Summary

Virtually everyone ruminates at least once in a while. However, some people ruminate more than others. People high-rather than low-in chronic ruminative tendencies (or simply ‘rumination’) are inclined to dwell passively on (typically negative) thoughts and feelings, particularly under stressful circumstances. Prior research has mostly focused on the cognitive aspects of rumination, even though rumination is associated with a wide variety of physical health complaints, hypertension, pain, and chronic fatigue. It thus seems important to ask whether and how rumination shapes the way people process their internal, bodily states. This general question is addressed in this dissertation. Specifically, this dissertation examines how various forms of stress may lead ruminators to become alienated from their own body.

Chapter 1 briefly introduces the central topics of this dissertation and previews the remaining chapters. Chapters 2-4 describe empirical research on embodied aspects of rumination. Chapters 5 and 6 feature theoretical discussions of empirical findings on rumination.

Chapter 2 examines the link between rumination, stress and interoception. Interoception is the processing and perception of internal bodily signals. We hypothesized that people higher in rumination would be more vigilant to interoceptive cues under stress. Consistent with this, the results of two experiments revealed that after inducing mild stress, higher rumination levels were positively associated with higher levels of interoception. Ruminators under mild stress reported more consciousness towards bodily signals and they were also better at detecting their own heartbeat. By contrast, under low stress conditions, no association emerged between rumination and interoception. These findings thus indicate that ruminators display amplified interoceptive processing under mildly stressful conditions.

Chapter 3 investigates how the combination of rumination and stress can lead people to suppress their natural desire for food. Stress is operationalized as the exertion of inhibitory control. Inhibitory control allows people to inhibit intrinsic preferences and bodily feelings like hunger, pain or fatigue. Because people should generally prefer high energy food intake
if they have not eaten for a while, healthy appetite for food should lead to a positive association between level of food deprivation and preference for high-calorie foods. We reasoned that ruminators have difficulties in disengaging from inhibitory control, which may lead to disrupted appetite regulation. In line with this idea, the results of two experiments showed that an initial act of inhibitory control indeed disrupted healthy regulation of appetite for food among people higher in rumination, as indicated by a reduced association between food deprivation and preference for high-calorie foods. However, inhibitory control did not disrupt healthy appetite regulation among people lower in rumination, because they showed the adaptive positive association between higher food deprivation and preference for high-calorie foods. People higher in rumination thus appear to be particularly vulnerable to disruptive effects of stress on their healthy, natural desire for food.

Chapter 4 examines the joint influence of rumination and stress on the experience of vitality. Vitality refers to the feeling of being alive and full of energy and is seen as a universal human experience that is also grounded in the body. We therefore investigated people’s experiences of body vitality in this chapter. Earlier research found that vitality can decrease when people experience more stress. Building on and extending this notion, we reasoned that stress would only be associated with reduced body vitality among people higher in rumination (referred to as ‘state-oriented people’ in this chapter), because they are quicker to experience physical energy fatigue under stress. Supporting this notion, three studies showed that more stressful life experiences (referred to as ‘life demands’ in this chapter) were associated with a drop in body vitality only among people higher in rumination. People lower in rumination were not affected by the body-vitality draining effects of life stress. Inducing mild stress likewise resulted in lower body vitality experiences among ruminators, compared to non-ruminators.

Rumination is treated a personality variable in this dissertation. Chapter 5 compares two personality theories self-determination theory (SDT) and personality systems interaction theory (PSI). The two theories share the idea that personal growth should be seen as a whole systems process that takes into account mind, body and environmental information. SDT has adopted more a first-person perspective on personality, by emphasizing subjective
experience and self-report measures. By contrast, PSI theory has adopted predominantly a third-person perspective, which emphasizes implicit processes and objective measures. The chapter briefly reviews the two theories and examines how they are implemented in three empirical domains, which are internalization, flow, and vitality (see also chapter 4).

Finally, **Chapter 6** reviews the main findings from Chapters 2-4 and considers how they may fit together in a more general psychosomatic model of rumination and coping with stress. According to this model, chronic ruminators cope with stress through psychosomatic processes that alternate between mobilization and minimization. Mobilization coping is characterized by heightened vigilance for interoceptive signals (see also Chapter 2) and inhibition of bodily needs like sleep and hunger (see also Chapter 3). Minimization coping is characterized by fatigue (see also Chapter 4) and physiological blunting, along with avoidance behavior such as over-eating and self-injury. Over time, mobilization-minimization alternation increases psychophysiological load, which can ultimately lead to physical degradation and organic disease.

In conclusion, this dissertation sheds new light on the embodied aspects of rumination. The various chapters show that stressful conditions may lead ruminators to become alienated from their body, as evidenced by increased interoception, disrupted appetite regulation, and decreased body vitality. These findings suggest that rumination not only happens between the ears, but is implicated in the health of all bodily functions.