

## Resonance in Resting Rhythms

From the oscillation of atomic particles to the swirl of galaxies, from brain waves to the beat of the heart, and from the tempo of day and night to the seasons of the sun, rhythms literally rule our world. And they regulate us. From merry-go-rounds to rock and roll, from personal routines and religious rituals to standard operating procedures, rhythms provide a structure for virtually all aspects of life. In the course of our daily lives, rhythms serve as clocks, calendars, metronomes, and baselines, telling us when it is and therefore, what to do. Rhythms tell us when to breathe, eat, mate, when to be active, and when to rest. And they tell us when to sleep, dream, and awaken.

Rhythms have always had a central place in spiritual thought and practices around the world. Rhythmic procedures are central to most approaches to meditation, prayer, yoga, holiday celebrations, and other religious and spiritual rituals. Whether at cosmic, cultural, or consciousness levels, rhythms can be thought of as patterns that underlie the expression, movement, or flow of energy. And whether it is the “energy” of a culture, an individual, or a drop of water, there are distinctive qualities about all things that are reflected in their rhythmic signatures.

Just as ocean waves are contained within the larger rhythmic structure of the tide, there are lower- and higher-order rhythms. It is useful to think of ourselves as complex, interactive energy systems defined by the rhythmic activities of the body and mind – of hormones, circulation, digestion, brain waves, and states of consciousness, for example. At the same time, we are embedded in larger social, cultural, environmental, and cosmic energy systems that influence us. We depend on smaller, lower-order rhythmic patterns “below” in the form of our biology, and “above” us in the form of our cosmology.

Living with and within a conscious sense of rhythm is comforting and healing. Research has confirmed that people and animals are comforted by repetitive rhythmic behavior. Whether through the rocking of a rocking chair or the rock in “rock and roll,” rhythmicity elicits a soothing neurochemical response in the brain. Routines, standard operating procedures, and temporal structures are all about rhythm. Obviously, rhythm is the foundation of music, dance, and all forms of ritual, and it lies at the core of our very life in the form of the breath.

Breathing may be the most fundamental expression of rhythmicity in human life. Breathing is the only physiological function that can operate on both completely conscious and completely unconscious levels. In this way, it seems to serve as an essential bridge between consciousness and unconsciousness. Changes in breathing patterns are known to be associated with changes in consciousness. More shallow and rapid breathing is characteristic of more aroused states, while deeper and slower breathing is associated with relaxation, meditative states, and sleep. Breathing connects the lower-order rhythms of our biology with the higher-order rhythms of consciousness.

Like the yin and yang, our planet is always half- illuminated, half dark. The rotation of the earth spins each hemisphere through daily cycles of light and dark. This pattern has become deeply imprinted on our biology in the form of an internal biological clock. Also known as a circadian (from *circa*, meaning “about,” and *dies*, meaning “day”) pacemaker, this small bundle of cells situated near the center of the

brain tells us when it is – when to be active and when to rest, when to wake and when to sleep. Our very consciousness, that is, our basic sleep-dream-wake cycle, is circadian in nature, born of and structured by nature's cycles of light and darkness. Circadian rhythms mete out a basic temporal framework for our biology, including our endocrine, immune, cardiovascular, digestive, and central nervous system functions. They strongly influence states of arousal, our performance, and our need for food and drink.

There is a natural, ubiquitous, and powerful innate tendency in all things, living and otherwise, to “go together,” – to synchronize their rhythmic activity. The complex rhythmic signatures that make up all things will resonate, harmonize, or “entrain” with one another when they are in proximity. Groups of fireflies blink synchronously, individual cardiac pacemaker cells maintain a steady heartbeat, women who share living space report that their menstrual cycles synchronize, and heart and brain rhythms of people sitting quietly together also synchronize. In all of these, separate oscillators, or “clocks,” allow for a kind of coordinated or collective behavior to emerge.

Depending on their receptivity, individual cells, animals, people, events, and virtually all other things can resonate with and potentially influence one another's rhythms. Resonance is the essential process underlying all relating. What we resonate with, consciously or unconsciously, profoundly shapes our experience and behavior. It determines the essential tempo of our lives, including the complex rhythmic patterns of our daily activities and nightly rest. Resonance mediates our relationship with nature's circadian rhythms as well as our connection with cultural forces. It is about the interaction, coordination, and synchronization of life's complex clocks.

The specific kind of resonance that affects our sleep, dreaming, and waking patterns is referred to as “entrainment”. When we ride a train, it carries us along at its own rhythmic pace; we go with or become entrained to it. Most of us are unknowingly carried along throughout our daily lives by the movement, activity, energy, and pace around us. The tempos of our surroundings, workplace, community, and social environment tell us when to get up and when to go to bed, when to work and when to sleep, when to be active and when to rest.

There are, according to Dr. Rubin Naiman, three types of influence on our circadian rhythms: personal, natural, and cultural clocks. Our personal clocks, our body clocks, reflect our inner and biological sense of time. Natural time, of course, is defined by rhythmic changes in the ebb and flow of light and darkness. And cultural time, in much of our world, is about the rapid paced rhythm of overly industrious life. Ultimately, our personal sense of time is determined by the resonance between our inner-- personal and biological clock – and our outer clock – defined to varying degrees by culture or nature. The train most of us ride each day is a cultural express. But we have other options, moment to moment, with each choice point. Inhale. Exhale.