instance, where would cathexis fit? What would happen if we tried to reconcile this drawing with the previous ones?

3 Beck’s reference to “neuronal connections” in the bottom drawing is curious. There are echoes of Freud’s Project for a Scientific Psychology, which first appeared in English in 1954 (Freud, 1954; Sulloway, 1979), where Freud visualized pathways of neuronal connections between ideas.
pull of gravity downward. If we assume the same kind of energy is at play in this drawing as in the others, then a deliberate act of will would be required to draw the energy up and out of these extreme thought gravity wells. Willful effort is needed to keep the thoughts at the higher level from being pulled down by the force of gravity.

The Cognitive–Psychoanalytic Story of The Bipolar Schema

When we put the topographical, the geometric, the developmental, the energetic, and the therapeutic components of these drawings together, like stringing words together into a sentence and sentences into paragraphs, a story told in images emerges about our interior world and the possibilities for growth and change. Like the public face of cognitive therapy these drawings offer a highly pragmatic vision of what good living looks like: The engagement of rational and creative thinking about one’s self and the world and the ability to solve problems with flexibility and resiliency. But these drawings contain an additional component. They speak of an ongoing conflict to maintain those capacities against a primitive self that never completely goes away. They portray a highly charged environment. The most to which we can aspire is to strengthen our innate rational capacities so that we can resist, time and again, the pull of the primitive. The drawings tell us that for Beck, at least in the mid 1960s, the cognitive model carried over from psychoanalysis a stark realism about the struggle of human nature. They are an admission that we are not entirely in the driver’s seat. But while Freud was pessimistic about the human condition, Beck’s belief in an innate capacity to neutralize our destructive selves such that he embodies it within our minds invested this model with an optimism not seen in Freud.

Indeed the drawings reveal a complex mixture of psychoanalytic and cognitive sensibilities. Our mature selves perpetually counteract the pull of the primitive just as the ego perpetually defends against the unwanted impulses of the id. The primitive, like the id, is a feature of childhood lacking restraint and self-awareness. This quality is akin to Freud’s primary process. The mature faculties, like the ego, grow out of the primitive and mediate between reality and the primitive experience. This quality is akin to Freud’s secondary process. Beck excised all of the motivational elements of psychoanalytic theory including defensive processes of the ego that are predicated on the existence of a drive that seeks gratification. So Freudian assumptions about destructive impulses and defenses are gone. Beck’s insertion of cognitions and rational faculties in their place also makes the comparison with Freud incomplete. But the primitive cognitions and the rational faculties are in relationship with each other in a way analogous to the relationship between the id and the ego.

Derivatives

The drawings of the bipolar schema are compelling evidence in favor of the psychoanalytic origin story. The problem is that after January 5, 1965, Beck makes no further mention of a bipolar schema either in private or in public. He drops the entire exercise. If there are continuities, where are they? Let us begin by asking why Beck might have abandoned the bipolar schema and what he did next. The bipolar schema was a response to criticism from colleagues that his structural theory was not dynamic. By late 1961 he confessed to those same colleagues that certain elements of his theorizing were too far removed from observed behavior (Beck, A. T., personal collection, Beck, A. T. to S. Feshbach, December 1, 1965, C. Ward, December 16, 1965). It is probable that he retreated from the bipolar exercise because he could not anchor it in anything he observed clinically.

It is also possible that the bipolar structure did not support his preference to think in terms of categories. Beck simultaneously had been considering a unipolar schema (which he never visualized on paper). We find Beck debating the virtues of the unipolar and bipolar ideas in his handwriting in Figure 2. Deliverations of this sort appeared as early as July 1962 when Beck established the fundamental problem of whether his theory should be more elaborate or limited to descriptive categories (Beck, A. T., personal collection, 1965, C. Ward, December 16, 1965). It is probable that he retreated from the bipolar exercise because he could not anchor it in anything he observed clinically.

"4 The author thanks one of the anonymous reviewers for the very valuable critique of the concluding sections of this article.
handwritten note, July 6, 1962). The bipolar version embodied the more elaborate theory. The unipolar version emphasized categories and descriptions. By late 1965 Beck settled on the unipolar version (Beck, A. T., personal collection, Beck, A. T. to M. Hurvich, December 16, 1965). The public face of cognitive therapy showed no change in the schema. Beck did not begin referring to it as a “unipolar” structure. Cognitive therapists have no idea that he ever envisioned a unipolar structure in contrast to a bipolar one. Rather, his public portrayal of the schema after 1965 continued as it had been in TD2: a stable cognitive structure containing a single theme that generates context-specific automatic thoughts.

Beck had been observing for some time that schemas of related beliefs tend to cluster together such that when one is activated the related ones also are activated. He had experimented with a variety of visual representations of those clusters as a way of categorizing the cognitive configurations of different personality types. Figure 3 shows what a cluster of depressive schemas looked like in the bipolar version. In that drawing he also imagines the energy variable (cathexis) that causes the cascade of activations within the cluster. In September 1964, he organized clusters from different personality types in the shape of sectors within a pie chart (Beck, A. T., personal collection, handwritten note, September 13, 1964). Figure 7 illustrates that on January 11, 1965 (six days after the final bipolar drawings), he configured the depressive clusters in the shape of a triangle. This triangle does not show a schema but rather simply establishes the presence of three clusters of schemas in depression. The three corners identify the themes of each of the three clusters:

![Figure 7](image_url)

**Figure 7.** Precursor to the cognitive triad (Beck, A. T., personal collection, handwritten note January 11, 1965). The themes in the triangle in the upper right hand corner of “loss,” “helpless,” and “self-blame” later became the more familiar triad of negative thoughts about the self, about the world, and about the future.
themes of “loss,” of feeling “hopeless,” and of “self blame.” He later called this the cognitive triad.

As Beck refined the cognitive triad (Beck, A. T., personal collection, handwritten notes March 10, March 15, 1965) these themes became known as negative thoughts about the self, about the world, and about the future. In late 1965, he submitted a paper on the cognitive triad to the Archives of General Psychiatry as the third installment in his series on thinking and depression (which was not accepted for publication). The triad appears in print for the first time in Beck’s, 1967 book on depression (Beck, A. T., personal collection, M. Hurvich to A. T. Beck, December 6, 1965; C. Ward to A. T. Beck, December 5, 1965; Beck, 1967). In contemporary practice the cognitive triad of depression functions as yet another black box of the model. Cognitive therapists use it to identify the specific cognitive characteristics of depression. It is not designed to evoke discussions of the mechanics of the schema but merely to make it easy for therapists to identify the schemas of depression. As Beck told his biographer, “It was a neat little package that you could sell” (Beck, 1990b, p. 18). We now know that it emerged after TD1 and TD2 as the last in a series of visual exercises charting possible configurations of the schemas.

Even with the cognitive triad in hand Beck still imported some of his psychoanalytic theorizing from the bipolar version into the unipolar version. Remember that TD2 (1964) introduced the schema and how it operates in depression. The break with psychoanalysis is evident in TD2. His language is completely devoid of psychoanalytic concepts. He describes the schema simply as an “idiosyncratic cognitive structure.” After 1965, however, the schema takes on psychoanalytic properties. It bears the imprint of Beck’s thought experiments with the bipolar schema. The red threads that link the bipolar schema with the unipolar version are Beck’s postulates of two levels of thinking akin to Freud’s primary and secondary processes and cathexis. Recall that the bipolar version consisted of two opposing primitive qualities with a neutral high ground of mature qualities above and between them. The unipolar version postulated two separate sets of unipolar structures, one with primitive single-themed idiosyncratic schemas and the other with mature capacities. Beck attributed Freud’s primary process to the “primitive” schemas. He gave the “higher centers” a separate structure with secondary process.

Some of these psychoanalytic ideas transferred more completely than others. Beck has been consistent in arguing that idiosyncratic schemas are primitive in a manner analogous to Freud’s primary process (see, e.g., Beck, 1970a; Beck, 1972; Beck, 1984; Beck, 1991a; Beck & Weishaar, 1989). In language especially evocative of the drawings, for instance, he has described the “properties of the primitive schemas” as being “their breadth, rigidity, and dichotomous structure” (Beck, 1972, p. 152). He even has hypothesized a link between cognitive and affective structures in language that evokes the black lines of the January 5, 1965 drawings, “The intimate connection between cognition and affect may be represented metaphorically as pathways between cognitive structures and corresponding affective structures; therefore, a particular cognitive content produces an affect congruent with it” (Beck, 1972, p. 153).

He has been equally clear that the “higher centers” are analogous to Freud’s secondary process. He has been more vague about their structural properties, however. He often speaks of the structure as serving a reality testing function. In 1970, for instance, he suggested that secondary process was a system of “refined and elastic structures” that test, authenticate, and reject the primitive ideations (Beck, 1970a, p. 194). In 1972 he spoke of their role in serving “the demand character of the external stimulus situation” (Beck, 1972, p. 153). In 1984, after explaining the similarities and differences between Freud’s primary process and his own, he simply called “mature thinking” the “higher level” corresponding to secondary process (Beck, 1984, p. 120). In 1991, in contrast, he argued that secondary process helped build mature schemas: “Cognitive therapy is designed to produce more enduring structural change than simply symptomatic relief (de-activation of the schemas). If the underlying assumptions . . . are undermined and new, more adaptive schemas are constructed then the person will be less prone to experience later recurrence of depression” (Beck, 1991a, p. 194). The features of secondary process structures, however, remain sketchy.

Cathexis also has remained a sketchy concept. Beck often uses energy language such as “grinding out,” “powerful streams,” “explosions,” and so...
on. Beck even has acknowledged that psychoanalytic energy concepts persist. He told Seymour Epstein, founder of cognitive–experiential self-theory (Epstein, 1994), that “I will draw on psychodynamics whenever it suits my purpose! I do feel that many of Freud’s observations were right on target, and that some of his preliminary formulations made sense, but that he simply went too far” (Beck, A. T., personal collection, October 27, 1994). He continued,

I have struggled with the concept of energetics, cathexis, charge, and so forth for a long time because I was not at all satisfied with the way Freud had mixed in the physicalistic concepts of energy with the abstract conceptualist concepts of unconscious, and so forth as though they were isomorphisms. However, although I detoured around these concepts in several of my books, I have found that there is no way I can satisfy myself with an adequate explanatory model unless I do bring in these concepts (Beck, A. T., personal collection, November 8, 1994).

But the nature and behavior of this energy variable within the model remain unclear.

Finally, a fundamental difference between Beck’s psychoanalytic theorizing in the bipolar and unipolar versions lies in his vision of the nature of our interior world. The bipolar model recapitulated the conflict between our destructive natures and our adaptive selves of Freud’s model. In the world of the bipolar schema there was no possibility of escaping completely the pull of our primitive selves. The best to which we could aspire was a kind of energy homeostasis, where we willfully use our innate capacities for rational thought to outflank the brute strength of our primitive selves. But the conflict itself was never-ending, just as in Freud’s model. With the unipolar schema Beck loses this sense of conflict. From the way Beck describes it, there are simply lower order and higher order cognitive mechanisms. The goal of treatment is to deactivate the primitive ones and build more mature ones. The conflict may still be there but Beck doesn’t venture into those speculative waters.

Despite inconsistencies in Beck’s psychoanalytic theorizing, the historical record allows us to bring into clearer focus the trajectory of the psychoanalytic origin story. Beck tested experimentally in the late 1950s a psychodynamic theory of depression that he operationalized as “inverted-hostility”. His data did not support a motivational theory of depression. He considered revising psychodynamic theory to account for nonmotivational properties in depression. Instead, he broke with psychodynamics altogether and built a cognitive model of depression in its place in the early 1960s. We now have discovered a moment from 1964 and early 1965 when he returned to a nonmotivational dynamic theory. He revived a psychodynamic concept he had envisioned in the late 1950s of a continuum of passive-aggressive motivations, structuralized it, and transmuted it into a bipolar cognitive structure. He imbued it with primary and secondary processes and cathexis, constructs advocated by a school of ego psychology in which Beck trained which proposed that cognitive activity occurred in the ego outside the realm of the unconscious. In 1965 he abandoned the bipolar model and returned to a unipolar one. He de-emphasized cathexis but maintained primary and secondary process. This final structural map of the schema persists to the present day even as Beck has continued to improvise upon it.

Epilogue

Clearly Beck does not want to emphasize the community of classical psychoanalysts with whom he trained at the Philadelphia Psychoanalytic Institute, with whom he worked at Penn, and whose national organization refused to grant him membership. In private, Beck has spoken critically about their culture of loyalty. Writing to Paul Meehl in 1968 he remembered that “as time went on, I realized that support for [the psychoanalytic] postulate was ultimately derived from the declarative statements of the psychoanalytic authorities rather than from evidence; I began to query in my belief that ‘20,000 analysts can’t be wrong’” (Beck, A. T., personal collection, A. T. Beck to P. Meehl, March 13, 1968). His antagonism toward psychoanalytic dogmatism is palpable in this excerpt from an interview with his biographer Marjorie Weishaar:

The personal elements . . . that got me out of the whole psychoanalytic framework is the whole notion that authorities don’t have to be taken at their face value and my own data seemed to contradict the authorities; that my own data can be trusted . . . And there were no authorities that are more powerful in this world except maybe priests—the Pope—but no authority is more powerful than analysts because they know everything. They have the word. And if you deny their thing, it only proves that they’re right. Denial is affirmation.
You’d be surprised how many intelligent people buy into it (Beck, 1991b, pp. 17–18).

Over the years he has been positioning the experimentalism of cognitive therapy as a direct assault on the irrationality of what came before. The story of discontinuity makes clear that our memory of his work should begin with his first victory of scientific reasoning over psychoanalytic dogmatism.

But then there is the issue of identity. The origin story of continuity tells us not about where he came from but where he hoped to arrive. Beck needed a new community with which to identify after 1962. He had incorporated into his model psychoanalytic ideas commensurate with other break-away schools that emphasized conscious experience in interaction with the environment, such as those of Karen Horney, Alfred Adler, and Harry Stack Sullivan (see Beck, 1991a, p. 192). He decided to identify himself with them. In 1990, he told Paul Salkovskis that,

First I called this ego psychology, (and then I felt that this was) the psychoanalysis of the ‘60s, this is neo-analysis. What I am saying is that (cognitive therapy) is consistent to this day with Adler and Horney and so on. I kind of identified myself with the so-called neo-analytic school (Beck, 1990a, p. 9).

In the early 1960s these groups had coalesced in an organization known as the American Academy of Psychoanalysis. Beck joined the Academy in 1968. He chaired a midwinter session on depression, spoke at their meetings, served on the membership committee, and published in their journal (Beck, 1970b; Rosner, 1999). His self-identification as an ego psychologist and neo-Freudian has been a membership badge showing that cognitive therapy looks at conscious activity (rather than unconscious) and the interaction with the environment (rather than on internal psychodynamics). This origin story points us not to Beck’s origins in classical psychoanalysis but to his new location among post-classical psychoanalytic communities.

There are a few, like his former patient and collaborator Marvin Hervich, who understand intimately the overlay of his model with these theories (M. Hervich, personal communication, April 4, 1997). But these locations are unknown to most psychotherapists. The neo-Freudians were not quick to accept him as one of their own. He let his membership in the Academy lapse in 1976. He tells a similar story in 1997: “When I presented this material before the local analytic society, I said, ‘this is really neo-analysis.’ They said, ‘Well, Beck, this is no longer analysis. You better stop calling yourself an analyst’” (Beck, 1997, p. 7). Beck needed to identify himself as something other than a classical analyst but it was not at all clear who would embrace him.

Beck had simultaneously been courting behavior therapists (see Beck, 1970a). Initially they too did not see reason to accept him as one of their own. Beck continues:

I had to find a new name for this approach. At that time I was attracted to behavior therapy, so I thought maybe I’d call myself a behavior therapist. I spoke to Dr. Wolpe about some of my ideas and he said, ‘Well, you’re not a behavior therapist at all.’ So, I ended up with the idea of calling my approach cognitive therapy, because it was based on the cognitive model of psychopathology (Beck, 1997, p. 7).

A split among behavior therapists in the early 1970s, however, produced a new cognitive wing eager to incorporate cognitions into the stimulus-response paradigm. That group needed Beck. He needed them, too (Rosner, 1999; see Beck, 1990b, p. 6 for a detailed story of how he nurtured relationships with these therapists). Behavior therapists were sophisticated experimentalists. They also had long been critical of psychoanalytic subjectivism. Beck shared this sentiment. A group of cognitively oriented behavior therapists coalesced around Beck. Together they charted a future for his new science; this included downplaying the overlaps with postclassical psychoanalysis (see Clark, Beck & Alford, 1999 for a good example of this science-as-justification origin story).

There is something scandalous to a contemporary clinical ear in suggesting that Beck needed Freud, even if it was a neo-version of Freud, to flesh out his theory. So many resources and so much rhetoric have been invested in keeping the wall between him and Freud firm. The training of many cognitive therapists does not include psychoanalysis. Consequently, they may not be fully conversant in the psychoanalytic features of Beck’s theory from their own experience. Their training emphasizes the solid foundation of science upon which cognitive therapy rests, which distinguishes it from psychoanalysis and other schools of therapy. My aim in this essay has not been either to
challenge the validity of their science or to take a position on the relative merits of cognitive therapy, psychoanalysis, or behavior therapy. Rather, I am making public and providing a context for archival evidence showing that Beck has been improvising upon both psychoanalytic and cognitive strains in his work nearly since the inception of cognitive therapy. The drawings and correspondences clarify that these exercises have been a rich data source for some of the explanatory metaphors and conceptual modeling that appear in his written work. They suggest that the creative calculus of cognitive therapy “in-the-making” has been more complex and broader in scope than previously known.

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