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Responsibility for Bad Deeds – and for Good? The Impact of Cultural Attribution Tendencies on Cognition and Emotion

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Abstract

Appraisal theories of emotion assume that similar evaluations of an event result in similar emotions, whereas the evaluation itself may depend on culturally defined concepts, experiences, and values. In other words, cognitions are crucial for the elicitation and differentiation of emotions, and the impact that culture has on emotions is enclosed in their cognitive determinants. Based on this approach, our interdisciplinary project compares the cognitive elicitation of six emotions in Tonga and Germany. It tests the hypothesis that – driven by different self-concepts and corresponding attribution tendencies – members of both cultures ascribe responsibility to others and self in diverging manners. Consequently, responses should differ when it comes to emotions that hinge on these attributions. Our experimental data supports this hypothesis.

Key words: Cognition, Emotion, Culture, Appraisal Theory, Ascription of Responsibility, Attribution Biases.

Introduction

Imagine that you are taking part in a performance of your local amateur theatre group. Everything is going like clockwork, and the audience is enthusiastic. You will most likely be convinced that this is due to a great extent to your part in the performance. However, if the performance turns out to be clumsy, and the audience starts murmuring with dissatisfaction, you might focus more on your colleagues' weaknesses and failures, blame the bad acoustics or even the audience.

People easily take credit for positive outcomes while tending to blame others for failures. Such a self-serving bias (Miller & Ross, 1975) can be observed in daily life, in the public sphere and, most pronounced, among politicians. It is nothing to feel ashamed of as it is reinforced by the individualistic values of Western cultures. Maintaining and enhancing one's self-esteem is consistent with those values that also emphasize an *independent* self-concept, the importance of personal accomplishments for one's identity, and the focus on rights over duties. In more collectivistic cultures, on the other hand, the self is seen as interdependent, as part of larger social groups that bind and mutually obligate the person; duties are valued over rights, and social harmony is of prime concern (Markus & Kitayama, 1991; Oyserman, Coon, & Kemmelmeier, 2002). As smooth interpersonal relationships are more important than one's self-esteem, members of collectivistic cultures may apply a reversed selfserving attribution style in more readily taking the blame for negative outcomes (e.g., Anderson, 1999).

A divergence in attribution styles can be observed not only for self-caused events, but also for other-caused events. Recent studies on attribution tendencies suggest that members of "individualistic" Western cultures are also more prone to the *fundamental attribution error* than members of "collectivistic" cultures such as the Chinese: The former typically tend to overestimate dispositional factors and therefore ascribe higher personal responsibility than collectivistically oriented people, who more readily take situational influences into account (Choi & Nisbett, 1998; Morris, Nisbett, & Peng, 1995; Morris, Menon & Ames, 2001).

Attribution styles are not only interesting in themselves, but also have cognitive implications and affect emotional responses. Attributing causation and ascribing responsibility are crucial factors in differentiating between emotions such as anger or shame (e.g., Lazarus, 1991; Smith & Ellsworth, 1985). In this case, cultural differences in attribution styles should imply cultural differences in respective emotions. In other words, discounting responsibility should calm anger.

In order to examine this hypothesis, we compared Germany with the Polynesian culture of Tonga. This island Kingdom in the South Pacific, once named the "Friendly Islands" by Captain Cook, is renowned for the amicability of its inhabitants. As negative emotions are disapproved of, it is difficult to decide whether Tongans only *display* or actually *feel* anger less frequently. The latter could be the case if people tend to take situational factors into consideration when ascribing responsibility for bad deeds to others. In that case, however, the same process should also reduce gratitude for good deeds. While a similar pattern may be expected in cases of self-caused events – leading to lower shame or pride in Tonga due to lower responsibility ascription – we rather assume a pattern consistent with the self-serving bias in Germany and the reversed pattern in Tonga.

In our study, these assumed influences of self-concept on attribution tendencies and emotional responses were experimentally tested. Before presenting this experiment and its results, we will outline the relevant theoretical assumptions and highlight essential aspects of Tongan culture.

Cognitive Determinants for Emotions

Despite a popular view of cognition and emotion as antagonists, emotions are, to a large extent, shaped by cognitions. Imagine that you enter a public transport vehicle and a young man offers you his seat. Will you feel gratitude? Or shame?

Probably even anger? It depends on how you appraise the situation. If you are of older age and your leg is hurting terribly this morning, you may very well appreciate the boy's consideration. If, on the other hand, this interaction makes you aware of the fact that you are getting on in years, sadness or shame may result. And if you like to think of yourself as independent and spry, the kind offer might even come across as an insult. Such cognitive determinants for emotions are captured by appraisal theories of emotions.

Appraisal Theories of Emotion

Appraisal theories assume that emotions are elicited and differentiated by the cognitive appraisal of an event (e.g., Frijda, 1993; Lazarus, 1991; Ortony, Clore & Collins, 1988; Roseman, Antoniou & Jose, 1996; Scherer, Schorr & Johnstone, 2001; Smith & Ellsworth, 1985). Appraising situations in similar ways should lead to similar emotions, while appraising them differently should lead to different emotions – irrespective of culture. What *should* be prone to cultural influences is the way in which a certain event or situation will be appraised. If, for instance, a person regards a situation as an insult, a likely response will be anger. But *whether* he or she regards the situation as insult will depend on a whole range of factors, among them culture-specific concepts, values, and norms (e.g., Mesquita & Ellsworth, 2001; Mesquita & Frijda, 1992; Scherer, 1997).

While all appraisal theories share the same assumption – that the elicitation of a specific emotion is linked to a corresponding set of criteria perceived in an event – there is still some debate with regard to the exact nature of these sets of criteria or "cognitive determinants". Most of them, however, agree that valence (outcome of event) and causation (agency and/or responsibility) are important at least for certain emotions (e.g., Ellsworth & Smith, 1988a; Lazarus, 1991; Nerb & Spada, 2001; Roseman et al., 1996; Weiner, 1995).

Agency, Responsibility, and Valence: Six Emotions

The relevant dimensions for our study are the degree to which people attribute causation to various sources and ascribe responsibility. In principle, events can be caused by oneself, another person, or circumstances, and responsibility can be considered as rather high or low.

Causation and responsibility are logically, but not empirically independent dimensions. An event can be caused by a person who might not be responsible for it in the strictest sense. If somebody drops a glass because he slips on the floor, we may still consider him as the cause, but not as responsible. It is not entirely clear, though, whether low personal responsibility is much different from circumstantial causation. Rather, the more we consider circumstances to be "responsible", the less likely we will focus on the person as the source of causation. In addition, folk psychological theories and terminologies do not differentiate emotional responses to all combinations of causation and responsibility. While self- and other-caused events elicit clearly different emotions when high responsibility is ascribed, causation is less clearly attributed and may even be regarded as cir-

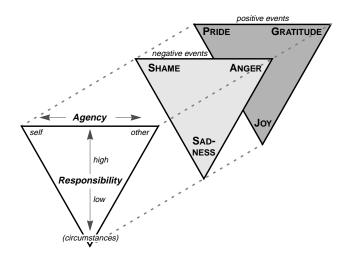


Figure 1: Predicted emotional response to three positive and three negative events varying in agency and responsibility.

cumstantial when personal responsibility is assessed as low (cf. also Smith & Ellsworth, 1985).

For our scenarios, we therefore decided to distinguish only between high responsibility (personal causation: agency either by self or other) and low responsibility (circumstances). In negative events, the most appropriate emotions corresponding to the corners of this triangle (Figure 1) are anger, shame, and sadness (Smith & Ellsworth, 1985, p.828; see also Roseman et al., 1996). In other words: If I ascribe high responsibility to someone who caused some damage, a likely response will be anger. If I find out that it was not his fault but triggered by circumstances beyond his control, sadness may prevail; and if I have to take the blame myself, I will feel shame.

Although positive emotions are typically less differentiated than negative ones (e.g., Ellsworth & Smith, 1988b), a positive complement can be identified for all three negative emotions: *gratitude* (for other-caused events), *pride* (for self-caused events), and *joy* (for circumstances).

Cultural Differences and Consequences

If we assume that a cognitive determinant like the ascription of responsibility is crucial for the elicitation and differentiation of specific emotions, then cultural differences in attribution style and in the tendency to ascribe responsibility should lead to different emotional responses, at least in terms of intensity (e.g., Mesquita & Ellsworth, 2001; Scherer, 1997).

With regard to events primarily caused by *others*, the fundamental attribution error, more pronounced in individualistic cultures, should result in ascribing higher responsibility to others, thereby also enhancing anger and gratitude, while in collectivistic cultures, personal responsibility – together with the subsequent emotional responses – should be reduced. With regard to events primarily caused by the *self*, the self-serving bias, more pronounced in individualistic cultures, should favor taking the credit and feeling pride in positive events, but putting the blame (and shame) on somebody else in negative events. In collectivistic cultures, this pattern should be either less pronounced or even reversed: More

readily giving credit to others should reduce pride, while taking the blame should enhance shame.

Finding such a correspondence would provide not only support for appraisal theoretical assumptions, but also a cognitive explanation for cultural differences that is more differentiated than usually available. Yet, the meta-analysis conducted by Oyserman et al. (2002) gives no hint that this line of argument has been experimentally tested so far. Our study tries to fill this gap. It is based on the assumption that the cognitive processes preceding emotions are universal, but the conceptual content on which these processes operate are culture-specific. It scrutinizes the tendencies of ascribing responsibility and its correspondence with emotional responses. Furthermore, it compares two cultures that diverge with regard to self-concept, namely Germany and Tonga.

Values, Self-Concept, and Emotions in Tonga

Tongan society is hierarchically structured, with older people having a higher rank than younger ones, and sisters higher than brothers. Linked with these differences in rank are social rules of respect and obedience, which are supposed to reflect 'ofa ("love, concern, or generosity"). 'Ofa characterizes the ideal emotional relationship between people (Morton, 1996). Cooperation and sharing with others are core values (e.g. Bender, 2002; Evans, 2001), social harmony is particularly emphasized and, consequently, negative emotions and open conflicts are disapproved of. Accordingly, a strong interdependent self-concept can be assumed to prevail in Tonga. Previous studies supported this assumption, revealing a significantly stronger interdependent self-concept for Tongans than Germans (and even Chinese), while the independent aspects of the self were rated rather similarly (Beller & Bender, 2004; Beller, Bender, & Song, subm.). These studies also suggest that in social relationships and interactions, situational factors are taken into account more readily in Tonga than in Germany when ascribing responsibility.

Experiment: Self-Concept, Attributions, and Emotions in Germany and Tonga

The experiment is motivated by three hypotheses: The respective cultural differences in self-concept should have an impact on (1) the fundamental attribution error, (2) the self-serving bias, and (3) emotions related to high ascription of responsibility, particularly anger. More precisely, we expected that – corresponding to being more interdependent – Tongans should more readily take situational factors into consideration when ascribing responsibility to others and should more readily take the blame in ambiguous situations. Germans, on the other hand, should largely disregard situational factors, thus ascribing higher responsibility to others, and avoid taking the blame in ambiguous situations. Consequently, Tongan participants should feel less anger and gratitude in other-caused events, and more shame but less pride in self-caused events than German participants.

Method

In order to ensure a valid choice of terminology and scenarios, the construction of the experimental material was

assisted by anthropological fieldwork in Tonga, which consisted of participant observation, informal talks, interviews, pile sorting tasks, and linguistic analyses (not reported here).

Materials. The experimental material consisted of two parts. The first part included several context stories (vignettes), each followed by a set of questions, and the second part included different scales. All materials were presented in the participants' native language and used customary names for the persons involved. Only those parts of the material and results relevant to our current question are reported here.

Part 1: Six context stories crossed three sources of causation (Other / Self / Circumstances) with two outcomes of an event (positive [+] / negative [-]). Two sources of causation (i.e., O and S) corresponded to high personal responsibility, while the third (i.e., C) corresponded to low personal responsibility. To vary the source of causation, three different stories were used, while the outcome of the event was varied by modification (printed in Italics) of the respective story:

- O+ Tina has an agreement with her mom that she is allowed to go to a performance at the weekend if she gets a good mark on her math exam. Tina gets *a bad mark*, but her mother *allows her to go nevertheless*.
- O— Tina has an agreement with her mom that she is allowed to go to a performance at the weekend if she gets a good mark on her math exam. Tina gets a good mark, but her mother doesn't allow her to go.
- S+ John has spent a lot of time on his homework. When he is asked in class to answer a question, he *can give a very good answer*. All his classmates look at him.
- S— John has taken a lot of time for his homework. When he is asked in class to answer a question, he *doesn't remember the correct answer*. All his classmates look at him.
- C+ Mary hears that her cousin, whom she likes a lot and hasn't seen for a long time, is coming for a visit. So she knows that her weekend won't be boring.
- C- Mary's cousin, whom she likes a lot and hasn't seen for a long time, has come for a visit. But suddenly the cousin has to leave again, and now Mary expects to have a boring weekend.

Each story was followed by several questions. The first asked for ratings of emotional responses in the situation. A multiple-choice format was used with 19 emotions, among them anger (German: Ärger, Tongan: 'ita), shame (Scham, ma), sadness (Traurigkeit, loto-mamahi), gratitude (Dankbarkeit, fakamalo), pride (Stolz, polepole), and joy (Freude, fiefia). Although not all terms are entirely congruent across languages, congruence is high for the relevant notions. For each emotion, participants had to indicate its intensity on a five-point scale ranging from 0 ("not at all") to 4 ("very strong").

Subsequent questions asked for evaluations of how responsible other, self, or circumstances were. Again, participants had to indicate their ratings on a five-point scale ranging from 0 ("not at all") to 4 ("completely").

Part 2: In addition to the questionnaire, we asked for aspects of the self-concept (independent vs. interdependent construal of the self). After pretesting the original scale of Singelis (1994) in both cultures, two items on each subscale were deleted. Both subscales therefore consisted of ten items. People were instructed to rate the degree to which

each statement applied to them on a five-point scale ranging from 0 ("not at all") to 4 ("completely").

Design. The study compared two countries in a correlational design (Germany and Tonga). The six context stories were presented within-subjects and in various different orders to control for order effects. Each story started on a new page; the questions were presented in the same order as described above.

Participants. Both samples consisted of students from higher classes of secondary schools, one in Lahr, Germany, the other in Pangai, Tonga. The German sample consisted of 39 students, 20 of whom were male and 19 female. The Tongan sample consisted of 21 students, 9 of whom were male and 12 female.

Procedure. The data collection took place in the classrooms. Each participant received a booklet with general instructions, the questionnaire, and the scales. They were instructed to answer all questions in the given order, and were granted as much time as they needed.

Results and Discussion

All data were analyzed by means of one-factor analyses of variance, with the between-subjects factor *country*.

Self-Concept: In line with previous studies, we expected the Tongan students to be more socially oriented than the German students. We found no differences between the two samples on the independence scale (in fact, the low Cronbach α did not allow us to interpret this scale), but did find differences on the interdependence scale. The mean *interdependence* value was 2.29 in Germany (SD = .499) and 3.27 in Tonga (SD = .692); F(1, 54) = 37.399, p < .001. As expected, the Tongan students judged themselves to be more interdependent than the German students.

Attribution Tendencies: In four out of six scenarios, the highest ascriptions of responsibility followed the pattern intended by scenario construction (Table 1): Responsibility was ascribed to other in the scenarios caused by others ([O+] and [O-]) and to self in the self-caused scenarios ([S+] and [S-]). In the two events construed as caused by circumstances ([C+] and [C-]), Germans ascribed responsibility to others, while Tongans predominantly ascribed responsibility to self.

Table 1: Mean ratings of responsibility to other, self, or circumstances in six scenarios, compared across cultures (G = Germany, T = Tonga).^a

Sce-	Other			Self			Circumstances		
nario	\overline{G}	T		\overline{G}	T		G	T	
O+	3.68	2.53	***	1.08	2.37	**	1.08	1.95	*
O–	3.66	2.76	**	0.55	2.29	***	1.21	1.94	
S+	1.39	2.74	***	3.66	3.53		1.32	2.00	*
S-	1.74	1.06		2.71	2.67		1.42	1.61	
C+	3.32	2.30	*	1.66	2.42		1.55	2.05	
C-	2.79	1.67	*	1.00	2.00	*	1.47	1.94	

^a *p < .05, **p < .01, ***p < .001

Across all scenarios, ascription of responsibility generally followed the expected pattern for cultural differences: German ratings of *other-responsibility* were higher than Tongan ratings in all scenarios except [S+], and Tongan ratings of *self-responsibility* were higher than German ratings in all scenarios except [S+] and [S-], although these were not significant. Attributions to circumstances were higher in Tonga than in Germany in all scenarios (although only significantly in two scenarios).

Comparing positive and negative scenarios suggests that participants from both cultures were generally more ready to take credit than blame. However, Tongan participants also gave high credit to others when actually the self was to be praised [S+].

Emotions in Positive Scenarios: From the emotions asked for in the positive scenarios, three are reported here: gratitude, pride, and joy (Table 2).

Table 2: Mean ratings of emotions in the three positive scenarios, compared across cultures.^a

Sce-	Gratitude			Pride			Joy		
nario	\overline{G}	T		\overline{G}	T		\overline{G}	T	
O+	3.68	2.43	***	1.63	1.10		3.61	2.60	**
S+	2.00	2.42		3.65	2.84	**	3.39	3.58	
C+	2.97	3.15		1.89	3.35	***	3.81	3.85	

^a *p < .05, **p < .01, ***p < .001

In all positive scenarios, the positive responses prevailed in both samples, except for [O+]. Here, Tongan participants rated shame (1.81) higher than pride (1.10) because they also took the blame for the bad mark.

Apart from this, the responses followed the pattern expected from the item construction in the German case: gratitude in [O+], pride in [S+], and joy in [C+]. In Tonga, this was not equally obvious, as here, all scenarios predominantly elicited joy. However, the emotions rated in second place after joy reflect the predicted pattern.

Emotions in Negative Scenarios: From the emotions asked for in the negative scenarios, three are reported here: anger, shame, and sadness (Table 3).

In all negative scenarios, negative responses prevailed in both samples, except for [C–]. Here, Tongan participants rated joy (2.11) and pride (1.88) higher than shame (1.50) because they appreciated that the visit had taken place at all.

Apart from this, the responses focused almost entirely on sadness as the prevailing emotion in all scenarios and both

Table 3: Mean ratings of emotions in the three negative scenarios, compared across cultures.^a

Sce-	Anger			Shame			Sadness		
nario	G	T		G	T		G	T	
O-	3.84	2.82	**	0.38	1.94	***	3.95	3.06	
S-	2.61	2.83		2.58	3.33		2.87	3.22	
C-	2.63	2.50		0.55	1.50	**	3.45	2.83	*

^a *p < .05, **p < .01, ***p < .001

cultures, except for [S-]. In [O-], sadness is closely followed by anger. A remarkable divergence from the pattern predicted by appraisal theories appears in [S-], where shame indeed prevailed in the Tongan sample, but was ranked last in the German sample.

Correspondence of Variables in Other- and Self-Caused Scenarios: For the two events caused by others ([O+] and [O-]), ascriptions of responsibility and emotional responses correspond with each other and with differences in self-concept as predicted (see Figure 2). In other words: In accor-

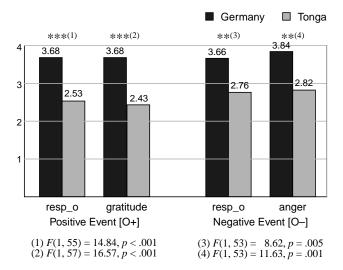


Figure 2: Cultural differences in ratings of responsibility to others (resp_o) and emotions in the *other-caused* scenarios [O+] and [O-].

dance with a pronounced interdependent self-concept, Tongan participants ascribed responsibility to others less strongly and rated gratitude and anger lower than Germans.

In the self-caused events ([S+] and [S-]), we wanted to examine whether the self-concept affects the ascription of

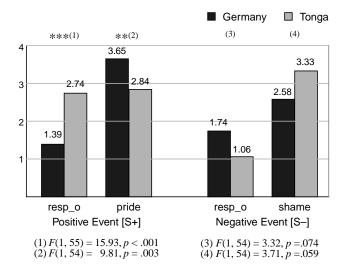


Figure 3: Cultural differences in ratings of responsibility to others (resp_o) and emotions in the *self-caused* scenarios [S+] and [S-].

responsibility to self or to others. We found that the ratings of self-responsibility did not differ at all across cultures. They were generally higher for positive than for negative events, thus indicating a self-serving bias in both cultures. However, the emotions elicited differed significantly. We therefore again have to take into account the ratings of otherresponsibility, and these do diverge in interesting ways (Figure 3): In the positive scenario, Tongans ascribe more responsibility to others than Germans, while in the negative scenario the opposite is true. This interaction corresponds to the difference in emotional responses: the higher rating of other-responsibility in [S+] with reduced pride among Tongan participants, and the higher rating of other-responsibility in [S-] with reduced shame among German participants. These findings are consistent with a self-serving attribution style among Germans and a reduced or even reversed pattern among Tongans.

General Discussion

Overall, the results indicate that Germans and Tongans indeed apply diverging attribution styles corresponding to cultural differences in self-concept. Germans tend to ascribe high responsibilities to others for good and bad deeds equally, responding with high gratitude or anger. Tongans ascribe less responsibility to others, and accordingly their respective emotions are less intensive.

In self-caused events, members of both cultures are more ready to take responsibility for good deeds than for bad (self-serving bias), and their ratings do not differ cross-culturally. What does differ, again, is the ascription of responsibility to *others*: Germans do so to a greater degree for bad deeds, while Tongans do so for good deeds. This corresponds to a strong self-serving bias in Germany, eliciting relatively little shame for bad deeds, but much pride for good ones. The reversed attribution tendency in Tonga eclipses the self-serving bias and produces a high degree of shame for bad deeds and a lower degree of pride for good ones.

With regard to scenarios caused by *circumstances*, we obtained partly unexpected results. None of our samples accepted circumstances as the *prime* explanation for the event. This may be an artefact from the scenario chosen, but in addition indicates a deeper conceptual problem: While in our rather ambiguous scenarios [C+] and [C-] it is easy to detect a personal causation for the event, people tend to persistently search for an agent even in scenarios with explicit non-human causation. This tendency may not be restricted to Western cultures, as a previous study on environmental attributions suggests (Nerb, Bender, & Spada, in press): When asked to what extent an instance of damage (i.e., dying fish) was caused by man, both Tongan and German participants ascribed responsibility to human actors – even in those scenarios that elaborated on the natural causation.

Apart from the rather low ratings of circumstantial causation, ascription of responsibility in the scenarios [C+] and [C-] followed the predictions insofar as Germans favored other-responsibility and Tongans favored self-responsibility. Emotional responses, on the other hand, followed from appraisal theoretical predictions as though they were not affected by diverging attribution tendencies. In other words:

Ascription of responsibility and emotional responses did not correspond for joy or sadness, which may be an indication of a more complex relationship between the two factors (cf. Nerb & Spada, 2001).

Overall, the patterns for ascribing responsibility to *others* and *self* and the corresponding emotions follow the cultural differences in self-concept in the expected way. It is always difficult, if not impossible, to prove causal links between cultural features and behavioral data in a semi-experimental design. But as our data is consistent with previous studies on Tongan emotions (Beller & Bender, 2004; Beller et al., subm.; Bender, 2002) and with research on other collectivistic cultures (e.g., Anderson, 1999; Morris et al., 1995), we consider it safe to conclude that cultural preferences affect not only attribution tendencies, but also – in emphasizing personal responsibility differently – subsequent emotional responses.

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References

- Anderson, C.A. (1999). Attributional style, depression, and loneliness: A cross-cultural comparison of American and Chinese students. *Personality and Social Psychology Bulletin*, 25, 482-499.
- Beller, S. & Bender, A. (2004). Cultural differences in the cognition and emotion of conditional promises and threats: Comparing Germany and Tonga. In K. Forbus, D. Gentner, & T. Regier (Eds.), Proceedings of the 26th Annual Conference of the Cognitive Science Society. Mahwah: Erlbaum.
- Beller, S., Bender, A., & Song, J. (subm.). Conditional promises and threats in a cultural comparison. [Under review]
- Bender, A. (2002). Environmental models, cultural values, and emotions: Implications for marine resource use in Tonga. *International Research in Geographical and Environmental Education*, 11, 58-62.
- Choi, I. & R.E. Nisbett (1998). Situational salience and cultural differences in the correspondence bias and actor-observer bias. *Personality and Social Psychology Bulletin*, 24, 949-960.
- Ellsworth, P.C. & Smith, C.A. (1988a). From appraisal to emotion: Differences among unpleasant feelings. *Motivation and Emotion*, *12*, 271-302.
- Ellsworth, P.C. & Smith, C.A. (1988b). Shades of joy: Patterns of appraisal differentiating pleasant emotions. *Cognition and Emotion* 2: 301-331.

- Evans, M. (2001). Persistence of the gift: Tongan tradition in transnational context. Waterloo: Laurier University Press.
- Frijda, N.H. (1993). The place of appraisal in emotion. *Cognition and Emotion*, 7, 357-387.
- Lazarus, R.S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Markus, H.R. & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224-253.
- Mesquita, B. & Frijda, N.H. (1992). Cultural variations in emotion. *Psychological Bulletin*, 112, 179-204.
- Mesquita, B. & P.C. Ellsworth (2001). The role of culture in appraisal. In K.R. Scherer, A. Schorr & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, methods, research.* Oxford: Oxford University Press.
- Miller, D.T. & Ross, M. (1975). Self-serving biases in the attribution of causality: Fact or fiction? *Psychological Bulletin*, 82, 213-225.
- Morris, M. W., Menon, T., & Ames, D. R. (2001). Culturally conferred conceptions of agency: A key to social perception of persons, groups, and other actors. *Personality and Social Psychology Review*, 5, 169-182.
- Morris, M.W., Nisbett, R.E. & Peng, K. (1995). Causal attribution across domains and cultures. In D. Sperber, D. Premack & A.J. Premack (Eds), *Causal cognition*. Oxford: Clarendon Press.
- Morton, H. (1996). *Becoming Tongan: An ethnography of childhood*. Honolulu: University of Hawai'i Press.
- Nerb, J., Bender, A., & Spada, H. (in press). Attributing causes of environmental problems: A cross-cultural study of coping strategies. In M.J. Casimir (Ed.), Culture and the changing environment: Uncertainty, cognition, and risk management in cross-cultural perspective. Oxford: Berghahn.
- Nerb, J. & Spada, H. (2001). Evaluation of environmental problems: A coherence model of cognition and emotion. *Cognition and Emotion*, *15*, *521-551*.
- Ortony, A., Clore, G.L., & Collins, A. (1988). *The cognitive structure of emotions*. Cambridge: Cambridge University Press.
- Oyserman, D., Coon, H.M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analysis. *Psychological Bulletin*, 128, 3-72.
- Roseman, I.J., Antoniou, A.A. & Jose, P.E. (1996). Appraisal determinants of emotions: Constructing a more accurate and comprehensive theory. *Cognition and Emotion*, *10*, 241-277.
- Scherer, K.R. (1997). The role of culture in emotion-antecedent appraisal. *Journal of Personality and Social Psychology*, 73, 902-922.
- Scherer, K.R., Schorr, A. & Johnstone, T. (Eds.) (2001). Appraisal processes in emotion: Theory, methods, research. Oxford: Oxford University Press.
- Singelis, T.M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin* 20: 580-591.
- Smith, C.A. & Ellsworth, P.C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology*, 48, 813-838.
- Weiner, B. (1995). Judgments of responsibility: A foundation for a theory of social conduct. New York: Guilford Press.