PROLOGUE: AFFECT IMAGERY CONSCIOUSNESS

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It is not unusual for the great minds to explore several paths before they pick up the scent of their future. Many roads diverge in the woods and it matters a great deal which we follow and when. Silvan S. Tomkins entered the University of Pennsylvania hoping to emerge as a playwright; he saw existence as sequences of scenes animated by emotion and linked to form stories about lives. He left with a Masters in Psychology and a doctorate in Philosophy, thence to postgraduate work at the Harvard Clinic studying Personology under Henry Murray. A lifelong passion for the racetrack led him to study the facial display of horses to correlate attitude and performance. During the Great Depression he made a good living picking horses for a betting syndicate; sheer joy overtook him when, near the end of his life, in his honor the local track named a race "The Professor." Most comfortable at the seashore, his son recalls that often he'd stand silently at the water's edge for hours on end "just thinking." None who knew him remembers a brief conversation, for everything led anywhere. Occasionally, for days at a time, he'd detach his telephone from its wall socket as protection from his compelling sociophilia.

The writings for which this essay is offered as a Prologue consumed him from the mid-1950s through the end of his life in 1991. Knowing it was his "lifework," Tomkins conflated "life" and "work," reifying the superstition that its completion would equal death and refusing to release for publication long-completed material. He knew the risks associated with this obsessive, neurotic behavior, and the results were as bad as predicted. The first two volumes of *Affect Imagery Consciousness* (*AIC*) were released in 1962 and 1963, Volume III in 1991 shortly before he succumbed to a particularly virulent strain of small cell lymphoma, and Volume IV a year after his death. This last book contains Tomkins's understanding of neocortical cognition, ideas that are even now exciting, but until this current publication of his work as a single Supervolume, almost nobody has read it. The bulk of his audience had died along with the enthusiasm generated by his ideas. Big science is now more a matter of big machines and unifocal discoveries as the basis for *pars pro toto* reasoning than big ideas based on the assembly and analysis of all that is known. Tomkins ignored nothing from any science past or present that might lead him toward a more certain understanding of the mind. Every idea, every theory deserved attention if only because significant observations can loiter in blind alleys.

"Why are there no commas in the title?" we all asked him. "Because there isn't any way to separate the three interlocked concepts. Affect produces attention that brings its trigger into consciousness, and the world we know is a dream, a series of images colored by our life experience of whatever scenes affect brought to our attention and assembled as scripts." *Affect Imagery Consciousness* is the label for a supraordinate concept. It fit his personality perfectly, this belief that something so complex as the person could only be encompassed by allusion and imagery no matter how many machines might be needed in order to prove individual ideas. It was inconceivable to him that his "book" could be "finished" because there was always so much more to learn. On his deathbed he was consumed with questions about the logic underlying the design of the hospital. He worked until he died, and left to his intellectual heirs the task of organizing and releasing what he dared not describe as "complete."

These years after his death few people know his personality, his sense of himself, how he hoped to be known or remembered. Surely he was one of history's most original psychologists, a tireless scientist who contributed much to that discipline. Yet the biggest clue was the balance of books in his library. Most important to him were philosophical concepts, the deepest possible musings about what it meant to be human and the role of the human in the world. Of perhaps equal valence were biographies of great leaders and thinkers, for concepts must derive from personhood. Front and central to him was the battle between Bertrand Russell (whose *Principia Mathematica* reduced all ideation to mathematical neatness) and Ludwig Wittgenstein (who said that books and formulae could neither embrace nor encompass the complexity of existence). Kant's *Critique of Pure Reason* was his totem, and Tomkins defined himself as a neo-Kantian. If, as Tomkins commented, Kant compared the human mind to a glass that imprinted its shape on whatever

liquid was poured into it, our concepts of space, time, and causality must be understood as constructions that imposed the categories of "pure reason" on "things," thus disguising and pushing their ultimate nature beyond understanding. Kant's error of omission required repair by the theories of affect and script Tomkins was now to introduce: No matter how reasonable, the engine of analysis is engaged and focused where aimed and sent by emotion; human thought is never dispassionate. It is from this perspective that I ask the reader to consider the complex work that opens a few pages forward.

What of our demonstrable essence defines us as human, as different from other life forms? Imagine, if you will, the enormity of the task he took on. Tomkins claimed that the core, the critical element of the mind, whatever was to be our fundamental nature, derived not from the splendid neocortex that allowed critical thinking and enabled productivity of all kinds, but in the lowliest and most primitive of places—the face of the infant. Over and over he reminded us that "there is a taboo against looking at the face," a cultural rule that one should not stare at the face of another. But lovers stare enraptured into each other's eyes, almost addicted to joy. Babies literally search mother's face as if attempting to drain it of needed information, just as maternal attention to the face of the preverbal child is essential to their connection. The contrast between what seemed most attractive to babies and the rules promulgated to keep us away from that normal object of our fascination guaranteed Tomkins's curiosity.

He studied the face with unique equipment—including a specially built camera capable of taking 10,000 frames/second. ("It sounded like a canon when it went off," he laughed. "We had to keep it in the next room with a one-way mirror so the subject could be isolated from the noise. No one had ever seen that much detail in any affect display before.") But for what he thought would be one normal book, he had to do something different, something that would drive home to a new generation the importance of the face.

And so he compiled everything known about the face—musculature, enervation, characteristics of its skin, thermal response, microcirculation, and more. He postulated as yet undiscovered but unsought microreceptors in the skin of the face. Such receptors would allow sensitivity to subtle and almost microscopic movements of its musculature; the signals they picked up were made more salient by moment-to-moment alterations in facial circulation. For theories he could not yet prove, he adduced evidence from elsewhere in biology. To Tomkins, the skin of the face was favored as the receptor site for some of the most vital information imaginable. The face, he claimed, is the display board for what he termed "the affect system," a specialized neuromuscular system responsible for some of the most important functions in human life. Amplified by affect, anything becomes important. Affect, he said, "makes good things better and bad things worse."

The obvious is obscure because it is unexamined. From first hearing, the leitmotif of Molière's "Bourgeois Gentilhomme" became a pillar of my intellectual house: "Until today I had never heard of prose, and now I find I have been speaking it every day of my life." Poe's "Purloined Letter" was hidden safely in plain sight. Despite that wars are fought over access to water and legal battles engaged to protect the purity of what we drink and breathe, such elements are taken for granted until selfish interests move our society into zones of danger. Throughout history parents have chastised their children for their failure to control and contain their visible emotionality; a sobbing adult is mocked for "being emotional." Decades ago, in a hushed moment during the stage performance of a multi-talented film star, I saw a raptly attentive audience of thousands reduced to sudden, helpless hilarity when the unexpected brief scream of a baby co-opted our attention. "Never try to work a crowd with anybody under three," said the star to thunderous applause. Tomkins asked why we had emotions and why we paid attention to them.

Advanced life forms occupy only two kingdoms—plant and animal. He wondered how they differed, why they occupied two such distinct realms. The clue lay in their verbs, for animals are animated and plants remain where planted. "It was therefore possible to program into the genetic code of any plant the responses to any situation it might encounter." Leaves and roots contain cells specialized to identify a variety of stimuli and to transmit messages that engage life enhancing protocols. Daily we read that plant biologists have discovered ever more complex systems through which trees and other advanced members of that kingdom communicate with each other, send and interpret messages, and mobilize intricate defenses of their turf. But (so far) there is no evidence that any tree can learn, remember, or teach another what it has experienced, save for the species

specific system of evolution through which whatever life form manages to survive some novel insult gets therefore the privilege of primacy until some new danger threatens that species.

Affect as a System

Mobility allows animals the ability to escape many situations they find noxious, but the survival of any individual creature is tightly linked to the sophistication of its ability to analyze new data and from any encounter to remember as many aspects as necessary for future utilization. Tomkins pointed out that the evolutionary sequence featured steady increase in the ability to receive and interpret signals that differ most in the rate at which they vibrate. The slowest forms of vibration are touch and movement, followed by sound, heat, and light. Success as a life form depends largely on the ability to process data of each type, and to retain in memory whatever was discovered in previous experiences.

Touch, sound, heat, light? They are constants, always present, always sources of information. How can any organism discriminate among or "make sense of" information flowing simultaneously to and from several organs and receptors? The ability to store and retrieve data from past experience is essential for the survival of the most advanced creatures, but how best should such information be managed? What aspect, what attribute of the information available to Animal's steadily increasing range of data acquisition might favor its best possible analysis? What brings, maintains, controls attention, and once it is engaged, what allows us to relinquish attention?

Over the decades of his research, Tomkins identified nine of these primary motivating mechanisms, the inborn protocols that when triggered encourage us to spring into action. Two feel different kinds of good and are known as "the positive affects." Four feel different kinds of unpleasant and are known as "the negative affects," and one other is a very brief neutral reset button for the affect system. Late in his career, he recognized two other stable forms of displeasure that he linked to innate mechanisms evolved to protect us when hunger or thirst might lead us to ingest potentially dangerous substances. So great is the importance of food and the hunger drive that on a symbolic level these became protective protocols that alerted us to interpersonal danger and were therefore called "auxiliary affects." Affect is motivating but never localizing; the experience of affect tells us only that something needs our attention. Other systems must be engaged in order to decide what must be done and how.

Most of us were taught in the language of Mowrer's 1938 dictum that every response was triggered by a stimulus, that life was lived as sequences of stimulus-response pairs, "S-R Pairs." Yet in real life, life as it is lived by organisms with affects, no stimulus can trigger a response unless and until it triggers an affect. It is the affect that brings the stimulus to the attention of the organism that then mobilizes a response. Life is not made up of "S-R Pairs." We live with S-A-R triads or "Stimulus-Affect-Response" sequences. Mood altering substances, whether in the form of medication or foodstuffs, are not needed by animals too primitive to have affects, but are essential accoutrements for those organisms that have an affective life. True to his romantic affinity to the theater, he gave these tripartite sequences the group name of "scenes."

Affect, Feeling, Emotion, Mood, Disorders of Mood

The affects are physiological mechanisms easily visible on the face of the newborn and although muted through the process of maturation, can be easily identified throughout life into senescence. The reader may find helpful the following terminology of affect-related experiences, all of which will be explained in greater detail below:

1) By the terms "affect" or "innate affect," we reference a group of nine highly specific unmodulated physiological reactions present from birth.
2) We use the term "feeling" to describe our awareness that an affect has been triggered.
3) The formal term "emotion" describes the combination of whatever affect has just been triggered as it is coassembled with our memory of previous experiences of that affect. Tomkins eventually dropped the term "emotion" in favor of the much larger category of these coassemblies that he called "scripts."
4) In general, the term "mood" or "normal mood" refers to a state in which some immediate experience has triggered an affect in such a way that the combination reminds us of an analogous historical experience,

the memory of which re-triggers that affect. Such sequences may go on in the form of reminiscences that maintain the more-or-less steady experience of any affect. This kind of normal mood will vanish the moment some new stimulus triggers another affect and terminates the loop.
5) By "disorders of mood" we refer to biological glitches that produce the relatively steady experience of any positive or negative affect, affects that share neither the triggers nor the time constants typical of normal affective experience.

A good way to conceptualize this system of nine quite different alerting mechanisms is to view them as a bank of spotlights, each of a different color, each flicked on by its own quite individual switch, each illuminating whatever triggered it in a way highly specific to that light. We don't "see" any stimulus unless and until it is brought into our field of awareness as colored by affect.

The Drive System

As psychological mechanisms, the innate affects differ greatly from the biological drives that have for so long dominated the discipline of psychoanalysis and become part of our everyday language. As Tomkins explained them, nearly all drives have in common the property that they announce the need to move some substance into or out of the body and specify the site at which that action must occur. Breathing, ingestion, excretion, sleepiness, and sexuality are managed by instruction protocols that encourage an organism to initiate and complete specific actions at highly specific sites. Most of these instruction sets are fully functional from birth, although the sexual protocols don't ordinarily engage until their special organs have matured. All drive systems can operate without the need for instruction but can also be engaged intentionally. They are far more fractionated than usually considered, for we can become hungry not just for food in general but for specific nutrients recognized by the drive system as deficient. The drives provide localizing information, but derive all of their motivation from the affect system. Tomkins noted that, for example, "sexuality is a paper tiger" unless amplified by affect; sexual arousal cannot occur in the absence of affective amplification. Often we ignore hunger when preoccupied.

Pain

The only other inborn mechanism of attention is pain, and it is equally motivating and localizing. We hurt where there has been injury, and the various types of pain may be viewed as analogues of that injury: ripping, cutting, burning, tearing, breaking or bruising. Eyes and hands move quickly and precisely to what hurts and as soon as possible. Pain, drives, affects: Three interlocked but remarkably different systems of prewritten instructions. If pain initiates messages about injury, and drives are set in motion by the physiological need to move something into or out of the body, what attribute is shared by all of the innate affects? What have they in common that allowed Tomkins to describe this group of nine mechanisms as a system? The descriptions that follow are highly condensed statements about the nature of each affect, extended introductory sentences through which I hope to whet your appetite for the book itself. They are not ordered as you will find them in the book, but represent what I understand as the final form of his thinking on each subject.

The Nine Innate Affects

1) Surprise-Startle

Tomkins reminds us that everything must increase, decrease, or remain stable at some level. He suggested that the affects evolved as highly specific responses to such qualia – mechanisms sensitive to increases, decreases, or specific kinds of steady-state presentation, but neutral to the nature and function of the bodily system involved. Each affect might then be seen as an analogue of this specific aspect of its stimulus, regardless of whatever else that stimulus represented. Take, for instance, our response to the sharp report of a pistol shot: automatically, we blink, raise our eyebrows, inhale suddenly with the sound of "uhh," sometimes bend forward slightly at the waist, and then look around to see what might have "triggered" our reaction. Taken for granted is the quality most important to Tomkins – affect over the range from mild surprise to full startle (and to which he gave the formal range name "surprise-startle") clears the mind of whatever we'd been "thinking about" only a moment earlier. Freed from what might previously have been the subject of our attention, we are suddenly able to search for the cause of this freedom. "Sudden on, sudden off" is the neutral reset button for the

attention system. It is equally likely to be triggered by something pleasant or unpleasant, but is "experienced" and remembered in terms of what we next recognize or assign as its triggering source. Despite their meaning to us, a pistol shot and the joyous shout "Surprise!" at a birthday party gain our attention from the same affect.

2) Distress-Anguish

Imagine next a noxious steady state stimulus (relentless noise, unpleasant ambient temperature, physical discomfort, hunger, fatigue) that turns on and simply won't turn off. The baby's cry of distress is an amplified analogue of a noxious, steady state stimulus, and a universally recognized output that signals clearly its helpless discomfort. It is accompanied by a highly specific facial display: the outer edges of the mouth turned down to form the characteristic "omega of melancholy," eyebrows arch, and eyes fill with tears. As she picks up the crying infant, the mothering caregiver checks quickly and reflexively for the most likely sources of steady state discomfort: cold, wet, hungry, lonely, sleepy, or in pain for some as yet undetermined reason. Some condition, some now quality of its existence has triggered an affect over the range from mild distress to sheer anguish, and it is the expression of that affect which draws mother to the helpless infant and throughout adult life operates as an amplified analogue of steady state discomfort. And since the cry of the infant is itself a steady state and quite relentless auditory signal, the cry of her baby triggers maternal distress-anguish by affective resonance.

It was the phenomenology of affective resonance that led me to read Tomkins's work and later work with him. Our training places young physicians in strange places, and I'd always been amused to watch the theater of the newborn nursery where the cry of one infant would like a wave course over other infants until all were crying in unison. None of us onlookers cried, which suggested that with maturity came the learned ability to maintain one's personal boundaries even in the presence of intense ambient affect. Furthermore, in my clinical work as a psychiatrist, I had often experienced within myself specific emotions that were coursing through but not expressed verbally by my patients. Each of the nine innate affects is an amplified analogue of its stimulus conditions, and (simply because it carries, amplifies, and extends the qualia of its original stimulus) is therefore capable of triggering more of that affect in oneself. The baby hears its own cry as a competent trigger for more, and more intense crying. Quite early, the infant also learns to get mother's attention by imitating its own innate cry, a process Tomkins called "autosimulation." No matter why triggered, the cry of distress-anguish acts as a significant trigger for the distress of others.

We are thus wired to react innately to the expressed affect of others as if it were our own, and therefore enabled to know a great deal about the inner world of those others. Infantile expression of affect is often an all-or-none phenomenon and has thus evolved as the most efficient possible system to guarantee maternal attention to baby's needs. We would forever live at the mercy of those who express affect with the most intensity save for the fact that each of us learns to protect and preserve variable degrees of inner peace in the face of others' affect. To be most receptive as audiences, and in certain social or sexual situations, we may suspend the operation of what I eventually termed an "empathic wall," but our ability to live in a complex world with all its intense experiences requires that we practice variable susceptibility to the affect of others. Twenty-five years ago we viewed it as an "ego mechanism"; now the empathic wall is understood as an affect management script. I suspect but cannot prove that the entire mythology of "mental telepathy" is a fanciful extrapolation of the far simpler physiology and phenomenology of affective resonance through which we really do know a great deal about the inner experience of the other person.

3) Anger-Rage

Babies, of course, do not merely sob quietly. The logical extreme of a steady state complaint is of course the cry of rage, the roar of dissent, the prolonged all-or-nothing scream that conveys the utter unbearability of its trigger. Tomkins gave this hot affect the range name anger-rage, and suggested that the circulatory changes associated with the infant's swollen, reddened face operated both as a highly visible sign of the innate affect and a feature that made even more salient whatever messages might be associated with the muscular part of its facial display. Muscles all over the body are recruited in the service of anger-rage—fists, arms, and legs tensed in isometric contraction, abdomen taut, mouth open at its widest. Said a friend observing his 6-week-old son rage on the changing table, "If he were 6 feet tall, that would be King Kong." Just as with any other of the innate affects elucidated by Tomkins, anger can be autosimulated and thereby recruited on demand—initially

as a pale imitation of the physiological affect mechanism, but soon enough morphed into the real thing as art paves the way for the innate. The expression of our own affect triggers by resonance more of the same in both self and other—a demagogue can make rage as infectious as a comedian can generalize laughter. In the infant, a steady-state stimulus at one range of intensity triggers distress-anguish, whereas a steady-state stimulus at a higher range of intensity triggers anger-rage.

All innate affects are modified by experience and learning. Comparing the facial display of infants and adults, Tomkins asked us to consider geology. The fresh, new Rocky Mountains are sharp, craggy, and definite. Older mountains like the Catskills are rounded, weathered, smoother. Displayed on the face of the infant, innate affect involves every possible muscle and the maximal reactivity of facial microcirculation. The adult display of affect is muted, smoother, and subtle. Despite that the anguish of a baby is heart-rending and the sob of an adult is far more private, both involve analogic amplification of a higher than optimal steady-state stimulus. Despite that the entire body of an infant may be committed to the display of rage, an adult may learn to miniaturize the display of that same affect by momentarily tightening the jaw muscles or a fist hidden in a pocket. Analogues display qualia, not degrees of intensity.

4) Enjoyment-Joy

From the "on-off" quality of surprise-startle and the constant density qualities of distress-anguish and anger-rage, look next at the affects characterized by graded increases or decreases in stimulus density. Easiest to grasp is the affect responsible for laughter, the feeling of relief, the sense of "whew!" when a challenging situation ends, or the joy of victory. The gradual decrease in any stimulus will trigger a pleasant smile and a relaxation response, whereas rapid decrease in stimulus density will trigger laughter. There is nothing intrinsically "funny" about the punch line of a joke, but the suddenness with which an anecdote ends is quite analogous to an unexpected physical punch. In the world of professional comedians, "one-liners" are protocols in which the operator draws our attention with an interesting premise but terminates that attention unexpectedly by referencing an alternate meaning of that phrase.

The modal example of this genre is Henny Youngman's archetypal "Take my wife. Please." The initial phrase (the words as well as the tone in which it is delivered) prepares us for perhaps a minute's description of that beleaguered spouse, but the immediately following punch line shifts the meaning of "take" from "please listen to the following story about my wife" toward "remove my wife." It is only the suddenness with which we are forced to make this shift, accept that we were tricked, and recognize that the joke has ended, that triggers laughter. Despite that we laugh at jokes and consider them a major source of enjoyment, most of them "don't work" unless they contain at least some elements of novelty and surprise. ("I've heard that before.") If surprise-startle is triggered by the sudden onset and sudden offset of data acquisition, the guffaw is an analogous response to sudden or unexpected offset following a relatively slow onset. Tomkins gave this affect the range name "enjoyment-joy," thus referencing the wide spectrum of situations in which "stimulus decrease" brings pleasure. In the infant, it is seen as a moment of complete relaxation of all the facial muscles, the smile of contentment, and bright shining eyes. You will often see adults crowded around a baby in order to savor that wonderfully infectious affect, sometimes pleading aloud "Give us a smile." As adults, our personal world is often so complex that we search diligently for situations that allow the simple pleasure of even momentary relaxation and consequent enjoyment-joy.

5) Interest-Excitement

Recall, for a moment, Tomkins's basic premise about the affect system: Advanced animals cannot survive as individuals or as a species unless they are able to 1) select whatever turns out to be the most important source of information available at any moment; 2) develop the best method of handling that information; and 3) manage systems for the retention of and immediate access to what was so learned. Interest-excitement is the genetically scripted protocol that mobilizes attention to information that enters our neurological system at an optimally increasing rate of stimulus acquisition. So important, so compelling is this positive affect that adults will endure standing in line to see a new movie, purchase the latest fashion of anything, or embrace almost anything that seems both novel and safe. Although it is the most important affect associated with the normally disciplined learning in a classroom situation, its range name makes clear that the intensity of the expressed affect is related to the rate at which stimulus acquisition increases. Within limits, we are programmed to attend to novelty in an atmosphere of excitement.

Each of the nine innate affects is equally responsible for the attitude we call "attention," and the universal sense that attention requires some sort of effort or work leads us to claim that we "*pay*" attention to a stimulus. Yet I doubt that any concept introduced by Tomkins has produced as much confusion as his insistence that what we had always considered "normal attention" was itself a highly specific affect mechanism. In the infant, this is seen as the rapt face of "track, look, listen," and we take it for granted as the attitude of "pure" attention to novel information entering through any portal at an optimum rate of stimulus increase. The sheer ordinariness of this affect has precluded serious investigation for centuries. It is characterized by furrowed brow, head tilted slightly forward and perhaps a bit to the side as if favoring one ear, mouth slightly open, (in the infant) tongue protruded slightly and often to the non-dominant side. The childhood activity we call "spontaneous play" is almost always initiated by this affect, despite that normal playing almost always provides a wide range of other affects as difficulty, success, and failure are encountered.

6) Fear-Terror

Just as distress-anguish and anger-rage are negative affects that amplify or bring into awareness different levels of steady-state discomfort, thus increasing radically the possibility that it might be remediated by conscious action, affect over the range from mild fear to sheer terror calls our attention to some sort of information entering our system at a rate categorized as "too much, too fast." Whereas distress and anger identify steady state overload, fear-terror identifies rapidly increasing overmuch. The term "anxiety" usually references the milder forms of fear for which we cannot immediately assign a source. We all know fear-terror as the "alarm" that goes off when driving on a highway, we are alerted to what may be a rapidly approaching danger. In an automobile, we then swerve, brake, or increase our speed to avert whatever has triggered this alarm. Unlike the kind of attention associated with surprise-startle, conscious awareness of whatever has frightened us does not involve sudden clearing of our attention to whatever had been going on only a moment ago, but rather an increased intensity of and different type of concentration on something that has begun to happen uncomfortably rapidly.

If excitement and anger are hot affects, the worried attention of fear is a cold affect in which the face is turned a bit to the side, the cheek is blanched, and all muscles are held stiffly for a moment. It includes the cry of terror, eyebrows raised and drawn together, sometimes the corners of the mouth drawn back and (in extreme terror) contraction of the muscles underlying the skin of the neck. As fear is an analogic amplifier of something that is happening too rapidly, it also causes the pulse to race uncomfortably; the pounding heart of fear-terror itself can terrify the already frightened individual. The emergency reaction of acute terror is toxic even when quite brief. Affect always makes good things better and bad things worse.

7) The Protective Mechanism of Shame–Humiliation

Tomkins's analysis of shame differs from any ever propounded for this complex and inherently uncomfortable emotional experience. His description of the visible changes associated with shame fits what we already understood: in the moment of shame the head dips down and to the side, removing our gaze from whatever had been going on only a moment earlier. This is what is meant by the Chinese expression "losing face," for the visage of the acutely shamed person is removed from the previously consensual interchange. I've emphasized that shame affect causes a "cognitive shock," a momentary inability to think clearly. Acute vasodilatation accounts for the phenomenology of the blush, reddening the face and often the neck and upper chest, and therefore maximizing the degree to which others can perceive our discomfort and thus maximize It. Both Darwin and Tomkins commented that this terrible visibility of our own shame robs us of the very privacy that might have let us recover our composure. A hot negative affect that is responsible for much emotional discomfort, its function and logic have long been obscure. His own judgment fiercely dependent on the primacy of the drive system as the source of all wishes and needs, Freud declared that shame was well deserved punishment for the wish to exhibit the genital. The psychoanalytic movement so deeply embraced this attitude that for several decades thereafter the appearance of ordinary embarrassment during an analytic or psychotherapy session was neither investigated nor interpreted.

Tomkins understood shame as a powerful system of reactions that set in motion a wide range of responses. Alone of the innate affects, he conceptualized it as a mechanism triggered when something interferes with the experience of positive affect—either interest-excitement or enjoyment-joy—but does not turn it off completely. Shame affect has evolved to call attention to the presence of some stimulus that distracts from the preexisting positive affect but does not displace it. "Aw mom!" is a typical and expected protest of the child whose excitement over a television program has been interrupted when mother demands attention and distracts from the obvious trigger for interest by standing in front of the screen. The exciting scene goes on, continuing to operate as the normal and expected trigger to interest, but her intrusion triggers the special response of shame affect. Other terms that involve shame affect include disappointment, dashed expectations, being declared the lesser in any form of comparison, and being jilted or taunted.

Shame affect can almost always be overridden by intentional concentration on the preexisting good scene with satisfying return of the original positive affect. As such then, affect over the range from mild shame to paralyzing humiliation is considered an "affect auxiliary," an affective experience that operates only as a limitation on what started as a good scene. As only one example, since one of the most powerful experiences of positive affect involves mutualized excitement or joy when staring into the eyes of one's beloved, the merest flicker suggesting that something has "gone wrong" triggers the full expression of shame. Sexual arousal (the drive is deeply dependent on its coassembly with excitement) is a fragile and highly vulnerable experience. Foreplay routinely involves sequences in which the arousal-excitement coassembly is challenged by moments of shame as self-consciousness, and then overridden by the conscious intent to resume and increase the original state of arousal until the desired state of mutual arousal is achieved and sexual congress begun.

My own studies suggest that shame is the dominant negative affect of everyday life, far more varied in its triggers and presentation than any other displeasure. Most of the problems of interpersonal life can be traced to shame-based issues; the majority of advertising and marketing campaigns are designed to deal with issues of self-esteem and the valence of personal identity. Just as each of us longs for pleasurable excitement and reasonable amounts of joy, the ubiquity of situations that interfere with the experience of positive affect makes shame—no matter how disguised—our constant companion. One of the factors that made shame so difficult to study until Tomkins offered this realm of explanation is the reality that each of us has different interests and a history of enjoying different scenes, the incomplete interruption of which triggered our own shame experiences. So deeply personal and uniquely individual are our own scenes of shame that (sadly) nobody else ever seems to "know" exactly what shame means to us. I dealt with this puzzle in the 1991 book *Shame and Pride: Affect, Sex, and the Birth of the Self*, which Tomkins regarded as the logical extension of his theoretical work on shame affect into the lived world of scripts.

8) and 9) The Drive Auxiliaries of Dissmell and Disgust

Small children are omnivores who would be at great danger of ingesting noxious and dangerous substances were they not protected by two inborn mechanisms. *Dissmell*, a neologism coined by Tomkins, makes us reject potential foodstuffs that carry an odor outside certain rigidly determined limits. From the early beginnings of extrauterine life, such substances trigger programmed reactions that include wrinkling the nose and upper lip, backward movement of the head away from the offending odor, and the vocalization "eoouuh." So powerful is this innate mechanism that it becomes a part of a "rejection before sampling" script with increasing importance as the child matures. Although it has evolved as one form of protection against potentially dangerous food, dissmell is the physiological mechanism underlying prejudice, in which we reject a person or a concept before trying or testing it personally.

Similarly, potential foodstuffs that trigger tastes outside a rather narrow realm of acceptability are rejected with *disgust*, in which from infancy on the offending material is spat out, the lower lip protruded, and the head thrust forward with the vocalization "ugh." This mechanism forms the basis of another script through which a person or experience once found "delicious" is now declared disgusting and worthy only of expulsion. The social/legal system of divorce may be understood as a process through which someone once loved is expelled as lawyers maximize and manage the affects of disgust and anger.

A System of Prewritten Affect Mechanisms Forms a Blueprint

The palette of nine innate affects, this universal set of prewritten instructions, controls and animates far more than the neat patterns of reaction sketched briefly above. Tomkins observed that the existence of this group of affects is a major factor in the formation of personality, of the habits and goals "natural" to all humans. We are, he said, motivated to accept, savor, and seek out the two positive affects because they are "inherently rewarding," and motivated to avoid, quash, and rebel against the six negative affects because they are "inherently punishing." Although the number of situations in which any individual might encounter these nine innate mechanisms is perhaps infinite, at least these experiences can be arranged in nine discrete categories. All life is "affective life," all behavior, thought, planning, wishing, doing . . . There is no moment when we are free from affect, no situation in which affect is unimportant, and the simple fact that these action protocols exist forces on each human a set of four highly specific behavioral requirements. Tomkins identified this group of inherently scripted rules as the Blueprint:

The Tomkins Blueprint for Individual Mental Health

1) As humans, we are motivated to savor and maximize positive affect. We enjoy what feels good and do what we can to find and maintain more of it.
2) We are inherently biased to minimize negative affect.
3) The system works best when we express all of our affects.
4) Anything that increases our power to accomplish these goals is good for mental health, anything that reduces this power is bad for mental health.

Psychiatrist Vernon C. Kelly, first Training Director of The Silvan S. Tomkins Institute, has a core interest in couples therapy and the specifically interpersonal manifestations of innate affect. Working carefully with Tomkins, Kelly developed a Blueprint for Intimacy, affect-based rules of the road for couples. Relationships are about the way we feel with others, and cannot prosper unless careful attention is paid to the affects experienced by self in the context of other. Their new Blueprint gave precedence to affective resonance as the core element of intimacy, and stated clearly that effective management of the affects experienced in the context of a relationship is the core task of intimacy:

The Tomkins–Kelly Blueprint for Intimacy

1) Intimacy requires the mutualization and maximization of positive affect.
2) Intimacy requires the mutualization and minimization of negative affect.
3) Central to intimacy is the requirement that we disclose our affects to each other.
4) Anything that increases our power to accomplish these three goals is good for intimacy, anything that reduces this power is bad for intimacy.

The clinical implications of these two blueprints have turned out to be quite rewarding. Much of our personal and interpersonal discomforts are affective, and few people find difficulty learning the "nine letters of the affective alphabet" in the service of understanding self and other. One is reminded of the scene in the movie "Batman" in which the evil Joker stares in growing rage at the easygoing goodness of the newly discovered "caped crusader" being interviewed on television and snarls "At last I know the name of my pain!" The attitude of Molière's naive character becomes increasingly salient in direct proportion to the importance we assign to the universality of innate affect.

Script Theory

Return, for a moment, to Tomkins's adolescent dream of becoming a playwright. Life is a series of scenes (Stimulus-Affect-Response Sequences) loosely organized into segments called Acts; a life story can be made cohesive only if one discerns or assigns a unifying theme or purpose. But what is the minimal set of experiences necessary to establish such a theme? Half a life later, he offered a stunning explanation for what we had taken for granted as the path of normal life, bridging the gap between the momentary innate affects easily identified on the face of the infant and the subtle complexity of adult psychology.

The trivial affords good examples of script formation. Imagine that you love some favorite specialty food (as in my daughter's affection for Brazilian hearts of palm) and learn that the local market is selling cans at a ridiculously low price, obviously to lure customers who will also purchase other goods. Immediately on reading this advertisement, you rush to the store only to find out that they're sold out of that product. You're disappointed, do purchase something else you needed, and return home blaming bad luck. If nothing like this ever happens again, this scene will never achieve "importance" beyond its place in the momentary annoyances of everyday life.

Not long after this scene, imagine next that your favorite clothing store advertises at vastly reduced price some article of clothing you'd admired but earlier rejected as too expensive. You rush there only to find that they're sold out of that product. Yes, you are disappointed. But something else happens, simply because the stimulus-affect-response sequence involved is almost identical to what happened when you rushed to purchase that delicious treat at the food market. Automatically, we link the two quite different scenes as examples of an affective process in which anticipatory excitement powered our trip to the store, and disappointed expectations triggered some degree of shame affect. ("I've been tricked.") Furthermore, we can now bundle in the mind these two experiences and mobilize the affect of disgust toward this new family of scenes because an expected good experience became quite distasteful. In the example given, from this moment forward we will operate within the bounds of a script through which a loss leader offer triggers protective disgust, mistrust, and perhaps contempt.

Tomkins defined consciousness as a state created by the assembly of an event (percept, cognition, scene retrieved from memory, etc.) with the affect it triggered, and postulated that only those states that achieved conscious representation would be stored in memory. But the storage system, the complex system of attributes that allowed us to assemble experiences with these special cognitive skills, was what he called script formation. The technology and equipment required to store, access, and cross-reference each experience as a separate datum would be far more massive and complex than a system that grouped memories on the basis of the affects with which they were associated. Individual stimuli are amplified into consciousness by affect, but in script formation the affect within families of similar scenes is magnified, making far more meaningful and tenacious whatever information is so bundled.

The "general features of all scripts" include sets of rules for the interpretation, evaluation, prediction, production, or control of scenes. Some of the enormously complex features he described include the idea that scripts are selective and always incomplete. They are in varying degrees accurate and inaccurate in these tasks, are continually reordered and capable of change, and tend to be more self-validating than self-fulfilling. If it is affect that amplifies its trigger enough to provide the amplification and conscious awareness of that trigger, it is through our lifetime of script formation that we live and "know" how we live. The application of Script Theory to clinical work, psychological experimentation, indeed to the understanding and betterment of our shared world, will be the job of the next generation of scholars and clinicians.

Therapeutic Disassembly of Scripts

I have been fascinated by one currently popular system of psychotherapy, which is perhaps best understood In the language of script theory. Psychologist Francine Shapiro developed the form of treatment she called EMDR (Eye Movement Desensitization and Reprocessing), and through an extensive network of training facilities, taught and licensed a great many therapists. At the suggestion of Tomkins Institute member and EMDR expert Marilyn Luber, PhD, Dr. Shapiro invited me to become trained in her system, interpret it in the language of Script Theory, and present my understanding to her own group. That training, and experience of this system with my own patients, has increased radically my understanding of scripts.

The trained EMDR therapist asks the patient to concentrate on a specific target image, usually the noxious scene (stimulus-affect-response sequence) that has either precipitated the request for treatment or is considered by the patient most representative of that person's dysphoria; one is instructed to allow into consciousness

all of the negative affects associated with this scene. Next, the patient is instructed to outline the desired new image with its associated positive affects, an image of who and how one would like to be. When patient and therapist agree that these two constructs have been built and are held firmly in mind, the patient is asked to focus on and visually track a moving stimulus (finger, light, sound, touch). After a few repetitions of this process, the target noxious scene no longer operates as a trigger for negative affect. At this point, the operator asks whether another scene with similar affective tone has come to mind, and repeats the process until it, too, has been rendered relatively neutral. In some cases, one or two such sessions will produce significant reduction in the dysphoria that provoked the request for treatment; in cases characterized by significant and ongoing psychological trauma, treatment may take longer.

Observing both live and videotaped therapy sessions, I was able to demonstrate from the facial displays of each patient that this system of treatment worked best when shame was the negative affect most responsible for that patient's dysphoria. The therapeutic process asks the patient to hold in consciousness two contrasting images—the scene made painful by shame affect, and the desired outcome of a similar scene amplified by unimpeded positive affect—and while doing this, focus attention on a novel, moving stimulus. The facial display of each patient was clearly that of "track, look, listen," the modal face of the affect interest-excitement. The EMDR protocol "tricks" the mind by transforming old scenes previously amplified by the negative affect shame-humiliation to what are essentially new scenes when amplified by the positive affect of interest-excitement.

Since the patients' scripts had been formed by the steady accretion of new scenes to an established sequence, as each painful scene was revisited therapeutically in the ambience of the positive affect interest-excitement, the established pathological script was sequentially disassembled and rendered ineffective. I suspect that script theory will become an increasingly valuable system for the explication of much that is now obscure.

Disorders of Affect

To the best of my knowledge and understanding, Tomkins ignored only one important aspect of affective life. His theoretical system defined the nine innate affects as neurobiological mechanisms that turned on when their switch was activated, and turned off as soon as the organism focused attention on the triggering event and began to deal with it. The depressive disorders are characterized by such aberrations of normal affect management as the inability to mobilize positive affect or to turn off distress-anguish. There are myriad situations in which an affect continues unabated unless or until we devise some way to turn it off. Psychologist Wesley Novak has taught our group to enter and by sympathetic attention often empty "the cave of tears" in which most "depressed" individuals store the anguish they cannot countenance. The system of cognitive therapy introduced by Aaron T. Beck teaches depressed patients how to think differently about their negative affect and so reduce the degree of emotional pain previously suffered. Such therapeutic approaches are based on the reality that many of us can benefit from education about affect management.

It is ordinary folk knowledge that shame is soluble in alcohol and boiled away by cocaine and the amphetamines, that opiates dull some dysphorias as well as pain, and that cannabis derivatives foster dissociative states that allow temporary freedom from certain noxious affects. I have read that of all the societies identified on our planet, only two isolated aboriginal cultures (tribes in Micronesia and Venezuela) have ever failed to "discover" caffeine, nicotine, and alcohol. Included in the wide range of affect management scripts possible for us humans are both psychological and chemical modalities. We are quite inventive in our ability to use devices and scripts of all sorts to quell or stimulate affect. Tomkins wrote eloquently about substance abuse and addiction; Tomkins Institute member Marsha Schwartz Klein has taught a generation of clinicians a wide range of therapeutic approaches based on his logic.

As a practicing psychiatrist, I am fascinated by the variable responses of patients to our currently available medications. There can be little argument that the Bipolar Affective Disorders are caused by genetic glitches (polymorphisms, or minor but significant alterations in the genes responsible for what we consider "normal mood"), and that the systems through which we now manage these disorders of affect metabolism are at best

frail. Despite that the basket of antipsychotic, antidepressant, and antianxiety agents is wide and deep, I am aware of no single medication that attacks the cause of any "mental" illness. The contemporary pharmacopoeia is best understood as a holding action, a system of treatments that relieves only a fraction of the symptoms experienced by our patients.

Of perhaps equal importance is the fact that at this writing, most psychiatric ills bear names based on theories well known to be outmoded: No one believes that Borderline Personality Disorder represents a state poised on the border between neurosis and psychosis—it is clearly a disorder in which the psychology of shame is predominant. (Our entire culture works hard to disavow shame.) The entire concept of "impulsiveness" or "impulse control" should be scrapped in favor of language that recognizes which of the innate affects has become difficult to manage. "Attention-Deficit Disorder" and "Attention Deficit Hyperactivity Disorder" are less insulting to the patient than the term "Minimal Brain Dysfunction" that they replaced, but both are syndromes in which interest-excitement is inadequately mobilized and/or maintained, and hypersensitivity to shame-humiliation dominates the clinical picture. In my clinical experience, patients with "Conduct Disorder," "Oppositional Defiant Disorder," "Reactive Attachment Disorder of Infancy or Early Childhood," and "Social Phobia" all share features of unusual susceptibility to shame affect. "Anxiety" has become an overinclusive or nonspecific term referencing not fear-terror but pretty much any negative affect, and therefore increasingly useless as a descriptor. Generalized Anxiety Disorder ("GAD") is currently described as responding best to serotonergic medications that are otherwise used routinely to remediate clinical conditions, characterized by unremitting shame symptomatology. When questioned closely, most of these patients seem to fear embarrassment. Tomkins was forever reminding us that there is a taboo against looking at the face, and indeed in most clinical conditions much can be learned by studying facial display. Disorders of affect metabolism render both blueprints inoperative, simply because individual wellness and the emotional health of a couple are deeply dependent on the ability not merely to recognize but to modify what feels wrong.

Cyclic Changes in the Public Display of Affect

Longevity favors the critical writer. I entered college during the early 1950s, when public protest was barely audible and alcohol the only known lubricant for playfulness impeded by anticipatory shame. These decades later I still enjoy the memory of a dozen couples kissing on couches in a fraternity commons room, the Boston accented voice of one young woman rising above the crooner's voice: "Oh, I'm having so much fun, this must be a sin!" This was an era of self-control, chastity, public display of morality; the average age of first intercourse for women was 20 and the menarche 16. Today, pregnancy in a 9-year-old no longer warrants mention in a medical journal. Public behavior is bawdy and loud, its scripts intertwined with a pharmacopoeia of hallucinogens, marijuana, cocaine, amphetamines, and other drugs known to magnify excitement and ward off shame. The early psychoanalytic movement described the young child as untrained in the limitations on behavior associated with maturity, and therefore "polymorphic perverse." Today, public nakedness is taken for granted, the internationally accessible electronic display boards allow anyone to advertise sexual availability and encourage desire, and all limitations on behavior are scorned. Sexual activity is regarded as more of a skill set than anything to do with the search for emotional intimacy, and there is no evidence that sexual freedom has reduced the frequency of heterosexual or homosexual rape.

From infancy through senescence we are sandwiched between conflicting instruction sets to "say what we really mean" and also "maintain a cool head." Screaming infants are shushed and the taciturn are encouraged to express their affect more vigorously so we know what they "really" think. Normal socialization and consensual downregulation of affective expression do incur some psychological costs: Just as emotional maturity seems inextricably linked with the ability to maintain reasonable control over our expressed affects, people really do need places where they can cheer, scream, and lust in safety and relative privacy. The entertainment world is designed for the maximal display of affect of all sorts, broadcast with visual and auditory support that allows us maximal opportunity to resonate with it. The enormously popular genre of horror movies allows its audience to experience maximal amounts of terror safely and recover from it quickly, just as the gambling casinos provide "games of chance" with carefully calibrated variations in perceived risk and danger. Love stories allow us to sit in relative comfort as we watch actors go through relational sequences that both resemble and far exceed our own personal experience; such films provide results that are analogues of what any viewer can hope to

achieve. We can thus try on the identity of a war hero, business tycoon, a sexually or an athletically daring role model. We can laugh safely at a fool who is "nothing like me" and imagine ourselves responding perfectly to any situation. The world of athletic competition has become merely another arm of the entertainment industry, its heroes (like aging actors) discarded when they have been used up or injured so badly that they have difficulty finding employment when their public careers have ended.

Personal computer games and elaborate fantasy game systems for groups ask our youth to practice strategies for murder and lethal crimes that require total attention and prolonged immersion. Notwithstanding the constant disavowal of responsibility by their designers and distributors, it has become obvious to the casual observer of modern society that what is learned in games often finds its way into "real life." Kids now kill with far more frequency than we'd like to admit, and they do it in ways they've learned from their entertainments. There were over 400 murders in my city last year, crimes committed mostly by young men who killed because they owned guns and lived in a society that sees gun violence as a form of play that evidences competence and therefore produces healthy pride.

There are two problems most likely to trigger interference with a system in which entertainments and personal satisfaction are linked to the intensity of the affective experiences involved: Firstly, the biological nature of the affect system must eventually act as a brake on the steadily increasing density of whatever stimuli are manufactured. Too much of anything becomes unpleasant, not just because the audience protests that "we've seen this before," but because there is only a slim border between intense positive affect and negative affect. Secondly, there is an increasing likelihood that public disgust for increasingly violent entertainments will rise to the extent that our culture will follow the path of previous generations and build into our social systems the kind of structures and safeguards that will initially enrage the entertainment industry but actually save it from far worse attacks. No society can survive constant and unchecked increase in affective amplification. We don't tolerate it from children over the age of three, and I fully expect that within a few years of this writing our society will have withdrawn its support of the unmodulated expression of affect and sexuality now in vogue. We'll do it quite badly, because change of this sort only occurs as the result of scripts based in anger, disgust, and dissmell, and the subsequent retreat from social and political control will place us right back where we are today.

Tomkins on Cognition

"The human being confronts the world as a unitary totality. In vital encounters he is necessarily an acting, thinking, feeling, sensing, remembering person." In Volume IV, Tomkins rejoined the motivational and the cognitive systems he had separated for the purpose of investigation and explanation. Motivation, as summarized above, involves all of the mechanisms for amplification through which data is brought into consciousness. But he defined as cognition all of the ways raw information is acquired, and how it is transformed from the way it entered the system to however it gets to be used. Unlike the kind of transformation provided by the contemporary computer, cognition is much more than problem solving and the storage/retrieval of data. It involves matters as real and vague as knowing, understanding, sensing, and loving; it must explain aesthetics as well as the aiming of artillery. In *AIC*, Tomkins asked that we reclaim the almost archaic term "mind" for the combination of affect and cognition, and called that coassembly "the minding system."

"Cognitions coassembled with affects become hot and urgent. Affects coassembled with cognitions become better informed and smarter." Whatever is processed by the cognitive system must be amplified by the motivational system—pure transformation cannot matter very much without the special oomph provided by affect. Raw data amplified without transformation would bring little advantage to the organism. "The blind mechanisms must be given sight; the weak mechanisms must be given strength. All information is at once biased and informed." Intrinsic to humanness is this "minding" or caring about what we know. The special function of the minding system is the ability to convert the raw texts of affect and cognition into the compelling poetry of scripts, which provide the rules that turn data into language with grammar, semantics, and ways of living. Volume IV contains Tomkins's early vision of "human being theory," studies that he presented as incomplete and ambiguous simply because the elusive complexity of our many systems prevented the development of a unified theory.

His unique definition of cognition as the process of data transformation solved a problem largely ignored by previous thinkers. Even casual study of the brain reveals the integration of sensory and motor mechanisms with the regions traditionally considered cognitive. Eyes and ears transform vibratory information in the forms we term sight and sound, and which we consider as intrinsically separate realms of data acquisition. Yet our fellow mammal the bat and the avian owl produce maps of astonishing precision by transforming sonic data that allow precise localization of both prey and predator. To Tomkins, there is no separate mechanism that can be defined as specifically and distinctively cognitive, just as there is no separate mechanism that can be defined as purely motor or purely sensory. Kinesthesia provides the central assembly with data no less vital than sight or hearing. It is the gestalt, the totality of our attributes that makes us human. Data will always be transformed in the process of acquisition, and transformed data must be amplified if it is to be used. Cognition and affect must be separated for the purpose of study, but they must work together if we are to be whole.

The Reader's Quandary

There is a special sort of "nerve" or "guts" required for a close reading of Tomkins's overwhelming masterpiece. Even to know about *AIC* means that one has thought a great deal about the concepts of motivation and consciousness, and wondered whether there was some way to draw together all the disparate theories found in ordinary textbooks. I got here because a senior colleague suggested that a journal article on empathy by psychoanalyst Michael Franz Basch might inform my early musings about what I soon understood as affective resonance. His reference to a 1981 article by Tomkins led me to purchase Volume I of *AIC*, which I found so densely written that immediately I enlisted the aid of Dr. Kelly to form the study group that after Tomkins died became *The Silvan S. Tomkins Institute*. Under the direction of Dr. Kelly, we mounted public colloquia and developed an international system of study groups through which several hundred scholars have enjoyed guided entry into this compelling set of ideas.

As mentioned in the opening paragraphs of this Prologue, because of Tomkins's personal peculiarities the final pair of volumes that constitute *AIC* were released 30 years after Volumes I and II. Only one vendor, the Joseph Fox Bookshop of Philadelphia, maintained the entire set in stock and handled the needs of scholars all over the world for it as well as the other books written by our group. This present publication of the entire set as what we have come to call a Supervolume has been made possible by a grant from the 1675 Foundation, which has taken special interest in our work. By allowing the Tomkins Institute to underwrite this publication and act as co-publisher, the new management of Springer Publishing Company has been able to make *AIC* both affordable and accessible to a large audience. Our gratitude to both organizations is great. Nevertheless, our experience with this material suggests that it is most easily learned in the company of others. We hope you will enjoy, learn from, and perhaps add your wisdom to the study of affect, imagery, and consciousness.