Sync Sense

Social Rhythm Researchers Find

- Rhythmic Synchrony governs conversation, as is part of life from infancy to old age. Tempos may vary from culture to culture and person to person but folks who successfully relate manage to stay in sync. Rhythmic Researchers study the internal mechanisms which govern social rhythms and show that "sync sense" plays a major part in our ability to talk, work, and may also play a part in easing racial tensions.

- Conversations have a tempo and can look like a choral score with ¼ and 1/8th notes, triplets, rests, pickup notes and syncopation.

- Erickson says rhythm “seems to be the fundamental glue by which cohesive discourse is

- You can tell when people are comfortable with each other when their conversation is smooth, and rhythmic. The flow of the interaction keeps them involved from moment to moment just the same way as staying in sync keeps an orchestra together.

- The beat of the language also underscores the meaning of what is said and helps to organize the conversation.

- We need to be directed to pay attention to what is important – when to look and listen. There is too much information that tries to get our attention so we need help. Erickson says, “We
set up a regular time framework so that we avoid cognitive overload by focusing on predictable, strategic moments to pay special attention.”

■ THE BEAT is where speakers often convey key information and bring up new topics.

**HOW DOES THIS WORK**

If you were to read this page out loud, the words you would stress would be the important ones, and you’d automatically speed up or slow down on the words in between so that major points of stress form a regular chain of beats. Your listener would say “um humm” or nod on a beat or midway between two beats.

■ Evolution etched the sync sense into the human system. Animal communication is based on rhythmic movements or calls. When our ancestors started learning to talk it may have been a matter of life or death. When hunting a group of people needed to send and receive crucial information reliably. When somebody needed to tell the other hunter to throw that speak to the left – you can’t afford to miss the word “LEFT” when you’re about to be charged by a mastodon. “If you miss the word “LEFT” you may die. It is through rhythm that we show and still show each other when to pay attention – NOW, not before, not after – pay attention NOW. That NOW is the beat, and it’s predictable when a regular rhythm is set up.”

■ For folks who share the same speech background, rhythmic structure holds the conversation together and eases the effort to comprehend what you are hearing.

■ When Speakers and listeners come from different cultures, or from different language backgrounds in the same culture, they often have widely differing rhythmic expectations.

**HOW DOES THIS WORK**

If you were to throw a classical Indian Sitar player into a puck rock band it would be very very hard if not impossible for them to play together – probably a lot of stopping, starting, confusion, frustration, and then bad feelings.

■ A foreigner stresses words other than key ones for which you are listening, then as a result the intricate timing or “turn taking” I speak then you speak, gets whacked out.

■ “While you are trying to figure out what the person is saying, you delay your response,” says John Gumperz. “So the other person says something else. You fall further and further behind. It’s as if you hesitate during a ballroom dance – you can get completely out of sync and the

■ Deborah Tannen says that mere microseconds in speech timing affect how people view each other. When folks have a different timing expectation (ex. length of a pause) trouble can occur. New Yorkers have a shorter pause than Californians. So, when a Californian is waiting for what seems a to be their accustomed length of a pause the New Yorker feels that there is an awkward silence is developing and jumps in to fill it with more talk. Now the Californian may feel that the New Yorker is being rude by intentionally interrupting and being aggressive. The New Yorker may think the Californian isn’t really very interested in the conversation or hasn’t anything to contribute. “Being aware of conversational style, including rhythms, may not prevent misunderstandings from happening, but it can help you understand them after the fact without having to see yourself or others as crazy or mean.”
In a classroom (community) with already volatile cross-cultural relations, colliding rhythms and the assumptions people make because of them there are serious consequences.

**HOW DOES THIS WORK**
Example: In Alaska “Native Americans receive on average 20% longer jail sentences than do non-Native Americans,” says Ron Scollon. He explains that Native Americans when talking to cops will show deference to authority by slowing down the rhythm of their speech and pausing longer than usual before speaking. Non Native Americans tend to interpret such hesitation as a sign of antagonism, not respect. He thinks, “the difference in sentencing occurs primarily because if a convicted Native American doesn’t respond to a question in the expected length of time, the official tends to say he’s hostile and recommend a stiffer sentence.” “Throughout the North, public safety and health officers frequently diagnose Native Americans as physically or psychologically ill or incompetent,” and believes it has something to do with speech tempo.

**SOCIAL RHYTHM EXPERTS AGREE** that one of the best ways to keep a potential clash of such rhythms from escalating into something worse is simply to be aware that rhythmic differences exist. People can improve the way they talk to people of other cultures just by investing a few hours in learning about cultural rhythms.

Laurence Wylie says “Getting the rhythm of the language is essential to learning it.” It helps students absorb correct pronunciation and even grammar: His students have marched around the room to the one-second beat of a metronome while chanting French phrases, in French rhythm, in time with their steps to capture the foreign beat of the language.

Sensitivity to rhythm does not arrive when a child starts talking by may begin to develop in utter when the fetus senses heartbeat and hears the rhythm of the mother’s speech, it may make us hard wired for the language culture we are born to.

Research shows that infants interact with adults rhythmically.

**HOW DOES THIS WORK**
Example: Beatrice Beebe and Daniel Stern research shows that extended, overlapping movements, in mother-infant pairs tend to move almost simultaneously. It didn't matter whether mother or baby moved first the other would join in on average an 1/8 of a second later. They appeared to be sharing a rhythm, and saw them “taking turns” following each other’s movement keeping a steady rhythm with beats of about a half second.

Prespeech vocalizations of Mom and infant display rhythms and timing similar to those in adult dialogue. *Rhythm may capture a recalcitrant infant's attention when all else fails.* Beebe and Louis Gerstman found that one mother was able to get her inattentive infant’s interest only when she swung the child’s arm to a regular beat.

William Condon has devoted more than 20 years to the microanalysis of films of everyday interaction to find the patterns in speech and movement. A neurologically health person speaks and moves in coordinated pulses of about a second’s duration. Within these pulses,
smaller units of speech appear to synchronize precisely with comparable units of body motion. "Your body's locked precisely with your speech. You can't break out of this no matter what you do. Your eyes even blink in synchrony with your speech." Movements appear to begin, change, or end on the same film frame that a new vowel or consonant begins – within about four-hundredths of a second in the new sound. "The synchrony of the listener with the speaker is just as good as my own synchrony with myself." An auditory-motor reflex in the central nervous system might allow, even force, a listener's movements to synchronize with a speaker's voice far faster than any conscious reaction time. "We're almost in auditory touch. When I speak to you, my thoughts are translated into muscle movements and then into airways that hit your ear, and your eardrum starts to oscillate in absolute synchrony with my voice. In essence there's no vacuum between us – it takes only a few milliseconds for a sound to register in the brain stem, 14 milliseconds for it to reach the left hemisphere. Communication is thus like a dance, with everyone engaged in intricate and shared movements across many subtle dimensions."

Edward Hall says "you can see a family or group of friends separate itself out from a crowd after two or three film frames. They'll share their own rhythm and move in rhythmic

Lovers share a rhythm and make more frequent and lengthy movements simultaneously than casual acquaintances. Without realizing they even begin to mirror each other's movements. A newly acquainted but smitten couple will begin to synchronize first head and arm movements then more body parts will join the mating dance, until the two are dancing as one.

Timothy Perper calls sustained mirror synchrony the "best indicator that exists of mutual involvement." He believes that such exquisite coordination may be an unconscious precondition for further intimacy.

Social Rhythm researchers say that music simply releases the rhythms that are already in us. They suggest that hit records occur because someone composes something that is so close to what people are doing, saying, or feeling that the tunes are instantly recognizable and release feelings and rhythms that people are familiar with.

Edward Kelly says "Relating in rhythm is a natural outgrowth of a world in which just about everything moves with a beat, from the atom to the earth itself. Waves of sound and rays of light travel in characteristic frequencies, Biologically, "We are essentially rhythmic creatures." "Everything from the cycle of our brain waves to the pumping of out heart, our digestive cycle, sleep cycle – all work in rhythms. We're a mass of cycles piled one on top of another so we're clearly organized both to generate and respond to rhythmic phenomena."

INCOMPLETE LIST OF SOCIAL RHYTHM EXPERTS

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Frederick Erickson has written (with Jeffrey Schultz) *The Counselor as Gatekeeper: Social Interaction in Interviews* New York: Academic Press, c1982. ISBN 0122405803 and numerous papers on the conduct of face-to-face interaction, with particular emphasis on the role of rhythm in the regulations of interaction and on the influence of listeners’ activity on the discourse production of speakers. He has been an innovator in the use of film and video to study situations of oral discourse.

*The Music Goes Round and Round: How Music Means in School*  
[http://www.ed.uiuc.edu/EPS/Educational-Theory/Contents/45_1_Erickson.html](http://www.ed.uiuc.edu/EPS/Educational-Theory/Contents/45_1_Erickson.html)

Introduction ~~ In this essay, I will show how classroom conversation is musical—we sing when we speak—and how this musicality is fundamental for our sense of discourse coherence. Research that shows how talk hangs together so as to make sense may be crucial for implementing what new standards call for as "teaching for understanding." A researcher’s musical sense may be essential for identifying and analyzing the fundamental organization of classroom talk within which teachers and students construct understanding together. As a former musician and musicologist, I think we need to think carefully about how music fits into Eisner’s overall vision of relations among the arts, educational research, and educational practice.

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is on the linguistics department faculty at Georgetown University, where she is one of only four who hold the distinguished rank of University Professor. She has been McGraw Distinguished Lecturer at Princeton University, and was a fellow at the Center for Advanced Study in the Behavioral Sciences in Stanford, California, following a term in residence at the Institute for Advanced Study in Princeton, New Jersey. She has published sixteen books and over 70 articles on such topics as spoken and written language, doctor-patient communication, cross-cultural communication, modern Greek discourse, the poetics of everyday conversation, and the relationship between conversational and literary discourse. Among her scholarly books are *Talking Voices, Gender and Discourse,* and *Conversational Style.*

Dr. John J. Gumperz  
[http://sunsite.berkeley.edu/Anthro/gumperz/gumpbio.html](http://sunsite.berkeley.edu/Anthro/gumperz/gumpbio.html)

several biographical sketches of and interviews  
Published works by John J. Gumperz  
[http://sunsite.berkeley.edu/Anthro/gumperz/gumppub.html](http://sunsite.berkeley.edu/Anthro/gumperz/gumppub.html)

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Dr. Laurence Wylie  
was "Professor Emeritus in French Civilization" at Harvard University, Cambridge, Massachusetts. He is well known for work in French Civilization studies, the basis of his popular textbook *Les Français* (2nd edition, Prentice Hall, 1995). He is also known for a 1972 book on French gestures called *Beaux Gestes.* In spite of the success of this very accessible guide, his
most important work in devising an approach to learning total communication in French is not very well known. It is hoped that the present work in our "Face to Face" project will overcome the banalizing influence of "Beaux Gestes" which in the minds of some has come to symbolize the study of nonverbal communication in language learning. His article "Communication With The French” The French Review, May 1985 explains the basis of his method. Professor Wylie, to our sorrow, passed away on July 28, 1995.

The Laurence Wylie Prize in French Cultural Studies
Created to honor the memory of Laurence Wylie. The Prize is awarded every second year to a critical study in French culture or civilization, written in English or in French during the previous two years, by an author living in North America during the period considered. The prize is awarded at the AFCS Colloquium at which the author is invited to present the prize winning work. The award consists of $250 and up to $500 for transportation to the Colloquium. Nominations are invited with an announced deadline, and must include a full publishing information and a brief statement detailing the pertinence of the work to the study of French culture and civilization. Please send nominations to: JEAN-FRANÇOIS BRIÈRE jb707@cnsvax.albany.edu State University of New York at Albany.

Dr. Beatrice Beebe
Yeshiva University – Developmental Psychologist
The Effect on the Infant of Post-partum Depression in the Mother
http://www.nyspi.cpmc.columbia.edu/NYSPI/PIDPT_CO.HTM

Mother-Infant Regulation (B. Beebe, J. Jaffe, S. Anderson and S. Feldstein)

Depressive symptoms and attachment In this project, the microstructure of mother-infant preverbal “conversation” is being explored. Dr. Anderson reported that 90% of the infants of control mothers respond more often to mother’s ongoing vocalization than they initiate vocal activity at times when she is silent. The result is the familiar pattern of simultaneous vocalization that characterizes normal four-month-old infants. However, only 50% of mothers reporting depressive symptoms show this effect when talking to their babies, perhaps an early form of social deprivation.

Infant-directed speech “Baby talk” or “motherese” is a feature of infant-rearing in all cultures, a so-called “linguistic universal.” Published reports on this special mode of communication have recently increased. Infant researchers now devise ingenious experiments that demonstrate infants’ comprehension of aspects of vocal communication both pre- and postnatally, and long before speech onset (the first word). The hypothesis that timing and rhythm in many modalities are the fundamental links between non-verbal and verbal behavior is being tested. A monograph completed this year by Jaffe, Beebe, Feldstein, Crown and Jasnow (submitted for publication) discovered a rhythmic measure which is significantly correlated between partners in both the spoken dialogues between adults and in adult-infant vocal “proto-conversations.” Across the groups, the adult modified this dialogic measure to match that of the infant. The result is an automated index of the degree of “infantized timing” in adult babtalk. The research can now proceed to the major question of the biological significance of this linguistic universal. An adult adaptation that appears in all cultures is naturally presumed to have some developmental advantage. Yet this functional advantage has never been demonstrated. Social outcome data on all infants in this longitudinal study permit this important question to be addressed.
Other Activities

Dr. Beatrice Beebe won the Distinguished Scientific Award of the American Psychological Association, Division of Psychoanalysis. Dr. Beebe gave the Frieda-Fromm Reichmann Memorial Lecture at the Washington School of Psychiatry, on Mother-Infant Research and Treatment. [http://www.hisf.no/njmt/artikkelshogler71.html](http://www.hisf.no/njmt/artikkelshogler71.html)


**Dr. Joseph Jafe**
New York State Psychiatric Institute - Psychiatrist
Dr. Jaffe gave the Jacob Swartz Memorial Lecture at Boston University Medical Student Program in Psychiatry on the topic Rhythms of Dialogue in Infancy. [<http://nypisys.cpmc.columbia.edu/development/Web/98_Reviews/Comm_Sci/98_COMM.HTM>](http://nypisys.cpmc.columbia.edu/development/Web/98_Reviews/Comm_Sci/98_COMM.HTM)

**Dr. Daniel Stern,**
Cornell University Medical Center – Physician

**Dr. William Condon**
Boston University Medical Center – Psychologist
[http://www.heise.de/tp/english/special/glob/2227/1.html](http://www.heise.de/tp/english/special/glob/2227/1.html)

**Dr. Edward F. Kelly** – Psychologist

**The International Paleopsychology Project**

**William Benzon** <bbenzon@mindspring.com>
A multi-disciplinarian, Dr. Benzon has taught in the Department of Language, Literature, and Communication at the Rensselaer Polytechnic Institute and has published scholarly articles, reviews, and technical reports on African-American music, literary analysis and theory, cultural evolution, cognition and brain theory, visual thinking, and technical communication. Dr. Benzon is currently writing a book, *Beethoven's Anvil*, on the paleopsychology of music, including the evolutionary, neuroscientific, and social origin of music's passions.

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