

On Yawning; or, The Hidden Sexuality of the Human Yawn

by Wolter Seuntjens
Vrije Universiteit Amsterdam, The Netherlands

[EDITOR'S NOTE: This is a specially abridged version of the Ph.D. dissertation which the author defended (successfully!) on October 27, 2004. Dr. Seuntjens can be reached at <seuntjens@baillement.com>. The web site www.baillement.com is a lavish compendium of information about yawning.]

In science, the yawn has not received its due attention. In this investigation I provide (1) a systematic-encyclopedic overview of all available knowledge about yawning. The fields from which I derive my data are linguistics (semantics, etymology), sociology, psychology, the medical sciences (anatomy, physiology, pathology, and pharmacology), and the arts (literature, film, visual arts). Then, I (2) associate a number of these data in order to (3) test the hypothesis that yawning has an erotic side, a sexual aspect.

A Taboo, an Unsolved Riddle

The mass of data that I present in the encyclopedic overview makes one thing clear: there is no good explanation for yawning.

As regards physiology: the hypoxia and hypercapnia theories -- these long-untested theories that also figure prominently in common-sense notions -- were conclusively refuted by Robert Provine and his collaborators (Provine, Tate, and Geldmacher 1987). The now popular theory that yawning leads to wakefulness ('arousal defense reflex,' Askenasy 1989) is not without its problems (Regehr, Ogilvie, and Simons 1992).

In the paragraphs on pathology and pharmacology I enumerate so many different illnesses and disorders that are associated with increased yawning that for the moment it is impossible to extract a common factor. The same goes for the very many chemical substances that induce yawning (Crenshaw and Goldberg 1996: 415; Argiolas and Melis 1998: 12). What this common pharmacological factor, if there is one, constitutes, remains unclear.

This drawing, titled "Morning Yawning," is by the British artist Trevor Price. It is reproduced here courtesy of the

In the chapter on the psychology of yawning I discuss various subthemes of which the most concrete are: contagiousness, non-verbal behavior, and conditionability. Neither of these subthemes has been completely clarified. Psychologically, too, the yawn is still very much an unsolved riddle.

In the chapter on the sociology of the yawn I note that the yawn is (quasi-)universally taboo. The reason why this is so remains shrouded in mystery: the various rationales given -- superstitious, hygienic, aesthetic, psychological -- are all implausible. The ethological rationale (bared teeth) may turn out to provide the best explanation for the taboo of yawning.

As a preliminary conclusion we may therefore state that Reber's Law applies perfectly to the hitherto considered trivial behavior of yawning: the closer the yawn is examined, the more complex it is seen to be (Reber 1985: 618). In fact, we have really no idea what causes yawning and what purpose yawning serves or what mechanisms are responsible for yawning and even what the essential anatomical constituents of yawning are. In the age in which the human genome has been deciphered and space travel has become almost trite this verdict may sound like an affront.

Eroticism-Sexuality

Yet, in the light of the hypothesis that yawning has an erotic side, it becomes clear that in the data that I gathered there is at least one recurrent theme: eroticism-sexuality.

I found that both the 'yawn' and the 'stretch' of the stretch-yawn syndrome (SYS) are semantically and etymologically associated with 'desire' and 'longing for' (de Vries 1991: 142).

In several proverbs and sayings yawning -- and especially contagious yawning -- is interpreted as a clue of something more than just sympathy, that is, as a sign of being in love (Schlossar 1891: 402; Hand 1981, no. 12964; Beyer 1985: 187).

Yawning was both linked with *acedia*-boredom and with *luxuria* (lechery) and passion. As a non-verbal behavior the yawn was found to figure -- be it consciously or unconsciously -- in the courtship process (Howell 1659: 14; Mantegazza 1890: 126; Féré 1905; Givens 1978). That this is not a purely recent or western phenomenon was illustrated by passages from ancient Indian literature (Vatsyayana 1965; Biharilal 1990; Kesavadasa 1993).

Not surprisingly perhaps, the few psychoanalysts and depth-psychologists who did mention the yawn interpreted it as a latent sexual signal (Meerlo 1955: 65; Marcus 1973; Felstein 1976).

Ethological studies in primates found a clear relationship between yawn-frequency and hierarchical status (Bielert 1978; Hadidian 1980; Deputte 1994) and between yawn-frequency and the serum level of testosterone (Chambers and Phoenix 1981).

In discussing anatomy and physiology I recounted that Chouard and Bigot-Massoni (1990: 146, 152) described the feeling that accompanies the acme of yawning as a 'mini orgasm'. Moreover, the same authors concluded: "Let us remember in conclusion its intimate and unconscious relation with sexual life, [...]" (ibidem).

In discussing pathology I discovered that yawning and spontaneous ejaculation were mentioned concomitantly in terminal rabies (Beek 1969: 127).

In discussing pharmacology I found a link between yawning and spontaneous orgasm in withdrawal from heroin addiction (Parr 1976). Likewise, yawning and sexual response (SR) were associated as clinical side effects of several antidepressant drugs. In one publication an undeniable causal relation was reported: both spontaneous and intentional yawning provoked instantaneous ejaculation-orgasm (McLean, Forsythe, and Kapkin 1983). In experiments with animals many more substances were seen to induce, sometimes simultaneously, both SYS and SR. Moreover, in humans apomorphine induces both SYS and SR (Lal et al. 1989).

In the chapter on yawning and the arts, I discussed, in a somewhat more conjectural manner, the conspicuously erotic sigh and the equally erotic posture X. I argued for the interpretation of the sigh and posture X as the auditory and visual proxies for the SYS.

My Conclusions About Yawning

It is because of the critical mass of circumstantial evidence that was accumulated that all these data, passages, and quotations take on an ambivalent or double meaning. Nowhere is that clearer than in the use of the words 'yawning' and 'stretching' in the poetry of W. B. Yeats (1989 [1929]: 379), as for instance in:

O cruel Death give three things back,
[...]

Three dear things that women know,
[...]
The third thing that I think of yet,
[...]
Is that morning when I met
Face to face my rightful man
And did after stretch and yawn.

And what to think of the following passage taken from *The Prime of Miss Jean Brodie* by Muriel Spark (1967 [1961]): 59) in which the pupils Jenny and Sandy discuss their teacher's love life?

For this reason she was more reticent than Jenny about the details of the imagined love affair. Jenny whispered, 'They go to bed. Then he puts out the light. Then their toes touch. And then Miss Brodie... Miss Brodie...' She broke into giggles.

'Miss Brodie yawns,' said Sandy in order to restore decency, now that she suspected it was all true.

This, of course, does not mean that every yawn can be interpreted as erotic or even sexual: "There are times when a yawn is simply a yawn." (Even if a 'simple' yawn is not simple at all.)

In 'The Thinking of Thoughts: What is *Le Penseur* Doing?' Gilbert Ryle (1971: 480) presented the example of the blink of an eye to illustrate the necessity to interpret individual behavioral acts. Equally, we cannot but interpret every individual yawn as the occasion arises. In everyday life each and every individual yawn must be interpreted, as it cannot be ascribed to one specific cause, or be explained with total certainty. Likewise, we face a 'prediction barrier' in experiment and observation when predicting individual yawns.

In summary, the two foremost conclusions of my investigation are (1) the yawn is -- contrary to common-sense ideas -- far from trivial; yawning is an extremely complex behavior. (2) The yawn -- and this clashes even more with common-sense notions -- appears to have an erotic side, a sexual aspect.

Bibliography

"The Neuropharmacology of Yawning," Antonio Argiolas and Maria R. Melis, *European Journal of Pharmacology*, vol. 343, no. 1, 1998, pp. 1-16.

"Is Yawning an Arousal Defense Reflex?" J.J.M. Askenasy, *Journal of Psychology*, vol. 123, no. 6, 1989, pp. 609-21.

Waanzin in de Middeleeuwen, Henri H. Beek, Nijkerk (Netherlands): Callenbach, 1969.

"Androgen Treatments in Young Male Rhesus Monkeys," F. Bieleert, in *Recent Advances in Primatology*, ed. D. Chivers and J. Herbert, vol. 1, pp. 485-88, London: Academic Press, 1978.

Sprichwörterlexikon, Helmut Beyer, Munich: Beck, 1985.

The Satsai, Biharilal, trans. K. P. Bahadur, New Delhi: Penguin India, 1991 [originally c. 1647].

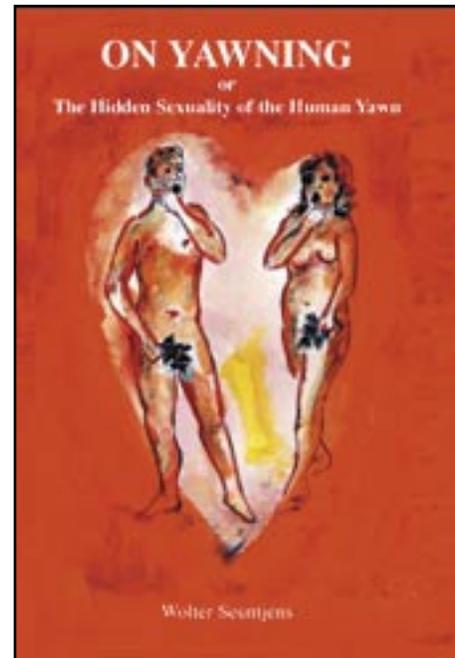
"Diurnal Patterns of Testosterone, Dihydrotestosterone, Estradiol, and Cortisol in Serum of Rhesus Males: Relationship to Sexual Behavior in Aging Males," Kathleen C. Chambers and Charles H. Phoenix, *Hormones and Behavior*, vol. 15, no. 4, 1981, pp. 416-26.

"Mécanismes et Rôles Physiologiques du Bâillement," C. H. Chouard and D. Bigot-Massoni, *Annales d'oto-laryngologie et de chirurgie cervico-faciale* (Paris), vol. 107, no. 3, 1990, pp. 145-53.

Sexual Pharmacology: Drugs That Affect Sexual Functioning, Theresa L. Crenshaw and James P. Goldberg, New York: Norton, 1996.

"Ethological Study of Yawning in Primates. I. Quantitative Analysis and Study of Causation in Two Species of Old World Monkeys (*Cercocebus albigena* and *Macaca fascicularis*)," Bertrand L. Deputte, *Ethology*, vol. 98, 1994, pp. 221-45.

"Oh! What a Big Yawn," Ivor Felstein, *Pulse* (London), March 6, 1976, p. 7.



The author's discoveries are presented more fully in his complete Ph.D. thesis. It has been published as a book [Éditions Oscitatio, 2004, 469 pages, ISBN 9-073-83822-3].

“Note sur le Bâillement,” Charles Féré, *Comptes Rendus des Séances de la Société de Biologie* (Paris), vol. 59, no. 1, 1905, pp. 11-12.

“The Non-Verbal Basis of Attraction: Flirtation, Courtship and Seduction,” David B. Givens, *Psychiatry*, vol. 41, no. 4, 1978, pp. 346-51.

“Yawning in an Old World Monkey, *Macaca nigra* (Primates: Cercopithecidae),” John Hadidian, *Behaviour*, vol. 75, no. 3-4, 1980, pp. 133-47.

Popular Beliefs and Superstitions: A Compendium of American Folklore. W. D. Hand, Boston: G. K. Hal, 1981.

Lexicon Tetraglotton: Proverbs Old Sayed-Sawes and Adages in the English Tounge; etc. James Howell, London: Thomas Leach, 1659.

Rasikapriya, Kesavadasa, unpublished translation by G. H. Schokker, Leiden / Wassenaar, 1993 [originally c. 1600].

“Apomorphine: Clinical Studies on Erectile Impotence and Yawning,” Samarthji Lal, Y. Tesfaye, Joseph X. Thavundayil, T. R. Thompson, M. E. Kiely, N. P. Nair, Alejandro Grassino, Bernardo Dubrovsky, *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, vol. 13, no. 3-4, 1989, pp. 329-39.

“Unusual Side Effects of Clomipramine Associated with Yawning,” D. McLean, R. G. Forsythe, I. A. Kapkin, *Canadian Journal of Psychiatry*, vol. 28, no. 7, 1983, pp. 569-70.

Physiognomy and Expression, Paolo Mantegazza, London: Scott, 1890.

“Yawning: Analytic and Therapeutic Considerations,” Ned Marcus, *International Journal of Child Psychotherapy*, vol. 2, no. 4, 1973, pp. 406-18.

“Archaic Behavior and the Communicative Act: The Meaning of Stretching, Yawning, Rocking and Other Fetal Behavior in Therapy,” Joost A. M. Meerloo, *Psychiatric Quarterly*, vol. 29, no. 1, 1955, pp. 60-73.

“Sexual Aspects of Drug Abuse in Narcotic Addicts,” Denis Parr, *British Journal of Addiction*, vol. 71, no. 3, 1976, pp. 261-68.

“Yawning: No Effect of 3-5% CO₂, 100% O₂, and Exercise,” Robert R. Provine, Bentley C. Tate, Lisa L. Geldmacher, *Behavioral and Neural Biology*, vol. 48, no. 3, 1987, pp. 382-93.

The Penguin Dictionary of Psychology, Arthur S. Reber, Harmondsworth: Penguin, 1985.

“Electrophysiological Correlates of Yawning,” Kimberly L. Regehr, Robert D. Ogilvie, and Iain A Simons, *Sleep Research*, vol. 21, 1992, p. 14.

“The Thinking of Thoughts: What is ‘Le Penseur’ Doing?” Gilbert Ryle, in *Collected Papers*, 2 vols., vol. 2, pp. 480-96, London: Hutchinson, 1971.

“Volksmeinung und Volksaberglaube aus der deutschen Steiermark,” Anton Schlossar, *Germania* (Vienna), vol. 36, 1891, pp. 380-406.

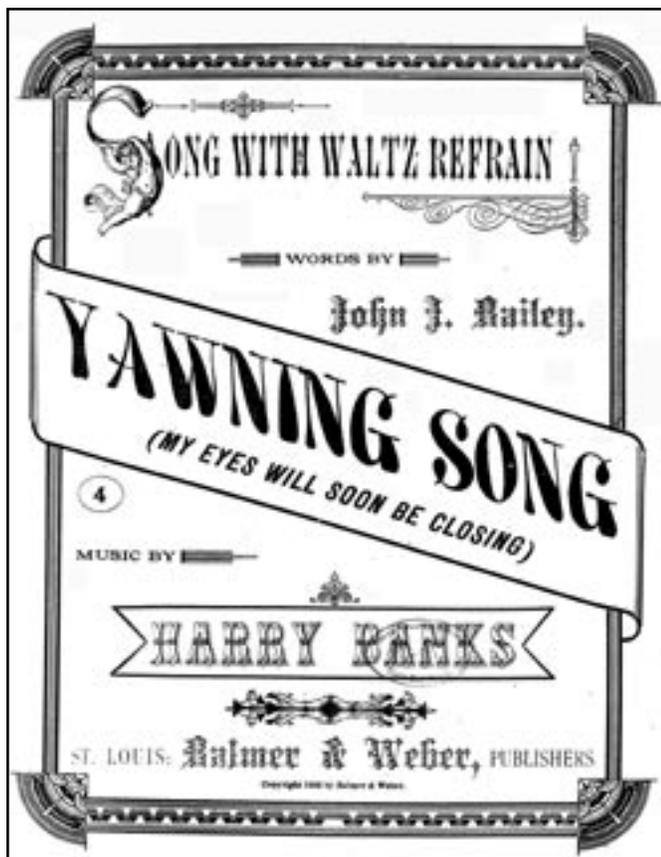
The Prime of Miss Jean Brodie, Muriel Spark, Harmondsworth: Penguin 1967 [originally 1961].

Kama-Sutra of Vatsyayana, Mallanaga Vatsyayana, trans. and ed. S. C. Upadhyaya, Bombay: Taraporevala, 1965 [originally c. 350].

Etymologisch Woordenboek, Jan de Vries, Utrecht: Spectrum, 1991.

Yeats's Poems, William Butler Yeats, ed. A. Norman Jeffares, London: Macmillan, 1989.

The phenomenon of yawning has been celebrated by songwriters, as well as scientists. This sheet music, for Harry Banks' “Yawning Song,” was published in 1882.



Annals of **IMPROBABLE RESEARCH**



Research that makes you LAUGH, then makes you THINK.

Please:

start or renew a subscription FOR ME (1 year (6 issues) 2 yrs 3 yrs)

start or renew a GIFT SUBSCRIPTION (1 year (6 issues) 2 yrs 3 yrs)

My name, address, and all that:

Name: _____

Addr: _____

Addr: _____

City: _____ State: _____ ZIP: _____

Country: _____

Phone: _____ FAX: _____

E-mail: _____

I am giving a GIFT SUBSCRIPTION to:

Name: _____

Addr: _____

Addr: _____

City: _____ State: _____ ZIP: _____

Country: _____

Phone: _____ FAX: _____

E-mail: _____

Send renewal notice to my beneficiary.
 Send renewal notice to me.

As a subscriber to the *Annals of Improbable Research*, you will receive an official Improbable Research Investigator Card.

Total payment enclosed: _____

Payment method:

Check (drawn on US bank) or int'l money order

Mastercard Visa Discover CARD #: _____ EXP. DATE _____

RATES (in US dollars)

	<u>1 year</u>	<u>2 yrs</u>	<u>3 yrs</u>
USA	\$29	\$53	\$79
Canada/Mex	\$33	\$57	\$85
Overseas	\$45	\$82	\$123

Send payment to:

AIR
P.O. Box 380853, Cambridge, MA 02238 USA
617-491-4437 FAX: 617-661-0927 air@improbable.com

WWW.IMPROBABLE.COM