

The Aging Self: Shifting from Promoting Gains to Balancing Losses

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With increasing age, preserving action resources and counteracting developmental losses may become dominant concerns in themselves as the basic vectors of intentional self-development shift from expansion or self-actualization toward the maintenance and defense of established self-definitions.

(Brandtstädter, 1999, p. 55f)

People learn who they are and about their environment through action. And, as Brandtstädter and Lerner (1999) put it, people construe representations of themselves and their environment, which will guide their future action and development. Adopting this perspective of an interplay between person, action, and development (see also Brandtstädter, 1998), we believe that the “aging self” can best be understood in

terms of changes in processes of interacting with the internal and external world. Such changes as how we view ourselves, the world, our wishes, goals, beliefs, and our actions occur in interaction with age-related changes in internal and external resources.

In accordance with Brandtstädter (1998, 1999), we argue in this chapter that resources play a central role in the interplay of the person with his or her environment, forming the “self” and representing the basis of development. Resources, denoting finite and limited commodities, serve as *constraints* for development. Constraints are not only *limitations* in that they exclude certain possibilities. Constraints also specify boundaries defining developmental *opportunities*. In this sense, then, resources are similar to the term “affordances” by Gibson (1977). Affordances refer to the “actionable” properties between the world and a person. That is, affordances are defined as relationships that describe the action possibilities posed by the interaction between the environment and the person. For instance, a book on fishing can be used for reading. Obviously, however, the book can only be read by a person who knows how to read the respective language in which it is written. The content of the book might then improve the reader’s knowledge about fishing and his or her fishing skills. In this way, the action of reading transforms affordances into capabilities and competencies. In this sense, then, constraints (e.g., that the book is written in a specific language and has a particular content) and action (e.g., reading, acting upon the knowledge provided in the book) are both essential for development. In fact, action never occurs in a vacuum but always in interaction with an object or a person. As pointed out by von Cranach (1991), actions can best be understood in the context in which they develop. Taking this perspective, the “self” is the interaction of a person with herself and her environment. This interaction can only be understood when both, resources (as opportunities and constraints) and action are considered as two key elements of development. What develops when the “self” develops is the process of a person *interacting* with herself and her environment.

Let us now turn to the notion of action (see Greve, 2001, for an excellent theoretical discussion of the notion of “action” in psychology). In action theory, human behavior is seen as goal-directed, and regulated by internal (e.g., cognitive) and external (e.g., social) factors (Brandtstädter, 1998; Ford, 1987). Action-theoretical perspectives espouse the basic assumption that actions are carried out by volitional agents; in fact, it is the very definition of actions that they are intentional (see Brandtstädter & Greve, 1999, for a distinction of different aspects of intentions and their relation to the notion of “free will”). That is, in action theory persons are viewed as being able to intentionally shape their environment and determine their behaviors according to their goals. This, in turn, implies that persons can make plans as to how they can reach their goals, and initiate, monitor, and change their behavior and even themselves (see also Carver & Scheier, 1999; Gollwitzer, 1996). Recently, Bargh and Ferguson (2000), however, have questioned this assumption of the person as a volitional agent possessing free will. Instead, they claim “social interaction, evaluation and judgment, and the operation of internal goals can all proceed without the intervention of conscious acts of will and guidance of the process” (p. 625).

According to the automotiv model by Bargh (1990), goals can be automatized by repeated activation in a given situation. Subsequently, goals can be triggered by environmental stimuli without the involvement of conscious choice or reasoning processes. There is convincing empirical support for this assumption (as provided by Bargh & Ferguson, 2000). Automatization of goal-pursuit, however, does not solve the problem of a “free will” in the original *setting* of a goal. Why does a person aspire to become a concert pianist and not a kindergarten-teacher? Here, reinforcement principles can be used to explain preferences, again making the assumption of a free will unnecessary.

In this chapter, however, we do not want to attempt solving the philosophically complex issue of whether or not free will exists (Greve, 1992; see Wegner, 2002, for a recent psychological discussion of this topic). Moreover, intentionality is itself a multifaceted construct and not all of its facets need to be conscious, deliberate decisions at all times (Brandtstädter & Greve, 1999). We evade this interesting debate by claiming that the existence of free will is not a necessary assumption for psychological, action-theoretical approaches to explaining and predicting behavior. Instead, we suggest that the interesting and critical question is *what* internal and external factors contribute to the setting and pursuit of goals and *how*. Whether volition is an epiphenomenon or not, it predicts commitment to, initiation of, and persistence in goal pursuit (e.g., Brandtstädter, Lengfelder, & Gollwitzer, 2001; Gollwitzer, 1999). It might well be that the feeling of *wanting* to do something (as opposed to *having* to do it) is an illusion, but it is a powerful one as shown in research on autonomy and intrinsic motivation (e.g., Ryan & Deci, 2000). As pointed out by Greve (1996), taking the perspective of the person (“first person perspective”), the belief to possess a free will is necessary for a comprehensive understanding of psychological processes.

In this chapter, we argue that personal goals (referring to *what* the person wants to achieve, maintain, or avoid) and motivational processes (referring to *how* a person sets, pursues, maintains, and abandons goals) are central aspects of the “self” in general and the “aging self” in particular that help understanding the direction and level of individual development. Personal goals are states that people desire or fear for themselves and consequently want to achieve, maintain, or avoid (Emmons, 1996). Following Hooker and McAdams (2003), goals (“personal action units”) and motivational processes (“self-regulatory processes”) constitute one level in a multiple levels of analysis model of personality (including basic personality traits and narrative identities as the other two levels of personality). It is this level of analysis – personal goals and motivational processes – that has mostly concerned the research agenda by Brandtstädter and his colleagues (e.g., Brandtstädter, 1998, 1999; Brandtstädter & Greve, 1994; Brandtstädter & Renner, 1990; Brandtstädter, Rothermund, & Schmitz, 1998; Brandtstädter & Wentura, 1995).

In accordance with Brandtstädter (1998, 1999), we take the view that the “aging self” can best be understood in terms of motivational changes (including both personal goals and motivational processes) that occur in interaction with age-related changes in internal and external resources. The next question, then, is what these motivational changes are.

WHAT AGES WHEN THE "SELF" AGES?

Development and aging does not occur in a vacuum. Instead, the changes a person goes through over the lifespan occur in constant interaction with his or her social and physical environment. When trying to understand the "aging self," we need to identify age-related changes in the person, the environment, and their interaction. On a very general level, the clearest change is that age is associated with increasing losses. Such multiple sources as increasing morbidity, loss of social partners, decline in information processing speed, loss of sensory acuity and stamina all contribute to the general sense that aging is associated with losses (for a summary see Freund & Riediger, 2003). Moreover, there is high social consensus that old age signals the onset of a larger number of undesirable personality traits (e.g., rigidity) and loss of desirable ones (e.g., extraversion; Heckhausen, Dixon, & Baltes, 1987). For very old age, this negative view appears to be empirically supported (Baltes & Smith, 2003). This is not to say that aging can be described as a uniformly negative, loss-ridden time in life. This is neither true in the stereotypes of older people (Brewer, Dull, & Lui, 1981) nor with regard to the empirical evidence in various domains of functioning. On the one hand, some of the changes that are viewed as losses by younger age groups might, in fact, be seen as value-neutral or even positive changes in the eye of older adults (Carstensen & Freund, 1994). On the other hand, there are a number of functional domains such as vocabulary skills, wisdom, or emotion-regulation that show stability or even increase into old age (for an overview see Baltes, Lindenberger, & Staudinger, 1998). As any other phase in life, then old age comprises both gains and losses (Baltes, 1987; Brandtstädter, 1998; Labouvie-Vief, 1981). The ratio of gains to losses, however, becomes more and more negative with age (Baltes et al., 1998).

What does it mean for an aging person to encounter more and more losses in various life domains? Of course, the meaning of such losses as the death of a spouse can only be understood in the context of an individual life and depends on a variety of factors such as predictability, emotional and instrumental social support network, financial situation, and coping style. Leaving interindividual differences in the meaning and impact of losses aside, however, it seems that the accumulation of them very likely represents a depletion of resources. Contrary to most psychological definitions, we limit resources to finite and limited entities that can be invested into the selection and the pursuit of goals. In order to avoid potential circularity, we exclude processes related to the management of resources or psychological states such as self-esteem or positive emotions (Freund & Riediger, 2001). This restricted definition of resources allows clearly differentiating between resources (e.g., time), their management (e.g., motivational processes), and outcomes (e.g., positive emotions).

The next question, then, is how older adults manage the losses in resources. A number of models of successful aging argue that management of losses is of prime importance (e.g., Baltes & Baltes, 1990; Brandtstädter & Greve, 1994; Freund, Li, & Baltes, 1999; Heckhausen & Schulz, 1995). All of these models propose that personal goals and motivational processes of setting, pursuing, and abandoning goals are

central for understanding how older people manage the depletion of resources. Why do these models stress the importance of selection and pursuit of personal goals? Personal goals motivate and organize behavior over time and across situations, giving directionality and meaning to development. For instance, a person who pursues primarily affiliation-related goals might spend much of her time with friends and family, trying to improve relationships or maintaining closeness. In contrast, a person who is mostly interested in excelling as a chess player might spend most of her time reading relevant literature, thinking about chess problems, and practicing. In both cases, the goals of a person guide behavior across situations and time. Moreover, as the investment of resources such as spending time on deliberate practice is highly predictive of performance in a given domain of functioning (in the case of chess, see e.g., Charness, Krampe, & Mayr, 1996), goals also help to predict the level of functioning.

As pointed out particularly by Brandtstädter and Greve (1994), goal-standards (i.e., the level of outcome a person tries to achieve, maintain, or avoid) play an important role for the regulation of emotional well-being. Whereas the achievement of goals leads to positive emotions and well-being, not being able to attain one's goals and falling short of one's standards because of a permanent loss of relevant resources results in negative emotions and depression. Accordingly, the adjustment of goal-standards (i.e., accommodative coping) to achievable levels helps to protect older persons' well-being against losses (e.g., Brandtstädter & Rothermund, 1994; see also Heckhausen & Schulz, 1995).

The model of selection, optimization, and compensation (SOC; Baltes & Baltes, 1990) distinguishes between two ways of responding to actual or impending losses: Loss-based selection and compensation (Freund & Baltes, 2000). Loss-based selection refers to adjusting goals and standards to the available resources, compensation denotes substituting lost means in the service of maintenance of performance. Loss-based selection implies changing the goal in accordance with losses in resources, whereas compensation implies keeping the goal constant while changing the means of goal-pursuit as a way of adapting to goal-relevant resources.

We propose that younger adults are more likely to react to losses by redefining their goal-hierarchy and placing more importance on goals that are not affected by the loss of resources. In contrast, older adults may be more inclined to persist in efforts to maintain performance when faced with a loss. Why should this be the case? In accordance with the model of primary and secondary control (Heckhausen, 1999; Heckhausen & Schulz, 1995), we posit that the central motivation of young adulthood is to acquire skills and place oneself in environments that allow a maximum access to resources, whereas older adults are more motivated to preserve acquired resources and functioning. This is the case because resources are increasingly limited and threatened in older adulthood (e.g., Baltes et al., 1998). In young adulthood, the time-perspective allows for an upward spiral of accumulating resources. In addition, younger adults still need to acquire new skills and resources. They might have a large potential but they still need to translate this potential into actual outcomes or resources before they can start protecting and preserving. Older adults have already ac-

quired and achieved much of what they are able to do. They might not have as much potential as younger adults but they have accumulated more resources or skills over the years that need to be protected. In addition, in old age it is of increasing importance to avoid a downward spiral of resource losses. Moreover, the longer a person feels committed to a certain goal and has invested into it, the more difficult it should be to give it up when encountering losses. For instance, a phenomenon known as the “sunk cost” effect (Arkes & Ayton, 1999) describes the fact that, the more a person has invested into attaining a goal (e.g., time, money, closing other doors), the more difficult it becomes to view these costs as “sunk costs” that should be cut. Instead people are likely to try repairing and investing even more resources into achieving the respective goal. Distancing oneself from goals might hence become more and more difficult the longer one has held it, and thus might be more difficult the older one is. In sum, we hypothesize that, as the motivation to maintain a goal is related to its past resource investment and as the amount of resource investment is likely to be strongly associated with the amount of time a goal has been held, the “sunk cost” effect is positively related to age.

The tendency to value something more simply because one owns it has been described as the “endowment effect” in the literature on judgment and decision-making. For instance, people value a mug that they have just been given about three times as much (in monetary terms) than when they do not own it (i.e., people are unwilling to sell the mug unless one offers up to three times the money they would be willing to spend on acquiring it; Kahneman, Knetsch, & Thaler, 1990, 1991). This effect is usually interpreted as reflecting an aversion to loss and a bias toward the maintenance of the status quo. But why should people be motivated to maintain a more or less arbitrary object they just obtained? One of the processes leading to this effect might be an immediate identification with one’s possessions (e.g., the mug becomes part of me when I own it; compare to William James’ (1890) notion that a man’s possessions are part of his or her “material self”). And if something is part of me, it is worth more than the same object that is not. This interpretation of the “endowment effect” is supported by Loewenstein and Issacharoff (1994) who found that an object is valued higher when receiving it as a reward for good performance than when receiving it merely by chance or as compensation for poor performance.

Going beyond the mere “endowment effect,” the subjective value of something should be particularly high after having invested resources into its attainment. The resources might now become part of the object’s value. Moreover, as the invested resources might also be seen as part of one’s self, the value of oneself now also goes into whatever one has attained. Therefore, losing what one has attained can be directed toward a part of a person’s identity or self-definition. Applied to personal goals, this implies that the longer a goal has been pursued and the more resources have been invested into its achievement, the stronger the tendency for maintenance should be. For instance, when the goal is to be a good tennis player, and I have invested much time, money, and effort into achieving this goal, being a good tennis player might become a part of my self-definition, and its loss might threaten my very sense of who I am (Brandtstädter & Greve, 1994; Freund, 1995; Swann, 1990).

Consequently, the likelihood of investing efforts in the service of maintenance might become higher the more one has invested into it in the past and the longer one already holds the goal. And this is more likely the case the older one is.

In addition, future time perspective might play a role in age differences in goal orientation. People tend to be more risk averse in situations that are located in the near future because they have a preference to judge possible gains and losses for a short-term opposed to a long-term perspective (e.g., Lopes, 1981). This might be the case because people mentally represent events in the near as compared to the distant future in different ways. As elaborated by Trope and Liberman (2003) in construal level theory, the greater the temporal distance to an event, the more abstract their mental representation (high-level construals). Low-level construals, i.e., representations in terms of more concrete and incidental details of the events, are more likely when taking a short-term perspective.

Pennington and Roese (2003) showed in a study with college students that the importance of a goal orientation toward the promotion of gains *decreased* with temporal proximity of the goal-related event. Goal orientation toward the prevention of losses, however, remained important when events came closer. The longer future time perspective (Carstensen, Charles, & Isaacowitz, 2000) might contribute to younger adults' orientation toward promoting gains. A theory that integrates the research on "self" and the research on motivational orientation is Higgins' Regulatory Focus Theory (Higgins, 1997, 1998). Regulatory Focus Theory attempts to explain how people reduce discrepancies between current and desired states: the ideal self-guides, characterized by individuals' representations of desired end states as hopes, accomplishments, or aspirations (i.e., promotion focus) and the ought self-guides, characterized by the individual's representation of desired end states as safety, duties, or responsibilities (i.e., prevention focus). The theory assumes that self-regulation operates differently when serving these fundamentally different needs of nurturance (ideal self, promotion focus) versus security (ought self, prevention focus). Thus, the theory focuses less on goal orientation in itself but more on its effects on goal pursuit strategies. Following ideal self-guides orients a person toward the presence or the absence of positive outcomes and heightens the sensitivity to opportunities for goal attainment ("eager strategy"). Following ought self-guides orients a person toward the absence or presence of negative outcomes and heightens the sensitivity to impediments to goal attainment ("vigilant strategy").

Crowe and Higgins (1997) find in a study with younger adults that participants in a promotion frame preferred an eager strategy whereas participants in a prevention frame preferred a vigilant strategy when pursuing goals. The preference is also reflected in a better memory for the respective strategies. Higgins, Roney, Crowe, and Hymes (1994) show that young adults who were primed with promotion focus ideals better recalled "eager" strategies, whereas young adults primed with prevention focus oughts remembered "vigilant" strategies better. In another study with college-students, Roney, Higgins, and Shah (1995) find that persistence and performance are higher when a task is framed in terms of positive outcomes (promotion focus) as compared to a prevention focus. To our knowledge, there is currently no empirical

evidence if this effect also holds for older adults. We suspect that it does not. We suggest that there is a shift in motivational orientation across adulthood from orientation toward gains or growth to goals oriented at maintaining performance and functioning in the face of loss and decline (Freund & Baltes, 2000; Heckhausen, 1999; Staudinger, Marsiske, & Baltes, 1995).

Although Higgins and colleagues find interindividual differences in the strength of regulatory focus in their samples of young adults, we posit that, on average, younger adults are more likely to adopt a promotion focus. This should be the case if, as we posit, the central motivation in young adulthood is to maximize one's potentials. With increasing age, however, the motivational orientation shifts toward maintaining skills, counteracting losses, and focusing on prevention. Older adults, then, should be more motivated to pursue a goal according to a vigilant strategy and avoid losses.

Linking self-regulation theory to the endowment effect, Liberman, Idson, Camacho, and Higgins (1999) argue that people who are concerned with safety and security (i.e., people who hold a prevention focus), favor maintenance and stability in situations when they are satisfied with their level of functioning. In contrast, promotion focus should foster the pursuit of new goals, which might offer new possibilities for gains. In support of this hypothesis, Liberman et al. (1999) found that the endowment effect is moderated by regulatory focus: Prevention focus is positively related to the "endowment effect," whereas people in a promotion focus are more willing to exchange an object for a new one. If, as we argue, older people are more oriented toward the prevention of losses, they should also show a stronger "endowment effect" and less willingness to explore new possibilities that might offer possibilities of gains. In the next section, we elaborate on the proposition of an age-related shift in goal-focus.

GROWING OLD – FROM ORIENTATION TOWARD GROWTH TO PREVENTION OF LOSSES

In the social-psychological literature, the distinction between goals that are oriented toward gains or growth as compared to goals that are oriented toward the maintenance of functioning in the face of losses is known as *approach or avoidance* motivation (e.g., Emmons, 1996). Although logically, the framing of a goal as an approach or avoidance goal is symmetrical ("I want to get a job after graduation" vs. "I do not want to become unemployed after graduation"), they differ in their effects on personal well-being and performance. Avoidance goals are related to lower subjective well-being (lower positive mood, less life satisfaction, more anxiety) and performance, whereas approach goals are related to higher positive emotions, well-being, and creativity (e.g., Coats, Janoff-Bulman, & Alpert, 1996; Elliot & Sheldon, 1997; Elliot, Sheldon, & Church, 1997; Emmons, 1996). From this research, one might conclude that goals should be framed as approach goals in order to enhance performance and personal well-being. One caveat, however, concerns the age of par-

ticipants in these studies, namely young adults, predominantly college students. In addition to the prevalent goal orientation, the *effects* of approach as compared to avoidance motivation, however, might also change with age (Freund & Baltes, 2000).

The fact that people are loss-avoidant is known from the research based on prospect theory by Kahneman and Tversky (1979). This research shows that people are more willing to take a risk in order to avoid losses than in order to attain gains. According to prospect theory, people react more extreme to losses because the very same amount of resources (e.g., money) has a higher subjective value when it is framed as a loss compared to a gain. To lose ten dollars appears to be subjectively more than to gain them. Similarly, Hobfoll (e.g., 1998) argues that losses have a stronger negative impact than positive events. According to Hobfoll's theory of conservation of resources, people are primarily motivated to avoid losses. We maintain that the relative importance of conservation of present resources as compared to attainment of new resources is more true for older than for younger adults. As elaborated in more detail elsewhere (Freund & Riediger, 2001), possessing as many resources as possible is of evolutionary advantage because resources are essential for one's own and the survival of one's offspring, and they enhance attractiveness by signaling good genetic material to potential mates (Buss, 1999). Therefore, attaining and accumulating resources appears at least as important as maintaining them. As the relative standing in terms of resources in a given social group seems, among other things, to determine one's attractiveness as a mate, resource gain should be particularly motivating in younger adults who are, evolutionary speaking, in a phase where their prime motive is to produce offspring and thereby enhance the likelihood of survival of their genes.

For older adults, being more and more confronted with threats to their resources, the motivation for maintenance and loss-avoidance should become more and more prevalent (Freund & Baltes, 2000; Heckhausen, 1999; Staudinger et al., 1995). Moreover, under conditions of decline in resources, the remaining resources need to be invested in a highly focused and effective manner. Pursuing new goals and trying to improve functioning instead of investing into repairs of losses might be too costly for older adults. On the one hand, they might have less knowledge about the new goal and would need to invest time and effort into gaining information about how to attain it. On the other hand, a person typically holds multiple, interrelated goals. The loss of one of these goals might also have detrimental effects on other, related goals, in the sense of a downward spiral. For instance, the goal of exercising regularly might be positively related to the goal to become healthier and the goal to engage in activities together with friends (Riediger, 2001). Stopping to exercise because jogging becomes too painful due to osteoarthritis, might affect the other two goals in negative ways. Instead, switching to power walking, biking, or aqua-aerobics as compensatory efforts might maintain all three goals.

EMPIRICAL EVIDENCE

Motivational preferences for growth or gains in young adulthood are evident in research on personal goals. When younger adults (mostly college students) are asked to list their personal goals, they typically report at least three times as many goals that focus on gains ("approach goals") than goals that focus on losses ("avoidance goals"; Elliot et al., 1997; Emmons, 1996). This finding favors the view that, for young adults, approach motivation is more salient than avoidance motivation. The question is, then, if this motivational preference changes with age and how.

The empirical evidence pertaining to this question is scarce. In the following, we will report a selection of studies that have addressed age-related changes in motivational orientation (Ebner & Freund, 2003; Freund, 2002; Heckhausen, 1997; Ogilvie, Rose, & Heppen, 2001). As will be elaborated in more detail, all four studies support the hypothesis that younger adults are more oriented toward gains whereas older adults show a stronger orientation toward maintenance and avoidance of losses. In the study by Heckhausen (1997), young, middle-aged, and older adults were asked to list their most important personal hopes, plans, and goals for the next 5 to 10 years. Each of these goals was coded by independent raters as either approach or avoidance goal. The rating was based on the life domain to which the goal related (e.g., work-related goals were coded as approach goals, whereas health-related goals were coded as avoidance goals). As expected, compared to middle-aged and older adults, young adults listed more goals in life domains that were coded as pertaining to approach orientation. In contrast, older adults listed more goals in life domains that were coded as avoidance oriented. Interestingly, the orientation toward loss-avoidance was already present in middle adulthood: Middle-aged adults named more goals in life domains coded as loss-avoidance than younger adults. These results support the idea of an age-related increase of avoiding losses instead of striving for gains as central motivational orientation.

The coding of goals as reflecting approach or loss-avoidance motivation on the basis of the life domains to which they refer can only serve as a rough indicator of goal orientation. Ogilvie and colleagues (2001) used a more direct and extended assessment of motivational orientation in interviews on personal projects with adolescents, middle-aged adults, and older adults. In two studies, participants were asked to list their goals and to indicate their reasons for goal involvement. Independent raters categorized these purpose statements into one of four motivational categories: the motivation to acquire (i.e., the desire to obtain a future positive outcome), the intention to keep (i.e., the desire to avoid losing an existing positive condition), the desire to cure an existing negative condition, and the motivation to prevent a negative outcome.

The desire to acquire constituted the highest percentage of reasons for goal involvement in all three age groups, accompanied by a stepwise decline in its prevalence in the middle-aged and older groups. Maintenance orientation was more char-

acteristic of older than adolescents or middle-aged adults. Unexpectedly, the motivation to cure an existing negative condition and the intention to prevent a negative outcome showed no consistent significant age trajectories.

The studies by Heckhausen (1997) as well as Ogilvie et al. (2001) relied on external categorization of goal orientation. Moreover, the exclusive categorization of goals as being either oriented toward growth, maintenance, or prevention of loss assumes that any one given goal can represent one and only one orientation. We (Ebner & Freund, 2003) tested this assumption by asking young and older adults to rate each of their personal goals separately with respect to three dimensions of goal orientation: growth (i.e., orientation toward the improvement or achievement of new skills), maintenance (i.e., orientation toward maintaining functioning), and prevention of loss (i.e., orientation toward prevention of undesired outcomes and losses). In contrast to the exclusivity assumption in the literature, we found that growth and maintenance and growth and prevention of loss orientation are independent of each other. For instance, the goal “engaging in an exercise program” can be aimed simultaneously at improving one’s appearance (growth), staying in shape (maintenance), and not becoming overweight (prevention of loss).

Regarding age differences in motivational orientation, we found in accordance with results reported by Heckhausen (1997) as well as Ogilvie et al. (2001), that young adults reported a primary orientation toward growth, whereas older adults’ goals were equally oriented toward maintenance and loss-prevention. Moreover, in accordance with earlier studies (e.g., Coats et al., 1996; Elliot & Sheldon, 1997; Elliot et al., 1997; Emmons, 1996) we found that orientation toward loss-avoidance was negatively related to subjective well-being in young adulthood. As expected, this negative relationship was *not* present for older adults. In old age a primary orientation toward maintaining functions evidenced as most favorable.

Going beyond self-report, a set of studies assessed age-related differences in goal orientation on the level of goal selection *behavior* (Ebner & Freund, 2003). Again, we found evidence supporting the hypothesis that younger adults are more oriented toward gains whereas older adults are more oriented toward maintaining and preventing losses. Using a forced choice design, we found that younger adults more frequently selected goals oriented toward growth (here related to cognitive or physical functioning). In contrast, older adults selected goals that focused on maintenance and prevention of loss just as frequently as growth-oriented goals in the domain of cognitive functioning, and selected even more often goals oriented toward maintenance and loss-prevention in the domain of physical functioning. Underscoring the role of resources, we also found that, when making the higher resource demands of pursuing a growth-oriented goal opposed to a goal oriented toward maintenance and prevention of loss more salient, both age groups showed a primary orientation toward maintaining functioning and counteracting losses.

Addressing actual goal pursuit, a set of studies investigated age-differential effects of goal orientation on *persistence* in goal pursuit (Freund, 2002). These studies support the hypothesis of a preference for compensatory efforts in older adults and for gain orientation in younger adults. The results showed that younger adults were

more motivated (operationalized as persistence) to achieve higher levels of performance than to maintain performance when confronted with a loss on the same experimental task. Conversely, older adults when faced with a loss-situation showed higher persistence when compared to the same task aiming at improving their performance.

Taken together, empirical evidence suggests a motivational shift in goal selection as well as in its effects on goal pursuit in the “aging self” that occurs in interaction with age-related changes in internal and external goal-related means and resources across the life course (Brandtstädter, 1998). To acquire skills and approach situations that allow a maximum access to resources seem to be the central motives that drive younger adults. The awareness of depletion of available resources and an increasing risk of a downward spiral of resource losses with age, however, seem to direct older adults central motivational orientation toward preservation of acquired resources and functioning. Specifying the findings reported in the literature on approach and avoidance motivation, pursuing goals that contribute to avoiding losses and help to maintain what one has appears to be detrimental only in younger adults. In older adults, avoidance motivation appears to be related to higher subjective well-being.

THE AGING SELF: INTENTIONAL OR UNINTENTIONAL DEVELOPMENT?

In the remainder of this chapter, we want to approach the question of intentionality once again. Are the age-related changes in goal orientation from gain to maintenance and prevention of loss intentional, controlled, or even conscious as Brandtstädter (1999) would suggest? Are individuals consciously aware of changes occurring in their internal and external resources and intentionally react to these in reorienting their motivational focus? Or does the change in goal orientation occur automatically and uncontrolled? For instance, do younger adults intentionally strive for gains because they *want* to acquire new skills and maximize their potentials? Or is this a motivational orientation that has evolved because of evolutionary advantages of accumulating many resources in young adulthood, and has become part of our behavioral repertoire that does not require intentionality? Similarly, to what degree do older adults consciously and volitionally decide to change their motivational focus toward maintenance and loss-prevention, and to what degree does the prevalence of losses in old age automatically trigger loss-avoidant behavior? We argue that it is not helpful to frame the question of the presence or lack of intentionality, control, and automaticity as exclusive alternatives. Instead, motivational processes are likely to have aspects that are intentional, conscious, and controlled but also aspects that are unintentional, unconscious, and automatic.

Unconscious goal processes are not the same as implicit motives. Implicit motives are typically conceptualized as being based on early acquired, affective preferences for certain kinds of stimuli and are only rarely equivalent to explicit goals (Brunstein, in press). For instance, high achievement motivation might be expressed as the goal to become a professional athlete in one person, or as the goal to maintain the position

as the CEO of a large corporation in a different person. Both persons have very different explicit goals but they both serve the same underlying implicit motive of high achievement. Similar to implicit motives such as achievement, affiliation, and power, we posit that goal *orientation* can also be considered a fundamental preference for a certain kind of outcome (i.e., gains, maintenance, prevention of loss). Goal orientation can be applied to a variety of goal contents or life domains, and does not have to be consciously represented in order to guide attention and behavior. As the self-report studies by Ogilvie et al. (2001) and Ebner and Freund (2003) show, people appear to be able to recognize different goal orientations in their explicit goals when asked to do so. If this explicit goal orientation, however, is the same as their implicit one is to this point unclear. As is true in the case of implicit motives, people might not be able to easily access their implicit goal orientations.

In earlier research on regulatory focus by Higgins and colleagues (Higgins, Klein, & Strauman, 1985) used a self-report measure to assess ideal and ought self-orientation. Most of their recent research, however, uses response times for generating and rating ideal and ought self-attributes. This indirect assessment approach seems to assume that people are unable to directly report on their self-guide (ought or ideal) and related regulatory focus. Instead, this assessment procedure seems to be based on the assumption that the more important the 'ought' or 'ideal self' is in its function as a guide for evaluation and behavior, the more frequently it is activated, and hence the more accessible it is, which leads to shorter response times. As frequent activation is one of the key factors for automatization (e.g., Bargh, 1994), the 'ought' or 'ideal self'-comparison standard might also become automatic over time. Automatization of processes is typically associated with a lack of awareness, intention, and control. Regulatory focus, then, appears to be conceptualized as comprising automatic aspects that can occur without conscious awareness, control, and intention.

Environmental stimuli might serve as external trigger for the automatic activation of goal orientation (Bargh & Ferguson, 2000). Younger adults are frequently in situations that allow improvement of skills and maximization of resources, whereas older adults are much more likely to be confronted with losses in their resources threatening their functioning. This might result in an automatic orientation toward gain in young adults and toward loss-avoidance in older adults. In this vein, we are currently exploring the degree of accessibility of growth orientation in young adults and of maintenance and loss-avoidance in older adults.

The powerful effect of the activation of concepts for subsequent behavior has recently been demonstrated in a study by Bargh, Chen, and Burrows (1996). In this study, young adults walked more slowly after being primed with the concept of old age which is associated with a decrease in walking speed (but see for differing results Hausdorff, Levy, & Wei, 1999). Similarly, young adults showed longer reaction times in a simple lexical decision task after having been presented with pictures of older persons (Kawakami, Young, & Dividio, 2002). This effect seems to hold for experimental subliminal priming but only for those younger adults who have a lot of contact with older adults and who hold strong aging stereotypes (Dijksterhuis & Corneille, 2000; cited in Wheeler & Petty, 2001). Taken together, these findings suggest

an automatic link between the activation of a concept and behavior. As of yet, however, the processes of how stereotypes or expectations about the activated concept (here “old age”) affect behavior are not clear. One possible process is that the activation of a concept (e.g., “slow”) also activates the respective motor code (Hommel, Muesseler, Aschersleben, & Prinz, 2001). Another process could be the automatic assimilation of one’s own behavior to the behavior that is displayed by the environment (e.g., adjusting one’s walking pace to that of one’s social environment). Thus, environmental stimuli that activate the concept “young,” which is strongly associated with gains, might automatically lead to behavior that is oriented towards gains. Conversely, stimuli associated with “old” might automatically trigger the activation of maintenance or loss-avoidance orientation. As people are typically in social environments that are dominated by their own age group, their peers might serve as cues for the automatic activation of the respective goal orientation.

Reinforcement principles might also play a role in establishing a chronic goal orientation. Younger adults might be more successful in attaining growth goals since they possess the respective resources. Goal attainment serves then as a reward, increasing the likelihood of activating the corresponding goal orientation in the respective situation. In contrast, older adults, due to a lack of the necessary resources, might more frequently experience failure in attempts to attain growth goals. The likelihood of achieving maintenance or prevention of loss goals is much higher for older adults, which serves as reinforcement of this kind of goal orientation. Over time, individuals might learn and automatize the goal orientation that leads more frequently to positive (or, in the case of avoiding a negative outcome, negative) reinforcement.

Acknowledging automatic, unconscious, and uncontrollable aspects in goal-related processes does not imply that all or even most goal-related processes fall into this category. People might still have (or feel they have) intentions and actively set and pursue goals. For instance, young adults might actively decide to set their goal standards very high to increase their skills, to be able to keep up with their peers, and to maximize their resources. Older adults might opt to lower their goal standards and to shift their goal orientation toward perseverance and loss-prevention, because they have experienced that this is more adaptive for them. The perception of a “free choice” of goal orientation might actually be of great importance for subsequent goal-related behavior and well-being. The perception of having freely chosen to lower one’s goal standards from gains to maintenance or loss-prevention might preserve older adults’ feelings of control and well-being (“sour grape reaction” or secondary control in terms of the model by Heckhausen & Schulz, 1995). In this sense, then, intentionality might play an important role in self-development, be it an illusion or not.

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