

*Well Informed*

# You Don't Always Get What You See

BY MARJORIE ROBERTS

The words *to see* can have two meanings: to have the power of sight and to understand. How ironic language is because human beings do comprehend their environment primarily through sight. But if someone's visual perception of the world is flawed, if space is visualized on two planes rather than the three that are critical for proper depth perception, isn't it likely that comprehension will be impaired as well?

Yes, insists Melvin Kaplan, OD, an optometrist who devotes his practice in Tarrytown to the relationship between visual perception and an individual's ability to interact appropriately with the environment. By testing his patients with standard and novel procedures, Kaplan can identify if they have a perceptual dysfunction. Individually or in groups, he presently treats 70 cases each week who do with special prism glasses and exercises in a program he calls visuo-spatial management.

Kaplan's concepts are the subject of a recent study at New York Medical College's Psychiatric Institute in Valhalla. The research was conducted on 57 functionally disabled psychiatric patients and 60 control subjects. The findings indicate that patients with schizophrenia and depressive disorders have profound visual problems that might someday even serve as a diagnostic test for these psychiatric disorders.

"But 20 percent of the controls had the same visual problems," Kaplan advises, "which means some people have learned to adapt to their stress." The visual difficulties that were tested for

include a lack of depth perception, the lack of an ability to fuse the images obtained from both eyes into a single image, and an inability to adjust to the movement of nearby objects.

Now Kaplan is searching for a research grant to study the efficacy of his prism glasses and exercise therapy in emotionally disturbed people. One of his proposals is under consideration at New York Medical College, where Kaplan holds an appointment as clinical instructor for research in psychiatry. His collaborators are Herbert Bengelsdorf, MD; Barbara Orlowski, Ph.D.; Dennis Carmody, Ph.D., and Frederic Flach, MD, of The New York Hospital-Cornell Medical Center. Flach is a psychiatrist who can personally vouch for the success of Kaplan's technique.

Flach is the author of *Rickie*, the story of his own daughter's ten-year battle with mental illness. It was her case that revealed the visual perceptual disorder of the type established in the first Kaplan-Flach study, and Flach credits Kaplan's program and the remediation of this disorder as a great contribution to her continued recovery.

After Kaplan's success with Rickie, Flach started sending him more patients and the two began to see a relationship between psychiatric illness and visual problems. This is not to imply that all people with impaired visual perception need psychiatric attention. Kaplan sees three levels of effect:

"The least affected is a level one, where a person might complain, 'I don't

like to drive at night,' or 'I get tired when I read.' There may be headaches," he says, but for the most part, these people have adapted to what he calls their spatial organizational dysfunction.

A level two has a great deal of trouble driving at night, constantly has to reread for meaning or read words rather than phrases, and tends to drive either in the center of the road or near the curb. The person exhibits excessive eye movements and takes a long time to perceive objects.

"A level three has severe orientation problems and can only do one thing at a time," he continues. "The reason is the way this individual is processing information. The person either is using tunnel vision or peripheral alternating vision, but not perceiving space in total. So we use special lenses with yoke prisms to change their perception by organizing space, specifically by increasing or decreasing the amount of space they can handle."

He also has devised an exercise program that relies on spatial rearrange-

ment with lenses, objects and auditory cues that aims to bring a patient into balance with the environment by helping the eyes and brain work together more effectively. Kaplan maintains that when the brain fails to perceive where objects are in relation to other objects or to self, the constant stress of trying to compensate for this discrepancy can produce attention deficits with symptoms such as headaches, dizziness, motion sickness, an inability to concentrate and personality changes.

Eventually, treatment promotes change in the patient's visual system, and the remedial lenses--costing about one-third more than ordinary lenses--can be discarded within a year. Kaplan says his fees receive regular major medical coverage up to 80 percent.

"What I do is to help people process more information in less time and this relieves stress," he sums up. "You get a lot of satisfaction being able to change lives continually."

Marjorie Roberts of Greenwich is a member of the American Medical Writers Association.