

PLANET MEDICINE *Modalities*

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Bates Method³¹

EYEGLASSES HAVE BECOME such a staple of modern civilization that we barely notice the ubiquity of these odd facial Props. Goggles to enhance seeing are considered as commonplace as clothes to keep warm. We take it as axiomatic that visual clarity (and lack of clarity) are hereditary and fixed and that artificial lenses are the only recourse for blurs and other nonpathological deficiencies of sight. The entire optometric profession exists to counteract poor eyesight by fitting mechanical aids onto the face. In the late twentieth century this partial prosthesis has been made so unobtrusive and socially acceptable it is no longer a major encumbrance or a stigma. In some circumstances, eyeglasses are even a source of pride and an opportunity to style attitudes and personali-ties. Many healers and holistic practitioners wear glasses without considering that poor vision might be a significant aspect of their general mind/body state. They presume that the capacity of the eyes to focus is somehow separate from well-being as a whole. Thus, clarity of vision has become the most conservative bastion of allopathy, the last to yield to somatic holism.

Yet what if visual clarity and blurs are no more hereditary or immutable than the habits of tension and stress explored by Alexan-der? What if relearning the natural patterns of movement underlying sight could dramatically improve just about everyone's ability to see clearly?

This hardly seems likely given the universal acceptance of optom-etry and the large number of educated and medically trained men and women who themselves wear glasses or contact lenses. Surely they are not all victims of delusion or fraud. After all, how could somatic edu-cation alter something as fundamental as the focal length of an inborn lens or the shape of an eyeball?

THE GENERALLY ACCEPTED theory of sight holds that clarity of vision is regulated by the lenses of the eyes and the ciliary muscles around those lenses. In response to the changing distances of landscapes and objects, these muscles

recoordinate the shape of the lenses in a manner loosely akin to that of the focusing knob of a camera. A healthy eye, one capable mechanically of being broadly refocused (its muscles adjusting properly), renders sharp images across a range of distances.

By this theory the basic errors of visual accommodation (i.e., responding to objects near and far) are the results of either unfortunate eyeball lengths or a deterioration of the lens from an injury or aging. Distortions attributed to inherited structure and function include nearsightedness, farsightedness, astigmatism, amblyopia ("lazy eye"), and crosseyedness. Presbyopia, the increasing difficulty people have around the age of forty in focusing objects near at hand, is considered an effect of the gradual hardening of the lens such that it loses its pliability to accommodate for near vision and can focus only in the distance.

Alternate scientific theories base poor vision in part on flaws in the cornea, the retina, and the vitreous chamber, almost all of which are likewise inherited.

BORN IN 1860, William H. Bates became a prominent New York ophthalmologist and eye surgeon. In the course of examining more than **30,000** patients while adhering to familiar theories of eyesight, Bates began to suspect that the famous "lens model" was not supported by experience. He noticed that sight fluctuated markedly from day to day and even hour to hour. People with poor accommodation some-times improved for short periods of time. How could this happen if the proposed explanation for poor eyesight were accurate?

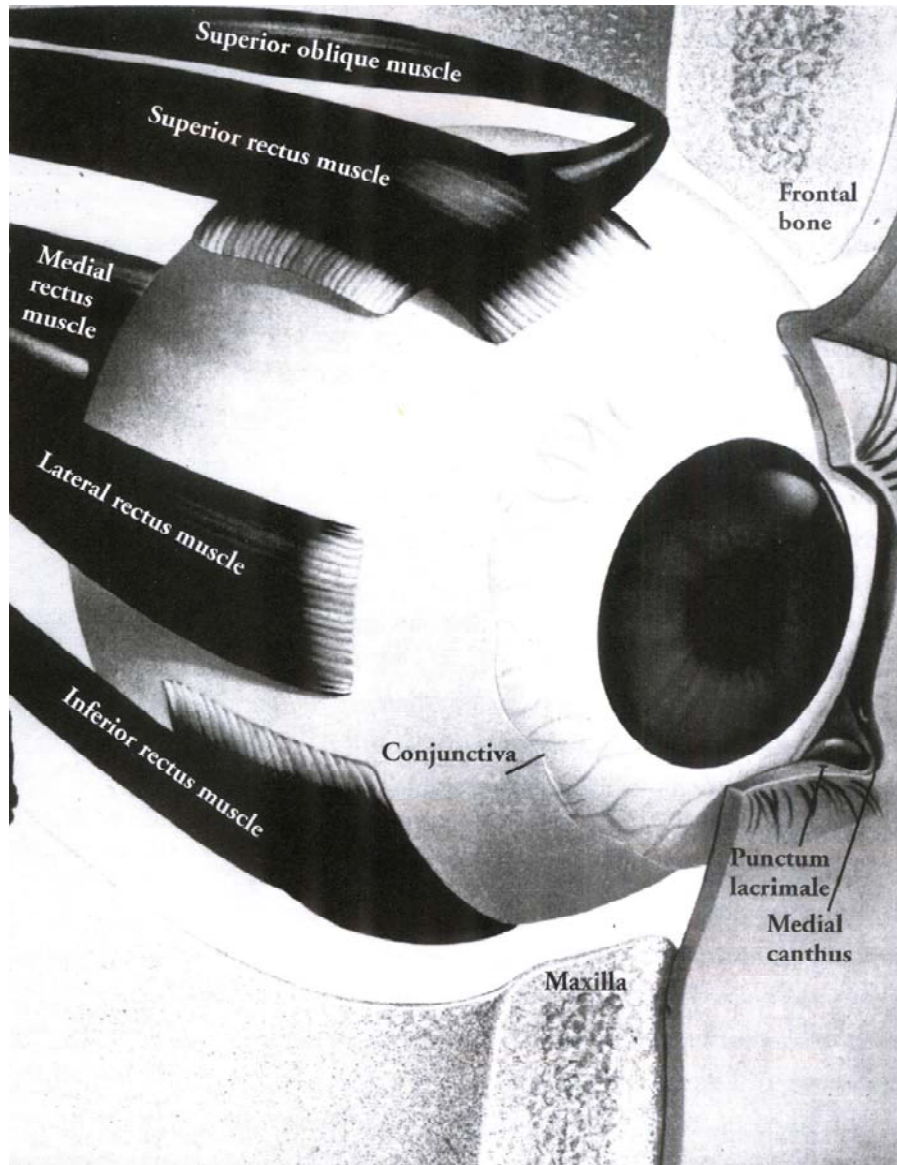
In truth, the existing orthodoxy made neither physical nor logical sense, nor was it experimentally testable or consistent.

- For instance, why should presbyopia, as a general hardening of the eyeball, cause only farsightedness?
 - What about people in their eighties who have rigid lenses but still see up close perfectly?
 - How does one explain the plight of those who become farsighted before the age of forty, likewise those who suffer nearsightedness (but not farsightedness) after the age of forty?
 - Why, when there is no physical connection between the two eyes, most people suffer the same distortion in both eyes at the same time?
 - Why, if one plays a game of constructing a pinhole with a fist and stares through it at a previously blurry object, does the object come into sharp focus?
 - Why should a movie on the screen be blurry and sharp at different cinematic distances when these actually are all at the same distance from the viewer?
- These events, considered collectively, indicate that deficiencies of eyesight may originate not in the eyes themselves but in subtle and profound links among the eyes, the rest of the body, and the mind.

Challenging what he called "theories, often stated as facts", Bates set out to discover the actual causes of clear vision. From the turn of the century he performed an elaborate course of experimentation, eventually summarizing his findings in 1920 in the landmark book *Perfect Sight Without Glasses*. The ophthalmological profession was outraged, and he was dismissed from his position at the New York Postgraduate Medical School. Predicting that an "incalculable amount of human misery"³³ would result from the rejection of his theories and the continuation of ophthalmological delusion, he spent the rest of his life continuing to study eyesight and teaching his method.

Even today, eyeglasses set at one focal length (or bi- and multi-focal lenses) remain virtual requirements for correcting poor eyesight and are universally recommended, while Bates' techniques are considered fallacies or quackery. Yet through these "fallacies" many people who were once legally blind have improved their vision to the level where they are no longer required to wear corrective lenses to drive a motor vehicle. Bates teacher Tom Quackenbush's myopia and astigmatism, which resulted in a 20/100 diagnosis at age ten and deteriorated to 20/500 by the time he was thirty, improved by 90 percent after he began practicing the Bates Method.

IN PLACE OF traditional explanations for the errors of visual accommodation, Bates established to his satisfaction that blurs and similar distortions were caused almost solely by strain and tension in the extrinsic muscles of the eye (as opposed, for instance, to inherited eye-ball shape or the pliancy of the lens or intrinsic ciliary muscles). In proper visioning, the six muscles around each eyeball automatically change its shape to effect clarity. These cords literally squeeze the delicate, watery organs to appropriate focal lengths. Their compression is not particularly deep. A deformation of millimeters has a dramatic effect on the clarity of images passing through the soft eye. (Bates' mechanism of focus can be approximated by squeezing and stretching a rubber model of an eye between one's fingers.)



Extrinsic Muscles of the Eye

In the case of **near vision**, the two oblique muscles above and below the eye wrap around it from left to right and cause it to go long (they squeeze the eye long so that the cornea has a higher curvature and the image falls further back in its chamber and is larger).

For **far vision**,

the four recti muscles originating way in back of the eyeball near the brain extend forward and wrap, respectively, around the top, bottom, left, and right of the eyeball. In these positions they can pull the front of the eyeball back against the fatty tissue filling the hollow bony orbit cushioning the eye, causing it to go short.

The curvature of the cornea is reduced, and a smaller image lands closer to the front of the eye. For middle vision all six extrinsic muscles combine to round the eye into a sphere. The image lands mid-way and is of medium size.



Extrinsic Muscles of the Eye

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|-----------------------------------|-----------------------------------|
| A- External rectus muscle | B- Superior rectus muscle |
| C- Inferior rectus muscle | D- Inferior oblique muscle |
| E- Superior oblique muscle | F- Levator of upper lid |

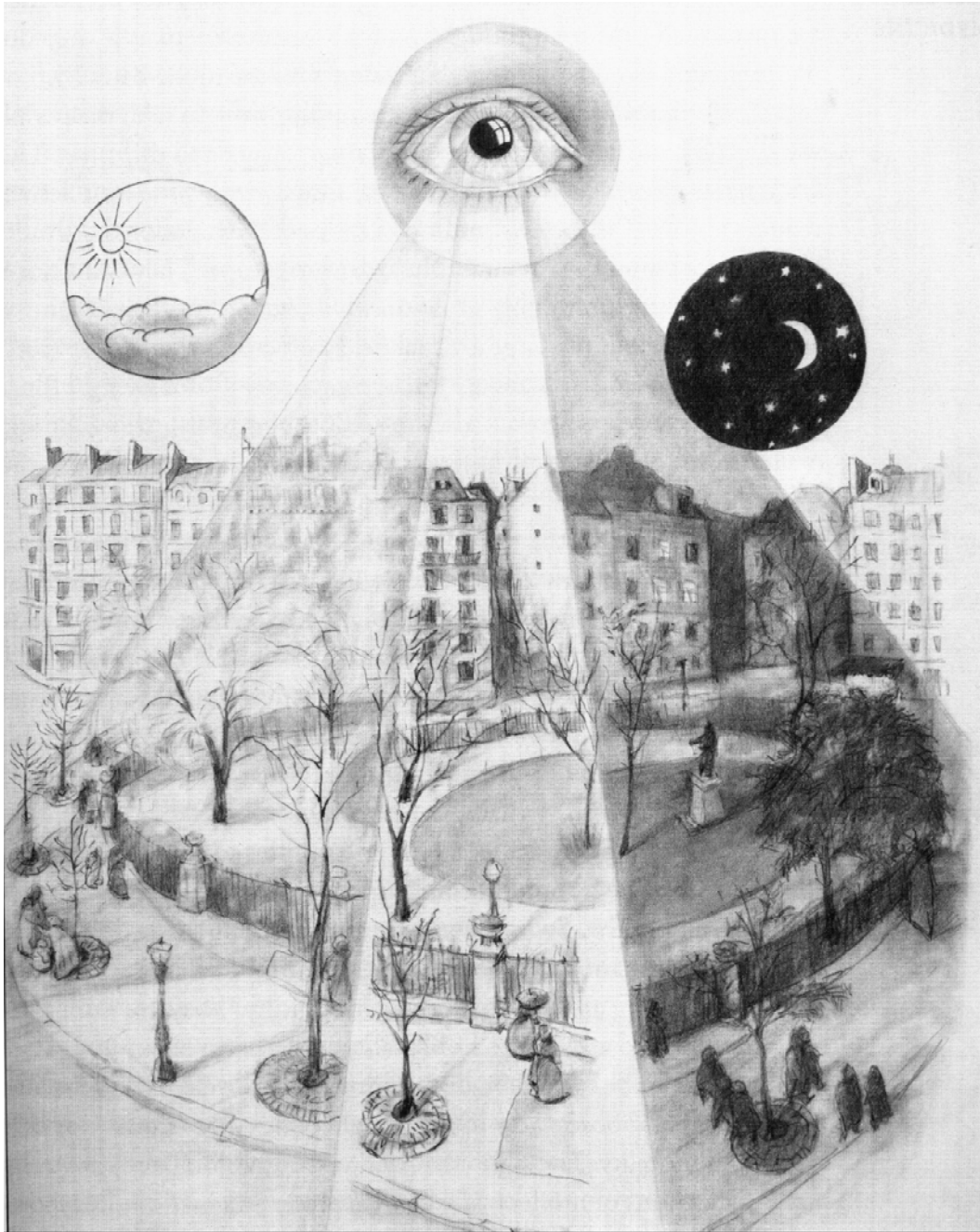
If the two oblique muscles remain chronically contracted, the recti muscles cannot squeeze the eye short to focus far objects more clearly. The result is near-sightedness (myopia). Excellent near sight is permanently fixed. Likewise, if the recti muscles are chronically contracted, the two oblique muscles cannot stretch the eye to see near objects more clearly. This leads to farsightedness (hyperopia). The eye becomes a rigid telescope.

This proposed mechanism of accommodation was not just another abstract ophthalmological theory. Bates observed the actual changing shape of the eyeball in response to proximate movements of nerves and muscles in the spinal column. He determined that the extrinsic muscles altering the shape of the eyeball were the sole direct cause of successful or unsuccessful accommodation. Blurs of nearsightedness, farsightedness, and astigmatism, and other symptoms of poor vision were caused by these muscles gripping too tightly in one way or another. Cross-eyedness was caused by their being twisted out of position. Thus, natal eyeball shape and lens pliancy are secondary to the movements of extrinsic muscles in determining clarity of vision.

HIS OWN DISCOVERIES convinced Bates that, since eye habits were not fixed at birth they were quite mutable. If the muscles could become chronically tense, they also could be relaxed. Once relaxed, they would adjust the eye properly and naturally clear vision should result.

We must not mistake either the simplicity or the radical nature of Bates' proposition. He argued uniquely that improving vision had nothing to do with ophthalmological or optometric attention to the eyes themselves. On the contrary, it had everything to do with the *extrinsic muscles* around the eyeball and the contingent *neuromusculature* of the neck. Since all of the dynamics connecting these tissues were at least partially disorganized by stress and other psychosomaticized habits, Bates looked solely to non-ophthalmological techniques for improvement of vision. He did not want to do anything to the eye, either by surgery or optometry. He sought only to get the extrinsic muscles working again autonomically.

To restore natural movement to the neck and muscles is much more efficient for the larger somatic equation than to stabilize poor vision at selected focal lengths of corrective lenses. Additionally, tension in the extrinsic muscles is often made worse by the wearer's unconscious attempts to see through eyeglasses at distances different from those for which they were prescribed. Thus, eyeglasses and contact lenses can become a self-fulfilling prophecy, making vision worse by freezing dysfunctional patterns (and thus requiring ever new, stronger prescriptions). Chronically tense muscles also squeeze the retina and ultimately damage the eyeballs. Bates improved accommodation by teaching new neuromuscular habits through educational paradigms not unlike those of Matthias Alexander and Moshe Feldenkrais. All of Bates' techniques in one or another way introduce movement into the eye-neck relationship and challenge kinesthetic stagnation. His central practice is called "shifting," which is little more than the collective motions of natural relaxed vision.



Only the “cones”, located in the “fovea centralis” at the back center of the retina, focus sharply

Shifting means keeping the eyes moving and centralizing, focusing one point at a time. The eyes graze freely about a landscape. They "see" as they focus single objects sequentially. They do not stare, and they do not diffuse. They do not glaze over into seeing "nothing," and they do not try to see too much at once. In fact, Bates argued, too many people try to see more than one point at a time with the result that everything is out of focus. That is because in fact only the cones, located in an extremely small pit (the fovea

centralis) at the back center of the retina, focus sharply. The more abundant rods, distributed in membranous layers throughout the retinal periphery, enhance night vision and detect movement. They do not register sharpness of detail. Chickens, with only cones, pick grains from dust in the daytime but are sightless after dusk. Owls and bats, with only photosensitive rods, rouse at dusk but otherwise shun bright light and cannot see detail without a blur.

Its indented morphology exposing cones to photons of light, the fovea centralis occupies less than one percent of the total area of the eyeball. The exposed cones are not only limited (for all practical purposes) to this tiny pit, but they are even more concentrated in its minute center. Thus, sharp vision comes solely from moving the fovea centralis to each object of interest. Super-sharp vision comes from moving the center of the fovea centralis. Objects may be as distant from one another as a ship on the horizon and a watch on one's own hand, or as close to one another as indentations on a grain of rice in which a Tibetan monk is carving a Buddha or contours on the inside of a chestnut shell in which a Greek scribe is transcribing the *Iliad*. The human eye is capable of remarkable feats of clarity and microscopy, but only if the cones properly move, centralize, and track.

In summary of the above, the human retina comprises photosensitive, achromatic night receptors (the rods) and a highly sensitive plate with focal color capacity (the cones). Trying to see too much means attempting to focus with rods, which are incapable of accommodation, hence a blur. Centralizing means always bringing the cones of the eye to the object ones wishes to see. People with excellent vision merely centralize and shift rapidly, seeing things in sequence. They do not have a larger visual field even though it might seem to them as if they do.

Inhibition of both staring and diffusing is central to the Bates Method. Inhibition means putting an end to attempting to focus with the periphery. Shifting and centralizing are simply not staring and diffusing. They are "seeing." Bates insisted that staring always strains the muscles and reduces vision. It is the end result of a series of dysfunctional attitudes. People stare and diffuse because they want to escape. They want not to be present in uncomfortable situations. Diffusing is the consequence of attempting to hold too large a visual field in focus. It literally "spaces" a person out of seeing. It is also a form of escaping and "not seeing." Blurry vision is automatic when one tries to see lots of different things at once or strains to focus one's peripheral vision. This fact seems obvious, but the present epidemic of poor vision proves it is not.

The principles of the Bates Method can be learned in less than an

hour, but it takes many classes and much practice and reinforcement for most people to unroot their subtle habits of staring. This is because stares come in many forms, both blatant and subtle. For a person truly to achieve clarity means to eliminate (or reenergize) all stares-first, obvious fixed stares, then minute "micro-stares" camouflaged in habit, attitude, and shallow breathing, and finally stares of the mind itself which can occur with virtually no neuromuscular affect.

Eyes are pure brain tissue honed into landscape-replication by the effects of sunlight. It should be no surprise that they express character, attitude, and interest. Symptoms of stress, anxiety, and depression often manifest directly through the neuromusculature of vision.

Acts of staring are fixity, compulsion, rigidity. They are mini-phobias. To stare is to attempt to hold reality in place, to be unmoved and invulnerable, to be locked in anxiety or fright. To stare is to be drawn magnetically and obsessively toward single things away from one's own center and mobility. The stares that lead to poor vision habits are ubiquitous symptoms of modern life. They represent alienation, fear, boredom, and dependence on electronic representations of images. They are the opposite of relaxed vision in open sunlight (practiced by all tribal societies). Glasses are their validation and prop.

When a person loses interest in the environment, she begins to stare rather than sketch. The natural quick movements of alert, clear vision are replaced by degrees of resistance to events, people, and tension. The environment literally is not exciting or safe enough to encourage active vision. (Phobias and anxiety patterns are equivalent "stares.")

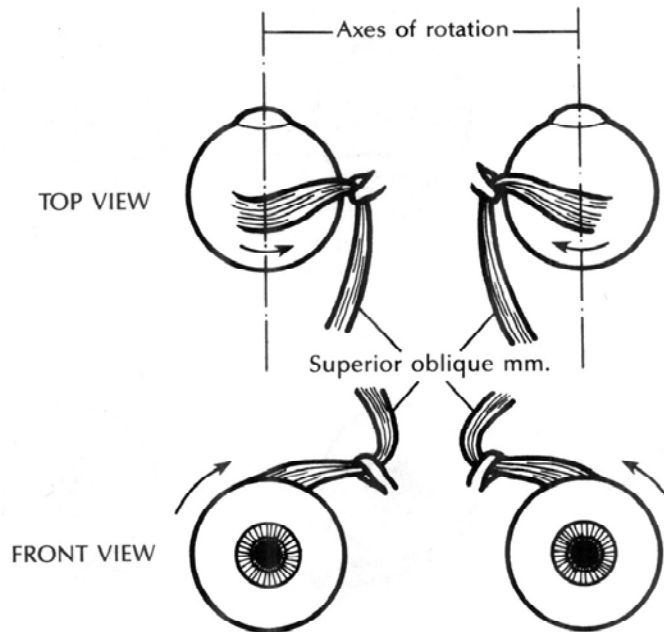
Transitions from centralizing to diffusing are so gradual and sub-liminal that one is not even aware of the process. It seems as though the eyes themselves are losing acuity.

Staring and diffusing are ultimately universal states of being (as are moving and centralizing). Vision is merely their most apparent metaphor. When a person tries to ease tension by first doing an internal inventory of her body and then relaxing any "held" muscles one by one, she is, in a sense, releasing her neuromuscular "stares." Such a process of alternately tracking and letting go can be remarkably effective in moving someone from stress and anxiety to a sense of calm and personal freedom. No bodyworker is necessary; the mind carries out the necessary acts.

The first hurdle is in overcoming one's own internal numbings that lead to glossing over tight shoulders, belly, jaw, etc. The second hurdle is in feeling ever more minute degrees of tension in underlying tissues. These tiny "holds"

are keys to unlocking major rigidities of mind/body. Merely finding them is an act of liberation. Perceptible breath rushes to their release.

Effect of superior oblique muscles on eye movement



Reprinted from *Craniosacral Therapy II: Beyond the Dura* by John E Upledger

The most imposing hurdle, however, is the fixation of mind itself. Often a well trained person is able gradually to relax every palpable point of tension, both gross and subtle, and yet still experiences a knot of underlying tension without a seeming neuromuscular locus. This tension clearly has a profound hold on the body and seems to pour out of the center of "mind" like a black, diffusing light. It marks the point where mind and body meet and are indistinguishable.

By the Bates Method a skilled practitioner similarly can release all her micro-stares and sketch freely yet may still experience a fixation of mind patrolling through superficially darting eyes. Blurry vision is the result. Exercises rarely dislodge such a fixation. The most intractable stare may not park the eyes at all but pours out of them anyway-a dead, black gleam. It is pure boredom and alienation. It also marks the threshold at which eyes are portals of the soul.

Bates did not live long enough to confront the global fruition of an optometric scam, but he understood its early implications. People are encouraged to think that their worsening vision is the effect of age, hence that they need glasses. As both vanity and worry over aging influence their attitudes, they strain harder to

see, to convince themselves they are not losing clarity. Straining to see immediately makes their vision deteriorate. After glasses are prescribed and they begin to see more clearly, they are convinced they are on the right path and have a good doctor. However, the glasses themselves lock in poor vision. This scenario has now become a boondoggle of major proportions.

CONTEMPORARY BATES PRACTITIONERS teach a form of shifting called "sketching" or "brushing" in which a student imagines, for instance, that she has a short pencil or feather attached to the end of her nose-not a soft pink plume but a sleek pointed feather. She then sketches or brushes objects with it, touching them imaginarily as she selects them for seeing: her own fingers, a friend's face, a stranger's hat, a fence in the distance, a tree at the horizon, clouds, even the Moon. Brushing is seeing. Instead of needlessly straining the eyes to focus bet-ter, brushing consciously uses the nose as a compass and the muscles of the neck as a clarifying rod.

Brushing places the fovea centralis right on the object being viewed. The precision of this act can be illustrated by a reverse mechanism. On a dark, preferably moonless night, try brushing single stars. Effective brushing should make each star disappear at the moment the nose-feather touches it. As acutely as the cones register detail in daylight, they are fully blind at night. Thus, if one can accurately impose the viewing field of the cones on a night object without the assistance of the rods, that object should disappear. The fact that each brushed star vanishes demonstrates that the effective area of visual clarity is as fine as the arc of a single star.

For this reason, brushing cannot be an exercise. It must become a subliminal habit. It would be far too difficult to brush intentionally every object one wished to see.

If one is brushing, then they can't be staring. The two together are impossible. Thus brushing is effective first in tricking the mind into not trying so hard to use the eyes to see and second in allowing the mind to exert another, more relaxing fulcrum to achieve clarity. The object attached at the end of the nose indirectly loosens the contraction in the ocular region. It also centralizes.

THE BATES METHOD is a course in relearning neurological patterns. It is an attempt to educate people to regain the natural habits of good vision most of them had at birth (or in the sightless realm of the womb). The fact that the animation of stares and "micro-stares" enhances metabolism, immunity, and emotional states makes the Bates Method more than just vision improvement. It is a form of holistic healing grounded in the mechanism of the eyes, the internalization of vision, and ocular habits. It is based on locating and healing

the mental pat-terns that give rise symptomatically to misuse of the visual apparatus and to a vicious circle in which poor vision habits lead to rigid, phobic thinking, and vice versa.

The Bates Method differs from other somatic learning techniques insofar as it is the invention of an ophthalmologist, is based exclusively on the role of vision in systemic health and organization, and thus deals specifically with improving eyesight. It is based on the physiology and function of the extrinsic muscles of the eye, the retina, the fovea centralis, the muscles of the neck, and the mind. Its goal is not so much to teach the body new overall patterns of organization as it is to restore the single act of seeing to a subliminal level. The rest should naturally follow.

Bates practitioners use any method they can to get an individual to relax and make vision unstained again. Some are tricks, some are visualizations, some are puzzles or games, and some are mnemonic devices or forming new habits (a red tag on the little finger, for instance). But Bates techniques can never be mere isolated mechanical remedies. Since the eyes regulate so many interpersonal functions and aspects of personal identity, the regaining of natural movement in their extrinsic muscles generally means an improvement in overall mental and physical health. Likewise, neurotic patterns must precede poor eyesight. The eyesight becomes weaker when a person doesn't want to relate or see, perhaps because his job or environment imposes stress, perhaps because there is nothing joyful to see. Relearning to see is relearning sensuality.

Insofar as Bates practitioners acknowledge the holistic aspects of eyesight and its kinesthesia, they respect Alexander and Feldenkrais work. However, they deny that these can have any lasting effect on vision because they do not address the muscle patterns in the eyes pragmatically and thus can deal with vision only secondarily as an aspect of somatic organization. These systems miss the single point of relaxing the six extrinsic ocular muscles, so they improve eyesight only by chance or because they train a general harmony and the eyesight follows.

Today the Bates Method is used in collaboration with many other somatic therapies, often to treat serious injuries affecting eyesight. An **osteopath** may correct an underlying spinal lesion while a Bates practitioner teaches ocular relaxation. This combination has worked well in instances of near blindness after car accidents and muggings.

Many of Bates' other techniques are obvious to the point of syllogistic, and all of them involve relaxation.

1- The simple process of "**palming**" was something Bates came upon quite accidentally when, one day, he removed his own glasses and cradled his head

in his hands, cupping his eyes. The resulting darkness was so restorative and calming that he kept his eyes covered for about fifteen minutes. Upon removing his hands he noticed a new vibrancy of color throughout the office. Later he formalized "**palming**" as a soothing placement of one's own cupped palms over the eyes with fingers crossed on the forehead to avoid touching the eyes themselves. In Bates' time the hands were usually rubbed together first to generate heat. Nowadays forming an initial '*chi*' *field* between separated rounded palms is more popular. The palmer can later summon up internal landscapes and play his eyes over these, focusing alternately on imaginary objects near and far. This is closed-eye "sketching."

2- Another elegant therapeutic method Bates called "**sunning**." This involves closing the eyes and rotating the head slowly from side to side so that the sun lightly massages the outer surface of the eyelids. Sunning rebuilds light tolerance and color intensity and restores some diurnal/nocturnal vision resilience. Natural light passing through the eyes is a nutrient for the whole body.

3- Bates also recommended self-massage, fuller breathing, and conscious **blinking**. In fact, he urged blinking softly (like a butterfly's wings) every two or three seconds until it becomes a habit. This naturally lubricates the eyeball and antidotes the scourge of visual accommodation: staring. Bates considered soft blinking (all by itself) to be the best natural remedy for a whole range of eye disorders, including "dry eye syndrome" and blurry vision itself.

4- ALTHOUGH BATES ESCHEWED pure exercises, some techniques taught by contemporary Bates practitioners are in fact relaxation exercises. "**Swinging**" is initiated by setting the feet approximately a foot apart and then turning the body to the right while lifting the left heel. The head and eyes remain stationary, and the apparent movement of motionless objects is ignored. As the left heel returns to the floor, the body turns to the left, and the right heel is raised. This sequence of alternately raising right and left heels and turning is carried out for about five minutes in order to recoordinate movement and vision.

Such exercises should not confuse the basic issue. Relearning natural eyesight is training a habit which ultimately must become second nature. As Tom Quackenbush enjoys commenting, "I don't teach exercises. The Bates Method is not about exercises. It's about relaxation. It's about relearning how to see and move naturally. You only have to practice twenty-four hours a day."" What makes relearning vision habits by the Bates Method so formidable (as to require an entire course) is that, ultimately, natural seeing can occur only at a subliminal level. Conscious sketching, breathing, and blinking will never in

themselves restore clarity. They are rough approximations of an extremely subtle mechanism that must be activated unconsciously. Thus, a person in the process of learning the Bates Method may find himself at the theater unable to see the characters on stage clearly. Having already improved his vision over seven weeks of classes, he may struggle hopefully to sketch, breathe, and blink, and be disappointed when the figures remain blurred. At such a point it would be better for him to accept his blur and stop straining because the thing that ultimately restores clarity is not sketching, breathing, and blinking as he knows it. It is a deeper and subtler version of these acts. Furthermore, when the so-called exercises of clear vision are carried out in crisis mode in a goal-oriented situation they cannot work. In fact, it is precisely such straining that undermined good vision in the first place.

At its core, the Bates Method teaches relaxation and movement. Any of its "exercises" can be either helpful or harmful depending on whether they are practiced in a context of ease or one of tension.

Seeing happens at the speed of light and thought; thus any actions meant to enhance seeing must sink to such an autonomous level. Only when these acts become natural again does clarity slowly return. The key to the Bates Method is not in learning techniques of focus. It is in retracking the system to the point where natural, primordial coordination takes over. At the end of his life Bates summarized his training in precisely these terms:

The importance of practicing certain parts of the routine activities at all times, such as blinking, centralizing, and imagining stationary objects to be moving opposite to the movement of the head, is emphasized. The normal vision does these things unconsciously, and the imperfect vision must first practice them consciously until they become unconscious habits.³⁵

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6. Bonnie Bainbridge Cohen, letter mailed to members of the somatics community concerning results of a two-day conference entitled "Research in the Field of Somatics," California Institute of Integral Studies, San Francisco, November 1992.

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9. *Ibid.*, p. 2.

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16. In these descriptions I received help from Alexander practitioner Jerry Sontag, whom I gratefully acknowledge.
17. Brennan, *The Alexander Technique Workbook*, pp. 3-4.
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28. Quote supplied by Jerry Sontag.
29. Quoted in Rubinfeld, "Alexander: The Use of the Self," p. 224.
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31. The section on the Bates Method has been developed through discussions with Thomas R. Quackenbush, founder and director of the Natural Vision Center of San Francisco.
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34. Quackenbush, personal communication, Berkeley, California, 1995. 35. William Bates, quoted by Quackenbush
35. William Bates, quoted by Quackenbush