ON DIRTY WORDS: AN ATTEMPT TO INTIMATE THE CONUNDRUM OF THE SIN

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Abstract: This article analyzes the use of dirty words with reference to sociolinguistic and Saussurean conceptual frameworks. It starts with a personal-anecdotal account on the difficulties in dealing with didactic issues in relation to the use of dirty words. In the guise of tackling the problem, sociolinguistic explanation is pursued, which, in the end, shows that sociolinguistic explanation is not really adequate to handle the issue. This relates to the possible notion that dirty words might be enacted as a (very) personal expression, devoid of any physical addressees. Saussurean linguistic concepts are also explored, and, yet, similar to the sociolinguistic explanation, also lacks explanatory rigor in that the Saussurean materiality approach affirms that dirty words are neutral in their very materiality. A hypothetical proposition to deal with dirty words will conclude the article.

Key words: dirty words, sociolinguistics, matter of convention

Abstrak: Artikel ini menganalisis penggunaan kata-kata kotor dengan merujuk pada konsep sosiolinguistik dan konsep Saussure. Artikel ini akan diawali dengan pemaparan kesulitan-kesulitan personal ketika penulis berurusan dengan masalah didaktik terkait penggunaan kata-kata kotor. Dalam rangka untuk menjelaskan kata-kata kotor, dilakukan eksplorasi penjelasan sosiolinguistik. Tetapi, pada akhirnya, konsep soiolinguistik kurang dapat memberikan penjelasan secara tuntas karena sosiolinguistik tidak dapat menjelaskan penggunaan kata-kata kotor yang merupakan ekspresi pribadi tanpa adanya kehadiran petutur lain secara fisik. Konsep Sasussure juga memiliki kekurangan karena unsur material pembangun kata sebagaimana yang ditunjukkan konsep Saussure menunujukkan bahwa unsur-unsur tersebut bersifat netral: tidak ada perbedaan unsur antara kata-kata kotor dan kata-kata yang lain. Proposisi hipotetis untuk menjelaskan masalah kata-kata kotor akan menjadi penutup tulisan ini.

Kata-Kata Kunci: kata-kata kotor, sosiolinguistik, persoalan konvensi

In our daily life, irrespective of the modes and media—be they old (manual) or new (electronic), communication is bound to be characterized to have oppositional, polarized ends: efficient/inefficient, effective/ineffective, good/bad, polite/impolite, and the like. On the negative plane, the employment of dirty words in daily communi-

cations demonstrates the ubiquity (if not really universality) of the existence of dirty words. However, of the binary oppositions, there is a tendency that people have been concerned much more with the positive ones—the favorable. It is understandable, therefore, that Brown and Levinson (1987) have been concerned with politeness strate-

gies rather than impoliteness strategies. Yet, it is also apparent that at times communication fails to proceed smoothly due to impoliteness which surfaces, which may manifest in several ways one of which is due to the use of taboo words (Culpeper, 1996). including dirty words. Allan and Burridge (2006:243) aver, critiquing the over-claim of the stock of the Eskimo people of words related to snow, that the number of English taboo words pertinent to sexual organs is much more abundant than snow related words of the Eskimo, stating that "English has accumulated more than 1,000 expressions for 'penis', 1,200 for 'vulva/vagina', 800 for 'copulation' and an extraordinary 2,000 expressions for 'wanton woman.'"

In her recent preliminary study, Rahayu (2010) demonstrated that impoliteness strategies densely mark the communications in facebook online group discussions. In the Indonesian context, the use of dirty words by a celebrity using the new medium of twitter has recently triggered controversies. Similarly, the use of a particular kind of language (interpreted as insulting) in facebook has forced a college student to trial (Jawa Pos, February 27, 2010, p. 13).

As noted above, in his formulation of impoliteness strategies, Culpeper (1996, 2009) has identified the employment of taboos as one among other strategies. Included in this category is the use of swear words (thus dirty words). However, in the formulation, Culpeper seems to have relied heavily on oral communication which has densely characterized human communications in the past. In our new epoch, we depend very intensively and extensively on the Internet, and consequently, myriads of communications nowadays are online in nature (Rahayu, 2010). The corollary is that the spread of dirty words nowadays is inevitably quite extensive. The up-shot is issues around dirty words warrant further discussion.

PERSONAL-ANECDOTAL DIDACTIC CONCERN

As mildly noted in the above overture, it is a truism that people distinguish good words from bad words, and thus, a good language from the bad one. Good words and language are often believed to reflect a speaker's good personality and the other way round, for language speaks for the speaker's mind (Chomsky, 1975:4).

The ubiquity of the use of dirty words does not necessarily go hand in hand with the ease of account for its nature. When I did a field work dealing with truck graffiti reported elsewhere (Basthomi, 2007; Basthomi 2009a), I happened to explore some points about dirty words written at the back of truck deck. Regarding this, truck drivers and co-drivers (literally the real owners of the truck graffiti) did not provide any lucid information why they should write the graffiti other than the very easy answer: just for fun.

As a father, I notice that at times my kids seem to enjoy the use of dirty words. They also indicate that they have astonishingly fast acquisition of dirty words through their daily socialization. Anecdotal interviews with a number of parents and teachers at my kids' schools confirm this notion: parents and teachers tend to complain about their kids' and students' use of dirty words. They also say that they are often infuriated by their kids' or pupils' bad words and/or language. A parent myself, my instantaneous attempt to straighten up my kids' occasional bad words drive them to express a berated typical question as "What's wrong with these words?" Towards this question, I frequently readily resort to my religion (in this case, Islam) to back up my answer, that is by stating that using bad words is sinful. In fact, underlying my action is my social (Saussurean) concern if my kids would infringe social conventions. At first glance, this situation seems to temporarily work to my kids, which makes me (erroneously) happy; but, actually, I myself am still asking the same question as that of my kids.

Recently, I was startled with my son's comment on the cover of a recentlypublished course-book I authored (Basthomi, 2009b). The cover mildly exposes, as the background of the book's title, a picture of truck graffiti bearing the expression of "BRENKSEX". He accused me of doing wrong, that is, giving people (readers) an example of dirty word thus (unidirectionally-deterministically interpreted as) teaching them to use dirty words. This runs counter to what I usually preach to my kids: not to use dirty words. Relevant to this, my concern in this piece of writing is how to locate the "sin" in the use of dirty words. In the guise of making a definition, the term "sin" here is simply that interchangeable with "what is wrong."

SOCIAL EXISTENCE: THE PROB-LEM

To my knowledge, the standard answer to the above question is of context-bound linguistic tenets (see e.g., Allan and Burridge, 2006; Djatmika, 2007; Jay & Janschwitz, 2008; Wardhaugh, 2002). Djatmika (2007, 2009) investigated the forms and functions of four letter words in the Javanese contexts. In terms of forms, he came up with the following categories of four letter words: 1) names of animal, 2) name of organs of human body, 3) name of negative professions, 4) name of fruits, 5) name of mental conditions, (6), name of torn clothes, 7) name of familial generations, and 8) nonsense words. This identification partly fits in what has been covered by Allan and Burridge (2006:1) in their treatise on taboos which include 1) bodies and their effluvia, 2) organs and acts of sex, micturition and defecation, 3) diseases, death and killing, 4) naming, addressing, touching and viewing

persons and sacred beings, objects, and places, and 5) food gathering, preparation and consumption.

With regard to the functions, Djatmika (2007) did not provide any additional information other than those proposed by Crystal (1997), that is, emotive and expressive functions. He also documented the conditions in which a speaker uses four letters words: 1) being annoyed, being frustrated, and being disappointed on oneself, 2) being angry with somebody else/ the other speaker, 3) underestimating someone or challenging something conducted or stated by someone, 4) being too happy. In the investigation, he resorted to the theoretical notion that four letter words are enactable only in the day-to-day communicative activities which incorporate more than one party or communicant. A similar account can also be found in Jay & Janschwitz's (2008) pragmatic explication of swearing. Wardhaugh (2002) also puts the discussion of taboo in his celebrated sociolinguistics textbook. Other pieces of work also do the same, that is, to see the phenomenon of dirty words from sociolinguistic point of view (e.g., Pramono, 2005; Cipto, 2006; Japutri, 2006).

Despite the claim on the universality of the use of four letter words or dirty words (Djatmika, 2007) and sociolinguistic undertaking in general (Ibrahim, 2009), this sociolinguistic approach to the use of dirty words fails to aptly deal with the fact that dirty words of a particular speech community might be completely unintelligible on the part of members of other speech communities: what is considered dirty in one language (dialect, code) is not necessarily dirty in other languages (dialects, codes) (see e.g., Baker, 1966; Djatmika, 2007; Simbolon, 1999). This particularity suggests that there is nothing wrong in using dirty words as long as the words are not understandable on the part of the addressees. However, in this regard, I have a doubt if the signific-

ance/meaning of the use of dirty words is effected only in socio-relationships or communications engaging at least two parties/interactants. In other words, at this juncture, I am questioning the meaning of the universality of the particularity of dirty words, for the unintelligibility of particular dirty words suggests the failure in enacting the meaning of the words. When the dirty words find no real meaning due to the failure in social meaning enactment, literally they do not have any meanings. If they do not have any meanings, they call for a question if a speaker should be deemed wrong (sinful) in using them when the words find no receptor. Since the talk about dirty words can be limited to word level, reference to Saussurean language conception is warranted (vis-à-vis Chomskyan syntax).

OPERATING SAUSSUREAN TENETS

In Saussurean conception, linguistics should study the system of conventions. These conventions are those which allow a sign, for instance, a word, to have meaning. So, the basic unit of meaning is sign and a system of signs constitutes a language (Rice & Waugh, 1992:5). A pivotal principle of Saussure's theory is that sign is 'arbitrary.' Such arbitrariness applies to two levels of signifier and signified. As a signifier, 'goat' has no necessary connection to the 'concept of goat.' So, basically, people are free to employ any configuration of sounds or written shapes to signify 'goat'-for instance, 'taog.' Yet, as to why (English) people use the signifier 'goat' to refer to the concept of 'goat' has to do with convention as put forth above. So, why Javanese people can use wedhus (goat) to refer to the concept of wedhus or alternatively as an expression of anger (Djatmika, 2007) is, in Saussurean concept, a matter of convention.

Saussurean concept also stipulates that signs operate in two ways. The first is paradigm. This is a set of signs from which the

one to be used is chosen. The alphabet can be said to constitute a paradigm. The second is syntagm. It is the horizontal string into which the chosen signs are combined. So, all words incorporate the selection (from a paradigm) and the combination (into a syntagm) of the alphabet. Let me take an example of an expression I once happened to glance at on the back of a truck deck which reads DAN COOK. In terms of its alphabetic materiality, the expression is composed of the letters D, A, N, C, O, O, and K. These letters are selected from the paradigmatic stock of the alphabet and syntagmatically combined in that sequence. We need to note that, in this case, and in any other linguistic events, each of the letters in the alphabet has equal probability of being selected. Materially speaking, there is no reason why the syntagmatic amalgamation of "f", "u", "c", and "k" should be different from that of "k", "i", "c", and "k". Both bear alphabetic elements which have a similar chance of being drawn from the alphabets. Each element of the two groups does not have any superiority over the other: all are the same and neutral. However, it is also crucial to note that each letter is different from any other letters in the alphabet at the time of being used. This difference is constitutive of what is responsible for the meaning potential of the expression. Even so, the materiality of the words does not account for the reason why somebody should select that particular expression.

Pertaining to the notions of signifier and signified, signs (words) are different from each other, phonologically as well as morphologically. They negate each other. The idea of 'negate' refers to the fact that the signifiers negate any other signifiers. This negative characteristic is also true with what the words signify. Yet, Saussure also observes that if a sign (word) is seen in its totality, it is positive: it posits ideas. He advocates that an alteration of signifiers insinuates conceptual changes of the signifieds

(1959:121). This accounts for the reason why the syntagmatic combination of "f", "u", "c", and "k" as noted above should be different from that of "k", "i", "c", and "k". However, the difference of these two syntagmatic combinations is dependent on the conventions shared by the speaker/writer and reader/hearer. So, similarly, the understanding of the example DAN COOK above relies on the posited ideas intended by the speaker/writer and shared by the reader/hearer, that is, whether s/he uses the conventions of English speech community or Javanese speech community. Within the convention of the former, DAN COOK is likely understood to refer to a person's name: probably, it is the short form of DA-NIEL COOK. So, DAN is understood as a first name and COOK a surname. In the convention of the latter, it might be understood as a swearing expression, for the expression might be meant to be a twisted expression of DANCUK, a swear word popular among many people in East Java. So, as mentioned earlier, there is nothing natural in the use of this expression: it resorts to the conventions effected or enacted by the speaker/writer and reader/hearer.

However, I have difficulties, partly Saussureanly speaking, understanding and, let alone, explaining (as a Moslem) why the Prophet Muhammad (peace be upon him) differentiate Assalaamu'alaikum from Assaamu'alaikum, the former being highly desirable and the latter gravely unfavorable. Again, materially speaking, the two expressions have the same neutral source of paradigm, i.e., the Arabic alphabet. Probably, people would say that semantically the two expressions are quite different. The first roughly means "May peace be upon you" and the second "Hopefully you get poisoned." However, this semantic approach cannot get rid of the notion of conventions among the Arabic speaking communities. As such, it is hard to say that the sin will be effected among people who do not under-

stand the conventionally-agreed-on meaning. In other words, the sin is contingent and, thus, relative.

So, the material approach using Saussurean linguistics should lead us to re-ask the place of what-is-wrong with the use of dirty words. In fact, as noted above, this materialist approach is still in need for socioconventions in order to work, whereas, as abovementioned, this socio-convention is relative. This relativist approach does not pay heed to an individual expression of dirty words, which is highly possible. In other words, Saussurean materiali(st/ty) approach does not depart from the sociolinguistic approach, which requires the presence of at least two parties for the dirty words to function as they do (Djatmika, 2007). This affirms the notion that the sin of the use of dirty words is in the mind of the speaking society. This notion, however, dismisses the fact that speakers of dirty words might be individuals in their very individuality.

FLIRTING WITH EMPIRICAL AP-**PROACHES**

Despite the well-known Saussurean and sociolinguistic approach, the mystery of the sin in the use of dirty words seems to remain lingering. The failure of the two approaches (which are actually sociolinguistic) to satisfactorily explain the place of the sin (what-is-wrong) in the use of dirty words should lead us to explore other possible approaches. Williams (1999) has reported her survey of some research into the effects of prayers on a wide range of entities, which include heart patients, blood pressure, people who lack health care, the life of twins, plant seeds, and microorganisms. All this indicates that prayers bear some positive effects. Taking the premise that dirty words are in opposition to prayers, the effects can be hypothetically believed to yield the opposite effects to those of prayers. In fact, this has been indicated by the control group of plant seeds receiving no prayers (Williams, 1999).

In their comprehensive discussion of forbidden words, Allan and Burridge (2006) provide us with, among other things, a good review of physiological, psychological, and neurological research findings pertinent to taboo words. What follows is a very brief summary of Allan and Burridge's discussion of the research findings in the three disciplinary areas. Reviewing a study employing semantic differential by Osgood and his colleagues, Allan and Burridge (2006: 244) came to a conclusion that "there is a general tendency that derogatory or unfavorable denotation or connotation within a language expression to dominate, whatever the context." They also summarize that "compared to other words, 'dirty' words cause bigger goosebumps; that is, they evoke stronger skin conductance responses." In other words, as they conclude, "taboo words are more stimulating than non-taboo words". In addition, their review has also come to a point that taboo words do not play the same role for nonnative speakers of the language of the taboo words. They also continue to say of their metaanalysis that, neurologically,

[t]he processing of the emotional components of language, such as taboo words, belongs to the limbic system. This is an older, deeper part of the mammalian midbrain (about the size of walnut) that adds emotional spice to the surrounding cerebral cortex — the part of the brain that is responsible for verbal reasoning, calculation, analytical thinking and rational thought.

However, all the reviewed physiological, psychological, and neurological findings are related to the social-conventions underlying the taboos whose attributes have been put in most of the experiments. So, similar to what Romaine (1994) has advocated, many linguistic phenomena are not solely linguistic ones, but inevitably social.

From a different perspective, yet of a similar nature, i.e., empirical, Emoto's (2009) research project might help locate the place of "sin" of dirty words or taboo words in general. Suggestive of this situation is that we can replicate Emoto's research methodology dealing with the effects of words on water. This research, however, in my hypothetical view will also need the definition of what is considered dirty (and tabooed) words to be taken into account in the empirical experiments. So, up to this point, the tensions between the notion of relativity as suggested in socio- and Saussurean linguistics on the one hand and universality as suggested in the shared mental capacity of every speaker are still outstanding—unresolved.

UNIVERSALITY OF PARTICULARITY: A HYPOTHETICAL CONCLUSION

At this juncture, the cyclic, if not necessarily of vicious-circle, issue of socialmind-social (universal-particular-social) in the use of dirty words is worth attention. In their psychological-neurological discussion of taboos, Allan and Burridge (2006) also emphasize the socio-didactical view of how taboo words become firmly stored in mind: it is due to the fact that the use of taboo words by kids tends to be accompanied with punishment (reprimands) and the use of favorable words does not necessarily invite specific and strong attention on the part of the parents (adults) as that of the taboo words. This situation is responsible for the strong imprint of dirty words over other words in memory.

However, it also holds true that language is dynamic and is open to changes. In this situation, the particularity of dirty words is inevitable. In this regard, along with the claim on the universality of sociolinguistics, on the one hand, and the particularity of the materiality of dirty words, on

the other hand, we can hypothetically believe that the universality takes the form of how social factors influence the definition of what to categorize as dirty (and taboo) words to be imprinted in the mind. So, the mechanism and the imprinting in the mind are universal and the material-individual dirty words are particular and contingent. These particularity and contingency emphasize the fact that languages are varied and dynamic. Yet, irrespective of the variability and dynamics of the individual dirty words in each individual language, the mechanism and the process of imprinting of dirty words in mind are the same across (speakers of) different languages. As such, the place of the sin can be tentatively claimed to be the mind.

However, I would hastily say that the sin in the mind is "sin-potential." If the dirty words are not activated, they do not function as or constitute the sin. This is comparable to (Islamic religious) practice in dispelling a demon possessing an individual. The practice demonstrates that verses of the Holy Koran (assumed to be in the diametral end of dirty words) do not have the power to dispel the demon until they are recited or uttered (Bali, 2008). This means that the power of the verses of the Holy Koran is "power-potential", which bears a comparable characteristic to "sin-potential." The manifestation of the sin in using dirty words has a similar mechanism to that of the power of the Holy verses, which is contingent upon or pending to the act of recital or utterance.

At this point, a critical question is warranted: "What if we use the dirty words in a jocular way, for instance, in addressing close friends?" To this question, I tentatively view that the activation of dirty words in a jocular situation is not the same as that in a serious manner. So, the sin which is formed in a joking way is not of the same entity or quality as that in a full gravity. All this suggests that the locus of the sin of dir-

ty word usage is extra-linguistic (physiological, psychological, and neurological). The linguistic materiality (the paradigmatic alphabets) should not be held responsible for the sin: it is the same irrespective of the way it is uttered. So, probably, the extralinguistic plane (physiological, psychological, neurological, and Emotoian experiments) can help tease out this problem. However, since dirty words inevitably bear linguistic properties, the issue around dirty words is not exclusively extra-linguistic. As noted earlier, the universality of the process and imprinting of dirty words in mind continue to take place in the situatedness of the dirty word usage in particular speech communities.

Consequently, the extra-linguistic approach which suggests universality, as noted above, should be imbued with consideration of the inevitable linguistic particularity of dirty words. So, Allan-Burridge's (2006:29-34) linguistic formulation of Xphemism, which encompasses the notions of euphemism, dysphemism, and orthophemism which are context-specific or particular in their very existence, can be a good reference for further inquiry into the locus of the sin in using dirty words. When this kind of projects is materialized, it will be a perfect manifestation of universality of particularity.

REFERENCES

Allan, K. and Burridge, K. 2006. Forbidden Words: Taboo and the Censoring of Language. Cambridge: Cambridge University Press.

Basthomi, Y. 2009a. Truck Graffiti: The Rhetoric of Emulation. Proceeding of Dialogue Analysis IADA/DA11 Rhetoric Conference, University of Münster, Germany (available at www.unimuen-

- <u>ster.de/Ling/iada/download/iada.online.s</u><u>eries_volume02.pdf</u>).
- Basthomi, Y. 2009b. *Discourse Analysis* (a/I)s Genre Analysis. Surabaya: Penerbit Jauhar.
- Basthomi, Y. 2007. An Initial Intimation of a yet Banal Discourse: Truck Graffiti. *K@ta*, 9 (1): 34-48.
- Baker, S. J. 1966. *The Australian Language*. South Melbourne and Crows Nest: Sun Books.
- Bali, S. W. A. S. 2008. *Kesurupan Jin dan Cara Pengobatannya Secara Islami*. Jakarta: Robbani Press
- Brown, P. and Levinson, S. C. 1987. *Politeness: Some Universals in Language Usage*. Cambridge: Cambridge University Press.
- Chomsky, N. 1975. *Reflections on Language*. New York: Pantheon Books-A Division of Random House.
- Cipto, B. 2006. *An Analysis of Swear Words* in <u>Jackass</u>: The Movie. Tugas Akhir. Universitas Kristen Petra, Surabaya.
- Crystal, D. 1997. *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press.
- Culpeper, J. 1996. Toward an Anatomy of Impoliteness. *Journal of Pragmatics*, 25 (3): 349-367 (Online), (http://linkinghub.elsevier.com/retrieve/pii/0378216695000143, accessed on May 30, 2009)
- Culpeper, J. 2009. *Impoliteness: Using Language to Cause Offence*. Lancaster: Lancaster University, (Online), (http://www.lancs.ac.uk/socs/englang/jculpepertalk.pdf, accessed on June 13, 2009)
- Djatmika. 2007. An Analysis of Javanese Four-letter Words: Forms and Functions. Paper presented at the International Symposium on the Language of Javanese, Semarang 15-16 August 2007.
- Djatmika. 2009. Swearing for Enriching?: Bringing Dirty Words into the Class. Paper presented at the 56th TEFLIN Inter-

- national Conference, State Islamic University-Maulana Malik Ibrahim, Malang, 5-7 December 2009.
- Emoto, M. 2009. *The True Power of Water* (trans.). Jakarta: MQ Publishing......
- Hughes, G. 2006. An Encyclopedia of Swearing: The Social History of Oaths, Profanity, Foul Language, and Ethnic Slurs in the English Speaking World. New York: M.E. Sharpe.
- Ibrahim, A. S. 2009. *Kesemestaan Sosiolinguistik*. Pidato Pengukuhan Guru Besar. Malang: Universitas Negeri Malang.
- Japutri, S. C. 2006. A Study of Swear Words

 Used by all Characters in the Movie <u>The</u>

 <u>Nutty Professor</u>. Tugas Akhir.

 Universitas Kristen Petra, Surabaya.
- Jay, T. and Janschewitz, K. 2008. The Pragmatics of Swearing. *Journal Politeness Research*, 4: 267-288.
- Mahasiswa Unej Dituntut Enam Bulan. Jawa Pos, 27 February, 2010, p.13.
- Pramono, J. R. 2005. The Study of Swear Words in Alexander Solzhenitsyn's One Day the Life of Ivan Denisovich through Pragmatic and Stylistic Approach. Tugas Akhir. Universitas Kristen Petra, Surabaya.
- Rahayu, E. 2010. Flaming on Facebook: Impoliteness Strategies in online Groups. Unpublished Sarjana Thesis. Malang: English Department, Faculty of Letters, State University of Malang.
- Rice, P. and Waugh, P. (eds.) 1992. *Modern Literary Theory: A Reader* (2nd edn.). London: Edward Arnold.
- Romaine, S. 1994. *Language in Society: An Introduction to Sociolinguistics*. Oxford: Oxford University Press.
- Saussure, F. M. 1959. *Course in General Linguistics*. New York: McGraw-Hill Book Company.
- Simbolon, P.T. 1999. Pesona Bahasa Nusantara Menjelang Abad ke-21. Pusat Jakarta: Penelitian dan Pengembangan Kemasyarakatan dan Kebudayaan (PMB)-LIPI, **KPG**

(Kepustakaan Populer Gramedia), dan The Ford Foundation.

Wardhaugh, R. 2002. An Introduction to Sociolinguistics (4th edn.). Malden, MA: Blackwell Publishers Inc.Williams, D. 1999. Scientific Research of Prayer: Can

the Power of Prayer Be Proven? 1999 PLIM Retreat, (c) 1999 PLIM REPORT, Vol. #4. (Online), (http://www.plim.org/PrayerDeb.htm, accessed on June 2009