



SOUTHPAW®

CHANGING AROUSAL TO RELAX, RE-ENERGIZE AND RE-FOCUS...

Continuum of Cassette Effect Wheel Series of Stimulation to change behavioral responses By Linda Messbauer, M.A., OTR/L ©

The 250 Optikinetics Projector is one of the most powerful tools for facilitating change in a Multi-Sensory Room. It is the crown jewel in the multi-sensory environment, whether on a mobile unit, or in a dedicated space. Its value is in both its versatility and in its ability to maintain novelty. It has primarily been used in a passive way, to relax people. But its true beauty is in being able to use it “actively” to change arousal levels*1. Before we discuss how this is done, we need to review the projector as a resource to use as a dynamic tool to maintain novelty.

The 250 projector has a number of types and sizes of wheel rotators that cause different projected effects on a surface, usually the wall. It also has many accessories which will help change the arousal state and has three outlets to plug in these accessories. You will need all three to change arousal and maintain novelty. Most MSE use the 6" rotator and 6" effects wheels that I call “Reality Wheels” (objects, scenes, animals, fish, flowers, etc.) or Liquid effects wheels which I often refer to as the “amoeba wheels” that is a slow flowing liquid and comes in a variety of color combinations. These Liquid effects wheels add to the ability to maintain optimal arousal levels, novelty and will be discussed below. The other is the 3" cassette rotator and 3" effect cassettes which are multi-colored abstract wheels offered in many designs.

The designs will impact the very core of the individual and help with memory retrieval, social-emotional attachments and be entertaining and pleasurable.

One of the key differences between these wheels and rotators is the speed. In addition, the 3" wheel actually has two wheels set

inside one another, one is static and the other turns, causing a "moving" effect of the image (Go to www.optikinetics.com to view examples). The other difference is that most of the 6" Reality wheels have bases in real life experience, which can be positive, negative or neutral to the individual. I prefer to use the abstract wheels since they have no symbolic meaning, can maintain novelty, and can cause Brain Entrainment*2 when combined with music. This ensures a neutral to positive experience. Simply put, Brain Entrainment is when the image or object seems to be dancing to the music and in reality it is not; your brain has combined the two sensory inputs and synchronized it. Some examples would be the Dancing Soda Cans or Santas, or when you watch fireworks with music, such as the 1812 Overture. The combination of the two simultaneous sensory inputs also leads to an additional input to the cortex, and the possibility of neurogenesis. (Neuroplasticity)

The common notion of "Relaxation" in a MSE for most individuals is a quiet place. Typically this means "relaxation music", dim lights, beautiful equipment, and a slow rotating image—usually a "Reality" wheel—projected on a wall. I need to challenge this perception especially for some of those individuals we serve who do not relax in a MSE.

These individuals usually have goals that might include: being less agitated, aggressive or self-injurious or to stop wandering or screaming or a variety of other extreme behaviors that interfere with daily functioning and quality of life.

Persons with these challenges often do not respond to the "Gentle Relaxation" style of the MSE. To achieve relaxation, change arousal, and refocus, they need more sensory input (stimulation) that their systems can utilize. I have found that adding more stimulation through increasing intensity and visual complexity in order to maintain novelty will help this type of individual.

The arousal continuum for the projector and accessories is based on the responses recorded since 1992 of individuals treated in a MSE. These individuals had either extremely high or low arousal, and did not respond to the "typical" relaxation room milieu.

The following continuum of suggested cassette rotator wheels is based on the rules of increasing arousal in the following ways: intensity, complexity, unexpectedness, incongruity, affective

meaning and novelty. Arousal can be decreased through: constancy, repetition, familiarity and neutrality. You can think of someone in high arousal as being a speeding car on a highway. If you want to catch them, you must accelerate to their speed and catch their attention. You then want to slowly decrease their speed (arousal) by changing the effects wheel to one lower on the continuum. If the person is in low arousal, you increase the speed by changing the effects up the continuum slowly while constantly observing their reactions, state of alertness, wakefulness, awareness and attention.

This is a dynamic process; you start at the level of the individual and respond to their changes. First, project the image on the wall and see the response. If none; move the projector slowly, tilting up or down, and turning it from side to side, but starting out from where they are looking. Do everything in slow-motion, with smooth seamless transitions. Don't hurry, and give the individual a chance to respond. Observe their faces and read their body language. If needed, use a prism or panoramic rotator to increase the complexity in order to capture their visual attention. The person does not have to look directly at the image; but you will see signs of them scanning the environment and physical adjustments. Observe head position changes and note their change in movement patterns and level of arousal. You will start to see signs of relaxation when the general arousal level allows for focus. The Series is in a continuum from the low to high stimulation. Depending on the music tempo and selection, the Brain will seek Brain Entrainment (synchronization) and you will see the effects image align to the music.

3"Effects Cassettes:

1. 7125
2. 7120
3. 7105
4. 7108
5. 7123
6. 7111
7. 7113

Using the Liquid effects wheels to maintain novelty and provide constancy.

The Liquid effects wheels offer: constant speed with slow moving changes, as it turns the colors mix and the shapes morph offering

a visually interesting image. Again these wheels are abstract and great for adding to the novelty of changing arousal. They also offer never ending opportunities to share conversation; “what do you see in that shape”? This can be very beneficial to some treatment modalities. No matter who is coming into my MSE and at what level of arousal; I start with the Primary Liquid Color Wheel before starting the 3” cassettes. Why? Because our visual system sees all colors and most of our life experiences have been in full living color. From social-emotional aspects for example: “they are Red in the face, feeling Blue, Green around the edges”, and most people have had pretty good experiences with coloring books and crayons.

In addition, we use color to evaluate facial expressions, for example: “Red in the Face could be anger, or the color Blue in the face could mean illness. (I especially select this wheel when working with people with Autism) Depending on the individuals’ initial level of arousal, I then pick out the 3” effects wheel from the continuum and slide it into the second gate on the projector and slowly re-focus the lens. This adds a slow transition and interesting image and I observe the response of the individual. I then can remove the Liquid wheel without adding bright white light into the room and startling the individual’s nervous system. The change is subtle and seamless.

The following list of liquid wheels can then be used alone or by combining it with the cassettes to change: intensity for example the yellow wheel will brighten some images and dim others; it also symbolizes the “sun” and adds pleasure to many other wheels. Essentially you follow the rules for changing arousal above; combining wheels to maintain novelty and optimal arousal.

Primary Color Liquid Wheel # 7038

Blue Green # 7038F

Red Pink # 7038I

Yellow # 7038J

In addition, I consider the following accessories necessary to change arousal (either to speed things up or slow them down) and use in my MSE: 3 faceted prism, Panoramic rotator, Deflector mirror and depending on the size of your room, the 60mm lens as it projects a larger image. For further information and articles about MSE visit www.lmessbauer.com.

*1 Brain Arousal in a continuum of low to high, would be defined as: more Motorically active, more alert to Sensory stimuli of all sorts, more reactive Emotionally (MSE) Other states of arousal will influence one another; dampening or increasing the other state on top of the generalized arousal state causing an emergence of one focus. Reference: Donald W. Pfaff, PhD, Rockefeller University

*2 Brainwave entrainment, also known as "brainwave synchronization", is concerned with frequency following response, a naturally occurring phenomenon where the human brain has a tendency to change its dominant EEG frequency towards the frequency of the dominant external stimuli applied to it. Wikipedia

Please remember the most important aspect of the MSE is that it is voluntary, but ultimately the practitioner controls the entire tone/mood/milieu of the environment from the design, selection of equipment, to controlling the transitions and often choosing the images and music.