

# Free Will

*When we first began to help others who had ‘something wrong,’ what we ought to have done was, not to teach them to do something, but what not to do to prevent...bringing about the wrong conditions.*

Alexander

## A Surprising Means of Not Doing

Inhibition, the door to natural use, is a dynamic and intentional non-action. It is an indirect, abductive means by which *AT* education interrupts unconscious habitual motor functioning to enable a more adaptive coordination.

*AT* inhibition parallels psychoanalytic free association. The release of muscular tension and the liberation of repressed emotion begin in the semi-conscious interval between stimulus and response.

*Inhibition* is a decision to not initiate an habitual motor response.

*Free association* is a decision to not engage in habitual self censoring, to say whatever comes to mind.<sup>1</sup>

*AT* inhibition is not an unconscious process, nor is it suppression of a painful thought. *AT* inhibition is a decision employed by pupil and teacher to not act on an intention. The natural hiatus in neural processing between stimulus and response affords the opportunity to change habitual response. Inhibition requires: (a) awareness of a stimulus, e.g., to speak, (b) consciously withholding response to the stimulus by not doing, e.g., to not speak and then (c) allowing innate coordination to manifest, e.g., into free speech.

## Freud’s Mind

Freud pictures mind as a “compound microscope” that—although stirred by the outside world—constructs representations that are independent of and do not necessarily mirror this reality. (*IOD*:511ff) This mind has a sensory end which receives perceptions (stimuli) from outside and a motor end “that opens the gateway to motor activity” (response). Present experience and “memory traces” of past experiences join to provide the perceptual stimuli that provoke response. Freud distinguishes “primary” and “secondary” stimulus-

response paths. (ibid:537)

In the primary path, a stimulus triggers an automatic response that proceeds immediately to action (e.g., being startled by a loud noise). Freud's secondary stimulus-response path depicts more complex experience. In the secondary path, (i) there are perceptual stimuli, (ii) there is an internal response, and (iii) there is a subsequent internal decision as to what to do. This decision making process is Freud's preconscious "PCS," the "critical agency" that "stands like a screen" between our internal responses and conscious thoughts. (Freud, *IOD*:540-541)<sup>2</sup>

Everything conscious has an unconscious preliminary stage; whereas what is unconscious may remain at that stage and nevertheless claim to be regarded as having the full value of a psychical process. The unconscious is the true psychical reality; *in its innermost nature it is as much unknown to us as the reality of the external world, and it is as incompletely presented by the data of consciousness as is the external world by the communications of our sense organs.* (Freud's italics) (*IOD*:612-613)

The PCS is the agency which, to one degree or another, allows a thought to filter through to consciousness—or censors it.

## Access to Emotions

How does a thing [from a person's unconscious array of neuro-dispositions, emotions and thoughts] become preconscious? ...through becoming connected to the word-presentations corresponding to it. (Freud, *E&I*:10)<sup>3</sup>

While awake, *left* consciousness accesses impulse, urge, emotion, experience and memory with the words which we use to interpret our experience. But the words we choose can also deny access. (Freud, *IOD*:541) When an unconscious image threatens self cohesion, we purposely limit our conscious access by constructing word-presentations that divert attention from the source of the disturbance.

Asleep, however, our psyche roams. The emotions of daily events and memory flood our consciousness. Awake, this emotional energy finds expression in posture, movement, daydreams and thought. Asleep, when the energy is strong but the movement is curtailed, a dream results.

Dreaming is propelled by the "instinctual impulses which

dominated childhood.” (*IOD:458*) Dreaming brings unconscious material to mind but in chaotic symbols that mask its meaning. This material carries our sense of ourselves, our feelings about ourselves in relation to others—the building blocks of our personality. Partly acknowledging and partly disavowing these core feelings, we live in an ongoing struggle to come to grips with an inner world that influences us profoundly, but of which we make a point to consciously know little. Exploration of this emotional world by dream analysis and free association is psychoanalysis.

## Freud’s PCS and Muscle Tensing

*AT* education is not concerned with psycho-history. Although fear and self doubt precipitate uncomfortable body response, exposing specific unconscious content is not necessary to undo this response. What is relevant—and what parallels psychoanalysis—is fostering conditions that interrupt automatic habitual control. In psychoanalysis, this means undoing the unconscious censoring of unpalatable feelings. In *AT* education, this means learning how to undo the habitual motor patterns that are automatically triggered by the mere idea of initiating a particular action.

There are two outcomes for material emerging from the unconscious. On its own, the unconscious will either: (a) discharge to expression without conscious awareness of meaning or (b) come under the influence of the PCS to become censored and bound. (*IOD:578, 613*) In outcome (a), the PCS is unable to prevent an unconscious wish from overflowing into some kind of reactive consciousness and expression. In outcome (b), the energy of the repressed unconscious impulse remains active and, even though unconscious, asserts an unrecognized control over speech, posture and action, even to the point of regression, perceptual distortion, self injury and disease. (*IOD:569*) Preconscious censorship forces this unspent energy into muscle contraction.

The difference between allowing impulse to come to expression, Freud’s outcome (a), and preconscious censoring, Freud’s outcome (b), is that the muscle cycle initiated in (b) is never completed. The tensing remains in place as long as the unconscious material remains unexpressed.<sup>4</sup> And since the muscle tensing is disassociated from the emotion that inspired it, the muscle tensing acquires a life of its own and becomes a habit.

Free association releases a patient to give verbal expression to vague emotional experience before the verbal expression has been disciplined by a *left* interpretation that seeks distance from the emotional

disturbance. *AT* lessons intervene in the same unconscious path, but not to uncover emotional history. *AT* lessons address the body response, with the aim of bringing unconscious motor contractions under conscious control.

Peirce's 3rd, 4th and 5th stage signs clarify the parallels between inhibition and free association in the generation of consciousness.

### Three Steps To Consciousness

Stage	Characteristic
gamma ( $\gamma$ )	Experience developing into a emotion but vague and wordless, as in anxiety
delta ( $\delta$ )	Experience with noticeable bodily expression, as in blushing.
epsilon ( $\epsilon$ )	The beginning of internal naming, as in daydreaming.

Table 10-2

In these semi-conscious states, unconscious material lingers for a fleeting moment in vague consciousness that we rarely recognize. *AT* education and psychoanalysis work to keep this vague consciousness alive and to use it for self illumination and transformation.

The preconscious is crucial in *AT* education. The preconscious is not merely “the segment of the mind harboring thoughts temporarily out of sight” such as one's telephone number. (Gay, 1989:128) It is the key transition in our psycho-physical process. It is the moment of opportunity that can lead to freedom of expression—or to unconscious repression and muscle contraction. The preconscious, the “through the looking-glass” of our three-brained world, is our only access to the forces of instinct and habit.<sup>5</sup>

## Negation

Free association is the key procedure of Freud's psychoanalysis, his means of change. In free association, by saying whatever comes to mind, we outwit our habitual censor. We slip words past our *left* guard. We allow surprise. A particularly dynamic step is by “negation,” by insisting what is not.<sup>6</sup>

[O]ur patients'...associations during the work of analysis give us an opportunity...[The patient may say] 'now you'll think I mean to say something insulting, but really I've no such intention.' We see at once that this is a repudiation, by means of projection, of an association that has just emerged. Or again: 'you ask who this person in the dream may have been. It was *not* my mother.' We emend this: so it *was* his mother...[this] is a most convenient method by which one can sometimes obtain a necessary light upon a piece of unconscious and repressed material...

[A] negation...assists in undoing one of the consequences of repression—namely...that the subject-matter of the image in question is unable to enter consciousness. The result is a kind of intellectual acceptance of the repressed. (Freud, 1925:180)

Underlying the power of self-adjustment by negation is the "hypothesis that perception is not merely a passive process." (ibid, 185) Even "seeing is an active, constructive process." (Crick, 1993:31) Negation deconstructs upper stage abstractions (semiotic stages A through E) to uncover their preconscious roots (semiotic stages  $\epsilon$  through  $\alpha$ ). They interrupt habitual perceptions, thereby enabling self-adjustment.

The real existence of something imagined...is no longer a question of whether something perceived (a thing) shall be taken into the ego or not, but of whether something which is present...as a image can also be [shown to exist] in reality...[T]he question is one of external and internal. What is not real, what is merely imagined or subjective, is only internal...[W]hat is real is also present externally...[Yet since] all images originate from perceptions and are repetitions of them,...the mere existence of the image serves as a guarantee of the reality of what is imagined.

The contrast between...subjective and...objective...arises from...the faculty [of] reproducing...an image without its being necessary for the external object still to be present. Thus...reproduction of a perception as an image is not always a faithful one; it can be modified by omissions or by the fusion of a number of elements. The process for testing the thing's reality must then investigate the extent of these distortions. (Freud, op.cit:183-184)

## Free Association in Actor Training

Experience with conscious *AT* inhibition shows that undoing habitual contraction liberates new expression. In Marjory Barstow's *AT*

workshops, students perform a song, instrumental piece or monologue while the teacher works with the performer to undo unnecessary, unconscious tensing.<sup>7</sup> At the moment of motor release the performer's expressiveness is suddenly and inevitably enhanced.

Sanford Meisner's version of Stanislavski's acting method produces a similar result.<sup>8</sup> Meisner's *Repetition* exercise is an abductive play in which the actor learns to "speak from the gut"—spontaneously responding to another actor. In *Repetition*, two actors face one another. An impulse occurs to one actor. The actor states it. The other actor repeats the first actor's words. This continues until a different word comes to one of the participants. The exercise proceeds as another (and another and another) impulse "states itself." "It is not intellectual. It is emotional and impulsive. [What an actor says] comes, not from the head, but truthfully from the impulses." (Meisner 1987:36-37) Although it seems simple, *Repetition* is a plunge into darkness. Sometimes the impulses of rage or lust reach the verge of attack.

*Repetition* words spring spontaneously from unconscious sources. Each word becomes a story. As the word is spoken, there is a sudden experience of unexpected free expression. The performance comes to life. *Right* brain emotion infuses *left* ideation, takes over expression. Expression becomes whole. The *left* defense system relaxes enough to allow forbidden expression, while the stage setting keeps the performance safe.

Alexander, an actor, also discovers opportunities in the preconscious. Working from the physical end of the psycho-physical spectrum, Alexander encounters a critical moment at which he becomes aware of the stimulus to speak. At this critical moment of having the thought to speak, Alexander notices that he is about to initiate a tension that constricts his voice. When he inhibits the idea to speak, he interrupts this habitual tensing, he speaks freely.

Although the means that Freud, Stanislavski, Meisner and Alexander developed to release preconscious phenomena appear different, they employ the same dynamic process. Becoming aware of an emotion and not censoring it, becoming aware of an impulse to initiate a motor habit and not acting on it, are examples of using emerging unconscious material as an opportunity for change. Alexander's "critical moment," Freud's "crucial agency" and the spontaneous words that come to the actor in *Repetition* involve 3rd level gamma signs of vague feeling manifesting through palpable 4th level delta actions to become spontaneous semi-conscious 5th level epsilon words. Free will depends on choice. Habituality imprisons—and denies choice. Alexander's inhibition to undo habitual motor

response and Freud's free association to undo emotional repression emancipate free will.

## Impulse Precedes Awareness—Libet's Study

Benjamin Libet's research data supports Freud's preconscious agency, Alexander's critical moment and Peirce's preconscious signs.<sup>9</sup> Libet's study (1985) measures the time between (i) micro-volt brain activity signaling the inception of movement (readiness-potential RP), (ii) a subject's awareness of "wanting to move," and (iii) muscle action.<sup>10</sup>

### Neural Sequence of an Act

Readiness	Free Will	Action
_____	_____	_____
0ms (millisecond)	350ms	450ms 500ms
RP (readiness potential)	Awareness	Movement

Table 10-4

- 1) The interval between neural arousal (measured by the RP) and motor action takes 500ms (1/2 second).<sup>11</sup>
- 2) But Libet's subjects report being unaware of deciding to move until 350ms after the RP. That is, conscious awareness of impulse to move does not occur until 350ms *after* RP brain activity has begun. Our *back* brain readies movement 350 ms before our *left* brain becomes aware of our impulse to move.
- 3) The time required for final neuro transmission—from the moment-of-decision-to-allow-the-impulse-to-proceed to the moment-of-motor-action— is 50ms.
- 4) Since, the whole process takes 500 ms; and since awareness does not set in until 350 ms after the process begins; and since 50 ms is needed at the end to transmit the decision to act or not; there is a 100 ms window of opportunity in which we can consciously affect action.

We initiate movement unconsciously (via our vestibular cerebellar *back* system). When we become aware of getting ready to move, we have an option. We can let the movement go through. Or we can veto it. There are 100ms to note the impulse and exercise the veto before the 50ms required to fire the muscles. "Some propose that a conscious urge to go is necessary to trigger motor activity. I tend not to like this because there is no special electrical [brain] event [at the moment

subjects become aware of the impulse to move] 150ms before movement occurs. (Libet, 1989:7-9).

In the case of the motor side, since you do become aware between 150-200ms before acting, there is a potentiality for stopping an act. In the case of the sensory side, if there's a delay of a few hundred milliseconds from the time you get a sensory stimulus to the time you're aware of it, that also provides a time interval in which perception can be modified. And that's completely in accord with everything we know about perception—Freudian repression for example. If there were no delay, there would be no time in which you could repress the image. But if there is a delay of several hundred milliseconds, there's just enough time to stop the image. So you can stop sensory images just like you can stop motor outputs—and there's sufficient time to do it. (Libet, op.cit.:15-16)<sup>12</sup>

This 100ms window provides the opportunity to undo emotional and motor habit. We can stop compulsive unconscious habits of movement and habits of emotional censorship. But to do so, we must train our awareness to notice our emerging impulses and to seize the 100ms opportunity.

## To Speak Our Mind

Preconscious words are condensations of experience. Freedom of thought requires that we allow words to speak our preconscious insight. Interrupting a learned habit in that re-opened moment allows the organism to remeet the situation with imagination and renewed energy.

Libet's subjects did not know, until a third of a second after their brain began processing, that they were on their way to act. Motion starts in our *back* cerebellum. Out in our *left* hemisphere, we do not know what is coming for a third of a second. The irony of this inner government is that, although physical movement depends on *back* action, the "boss" back system depends on the sights and sounds caught, recognized and interpreted by *right* and *left*. Judgment about what is going on outside and inside comes from the *right* and *left* cortices. But it is the *back* cerebellum that responds. And *back* starts its reaction before *right* or *left* become aware of what is coming. *Left* reasoning and deciding does not have the opportunity to evaluate this *back* action until after action has started. It is this catch-up relationship which makes the 'Stop and think' of inhibition decisive for self management.<sup>13</sup>

There is always a chance for free will, a 100ms window of

opportunity in which to assert change. But it takes an undoing, an interruption of habit. *AT* education is an active strategy of conscious inhibition of poorly adapted functioning. By exploring the initial moments of moving from sitting to standing, of taking a step, of speaking, *AT* education keeps this window of opportunity open.

### Peirce and Libet

Now I propose to show just what free will really consists of and how it acts; and how that renders our conduct analogous to the manner in which growth takes place in plants and animals.

Peirce, letter to Lady Welby

Libet’s neurologic evidence intersects with Peirce’s preconscious stages of consciousness.<sup>14</sup> The RP is the alpha moment that initiates the process—an electrical stimulus. Beta are the involuntary, neuromuscular chain reactions that follow the alpha stimulus automatically. Alpha ( $\alpha$ ) and beta ( $\beta$ ) reactions precede awareness. They occur in the 350ms of internal processing.

The gamma ( $\gamma$ ), delta ( $\delta$ ) and epsilon ( $\epsilon$ ) levels are semiconscious—fleeting moments of vague emotional experience, incipient body response and preconscious word formulations. They occur in the 100ms window that precede the decision to act. Our ability to notice these fleeting moments determines our freedom. When we act out of habit unconsciously, we repress emotion and assert idiosyncratic body tensing. Our words and ideas travel through pre-established channels that alienate us from our present reality.

To engage in Peircean Play, to free associate, to *AT* inhibit allows these fleeting moments to percolate. This enables greater awareness of internal experiences and inspires spontaneous, creative solutions to the momentary challenges of living.

#### Semiotic Neural Sequence of an Act

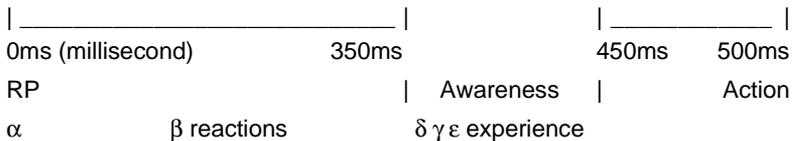


Table 10-5

### Opportunities For Choice

1. Stanislavski’s method and Meisner’s *Repetition* train the actor not to be ruled by censoring convention but, instead, to allow awareness of

an impulse and then, in that brief moment of choice, also to allow expression. This allowing enables a performance that expresses the full spectrum of *right, back, left* brain collaboration. It is this whole person communication which transforms actor and audience.

2. Dewey's principles of education "by experience" were developed when he administered a primary school program as an adjunct to his professorship at the University of Chicago. (Dewey, 1899) Dewey believed that learning takes place in the relationship between subject matter and the "step the child needs to take just here and now; to what use he needs to put his blind impulse in order that it may get clarity and gain force." (ibid, 17)

Natural impulses and desires...constitute the starting point. But there is no intellectual growth without some reconstruction, some remaking of impulses and desires in the form in which they first show themselves. This remaking involves inhibition. [In contrast to] externally imposed inhibition, [this] inhibition [is] through an individual's own reflection and judgment... 'stop and think' is sound psychology. For [this type of *left*] thinking is stoppage of the immediate manifestation of impulse until that impulse has been brought into connection with other possible [*right, back* and *left*] tendencies [that constructively influence] action.

[Inhibition leads to] more comprehensive and coherent [functioning of] eye, ear and hand to observe objective conditions in recall of what has happened in the past. Thinking is thus a postponement of immediate action, while it effects internal control of impulse through a union of observation and memory, this union being the heart of reflection. (Dewey, 1938:64)

3. Jacques-Dalcroze music education proceeds by "excitation and inhibition." (Abrahamson, 1981) A teacher plays music. He instructs his pupils to walk in time with the music and to stop when the music stops. Walking embodies natural (innate, primary) rhythm. Without warning, the teacher stops the music. Some pupils continue to walk. Even for those pupils who do not continue, the energy of the rhythm continues in their bodies. The rhythm has become internalized, part of body and spirit. This form of music training by excitation and inhibition has unexplored possibilities for *AT* education.

4. A baseball pitcher's 90mph fastball takes 458ms to travel the 60.6 feet to homeplate. (Dennett, 1991:103) Once the pitcher releases the ball, the batter has but milliseconds to decide whether the ball can be hit, whether to swing or not. The batter must begin to swing before the

ball is thrown. His muscles “know” what to do when set in motion. The batter’s only choices are to allow or veto the swing he has already set in motion.

5. Georg Groddeck (Freud’s inspiration) and Robert Scanes Spicer (Alexander’s mentor) speculate about what causes spontaneous healing in fatal disease. There has long been recognition, from the shamans of primitive societies to Groddeck and Bernie Siegel (1990), of the power of humor. Laughter is good medicine. Humor is an interruption, a surprise.

Reactions usually terminate in the removal of a stimulus; for the excitation continues as long as the stimulus is present. Accordingly, habits are general ways of behavior which are associated with the removal of stimuli. But when the expected removal of the stimulus fails to occur [because the habit is not consummated along its usual path but interrupted], the excitation continues and increases, and non-habitual reactions take place. If then we suppose that matter never does obey its ideal laws with absolute precision, but that there are almost insensible fortuitous departures from regularity, these will produce, in general, equally minute effects...[I]t is the characteristic of unstable equilibrium, that near that point excessively minute causes may produce startlingly large effects. Here then, the usual departures from regularity will be followed by others that are very great; and the large fortuitous departures...will tend still...to break up [further]. (Peirce, *EP*:348)

## Our Glassy Essence

“Self control of any kind is purely inhibitory. It originates nothing” (Peirce).<sup>15</sup> Interrupting a habit by removing the usual completion of its stimulus, is the only means to go beyond habitual response to attain a center of power and purpose.

The individual man, since his separate existence is manifested only by ignorance and error, so far as he is anything apart from his fellows, and from what he and they are to be, is only a negation. This is man,

proud man,  
most ignorant of what he’s most assur’d  
his glassy essence. (Peirce, *EP*:55)

The human instrument—the self that perceives, feels, thinks—gets out of tune. Through ignorance and error—pre-formed kinesthesia and

repressed emotion—we construct a personal world. It includes idiosyncratic projections of our own misperceptions. It is not entirely “out-there.” Yet, we accept it as real.

Our most basic notion is that we exist as distinct individuals, each with our own life. This fiction helps us to ignore the obvious inseparability of things—the intricate interdependence of humans, plants, animals, ecosystems—the unity of existence.

As individuals, we are nothing outside our relation to everything else. We are driven, however, to continually distinguish ourselves so as not to be obliterated by the mass. For self existence, we obsessively assess our qualities and accomplishments against those of others. We say “I’m good. He’s bad,” “I’m generous. He’s selfish,” “I’m ugly. He’s beautiful,” “I’m ordinary. He’s special.” But when we interrupt the inner chatter, we begin to notice what we impose. Momentarily, we sense our glassy essence.

By recognizing and undoing habit, we open the possibility of rediscovering our innate emotional and physical capacity, and of allowing more useful, deeper connections with ourself, with others and with nature. By continuously negating the habits from which we have evolved, we become freer to live creatively moment to moment.

## AT Hands-On

Manually guiding a person in and out of a chair became the centerpiece of Alexander’s work. He would gently place one hand on the back of a pupil’s head, gently encourage him to release his neck and back extensor muscles as he deftly guided him to rising and sitting in a new way. At first, when a pupil would think he was about to stand, the pupil would tense his neck muscles according to his habit. Alexander’s manual contact, supported by Alexander’s ability to inhibit his own habitual response, encouraged the pupil to not immediately react to the idea of standing but, instead, to remain in a ready, adaptive state. This brought about an integrative reorganization of the pupil’s network of standing muscles.

The simple, everyday movement from sitting to standing takes only a moment. We do it a hundred times a day.<sup>16</sup> The action provides a pupil “with frequent opportunities in the course of each day for the application of inhibition and direction” to refresh the generative power of habit negation. (Nicholls 1987:23) The not-doing of a habit, in concert with not attempting to replace it with any other action, allows our purposeful actions to fall in step with our innate capacity. If, when we sit, we say to ourselves “do not sit at all,” we create the possibility of free sitting.