

THE USE & MISUSE OF LANGUAGE: CENTERING & IDENTIFICATION

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Abstract

The changing concepts of Dr. A. M. Skeffington regarding accommodation and convergence, and their relationship to his terms, identification and centering are presented. It is done by documenting Skeffington's writings from 1945 to 1967. The author presents his general thoughts on the topics and specific opinions on the documented writings.

Key Words

accommodation, behavioral vision, centering, convergence, identification.

During the course of his optometric life, A. M. Skeffington utilized writing and lectures as means of teaching. He introduced new words into optometric language and, at times, different uses of conventional words. These new terms were meant to convey meanings different from the conventional terms. This was a dynamic experience and one cannot assume that when Skeffington used a term, it retained the same meaning throughout his lecturing and writing career.

Skeffington's optometric lectures and writings delineate a continuum of his own development and understanding. They also reflect his ability to express his thinking at any given time. A quote taken from a 1950 lecture or OEP chapter would be an expression of what had been in his thinking and belief. It did not necessarily express his most current thinking or what it would be in the future.

This has created a problem for optometry in both the professional curriculum and continuing education, and for both teachers and students. What teachers teach is always a resultant of what the teachers were taught. To this, teachers add what they create themselves from their own experience. If their understanding in a particular area does not continue to develop, then they will continue to convey to students a thinking derived from an earlier

era. Particularly regarding the Behavioral concept of vision, this situation contributed to a misuse of language in our profession. In turn, this has fostered inadequate and misleading notions about the application of the Behavioral concept.

The terms identification and centering are excellent examples. These terms have meant different things to different people over many years. This was true even of Skeffington as he attempted to introduce the terms. The purpose of this paper is to chronologically explore Skeffington's usage of these words from their first appearance through some 20 years of development. A personal perspective will consider the continuing development of those terms. For the purposes of this paper this author personally reviewed all the available material written by Skeffington and, thus, can attest to the accuracy of this chronology.

The very first use of the term identification was in the June, 1945 issue of OEP's Practical Applied Optometry (Series 17, Chapter 6, pg. 55). The very first reference to the term centering was in the April, 1948 issue of OEP's Practical Applied Optometry (Series 20, Chapter 4, pg. 47). By definition, Skeffington used identification synonymously with visual acuity. Centering was equated with convergence as a substitute term.

And, from here the chronology begins.

Dates - Period

Comments and/or Quotes

June, 1945; p. 55; Series 17; #6

“lowered identification (acuity) can be found.”

April, 1948; p. 47; Series 20; #4

first use of term, centering and extended use of term identification ... Centering is synonymous with “convergence” and Identification with accommodation.”

the quote:

“A partial interference with centering, or convergence... Something less than full effectiveness of identification at all distances, or accommodation...”

July, 1948; p. 66; Series 20; #7

Centering was equated with both accommodation and convergence.

the quote:

“... the very basic substrate properties of contour discrimination and localization by centering (accommodation and convergence) would ...”

Oct., 1948; p. 92; Series 20; #10

“If the word ‘centering’ is substituted for ‘convergence’ and the statement made...”

Feb., 1949; p. 19; Series 21; #2

The terms convergence and accommodation are used.

the quote:

“The lenses allowed . . . to localize convergence nearer than the localization of accommodation.”

March, 1949; p. 21; Series 21; #3

The terms centering and identification continue to be used interchangeably for for convergence and accommodation.

the quote:

“The prism placed base-out transposes identification beyond the plane of ‘regard’...”
See prior quote for contrast and similarities.

further quote:

“... task is a drive towards localizing centering (convergence) nearer...”

Dec., 1950; p. 103; Series 22; #12

“... The characteristic response of the organism to a socially compulsive visually near-centered task is a drive to ‘center’ nearer than the localization of identification.”

Note the rare use of the term “to center” this again relates to the equating as described with the frequently used diagrams.

Oct., 1952; p. 91; Series 24; #10

The equating continues but slightly expands.

the quote:

“Vision operates through the two systems that were once called convergence and accommodation. ... for the moment it is sufficient that the words have become largely meaningless, and semantically lead to a confusion in thinking. Today one speaks of ‘centering’ and ‘identification.’ The one is skeletal and the other visceral. Arnold Gesell ... says that with the skeletal we seek and hold... and with visceral we define and discriminate.”

Oct., 1952; p. 92; Series 24; #10

This is the next “nodal” point, as there begins an obvious difference in the use of the terms as previously quoted from the same chapter on page 91.

the quotes:

“The organism cannot gain optimal identification until the eye is “pointed.” Pointing is a function of the process of centering, yet centering is more than pointing, for centering comes to have the property of one of the forms of localization in space. It supplies the zero point, the datum from which the organism can maintain the constancy of its valuation of the things in its space world. Indeed, ... It might be said that identification is a function of centering and then they become functions of each other.”

He begins to talk of centering and identification as processes.

the quotes:

“Changes in the centering process...”

“Alterations within the visceral process of identification...”

Nov., 1952; p. 98; Series 24; #11

He continues to deal with centering and identification describing them in this chapter as systems, subsystems and processes.

Dec., 1952; p. 113; Series 24; #12

Centering and Identification described as operational patterns.

the quote:

“exophoria would appear to be the measurement of the relationship between the operational patterns of identification and centering.”

He has developed the appreciation that ranges exist in all functions, and describes as follows:

further quote:

“The idea of a depth of focus as a range for identification, and of Panum’s areas as the mechanism for the range in centering gives new understanding to the significance of ductions.”

Feb., 1953; p. 12; Series 25; #2

Further elaboration of centering and identification concepts continue in his thinking and writing as evidenced by the following:

the quote:

“The centering process can be in operation for a very far point or a very near point. When it is for a very near point and both eyes are involved in the action, then the visual axes of the two eyes are converging. The centering function of the skeletal effector system is in operation whether the gaze is fixed for near or for far... Always the organism strives to center on the point or item of transcending interest at the moment, and always this is the role of the skeletal centering process. In the same way, identification is the function of the effector of each eye.”

May, 1953; p. 55; Series 25; #5

Further differentiation of centering and identification from convergence and accommodation.

the quotes:

“The word ‘centering’ is used as a more comprehensive substitute for the common term, convergence. The latter term implies the coming together of two visual axes. Centering of the total visual field of operation upon certain items in the environment singled out for attention, is a fundamental of the visual process... It is demanded of the one eyed or the two eyed. The word, convergence, is semantically misleading.”

“The term ‘identification process’ is also used as a more comprehensive one than the potentially misleading one of ‘accommodation.’ Vision is a total complex, with all the elements essential to the operation of gaining information through the use of the total process. If the word, ‘accommodation,’ carried the meaning of total ‘retino-cortical-effector-backstroke’ to the reader, that word would continue to be used. For fear it does not, the term ‘identification process’ is used.”

August, 1953; p. 80; Series 25; #8

There is a flip in the writing as he reverts back to the equating.

the quote:

“In the nomenclature of the measuring prisms and spheres, the units of measurements are prism diopters for convergence (or change in centering) and spherical diopters for accommodation (or changes in identification.)”

May, 1956; p. 54; Series 28; #5

Differentiation is made between “alignment” and “centering,” a very critical differentiation with a more specific definition of centering.

Another “nodal point” in time.

the quote: “Alignment is the heliotropic, anatomical quadranted ‘bomb-sighting’ operation of the organism. CENTERING is the selection of some item in an entire environment for problem-solving relationship to all the other objects and distances in the terrain.”

Oct., 1956; p. 54; Series 28; #5

But yet another flip as he again equates centering with convergence and identification with accommodation.

the quote: “... the relationship between the ranges of centering and identification (convergence and accommodation.)”

Nov., 1956; p. 11; Series 29; #2

The flip continues!!!

the quote: “The enforced changes in identification (or accommodation) are made with retinoscope, subjective, cross cylinder, minus to blur-out and plus to blur-out. Measurable change in centering (or convergence) are those findings wherein prisms are used in recording quantities.”

Jan., 1957; p. 27; Series 29 #4

And, yet it is obvious that he is not comfortable or desires to fall into the trap of continued equating as evidenced by:

the quote: “The relationships between the effector systems of centering and identification (convergence and accommodation are more restrictive terms) are products of the gene-determined related patterns of movement.”

June, 1957; p. 79; Series 29; #9

Further definition of centering.

the quote: “... ‘centering’ is defined as the selection of that area out of the total terrain which is for the moment dominant in the meaning-seeking of the organism.”

Oct., 1957; p. 3; Series 30; #1

Again referring to centering and identification as subsystems, and that the analytical examination has the purpose of:

the quote: “The analytical examination is an investigation of the potentials of shift in the two subsystems of the dual effector system of vision. Those subsystems are:
1. the subsystem of centering, which is skeletal
2. the subsystem of identification, which is visceral
The two, with many other subsystems, notably that of speech (or audition) make up the total visual system.”

Nov., 1957; p. 9; Series 30; #2

Further and even more important differentiation emerges, noting that the term “alignment” is now equated with “convergence.”

the quote: “The model of vision assumes that in the space structuring there are two subsystems, one of ‘centering’ and the other of ‘identification.’ These are not convertible into ‘convergence’ and ‘accommodation.’ Centering is much more than alignment, and identification is much more than accommodation.”

Jan., 1958; p. 28; Series 30; #4

More interesting statements.

the quote: “When the enforced change is due to an alteration in the beam of light entering the eye itself, the primary change is in the process of identification. When the enforced change is one altering the position of alignment, the primary change is in centering.”

The term, movement patterns, is introduced.

further quote:	“The modern optometrist thinks in terms of movement patterns. He knows that there is a movement pattern of identification. There is one of centering. He assumes that they were learned and that they were learned adequately.”
March, 1958; p. 42; Series 30; #6	The elaboration of the thinking and description of centering and identification over and beyond convergence and accommodation continues.
the quote:	These two are the output-feedback systems of centering and identification.”
from p. 43, same chapter	“Centering would appear to be almost wholly learned. It would appear to be the slowly learned and synthesized relationships between objects in space.”
June, 1958; p. 68; Series 30; #9	“The whole process of ‘centering’ is the utilization not alone of the cues from the heliotropic mechanisms and the alignment. An infinite number of other information data make for understanding of the spatial relationships between objects in space. The blur-out findings do not measure the relationships between the ranges and of centering and identification.”
the quote:	Another “nodal” point in time with specific stated definitions. “Definition of Terms” Alignment: the placing of the retinal quadrants so the light stimulus is equally distributed on all four quadrants. This is the ‘pointing’ mechanism, the ‘bombsighting.’ Convergence: the directing of the visual axes so that the alignments cross one another somewhere inside infinity. Centering: the selection of some area of space for attention and meaning. Identification: the getting of that meaning.”
July, 1958; p. 73; Series 30; #10	Further clarification and differentiation is contributed.
the quotes:	“... Accommodation is a ‘lenticulo-retino-cortical process’ whereby radiant energy is transformed into a triggering of appropriate organized units of experience. Convergence is much simpler. Convergence is the turning of the alignments of the two eyes and cross somewhere in space inside of parallelism. Alignment and convergence are overt.” “Centering is covert. It is the galaxy of movement patterns that permit knowing where an object is, in relation to other objects, and its size in relation to physical reality and to the size of other objects...” “identification is perhaps farther away from any real explanation of its mechanisms (accommodation) than any other process of the body. ... Identification is the process whereby one knows what things are.”
Feb., 1959; p. 46; Series 31; #5	“Centering has been defined as the slowly learned, covert, patterned ability to know precisely where a thing is in spatial relation to other things. ... It is not to be confused with alignment.”
April, 1960; p. 51; Series 32; #7	“The centering-alignment mechanism appears to be primarily used to learn where things are in space, and the identification-accommodative mechanism to gain and ‘nail down’ the knowledge of what things are in space.”
May, 1960; p. 57; Series 32; #8	A very important acknowledgment is made.
the quote:	“... Centering may, and should be capable of great changes without disturbance of the basic alignment.”
March, 1961; p. 46; Series 33; #6	Continuing with important additional concept development and clarification.

the quote:	<p>“The eyes are aligned, an object of regard is selected out of the total space, and the inner optics of the eye is adjusted for an appropriate light scatter. These operate as a unified action to trigger off the experience knows as identification.”</p>
Nov., 1961; p. 41; Series 34; #2	Another consolidation point with a definition.
the quote:	<p>“Centering — Choosing a region of concern out of the whole of the forces in the terrain. It derives from the process by which a person becomes aligned. It picks out the region of value at the moment to the viewing person.”</p>
Nov., 1963; p. 11; Series 36; #2	<p>The 4 circle, vision-emerging diagram is referred to, and circles 1 and 2 are referred as the “centering process” and “identification process” with definitions as follows:</p>
the quote:	<p>“1. Centering process - giving the organism knowledge of where things are in space as they relate to him. 2. Identification process - scanning by the organism for certain experiences within the stream of consciousness, that let it meet the demands of the immediate environment.”</p>
Dec., 1963; p. 20; Series 36; #3	Additional comments regarding centering are provided.
the quotes:	<p>“... centering refers to the selection of some area in space for the greatest amount of meaning getting.”</p> <p>“Centering appears to be a covert process that cannot be measured.”</p> <p>Another important shift and advancement in thinking.</p>
Dec., 1963; p. 22; Series 36; #3	<p>The advancement and broadening in thinking continues as evidenced by the following:</p>
the quotes:	<p>“Centering and identification are always related in operational space. This visual space is a product of the experiences of the organism...”</p> <p>“Identification is a function of centering. The two are always feed-back systems, one upon the other.”</p> <p>“Centering is surmised to remain relatively ‘fixed’ in space while phorias are measured. ... phorias may show how much investigative activity is tolerated while centering remains unchanged.”</p>
Dec., 1963; p. 24; Series 36; #3	<p>Still further development of thinking in the same chapter as evidenced by the following:</p>
the quote:	<p>“Alignment, of itself, seems of small value to the person. It does permit a given large area of the total space volume to be selected, with relation to it for bilateral balance. This large area presents not even a generalized meaning. Yet within it is that area of specific meaning getting that has been treated here under the term centering. This function should be fluid.”</p>
June, 1967; p. 96; Series 39; #9	<p>The thinking continues to solidify, and the understanding more elegant with more simple definitions such as follows:</p>
the quote:	<p>“Centering has been defined (simply) as that area in space selected for attention and meaning. Selected implies that there has been a deliberate process put into action.”</p>

The foregoing, chronological descriptions and quotes from the writings of A.M. Skeffington reveal, dramatically, a continuum of development of an emerging concept of vision. Today we refer to this more specifically as the Behavioral Concept of Vision. In no way was this concept complete in his thinking at the time of his death, nor is it even today a completed item in our thinking. We continue to learn and develop. We have even greater appreciation of what vision is, what it provides, and its purpose as the dominant process in human behavior. And, we continue to broaden our own appreciation of this Behavioral (or dynamic) concept of vision.

The chronology reveals specific differences in thinking as time moved on. It begins with the very deliberate and obvious introduction of the terminology centering and identification to substitute for convergence and accommodation. This was an attempt to associate the new terms with a different approach to vision as compared to conventional wisdom. In reality, the quotations reveal that the initial use of the term 'identification' was as a synonym for visual acuity. As the chronology unfolded, it was important to appreciate that:

- 1.) The lack of comments and/or quotes from one month or year to the next implied that there were no significant differences in thinking or defini-

itions apparent during that period of time.

- 2.) There were periods when the thinking was identical, but the definitions and descriptions were simply stated in different ways.
- 3.) Specific "nodal" points appeared which revealed definite and obvious shifts in thinking.

Now, in 1994, it has been 18 years since A.M. Skeffington lived and at least a generation since he was a viable and productive thinker and writer. He was the trigger, the inquisitor, and the synthesizer, but not the final word by a long shot, particularly while he was living. He was our voice and our pen. He expressed the thinking of the associates with which he surrounded himself. And by his example he continues to play a role despite his silence. Today, we do not necessarily express the concept exactly the same as 20 years ago. Today, we have even greater insight, and have better appreciation of the benefits afforded to patients as products of the application of the Behavioral concept of vision.

Currently, this author does not use and refer to the four-circle, emergent vision diagram in dealing with the Behavioral concept. Even though this author makes little reference to the notions of centering and identification, these terms exist within the framework of his understanding of the

Behavioral concept. Specifically, he is comfortable in defining these terms as follows:

CENTERING - the selection of an area in space from which meaning is derived and acted upon.

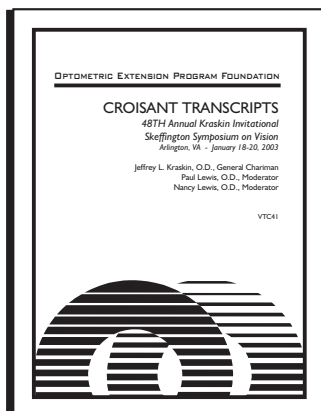
IDENTIFICATION - the deriving of meaning and directing of action from the area selected in space upon which to act.

To me, the terms centering and identification are descriptions of an apparent phenomenon and not a physiologic activity. In the consideration of the three aspects of information processing (i.e. balance with gravity, balance with task, and manipulation of task), centering and identification are descriptions related to manipulation of the task. They are not mechanisms, processes, systems, or subsystems. They are simply the descriptions of the activity involved in manipulating the task as an aspect of information processing.

This article was compiled from a presentation by Robert A. Kraskin, O.D., at the first annual Conference on Clinical Visual Care (CCVC), 1994, Memphis, TN. Dr. Kraskin died May 14, 1996. Ed.

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