Short term effects of gossip behavior on self-esteem

AUTHORS ACCEPTED VERSION

(Final published version available at

http://link.springer.com/article/10.1007/s12144-013-9176-3)

Jennifer M. Cole¹, BSc., PhD, and Hannah Scrivener¹, BSc.

¹ Staffordshire University

Keywords: gossip, communication, subjective well-being, self-esteem

CORRESPONDING AUTHOR:

Jennifer Cole

Psychology, Sport and Exercise, Staffordshire University

The Science Centre, Leek Road,

Stoke-on-Trent,

ST4 2DF.

Telephone: +44(0)1782 294672

Email: j.m.cole@staffs.ac.uk

Abstract

Gossip is a frequent social activity, yet there is little research on the experience of providing gossip and how it impacts upon well-being of the gossiper. The present research aimed to investigate the effect of gossip behavior on the self-esteem of the gossiper. In Study 1, 140 participants were asked to write either a positive or negative description of a target person. Self-esteem was significantly reduced after providing a negative description but not after providing a positive one. In Study 2, 112 participants were asked to share information about someone they knew. Self-esteem decreased significantly regardless of the valence of the information. This research suggests that the act of gossiping is one which leads to self-criticism regardless of valence.

KEY WORDS: gossip, communication, subjective well-being, social support, self-esteem

Short term effects of gossip behavior on self-esteem

The act of engaging in evaluative talk about an absent third party or 'gossip' has traditionally been considered as "trivial" (Fine and Rosnow, 1978, p. 161), however research on gossip in recent years suggests a view of gossip as a frequent (Dunbar, Marriot and Duncan, 1997; Emler, 1990) and important (Dunbar, 2004; Foster, 2004) aspect of our social communication.

In modern gossip research, gossip is commonly referred to as "the exchange of personal information (negative or positive) in an evaluative way (negative or positive) about absent third parties" (Foster, 2004, p 83). Key features of this definition are that the person being discussed is not present, and that the discussion of them involves some evaluation. This may be observed in what is said, or how it is said, although for the purposes of experimental scenarios, this often refers to the content of the gossip.

Despite the shift in how gossip is viewed by psychologists away from being 'trivial,' there still remains little research on the causes and consequences of gossiping. Researchers have argued that gossip is essential for the development and maintenance of social groups (Baumeister, Zang and Vohs, 2004) but that gossipers are often disliked (e.g. Turner, Mazur, Wendel and Winslow, 2003) due in part to potential negative effects on the victim of the gossip (Bok, 1983; Einarsen and Skogstad, 1996). The gossiper may therefore be taking a risk by engaging in gossip behavior. Yet gossip still takes place, with little known about how the gossiper feels about being involved in this important but potentially socially undesirable behavior. The aim of the current report is to present initial findings which examine the short term effects of gossip on self-esteem.

There are four main functions of gossip: influence of others, provision of information, provision of entertainment and facilitation of social bonding (Foster 2004; Stirling, 1956).

Gossipers therefore perform an important role in social groups. For example, through identification of black sheep (Marques Yzerbyt and Leyens, 1988) and free riders (Enquist and Leimar, 1993) they are able to negotiate group membership and could potentially enjoy elevated social status within their group. For example, Jaeger, Skleder and Rosnow (1994) found that in a group of sorority sisters those who were perceived as being gossipers within the sorority were also seen by the other girls as being central to the group.

Potential benefits for gossipers are not only at group level; the social bonding function of gossip may mean that gossipers feel closer to their listeners. Indeed, Peters and Kashima (2007) found that even when talking negatively about others, if a listener shares a speaker's emotional reactions to the person being talked about, the listener feels closer to the speaker when those reactions are shared. Rosnow and Fine (1976) also point out that often the sole purpose of gossip is to pass the time and alleviate boredom; an activity which may also endear the gossiper to their listeners.

It would seem, therefore, that gossipers may feel good when engaging in gossip; that their increased closeness with others, and elevated group status would result in increases in selfesteem. However, much of gossip is negative (Leaper and Holliday, 1995). Talking about someone negatively when they are not present could be considered as a violation of privacy norms (Bok, 1983) or as attempting to interfere with the target's reputation for the gossiper's own ends. Research by Wilson, Wylczinski, Wells and Weiser, (2002) shows that those who engage in gossip are generally disliked, especially when their motives are seen as self serving. There have been several studies which support the conclusion that those who gossip are disliked even when the gossip is positive in tone (Turner et al., 2003.; Farley, Timme and Hart, 2010).

Gossipers may be aware of this effect; research demonstrating the 'MUM' effect shows that participants are unwilling to pass on negative evaluations of someone even when they have not authored the description (Blumberg, 1972; Uysal and Oner-Ozkan, 2007). It is also possible that gossipers are aware of a general privacy norm not to speak about others when they are not present (Bok, 1983) or not to be critical of others when they cannot defend themselves (Holtgraves, 2001). An additional possibility is that gossipers suffer when they gossip due to experiencing guilt about harming the target's reputation. There appears to be no research which looks at the effects of engaging in gossip behaviour on how the gossiper feels about themselves.

When examining the effects of gossiping experience on self-esteem it is clear that there are theoretical factors which may predict both a decrease in self-esteem and an increase. Factors which feed into an increase in self-esteem are related to feelings of closeness to others (related to the social bonding functioning of gossip, Peters and Kashima 2007), providing that these views are shared by the audience and that the gossip is responded to in a positive fashion by the listener (i.e. encouraged, Leaper and Holliday 1995). Alternatively there may be tacit awareness of a dislike of gossipers, (Farley, Timme and Hart, 2010) due to general awareness of the negative consequences of gossip for the target of gossip, which provokes a decreased in self-esteem.

Of course all gossip behavior occurs in a social context; in a laboratory setting the bonding experiences and group effects of gossip cannot easily be replicated. Therefore the current research aims to provide a starting point for research into this area; to examine potential effects of gossip on self-esteem where the gossiper cannot benefit from the social effects which may offset any negative impact. If the effects of describing someone positively or negatively (i.e. gossiping about them) merely represent the effects of encountered positive/negative stimuli, then the pattern observed may simply be that self-esteem would increase with a positive description

and decrease with a negative description. However, if it is the specific act of gossiping which affects the gossiper, then a detriment to self-esteem may be observed regardless of the valence of the gossip.

Study 1

In this first study, the aim was to examine the effects of describing someone else on selfesteem. Here all participants were asked to look at information about a target person. However, some participants were required to formulate a negative evaluation of them, and some were asked to formulate a positive one. An increase in self-esteem following positive descriptions, and decrease following negative one, would suggest that gossipers suffer only when they describe others negatively and that this may merely be due to the exposure to negative stimuli. This explanation would also be suggested by an asymmetrical pattern where the decrease caused by a negative description was greater than the benefit gained from a positive one. This asymmetrical pattern has been observed frequently in social psychology when encountering positive and negative stimuli (see Lewicka, Czapinski and Peeters, 1992, for a review). Alternatively, a decrease in self-esteem following both positive *and* negative descriptions would suggest that it is something specific about the act of gossip-type behavior which affects the self-esteem of gossipers.

Method

Participants and Design

140 participants took part in a 2 (valence of description; positive, negative) x 2 (time of measurement: before description, after description) x 2 (sex of participant; male, female) mixed design, where 'time of measurement' was the within subjects variable. Participants were mostly students from a British University or non-students visiting the University campus, consisting of

70 males and 70 females, aged 18 - 84 (M = 29.04, SD = 12.84). Participants were randomly allocated to conditions (excepting allocation to groups by sex of participant).

Materials and procedure

Participants were told on the consent form for this study that they were taking part in an 'information processing' study. They were first asked to complete five items from the Rosenberg (1965) self-esteem (SE) scale which asks participants to indicate the extent to which they agree with statements pertaining to their perceived general personal worth, for example '*At times I feel that I am no good at all*' on a 5 point scale where 1 = not at all and 5 = very much so. This scale was split into two halves to measure change in SE, to avoid demand characteristics, with one half presented before the experimental task and one half afterwards. As this scale is very short, participants may easily be able to remember their previous responses and attempt to replicate them after the experimental task. Alternatively they may recognise that a change may be expected and respond in line with what they perceive to be the expected change.

Participants were then presented with a photograph of a target person (there were four possible target persons, two males and two females, the presentation of which was randomised across conditions) and some demographic information about the target, including hobbies and interests (this was the same across conditions). Participants were asked to imagine what the person described might be like and write a description of them. Crucially, half of the participants were asked to focus on any negative aspects of that person's personality and the other half were asked to focus positive aspects. Following the description, participants were asked to fill out the second set of self-esteem items (there was a significant correlation between the two halves of the scale; r(138) = .727, p < .001). Participants were then fully debriefed and thanked for their participation.

Results and Discussion

The self-esteem items were averaged for 'before description' and 'after description' and were entered into a 2 (valence of description; positive, negative) x 2 (time of measurement: before description, after description) x 2 (sex of participant; male, female) mixed ANOVA, where time of measurement was the within subjects variable. There was a main effect of sex on self-esteem [F(1, 136) = 5.394, $p = .022 \eta^2 < .0.05$] as men had higher self-esteem generally than women, but there was no statistically significant interaction of sex with time [F(1, 136) = 2.483, $p = .117 \eta^2 = 0.003$] or with valence [F(1, 136) = 5.394, $p = .022 \eta^2 = 0.005$] and no significant three-way interaction between sex, time and valence [F(1, 136) = 0.020, $p = .657 \eta^2 < .0.001$]. For this reason, the analyses below are collapsed across sex of participant.

The main effect of time on self-esteem was not statistically significant $[F(1, 136) = 1.778, p = .185 \eta^2 = 0.002]$; the same applied to the main effect of valence $[F(1, 136) = 0.496, p = .483 \eta^2 = 0.004]$. However, there was a significant interaction between time and valence $[F(1, 136) = 9.678, p = .002 \eta^2 = 0.010]$. Self-esteem was higher after a positive description (M = 3.18, SD = 0.62) than it was before (M = 3.12, SD = 0.54), but this was not statistically significant [t(69) = -1.186, p = .240, d = 0.108]. However, for negative descriptions, self-esteem was lower after the description (M = 3.01, SD = 0.62) than it was before (M = 3.12, SD = 0.62) than it was before (M = 3.01, SD = 0.62) than it was before (M = 3.17, SD = 0.45) and this difference was significant [t(69) = 3.337, p = .001, d = 0.288].

It appears, then, that negative descriptions have a much more pronounced effect on the describer's self-esteem than positive ones. This could be explained by positive-negative asymmetry observed in other areas of social psychology where participants are asked to engage in tasks involving positive versus negative stimuli (see Skowronski and Carlson, 1987, for explanations of this effect). This study suggests that when taken out of the social context in

which gossip takes place, providing negative gossip about unknown others exposes the gossiper to experience of negative stimuli. These negative stimuli, potentially pertaining to the character and behavior of others, may transfer on to the gossiper, reducing self-esteem.

This task, where all participants describe the same of set of targets, does allow for a degree of experimental control, but the extent to which this study simulates a transmission-of-gossip scenario is limited. Generally the gossip which is most encouraged is that where the listener shares the gossiper's views (cf. Peters and Kashima, 2007); gossip is therefore usually about someone known to at least the gossiper, if not also the listener (Baumeister et al., 2004). It could therefore be argued that the effects of descriptions in Study 1 are in fact limited to those resulting from experience of positive versus negative stimuli. This issue is addressed in Study 2, where participants were required to think of someone *they know*, and share some information about them.

Study 2

In this study, participants were placed in a scenario which, while still retaining some control over what is shared, more closely simulated a gossip scenario. Participants were asked to think of someone they knew, and share something about them (anonymously) by writing down a few sentences for the experimenter; self-esteem was again measured before and after this task. Similar predictions were formulated as for Study 1. A replication of the pattern in Study 1 would support the theory that the effects of providing gossip on self-esteem are due to experience of positive versus negative stimuli. If self-esteem is reduced in all conditions, however, this would suggest that it is the act of gossiping alone which adversely affects self-esteem.

In this study an additional measure was included; the extent to which participants felt that the information, should it also be shared in real life, would harm the reputation of the person

described. The aim of this measure was to explore the possibility that an act of gossip's effect on self-esteem can be explained by the gossiper's perceptions of how the act would affect those they discuss. It was predicted that any change in self-esteem would be associated with the extent to which the gossiper perceived the description would harm the person described.

Method

Participants and design

Participants were 112 female students studying Psychology at a British University. There were no interactions of the key IVs with sex in the previous study, so the all-female sample for Study 2 was not considered problematic. Participants were aged 18 - 44 years (M = 21.13, SD = 5.16) and were randomly allocated to a 2 (valence of gossip: positive, negative) x 2 (time of measurement: before gossip, after gossip) mixed design where 'time' was the within subjects variable.

Materials and design

Participants were asked to take part in a study about 'sharing information about others'. A decision was made not to label the task as 'gossip'; people engage in gossip behavior without labelling it gossip and may have individual ideas of what constitutes gossip. Half of the participants were asked to share some information about the person they knew which portrayed them in a negative way, and half were asked to share information which portrayed them in a positive way. Participants were asked directly after the description about the extent to which they thought the sharing of this information 'in real life' would harm the target (on a seven point scale where 1 = Not very much and 7 = Very much so).

Self-esteem was again measured using Rosenberg's (1965) self-esteem scale and the change was measured by splitting the scale into two; half of the scale was rated before the

description and half afterwards. There was a high correlation between the two measures of selfesteem [r(110) = .641, p < .001]. After completing the second half of the self-esteem scale, participants were debriefed and thanked for participation.

Results and Discussion

The effect of gossip on self-esteem was analysed in a 2 (valence of gossip; positive, negative) x 2 (time of measurement of self-esteem; before gossip, after gossip) mixed ANOVA where 'time' was the within subjects factor. The main effect of valence of gossip on self-esteem was not statistically significant [$F(1, 109) = .006, p = .941, \eta^2 < .001$], although there was a main effect of time [$F(1, 109) = .6.791, p = .010, \eta^2 = 0.059$]. There was however no statistically significant interaction between time and valence [$F(1, 109) = 2.49, p = .117, \eta^2 = .022$]. It would seem that self-esteem was lower after the sharing information ($M_{pos} = 4.75, SD_{pos} = 1.44; M_{neg} = 4.57, SD_{neg} = 1.57$) than before sharing the information ($M_{pos} = 5.47, SD_{pos} = 1.10; M_{neg} = 5.60, SD_{neg} = 0.91$), regardless of valence.

The extent to which change in self-esteem was associated with perceptions of harm for the target was then explored. The change in self-esteem between the two time points (before and after the description) was calculated by subtracting self-esteem *before* the description from selfesteem *after* the description; a negative value would therefore indicate a drop in self-esteem. This difference measure was then correlated with the perceptions of harm measure. There was no significant correlation between the two measures for positive descriptions [r(55) = .123, p =.363], or for negative descriptions [r(52) = .049, p = .723].

This study suggests that there may be some effects of sharing information about others which cannot easily be explained by mere exposure to negative stimuli. In this study, talking about someone you know when they are not present resulted in a reduction in self-esteem for both positive and negative descriptions. However, the drop in self-esteem suffered by participants involved in the sharing information task in Study 2 cannot be explained by anticipated consequences for the person discussed (should the information be shared). This could be explained by the hypothetical nature of the 'harm' measure. Realistically, no harm can come to the person described through the information being shared anonymously to a psychology researcher. Participants had to imagine that they shared the information in real life. It is possible that this was not compelling enough for any perceived harm to be picked up by the simple perceived harm measure used here.

General discussion

The research presented here suggests that there may be adverse effects of gossip-type behavior on self-esteem. In Study 1, participants who were asked to describe an unknown target person positively benefited slightly in terms of increased self-esteem, but this was not significant. The effect of describing an unknown target negatively produced a much larger effect and resulted in a significant drop in self-esteem. This could be explained by positive-negative asymmetry; that participants experienced a lack of significant increase and a larger decrease in self-esteem due to the asymmetrical effects of exposure to positive and negative stimuli. The task in Study 2 improved upon Study 1 in that participants were asked to share information about someone they knew. This task was much closer to the experience of everyday gossip, though it still lacked the social context. The results of Study 2 suggest that sharing information about someone known to you causes a decrease in self-esteem regardless of the valence of the description. This was not explained by the extent to which the descriptions would be harmful if shared in real life; another feature of gossip may be causing participants to feel bad when they gossip.

Potential candidate variables for explaining the effect in Study 2 include the extent to which participants feel they are violating social norms. Several theorists (e.g. Barkow, 1992; Taylor, 1994) argue that gossip represents a morally reprehensible act because it violates the *privacy* of the person being described as well as politeness norms which dictate that we are not critical of others when they cannot respond to the criticism (Holtgraves, 2001). If gossipers are aware that they are violating these privacy norms then they may feel guilty when sharing the information (Yerkovich 1977), resulting lowered self-esteem (O'Connor, Berry and Weiss, 1999).

Alternatively, it is also possible that gossipers possess implicit knowledge of the dislike suffered by those who gossip. It has been found in previous research that gossipers are not considered likeable by others (Farley, 2011; Turner et al., 2003; Wilson et al., 2002) and gossipers may be no different in holding this view, despite their engagement with gossiping. This could operate in a mechanism similar to stereotype threat; gossipers are aware that gossiping is socially undesirable so sharing information about others leads them to feel disliked, reducing self-esteem. Future research would need to explicitly address the extent to which perceptions of norm violation and/or awareness of meta-stereotypes regarding gossip behavior can explain drops in self-esteem following an information sharing activity such as this.

The picture provided by the present research of how gossipers feel when they gossip is not complete. This research represents only a starting point for further research into the interaction between gossip behavior and self-esteem of the gossiper. Research on the causes and consequences of certain types of gossip behavior is sparse; there are recent exceptions to this (e.g. Farley, 2011) but the present research shows that there are many unanswered questions

about the mechanics of gossip and effects of gossip behavior on those involved, both in the long and short term.

It appears from the present findings, however, that gossipers may suffer twofold from evaluations following their gossip behavior; previous research shows that they may be evaluated harshly by onlookers, and the present research suggests that they may evaluate themselves harshly for sharing information about others. As well as looking more closely at the explanations for this effect, more investigation is needed into why gossipers continue to engage in such behavior when there are such potentially negative consequences. One plausible explanation is that the immediate social bonding benefits afforded by sharing gossip override any thoughts about potential negative consequences. In the present research the sharing information activity in Study 2 fits the technical definition of gossip, but the social context and therefore social bonding opportunities were missing. This could be rectified by introducing a confederate into an experimental gossip scenario. A clearer picture could then be gained about whether social bonding benefits offset any resulting drops in self-esteem.

In summary, although the present research raises many questions, it is clear that gossip behavior does affect the self-esteem of those who engage in it. This may merely be the result of exposure to potentially negative stimuli, or from engaging in behavior which is perceived to be anti-normative. It remains clear that the act of gossiping warrants further investigation.

References

- Barkow, J. H. (1992). Beneath new culture is old psychology: Gossip and social stratification. InJ. H. Barkow, L. Cosmides, and J. Tooby (Eds.), *The adapted mind* (pp 627-637). Oxford,England: Oxford University Press.
- Baumeister, R. F., Zhang, L., and Vohs, K. D. (2004). Gossip as Cultural Learning. *Review of General Psychology*, 8, 111-121. doi:10.1037/1089-2680.8.2.111
- Blumberg, H. H. (1972). Communication of interpersonal evaluations. *Journal of Personality* and Social Psychology, 23,157-162. doi:10.1037/h0033027
- Bok, S. (1983). *Secrets: On the ethics of concealment and revelation*. New York: Pantheon Books.
- Dunbar, R.I.M. (2004). Gossip in evolutionary perspective. *Review of General Psychology*, *8*, 100–110. doi:10.1037/1089-2680.8.2.100
- Dunbar, R. I. M., Marriott, A., and Duncan, N. D. C. (1997). Human conversational behavior. *Human Nature*, *8*, 231-246. doi:10.1007/BF02912493
- Einarsen, S. and Skogstad, A. (1996). Bullying at work: epidemiological findings in public and private organizations. *European Work and Organizational Psychologist*, *5*, 185-201.
 <u>doi:10.1080/13594329608414854</u>
- Emler, N. (1990). A social psychology of reputation. *European Review of Social Psychology, 1,* 171–193. <u>doi:10.1080/14792779108401861</u>
- Enquist, M. and Leimar, O. (1993). The evolution of cooperation in mobile organisms. *Animal Behavior 45*, 747-57. <u>doi:10.1006/anbe.1993.1089</u>
- Farley, S. D. (2011). Is gossip power? The inverse relationships between gossip, power, and likability. European Journal of Social Psychology, 41(5), 574-579. <u>doi:10.1002/ejsp.821</u>

- Farley, S. D., Timme, D. R., and Hart, J. (2010). On coffee talk and break-room chatter:
 Perceptions of women who gossip in the workplace. *Journal of Social Psychology*, *150*, 361-368. doi:10.1080/00224540903365430
- Foster, E.K. (2004). Research on gossip: Taxonomy, methods, and future directions. *Review of General Psychology*, *8*, 78–99. doi:10.1037/1089-2680.8.2.78
- Fine, G. A., and Rosnow, R. L. (1978). Gossip, gossipers, gossiping. Personality and Social Psychology Bulletin, 4, 161-168. doi:10.1177/014616727800400135
- Holtgraves, T. (2001). Politness. In W. P. Robinson and H. Giles (Eds.), *The new handbook of language and social psychology* (pp. 341-355). West Sussex, England: Wiley and Sons.
- Jaeger, M. E., Skleder, A. A., Rind, B., and Rosnow, R. L. (1994) Gossip, Gossipers and Gossipees. In A. Ben-Ze'ev and R. Goodman (Eds.) *Good Gossip*. Lawrence, Kansas: Press of the University of Kansas.
- Leaper, C. and Holliday, H. (1995). Gossip in same-gender and cross-gender friends' conversations. *Personal Relationships, 2,* 237-246. doi:10.1007/BF01954575
- Lewicka, M., Czapinksi, J., and Peeters, G. (1992). Positive-negative asymmetry or 'When the heart needs a reason.' *European Journal of Social Psychology*, 22, 425-434. doi:10.1002/ejsp.2420220502
- Marques, J. M., Yzerbyt, V. Y., and Leyens, J.-P. (1988). The black sheep effect: Extremity of judgments towards ingroup members as a function of group identification. *European Journal of Social Psychology, 18*, 1-16. <u>doi:10.1002/ejsp.2420180102</u>
- O'Connor, L.E., Berry, J.W., and Weiss, J. (1999). Interpersonal guilt, shame, and psychological problems. *Journal of Social and Clinical Psychology*, 18, 181-203.
 <u>doi:10.1521/jscp.1999.18.2.181</u>

Peters, K., and Kashima, Y. (2007). From social talk to social action: Shaping the social triad with emotion sharing. *Journal of Personality and Social Psychology*, *93*, 780-797.

doi:10.1037/0022-3514.93.5.780

- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton. University Press.
- Rosnow, R.L. and Fine, G.A. (1976). *Rumor and gossip: The social psychology of hearsay*. New York: Elsevier.
- Skowronski, J. J., & Carlston, D. E. (1987). Social judgment and social memory: The role of cue diagnosticity in negativity, positivity and extremity biases. *Journal of Personality and Social Psychology, 52,* 689-699.
- Stirling, R. B. (1956). Some psychological mechanisms operative in gossip. *Social Forces*, *34*, 262–267. doi:10.2307/2574050
- Taylor, G. (1994). Gossip as moral talk. In R. F. Goodman and A. Ben-Ze-ev (Eds.), Good gossip, (pp. 34-47). Lawrence: University Press of Kansas.
- Turner, M. M., Mazur, M. A., Wendel, N., and Wilmslow, R. (2003). Relational ruin or social glue? The joint effect of relationship type and gossip valence on liking, trust, and expertise. *Communication Monographs*, 70, 129 – 141. doi:10.1080/0363775032000133782
- Watson, D., Clark, L. A., and Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 47, 1063–1070. doi:10.1037/0022-3514.54.6.1063
- Wilson, D.S., Wilczynski, C., Wells, A. and Weiser, L. (2002). Gossip and other aspects of language as group-level adaptations. In C. Heyes and L. Huber (Eds.) *The evolution of cognition* (pp.347–365). Cambridge, MA: MIT Press.

- Yerkovich, S. (1977). Gossip as a way of speaking. *Journal of Communication, 26*, 192–196. doi:10.1111/j.1460-2466.1977.tb01817.x
- Uysal, A., and Oner-Ozkan, B. (2007). A self-presentational approach to transmission of good and bad news. *Social Behavior and Personality*, *35*, 63-78. <u>doi:10.2224/sbp.2007.35.1.63</u>