Chapter 3
The Psychology of Relaxation, Meditation, and Mindfulness
An Introduction to RMM Theory, Practice, and Assessment

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Jonathan C. Smith


People relax in many ways and for many reasons. Some might take nature walks, listen to music, or contemplate sacred scriptures. Others may practice yoga, breathing, progressive muscle relaxation, meditation, or biofeedback. My concern is with self-relaxation, activities and exercises one can do by oneself, without the necessity of external equipment (biofeedback) or personal assistance (massage). This chapter does not consider active, goal-directed leisure and recreational activities such as sports, reading, art, music, television, nature walks, and the like. All may well have profoundly relaxing effects, but they are not pure forms of self-relaxation.
But what is relaxation and how does it work? As can be seen in this volume, various physiological and neurological perspectives offer great insight. In this chapter I describe my psychological perspective. To begin, I find it useful to consider relaxation as part of a larger construct: relaxation/meditation/mindfulness (RMM). Exercises defined as relaxation by most texts and training manuals (Smith, 1985, 1986, 1990, 1999, 2001, 2005, 2007, 2017, 2019) include the following: progressive muscle relaxation, yoga and tai chi, breathing exercises, autogenic training, and visualization/imagery. My definition is based on popular use; relaxation is what most professionals call relaxation. To this list we can add meditation and mindfulness. Meditation can be defined generically as sustaining quiet, simple focus (Smith, 2017, 2019). In focused attention (FA) meditation (Lutz, Jha, Dunne, & Saron, 2015), one restricts attention to a singular stimulus, such as a mantra or the flow of breath. Mindfulness (OM, or open monitoring) involves quietly attending to the flow of all stimuli (or restricted domain of stimuli, such as sounds) as a neutral observer.

For decades I have argued that it is misleading to view relaxation, meditation, and mindfulness as separate approaches or phenomena. There is a bit of relaxation in all of meditation and mindfulness. There is a bit of meditation and mindfulness in all of relaxation. Nearly all texts and training programs teach blends of RMM. Although different techniques clearly have a different pattern of effects, all can be placed on the same psychological map. All can evoke experiences from the same lexicon (Smith, 2017, 2019).

**Neurophysiological Perspectives**

For over a century, neurophysiological perspectives have dominated the study of RMM. In the 180s, surgeon James Braid (1853) introduced the term *neurohypnotism* (sleep of the nerves). The term stuck over the decades in its current incarnation, *hypnosis*. In the 20th century, Jacobson
(1929) and Schultz (1932) introduced progressive muscle relaxation and autogenic training as methods for moderating neuromuscular and autonomic processes. In the 1970s Benson (1975) popularized the “relaxation response” as the mirror opposite of the nonspecific stress “fight-or-flight” response, mediated by sympathetic nervous system arousal. Benson theorized that such arousal reduction underlies all approaches to RMM. More recently, meditation and mindfulness researchers (Goleman and Davidson, 2017) have focused on brain structures (notably the prefrontal cortex, amygdala, and posterior cingulate) and activity patterns (high-amplitude EEG gamma).

Neurophysiological models of RMM have served us well and continue to form the primary rationale in training. These models are accessible and credible to trainees. Abundant research shows diverse positive health and performance outcomes. Body- and brain-based models have lifted techniques from the darkness of religion, pseudoscience, and the occult to genuine professional credibility. Indeed, the current flood of interest in meditation, mindfulness, and yoga can be traced to brain imaging research at the turn of the millennium.

**Beyond the Body and Brain: RMM Theory**

An exclusive emphasis on neurophysiology risks missing something important (Smith, 1990). Most practitioners of RMM appear to master arousal-reducing skills in a month or so, yet many go on to practice for years and decades. Often masters of meditation and yoga claim to progress deeper in their practice even after a lifetime of practice, even after brain changes are no longer detectable. Clearly, such individuals are discovering something more than a reduced metabolic rate or alterations in brain structure and functioning.

As is apparent in this volume, psychological theory forms the basis of other forms of stress management. Learning theory underlies desensitization. Cognitive psychology provides
the foundation for cognitive therapy, stress inoculation training, and exposure treatments. Constructs from social psychology are central to anger management and conflict resolution. The list goes on. In contrast, RMM has been viewed more similarly to exercise, diet, or psychopharmacology—defined by what happens in the body. But for practitioners of relaxation, more is going on than can be measured in the body or brain.

Two decades ago (Smith, 1985, 1986), I proposed the beginnings of what I now call RMM theory (alternatively named, “Third-Generation Mindfulness Theory”; Smith, 2017, 2019), a comprehensive integration of all approaches to relaxation, meditation, and mindfulness (Smith, 2005). My approach is not narrow-spectrum; it does not focus on a homogenous, static outcome state or trait (e.g., the relaxation response, focused awareness, or nonjudgmental acceptance). Instead, my approach is broad-spectrum and is based on four ideas: (1) RMM has many defining effects, (2) these effects inform and influence each other, (3) they change over time, and (4) this change is not random or circular but evolves in a direction that is decreasingly self-referential and increasingly deep and encompassing. Simply, my broad-spectrum model is multidimensional, interactive, dynamic, and directional (for an elaboration, see Smith, 2017, 2019). In this chapter, I introduce the highlights of the latest version of RMM theory and review implications for research, practice, and assessment.

On Asking the Right Question: Narrow-Spectrum and Broad-Spectrum Approaches

RMM theory begins with a simple question remarkably few trainers or researchers ask: What do you experience when you relax, meditate, or practice mindfulness? If you ask students of progressive muscle relaxation, yoga stretching, tai chi, breathing exercises, autogenic training, imagery, meditation, or mindfulness a narrow-spectrum question (Are your muscles relaxed?), you will likely get a narrow-spectrum answer that articulates a single state or trait (I am still
tense or I am relaxed). However, if your question is broad-spectrum and open-ended, you will quickly encounter a rainbow of psychological states. Some feel peaceful or rested. Others feel sleepy and far away, or even energized, loving, thankful, and joyful. And practitioners of strictly secular approaches may have deeply spiritual feelings.

If you make it clear that you are listening with genuine openness, sincerity, and interest, your student may trust you enough to share a personal story of RMM. Consider these journal excerpts of a practitioner of progressive muscle relaxation:

I am trying muscle relaxation to reduce my backache . . . my exercises are beginning to work and my pain is less . . . I can more readily detect tension and let go. . . My muscles feel pleasantly loose and relaxed. . . . I feel still and quiet, less distracted by preoccupying nagging muscle pain and worry about my body . . . . I can focus more easily . . . I’m curious about meditation and am learning to treat my muscle relaxation as a mindfulness exercise . . . . I find myself being a neutral observer and view my occasional pain and all body sensations as passing thoughts that do not define me . . . sometimes I have brief but remarkable experiences . . . with sustained undistracted focus I view the world as a beautiful dance of which I am a part . . . I am filled with joy, awe and wonder, and even a touch of reverence . . . . I am part of something greater . . . I am thankful for this experience.

Note that this is indeed a training outcome. But it is not a narrow-spectrum homogeneous static state or trait (My pain is less). Our client has shared a story. As such, it is broad-spectrum: multidimensional, interactive, dynamic, and directional. A truly complete assessment of any approach to relaxation, meditation, and mindfulness should examine the kinds of stories that emerge, how they are similar and different, what conditions influence their development, and
how they affect life’s pains, problems, and challenges. No single questionnaire, brain scan, or behavioral task assessment can reveal such a living portrait. To systematically and scientifically explore the stories of RMM, we need to go beyond practitioner anecdotal reports or trainer dogmas and preconceptions. To do this, we need a standard, empirically based vocabulary of analysis, a comparative template, a lexicon of RMM.

An RMM Lexicon

Since 1996 (Smith, Amutio, Anderson, & Aria, 1996), I have embarked on something of a quest for a comprehensive natural language or lexicon of RMM. Along with students and colleagues, our mission has been to identify those words practitioners actually use to describe their experiences. We began by studying the basic instructional texts of progressive muscle relaxation, yoga, tai chi, breathing, autogenic training, visualization/imagery, prayer, contemplation, meditation, and mindfulness. This search included ancient approaches as well as those that are new, approaches from the East and West, and approaches from spiritual and secular traditions. I reasoned that such manuals were likely to include words accessible to and used by actual practitioners, rather than the technical terms of scientists or the esoteric musings of mystics, philosophers, and theologians. I came up with an initial dictionary of more than 200 words.

Over the years, my colleagues and I have used two tools for screening and organizing our lexicon. First, we applied factor analysis to successively screen item lists. This 20-year effort involved more than 6,000 participants who have practiced more than 40 types of RMM exercises and activities (Borgogna & Smith, 2016; Smith, 1986, 1999, 2001, 2005, 2012 Smith et al., 1996). Second, we carefully surveyed the results from practitioner focus and training groups.
Factor Analyses

Factor analysis is an ideal tool for identifying which word items are accessible and which are not. Factors, of course, are groups of interrelated items. Factors show how many diverse items may be grouped and structured. Equally important, the loading of an item on a factor is often its correlation with the factor. An item that loads highly on a factor shares much of the factor’s variance. For example, the words at ease, peace, contented, rested, soothed, laid back, relaxed, and calm consistently form a single RMM factor and can be presumed to measure the same thing. The highest loading words are at ease and peace. These are the best words for describing what the remaining words may depict. We can delete the remaining words on our initial list, confident that at ease and peace do the best job of communicating their general meaning. There are many reasons why some word items emerge as highly loading. I speculate that such items may be most readily understood and have a clearly differentiated meaning. Such words contribute to something of the natural language of RMM.

But factor analysis can be particularly tricky. I have found that the factor structure of RMM states varies according to practice populations. Advanced Buddhist monks may display a characteristic factor structure different from that of patient practitioners of progressive muscle relaxation, dieters practicing hatha yoga, or college freshmen after a college psychology class. This does not mean that RMM has no reliable factor structure, but that the factor structure of RMM is one important characteristic of the RMM population being studied. Rather than conclude that our study of Buddhist meditators does not replicate the factor structure found among practitioners of yoga, the proper conclusion should be that our study of meditators suggests a factor structure that may be unique to meditators, one different from that displayed by
practitioners of progressive muscle relaxation. This is a direct challenge to several dozen factor-analytic comparative studies of RMM techniques (discussed later in this chapter).

**Focus and Training Groups**

Over the past 50 years, my students and I have taught more than 150 classes of more than 4,000 students. Each student learns and practices a complete menu of exercises, usually including yoga, tai chi, breathing exercises, muscle relaxation, autogenic self-suggestion, imagery, mantra meditation, and mindfulness (Smith, 2017). We attempt to teach relatively pure versions so students can more readily identify their unique effects. Generally, students are taught all techniques, spending 2 or 3 weeks on each. Students complete a version of an RMM word list questionnaire (the “RMM Tracker”; see [http://blogs.roosevelt.edu/jsmith](http://blogs.roosevelt.edu/jsmith)) to track progress and make technique comparisons.

My approach is egalitarian. Traditional RMM is typically authoritarian. An expert, leader, or guru presents his or her wisdom and techniques. Students passively listen and practice. In an egalitarian approach, the instructor is more of a guide, and both student and instructor are travelers along a path. Of course, the instructor has concepts and techniques to share. But each student has a unique set of training experiences and insights. Importantly, the learning atmosphere is one in which student and teacher instruct one another. Training manuals for authoritarian approaches tend to remain unchanged for years, decades, centuries, and even millennia. This is true for both approaches based on religious dogma as well as those that claim to be secular and evidence-based. In contrast, egalitarian approach to training is constantly evolving, continuously informed by the insights of student-instructors. Last year’s training manual may differ significantly from today’s version.
In my version of egalitarian training, I make a point of asking students to describe their experiences. Each week I conduct focus groups in which students explain how RMM words fit their experience.

**The “5 + 1” Model**

(Alternately “RMM Theory” or “Third-Generation Mindfulness Theory”)

From these sources of data I have constructed the “5 + 1” model, a list of five levels and one category of 25 self-report RMM (Smith, 2017, 2019) states. Some reflect factors. Some reflect my experiences as a trainer. Following is a brief summary of what I describe more extensively elsewhere (Smith, 2017, 2019).

**Level 1: Basic Relaxation (alternatively Mindful Basic Relaxation)**

For students of meditation or mindfulness (first, second, and third-generation mindfulness; Smith, 2019), this level can be termed *Mindful Basic Relaxation*. Basic Relaxation is most frequently reported by beginning and intermediate practitioners of all approaches to RMM. I identify six components

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**Level 1: Basic Relaxation (alternatively Mindful Basic Relaxation)**

**RMM 1 (Far Away, Disengaged).** Often, beginners in RMM discover the value of simply getting away from (or letting go of) the day’s stressors. I define this as RMM 1 (Far Away, Disengaged), in which one feels distant, far away, indifferent to cares and concerns, and nicely detached from the surrounding world. Sometimes
one loses awareness of the source of instructions or parts of the body. Such descriptors define a unified factor group, defined by the words far away and disengaged. In classes, RMM 1 (Far Away, Disengaged) is the most preferred and frequently reported state for students under high levels of anxiety or distress. This has been something of a revelation for me. I had thought that a stressed-out student would seek RMM to experience muscle relaxation, peace, or mindfulness. Instead, they seek RMM 1 (Far Away, Disengaged). Apparently, for them, RMM is getting away from the hassles of life.

**RMM 2 (Physically Relaxed).** Perhaps the most direct psychological manifestation of reduced autonomic arousal can be seen in the self-report of physical relaxation, that is reduced autonomic arousal and muscle tension, as well as increased relaxed breathing. This RMM state can be experienced in various ways. Muscles may feel warm, heavy, or tingling. Breathing becomes even and effortless. Of the nearly two dozen words individuals use to describe such physiological states, the prime descriptor is physically relaxed, our title for RMM 2. This state often correlates highly with RMM1.

**RMM 3 (At Ease, At Peace; Mentally Relaxed).** Psychologically, stress is often described by such words as frustration, pain, worry, fear, concern, or conflict.
When distress is reduced, we feel RMM 3, At Ease, At Peace, or, alternatively, Mentally Relaxed. Here, factor analysis reflects semantic content analysis.

RMM 3 is associated with how we deal with stressors. Someone hiding from a tornado may experience fear. When the threat is gone, a person feels relief. Or, a person hasn’t eaten for hours. She goes to the refrigerator and finds a tasty sandwich. Hunger turns to satisfaction. A worker is having an argument with his boss over workload. He experiences conflict. The boss agrees with the worker’s schedule requests. The conflict is resolved, and the worker is at peace.

The dictionary reveals that such experiences have one thing in common. They all reflect negative reinforcement, relief from psychological distress, whether it be fear, strain, craving, conflict, pain]. Interestingly, such words consistently clump into a factor group, RMM 3, defined by the highest loading items At Ease/Peace. Distress, whether it be tension, pain, or negative emotion, can be a barrier to growth in RMM, perhaps suggesting unfinished business requiring attention. A yoga student may be distracted by the fear that he left his home stove on. He needs to resolve this fear first, call home, and have someone turn the stove off. If a practitioner of progressive muscle relaxation is distracted by hunger, a banana can be simple solution. If one is stuck in meditation because of an unresolved home conflict, perhaps the conflict should be actively dealt with.
**RMM 4 (Refreshed).** One type of mental relaxation that occasionally emerges as a distinct factor is the simple feeling of being *refreshed* and *energized*—RMM 4 (Refreshed). In terms of negative reinforcement, *refreshed* can be viewed as the reduction of fatigue.

**RMM 5 (Pleasant Mind Wandering).** Mind wandering is often noted as technique distraction by trainers of meditation, mindfulness, yoga, and occasionally autogenic training. However, in my classes I have observed that when students practice RMM, often they report simply letting go of deliberately planning and doing things and enjoying the pleasures of undirected fantasy and random mind wandering. RMM 5 (Pleasant Mind Wandering) may well be an RMM state in and of itself, a sign that RMM training is working. Perhaps it represents an important RMM process. It is a state worth exploring.

**RMM 6 (Fantasy, Daydreaming).** Practitioners of cognitive approaches to relaxation often report a positive type of mind wandering, fantasy, and daydreaming that is somewhat directed, perhaps with a plot or story (unlike RMM 5). Typically, we find RMM 6 does not load on any prominent RMM factor, suggesting it may not merit status as an RMM state. Rarely is it noted as a sign that an RMM technique is working. I include this state because it merits further exploration.
**Level 2: Basic Quiet Focus (alternatively Mindful Quiet Focus)**

In addition to Basic Relaxation, most practitioners of RMM disciplines experience a degree of Basic Quiet Focus. Professionals might argue that Level 2 states more accurately depict meditation and mindfulness rather than relaxation techniques such as progressive muscle relaxation, yoga, and visualization/imagery. I disagree. First, my research and experience consistently show that even practitioners of ordinary professional relaxation techniques (such as progressive muscle relaxation) experience Level 2 as much as Level 1. Indeed, as I describe later, RMM research on the independence of Levels 1 and 2 has yielded inconsistent findings. Even Edmund Jacobson (1929), no friend of Eastern meditative approaches, noted that reports of mental *quiet* often followed training in the progressive muscle relaxation technique he popularized. Mental quiet, as we shall see, is a Level 2 RMM state.

To elaborate, the core act of meditation and mindfulness involves sustaining quiet simple focus. I believe this a component of all techniques popularly and professionally presented as RMM. For progressive muscle relaxation, one sustains focus on the sensations of releasing tension, actively letting go of potentially distracting tension. In hatha yoga, one sustains focus on achieving and sustaining a posture. Any distracting mind wandering would disrupt focus and the yoga pose. Level 2 states can be an intensely rewarding, reinforcing technique practice. Our research and student experiences suggest a natural language of five Level 2 RMM State
**Level 2: Basic Quiet Focus (alternatively Mindful Quiet Focus)**

**RMM 7 (Focus, Absorption).** Attention is fully directed to a target stimulus or task, engaged to the exclusion of competing stimuli. The targeted task can be the primary focus of any RMM exercise (yoga, progressive muscle relaxation, breathing, prayer, meditation, mindfulness, tai chi, imagery, autogenic training, and visualization/imagery; meditation; mindfulness).

**RMM 8 (Centered, Grounded).** The emphasis of RMM 7 (Focused, Grounded) is an exercise target stimulus or task (one is focused on, absorbed in); For RMM 8 (centered and grounded) the emphasis is the accompanying general physical and mental state of the one doing the focusing and absorbing. RMM 7 is more about the object of attention, whereas RMM 8 reflects the attending subject. Centered and grounded, one may feel more in the present moment or here and now. Synonyms may include whole, complete, and stable. One may feel like a rock or tree firmly planted in the ground. Centered and grounded may have a proprioceptive component of physical stability and poise. To summarize once again, one experiencing RMM 7 may say *I feel focused on and absorbed in the flow of breath,* whereas one experiencing RMM 8 may say *I am centered and grounded in the present.* Generally, this definition is consistent with how centering has been used.
historically. Indeed, it reflects the definition that appears in the APA Dictionary of Psychology (https://dictionary.apa.org/centering) [Confusingly, the word centered has been used by cognitive therapists to denote nearly the opposite, reification of or fusion with stressful cognitions. One is preoccupied, identified with negative beliefs and assumptions concerning oneself and the world (Hanley, et al, 2020; Safran & Segal, 1990).

**RMM 9 (Quiet).** One experiences a reduction of thought and emotional activity. The mind is quiet and still. Even feelings related to other RMM states may be absent. For example, a quiet mind may not feel particularly Far Away (RMM 1), Physically Relaxed (RMM 2), At Ease (RMM 3), or At Peace (RMM 3). Put differently, the opposite of inner peace may well be inner conflict. It may also be inner quiet.

**RMM 10 (Unbothered).** One is accepting. Negative thoughts or feelings might emerge; however, one is not “caught up” in them. They may be seen as simple thoughts rather than final realities. Thoughts are less distracting or impervious to control. They are less “sticky.”

**RMM 11 (Easy, Effortless).** It is easy to let go of mind wandering and distraction, return to task, and sustain focus. It is easy to let things be, accept what is, and go on.
The task at hand, whether it be relaxation, meditation, mindfulness, or even work or recreation, feels **effortless**.

**Level 3: Awakening (Mindful Awakening)**

Level 3 is an extension of Level 2. *Awakening* refers to an increased awareness of oneself and the world, a consequence of sustained focus and attention and reduced self-referential thinking. We can consider four RMM states:

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**Level 3: Awakening (Mindful Awakening)**

*RMM 12 (Observer).* Here one simply stands aside and watches things come and go, as a neutral and objective witness.

*RMM 13 (Clear, Awake, Aware).* As an observer, one may have a sense of experiencing things as they really are. Things may seem vivid or particularly real. One’s mantra may cease to be a mechanical chant, becoming a sound with a life and direction of its own. A prayer may become more than a verbal repetition, more like words to and from God. The flow of the present moment may be seen clearly, as for
the first time, perhaps as seen by a child.

**RMM 14 (Interested, Curious, Fascinated).** When one is interested, curious, or fascinated by a task, whether it be progressive muscle relaxation, yoga, meditation, or mindfulness, one is more than a neutral observer experiencing a stimulus vividly as really real. An important new dimension is added: There is more than first appeared. The deeper reality of breath is more than the inflow and outflow of air. The deeper reality of the mantra is not just a repeated sound or syllable. The reality of the present moment is more than a series of events. What is this *more*?

Emergence of this realization is depicted in the experience of RMM 14 (Interested, Curious, and Fascinated).

**RMM 15 (Beautiful).** One experiences one important additional feature of the object of one’s interest, curiosity, and fascination. Things seem beautiful, harmonious. Practitioners from the full range of RMM approaches report such experiences.
Level 4: Deepening (Mindful Deepening)

In Level 3, one opens up to various stimuli beyond a self-referential perspective. In Level 4, another feature emerges. Whether the focal task is a tension release, a simple stretch, pose, breath, image, mantra, or flow of stimuli, it no longer evokes a static state but one that is dynamic, that changes and evolves in a way that is experienced as increasingly deep and encompassing. Here we can consider four RMM states:

**Level 4: Deepening (Mindful Deepening)**

**RMM 16 (Going Deeper).** Things are unexpected, new, interesting. One has a sense that experiences are *changing, opening up, being revealed.* It may feel like one is in *a different place or space.*

**RMM 17 (Spaciousness, Expansiveness).** One has a sense of *spaciousness* and *expansiveness.*

**RMM 18 (Sense of Something Greater).** One may feel the sense of *something greater than oneself* (God, a higher power, spirit, energy, love, or consciousness). If religiously inclined, you may feel that God is with you.
**Level 5: Transcendence (Mindful Transformation/Transcendence)**

In rare and special moments, the practitioner may come in touch with the deeper side of life. Again, in my experiences as a trainer and researcher, these can occur in all approaches to RMM, even those ordinarily thought of as strictly physical and secular. Transcendent states reflect awareness of a world larger or greater than oneself. These are often noted in the literature on mysticism and transcendence. Our research identifies the following:

**Level 5: Transcendence (Mindful Transformation / Transcendence)**

**RMM 20 (Reverent, Prayerful).** Feelings of reverence and prayerfulness reflect an emotional response to something larger or greater than oneself. These are expressive states, coming from oneself. One reveres, one prays. It is important to note that feelings of reverence and prayerfulness do not require belief in any supernatural deity or paranormal entity or dimension.
**RMM 21 (Awe/Wonder, Deep Mystery).** Although RMM 21 states Awe/Wonder and Deep Mystery frequently load on the same factor, it is instructive to consider their differences. Awe and Wonder reflects a nonanalytical and goalless awareness of a larger and greater reality that is new, awesome, beyond ordinary familiar comprehension and expectations. We don’t have words for this state. Our language provides many phrases that convey this notion: *shock of the new, blinding truth, dumbstruck, speechless, far out, mind-blowing, knocks one’s socks off,* or simply *Wow!* or *Amazing!* However expressed, one’s adult, verbal, analytic thinking cap has been knocked askew; one is temporarily freed or released from self-referential or automatic habitual conceptualizations and one sees things anew.

Deep Mystery is somewhat familiar to most people. We all have discovered things we do not understand. Sometimes we encounter profound questions and mysteries that seem to transcend any possibility of understanding.

There is a subtle difference between Awe/Wonder and Deep Mystery. Awe/Wonder suggests we simply do not have the words to describe what we experience. Deep Mystery implies we do not understand it. We may understand the geology of the Grand Canyon but experience it with awe and wonder. We may have words to describe the complex constellations in the sky but recognize the mysteries of the expanding universe, the Big Bang, dark matter, and so on.
**RMM 22 (Spiritual, Mystical).** Practitioners of all approaches can experience moments of profound and personal meaningful experience—a sudden awakening or insight. These can have several aspects

- Feelings of an underlying hidden truth. One might feel as if one has special and important insightful and intuitive knowledge. There is a sense of certainty of encounter with ultimate reality, a sense of seeing or knowing what is really real, ultimate reality.
- Feelings of being *at one* with the universe or others, a sense of selflessness.
- Difficulty in describing or communicating them to others—a common feature of transcendent experiences (a variant of RMM 21).

I loosely define transcendent experiences as a profound reduction in self-referential thinking and increased awareness of something larger or greater than oneself. This experience may be dualistic in that it includes awareness of oneself and of something other (“I feel so small when gazing at the immense Grand Canyon”). At extreme levels, it can be nondualistic in that the sense of self dissolves or merges with the world, and all is seen as timeless, eternal, or *at one.* This conceptualization is somewhat similar to what Yaden, Haidt, Hood, Vago, and Newberg (2017) termed *self-transcendence:* “the subjective sense of one’s self as an isolated entity can temporarily fade into an experience of unity with other people or one’s surroundings, involving
the dissolution of boundaries between the sense of self and other” (p. 143).

Such experiences can emerge in any RMM exercise. At times, they provide a defining or guiding context. One can argue that, like some positive emotions (explained later), they enhance singular focus, reduce self-referential mind wandering, and provide motivation to practice.

Maslow is noted for providing long, unorganized lists of related “peak experiences” (Maslow, 1964). More systematic accounts can be found in the scientific literature of mystical states (Maclean et al., 2012; Pahnke, 1963, 1969; Stace, 1960). This literature articulates the following facets:

- Unity (oneness, internal and external merging of self)
- Transcendence of time and space
- Noetic quality (deep understanding of hidden mysteries)
- Sacredness
- Positive mood (which we differentiate as a separate RMM category, Transcendent Positive Emotion)
- Ineffability

**Transcendent Positive Emotion** (Mindful Transcendent Positive Emotion)

Transcendent positive emotions involve reduced self-referential thinking. In contrast, feelings of pride, self-control, personal power, superiority, conquest, success, ownership, domination, and so on may be positive, but they highlight or enhance one’s sense of self. For transcendent positive emotions, one’s experience of self becomes secondary. Such emotions can emerge in RMM and help one sustain simple focus, reduce needless effort and judgment, and let go of self-referential thinking and mind wandering. Our factor analytic research differentiates three:
A long research tradition has examined various self-reported positive emotions (Cohn & Fredrickson, 2012; Gillham, Shatté, Reivich, & Seligman, 2001; Keltner & Haidt, 2003; Scheier & Carver, 1987; Yaden, 2017):

- Admiration
- Awe
- Compassion
- Elevation
- Gratitude
- Happiness
- Love
- Optimism

Fredrickson has proposed a “broaden-and-build” hypothesis. Positive emotions broaden one’s “thought–action repertoire”; they build one’s personal resources, whether physical, intellectual, or social. These “prompt individuals to discard time-tested or automatic (everyday)
behavioral scripts and to pursue novel, creative, and often unscripted paths of thought and action” (Fredrickson, 1998, p311). Negative emotions narrow one’s attentional focus (Easterbrook, 1959). Positive emotions have an opposite effect—expansion of attentional focus—that enables one to see both the forest and the trees, the figure and ground, and that increases creativity and flexibility. Positive emotions counter the aftereffects of negative emotion, enabling one to loosen the hold that (no-longer-relevant) negative emotions gain on an individual’s mind, a notion similar to letting go in RMM. It is not surprising that Fredrickson proposes that positive emotion may well be one mechanism underlying meditation and, by extension, all of RMM (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). Specifically, they help channel or focus attention, help one put aside distraction and mind wandering, and provide motivation to continue practicing. I propose that transcendent positive emotions are not incidental descriptors, triggers, or effects, but a part of what RMM is all about.

Are All RMM States Really Part of RMM?

Those who embrace strictly neurophysiological definitions of RMM may protest that our list of 25 RMM states is too broad. My response is that this lexicon reflects what practitioners of progressive muscle relaxation, yoga and tai chi, breathing exercises, autogenic training, and visualization/imagery, meditation, and mindfulness actually experience. Of the 150 RMM classes I have taught over the past 50 years, involving over 4000 students, in every single class at least one student reports even the rarest RMM state. This is reflected in factor analyses of practitioner experiences, research reviewed later in the chapter. Of course, some (Level 1, Basic Relaxation; Level 2, Basic Quiet Focus; Level 5, Transcendent Positive Emotion) are more common than others (Deepening, Transcendence). But each reaction is experienced by at least
some practitioners. The fact that many trainers may find this surprising suggests that they should perhaps listen more to their students. They have important stories to tell. Progressive muscle relaxation can be more than identifying and releasing tension. Hatha yoga can be more than stretching and assuming certain postures. Breathing exercises can go beyond breath. Autogenic training can be more passively repeating phrases suggesting relaxing physical states. Mindfulness can go beyond nonjudgmental present-centered awareness.

**Research**

When RMM techniques are narrowly viewed in terms of physiological variables, relatively few differences emerge. However, in dramatic contrast, every single study that has compared a broad spectrum of RMM states has found significant, consistent, and dramatic differences among techniques. In this section I present a sample of studies. Over a dozen versions of our RMM questionnaires have evolved over the decades. Currently, researchers use the Smith Relaxation States Inventory 3 (SRSI3) and its successor, the RMM Tracker Series (http://blogs.roosevelt.edu/jsmith). We use both in research and training. In the following summary I present findings in terms of current RMM terminology.

**The Factor Structure of RMM States**

Scholars may be surprised that no fewer than 31 separate published factor analyses support our differentiation of 25 RMM states (Smith, 2019). Factor-analytic research on precursors to current RMM inventories began in 1996. Smith et al. (1996) presented early versions of RMM word lists to 940 practitioners of massage, progressive muscle relaxation, yoga, breath exercises, imagery, and meditation. Practitioners described technique effects. Ten factors emerged: Joyful, Distant (currently Far Away, Disengaged), Calm (currently At Ease, At Peace), Aware, Prayerful, Accepted (Unbothered), Untroubled (Unbothered), Limp (Physically Relaxed), Silent (Quiet),
and Mystery (Awe/Wonder, Deep Mystery). This is the first study to reveal the rich and complex psychological states the full range of RMM techniques can evoke.

Smith et al. (2000) summarized 13 factor-analytic studies completed prior to 2000. The combined sample included 1,904 participants reporting on a diverse range of RMM techniques. Using a rigorous selection criterion, only RMM items that loaded consistently and exclusively (.70) on a factor were included. Six factors consistently emerged: Centered Positive Affect (Transcendent Positive Emotion), Sleepiness (not a part of current tests), Disengagement (Far Away, Disengaged), Physical Relaxation, Mental Quiet (Quiet), and Spiritual.

Subsequent RMM research has found a similar set of factors. Corbeil, Marcaurell, and Belanger (2015), examining 531 college students, replicated the RMM trait factors of Physical Relaxation (relaxation combined with mindfulness), Positive Emotion, and Spirituality. Corbeil and colleagues found that relaxation and basic mindfulness items load on the same factor (Physical Relaxation).

Borgogna and Smith (2016) gave RMM state questionnaires to 119 practitioners (average of 3 years’ practice) of yoga/meditation (after 40-minute practice sessions) and 115 nonpractitioners. Consistent with Corbeil and colleagues (2015), we found three factors: Mindful Relaxation (mindfulness and relaxation items), Transcendence, and Positive Emotion. In contrast, Malia (2018) gave a state version of the RMM to 210 seasoned practitioners (average of 4 years’ practice) of various blends of hatha yoga and mindfulness after practice sessions averaging 46 minutes length and found the factors Mindful Transcendence, Mindful Focus, Mindful Positive Emotion, Basic Mindful Relaxation, Pleasant Fantasy, and Unbothered Observer. Mindful Relaxation was defined by Physical Relaxation, Centered/Grounded, and Quiet. A separate mindfulness factor emerged, Mindful Focus, defined by Focus, Absorption,
and Easy, Effortless.

In sum, factor-analytic studies of RMM states find distinct RMM factors reflecting four of our five levels: Basic Relaxation, Quiet Focus, Transcendence, as well as Transcendent Positive Emotion. (Level 4, Deepening, items were added recently and have not been subjected to factor analysis.) However, the general pattern for some factors to appear in some studies and not others and to at times merge into a single factor should not be seen as a sign of unreliability.

With a bit of humility, I propose a change in how we study RMM states. As noted earlier, the factor structure of RMM states may depend on the RMM population under study. Buddhist monks and Roman Catholics at a prayer retreat may well display distinct patterns of RMM states. The pursuit of a universal factor structure is a fool’s errand. First, I suggest researchers examine what factor patterns are characteristic of specific populations. This is particularly relevant to emerging discussions as to whether relaxation and meditation/mindfulness evoke the same states or distinct sets of states (Borgogna & Smith, 2016; Corbeil et al., 2015; Malia, 2018). Second, when do Basic Relaxation states and Basic Quiet Focus manifest as one factor? Perhaps for nonrelaxers and beginning practitioners. Perhaps these states differentiate into two or more factors as training continues. Third, I recommend including a supplementary analyses at the item level in which each of 25 items is treated as a separate variable. Currently, my team is examining RMM 1, 5, 12, 16, and 18.

**RMM 1 (Far Away, Disengaged)**

Perhaps one of the most important fruits of RMM state research has been the discovery of RMM 1 (Far Away, Disengaged). In factor analysis, this state is defined by three dimensions: spatial, attitudinal, and somatic. Each reflects withdrawal from and reduced awareness of the world.
Terms such as feeling *distant, far away, disengaged,* and *in my own world* are primarily spatial. In contrast, statements such as feeling *detached, indifferent, not caring about anything, unmoved,* or *unbothered* represent an attitude of withdrawal. As relaxation progresses, one may display a type of disengagement in which one becomes less aware of one’s limbs and parts of one’s body. A client may realize that he or she has lost awareness of hands, arms, legs, or feet. More dramatically, one may have an out-of-body experience in which one feels or actually hallucinates oneself floating above and observing one’s own physical body. Clinically, one might view RMM 1 at least in part as low-level, potentially adaptive dissociation.


Such research suggests that those under distress are most likely to conceptualize effective relaxation as simply getting away from it all, tuning out, or becoming indifferent, all of which are defining descriptors of RMM 1 (Far Away, Disengaged). This RMM 1 appears to be one of the first to emerge in relaxation training, especially progressive muscle relaxation, and it may be a prerequisite to becoming successfully Physically Relaxed. To relax the body, one must first learn to disengage from the stressors of the world. Progressive muscle relaxation (and, I hypothesize, rudimentary autogenic standard exercises) may well be among the most effective tools for becoming Disengaged. Yoga stretching and breathing exercises appear less likely to evoke this
RMM state (Ghonchee & Smith, 2004; Matsumoto & Smith, 2001).

**Technique Comparisons**

Progressive muscle relaxation is initially associated with RMM 1 and 2 (Far Away, Disengaged; Physically Relaxed), whereas both yoga stretching and breathing exercises are more associated with RMM 13 (Clear, Awake, Aware; Boukydis, 2004; Ghonchee & Smith, 2004; Matsumoto & Smith, 2001; Rice, Cucci, & Williams, 2001; Ritchie, Holmes, & Allen, 2001; Smith & Jackson, 2001).

Ghonchee and Smith (2004), Matsumoto and Smith (2001), and Boukydis (2004) have used a promising new design for evaluating techniques. These researchers assigned participants to one of two approaches. Ghonchee and Smith (2004) compared progressive muscle relaxation and yoga stretching, whereas Boukydis (2004) and [Au: OK to delete?--OK] Matsumoto and Smith (2001) looked at progressive muscle relaxation and breathing exercises. Participants practiced their assigned technique once a week for 5 weeks in a supervised group setting, using standardized matched 28-minute recordings. Samples were diverse. Matsumoto and Smith (2001) examined college undergraduates; Ghonchee and Smith (2004) used bank employees; and Boukydis (2004) used a clinical sample of outpatients who had been in therapy for an average of 6 years for anxiety and depression.

RMM states were assessed before and after each session. At weeks 1 and 5, RMM state *aftereffects* were assessed. An aftereffect (Smith, 1999) is a state that emerges after a 3-minute pause at the end of training and after an initial posttest. During the intervening 3 minutes, participants are instructed to casually think about the forthcoming day’s and week’s activities. All studies found that progressive muscle relaxation consistently evokes RMM 2 (Physically Relaxed) and (with the exception of Boukydis, 2004) RMM 1 (Far Away, Disengaged).
Interestingly, for all studies, some effects took 4 or 5 weeks to emerge and did not show up on an immediate posttest but as an aftereffect 3 minutes after posttesting. For example, both Ghonchech and Smith (2004) and Matsumoto and Smith (2001) found that RMM 9 (Quiet), and RMM 13 (Happy, Optimistic, Trusting) emerge as aftereffects.

Little research has examined the impact of combining relaxation techniques. Two cross-cultural studies on senior citizens provide some intriguing leads. Bang (1999) examined relaxation scripting with 22 non-English-speaking Korean American nursing home residents. Half were assigned to a no-treatment control group and half received combination training. Specifically, participants were taught a different technique each day for 6 days (progressive muscle relaxation, autogenic training, breathing, yoga, imagery, and meditation). On the 7th day a group combination script was constructed incorporating exercise components that participants voted to include. The group script was then practiced for the remaining 14 days. Gonzales (2001) repeated this design on 24 senior citizens in Rio Piedras, Puerto Rico. Both studies found significantly reduced Beck Depression Inventory scores and increased scores on RMM 1 and 2 (Far Away, Disengaged; Physically Relaxed). In addition, Bang (1999) found increased scores on RMM 23 (Happy, Optimistic, Trusting), RMM 24 (Loving, Caring), and RMM 25 (Thankful). Gonzales (2001) found higher levels of RMM 9 (Quiet), RMM 4 (Refreshed), and RMM 3 (At Ease, At Peace).

Additional technique studies are worth noting. Gillani and Smith (2001) found that advanced Zen meditators report higher levels of RMM 9 (Quiet); RMM 25 (Thankful); and RMM 20 (Reverent, Prayerful). Smith and Joyce (2004) compared the relaxing impact of Mozart’s music, new age music, and reading popular magazines. Individuals who selected and listened to Mozart’s “Eine Kleine Nachtmusik” reported higher levels of RMM 9 (Quiet), RMM
13 (Clear, Awake, Aware), and RMM 21 (Awe/Wonder, Deep Mystery). Both Mozart listeners and listeners to new age music (Halpern’s “Serenity Suite”) reported higher levels of RMM 3 (At Ease, At Peace), RMM 4 (Refreshed), and RMM 24 and 25 (Loving, Caring; Thankful).

Implications for Training and Assessment

Over the past half century, I have devised a number of relaxation training and assessment protocols (Smith, 1985, 1990, 1999, 2005, 2017). As noted earlier, my approach has evolved, informed by the experiences of over 4,000 trainees and guided by two general ideas: (1) Different approaches to RMM have diverse, different, and changing effects. This suggests the value of combining pure and combination training formats. (2) Self-report is an important part of training and assessment. Training and assessment should be targeted to client strengths, needs, and interests. In addition, conscientious trainers should provide clients with a map for understanding how RMM may change over time, presenting new challenges and opportunities.

Pure and Combination Training Formats

I begin by teaching relatively pure versions of techniques. This makes it easier for students to detect and articulate RMM states that may be unique to specific techniques. Such an approach is meaningful only to the extent to which the procedural components of various approaches can be differentiated. For example, it makes little sense to contrast the effects of hatha yoga, progressive muscle relaxation, mindfulness, and breathing exercises when all of these approaches incorporate breathing exercises and imagery.

Initial training covers a full spectrum of RMM techniques. Each student receives two weeks of progressive muscle relaxation, seated yoga, breathing exercises, autogenic training, imagery, and meditation / mindfulness. Four types of meditation/mindfulness are presented: body scanning, breath scanning, FA meditation, and OM meditation. Of these, students prefer
progressive muscle relaxation, yoga, breathing, and FA meditation. Students often change their preferences as skills develop. Only after teaching several families of relaxation do I combine families of relaxation into an individualized program. For example, it is at this stage that imagery and breathing might be incorporated with progressive muscle relaxation.

My combination approach is not particularly original. Careful examination of what master trainers of RMM actually do (as opposed to what they say they do) reveals a preference for combining approaches. Many forms of progressive muscle relaxation blend letting go with an occasional quick stretch, often paced with inhaling and releasing breath, incorporated with some imagery (“imagine a tight wad of string slowly unwinding”) and physically targeted suggestions (“Let the tension melt away . . .”). Traditional hatha yoga is a rich mixture of stretching, breathing, physically targeted suggestion, and, often, letting go. Autogenic standard exercises deploy physically targeted suggestion and passive breathing exercises. More advanced autogenic exercises introduce imagery. And all approaches incorporate a bit of targeted and sustained meditative focus (Smith, 2005).

Although expert trainers may combine approaches, often they do so without a clear rationale. A good example of this is the preference among many well-known meditation and mindfulness instructors for preparatory stretching or breathing exercises. Why not use progressive muscle relaxation as a preparation? Indeed, our research (Ghonchec & Smith, 2004; Matsumoto & Smith, 2001) has found that progressive muscle relaxation (and not stretching or breathing) can evoke RMM 9 (Quiet), which is strongly associated with the practice of meditation (Gillani & Smith, 2001). Indeed, as mentioned earlier, Jacobson (1924) himself described his approach as a neuromuscular method for reducing worry or, as meditators prefer, “distracting thought.” Devotees of various schools of meditation or mindfulness may bristle at
any deviation from millennia of *time-tested* tradition. However, we need to be mindful that such
tradition may reflect the popularity of charismatic masters (and their favorite techniques), the
endurance of pseudoscientific beliefs (and associated exercises), religious dogma, and
unsystematic and careless trial and error. There are no substitutes for rigorous research.

Assessment

Traditionally, the assessment of RMM focuses on symptom reduction. I supplement this by
teaching students to identify, articulate, and differentiate RMM states. More generally, I prompt
students to discover how RMM can go beyond a targeted outcome state or trait and become a
journey that is multidimensional, interactive, dynamic, and directional. To these ends, I use two
strategies. First, I have students perform a “Double Present Moment Check” of what they feel
before and after an exercise. The specific instructions consist of four steps:

1. **Check.** _Just before your exercise, ask yourself: ‘What am I feeling right now, the present moment? What one or two words or images best describe my experience?’ Do not try to analyze this question or deliberately figure out the right or correct answer. Simply let words or images come to mind on their own and pick those that feel right for the moment. This is your first Present Moment Check._

2. **Record and let go.** _Put your words or images aside. You may briefly note them on paper. You are finished with this present moment check and are ready to move on to your exercise. There is no need to review or reconsider what you have done. That is history and not a part of what you are about to do. By putting your first present check aside, you are formally beginning your exercise._

3. **Practice.** _Do your selected exercise. It is important that you practice sincerely and correctly. What you are about to do is important, not casual._
4. **Check.** Do a second Present Moment Check. As before, simply ask “What am I feeling right now, the present moment?”

Second, Students complete the 25-item RMM Tracker after their best session for each approach (inventory available at [http://blogs.roosevelt.edu/jsmith](http://blogs.roosevelt.edu/jsmith)). Completing a RMM Trackers on a regular basis helps trainees articulate effects, compare techniques, identify changes that may be occurring, and uncover potential directions of practice. For example, one trainee may learn this sequence, practicing each approach for 3 weeks: progressive muscle relaxation → yoga stretching and breathing exercises → imagery → loving-kindness meditation → mindfulness meditation. One form of meditation is practiced throughout as a “home exercise.” The pattern of RMM states experienced may evolve over time. They may at first experience RMM 1 (Far Away, Disengaged) followed by RMM 2 (Physically Relaxed). As distractions subside, they may begin to experience RMM 7, 8, and 9 (Focus, Absorption; Centered, Grounded; Quiet). Meditative skills deepen, and they may experience RMM 9, 10, 11, and 13 ( Quiet; Unbothered; Easy, Effortless; Clear, Awake, Aware). In time, they may experience an awareness of the deeper potential of practice and a need to review practice goals (RMM 12, Observer; RMM 14, Interested, Curious, Fascinated). Such experiences may renew motivation to practice regularly, contributing to RMM 16 (Going Deeper), RMM 18 (Sense of Something Greater), and RMM 19 (Meaning, Purpose, Direction). In time, an occasional transcendent experience may further illuminate deeper reasons for practice (RMM 20, Reverent, Prayerful; RMM 21, Awe/Wonder, Deep Mystery; RMM 22, Spiritual, Mystical).

In my experience as a trainer, I find that students of all techniques become increasingly sensitized and able to differentiate subtle differences between RMM states as training continues. Advanced practitioners report more RMM states than beginners. This should not be surprising
and is a pattern for many types of training. Beginning chef students may be able to differentiate Asian, Italian, and Mexican cuisine. Advanced chefs, with their refined palates and culinary vocabularies, may be able to identify a variety of foods in each region, say Ahnui, Cantonese, Fujian, Hunan, Jiangsu, Shandong, Sichuan, and Zhejiang cuisines. I believe an important part of RMM training is helping students identify, articulate, and differentiate RMM states.

In sum, the outcome of RMM training is not a single state or trait but a broad spectrum of RMM states. Initial targeted outcomes (feeling Physically Relaxed) may pave the way and prepare for newer outcomes (Centered, Quiet, Easy), which in turn lead to additional unanticipated outcomes (Curious, Purpose, Sense of Something Greater). The outcome of RMM training is not a narrow-spectrum state or trait but a broad-spectrum and evolving story.

**Conclusion**

RMM theory presents a challenge to trainers, researchers, and students of relaxation, meditation, and mindfulness. Most programs promote a favored goal or, in our terms, preferred RMM states. Training in progressive muscle relaxation may emphasize symptom relief and feeling Physically Relaxed. A yoga retreat might teach Physically Relaxed; Centered, Grounded; and Easy, Effortless. A mindfulness system might emphasize Focus, Absorption; Quiet; and Unbothered. A loving-kindness or metta meditation group might focus on Loving, Caring. A group practicing centering prayer may focus on Reverent/Prayerful; At Ease, Peaceful; and Happy, Optimistic, Trusting. In the past, such defining RMM states have been influenced by the shifting sands of history, tradition, charisma, dogma, and bias. RMM theory presents a map of empirically derived set of states not based on any particular tradition. Such a universal lexicon invites us to look beyond our islands of favored techniques and consider the larger world of relaxation, meditation, and mindfulness.
REFERENCES


Borgogna, N., & Smith, J.C. (2016, June 16-19). The factor structure of relaxation and mindfulness: Two states or one? Poster presented at the Association for Contextual Behavioral Science Annual World Conference 14, Seattle, WA.


Braid, J. (1853). *Neurypnology or the rationale of nervous sleep considered in relation with animal magnetism*. London: Churchill.


