

Motives for social isolation following a negative emotional episode

Gérald Delelis, Veronique Christophe

▶ To cite this version:

Gérald Delelis, Veronique Christophe. Motives for social isolation following a negative emotional episode. Swiss Journal of Psychology, 2018, Swiss Journal of Psychology, 77 (3), pp.127-131. 10.1024/1421-0185/a000211. hal-04100157

HAL Id: hal-04100157 https://hal.univ-lille.fr/hal-04100157v1

Submitted on 21 Mar 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers. L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Number of words: 3,490 (title, abstract, main text, 1 table, acknowledments) + 25 references

Running title: Motives for social isolation

Swiss Journal of Psychology, 2018

Motives for social isolation following a negative emotional episode

Gérald DELELIS & Véronique CHRISTOPHE

Université de Lille, SCALab, CNRS UMR 9193, 59653 Villeneuve d'Ascq, France

Abstract

The emotional episodes lead the individuals to either a search for another individual's presence (social affiliation) or an avoidance of this presence (social isolation). The determinants and effects of social affiliation are now well-known but social isolation has not been thoroughly studied by social psychologists. This study aims at showing which motives and corresponding regulation strategies are reported for social isolation following negative emotional events. Ninety-six participants were asked to retrieve an actual negative event from their memory that led them to become socially isolated and to mention freely up to 10 motives for this behavior. A semantic categorization of the 423 reported motives showed that "cognitive clarification" and "keep one's distance" – i.e., the need for cognitive regulation and the refusal of a socio-affective regulation, respectively – are the most commonly and quickly reported motives for social isolation. These findings are discussed in terms of leads for future studies to understand better the role of social isolation in health situations.

Key-words: social isolation, negative emotion, motives, emotion regulation

Compared to social affiliation, social isolation in negative emotional situations has not been thoroughly studied by social psychologists. Social isolation is the behavior that leads an individual to be alone, by avoiding or refusing the presence or physical contact of others; this behavior may involve withdrawal or turning within oneself as well as a temporary departure from others (Delelis, 2002). It can be a consequence of an individual's general functioning when he/she experiences negative emotions, a stress, or a threat (e.g., personality or attachment style; Mikulincer & Shaver, 2012; Vanhalst, Goossens, Luyckx, Scholte, & Engels, 2013) and thus the strategies used to interact with others often lack flexibility due to limited abilities to search for or even to accept the help of others.

Numerous studies in psychology and health psychology have emphasized the great interest in studying situations that lead to social isolation as well as its consequences. Indeed, when social isolation is a recurrent chosen behavior in individuals facing stressful events, it can lead to the development or reinforcement of medical, physical, behavioral, psychological, and social problems such as immune system deficiencies, cardiovascular and mental illnesses, and accidents (for a review: Shankar, McMunn, Banks, & Steptoe, 2011). For instance, social isolation is associated with poor general physical and psychological health and early death among people suffering from cancer (Helgeson, Cohen, & Fritz, 1998), coronary insufficiency, myocardial infarction (Waltz, Badura, Pfaff, & Schott, 1988), HIV and AIDS (Bruhn, 2009).

To our knowledge, no study has been designed to point out the reasons why people choose (or think they choose) to socially isolate in stressful episodes. To better understand why people become isolated after a negative emotional event may help to protect them from the aversive effects of this behavior by anticipating their needs.

Before social affiliation and Social Sharing of Emotions (SSE), a temporary social isolation may enable people to initiate some emotion regulation strategies: for example, it

may provide time for cognitive and emotional processing of the event, which occasionally leads to the acceptance of this event and its consequences. This temporary isolation can offer individuals an opportunity to assimilate slowly the reality and then to prepare, first, an affiliative behavior and, second, a SSE (Delelis, 2002). Furthermore, Rimé (2007) pointed out the central effects that result from rapid and automatic meaning analyses of emotional events and the collateral consequences of these events, that is, the meaning analysis of elements beyond the specific episode (e.g., disconfirmation of expectations, schemas, and self- and world-views). He then argued that such emotional episodes elicit three kinds of regulation needs – socio-affective needs (e.g., appeasement, social support, understanding, reassurance, care), cognitive needs (e.g., recreation of meaning, modification of representations), and action needs (e.g., restoration of mastery, concrete assistance) – and that the first two lead people to share their emotions socially.

We argue that social isolation can sometimes fulfill the same first two needs and can constitute a springboard for a better future SSE.

Thus, a temporary social isolation could sometimes enable an individual to respond to regulation needs by facilitating an initial clarification of the causes and consequences of an event away from the eyes of other people, that is, temporary social isolation may be a regulation process. Besides, the literature on emotion regulation (e.g., Gross & John, 2003; Leroy, Delelis, Nandrino, & Christophe, 2014) shows that a cognitive clarification (or reappraisal) of an emotional event has beneficial effects on the individuals, their internal state, their future coping activities, and even their relationships. Emotions require thus that the event which engenders them be imbued with a meaning and that the preoccupied individual evaluates his/her ability to cope with this event. For example, Gross (1998) showed that individuals leaded to reappraise videos that are negatively valenced exhibit a decrease in their subjective negative emotional experience. In front of cognitive reappraisal,

expressive suppression (an emotional response modulation strategy) is linked with negative personal and social issues (Gross & John, 2003) but precisely one exhibits or inhibits emotional expressions not alone but in front of others: to keep one's distance from others could help people because it may enable them to select what can be shown or not to others – and how to show their affects – (Leroy et al., 2014).

Again, there are no existing studies on these topics: why do people search for social isolation and can their motive(s) for this isolation reflect a – first – efficient emotion regulation?

Mainly, this study aims first to highlight the motives (and further the regulation strategies) reported by individuals for avoiding the presence of others after the experience of a negative emotional episode, and second, to identify the prevalence in the use of these motives.

An third additional objective is related to the fact that men and women are generally not equal in terms of social isolation (e.g., Marangoni & Ickes, 1989). While women more frequently admit to being lonely than men (Borys & Perlman, 1985; Lau & Gruen, 1992), men are generally more socially isolated than women – because they do not create adequate emotional intimacy when they are not in partnership with a significant other (Stokes & Levin, 1986; Vandervoort, 2000). These differences may reflect both structural aspects (e.g., socialization, social roles, socio-economic status) and strategies (i.e., learned responses to diverse situations). Indeed, the two are mixed: the use of a particular regulation strategy may fit a social image to manage and in turn a particular status can lead an individual to exhibit a given strategy or even to mentally reconstruct a situation in such a way that he/she can maintain a positive identity (e.g., a man who has shown his distress to others could think of it in terms of "It wasn't weakness, I just would like to inform and warn my friends"; it also seems "normal" that a women searches for an emotional support even if she does not want or

need it), (see Delelis, Desombre, & Mignon, 2014; Leroy et al., 2014). Because men and women are very often pointed out as thinking and acting differently when they experience an emotional event and while one knows the reasons why they generally share their emotions (see Duprez, Christophe, Rimé, Congard, & Antoine, 2015), we still ignore whether these reasons are similar or different for isolation. This study aims thus thirdly to disentangle the motives evoked by men versus women.

Method

Participants

The participants were voluntary students randomly recruited on the university campus. They were initially asked to participate in a short self-report study on the social behaviors that follow personal emotional events. Approximately 20% of the requested people were not able to retrieve from their memory a negative emotional episode that led them to seek social isolation. Data coming from 96 participants (42 men aged from 18 to 25 years, M = 20.83, SD = 2.28 and 54 women aged from 18 to 24 years, M = 20.37, SD = 1.51) were thus finally taken into account for the analyses.

Materials and Procedure

After agreeing to participate and signing the consent form, the participants were instructed to find a calm, isolated place to complete a questionnaire. They were also asked to read the instructions carefully and to provide a short written description of a very negative actual and recent personal emotional episode that led them to seek social isolation, to avoid others' presence. Next, they were instructed to answer the manipulation check items related to the valence (both positivity and negativity were checked in order to disentangle mixed emotional events) and intensity of the episode (from 1 *Not at all* to 7 *Very much*). Subsequently, the participants freely mentioned (thought-listing technique) up to 10 reasons

explaining why they had become isolated in this situation. The questionnaire ended with socio-demographical items (age, gender). Confidentiality and anonymity were guaranteed.

Results and Discussion

Types of Events and Manipulation Check

The events that the participants retrieved from their memory were rated as negative (M = 6.06, SD = 0.94), not positive (M = 1.45, SD = 0.92), and were experienced as intense episodes (M = 5.94, SD = 0.91). All means differed from the theoretical mean of the scales at p < .0001. The number of motives mentioned varied from 1 to 10 (mean number = 4.4) and did not differ across gender.

The reported events were affective relationships and self-image management (56.25%), educational/professional failures/problems (12.5%), death of someone close (11.46%), financial/material problems (6.25%), violence (6.25%), health problems (4.17%), and automobile accidents (3.12%).

Motives for Social Isolation

From the initial 536 motives – that were isolated words as well as pieces of sentences –, two independent judges first eliminated the data coming participants who did not follow the instruction or who did not describe the event and the motives (21.08%) that were too specifically related to a particular personal situation or that were off-topic like personal comments, emotion labels, or incomprehensible or ambiguous wording ("I was disappointed", "freedom", "to find the thief"). Next, they analyzed the 423 remaining motives – 239 from women, 184 from men – using a semantic categorization system based on regulation needs proposed by Rimé (2007). They read and categorized the motives, reviewed the definition of each category, and then compared their analyses, considering the differences between them (inter-judge agreement was .89). Finally, nine categories of motives for social isolation

appeared: Cognitive clarification (the isolation aims at understanding what happened/finding meaning), Keep one's distance (hiding, escaping, staying alone), Avoid disapproval (being legitimized and understood), Forgetting, Calm down, Venting (search for relief), Not to inform or warn, Social support and help, Not to arouse empathy. These categories correspond to different regulation needs that cover the entire spectrum of regulation focuses (Table 1).

[Table 1]

Prevalence in the Use of the Categories

Comparisons of the extent to which the categories of motives were generally reported (Table 1) showed that *Cognitive clarification* and *Keep one's distance* were more reported than each one of all the other categories of motives (Chi² were at least p = .0008).

Furthermore, when looking at the first four motives reported by the participants, (1) the motive mentioned first was clearly *Keep one's distance* (41%) – a temporary avoidance of socio-affective regulation –, (2) *Cognitive clarification* – a cognitive regulation – was mentioned in second (42%), third (32%), and/or fourth place (29%).

Most of the time, these motives co-occurred and are thus the two most quickly and commonly reported motives. People who have experienced a negative event, regardless of their gender, sometimes need or try to stay alone to regulate their emotions personally and cognitively. After intense negative emotional episodes, social isolation could be a way to sort out what has happened and the reactions one has initially before affiliating with others, perhaps to forget the most troubling parts and to find the words to share one's emotions without being too much disapproved. In such, isolation can have cognitive and socio-affective beneficial effects on the individuals.

The vast majority of participants appeared to become isolated in order to understand or change favorably the meaning of the event – alone (*Cognitive clarification* was the most

frequently mentioned category). Furthermore, this search for meaning (cognitive but principally socio-cognitive clarification) is notable in the SSE too (Duprez et al., 2015; Rimé, 2007) and is usually specifically associated with negative episodes (Brans, Koval, Verduyn, & Lim, 2013; Delfosse, Nils, Lasserre, & Rimé, 2004; Sheppes, Scheibe, Suri, & Gross, 2011). It could be based on a desire to reduce the experience of a lack of understanding: people may become isolated to consider the implications of an event and to analyze the changes that it could lead to in their lives (e.g., "to take stock of...", "to do some soul searching"). Motives such as "to rebuild myself" or "to find myself again" suggest that isolation can be a way of taking time to focus on oneself first and calm down for a better adjustment in the future (Delelis, 2002; cf. also Wills, 1997).

Keep one's distance (e.g., "to be alone", "to find peace") was the other category commonly used for social isolation. Although a rapid reduction in the social distance appears frequently in the literature on SSE motives, social isolation behavior could be used as a personal time for adaptation as a springboard for future social affiliation and sharing. People may need to prepare mentally their exposure to others. In fact, if after a negative emotional event, completion of socio-affective needs is primarily what the individuals seek (Rimé, 2007), these individuals may also be sure of benefiting from a warm friendly welcome at least. Thus, while for Rimé a purely cognitive work takes place when sharing has failed, this study shows that cognitive regulation may also occur before a person turns to others. Future studies could check whether this is, for example, a question of intensity of the emotional event.

In a first step of coping and in a similar way as downward comparisons (cf. Wills, 1997), to spend a moment alone and to have the opportunity to begin alone a clarification of what happened seem thus adaptive regulation strategies in some cases because social isolation enables people to strengthen themselves sufficiently to search for others' presence.

The individuals also reported as motives the fact of becoming isolated in part to reexperience the event for themselves and to move beyond it (Forgetting). In response to
negative emotional events, isolation could enable them not to disclose the event to others or
at least to find the appropriate words to do so. In this context, social isolation could be
considered a means to protect the Self via an initial cognitive regulation: one objective of
social isolation could be to forget the episode or to modify a posteriori its course or
implications. The search for legitimization and the avoidance of disapproval may be
associated with the need for an individual to evaluate his/her opinions, abilities, or emotions
upstream in order to feel less devalued in the eyes of others and to keep his/her social
condition (Davison, Pennebaker, & Dickerson, 2000; Delelis, 2002): to experience judgment
in the spotlight immediately after a negative episode is likely to constitute an additional
source of (negative) emotions, which could produce additional discomfort or be appraised as
uncontrollable. As it was the case for Cognitive clarification and Keep one's distance, the use
of motives related to the categories Avoid disapproval and Forgetting differed from the use of
the other categories (except Calm down).

To conclude, this study is the first which aimed to collect and examine the concrete motives freely mentioned by people to explain why they chose to become socially isolated following a negative emotional event.

First, the results show the mention of nine categories of motives and reflect different kinds of emotion regulation needs: cognitive needs (personal meaning), socio-cognitive needs (collective meaning), self needs (personal focus), and socio-affective needs (relational/social focus), that is, two emotion regulation needs (self and socio-cognitive) which are not fulfilled by a SSE.

Second, they show the particular use of two motives (*Cognitive clarification* and *Keep one's distance*), motives which correspond respectively to a cognitive regulation need and a

socio-affective regulation need particularly present in the SSE (Rime, 2007): this leads to think that a (temporary) social isolation can prepare people for a good SSE.

Third, they also show that while men and women both differ in their tendency to stay alone and to think of the way they are more or less alone (e.g., Vandervoort, 2000), they seem to choose social isolation for the same motives. This is an intriguing point because the motives for social affiliation and SSE differ: according to Duprez et al. (2015), women report more than men disclosing their emotional experiences in order to make sense of these experiences (cognitive clarification/regulation), to vent (self regulation), seek support, and obtain advice (socio-affective regulation), while men disclose their emotions in order to reexperience the episode (cognitive regulation), arouse empathy (socio-affective regulation), and inform or warn others (socio-cognitive regulation). Why is it not the case for social isolation? Maybe the regulation needs that are fullfilled by a temporary social isolation are the same and this behavior could thus be an effective strategy to prepare at best a future self-disclosure.

Limitions and Directions for Future Studies

These results must be confirmed and extended (notably by an inductive approach) because this study used an introspective method and the participants were young adults only. Thanks to them, nevertheless, several questions have been raised.

The first is the relationship between the behaviors of social isolation and both the knowledge and the respect of various emotional social norms. The motives reflected by the categories may be related to social values that the individuals may exhibit or may feel that they should exhibit after a disturbing event. Supplementary questions are: for which motives, in which social situations, for which negative emotions, and for which intensity of these emotions do people avoid the presence of whom? Future studies should be designed to

precisely point out which category of motives and regulation needs but also which particular motives are evoked according to particular negative emotional events.

The second question is related to the effects of these behaviors on the later use of adapted emotion regulation and coping strategies by (male and female) individuals (e.g., Tamres, Janicki, & Helgeson, 2002).

Moreover, the tendency to affiliate and socially share emotions after a time of social isolation is an interesting area of investigation in terms of the timing, target(s), target(s)' motives for listening the sharing, communication content, and coping adjustment in the fields of crises and health. The answers to these questions may enable family and friends or health professionals to understand better the needs of people who are, or appear to be, avoiding the presence of others: what are they searching for, and what do they not want or need? For example, what precise motives for isolation could have in mind an individual experiencing a bereavement or a health bad diagnosis? This is probably a key issue because of the beneficial role of responsiveness in relationships (Reis & Gable, 2015). When avoiding the presence of family and friends, the individuals are "choosing" to not benefit immediately from exposure to possible affection, warmth, understanding, and validation — or perhaps they think they cannot benefit from these components of responsiveness because they perceive or imagine the feedback of others as inevitably negative? In fact, such a temporary period of social isolation may be necessary to face the consequences of the troubling event experienced in the best way possible.

References

- Borys, S. & Perlman, D. (1985). Gender differences in loneliness. *Personality and Social Psychology Bulletin*, 11, 63-74. doi: 10.1177/0146167285111006
- Brans, K., Koval, P, Verduyn, P., & Lim, Y. L. (2013). The regulation of negative and positive affect in daily life. *Emotion*, *13*, 926-939. doi: 10.1037/a0032400
- Bruhn, J. (2009). The group effect: Social cohesion and health outcomes. NY: Springer.
- Davison, K. P., Pennebaker, J. W., & Dickerson, S. S. (2000). Who talks? The social psychology of illness support groups. *American Psychologist*, 55, 205-217. http://dx.doi.org/10.1037/0003-066X.55.2.205
- Delelis, G. (2002). Emotions et interactions sociales: l'affiliation et l'isolement comme modes de régulation personnelle et sociale [Emotions and social interactions: Social affiliation and isolation as ways of individual and social regulation]. Unpublished PhD Thesis. University of Lille, France.
- Delelis, G., Desombre, C., & Mignon, A. (2014). Régulation émotionnelle et valeur sociale : réévaluer ses émotions pour se sentir à l'aise et pour bien agir [Emotion regulation and social value]. In V. Christophe, C. Ducro, & P. Antoine (Eds.). Psychologie de la Santé : Individu, famille et société (pp. 193-196). Lille : Presses Universitaires du Septentrion.
- Delfosse, C., Nils, F., Lasserre, S., & Rimé, B. (2004). Les motifs allégués du partage social et de la rumination mentale des émotions : comparaison des épisodes positifs et négatifs [Alleged motives for social sharing and mental rumination of emotions: A comparison of positive and negative episodes]. *Cahiers Internationaux de Psychologie Sociale, 64*, 35-44. doi: 10.3917/cips.064.0035
- Duprez, C., Christophe, V., Rimé, B., Congard, A., & Antoine, P. (2015). Motives for the social sharing of an emotional experience. *Journal of Social and Personal Relationships*, 32, 757-787. doi: 10.1177/0265407514548393

- Gross, J. J. (1998). Antecedent- and response- focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology*, 74, 224-237. doi: 10.1037//0022-3514.74.1.224
- Gross, J. J. & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348–362. doi: 10.1037/0022-3514.85.2.348
- Helgeson, V. S., Cohen, S., & Fritz, H. L., (1998). Social ties and cancer. In J. C. Holland &W. Breitbart (Eds.), *Psycho-oncology* (pp. 99-109). NY: Oxford University Press.
- Lau, S. & Gruen, G. E. (1992). The social stigma of loneliness: Effect of target person's and perceiver's sex. *Personality and Social Psychology Bulletin*, 18, 182-189. doi: 10.1177/0146167292182009
- Leroy, T., Delelis, G., Nandrino, J.-L., & Christophe, V. (2014). Régulations endogène et exogène des émotions: des processus indissociables [Endogenous and exogenous emotion regulations:Complementary and indivisible processes]. *Psychologie Française*, *59*, 183-197. doi: 10.1016/j.psfr.2013.10.001
- Marangoni, C. & Ickes, W. (1989). Loneliness: A theoretical review with implications for measurement. *Journal of Social and Personal Relationships*, 6, 93-128. doi: 10.1177/026540758900600107
- Mikulincer, M. & Shaver, P. R. (2012). An attachment perspective on psychopathology. *World Psychiatry*, 11, 11-15. doi: 10.1016/j.wpsyc.2012.01.003
- Reis, H. T. & Gable, S. L. (2015). Responsiveness. *Current Opinion in Psychology*, 1, 67-71. doi: 10.1016/j.copsyc.2015.01.001
- Rimé, B. (2007). Interpersonal emotion regulation. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 466-485). NY: Guilford Press.

- Shankar, A., McMunn, A., Banks, J., & Steptoe, A. (2011). Loneliness, social isolation and behavioral and biological health indicators in older adults. *Health Psychology*, *30*, 377-385. doi: 10.1037/a0022826
- Sheppes, G., Scheibe, S., Suri, G., & Gross, J. J. (2011). Emotion regulation choice. *Psychological Science*, 22, 1391–1396. doi: 10.1177/0956797611418350
- Stokes, J. & Levin, I. (1986). Gender differences in predicting loneliness from social network characteristics. *Journal of Personality and Social Psychology*, *54*, 1036-1074. doi: 10.1037/0022-3514.51.5.1069
- Tamres, L K., Janicki, D., & Helgeson V. S. (2002). Sex differences in coping behavior: A meta-analytic review and an examination of relative coping. *Journal of Personality and Social Psychology*, 6, 2-30. doi: 10.1207/S15327957PSPR0601_1
- Vandervoort, D. (2000). Social isolation and gender. *Current Psychology*, *19*, 229-236. doi: 10.1007/s12144-000-1017-5
- Vanhalst, J., Goossens, L., Luyckx, K., Scholte, R. H. J., & Engels, R. C. M. E. (2013). The development of loneliness from mid- to late adolescence: Trajectory classes, personality traits, and psychosocial functioning. *Journal of Adolescence*, *36*, 1305-1312. doi: 10.1016/j.adolescence.2012.04.002
- Waltz, M., Badura, B., Pfaff, H., & Schott, T. (1988). Marriage and the psychological consequences of a heart attack: A longitudinal study of adaptation to chronic illness after 3 years. *Social Science and Medicine*, 27, 149-158. doi: 10.1007/978-3-642-84312-9_3
- Wills, T. A. (1997). Modes and families of coping: An analysis of downward comparison in the structure of other cognitive and behavioral mechanisms. In B. P. Buunk & F. X. Gibbons (Eds.), *Health, coping, and well-being: Perspectives from social comparison theory* (pp. 167-193). Mahwah, NJ: Erlbaum.

Table 1. Percentage (number) of motives mentioned in the different categories

	Total (423)	Women (239)	Men (184)	Regulation need	Examples
1. Cognitive clarification	25.53% (108) ^a	26.36% (63)	24.46% (45)	Cognitive	to take stock of Need to think
2. Keep one's distance	20.33% (86) ^a	22.18% (53)	17.94% (33)	Socio-affective	to find peace, to hide, need to get away from
3. Avoid disapproval	11.82% (50) ^b	9.62% (23)	14.67% (27 ⁾	Socio-affective	to avoid judgments, not to have to explain myself
4. Forgetting	11.82% (50) ^b	9.62% (23)	14.67% (27)	Cognitive	to think of something else, to turn over a new leaf
5. Calm down	9.22% (39) bc	11.71% (28)	5.98% (11)	Self	to fade away, to need to be quiet for a while
6. Venting	7.56% (32) ^{cd}	5.86% (14)	9.78% (18)	Self	to shout, to drain off my emotions
7. Not to inform or warn *	5.67% (24) ^{de}	7.95% (19)	2.72% (5)	Socio-cognitive	not to discuss my life and explain, to avoid questions
8. Social support/help	4.02% (17) ^e	3.35% (8)	4.89% (9)	Socio-affective	to reassure myself, to show my need for help
9. Not to arouse empathy	4.02% (17) ^e	3.35% (8)	4.89% (9)	Socio-affective	to hide my emotions, to keep it together

Percentages that do not differ are shown using a similar letter

^{*} Difference between men and women, $Chi^2 = 5.32$, p < .05

note:

Gérald Delelis, Université Lille 3, UFR de Psychologie, BP 60149, F-59653 Villeneuve d'Ascq Cedex, France.

Email: gerald.delelis@univ-lille3.fr; Phone: (0033)320416955; Fax: (0033)320416324

Acknowledgments: The authors thank the editor and the anonymous reviewers for their helping and precise comments on this article.

The authors declare that there are no potential conflicts of interest with respect to the research authorship and/or publication of this article.