Self-Awareness

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What is self-awareness? Although we can easily think of examples of being self-aware, it turns out to be a rather difficult concept to define. Self-awareness *may* happen, for example, when you suddenly get the feeling that you are being watched, or when you see a reflection of yourself in the mirror, and it is *definitely* happening to you when you are aware of your thoughts, feelings, or yourself as a social being. But what exactly happens when you get the feeling that you are being watched? And what exactly is "awareness of thoughts and feelings"?

Even though examples of self-awareness are easily generated, it does not facilitate the formulation of a definition. As Niedenthal and colleagues (2006) argued in their discussion on the definition of an emotion, giving examples simply passes the problem to the next level of explanation. For example, saying that emotions are "states of joy, fear, and sadness" raises the question what it is about these examples that makes them all an emotion. Similarly, saying that self-awareness happens to you when you are aware of your thoughts, feelings, or yourself as a social being, raises the same question: "What makes these examples all instances of self-awareness?" You might say "awareness of self" is what binds all examples together, but as is true of the definition of emotion as "a state in which you feel highly emotional", defining self-awareness as "awareness of self" is circular reasoning.

This circular reasoning is nevertheless common in the social psychological literature on self-awareness. Baumeister (1998), for example, in his review chapter on the self, described self-consciousness[1] as "the experience of reflexive consciousness", that is, "conscious attention turning back toward its own source". Similarly, Duval and Wicklund (1972), two of the first social psychologists who systematically investigated the consequences of self-awareness, argued that the focus of conscious attention can be turned to the surroundings or to the self, the latter, of course, amounting to the same tautology. Even the Oxford English Dictionary defines self-awareness as the "condition of being aware of oneself," leaving each reader room for giving his or her own interpretation.

Thus, even though examples of self-awareness are generated easily, researchers seem to struggle with the concept. Having a closer look at the term "self-awareness"

quickly lays bare the difficulties scientists experience with it. The two individual components, "self" and "awareness," are both problematic in and of itself. Whereas, for reasons that will be described in the next sections, "awareness" is famously and ominously called "the hard question" in science (Chalmers, 1995), "the self" is not an easily described concept either. Thousands of journal articles, chapters, and books have been written on it. To put it in the words of Baumeister (1998): "Trying to keep abreast of the research on self is like trying to get a drink from a fire hose."

It is not just the overwhelming volume of the literature, but further complicating the formulation of a clear definition of the self, is that it does not seem to be a unitary whole. The self consists of, to name but a few things, a body, appearance, self-knowledge, thoughts, feelings, motivation, behavior, beliefs, hopes, dreams, and so on. As a consequence, the self is not a single topic, but "an aggregate of loosely related subtopics" (Baumeister, 1998).

Although this gives us an impression of the reason that self-awareness is not defined and understood easily, this is not to say that trying to picture and "grasp" it is a hopeless venture. On the contrary, as there have been many researchers studying the self, awareness, and /or a combination of both, knowledge has increased tremendously. Therefore, in this chapter we will give a brief overview (for detailed discussions on self-awareness and its consequences, see the introductions of the empirical chapters) of the knowledge that has been gained in this fascinating research area. More specifically, we will accept –in the absence of a satisfactory alternative- the tautology for a moment and look at both aspects of self-awareness separately. We will begin our quest with discussing awareness, after which we will specify what we understand by the self and which self-aspects we will be focusing on in the next chapters. The current chapter is foremost intended to create a framework; to give an impression of what we are talking about when we talk about self-awareness. We will not claim to be exhaustive, for there are thousands of research articles and books published on this topic, in which a manifold of theories are described. Nevertheless, we hope to create an outlook on self-awareness that places the next empirical chapters in perspective.

To return to the question we started off with: "what is self-awareness?" In our view the answer has yet to be given. Nevertheless, in the next part of this introduction we will undertake an ambitious attempt to combine the "hard problem" (awareness) with an "aggregate of loosely related subtopics" (the self).

Awareness in Social Psychology

On reading the literature on awareness and self-awareness, it seems that most social psychologists accept the idea that "awareness" is something every person has, and that "it" is exists. Awareness is rarely defined and the concept is applied relatively casually, as in "when we are aware of X, we do Y". The existence of "awareness" that instigates all kinds of processes is almost never casted in doubt, since we all seem to experience it.

But what is awareness? As it is rarely defined or described, reading the literature may leave us with images of "spotlights", which can be turned towards all kinds of information, including to ourselves (see, for an example, Duval & Wicklund, 1972, 1973; Scheier & Carver, 1983). It can even leave us with an image of a "Cartesian spirit", a non-physical substance also known as a mind (or a soul), which occupies a body, but is separate from it. Perhaps it is this "spirit" which takes in all kinds of information, including information about our body and about itself (hence, self-awareness). The implications of such images may determine the processes we suggest. For example, if we have a spotlight that turns towards the surroundings or towards private aspects as our feelings, then, by implication, we infer that it is something distinct from our feelings. Similarly, the spotlight metaphor may tempt us into viewing attention and consciousness as equivalents (see, for an example of both terms used interchangeably, Scheier & Carver, 1983). Also, if we say "attention /awareness can be turned to", what do we mean by that? Who does the "turning to"? Does this mean that we have a (Cartesian) spirit that brings everything into action? Social psychologists tend to be very silent about this.

In summary, studying social psychology, especially in the field of "self-awareness", leaves us more or less in the dark about what awareness is, even though terms as "attention", and "awareness" are prevalent. To get an idea of what we are talking about, social psychology, thus, may not be the best route to that knowledge. The questions posed in the previous paragraph, however, are the source of extensive discussions in another field of science, namely the cognitive sciences, and neurology in particular. To acquire knowledge about awareness, we will therefore look at the mechanism that makes it all possible: our brains. We believe that it is important to look at brain-processes, because the processes psychologists infer from studying psychological phenomena will have to be grounded in its design (brain mechanisms). If psychological processes, in the end, cannot be traced back to brain processes, they will undoubtedly be wrong.

This being said, we do not consider neurology to be the Holy Grail (otherwise this dissertation would have an entirely different –neurological- content). Neurology is only part of the story. For example, it does not explain how things feel and how we experience

life. If we have questions concerning our (experienced) motivation, feelings, and behavior, or how we respond to other people and who we (think we) are (questions we have, and of which this dissertation is the result), we have to turn to psychology. At the same time, we need some kind of framework to get a hint of the mechanism (or, as it turns out to be, "mechanisms") we are talking about. Therefore, we will look (briefly) at what neurologists have to say about awareness. As we will discuss later on, some neurologists distinguish between "awareness" and "consciousness". Because "consciousness" is the term used by neurologists to designate what social psychologists call "awareness", to remain consistent with the terminology neurologists apply, in discussing neurological research we will use the term "consciousness". In discussing the neurological underpinnings of consciousness, we will begin with the questions neurologists ask themselves and the methods they use, after which we may place their research results and theories in a better perspective.

"Consciousness" in Neurology: The hard problem

According to Chalmers (1995) there are relatively "easy problems", which deal with phenomena as the ability to discriminate, categorize, and react to environmental stimuli, and there is a "hard problem" of explaining the conscious experience that often accompanies these phenomena. The relatively easy problems are called that way because they can be solved -at least in theory- by specifying neuronal mechanisms that are able to perform those specific functions (discriminating, categorizing and reacting to stimuli). Whereas the methods of cognitive science appear to be sufficient for solving these kinds of problems (e.g., scientists seem to be making progress in these areas), these phenomena seem to be relatively easy to explain. The hard problem, according to Chalmers, on the contrary, concerns the explanation of conscious experiences people have, and, more specifically, the question of why physical processes in the brain should give rise to a rich and conscious inner life.

Although a heated debate is ongoing between proponents and opponents of the distinction between "hard" and "easy" problems (see Box 1a, b, & c), it may be obvious that it is a hard problem in the sense that it has not (yet) been world-news that scientists solved the "mystery of consciousness", even though they have been making progress in studying relatively "easy problems" as visual perception, categorization, and how taste is processed in the brain. As we will see, they do not even seem to be anywhere near a solution. This being said, neurologists have gained some interesting insights concerning consciousness, which may shed light on the processes psychologists are studying.

Box 1a. A philosophical debate: Hard versus easy problems

Not everyone agrees with drawing a distinction between relatively easy questions and a hard question. A heated debate is ongoing between Dennett (self-declared captain of the "A-team", which counts as its members, among others, Quine, Hofstadter, the Churchlands, Rosenthal, and Andy Clark) and Chalmers (declared captain of the "B-team", which counts as its members, among others, Nagel, Searle, Fodor, Levine, and Pinker) of whether or not the distinction between "hard" and "easy" questions is scientifically correct (Dennet, 2001).

Opponents of the view of consciousness as a hard question (the "A-team") point out the resemblance it has with an old problem that challenged scientists for ages, namely, understanding "life" and "life's functions." In the past, vitalists doubted that matter and physical mechanisms could give rise to life, growth, and reproduction, so they introduced an "élan vital": A vital spirit that occupies a living being and disappears when it dies. As in the twentieth century appropriate techniques were discovered that facilitated researching these questions, the underlying biological mechanisms were specified and the explanation in terms of an "élan vital" was pushed aside. According to Dennett (2001) the question, "can physical mechanisms do the job of creating life?", is exactly the same and just as hard back then as the question of consciousness, "can physical mechanisms do the job of creating consciousness?", is right now. As a consequence, Dennett believes that the distinction between easy and hard questions is confusing and misleading. Just as improved research methods resulted in a better comprehension of the biological mechanisms responsible for life (e.g., understanding the workings of the cardio-vascular system and cell division) and, therefore, made this question relatively easy to answer, opponents of the view of consciousness as a hard question believe that with improved methods, the question of consciousness may also become relatively easy to answer. Therefore, consciousness might not be an exceptionally hard question after all.

Box 1b. Consciousness as an illusion? The philosopher's zombie

Labeling consciousness as a hard question may be misleading because it suggests that consciousness has a unique status and that it is different and separate from all other processes. A concrete example of the presumption that consciousness may indeed be something separate from all other processes (the easy problems), is believing in a philosophers' zombie. Zombie theorists (e.g., Searle, Levine, Chalmers, and Block) assume the existence of distinct but equally adaptive conscious and unconscious systems. They assume a complete duplication of functions: the cognitive unconsciousness ('the zombie within') is just like your familiar conscious self, only minus consciousness (e.g., Searle, 1992; Nagel, 1998; Chalmers, 1999; Block, 2002). A zombie is functionally equal to a non-zombie in that it is awake, it behaves and reacts normally, and it is able to report the content of its inner states. The only difference is that a zombie lacks a "phenomenal feel."

Dennett (2001) made a strong argument against the scientific value of a philosophers' zombie. He believes that this theory is based on misguided believes, and worse, that it is not falsifiable. If asked, a zombie would claim to have internal states and would believe it has conscious experiences. Zombie theorists would "know" better, because it is a zombie. But what is this conviction based on? Why should our own believe in our consciousness be different from the zombie's believe in its consciousness? If we believe that we are not zombies, and zombies also believe that they are not zombies, how are we to prove the difference? And is there a difference? Or is it possible that we are all "zombies" with the

illusion that we have something different", which is separate from all basic processes and is called consciousness? Based on this reasoning, Dennett (2001) argues that we should investigate how we come to believe that we have conscious experiences, and not take consciousness as a fact that needs to be explained. Just as we needed to study the question why people believe that their visual fields are uniform in visual detail or grain all the way out to the periphery, instead of the question why people can't identify things parafoveally (since their visual fields are detailed all the way out), and just as we need to study why people think they have déjà-vu experiences, instead of taking déjà-vu as a reality that needs to be explained, we need to study the question why people believe that they have conscious experiences, instead of taking consciousness as a fact that needs to be explained (see also Wegner, 2004; Wegner & Sparrow, 2004).

Box 1c. Hard versus easy problems: The problem of subjectivity

The debate between proponents and opponents of the view of consciousness as a hard problem is not resolved by acknowledging the parallel between the problem scientists experienced with "life" in the past, and the problem scientists experience with consciousness today (see Box 1a). It is not only the question of consciousness as perhaps something separate from all "basic" processes identified as the more easy problems, but also the problem of subjectivity. This problem literally comes down to the question whether there will be anything left to explain when we have identified all processes taking place in the brain. The question here is whether we would be satisfied if we were able to identify the specific neuronal correlates of experience. There could still be an explanatory gap between identifying the processes that take place and understanding a conscious experience. Perhaps the most interesting questions would still be: "ok, now I know how consciousness arises, I know that these brain areas are necessary and sufficient to give rise to this specific experience, but what does this specific experience look like? How does it *feel*?"

As Thomas Nagel (1974) illustrates in "what is it like to be a bat?", consciousness is always confounded by subjectivity:

> "Our own experience provides the basic material for our imagination, whose range is therefore limited. It will not help to try to imagine that one has webbing on one's arms, which enables one to fly around at dusk and dawn catching insects in one's mouth; that one has very poor vision, and perceives the surrounding world by a system of reflected high-frequency sound signals; and that one spends the day hanging upside down by one's feet in an attic. In so far as I can imagine this (which is not very far), it tells me only what it would be like for *me* to behave as a bat behaves. But that is not the question. I want to know what it is like for a *bat* to be a bat."

But does the inability to adopt another person's perspective and learn at first hand what the other experiences, mean that we will never be able to understand consciousness? Is it, from a scientific perspective, important to have exactly the same experience to understand the phenomenon? We will indeed never know what it feels like to chase insects at dusk. Some of us will also never experience a handicap or illness, or will never see an atom, or inspect the moon at first hand. Does this mean, from a scientific point of view, that we do not know "what it is"? Not being able to experience the consciousness of others may not automatically imply that we will never solve "the mystery of consciousness." We do not have to experience an infectious disease to know what it is and what it does to other people.

Therefore, we will now turn to some of the insights that may be taken from their research. What do we know about brain-processes and what does this knowledge tell us about conscious experiences?

Neurological Underpinnings of Consciousness

Different approaches have been adopted in the study of consciousness. Some scientists approach this phenomenon by looking at the *differences between unconsciousness* (e.g., sleep, anesthetics, and automatic behavior) *and consciousness*. By comparing, for example, a sleeping state with a waking state and specifying what happens when the transition from unconsciousness to consciousness takes place, researchers hope to get a fuller understanding of what consciousness consists of and what its functions are. Although this approach has substantial shortcomings (see Box 2), it has generated some interesting insights.

Research results in this area seem to converge on the position that conscious experience is not created at a single place in the brain, but that it depends on the activation of "widely distributed brain areas" (e.g., Tonini & Edelman, 1998). Researchers disagree in their views of how that widely distributed information is unified to create a conscious experience, but for this discussion it is less important whether unity is brought about through a binding process executed by specific brain-areas (e.g., the prefrontal cortex and the parietal cortex; see, for example, Baars, Ramsøy, & Laureys, 2003; Crick & Koch, 2004; Laureys, 2005), or that binding emerges depending on the information that is most activated (e.g., Paré & Llinas, 1995; Tononi & Edelman, 1998; Greenfield, 2001).

Additional support for the hypothesis that conscious experience is generated by distributed brain areas comes from research on consciousness and learning. Whereas consciousness does not seem to be necessary when learning (e.g., implicit learning), it often accompanies learning processes. When learning new tasks, brain activation is widely distributed, but when the task becomes more automatic, activation is more localized and may shift to different brain areas (Petersen, Van Mier, Fiez, & Raichle, 1998; Srinivasan, Russell, Edelman, & Tononi, 1998). Automatic behavior proceeds faster, but at the cost of less flexibility and context-sensitivity (e.g., Edelman & Tononi, 1998). In well-learned, automatic behavior, consciousness is often reduced and the inducement of consciousness can even impair the performance of such behavior. In summary, consciousness often accompanies learning-processes, which is associated with distributed brain activation. This distributed brain activation seems to offer us flexibility and context sensitivity, which is needed when learning new things.

Box 2 Comparing consciousness with unconsciousness

Looking closely at the differences between conscious and unconscious states does seem to be a promising approach. After all, if you were able to identify the specific neurological mechanisms that are activated only when a process is accompanied by a specific conscious experience and not when the conscious experience is absent, this would point to the necessary and sufficient conditions for consciousness to arise.

Unfortunately, what counts as unambiguous reference points is unclear (e.g., Tononi & Edelman, 1998). An intuitive idea would be to compare brain states associated with sleep to brain states associated with consciousness. This approach requires that we first define what counts as an unconscious, sleeping state and, second, what counts as an awake, conscious state. Unfortunately, a clear definition of both states is lacking.

The first problem arises when we look for an imageable conscious state. Defining a conscious state is problematic because, usually, we are not "just conscious," but conscious of something. In other words, our consciousness is confounded with its contents (note that the implicit assumption herein is that consciousness can be separated from its content, which is arguable). If we image a "conscious brain state", we also image, for example, emotions, thoughts, (imagined) motor actions, etcetera. Our consciousness is usually filled with thoughts and feelings, which potentially confounds the data, especially in a laboratory setting, in which people think more or less about the same things and experience the same feelings.

The second problem arises when we look for an imageable unconscious, sleeping state. This seems to be the easy part, but, on closer inspection, looks may well be extremely deceptive. As we are interested in unconsciousness, we have to be sure that the sleeping state is not accompanied by consciousness. The problem is that we cannot ask the person who is sleeping whether he or she is conscious. Naturally we could ask a person afterwards, but we cannot check whether this is actually true. Maybe the person *was* conscious, but due to impaired memory encoding during sleep, he or she cannot *remember* being conscious. Therefore, we cannot fully rely on self-reports.

Moreover, especially during the "rapid eye movement" (REM) stage, people can sometimes become aware of themselves and the state they are in. This happens, for example, when they come to realise that they just jumped off a roof and are flying, which is at least remarkable, as people have a bad reputation in flying without reliance on advanced technology. Often, when people become aware that they must be dreaming, they wake up, but some people -naturally or after practice- can dream on and exert influence on the content and direction of their dreams. Those dreams, in which the dreamer is aware of being asleep and dreaming, are called "lucid dreams". LaBerge and colleagues have shown that people can indeed be conscious of their situation when they are sleeping, and, more specifically, that it is not a "mixed phase" (half awake, half asleep), but that it happens during the most intensive REM sleep, called "phasic" (e.g., Kahan & LaBerge, 1994; Holzinger, Laberge & Levitan, 2006). Although these experiments have the ability to shed new light on consciousness, the obvious drawback is that we currently do not know enough about those specific experiences and in what way they differ (if they do) from "normal" consciousness. Pinpointing the neural correlates and looking at the transition from deep sleep to REM sleep that is accompanied by lucid dreams may therefore be interesting, but not conclusive. More importantly, since sleep does not reduce consciousness necessarily, it may not constitute a good reference point.

As Damasio (1999; see also, Parvizi & Damasio, 2003; Boveroux et al., 2008) pointed out, slow wave (or "deep") sleep and deep anaesthesia may form better reference points. In these instances we can be fairly sure that consciousness is largely reduced and probably not present at all. But then, is consciousness only reduced in deep sleep? Or do we loose

consciousness earlier on and are the differences we measure, for example between sleep stage 2 and slow-wave sleep, due to other processes shutting down, or operating differently when the depth of sleep increases? In other words, perhaps the differences we may find have nothing to do with the transition from consciousness to unconsciousness. Even if we could be sure that the processes we measure indeed assess the transition from consciousness to unconsciousness, to which conscious equivalent should we compare this unconscious state? What is the proper conscious counterpart of being in a deep sleep?

Even though the study of sleep may offer us interesting insights in the workings of our brain and may even offer interesting hypotheses concerning consciousness, the problems described (finding proper reference points) inhibit definite conclusions. A different approach, in which more specific reference states can be compared to each other, is therefore needed.

A different approach neurologists (and cognitive psychologists) adopt is to study visual consciousness. Whereas vision is highly structured and much is already known about visual consciousness, this provides an opportunity to study the brain mechanisms associated with consciousness of visual information. One of the interesting findings that stems from this research is that our brain is hierarchically organized and that we have highly specialized modalities, which deliver different (parts of) sensory information (e.g., a modality for auditory or visual information, which may be further divided in areas that process color, movement, faces, etcetera; see Box 3). At a higher level, information processed by these distinct modalities is integrated and provided with meaning. By steering conscious attention to some information and steering it away from other information, and by complementing the information with memories, emotions, and plans for the future, the "highest processing mechanisms" (e.g., the paralimbic and limbic areas, in collaboration with the prefrontal cortex) bring about a rich, conscious experience (see Box 4).

Still another approach adopted (sometimes combined with the previous two approaches) is to look at the consequences of *brain damage* (see, for example, Box 5). By comparing intact brain processes with brain processes that are defective (which may result in, for example, persistent vegetative state, minimal consciousness, absence, or in sensory impairments as agnosia's and blindsight), and by looking at the consequences those defects have for consciousness, neuropsychologists hope to get an idea of what consciousness encompasses. This research domain has provided interesting insights in the underlying mechanisms of consciousness.

One of these interesting insights is that consciousness may be divided in "wakefulness" and "awareness" (e.g., Laureys, 2005). People can be awake but not aware (as persistent vegetative state tragically illustrates, but as also can be seen in "absence"), and, the other way around, people can be aware but not awake (as lucid dreaming

Box 3 Visual consciousness

Because vision is highly structured and relatively easy to articulate and monitor, this sensory modality seems perfectly suited for studying consciousness (e.g., Tononi & Edelman, 1998; Rees, 2004). Also, as vision is one of the most important capacities we have (as inferred from the proportionally large part it occupies in the cerebral cortex: About 27% of the total cerebral cortex is occupied by areas concerned with vision, as compared to 8% that has a predominantly auditory function, 7% that has a somatosensory function, and about 7% that has a motor function; Van Essen, 2004), knowing what causes visual consciousness would constitute an important advancement.

Visual consciousness: Binocular rivalry and bistable images
In research on visual consciousness, binocular rivalry seems to be the standard method applied by both psychologist and neurologist (e.g., Lumer, 2000). In binocular rivalry, two different images are presented simultaneously to the two eyes. Because images cannot be merged by the cyclopean visual system, they "compete" for dominance, and perception spontaneously alternates every few seconds between each monocular view. The same appears to happen when looking at bistable images, such as the Necker cube and Rubin's face/vase (see illustrations on the next page). These images allow for different interpretations and, as a result, perception switches between the alternatives (e.g., between the perception of a face or a vase). The advantage of binocular rivalry and bistable images is that the perceptual, retinal, input stays the same and that only conscious awareness changes. By imaging the brain during the transitions in consciousness, researchers try to identify the brain processes related to conscious vision.

In the 1980s Logothetis and colleagues pioneered the binocular rivalry paradigm in rhesus monkeys. Monkeys trained in a motion discrimination task were exposed to vertically drifting horizontal gratings that were presented independently to the two eyes through a stereoscopic viewer (e.g., Logothetis & Schall, 1989). If the gratings were moving upwardly, the monkeys executed a saccade (brief eye movement) to the right, whereas if the gratings were moving downwardly, the monkeys executed a saccade to the left. In half of the trials the gratings drifted in the same direction, and in the other half they were moving independently (one moving upward, one moving downward). Single cell recordings showed that neurons firing in the primary visual cortex (V1) reflect the visual input and not the conscious perceptions. Moving further up the visual hierarchy to higher cortical areas, an increased correlation was found with the perception reported by the animal.

Whereas in monkeys activity in the primary visual cortex reflects the visual stimuli rather than consciousness, functional magnetic resonance imaging (fMRI) in humans has demonstrated that fluctuations in activity in the primary visual cortex (during rivalry of stimuli that differed in contrast) are much stronger correlated to visual perception (Rees, 2004). This discrepancy could be due to differences between humans and monkeys, but it could also be due to the different methods used (spiking activity versus fMRI blood-oxygen-level-dependent activity), or to differences between stimulus features. The primary visual cortex in humans is necessary for detecting brightness and contrast, but it may be less important for detecting movement (e.g., moving gratings). Whether or not, or to what extent the primary visual cortex modulates perception may not be clear just yet, but at least for some stimulus features (e.g., brightness and contrast) it seems to be necessary (though not sufficient) for phenomenal experience to ensue.

Two examples of bistable images.
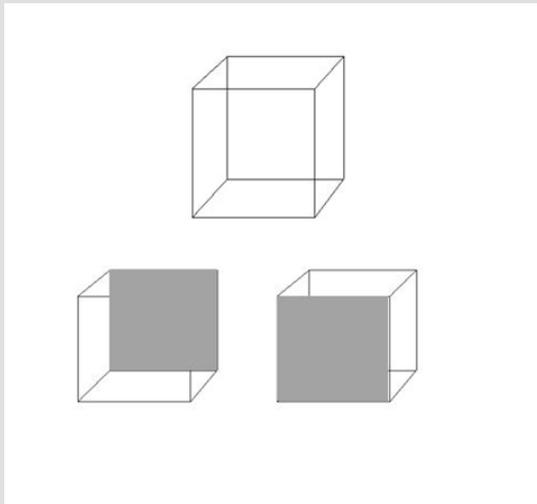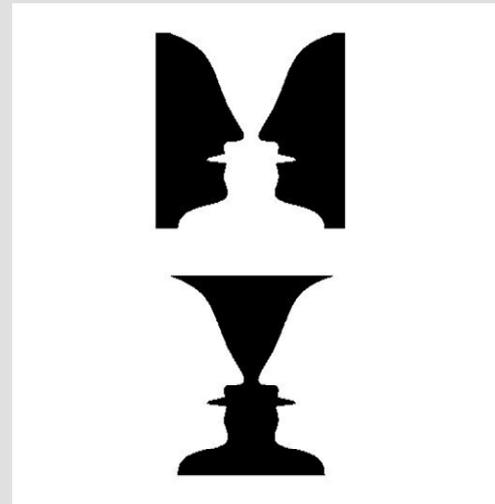
Necker cube   *Rubin's face /vase*

Box 4 Hierarchically processing of sensory information

In an extensive review on the relation between sensation (perceiving information) and cognition (being aware of the perceived information), Mesulam (1998) describes six functionally distinct levels of information processing that are each separated by at least one unit of synaptic distance in the brain (see figure on the next page). The six synaptic levels are hierarchical organized in such a way that sensory information is encoded at the first levels and gradually transforms into cognition at higher levels of processing.

The first level is occupied by the primary sensory and motor cortices [primary visual (V1), auditory (A1), somatosensory (S1), and motor (M1) cortices]. Sensory information first passes these primary sensory areas before entering the unimodal association areas. At the second synaptic level, basic features of sensation such as color, motion, form, and pitch are extracted. At the third and fourth synaptic levels, patterns and entities such as objects, faces, spatial locations, and words are categorically identified. The first unimodal areas extract basic properties of the sensory information, whereas the integration of these basic properties takes place in unimodal areas especially at the fourth synaptic level. In these unimodal areas (synaptic level 1 through 4) modality-specific sensory information is encoded (for example, auditory *or* visual information), and monosynaptic connections between distinct modalities are absent. In other words, at the first four synaptic levels, information between the specific modalities (e.g., vision, auditory) is not exchanged.

At the fifth and sixth synaptic level, the information of the different senses is integrated by "transmodal gateways", and meaning is assigned to the encoded information. Transmodal areas include heteromodal, paralimbic, and limbic areas (associated with "new learning" and attention), and the prefrontal cortex (associated with attention and working memory), which are interconnected and lack specificity for any single sensory modality. These cortical areas allow multimodal convergence, encoding, and recall of (new) information and are able to exert a "top-down" influence upon the unimodal areas. The top-down influence

of the limbic and frontal cortices modulates perception based on factors as novelty, emotion, motivation, intention, and past experience.

The first two synaptic levels are relatively "shielded" from the top-down influence of the limbic and frontal cortices, whereas the frontal cortex is relatively "shielded" from direct perceptual input. This observation led Mesulam (1998) to argue that it indeed makes sense that the information that is being processed at the first synaptic levels (e.g., color, motion, shape) is not being modulated by higher level areas (for example by motivation) because altering the response to color, motion, and shape makes little adaptive sense, whereas it makes perfect sense to modulate responses to specific objects, faces, and locations based on previous experience and current motivation. Only after essential features of the sensory information are encoded, modulation by the prefrontal cortex and limbic areas is adaptive. The prefrontal cortex, in turn, is relatively "shielded" from direct perceptual input so that it can be tuned specifically to internal motivation and needs.

In other words, this relatively extensive latitude between sensation (first synaptic levels) and cognition (last synaptic levels) ensures that the basics of the sensory information (tone, pitch, color, motion, shape) is being perceived in a relatively unbiased way, whereas this "basic information" may subsequently be interpreted and used in many different ways according to an individual's past, current motivations and emotions, and future plans. The greater amount of synaptic levels (compared to other non-primate species) seems to offer us behavioral flexibility (sensation does not lead to an inflexible reaction) and internal "preferences" lead to diversity instead of stereotypy and sameness (Mesulam, 1998).
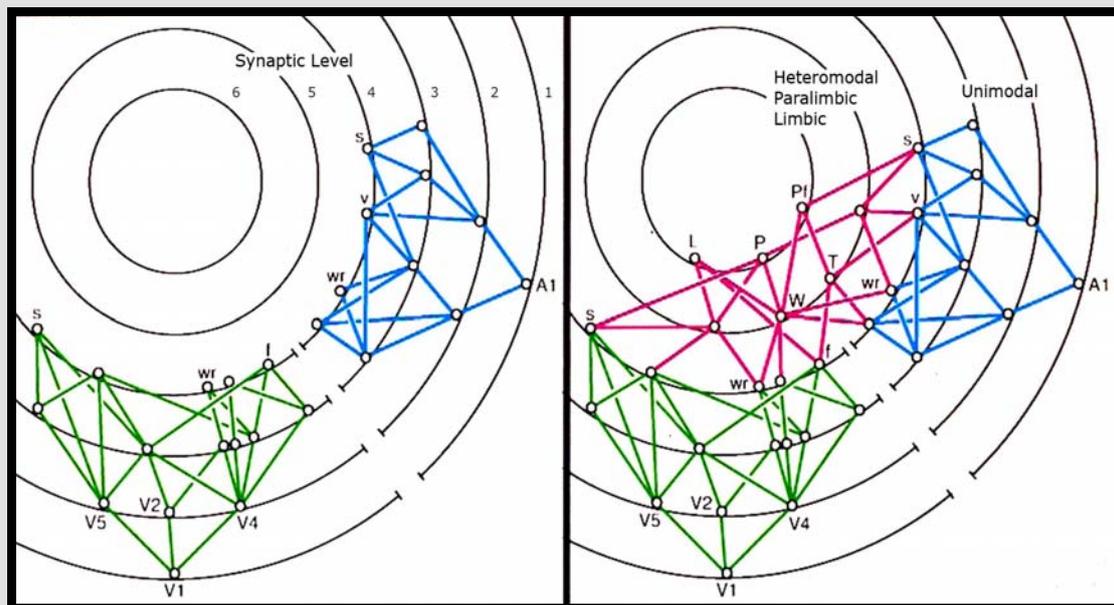
Hierarchical processing of information in the brain. Reprinted with permission of the author.

Box 5 Visual impairments

Support for the hypothesis that consciousness depends on activity in different brain areas can be found in research on deficits in visual consciousness. Vascular deficiency, trauma, and tumors, are among the most common causes of damage to the primary visual cortex (V1), (Stoerig & Cowey, 1997). A lesion in the primary visual cortex causes blindness in the contra lateral visual field. Thus, a lesion in the primary visual cortex of the left hemisphere causes blindness in the right visual field and vice versa.

     Although consciously unaware of visual stimuli, some people seem to be able to experience residual vision in their "blind field" (Weiskrantz, Barbur, & Sahraie, 1995). Especially stimuli that are rapidly moving, which have a fast on /off transient, and have high contrast can be more or less perceived. Even though patients are not able to consciously report what kind of stimulus is shown (e.g., the content of the stimulus, its color, and its form), they are aware that "something is shown." Moreover, although lacking conscious awareness of a visual stimulus, some people are nevertheless able to make visual discriminations. This phenomenon, in which people have no phenomenal experience but can make certain visual discriminations under forced-choice conditions has been called blindsight (e.g., Weiskrantz et al., 1995; Kentridge, 2003).

     What this phenomenon foremost shows us, is that the primary visual cortex is necessary for the conscious vision of content (color and form), but that certain visual information (i.e., fast motion) bypasses this area and is being processed in different brain areas (i.e., middle temporal area /V5). Brain areas in which information is still being processed, are capable to produce a response that is either implicit (e.g., by changing responses to stimuli of which a patient is phenomenally aware) or explicit (e.g., in a forced visual discrimination task), (Stoerig & Cowey, 1997).

     Moving from the primary visual cortex (V1) up in the visual hierarchy, we encounter specific visual deficits. Destruction of V4 (ventral part of Brodmann area 19) leads to color blindness (cerebral achromatopsia), but leaves the perception of movement, acuity and form intact. Destruction of V5 (at the junction of Brodmann area 19 and 37) leads to an inability to perceive motion (akinetopsia), but leaves the perception of color, form and acuity relatively intact. The specificity of these visual defects shows that perception depends on the cooperation of multiple functionally isolable brain areas (see for a review, Mesulam 1998).

     At a still higher level in the visual hierarchy, we encounter a conglomerate of disorders in higher-level perception that are captured with the term "agnosia". In agnosia, which literally means "lack of knowledge", the sensory system is intact and people are aware of stimuli, but those who suffer from it are no longer able to conjure up from memory the meaning of specific classes of visual information (Farah, 1992; Damasio, 1999). Examples of these specific classes of visual information are faces (prosopagnosia), printed words (alexias), or specific objects (object agnosia due to prosopagnosia). Disorders as prosopagnosia (not being able to recognize specific faces including one's own face), alexias, and object agnosia (for example, knowing that a car is a car, but not being able to distinguish a BMW from a Mercedes) show us that visual information is hierarchically processed in the brain. At the lower processing levels information is being represented, but only after the information is processed at higher levels, meaning is ascribed to this representation and people will be consciously aware of the meaning of the information. In other words, perception (the representation of information in the brain) is dissociable from knowing its meaning, and meaning is assigned to visual input at a higher level of information processing (e.g., Farah, 1992; Ogden, 1993; Jager, 2005).

In summary, research on the visual system demonstrates consistently that consciousness depends on activity in various brain areas, and that conscious vision is hierarchically organized in the brain. Although visual information appears to be modulated by consciousness even at the lower levels (e.g., the primary visual cortex), and conscious vision is not possible without these lower levels, meaning to the visual input is ascribed at higher levels (e.g., ventral extrastriate cortex, ventral visual cortex, parietal cortex, and prefrontal cortex). At higher levels of information processing, vision seems to depend on the cooperation of multiple functionally isolable brain areas, which lends support for the hypothesis that the content of (visual) consciousness consists of the input of distinct pieces of information (e.g., color, motion, faces, words).

In conclusion, although it feels as if our (visual) consciousness is a single entity (when we open our eyes, we perceive all aspects –color, patterns, movement, etcetera- of our surroundings as a whole), consciousness actually consists of many distinct aspects. If one such aspect is abolished, we still experience consciousness, only minus that particular aspect. Consciousness does not brake down, it is only lacking a specific piece of content.

illustrates). For "regular" conscious experience, both wakefulness and awareness are required.

Another interesting finding gathered with this paradigm is that different cortical areas may be damaged, but that consciousness can still be intact. For example, the entire visual system, the amygdala, the hippocampus, or even the prefrontal cortex may be badly damaged, which leaves the patient impaired, but not unconscious (e.g., Damasio, 1999). Such lesions influence the content of consciousness, which may alter an individual's experiences, but it does not leave a patient "half conscious", or not conscious at all. Perhaps only when all these brain areas are damaged together, a patient will be unconscious. The only structures that seem capable of leaving a patient unconscious (e.g., in a coma) are located near the brain's midline (e.g., Parvizi & Damasio, 2003; Laureys, Boly, & Maquet, 2006).

Conclusions

Now that we have briefly discussed the processes that appear to be involved in consciousness, what can we extract from these results? What are the implications of this information for the views we hold on consciousness?

One of the implications is that the spotlight-metaphor may not be particularly well chosen. We do not have a specific brain area that "oversees" it all and "decides" what we should be conscious of. As it seems, consciousness depends on the operation of widely distributed, hierarchically organized brain areas, which, when operating in concert, are related to consciousness.

This conclusion is related to another important insight: although we experience consciousness as an integrated entity, it actually involves many different brain processes. Thus, for example, even though we experience (and therefore believe) that we see the person who stands in front of us "as a whole", our perception is in actuality an aggregate of many different (sometimes highly subjective) bits of information (for example, color, motion, face recognition, the name of the person, completed with knowledge we have of that person, an opinion, and feelings we have for him or her). These bits of information are delivered by many different brain areas. When one such area dysfunctions, we are still conscious, only minus that particular aspect. Even though we experience our consciousness as something that cannot be divided, decomposed into smaller parts, it is not a single entity. Our experience, in other words, may well be an illusion.

Another implication of the literature discussed seems to be that meta-processes do not involve "an extra level of consciousness". It is not an "extra" conscious monitor that scrutinizes our consciousness. As it seems, we have only one conscious, which consists of different kinds of information, delivered by different brain areas. This information may be about our external world, ourselves, plans we have for the future, or mistakes we make. The underlying mechanisms may differ, but consciousness seems to be the same.

Other implications concern definitional questions. Several social psychologists, for example, have equated consciousness with attention (e.g., Scheier & Carver, 1983). Although attention is an important mechanism in consciousness, attention and consciousness are not the same things (e.g., Koch & Tsuchiya, 2006). Our attention may be (unconsciously) drawn to something, but that does not mean that we are also aware of it. In this dissertation we will sometimes use the term "attention" without specifying whether we mean "conscious" attention or "subconscious" attention, which does not necessarily engender consciousness. Although we expect (and we will argue) that most processes to be described are conscious processes, except for the times we explicitly measured consciousness, we cannot be sure. We will return to this issue in some of the chapters to be described and in the discussion.

Similarly, "awareness" (which is the term social psychologists apply to denote consciousness at a particular moment) is not an equivalent of consciousness, as consciousness requires both awareness *and* wakefulness. As "awareness" is the most frequently used term to designate consciousness in social psychology, we will use these two terms interchangeably. Because it will be apparent that our theories concern people who are awake, this may not lead to confusions. It is important, however, to keep in mind that "outside" our research area, both terms cannot be applied interchangeably.

Thus, to remain consistent with mainstream social psychology research on consciousness, in this dissertation we will use the term "awareness" to signify consciousness. However, to make things a little more complicated, social psychologists do distinguish between awareness and consciousness, but this distinction has nothing to do with the underlying mechanisms. Consistent with the prevailing views in social psychology, we will us the term "self-awareness" for self-consciousness *at a particular moment* (a state), and "self-consciousness" for the *chronic disposition to be self-conscious* (a trait). As most of our research concerns consciousness at a particular moment (for example, as a consequence of a specific manipulation), the term "self-awareness" will be used most frequently. But what is this "self" of which we may be aware? Now that we have a hunch of what consciousness may involve (and what it probably does not involve), we will turn briefly to the self, after which we will give an overview of the content of the empirical chapters that are included in this dissertation.

The Self

As already mentioned at the beginning of this chapter, the self, as Baumeister (1998) has put it, can be regarded as an "aggregate of loosely related subtopics". It may involve sensing our body (which may well be standing at the dawn of consciousness e.g., Damasio, 1999), remembering specific details of our past, our motivation, a specific or global feeling we have when thinking about ourselves, future plans, or our behavior. All these things together constitute the "self" and make up the person we are.

As a consequence of this multi-faceted characteristic of the self, we cannot be aware of all self-aspects simultaneously. Our consciousness may be filled with some aspects,[2] but not with all of them together. For example, when we worry about the way we look, we may not be aware of the opinion we hold that what is on "the outside" (e.g., appearances) is less important than what is on "the inside". Similarly, when in the company of others, thoughts about conveying the right impression in order to be accepted by them may be highly relevant, which could go at the expense of our own, private, thoughts and feelings. In conclusion, we will only be conscious of some self-aspects at any particular moment.

When are we aware of which self-aspects? And what are the consequences of being aware of those aspects? These questions are voiced in nearly all of the following chapters. In this dissertation, therefore, we will study the antecedents, the process itself, and the consequences of self-awareness from a psychological perspective. This perspective offers us the opportunity to study how self-consciousness is experienced, and

to explore its motivational and behavioral consequences. As may be clear, we will study the *content* of consciousness, and not consciousness itself. We will now turn to a brief overview of the empirical chapters.

Outline of this Dissertation

In the first two chapters we will ask ourselves which self-aspects people are aware of. To explore this, we will increase awareness with different, often-used self-awareness manipulations and examine whether they increase awareness of similar self-aspects. Also, we will examine the consequences of these increases in self-awareness for saliency of self-standards and for behavior. More specifically, we will argue that different, often-used, self-awareness manipulations (e.g., a mirror and activating words as "I", "me", and "mine") increase awareness of different aspects of the self, which may result in the activation of different, predictable standards, and to specific behavior.

Another question posed in these chapters is what happens when we *are* aware that different self-aspects are in conflict with each other. We will argue that it depends on the context which aspect will guide subsequent behavior. More specifically, whenever we have other people on our minds, or whenever we at least realize that our behavior is executed in a social context (e.g., other's *may* see it), "social" standards (e.g., to conform, to leave a desirable impression, and to be accepted) prevail, and, therefore, will incite behavior.

In the third chapter, we will examine the influence others may have more directly. In this chapter we explore what happens when we are being watched and evaluated. In this chapter, as well as in the following, we will also look at the process of self-awareness. Specifically, we will argue that we may adopt different perspectives, and that adopting our own, egocentric (first-person) perspective leads to different behavior as adopting an observer's (third-person) perspective does. As we stumbled across considerable gender differences in the third chapter, in the fourth chapter we explored those differences. In Chapters 3 and 4, the questions "what instigates self-awareness?", "what are we aware of when self-aware?", and "what are the consequences of self-awareness?" are further explored. Even though we found gender differences, we will argue that the process of self-awareness and its consequences are similar for both men and women.

In the fifth chapter, which also constitutes the last empirical chapter, we will examine the consequences of social versus personal standards in more depth. Specifically, we will argue that personal standards (e.g., being independent or being different) may foster creativity, whereas social standards may hinder it. Although it may be questioned

whether we induced self-awareness in this chapter, or whether our manipulations initiated automatic processes, we believe that this chapter gives us an interesting outlook on the influence of the activation of self-relevant knowledge structures (and, perhaps, self-awareness).

In the discussion we will summarize all results and we will draw some general conclusions. Furthermore, in this closing chapter we will pay attention to some of the outstanding research questions, and we will briefly present several ideas to answer these questions in future research.

Together, we believe that these chapters contribute to our understanding of the antecedents of self-awareness, the process itself, and the consequences of self-awareness. The central thesis in this dissertation is that a specification of the content of our awareness, leads to predictable motivational and behavioral consequences.

Footnotes

[1] "Awareness" and "consciousness" are usually treated as equivalents in social psychology. As will be discussed later in this chapter, in other disciplines than social psychology, scientists distinguish between consciousness and awareness, and argue that consciousness, technically, requires both awareness *and* wakefulness (see, for example, Laureys, 2005). In this chapter, consistent with social psychological research, we will use the two terms interchangeably. This means that awareness involves being awake.

[2] We are aware that statements like "consciousness may be filled" presuppose that consciousness is something distinct from its content. It could also be the case that consciousness does not exist without a specific content. We do not (yet) take a position in the (ongoing) debate whether consciousness may be something distinct from its content, or whether consciousness exists by virtue of its content.

CHAPTER 1

Self-Awareness and Saliency of Social versus Individualistic Behavioral Standards

In three studies the effects of private and public self-awareness on saliency of behavioral standards were examined. Several well-known manipulations were used to test the effects of private or public self-awareness on the activation of behavioral standards. It was expected and found that public self-awareness was related to relatively social standards, as "getting along well" with others, conveying a positive image, and wanting to be accepted. Private self-awareness was related to the relatively individualistic standard to be authentic and even to be different from others. The consequences of these results are discussed in light of previous research and it is argued that it is important to acknowledge that awareness of different self-aspects may increase saliency of distinct behavioral standards.

Self-Awareness and Saliency of Social versus Individualistic Behavioral Standards

What happens when people become aware of themselves? Previous research offers a variety of suggestions. Self-awareness has been related to, for example, *accurate self-reports* (Gibbons, 1983; Scheier, Buss, & Buss, 1978; Pryor, Gibbons, Wicklund, Fazio, & Hood, 1977), *consistency* (Silvia & Gendolla, 2001), *conformity* (either to general norms, or to specific others, e.g., Kallgren, Reno, & Cialdini, 2000), and *strategic self-presentation* (Schlenker & Weigold, 1990; Solomon & Schopler, 1982). In the current chapter, we will argue that the consequences of self-awareness may become more predictable when it is specified *which* self-aspects people are aware of.

Even though several researchers have speculated about the behavioral standards that are activated when people become self-aware (e.g., Duval & Wicklund, 1973; Gibbons, 1983; Schlenker & Weigold, 1990; Carver & Scheier, 1998), behavioral standards, to our knowledge, have seldom been assessed directly as a consequence of self-awareness. From behavioral data (e.g., "participants behave consistently" or "participants conform to norms"), it is typically concluded that certain behavioral standards must have been activated (e.g., Gibbons & Wright, 1983; Schlenker & Weigold, 1990). Gibbons (1983), for example, inferred from the result that self-aware participants expressed attitudes that were consistent with their behavior, that self-awareness leads to accuracy. But was "accuracy" activated? An alternative explanation for this finding may be that the standard "to be consistent" was activated, which led participants to behave consistent with previously expressed attitudes.

Similarly, based on the finding that self-aware participants contrasted their opinion away from the opinion of others, Schlenker and Weigold (1990) concluded that participants emphasized autonomy and personal identity. But was autonomy in this case a salient behavioral standard? Or was, perhaps, the standard "to be unique" activated? As the activation of behavioral standards was not assessed in these previous studies, we do not know why self-aware participants behaved the way they did.

Although the activation of different behavioral standards may induce similar behaviors, these different standards may also induce different behaviors. For example, the standard "to be consistent" may lead to the expression of an opinion consistent with previously expressed behavior, even when this opinion is inconsistent with a private opinion. In contrast, the standard "to be accurate" may lead to the expression of a private opinion, even when it is inconsistent with previously expressed behavior. To predict

which opinion self-aware people will express, it may therefore be important to know which standard is activated.

One possibility to gain knowledge about the standards that are activated is to measure all kinds of behavioral consequences and—by means of deduction—infer from the data which standard must have been activated. This approach requires numerous experiments, as every possible standard has to be depicted against the other standards. Another way to gain some insight is to measure the behavioral standards more directly. For this reason we designed the current studies: To measure the saliency of behavioral standards as a consequence of increased self-awareness.

Private and Public Concerns

In continuation of a research tradition started by Fenigstein, Scheier, and Buss (1975), we hypothesize that the consequences of self-awareness may become more predictable when we specify the self-aspects of which people are aware. Fenigstein et al. (1975) argued that attention could be turned to public self-aspects (e.g., behavior and physical appearance) or private self-aspects (e.g., thoughts and opinions). In the decades that followed, numerous studies on the consequences of private and public self-awareness were conducted.

Froming and Carver (1981) and Scheier (1980), for example, demonstrated that private self-awareness leads to the expression of privately held opinions, whereas public self-awareness leads to the expression of an opinion that is consistent with the opinion of others. Scheier (1980) subsequently argued that high public self-aware persons try to create a favorable public image. In contrast, Froming and Carver (1981) explicitly argued against the idea of positive self-presentation and hypothesized that public self-awareness leads to conformity because people want to "get along well" with others (instead of "impressing others"). Thus, even though the behavioral data of Scheier (1980), and Froming and Carver (1981) are consistent with each other, the behavioral standards that are thought to drive these behaviors are not. Measuring these standards as a consequence of (private and public) self-awareness, thus, may provide insight into the processes that lead to the demonstrated behavioral effects, and, as a consequence, may sharpen predictions that concern its behavioral effects.

Overview of Present Research and Hypotheses

In the present research we will measure the saliency of behavioral standards in response to an increase of both trait and state private and public self-focused attention, in order to circumvent the caveats associated with a focus on only (trait) self-consciousness or (state)

self-awareness[1]. Establishing a relation between individual differences in public self-consciousness and positive self-presentation, for example, would give us an indication of the behavioral standards associated with attention to public self-aspects, but it would not tell us anything about the direction of these effects. It could be that the behavioral standard to impress others leads to attention to one's public self-aspects, so as to establish how one is doing. By experimentally inducing state self-awareness, we could overcome this drawback.

Unfortunately, experimentally inducing state self-awareness is also not without its caveats. For instance, it is not entirely clear what different self-awareness manipulations induce. Although an audience may increase public self-awareness pretty straightforwardly (e.g., Froming, Walker, & Lopyan, 1982), the effects of an often-used mirror manipulation are less conclusive. Some authors inferred from their data that a mirror must have enhanced public self-awareness (e.g., Hofmann & Heinrichs, 2002), but others infer from their results that it enhances private self-awareness (Froming et al., 1982; Scheier & Carver, 1980). To overcome this drawback, we will use different self-awareness manipulations and assess which aspects of the self (public or private) are increased. An additional benefit of this approach (besides that it may provide multimethod evidence for the relation between public and private self-awareness and certain behavioral standards) is that it may shed light on the specific consequences of different self-awareness manipulations, which are, to date, have not yet been established unequivocally.

In Study 1 we will first measure behavioral standards as a function of individual differences in self-consciousness. This study will enable us to get an initial impression of the relationship between public and private self-focused attention and several behavioral standards. In Study 2 and Study 3 we will use several often-used self-awareness manipulations and measure their effects on public and private self-awareness and saliency of behavioral standards. Taken together, we believe that this approach will give us an opportunity to obtain converging multimethod evidence for the relatedness of private and public self-awareness and saliency of several behavioral standards. By specifying the consequences of self-awareness manipulations for awareness of public and private self-aspects, and delineating the relation between awareness of these self-aspects and specific standards of behavior, the consequences of self-awareness should become more predictable.

Consistent with research that shows that people have distinctive levels of self-representation (e.g., Brewer & Gardner, 1996; Gardner, Gabriel, & Lee, 1999) and that depending on context (and culture) they may represent themselves in relationship with others (social self-construals) or as individuals (personal self-construals), we hypothesize

that a focus on private aspects of the self (personal self-awareness) will activate relatively *individualistic* standards. Awareness of one's private thoughts and feelings, may increase the activation of an individualistic self (e.g., Cheek & Briggs, 1982; Gardner et al., 1999), which, in turn, may increase saliency of relatively "egocentric" standards. In contrast, awareness of aspects of the self that others can see (public self-awareness) may activate a social self (e.g., Baumeister & Leary, 1995; Brewer & Gardner, 1996; Scheier, 1980; Wiekens & Stapel, 2008), which, in turn may increase saliency of relatively *social* standards.

Applied to the specific behavioral standards as mentioned in this chapter, we expect that private self-awareness is associated with the relatively *individualistic* standards to be authentic (accurate, or "true to one's inner-self") and, perhaps, even to be different from others (e.g., Schlenker & Weigold, 1990; Stapel & Koomen, 2001). Furthermore, we expect that public self-awareness is associated with the relatively *social* standard to "get along" with others (e.g., to conform and to be similar; Froming & Carver, 1981), and, perhaps, even to present oneself in a positive way (e.g., Scheier, 1980).

Study 1.1

The Relation between Public and Private Self-Consciousness, and Behavioral Standards

The main goal of this first study was to examine whether public and private self-focused attention is correlated with specific behavioral standards. To test our hypotheses, we used a version of the revised self-consciousness scales of Scheier and Carver (1985; see also, Fenigstein et al., 1975). We expect public self-consciousness to be *positively* correlated with the (social) standards to conform to others, to present oneself in a positive way, to be accepted and admired, and to appear consistent (e.g., not to swim with the tide and, hence, "to be unreliable"). Whereas the social self is related to "connectedness to others" (see, for example, Baumeister & Leary, 1995), activation of social standards may exclude relatively individualistic standards as "to be autonomous" and "to be different". Therefore, we expect public self-consciousness to be negatively correlated with (individualistic) standards as "being autonomous" and "being different". Conversely, we expected private self-consciousness to be *positively* correlated with the (individualistic) standard to be autonomous, accurate and different, and *negatively* correlated with the (social) standards to conform, appear consistent, present oneself in a positive way, and to be accepted and admired.

Method

    Participants. A total of 137 undergraduate students (90 women, 48 men) participated in a mass-testing session in return for partial course credit.

    Materials and procedure. All participants completed a version of the Scheier and Carver (1985) private versus public self-consciousness scale (see also, Fenigstein et al., 1975; Sedikides, 1992). The items measuring private self-consciousness ("I think about myself a lot", "I'm quick to notice changes in my mood", "I'm always trying to figure myself out", "In general, I'm aware of the way my mind works", and "I generally pay attention to my inner feelings;" Cronbach's α = .83) and "public self-consciousness" ("I'm usually aware of my appearance,", "I often check myself in a mirror", "I generally pay attention to my behavior", and "I'm aware of the way I look;" Cronbach's α = .77) were measured on 7-point scales (*1* = strongly disagree, *7* = strongly agree).

    Next, participants received a measure of social standards they would like to pursue. All of the items were measured on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). We measured the following behavioral standards: *positive self-presentation* ("I strive to make a good impression on other people", "I want to give people the impression that my life is great", and "I want to show my best side;" Cronbach's α = .64), *accuracy* ("I want to portray myself in a realistic way", and "If I were to meet another person, I would want to convey who I really am;" Cronbach's α = .70), *consistency* ("I want to behave consistent"), *autonomy* ("I want to be an independent, autonomous person") *being different* ("I want to be different from other people"), *conformity* ("I prefer to conform myself to others"), *being accepted* ("I want to be accepted by other people") and *being admired* ("I want to be admired by other people").

Results and Discussion

    Private self-consciousness, public self-consciousness. Consistent with past research (e.g., Fenigstein et al., 1975), we found that public and private self-consciousness were correlated (*r* = .30, *p* < .01); people who are high in public self-consciousness have a tendency to be high in private self-consciousness as well. We did not find significant gender-differences in private and public self-consciousness, all *Fs* < 1.

    Saliency of behavioral standards. A close inspection of the inter-item correlations showed that "being different" and "conformity" were highly correlated (*r* = -.55, *p* < .01; see Table 1). Because of the conceptual overlap between these items, we computed a compound score "being different" (after reverse-scoring conformity, Cronbach's α = .71).

Table 1. Inter-Item Correlations

	Pos. S.Pr.	Admir.	Accur.	Consist.	Auton.	Different	Conform.	Accept.
Pos. self-presentation	-	.43**	.13	-.07	-.05	-.25**	.09	.19*
Admiration		-	.08	-.13	-.23**	-.24**	.11	.28**
Accuracy			-	.08	.10	-.12	.15	.07
Consistency				-	.40**	.12	-.10	-.07
Autonomy					-	.19*	-.15	-.07
Different						-	-.55**	.07
Conformity							-	-.05
Acceptation								-

** p < .01, * p < .05, N = 138

In previous research on the effects of private and public self-consciousness, the significant correlation between public and private self-consciousness is often ignored, and—as a result—the unique relation between, for example, behavioral standards and public and private self-consciousness is obscured (but see Froming and Carver, 1981, for an exception). To be able to establish the unique relation between private self-consciousness and behavioral standards we partialled out the effects of public self-consciousness (and vice versa). As Table 2 shows, a partial correlation analysis demonstrated, as expected, a positive correlation between private self-consciousness and the (individualistic) standards to be autonomous ($r = .30$, $p < .01$), and to be different ($r = .30$, $p < .01$). As also expected, we found a positive correlation between public self-consciousness and the (social) standards to present oneself in a positive way ($r = .47$, $p < .01$), to be admired ($r = .41$, $p < .01$) and to be accepted ($r = .35$, $p < .01$). In addition, as

Table 2. Partial Correlations between Self-Consciousness and Behavioral Standards

Awareness:	Private	Public
Positive self-presentation	-.02	.47**
Being admired	-.02	.41**
Accuracy	.13	.02
Autonomy	.30**	-.14
Being different	.30**	-.31**
Consistency	.15	-.06
Acceptation	-.01	.35**

**p < .01

expected, public self-consciousness was correlated negatively with the (individualistic) standard to be different ($r = -.31$, $p < .01$). Because we reverse-scored conformity and aggregated it with wanting to be different, this latter finding also means that public self-consciousness is correlated positively with conformity. Contrary to predictions, the standards to be consistent or to be accurate were not differentially correlated with public and private self-consciousness.

In conclusion, we found initial evidence that private and public self-consciousness are correlated differentially with specific standards. As expected, private self-consciousness was associated with the relatively *individualistic* standards to be authentic and to be different, whereas public self-consciousness was associated with the relatively *social* standards to conform (not being different), to be accepted, to be admired, and to present oneself in a positive way. Contrary to predictions and previous research, however, neither public nor private self-consciousness was correlated with the standards to be accurate and to be consistent. In the next two experiments, we will test the robustness of these findings.

Study 1.2

Manipulating Different Aspects of the Self:
Consequences for Saliency of Behavioral Standards

In Study 1 we demonstrated that *trait* private and public self-consciousness were correlated with specific behavioral standards. To assess the influence of *state* self-awareness on saliency of behavioral standards, we conducted a second study in which we manipulated private and public self-awareness. We will start off with a fairly blatant manipulation: Having participants imagine a private situation (in which their attention is focused on private thoughts and feelings) or a public situation (in which their attention is focused on public self-aspects). We hypothesize that an imagined audience increases public self-awareness and leads to saliency of the (social) standards to present oneself in a positive way, to be accepted, to be admired, and not to be different, whereas an imagined private situation increases private self-awareness and leads to an increased saliency of the (individualistic) standards to be autonomous and to be different.

Method

Participants and design. A total of 189 undergraduate students (139 women, 50 men) participated in a mass-testing session in return for partial course credit and were

randomly assigned to the conditions of a 3 (awareness: private, public, control) factor design.

Procedure. Participants in the public self-awareness condition were asked to imagine a situation in which they had to "present themselves" in front of their peers (in such a way that their peers would get an impression of the kind of person they were), whereas participants in the private self-awareness condition were asked to imagine a situation in which they were alone and thinking about their "inner self." Next, participants were asked several questions about the situation (e.g., to describe the situation).

Behavioral standard questionnaire and manipulation check. Next (or, in case of the control condition, "first"), ostensibly in a separate study, participants received exactly the same behavioral standard questionnaire as was used in the first study. Subsequently, as a manipulation check, participants filled out a slightly modified version of the private and public self-awareness questionnaire we used in Study 1. The original questions were rephrased so that they would measure *state* instead of trait self-consciousness (see also Sedikides, 1992). The items measuring private self-awareness (Cronbach's α = .78) were rephrased as to measure awareness at that particular moment (e.g., "I'm always trying to figure myself out" became "I'm trying to figure myself out"). The items measuring public self-awareness (Cronbach's α = .60) were rephrased in the same way (e.g., "I'm usually aware of my appearance" became "At this moment I am aware of my appearance"). Participants were asked to indicate on 7-point scales (*1* = strongly disagree, *7* = strongly agree) which answer reflected their current state best. Afterwards, the participants were fully debriefed about the nature of this study and about the manipulations used. No participants showed suspicion about the relationship between the questionnaires.[2]

Results and Discussion

Manipulation check. We conducted a 3 (awareness manipulation: private, public, control) between-subjects multivariate analysis of variance on the self-reported *private* and *public* self-awareness scales to check whether the manipulations had the intended effect. This analysis yielded a significant effect, $F(4, 372) = 9.19$, $p < .001$.

Between-subjects analyses of variance showed an effect of private self-awareness, $F(2, 186) = 4.54$, $p < .01$. Consistent with hypotheses, planned contrast analyses showed that participants who had been thinking about their own thoughts and feelings, were more privately self-aware ($M = 5.6$, $SD = .73$) than participants in the control condition ($M = 5.2$, $SD = .87$), $t(186) = 2.65$, $p < .01$, and participants who had been thinking about giving a presentation ($M = 5.2$, $SD = .87$), $t(186) = 2.57$, $p < .01$. There was no significant

difference in private self-awareness between participants who had been thinking about giving a presentation and participants in the control condition, $t(186) = .03$.

Between-subjects analyses of variance also showed an effect of public self-awareness, $F(2, 186) = 12.10$, $p < .001$. Planned contrast analyses showed that, consistent with hypotheses, participants who had been thinking about giving a presentation were more publicly self-aware ($M = 5.2$, $SD = .65$) than participants in the control condition ($M = 4.6$, $SD = .77$), $t(186) = 4.70$, $p < .01$, and participants who had been thinking about their thoughts and feelings ($M = 4.7$, $SD = .74$), $t(186) = -3.72$, $p < .01$. There was no significant difference in public self-awareness between participants who had been thinking about their thoughts and feelings and participants in the control condition, $t(186) = -.90$.

Saliency of behavioral standards. Because "being different" and "conformity", again, were highly correlated ($r = -.56$, $p < .001$), and due to the conceptual overlap, we aggregated them into the variable "being different" (Cronbach's $\alpha = .71$).
We conducted a 3 (awareness manipulation: public, private, control) multivariate analysis of variance on the behavioral standard questionnaire. This analysis yielded a significant effect, $F(12, 360) = 13.78$, $p < .001$. Consistent with hypotheses, analyses showed a significant effect of awareness manipulation on *positive self-presentation*, $F(2, 184) = 23.12$, $p < .001$, *accuracy*, $F(2, 184) = 4.57$, $p < .01$, *being admired*, $F(2, 184) = 24.63$, $p < .001$, *autonomy*, $F(2, 184) = 31.04$, $p < .001$, *being different*, $F(2, 184) = 27.41$, $p < .001$, and *being accepted*, $F(2, 184) = 16.42$, $p < .001$. Contrary to predictions, but consistent with the results of Study 1, we found no significant effect of self-awareness on the standard to be consistent, $F(2, 184) = 2.5$, *ns.*

As can be seen in Table 3, planned contrast analyses showed that, compared to the control- and public self-awareness conditions, *private* self-awareness increased saliency of the standard to be autonomous and different, which is consistent with predictions and the results of Study 1. Contrary to the results of Study 1 but consistent with predictions, private self-awareness increased saliency of the standard to be accurate and decreased saliency of the standard to be accepted. Furthermore, and consistent with the results of Study 1, planned comparisons showed that *public* self-awareness increased saliency of the standards to present oneself in a positive way, to be admired, and to be accepted. Also consistent with Study 1, public self-awareness decreased saliency of the (individualistic) standards to be different (or increased the saliency of the–social—standard to conform) and to be autonomous. Consistent with the results of Study 1, but contrary to predictions, neither public nor private self-awareness had a significant effect on the saliency of the standard to be consistent.

Table 3. Saliency of Behavioral Standards as a Function of Awareness Manipulation

Awareness Manipulation	Private		Control		Public	
	M	*SD*	*M*	*SD*	*M*	*SD*
Positive self-presentation	4.0[a]	.63	4.1[a]	.81	4.8[b]	.65
Being admired	3.6[a]	.87	3.8[a]	.91	4.7[b]	.72
Accuracy	5.3[a]	.96	4.9[b]	1.04	4.9[b]	.98
Autonomy	5.9[a]	.76	5.1[b]	1.02	4.6[c]	.88
Being different	5.3[a]	.80	4.9[b]	.87	4.3[c]	.66
Consistency	5.0[a]	1.60	4.7[a]	1.47	4.7[a]	1.11
Acceptation	4.9[a]	.83	5.3[b]	1.05	5.9[c]	.92

Means that do not share a superscript differ significantly from each other at p < .01

In conclusion, in this study we successfully induced state public and private self-awareness by asking participants to imagine a public or a private situation. As expected, private self-awareness increased saliency of relatively individualistic behavioral standards, whereas public self-awareness increased saliency of relatively social behavioral standards. Furthermore, private self-awareness increased the saliency of the standard to be accurate and decreased the saliency of the standard to be accepted. At this point we are hesitant to speculate about these latter results, because they are inconsistent with the results of Study 1. This inconsistency could be the result of a difference between the effects of state and trait private self-awareness, but it could also be coincidental, especially because the effects are moderate. In the next study we will see whether these results can be replicated.

Study 1.3

Effects of Often-Used Self-Awareness Manipulations on Public and Private Self-Awareness and Saliency of Behavioral Standards

Although a mirror is probably the most often applied manipulation of self-awareness, agreement on its effects on public and private self-awareness, has yet to be established (see, for example, Buss, 1980 versus Carver & Scheier, 1978). In the current study we will assess public and private self-awareness as a consequence of exposing participants to a reflection of themselves in a mirror. Our hypothesis is that a (fairly large) mirror (in which participants can see the upper-half of their body) increases public self-awareness[3] and increases saliency of relatively social standards. Even if a mirror should increase private self-awareness as well, we would still expect social standards to be more

important, as people will not only be aware of their private thoughts and feelings, but also of the judgment of those thoughts and feelings by others.

Besides mirrors, self-activation manipulations have been used to activate self-knowledge. One such self-activation manipulation is "I-priming" by means of encircling words as "I", "me", and "mine" in a text (see Brewer & Gardner, 1996; Stapel & Koomen, 2001). We expect this method to increase private self-awareness, without necessarily increasing public self-awareness. We expect the strong activation of private self-aspects to increase the saliency of relatively individualistic standards and to decrease the saliency of relatively social standards.

Participants and Design

Seventy-six female students were randomly assigned to the conditions of a 3 (self-awareness manipulation: mirror, I-priming, control) between subjects factorial design. Participants received partial course credit for their participation.

Materials and Procedure

On arrival in the laboratory, participants were seated in separate cubicles. In the mirror-condition, a mirror was placed at the end of the table in such a way that participants could see the upper half of their body while filling out the questionnaire. In the self-activation and control condition there were no mirrors.

Self-activation. The priming task was modeled after Brewer and Gardner (1996, p.87). Each participant, regardless of condition, received a task called "tracking." In the self-activation condition, participants were instructed to circle—as part of a word search task—all first-person pronouns that appeared in a text. In the I-priming condition, all of the pronouns referred to *I*, *me*, *my*, and *mine*. In the mirror- and control condition these pronouns were replaced by the letter combinations *abc* and *xyz*.

Manipulation check and dependent variables. To measure private and public self-awareness, the same questionnaire as in Study 2 was used. The same behavioral standard questionnaire as was used in the previous two studies followed.

Results and Discussion

Manipulation check. We conducted a 3 (awareness manipulation: mirror, I-priming, control) between-subjects multivariate analysis of variance on the self-reported private (Cronbach's α = .87) and public (Cronbach's α = .67) self-awareness scales to check whether the manipulations had the intended effect. This analysis yielded a significant effect, $F(4, 146) = 9.08, p < .001$.

Between-subjects analyses of variance showed an effect of awareness manipulation on private self-awareness, $F(2,73) = 3.73$, $p < .05$. Planned comparison analyses showed that, consistent with hypotheses, participants in the I-priming condition were more aware of private self-aspects ($M = 5.9$, $SD = .87$) than participants in the control condition ($M = 5.1$, $SD = 1.12$), $t(73) = 2.68$, $p < .01$. In the mirror-condition, private self-awareness was marginally increased ($M = 5.6$, $SD = .95$) compared to the control condition ($M = 5.1$, $SD = 1.11$), $t(73) = 1.80$, $p = .08$.

Between-subjects analyses of variance also showed an effect of awareness manipulation on public self-awareness, $F(2,73) = 15.34$, $p < .001$. Consistent with hypotheses, planned comparisons showed that in the mirror condition, participants were more aware of public self-aspects ($M = 5.8$, $SD = .73$) than both participants in the control condition ($M = 4.8$, $SD = .83$), $t(73) = 4.59$, $p = .001$, and participants in the I-priming condition ($M = 4.7$, $SD = .76$), $t(73) = 4.96$, $p = .001$. Participants in the control condition did not differ significantly in public self-awareness from participants in the I-priming condition, $t(73) < 1$. In conclusion, the manipulations were successful at inducing a state of private self-awareness (I-priming condition) and public self-awareness (mirror condition).

Saliency of behavioral standards. Again, we aggregated "being different" and "wanting to conform" (Cronbach's $\alpha = .72$). Next, we performed a 3 (awareness manipulation: mirror, I-priming, control) multivariate analysis of variance on the behavioral standard questionnaire. This analysis yielded a significant effect, $F(14, 138) = 11.41$, $p < .001$. Consistent with hypotheses, these analyses rendered a significant effect of the awareness manipulation on *positive self-presentation*, $F(2, 73) = 12.31$, $p < .001$, *being admired*, $F(2, 73) = 5.30$, $p < .01$, *accuracy*, $F(2, 73) = 9.38$, $p < .001$, *autonomy*, $F(2, 73) = 38.46$, $p < .001$, *being different*, $F(2, 73) = 52.03$, $p < .001$, and *being accepted*, $F(2, 73) = 13.88$, $p < .001$. Contrary to predictions, but consistent with the results of Study 1 and 2, we found no significant effect of self-awareness on the standard to be consistent, $F < 1$.

As can be seen in Table 4, planned contrast analyses showed that, consistent with hypotheses, private self-awareness increased the saliency of the standards to be autonomous and to be different (compared to the control and public self-awareness conditions). Contrary to the results of Study 1, but consistent with the results of Study 2 and predictions, private self-awareness also increased saliency of the standard to be accurate and decreased the saliency of the standard to be accepted.

Consistent with hypotheses, planned comparisons showed that public self-awareness increased saliency of the standards to present oneself in a positive way, to be accepted, and to be admired. Furthermore, and also consistent with hypothesis, public

Table 4. Saliency of Behavioral Standards as a Function of Awareness Manipulation

Awareness Manipulation	I-priming		Control		Mirror	
	M	*SD*	*M*	*SD*	*M*	*SD*
Positive self-presentation	4.7[a]	1.04	4.9[a]	.90	5.9[b]	.62
Being admired	4.6[a]	1.01	4.7[a]	.87	5.7[b]	1.02
Accuracy	4.9[a]	1.09	3.6[b]	1.58	3.5[b]	1.11
Autonomy	6.4[a]	.87	5.6[b]	.81	4.4[c]	.85
Being different	6.4[a]	.80	5.1[b]	.94	4.1[c]	.88
Consistency	3.7[a]	1.07	4.0[a]	1.57	4.2[a]	.93
Acceptation	1.9[a]	1.17	2.8[b]	1.41	3.8[c]	1.33

Means that do not share a superscript differ significantly from each other at p < .01

self-awareness decreased saliency of the standards to be different (e.g., increased the social standard to conform) and autonomous.

In summary, the results of this study show that I-priming increased private self-awareness (but not public self-awareness) and that it increased saliency of relatively individualistic standards while decreasing saliency of relatively social standards. A mirror, on the other hand, primarily induced public self-awareness. The effects of a mirror-manipulation resembled the effects of an imagined audience: It increased saliency of the relatively (social) standards to present oneself in a positive way, to be accepted, and to be admired, whereas it decreased saliency of the (individualistic) standards to be autonomous and different.

General Discussion

What happens when people become self-aware? In three studies we demonstrated that the answer to this question depends on which self-aspects are salient: Are people aware of their private thoughts, or are they also sensitive to more public self-aspects? The current results show that when people are aware of private self-aspects, more individualistic standards (e.g., to be authentic and to be different from others) are salient, whereas when they are aware of public self-aspects, more social standards (e.g., to get along well with others, to present ourselves in a positive way, to be admired, and not to be different from others) are salient.

These results point out two important issues. The first issue concerns the differential effects of self-awareness manipulations. Even though some authors have argued that different self-awareness manipulations have different behavioral effects (e.g., Carver & Scheier, 1998), others have used these manipulations interchangeably (e.g.,

Macrae, Bodenhausen, & Milne, 1998). By measuring private and public self-awareness directly as a consequence of several manipulations, we have shown that different self-aspects were increased. Consistent with hypotheses, we found that when people imagine that they have to give a presentation, public self-awareness (but not private self-awareness) increases, whereas when they imagine a private situation or when the self is primed, private self-awareness (but not public self-awareness) increases. The effects of a mirror are slightly more complex: Our results show that a mirror primarily induces public self-awareness, whereas previous research shows that private self-awareness is induced as well. Even when private self-awareness is induced as well, we would still expect public concerns to "win." As our results show, a mirror induces the social standard to convey a positive image and get along well with others. In summary, the current results show that awareness of different self-aspects has different consequences. As a result, when applying self-awareness manipulations it seems important to specify upfront which aspects of the self we intend to activate (public or private self-aspects), and to choose our manipulations carefully.

The second issue concerns the consequences of public and private self-awareness. As we have shown, private self-awareness has profoundly different consequences than public self-awareness. Although a discussion of all previous research in light of the current results goes beyond the scope of this chapter, we believe that the results may shed light on unsettled debates. For example, the debate on whether an increased compatibility between self-reports and behavior can be ascribed to the saliency of the standard to be consistent (Silvia & Gendolla, 2001), or to the standard to be accurate (Gibbons, 1983), or to the standard to be accepted (Wicklund & Duval, 1971), may be informed by the current results. In previous experiments concerning this issue, mirrors, cameras, and participants' own voice have been used to increase self-awareness. Our results suggest that these manipulations mainly increase public self-awareness. As a result, we would expect increased saliency of relatively social standards (to be accepted, to conform, to leave a favorable impression) to guide behavior, whereas relatively individualistic standards (to be authentic, or to be accurate) should be less salient. Together the current results offer support for the hypothesis that an increase in compatibility between self-reports and behavior is instantiated by the (social) standard to be accepted. Because knowledge of which standards are salient may improve predictions concerning the consequences of self-awareness, these results contribute to a better understanding of what happens when we are becoming self-aware.

Measuring Self-Focused Attention and Saliency of Behavioral Standards

In the current studies, as mentioned in Study 1, we used a slightly modified version of the revised self-consciousness scales (see also Scheier and Carver, 1985; Sedikides, 1992). Several of the old scales (see Fenigstein, Scheier, & Buss, 1975) were confounded and may not have measured self-consciousness per se (e.g., Wicklund & Gollwitzer, 1987). For example, the item "I am concerned about what other people think of me" seems to measure consciousness of other people instead of self-consciousness. In addition, the item "I usually worry about making a good impression" does not only measure self-consciousness (I am conscious of the way I look), but also "anxiety" ("I am worried about" the way I look). Similarly, in some of the items self-consciousness was confounded with behavioral standards (e.g., if you worry about making a good impression, "making a good impression", thus, is a salient behavioral standard).

To avoid these ambiguities in the current studies, the public self-consciousness scales we used, only measure *consciousness* of public self-aspects (e.g., "I am usually aware of my appearance" and "I generally pay attention to my behavior"). Similarly, the private self-consciousness scales we used, only measure *consciousness* of private self-aspects (e.g., "I think about myself a lot" and "I'm quick to notice changes in my mood"). As a consequence, in the current studies, measures of self-consciousness and behavioral standards were correlated, but did not overlap.[4] This result is consistent with early theorizing of Duval and Wicklund, who postulated that "when attention is focused on the self, there will be an automatic comparison of the self with standards of correctness" (Duval & Wicklund, 1972, p. 4). The current results corroborate this position, and add to it that awareness of private self-aspects activates relatively individualistic standards, whereas awareness of public self-aspects activates relatively social standards.

Limitations and Suggestions for Future Research

Even though the general conclusion that private self-awareness increases the saliency of relatively individualistic behavioral standards, whereas public self-awareness increases the saliency of relatively social standards seems warranted, not all findings of the present three studies were consistent. In Study 2 and Study 3 (when measuring state self-awareness) private self-awareness increased the saliency of being accurate and decreased the saliency of being accepted, whereas in Study 1 (when measuring trait self-consciousness) we did not find a significant relation. It may seem logical to conclude that private self-awareness does indeed decrease the saliency of the standard to be accepted, but the absence of a significant correlation in Study 1 suggests that this may not always be the case. Also, it could be argued that private self-awareness increases the saliency of the

standard to be accurate out of "concerns about one's autonomy" ("I am an autonomous person who wants to behave in line with my true self"), but, again, the correlations in the first study do not corroborate this. Further research should determine whether these differences are due to a difference in state versus trait self-awareness, or whether another method may provide conclusive results.

Also, despite evidence for the thesis that private self-awareness increases consistency between reported attitudes and behavior, we did not find evidence for a relation between self-awareness and saliency of the standard to be consistent in the current studies. A possible explanation for this discrepancy is that people may believe that they generally behave in a consistent way, and, hence, that they do not have to pursue consistency between their thoughts and their behavior. In previous research (e.g., Scheier, 1980; Wicklund & Duval, 1971), participants often had to articulate their attitudes and then react to a situation in which they could act on their attitudes (or vice versa). Perhaps this procedure increases saliency of the standard to be consistent. In contrary, our participants were not confronted with their attitudes. Therefore, the standard to be consistent may not have been salient for them.

Another issue concerns the question whether people always know which behavioral standard leads their behavior. Although we have studied "self-awareness" (which may imply monitoring one's standards and behaviors closely), it may be argued that people do not always know what guides their behavior. Moreover, even when they suspect having a specific standard, they may be reluctant to report it. Additional evidence resulting from, for example, implicit measures is therefore needed. Thus, although the current results seem promising, additional evidence will be needed.

In conclusion, in the current chapter we found that state and trait public and private self-awareness have specific consequences. As expected, we found that private self-awareness increased saliency of relatively individualistic standards, whereas public self-awareness increased saliency of relatively social standards. These results suggest that in studying the effects of self-awareness, researchers have to specify which part of the self they intend to activate, because awareness of different self-aspects can lead to increased saliency of profoundly different (but predictable) behavioral standards.

Footnotes

[1] Consistent with previous research, we will use the term "self-consciousness" to refer to individual differences in self-focused attention, and "self-awareness" to refer to state self-focused attention.

[2] The self-awareness manipulations (imagining presenting oneself to pears, or imagining being alone and thinking about one's thoughts and feelings) were framed as a research on "the start of college life." All participants had recently started their studies. We asked them to imagine a specific situation, which is associated with college life ("meeting peers" or "being alone"). The behavioral standard questionnaire was framed as a study on the general motivation of students (comparative study between different ages, studies, etcetera). At the debriefing no participants showed suspicion about the relationship between the questionnaires.

[3] Buss (1980) has suggested that the size of the mirror may influence whether private or public self-awareness is induced. He hypothesized that pocket-mirrors induce private self-awareness, whereas larger mirrors induce public self-awareness, but did not test this hypothesis.

[4] Integration of the behavioral standards scales into the self-awareness scales decreased the internal consistency of the self-awareness scales. Integrating "Autonomy" and "Being different" into the private self-awareness scales decreased the Cronbach's alpha in Study 1 from $\alpha = .83$ to $\alpha = .48$, in Study 2 from $\alpha = .78$ to $\alpha = .49$, and in Study 3 from $\alpha = .87$ to $\alpha = .49$. Integrating "Positive self-presentation", "Being different" (reversed scored) and "Acceptance" decreased the Cronbach's alpha in Study 1 from $\alpha = .77$ to $\alpha = .49$, in Study 2 from $\alpha = .60$ to $\alpha = .46$, and in Study 3 from $\alpha = .67$ to $\alpha = .54$. Even though the measures are significantly correlated, as expected, they do not measure exactly the same thing.

CHAPTER 2

The Mirror and I

When private opinions are in conflict with public norms

In two studies it is demonstrated that two self-saliency manipulations, often used interchangeably, can have profoundly different consequences. Whereas self-activation *increased* stereotyping in highly prejudiced participants, a mirror *decreased* stereotyping. Results show that this difference can be ascribed to the activation of specific self-aspects. Whereas a mirror increased both private *and* public self-awareness (and, hence, awareness of the social norm that stereotyping is bad), self-activation increased private self-awareness exclusively (and, hence, awareness of privately held negative stereotypes). The implications of these findings for the relation between self-awareness and conformity to social norms are discussed.

The Mirror and I:
When private opinions are in conflict with public norms

What will you do when your private opinion is in conflict with a public norm? Will you stand up for your own values or will you yield to those of others? In the current chapter, we will argue that the answer to these questions depends on which aspects of the self are salient: solely your private thoughts, or how you appear to "the public" as well. More specifically, we will argue that when the salience of public self-aspects is increased (even when the salience of private self-aspects is increased as well), the tendency to "yield" to social norms will be stronger.

It may seem quite logical to assume that people whose private opinions are salient will act according to those private opinions, and that people whose public self-aspects are salient (and may start to worry about the image they are transferring), will tend to act according to social norms. However, this assumption is inconsistent with self-awareness studies showing that whenever the self is salient, pro-social and normative behavior will typically ensue (e.g., Diener & Wallbom, 1976; Kallgren, Rino, & Cialdini, 2000). Diener and Wallbom (1976), for example, demonstrated that confronting people with a reflection of themselves in a mirror, increased behavior consistent with the social norm against cheating on an intelligence test. Based on this finding, Diener and Wallbom (1976) argued that self-awareness promotes normative behavior.

But what were the participants in their study aware of? Was it, as Diener and Wallbom argued, the social norm against cheating, to which they consequently conformed? Or were these participants perhaps aware of the way they came across to other people, and did they conform to the social norm as a result of that? Or did a mirror activate their own, private, norm against cheating, and did they behave in accordance with this private norm? Because saliency of different self-aspects was not measured, we do not know what exactly instigated the anti-cheating norm.

A study by Gibbons and Wright (1983) suggests that it is important to specify what self-aspects are cognitively activated by self-awareness manipulations. Gibbons and Wright (1983) argued that for individuals who are confronted with an image of themselves in a mirror, the cognitive activation of both social norms *and* private opinions should increase. They performed a study in which participants received bogus results of a questionnaire showing that the attitude of their peers was opposite to the participants' private attitude. Participants who sat in front of a mirror adjusted their private attitude in the direction of their peers' attitude, whereas control participants did not. Although this

result seems to suggest conformity to social norms, the correlation between the reported attitude and the pretest attitude-scores was higher in the mirror condition than in the control condition. In other words, whereas participants who sat in front of

a mirror conformed more, they did not "deny" their private attitude altogether. Gibbons and Wright (1983) concluded from this result that the mirror-manipulation had increased the salience of both private opinions and public norms. But, again, as different aspects of the self were not measured directly, we do not know whether this conclusion is warranted.

Moreover, because in the Gibbons-Wright study the public standard (the attitude of participants' peers) was *given* to participants rather than spontaneously *activated* by the presence of a mirror, we are not sure whether a mirror could activate a social norm spontaneously. As a result, we do not know what would happen when both private opinions and public norms are internally activated. Moreover, we do not know whether the "externally" provided (bogus) feedback about the public norm was consistent with participants' "internally" available public norms. Perhaps, participants' internal notion of the public norm differed from the external public norm in such a way that their private opinion and their view of the general public norm resembled each other more closely, which could also explain why participants did not disregard their own, private opinion completely.

In summary, although a mirror has often been used to increase the salience of certain aspects of the self, it is unclear what aspects of the self are activated and how this may relate to behavior. Some researchers have argued that mirrors increase salience of private self-aspects (e.g., Scheier & Carver, 1977, 1980; Scheier, Carver & Gibbons, 1979), but others have argued that they increase salience of public self-aspects (Hofmann & Heinrichs, 2002). Since in the relevant studies, to date, the activation of public and private self-aspects has not been measured directly, in the current studies we did just that.

Because a mirror reflects those parts of the self that are publicly observable, we expect a mirror to activate public self-aspects. We also hypothesize that this will increase participants' conformity to public norms, even when private opinions are also activated. In recent studies on prejudice and self-presentation goals (e.g., Plant & Devine, 1998; Sechrist, Swim, & Stangor, 2004; Stangor, Swim, Van Allen, & Sechrist, 2002), it has been shown that in public reporting conditions (e.g., when an experimenter is listening to the participants), self-presentation goals are salient, which motivate participants to report a public opinion despite of having a different private opinion. Extending this research, we expect that the *activation* of public self-aspects (in the absence of a real "public") will also motivate participants to convey a favorable (public) self-image. In short, we hypothesize

that because mirrors activate public self-aspects, they will lead to behavior in line with public norms, even when these norms are inconsistent with a private opinion and when private opinions are activated as well.

Of course, people sometimes stand up for their own opinion when their private opinions are discrepant from public norms. We expect this to occur when only private self-aspects are salient. Self-activation manipulations that increase the salience of private thoughts and feelings without simultaneously increasing the salience of public self-aspects, may lead to behavior consistent with those private thoughts and feelings. One such self-activation manipulation may be "I-priming" by means of encircling words as "I", "me", and "mine" in a text (see Brewer & Gardner, 1996; Stapel & Koomen, 2001). We expect this method to increase saliency of private opinions, without necessarily activating public self-aspects. We expect the strong activation of private self-aspects to lead to behavior that is in line with private opinions.

In order to test these hypotheses and generate more insight into the differential effects of a mirror-manipulation and I-priming, in the first study we will examine the consequences of these manipulations for the activation of public and private self-aspects. We expect that a mirror will increase saliency of both public and private self-aspects, whereas I-priming will mainly increase the saliency of private self-aspects. In the second study, we will examine the behavioral consequences of a mirror and those of I-priming. We expect a mirror to induce behavior consistent with public norms, whereas we expect I-priming to induce behavior consistent with private opinions.

Study 2.1

The Mirror and I: Saliency of public and private self-aspects

The main goal of this first study was to examine the specific consequences of a mirror-manipulation and I-priming for the activation of different self-aspects. To test our hypotheses, we used the "self-consciousness scales" of Fenigstein, Scheier, and Buss (1975). We expected a mirror to increase the saliency of both private and public self-aspects, and I-priming to only increase the saliency of private self-aspects.

Method

Participants. A total of 164 undergraduate students were randomly assigned to the conditions of a 3-group (self-focus manipulation: mirror, I-priming, control) between subjects design. Participants received partial course credit for their participation.

Materials and procedure. On arrival in the laboratory, participants were seated in separate cubicles. All instructions were administered in written form. In the mirror-condition, a mirror was placed at the end of the table in such a way that participants could see themselves while filling out the questionnaire. In the I-priming and control condition there were no mirrors.

I-priming. The priming task was modeled after Brewer and Gardner (1996; see also Stapel & Koomen, 2001). Each participant received a task called "tracking." In the I-priming condition, participants were instructed to circle, as part of a word search task, all first-person pronouns that appeared in a text. All of the pronouns referred to *I*, *me*, *my*, and *mine*. In the mirror- and control conditions these pronouns were replaced by the letter combinations *abc* and *xyz*.

Activation of public and private self-aspects. To measure the activation of private and public self-aspects, we applied the public and private self-consciousness scales of Fenigstein, Scheier, and Buss (1975). Participants indicated on 5-point scales (*1 = strongly disagree*, *5 = strongly agree*) their agreement with statements such as "I am trying to figure myself out" (private self-awareness, Cronbach's α = .75) and "I am aware of my appearance" (public self-awareness, Cronbach's α = .73).

Results and Discussion

Activation of public and private self-aspects. We conducted a 3 (self-focus: mirror, I-priming, control) between-subjects analysis of variance on the self-awareness scales. This analysis showed a significant effect on *public* self-awareness, $F(2, 161) = 9.47$, $p < .001$. Planned contrast analyses showed, as predicted, that participants who sat in front of a mirror were more aware of public self-aspects ($M = 3.6$, $SD = .65$) than participants in the control condition ($M = 3.0$, $SD = .54$), $t(161) = -5.57$, $p < .001$, and participants in the I-priming condition, ($M = 2.8$, $SD = .59$), $t(161) = -6.42$, $p < .001$. Participants in the control condition ($M = 3.0$, $SD = .54$) and I-priming condition ($M = 2.8$, $SD = .59$) did not differ significantly in public self-awareness, $t(161) = 1.34$, *ns* (see Table 1).

Table 1. Public and Private Self-Awareness as a function of Manipulation

Awareness	I-priming	Control	Mirror
Public	2.8	3.0	3.6
Private	3.5	2.5	3.1

We also found a significant effect on *private* self-awareness, $F(2, 161) = 26.31$, $p <$ .001. Planned contrast analyses showed, consistent with our hypothesis, that participants in the I-priming condition were more aware of private self-aspects ($M = 3.5$, $SD = .83$) than both participants in the mirror condition ($M = 3.1$, $SD = .86$), $t(161) = -3.09$, $p <$ .01, and participantsin the control condition ($M = 3.0$, $SD = .54$), $t(161) = -3.24$, $p < .01$. Participants in the mirror condition were also more aware of private self-aspects than participants in the control condition ($M = 2.5$, $SD = .41$), $t(161) = -4.11$, $p < .001$.

To summarize, in the mirror-condition, both public and private self-awareness were increased, whereas, in the I-priming condition, only private self-awareness was increased. These self-focus manipulations thus affected self-awareness in a manner that is consistent with the proposed model: Mirrors increase both private and public self-consciousness, whereas I-priming activates mainly private self-consciousness.

Study 2.2

When Private Opinions are in Conflict with Public Norms

In order to determine whether participants would also behave in accordance with the activated public or private aspects of their self, a situation in which those aspects are contradictory is needed. One such situation may occur when personal values are in clear and unequivocal contradiction with social norms, as, for example, when one's personal negative stereotypes of an ethnic minority are in conflict with the general norm that one should not judge others based on their social category. Highly prejudiced people may experience a discrepancy between their own negative views and the social norm against stereotyping. We expect that in this situation, one's behavior will depend on the specific self-aspects that are activated. More concretely, we expect that highly prejudiced people will behave in a way that is consistent with their privately held negative stereotypes when personal self-aspects are activated (e.g., by I-priming), whereas they will conform to the social norm that it is inappropriate to stereotype when public self-aspects are activated as well (e.g., by a mirror).

In this study, we asked (Dutch) participants who were either high- or low-prejudiced against Surinamese people to judge the ambiguous behavior of a Surinamese or a Dutch male, either when confronted with a reflection of themselves in a mirror, or when the self was activated by I-priming. We expected highly prejudiced participants who are confronted with their public appearance to be more concerned about their public image, which should lead to conformance to the social norm against stereotyping (thus, seeing the Surinamese male in relatively positive terms). Conversely, we expected I-

priming to increase the salience of highly prejudiced participants' negative stereotypes (activation of private self-aspects), which should then increase behavior consistent with privately held convictions. In the I-priming conditions, we therefore expected highly prejudiced participants, in comparison with low-prejudiced participants, to see the behavior of the Surinamese male in relatively negative terms.

Method

Participants and experimental design

One hundred and twenty-seven students participated in this experiment in return for partial course credit. The participants were randomly assigned to the conditions of a 3 (self-focus: mirror, I-priming, control) x 2 (person description: Clarence, Erik) between subjects design.

Procedure and materials

On arrival in the laboratory, participants were seated in separate cubicles to fill out a questionnaire that measured prejudice. In these cubicles, no mirror was present. After filling out this questionnaire, all participants left their cubicle, were thanked for participating and were asked to take place in a different cubicle for another set of ostensibly unrelated studies. In the mirror-condition, a mirror was attached to the wall behind the table at which the participants took place. In the self-activation and control conditions, there were no mirrors.

Measuring prejudice. To measure the degree of prejudice, participants responded on 9-point scales (*1* = totally disagree, *9* = totally agree) to propositions concerning their past behavior towards Surinamese people. The propositions were based on the "would-questionnaire" of Monteith and Voils (1998), and contained items such as: "I sometimes have prejudiced thoughts about Surinamese people," and "In the past, I have avoided people because they were Surinamese" (Cronbach's α = .81). Research of Gordijn, Koomen, and Stapel (2001) showed that this is an effective way of measuring prejudice against Surinamese people in The Netherlands.

I-priming. The I-priming task was identical to the one used in the first experiment. In the I-priming condition, participants circled the words *I*, *me*, and *mine* in a text, in the other two conditions these words were replaced by *abc* and *xyz*.

Manipulation checks. After completing the tracking task, participants were asked to unscramble several neutral sentences. This was a filler-task to prevent participants from relating the tracking task with the following "language task" (participants indicated at debriefing that they had not seen any connection between the two tasks). To measure the degree of self-activation, we applied the Wezwe-task (see Stapel & Tesser, 2001). Each

participant was told that earlier research had shown that people were sometimes able to guess the correct pronoun while reading a foreign language. They were presented with a short story that was supposedly written in "Wezwe", a language spoken only in New Guinea. In the text, 20 pronouns were missing and participants were asked to list the correct pronoun. Our main interest was the number of first-person pronouns (I, me, my) participants would list. We expected participants in the I-priming and mirror condition to list more first-person pronouns because in these conditions, self-awareness should be higher than in the control condition. Whether self-awareness is mainly driven by public and/or private concerns should not matter for performance on the "Wezwe"-task: Both the mirror and the I-priming manipulations are expected to activate self-cognitions (see Davis & Brock, 1975; Gibbons & Wright, 1983; Stapel & Tesser, 2001). Next, participants completed the same public and private self-awareness scales (Fenigstein et al., 1975) we used in the first study.

Stereotyping. After filling out the public and private self-awareness questionnaire, participants received a story about either a Dutch male, "Eric" (control condition), or a Surinamese male, "Clarence." Eric or Clarence displayed ambiguous behavior in the story. Pretests had shown that this story could be interpreted in terms of the positive Surinamese stereotype, as being "gezellig" (with no precise equivalent in English, it means something like sociable and easy-going) or in terms of the negative Surinamese stereotype, as being "irresponsible" (see Gordijn et al., 2001, and Otten & Stapel, 2007 on the content of the Surinamese stereotype). Participants had to judge the behavior of Clarence or Erik on 9-point scales (*1* = sociable, *9* = irresponsible).

Results and Discussion

Manipulation checks. A 3 (self-focus: mirror, I-priming, control) between-subjects analysis of variance on the amount of first-person pronouns listed, showed a significant effect, $F(2, 171) = 20.09$, $p < .001$. Planned contrast analyses showed, as expected, that participants in the mirror-condition ($M = 6.8$, $SD = 2.12$) and participants in the I-priming condition ($M = 7.4$, $SD = 2.24$) listed more first-person pronouns than participants in the control condition ($M = 5.1$, $SD = 1.79$), respectively $t(171) = -4.47$, $p < .001$ for the mirror-condition, and $t(171) = -6.15$, $p < .001$ for the I-priming condition. Participants in the I-priming and mirror-condition did not differ significantly, $t(171) = 1.65$, *ns*. This result shows that, as expected, the self was cognitively more accessible for participants in the I-priming condition and for participants in the mirror-condition.

We conducted a 3 (mirror, I-priming, control) between-subjects analysis of variance on the self-reported public (Cronbach's α = .71) and private (Cronbach's α =

.77) self-awareness scales. This analysis showed a significant effect on *public* self-awareness, $F(2, 171) = 26.63, p < .001$. Planned contrast analyses showed, consistent with our hypotheses, that participants who sat in front of a mirror were more aware of public self-aspects ($M = 3.7$, $SD = .58$) than participants in the control condition ($M = 3.0$, $SD = .55$), $t(171) = -.6.7$, $p < .001$ and participants in the I-priming condition ($M = 3.1$, $SD = .59$), $t(171) = -.6.3$, $p < .001$. Participants in the control condition ($M = 3.0$, $SD = .55$) and I-priming condition ($M = 3.1$, $SD = .59$) did not differ significantly in public self-awareness, $t(171) = -.98$, *ns*.

The analysis of variance also showed a significant effect on *private* self-awareness, $F(2, 171) = 47.58$, $p < .001$. Planned contrast analyses showed, consistent with the hypothesis, that participants in the I-priming condition were more aware of private self-aspects ($M = 3.0$, $SD = .67$) than participants in the control condition ($M = 2.5$, $SD = .41$), $t(171) = -4.5$, $p < .001$. Participants in the mirror-condition were also more aware of private self-aspects ($M = 3.6$, $SD = .72$) than participants in the control condition ($M = 2.5$, $SD = .41$), $t(171) = -9.7$, $p < .001$. In addition, participants in the mirror condition were more aware of private self-aspects than participants in the I-priming condition were, $t(171) = -5.2$, $p < .001$.

To summarize, our self-focus manipulations had the expected effects on the activation of different self-aspects. In the mirror-condition, private *and* public self-awareness were increased, whereas in the I-priming condition only private self-awareness was increased.

Main analyses. We tested whether participants' level of prejudice against the Surinamese moderated the effects of the self-focus manipulation and the identity of the target person on the judgment of the target person. To be able to do this, first we computed the mean of the sixteen items that measured prejudice (Cronbach's $\alpha = .81$) and the measure was standardized so that $M = 0$ and $SD = 1$. Next, we analyzed the effects on target judgments with a model with self-focus and target identity as discrete variables and prejudice as a continuous variable.[1] Following Aiken and West (1991), we selected data points at one standard deviation above the mean (labeled high prejudice) and at one standard deviation below the mean (labeled low prejudice; see table 2). The results revealed a main effect of prejudice, $F(1, 162) = 10.23$, $p < .01$, a main effect of self-focus, $F(2, 162) = 3.24$, $p < .05$, a target identity x prejudice interaction, $F(1, 162) = 25.58$, $p < .01$, a self-focus x target interaction, $F(2, 162) = 17.50$, $p < .01$, and the predicted prejudice x target identity x self-focus interaction, $F(2,162) = 8.50$, $p < .01$ (other $ps > .13$).

As can be seen in Table 2, this three-way interaction indicates that, as predicted, in the control condition, high prejudiced individuals rated Erik more positively ($M = 3.6$) than Clarence ($M = 5.1$), $F(2,162) = 8.49$, $p < .01$. This pattern was especially strong in the I-priming condition, where Erik was rated more positively ($M = 3.4$) than Clarence ($M = 6.7$), $F(2,162) = 37.94$, , $p < .01$. In the mirror condition, however, this pattern was reversed and Clarence was judged more positively ($M = 3.4$) than Erik ($M = 4.8$), $F(2,162) = 6.43$, $p < .05$. For low prejudice individuals the pattern was different. These individuals judged Erik ($M = 4.4$) and Clarence ($M = 4.5$) similarly ($F < 1$) in the control condition. However, in the I-priming condition, Clarence was judged more positively ($M = 4.1$) than Erik ($M = 4.8$), $F(2,162) = 4.26$, $p < .01$. This pattern was especially strong in the mirror condition, where Clarence was also rated more positively ($M = 3.2$) than Erik ($M = 4.9$), $F(2,162) = 5.98$, $p < .01$.

To further test our hypothesis that especially for highly prejudiced individuals, the ratings of the outgroup target (Surinamese Clarence) should be correlated with increased private (but not public) self-consciousness in the I-priming condition and vice versa in the mirror condition, we computed correlations and indeed found what our model suggests. In the I-priming condition, the correlation between private self-awareness and target judgment

Table 2. Person Judgment (sociable-irresponsible) as a Function of Identity Target (Surinamese, Dutch) and Prejudice Level (-1 SD Low, + 1 SD High)

Target person And Prejudice	Self focus		
	Control	I priming	Mirror
Low Prejudice			
Surinamese Clarence	4.4	4.1	3.2
Dutch Erik	4.5	4.8	4.9
High Prejudice			
Surinamese Clarence	5.1	6.7	3.4
Dutch Erik	3.6	3.4	4.8

Please note that higher scores indicate more negative (more irresponsible, less sociable) judgments.

was positive (i.e., the more self-aware participants were, the more negatively they rated Clarence), r = .52 (*p* < .01); and the correlation between target judgment and public self-awareness was not significant, r = .03 (*p* > .10). Conversely, in the mirror-condition, the correlation between target judgment and private self-awareness was not significant, r = .13 (*p* > .10); and the correlation between target judgment and public self-awareness was negative (i.e., the more publicly-aware participants were, the more positively they rated Clarence), r = -.48 (*p* < .01). In the control condition, both the correlations between target judgment and private self-awareness (*r* = .14) and the correlation between target judgment and public self-awareness (*r* = .16) were not significant (*p* > .10).

In conclusion, in the present study we found that although both a mirror and I-priming made private self-aspects more salient, these manipulations differed in the extent to which they activated public self-awareness. A mirror activated public *and* private self-awareness, whereas I-priming mainly activated private self-awareness. As a consequence, these manipulations had profoundly different consequences for behavior. In participants whose private opinions (negative stereotypes) were in conflict with the public norm (against stereotyping), a mirror induced normative behavior (e.g., less stereotyping), whereas I-priming induced behavior in accordance with private opinions (e.g., more stereotyping). Hence, when public (and private) self-aspects are activated, participants conform more to social norms, but when private (but not public) self-aspects are activated, participants behave more in line with their own, private opinions. The implication of this last finding is that prejudiced people stereotype more, rather than less, when private self-awareness is high and public self-awareness is low.

General Discussion

What will you do when your private opinion is in conflict with a public norm? We demonstrated that the answer to this question depends on which aspects of the self are salient: Are you just aware of your private thoughts, or are you also sensitive to your public self-aspects? More specifically, we showed that participants whose private opinions (negative stereotypes against Surinamese people) were inconsistent with a public norm (against stereotyping), conformed to the public norm (i.e., stereotyped *less*) when public and private self-aspects were activated by a mirror, whereas they behaved according to their private opinions (i.e., stereotyped *more*) when only private self-aspects were activated by "I-priming."

These results point out two important issues. The first issue concerns the differential effects of self-activation manipulations. Although mirrors and I-priming have been used interchangeably in previous research (e.g., Macrae, Bodenhausen, & Milne,

1998), in the current studies they activated different aspects of the self, which induced different behavior. Therefore, when activating self-aspects, it seems important that we specify which aspects we intend to activate, and that we choose our manipulation carefully.

The second issue concerns the circumstances when people will stand up for their own convictions and when they will conform to those of others. The current results indicate that the activation of public self-aspects increases the tendency to conform to social norms, even when private self-aspects are activated as well. The finding that when private aspects are activated together with public aspects, people still conform to social norms, suggests that the activation of public aspects does not merely activate norms, but probably instigates a concern about how one comes across to other people, which, in this case, resulted in normative behavior. In other words, our results suggest that when both private and public selves are activated they do not cancel each other out when it concerns their input for normative behavior. Rather, public concerns "win" and people show more appropriate, norm-driven behavior.

The finding that public opinions ultimately "win" is consistent with earlier research on prejudice. Plant and Devine (1998) have shown that in the presence of a non-prejudiced person, prejudiced participants will not express their private opinions. As Plant and Devine (1998, p. 825) concluded: "It appears that for these participants, making their responses in public cued the potential evaluation of the external audience (i.e., the experimenter), and they strategically altered their responses to avoid revealing their true prejudiced attitudes." The current findings extend these results by showing that highly prejudiced participants do not even have to be confronted with a non-prejudiced audience. The mere activation of their public self-aspects is enough to promote non-prejudiced responses.

Although in the current study a mirror reduced stereotyping, we do not expect that it will always promote normative behavior. Whereas a mirror activates public self-aspects and probably instigates a concern about how one is seen by other people, we believe -consistent with Plant and Devine's theorizing - that it promotes "impression management." An interesting test would perhaps be to see what happens when participants are aware of public self-aspects and the norms of the people around them differ from a social norm. Confronted with a reflection of themselves in a mirror, will participants yield to a social norm or will they ignore that norm and try to impress the people around them? We expect, in this case, that the activation of public self-aspects increases the motivation to leave a favorable impression. This, of course, remains an interesting empirical question for future research.

Implications of the Current Results for the Interpretation of Previous Research

The present study has several implications for the interpretation of the evidence provided by previous studies on the effects of self-focus on normative behavior. One work in particular can be reinterpreted in light of the current results. Based on the results of several experiments on the effects of self-focus on the regulation of stereotypic thoughts, Macrae and colleagues (1998) argued that a heightened self-focus promotes the spontaneous suppression of negative social stereotypes. To test this hypothesis, they activated the self via subliminal priming of the participant's name, and via mirrors. They demonstrated that an increase in self-focus caused by subliminal priming *decreased* the amount of stereotypic thoughts and behavior. This effect may seem to run counter to our finding that highly prejudiced participants stereotyped *more* when the self was activated by priming. However, Macrae and colleagues did not distinguish between high- and low-prejudiced participants, and they did not measure the activation of different self-aspects. As they explicitly stated, a characteristic of their sample was that participants endorsed the view that stereotyping is a generally inappropriate way of evaluating others. Therefore, it may be that their participants acted on *privately* held convictions that stereotyping is inappropriate. Even though the behavioral consequence may thus seem discrepant with our findings, the underlying process may be exactly the same (and similar to the results of our low-prejudiced participants).

Furthermore, in their mirror-study, Macrae and colleagues (1998) used a social group (politicians) for which some of their participants thought stereotyping was entirely appropriate, whereas others considered it to be inappropriate. They showed that participants who considered stereotyping politicians appropriate stereotyped more, whereas participants who considered stereotyping politicians inappropriate stereotyped less. This result may be interpreted as being discrepant with our findings, because it suggests that participants conformed to their private convictions (which is inconsistent with our argument that mirrors activate public self-aspects and therefore decrease stereotyping). However, it may be that Macrae et al.'s participants actually differed in their opinion of whether stereotyping politicians was *socially* appropriate. Highly prejudiced participants in their study may have believed that stereotyping politicians is socially acceptable and perhaps even a "desirable" activity (for example, because it is humorous, or perhaps because the stereotypes are considered to be reasonably accurate). Hence, when confronted with the public aspects of themselves, these participants stereotyped more because of applying this perceived *social* standard, which is consistent with our results.

Macrae and colleagues' general conclusion that an increase in self-focus (whether increased by I-priming or a mirror) *always* leads to behavior in accordance with social norms may thus have been premature. As our results show, reality is more nuanced: Self-saliency will instigate pro-social behavior when public aspects of the self are activated or when private aspects of the self are activated and private convictions are consistent with the public norm. However, when private convictions are inconsistent with the public norm, increasing the relative salience of private self-aspects will not lead to pro-social behavior. Therefore, it is important to be precise when we talk about self-saliency and to specify exactly what type of self-salience we are talking about. In this way, the consequences of self-activation will be easier to interpret and easier to predict.

Footnote

[1] We would like to note that including prejudice as a continuous variable in our analyses of the effects of our manipulations on the manipulation check measures (private self-consciousness, public self-consciousness, self-knowledge activation) did not yield a significant interaction or main effects ($Fs < 1$).

CHAPTER 3

What Happens When You Imagine Being Evaluated?

Adopting a first- or a third-person perspective

In this chapter we tested the hypothesis that in response to being evaluated, people will adopt a third-person (observer's) perspective. In Study 1, consistent with expectancies, we found that women adopted a third-person perspective and were relatively aware of public self-aspects when remembering being scrutinized by a man as compared to a control condition. Men, however, reacted differently: they predominantly adopted a first-person perspective. In Study 2, we found that, compared to a control condition, both men and women adopted a third-person perspective when they thought they were being evaluated by a selection committee, whereas they both adopted predominantly a first-person perspective when they were the ones doing the evaluating. These results suggest that when being evaluated, people may indeed adopt a third-person perspective, whereas when they are the ones evaluating, people adopt a first-person perspective. In the discussion we examine these results and take a closer look at the probably unique characteristics of a "mating context" in which men may have a chronic tendency to "judge".

What Happens When You Imagine Being Evaluated?
Adopting a first- or a third-person perspective

"By the mere appearance of the Other, I am put in the position of passing judgment on myself as on an object, for it is as an object that I appear to the Other"

(Sartre, 1943, Being and Nothingness, p.246)

In Being and Nothingness, Sartre (1943) wrote extensively about phenomena that we would now categorize under the rubric of "self-awareness" and "self-objectification." Of course, not all of Sartre's ruminations and conjectures about these phenomena are relevant for modern psychological studies, but one particular passage in Sartre's famous book caught our attention because of its relevance for the issues we want to discuss in the current paper: How the (imagined) presence of others may affect how people look at themselves.

In this passage, Sartre asks us to imagine that he—moved by jealousy, curiosity, or vice—had just glued his ear to a door and peeked through the keyhole. When peaking through the keyhole and listening in, he is "in a pure mode of losing himself in the world." Then, suddenly, someone approaches. Sartre realizes instantly that he has been caught in his undesirable behavior. The appearance of another person seems to correspond to a "fixed sliding of the whole universe;" a "decentralization of the world" in the direction of the other person. From being wholly engaged in his eaves-dropping activity, he now realizes that the he is being watched and that he is being judged as if he were an (undesirable) object (Sartre, 1943, pp. 279-289).

What happens when you think that you are being watched and evaluated by another person? What does this "sliding of the whole universe," or "decentralization of the world" mean? In this chapter, we will argue that it may imply a change of perspective; from seeing the world through your own eyes, to imagining it from a "third-person" (observer's) perspective. Moreover, we will argue that the "mere appearance" of an evaluative other may not even be necessary for this shift in attention to take place. Merely thinking about being evaluated may be sufficient for the "decentralization of the world in the direction of the other person" to happen. More specifically, in this chapter we will examine the antecedents of adopting a first- (seeing everything through your own eyes) versus third- (seeing yourself as other persons would see you) person perspective. Together, the here reported studies will contribute to our understanding of the cognitive effects of (imagined) evaluative audiences.

Evaluative Audiences and Self-Awareness

What happens when you notice that you are being evaluated? Researchers have conducted a great deal of research on the behavioral consequences of an evaluative audience. For example, researchers have demonstrated that the presence of an audience may lead to comparisons between a current situation and salient behavioral standards (e.g., Carver & Scheier, 1981; Scheier & Carver, 1983), social facilitation or choking (e.g., Zajonc, 1965), conformity (e.g., Froming, Walker, & Lopyan, 1982; Cialdini & Goldstein, 2004), not reporting discrimination when being the target (Stangor, Swim, Van Allen, & Sechrist, 2002; Sechrist, Swim, & Stangor, 2004), and self-presentation (e.g., Baumeister, 1982; Leary & Kowalski, 1990; DePaulo, 1992). But what is the process behind these phenomena? What are the underlying psychological mechanisms that instigate these behaviors?

Inspired by, *inter alia*, Mead (1934), Goffman (1959), James (1890), or other renowned thinkers, several researchers suggested that an evaluative audience increases self-awareness (see, for example, Duval & Wicklund, 1972; Carver & Scheier, 1978, 1980). However, empirical evidence in which the relation between the presence of an audience and self-awareness is firmly established, is scarce. In one of the few studies intended to demonstrate this relation, Carver and Scheier (1978) showed that the presence of an audience indeed increases "self-focused attention". But what exactly is self-focused attention?

Several researchers have distinguished between different kinds of content of self-awareness. For example, Fenigstein, Scheier, and Buss (1975) distinguish between public self-awareness (awareness of publicly observable aspects of the self) and private self-awareness (awareness of our private thoughts and feelings). Originally, the resulting questionnaire was devised as a measure of trait self-consciousness, but it has been adapted to measure state self-awareness as well (see, for example, Sedikides, 1992). Carver and Scheier (1981) argued that an audience may increase awareness of public self-aspects, but whether this is indeed the case is underresearched. In the current research, we will do just that. Consistent with Carver and Scheier's position, we expect that an evaluative audience will increase public self-awareness.

Another clue to what happens when people feel evaluated can be found in Fredrickson and Roberts' (1997) "self-objectification theory." These authors posit, similar to Sartre's (1943) suggestion, that people may adopt a third-person (observer's) perspective when being evaluated. Fredrickson and Roberts (1997) argue that in our society, emphasis is placed on a woman's physical appearance. Because women are confronted on a daily basis with images of how they should look (e.g., in films,

magazines, and advertisements), and because women learn that they will be judged by their appearance, they adopt a third-person perspective to assess how they will be evaluated. Adopting a third-person perspective, thus, may be a strategy applied when wanting to know how others see you.

If we combine these two research areas, it follows that when people notice that others construe an impression of them, they may become aware of their public self-aspects. One way to know what image they are transferring may be to adopt a third-person perspective. When being evaluated, thus, they may experience a shift in perspective: From seeing everything through their own eyes, to imagining it from the other's perspective.

Overview of the Current Studies

In Study 1 we will start of "strong" by examining what happens when people remember being scrutinized by someone of the other gender. We expect that in this particular situation, especially for women appearances will be important and, therefore, that public self-awareness increases. Moreover, we expect that public self-awareness, in this case, will be related to adopting a third-person perspective. In other words, in response to being evaluated, we expect participants to adopt a third-person perspective and to be relatively aware of public self-aspects. In Study 2 we will examine the consequences of a classic situation in which we are evaluated: A job-interview. In this study, we asked participants to imagine this situation from different perspectives: From the perspective of a job applicant, or from the perspective of someone of the selection committee. We hypothesized that participants who imagined this situation from the perspective of a job applicant, would adopt a third-person perspective, whereas participants who imagined this situation from the perspective of someone of the selection committee would adopt a first-person perspective.

Study 3.1

Being scrutinized by the other gender

To be able to determine whether participants are more aware of their public self-aspects, and adopt a third-person perspective when being evaluated, we asked them to remember the last time that they were being scrutinized by someone of the other gender (but of approximately the same age). We added a neutral situation (visiting a supermarket) to establish a base-line condition with which we could compare the specific effects of being evaluated.

In research on perspective-taking in memories, Nigro and Neisser (1983) have shown that situations that had taken place in a distant past were remembered more frequently from a third-person perspective than situations that had taken place recently. To exclude this alternative hypothesis, we asked participants to report when the situation had taken place. Similarly, Libby, Eibach, and Gilovich (2005) showed that negative situations are remembered more frequently from a third-person perspective than positive situations, because adopting a third-person perspective enables people to "distance" their current self from that past, negative, situation. To exclude this alternative hypothesis, we asked participants to report the valence of the remembered situation. We expected no differences in the time passed and in the valence of the remembered situations.

Method

Participants. A total of 78 students (36 males, 42 females) volunteered to participate in a mass-testing session. Participants were randomly assigned to one of two conditions (either being scrutinized by someone of the other gender, or a neutral, supermarket condition).

Materials and procedure. All instructions were delivered in written form. Participants were encouraged to remember one of the two situations as vividly as possible, and to turn the page only after they had a clear vision of the situation.

On the next page, participants first answered two questions concerning the valence of the situation (*1* = positive, *7* = negative) and when the situation had taken place. Next, a description of the different perspectives followed (Huebner & Fredrickson, 1999; Nigro & Neisser, 1983). The description read as follows:

> *"First person perspective:* While remembering the situation you experienced it through your own eyes; you saw what was happening around you. You saw, for example, the surroundings and other people in it from your own perspective.
>
> *Third person perspective:* While remembering the situation you experienced everything as if you were an observer; you overlooked the whole scene, with you in it. You saw yourself doing the shopping /being scrutinized."

Participants were asked to indicate on a 6-pointscale the perspective from which they had seen themselves predominantly (*0* = entirely from a first-person perspective, and *5* = entirely from a third-person perspective).

Next, participants were asked to complete a slightly modified version of the public and private self-conscious scales of Fenigstein, Scheier, and Buss (1975). The original questions were rephrased to measure *state* instead of *trait* self-consciousness (see also Sedikides, 1992). Participants indicated on 5-point scales (*1* = strongly disagree, *5* =

Figure 1. **Means of adopting perspective (and 95% confidence intervals) in different situations**
Judgments were made on 6-point scales (0 = *entirely from a first-person perspective*, 5 = *entirely from a third-person perspective*).

strongly agree) their agreement with statements such as "I am trying to figure myself out" (private self-awareness, Cronbach's α = .76) and "I am aware of my appearance" (public self-awareness, Cronbach's α = .68).

Results

Perspectives. Contrary to expectancies, an Analysis of Variance (ANOVA) showed a main effect of Gender, $F(1, 74) = 59,58$ $p < .001$. Women adopted a third-person perspective more frequently ($M = 3.1$, $SD = 1.37$) than men ($M = 0.9$, $SD = 1.18$). Although we did not find a main effect of Situation, $F < 1$, *ns,* we did find a significant interaction effect between Gender and Situation, $F(1, 74) = 12.82$, $p < .01$. Women adopted a third-person perspective more frequently when being scrutinized ($M = 3.5$, $SD = 1.05$) compared to the neutral condition ($M = 2.6$, $SD = 1.31$), $F(1, 40) = 4.94$, $p < .05$. Men, contrary to our hypotheses, were somewhat *less* prone to adopt a third-person perspective when being scrutinized ($M = 0.7$, $SD = 0.72$) compared to the neutral condition ($M = 1.3$, $SD = 1.38$), $F(1, 34) = 3.72$, $p = .06$ (see Figure 1).

Public and Private Self-Awareness. We conducted a MANOVA on the self-awareness scales. This MANOVA yielded a significant main effect of Gender, $F(2, 73) = 17.05$,

Figure 2. **Means of public self-awareness (and 95% confidence intervals) in different situations.** Judgments were made on 5-point scales (1 = *strongly disagree*, 5 = *strongly agree*).

$p < .001$. Contrary to expectancies, the main effect of Condition was not significant, $F < 1$, *ns*. However, we did find a significant interaction effect between Gender and Condition, $F(2, 73) = 4.75$, $p < .01$. These effects were due entirely to differences in Public Self-Awareness, as the main and interaction effects of private self-awareness were not significant (all $Fs < 1$). On public self-awareness, we found a significant main effect of Gender, $F(1, 74) = 32.34$, $p < .001$. As can be seen in Figure 2, women were more aware of public self-aspects ($M = 3.4$, $SD = 1.31$) than men ($M = 1.8$, $SD = 1.28$), $t(74) = -1.61$, $p < .001$. We did not find a main effect of Situation, $F < 1$, *ns*. However, the interaction effect of Gender and Situation was significant, $F(1, 74) = 8.13$, $p < .01$. Whereas women were more aware of public self-aspects when being scrutinized ($M = 3.9$, $SD = 1.11$) compared to the control condition ($M = 2.9$, $SD = 1.31$), $F(1, 40) = 8.05$, $p < .01$, men did not differ in awareness of public self-aspects when being scrutinized ($M = 1.5$, $SD = 1.32$) compared to the control condition ($M = 2.1$, $SD = 1.23$), $F(1, 34) = 1.66$, *ns* (see Figure 2).

Public Self-Awareness, Private Self-Awareness, and Adopting Different Perspectives. We conducted correlational analyses to examine the relation between public and private self-awareness, and adopting different perspectives (see Table 1). As all correlational patterns were similar across Situations and Gender, we will report the overall correlations.

Table 1. Correlations between adopting different perspectives, private-, and public self-awareness.

	Perspective	Public Self-Awareness	Private Self-Awareness
Perspective	-	.48**	-.35**
Public Self-Awareness		-	.25*
Private Self-Awareness			-

** p < .01, * p < .05, N = 78

Consistent with past research (e.g., Fenigstein et al., 1975), we found a significant correlation between public and private self-awareness ($r = .25$, $p < .05$). People who are aware of their public self-aspects, also tend to be somewhat aware of their private self-aspects. More importantly, and as expected, we found a moderate, though highly significant correlation between Perspectives and Public Self-Awareness ($r = .48$, $p < .001$). The tendency to adopt a third-person perspective was related to an increase in public self-awareness, and, the other way around, the tendency to adopt a first-person perspective was related to a decrease in public self-awareness. We also found a moderate, but significant negative correlation between Perspectives and Private Self-Awareness ($r = -.35$, $p < .01$), which implies that adopting a third-person perspective is related to a decrease in private self-awareness.

Valence and time. To test whether these effects may be explained by the alternative variables "Valence" and "Time", we conducted ANOVAs. These analyses did not show significant results, *Fs* < 1.

Conclusion and Discussion
Consistent with hypotheses, in this study, women were more prone to adopt a third-person perspective, and they were more aware of public self-aspects when being scrutinized (as compared to a control condition). However, contrary to our hypotheses, men were *less* prone to adopt a third-person perspective when being scrutinized. In contrary, they predominantly adopted a first-person perspective. Although unexpected, these results offer support for Fredrickson and Roberts' (1997) thesis that women self-objectify more often than men. The current results take this research one step further: Even when being scrutinized by a woman, men do not self-objectify. In contrary, when being evaluated, they predominantly adopt their own, first-person perspective.

Furthermore, the current results offer preliminary support for another hypothesis generated by Fredrickson and Roberts. Fredrickson and Roberts (1997) have argued that self-objectification (e.g., adopting a third-person perspective) may diminish attention to

inner body experience, which may be an important cause of disordered eating (for example, by ignoring signs of hunger). The current results offer preliminary support for a somewhat extended version of the hypothesis that self-objectification decreases awareness of bodily sensations: Self-objectification may not only decrease awareness of inner bodily experiences, but of all inner self-aspects (e.g., "private self-awareness").

Even though these results are intriguing, they do not entirely support our theory. Consistent with Sartre's (1943) suggestion that being judged would lead to a "decentralization of the world" in the direction of the other person, we expected that in response to being scrutinized, people would adopt a third-person perspective. The current results suggest that the situation is more complex. What happens when imagining being evaluated seems to depend on the characteristics of the target and on the situation. At least in a "mating-context", men and women differ in their responses, and their responses seem to be consistent with predictions that originate from self-objectification theory. Presumably, even when men are being scrutinized, the context is such in which they are usually the ones who are judging. We suspect that men, therefore, adopt a first-instead of a third-person perspective. Of course, this is yet little more than an interesting hypothesis, which has to be researched more thoroughly.

These results do point out several interesting issues that are in line with our hypotheses. We have demonstrated that adopting a third-person perspective is related to an increase in public self-awareness. The moderate, but highly significant correlation between these two constructs implies that these constructs are not interchangeable, but that adopting a third-person perspective does tend to go together with an increase in awareness of public self-aspects (e.g., appearances and behavior). Presumably, because women considered it important to know what image they were transferring to the man watching, they adopted a third-person perspective and were more aware of public self-aspects (compared to a control condition). These results offer preliminary support for the hypothesis that when people want to know how they come across to other people, they adopt a third-person perspective.

In the next experiment we will test this hypothesis once more, but in a different context. We are not yet convinced that our hypotheses are flawed, but suspect that the dating-context has been a somewhat unfortunate (though interesting) choice, and that this context is not entirely suitable for a neutral test of our hypothesis. Therefore, in the next study, we will test whether people (men and women) adopt different perspectives when in a classic evaluative situation: a job interview. We expect that both men and women adopt a third-person perspective when they imagine being the job applicant, and,

the other way around, that both men and women adopt a first-person perspective when they imagine being a member of the selection committee.

Study 3.2

Being the judge or the judged

In the current study we will examine whether a situation in which one has a specific role to fulfill can promote the adoption of a third-person perspective. In the introduction we hypothesized that, especially when evaluated, people want to know how they come across to others and thus adopt a third-person perspective. This, we think, should be the case for both men and women. To test this hypothesis, we gave participants a scenario about a job interview, and assigned them different roles. In the first condition, participants imagined that they were a member of the selection committee, whereas, in the second condition, participants imagined that they were the applicant. We expected that in the selection committee condition, both men and women experience the situation more from a first-person perspective, whereas in the applicant condition, they experience the situation more from a third-person perspective. Furthermore, to examine whether both situations had an effect, we added a control condition in which the participants had to imagine a visit to a supermarket.

Method

Participants. A total of 109 undergraduate students (45 men, 64 women) participated in a mass-testing session in return for partial course credit. The experiment had a 2 (gender) x 3 (situation: applicant, selection committee, control) between subjects design.

Materials and procedure. All instructions were delivered in written form. Participants were asked to imagine themselves experiencing one of three situations. The instructions encouraged the participants to imagine the situation as vividly as possible *while reading.* In the "selection committee" condition, the story began as follows: "Imagine that you have been working for a company for several years now and today you are going to take part in a selection committee. You are well-prepared and, right on time, you walk through the doors of a fashionable building." In the "applicant condition", the same story began as follows: "Imagine that you have a job-interview. You are well-prepared and you really want this job. Right on time, you walk through the doors of a fashionable building." Both stories proceeded in describing the reception room, the receptionist and their request where the interview takes place. The receptionist then takes the job interviewer /job

applicant to a room somewhere in the building where some people of the committee are already waiting. In the "selection committee" condition, the story ended as follows: "Behind an oval table there are four people waiting. You immediately recognize your supervisor, two of your colleagues and the human resource consultant. You take place at the table and after a few minutes the first applicant enters." In the "job applicant" condition, the story ended as follows: "Behind an oval table there are four people waiting. You immediately recognize your (perhaps) future supervisor and two of your (possible) future colleagues, and you are introduced to a human resource consultant. You take place at the table."

In the control condition, participants had to imagine a future visit to a specific supermarket and to do some shopping. After imagining these different situations, the same explanation about the different perspectives as was used in Study 1 followed, and participants were to indicate from which perspective they had imagined the situation.

Results and Discussion

An ANOVA was conducted with Gender and Situation as the independent variables and Perspective as the dependent variable. This analysis showed a main effect of Gender, $F(1, 103) = 4.68$, $p < .05$, as women, overall, indicated to see themselves more from a third-person perspective ($M = 2.4$, $SD = 1.47$) than men did ($M = 1.8$, $SD = 1.49$). More importantly, the analysis showed the expected main effect of Situation, $F(2, 103) = 29.56$, $p < .001$, and no interaction-effect of Gender and Situation, $F < 1$. In other words, women indicated to adopt a third-person perspective more than men did, but, as we will see, they both reacted in a similar way to the specific situations.

Planned comparison analyses on the effects of reading a specific situation, showed, as expected, that participants in the "applicant" condition indicated that they adopted a third-person perspective more ($M = 3.4$, $SD = 0.22$) than participants in the control condition did ($M = 2.1$, $SD = 0.20$), $t(103) = -2.24$, $p < .001$. Participants in the control condition, in turn, indicated that they adopted a third-perspective more ($M = 2.1$, $SD = 0.22$) than participants in the "selection committee" condition did ($M = 1.1$, $SD = 0.20$), $t(103) = -0.95$, $p < .001$ (see figure 3).

The results of this study show that, although women, again, were more prone to adopt a third-person perspective than men, both reacted in a similar way to the different situations. Men *and* women were more prone to adopt a third-person perspective when in the role of an applicant than when imagining a neutral situation, and –in comparison with this neutral situation- more prone to adopt a first-person perspective when in the role of a member of a selection committee. In other words, both sexes adopted a third-person
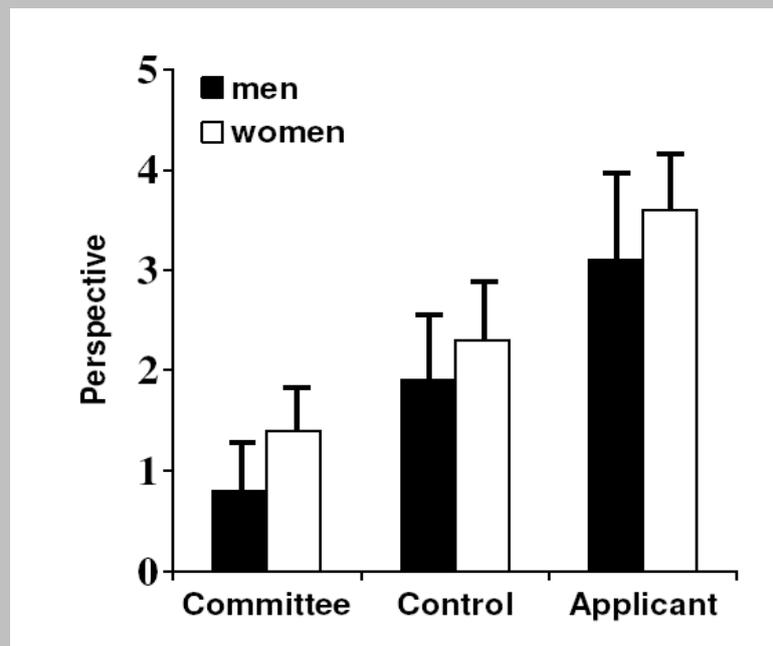
Figure 3. **Means of adopting perspective (and 95% confidence intervals) in different situations.** Judgments were made on 6-point scales (0 = *entirely from a first-person perspective*, 5 = *entirely from a third-person perspective*).

perspective more often when under the impression that they were being evaluated, whereas they adopted a first-person perspective more often when under the impression that they were the one's evaluating.

General Discussion

What happens when you think that you are being evaluated by another person? According to Sartre (1943), the "appearance of another person" corresponds to a "fixed sliding of the whole universe" and a "decentralization of the world" in the direction of the other person. The current results offer support for the idea that in response to being evaluated, this "fixed sliding of the whole universe" may imply –be it under specific circumstances- a change of perspective: From seeing the world through your own eyes, to imagining it from a third-person perspective.

More specifically, in two studies we found preliminary evidence for the hypothesis that adopting a third-person perspective is a broad and general process that enables people to determine what image they are transferring to other people. In Study 1, we found that women indeed adopted a third-person perspective and that they were relatively aware of public self-aspects when they remembered being scrutinized by a man

as compared to a control condition. Furthermore, we found a significant correlation between adopting different perspectives and public self-awareness: People who predominantly adopted a third-person perspective, were also relatively aware of public self-aspects, and, the other way around, people who predominantly adopted a first-person perspective, were less aware of public self-aspects. Moreover, in Study 2, we found that, compared to a control condition, both men and women adopted a third-person perspective when they imagined being evaluated (e.g., by a selection committee), whereas they both predominantly adopted a first-person perspective when they imagined being the ones doing the evaluating (e.g., evaluating the job applicant).

These results are consistent with a long tradition of authors who have argued that evaluative audiences increase self-awareness (e.g., Sartre, 1943; Goffman, 1959; Duval & Wicklund, 1972, Carver & Scheier, 1978, 1980). The current results add to the already existing literature an empirical demonstration of what it means to be "self-aware": When being evaluated, people are aware of their public self-aspects and they tend to adopt a third-person perspective.

The current results are also consistent with self-objectification theory. Although self-objectification theory was developed to understand "women's lived experiences and mental health risks" (Fredrickson & Roberts, 1997), the current results show that self-objectification may be regarded as a general process, which is initiated whenever people want to know what image they transferred to an audience. Thus, these results extend objectification theory in demonstrating that people do not only adopt a third-person perspective in response to being judged by their appearance, but also in response to being judged on other characteristics.

Also, these results offer some evidence for the hypothesis that self-objectification leads to diminished attention for "inner self-aspects." In Study 1, we showed that predominantly adopting a third-person perspective is indeed related to less awareness of private self-aspects. Even though it may still be a leap towards the conclusion that decreased awareness of private self-aspects due to self-objectification leads to disordered eating, the current results are promising and, in our view, encourage further research.

Unresolved Issues, Limitations, and Suggestions for Further Research

As interesting as these results may be, regarding our initial hypothesis that the adoption of a third-person perspective is a broad and general process, which is instigated when being evaluated, our results were not as clear-cut as we initially assumed. We expected both men and women to adopt a third-person perspective when remembering being scrutinized by someone of the other gender. Whereas women indeed predominantly

adopted a third-person perspective (as compared to a control condition), men reacted differently. When they remembered being scrutinized by a woman, they predominantly adopted a first-person perspective.

This finding raises several interesting questions. Can men be considered -at least in a dating context- as notorious judges? Or will they also adopt a third-person perspective, but only under specific circumstances (for example when literally told that they are being judged by their appearances)? It may be that the current situation ("the last time that you were being scrutinized by someone of the other gender") prompted participants to think of quick and relatively insignificant encounters. In hindsight, during these kinds of encounters, women are usually the ones who are being scrutinized (e.g., Gardner, 1980). Perhaps when it is important (for example, when a man has an interesting date and he wants to impress her), men will adopt a third-person perspective as well. Of course, this remains guesswork and future research is needed to clarify why men react differently, and when (if ever) they will adopt a third-person perspective in a dating context.

Another issue that needs to be resolved by future research is how people react when literally *in* an evaluative situation. In our experiments we did not include conditions in which participants were actually being observed by a person *in vivo*. It could be – although we suspect this to be quite unlikely-- that adopting a third-person perspective only happens when imagining a past or future situation. Whether people self-objectify when confronted with a real observer remains therefore an interesting question for future research.

Another question that needs further exploration is what people will do with the information gathered when adopting a third-person perspective. Duval and Wicklund (1972; see also, Carver & Scheier, 1981; 1998) have argued that self-awareness leads to self-regulation (e.g., comparing the current situation to a context-appropriate standard). Does adopting a third-person perspective also initiate self-regulative processes? We expect that this is indeed the case, and that adopting a third-person perspective will lead to actions directed towards improving one's public appearance (see also Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; and for reviews on impression management and its antecedents, Baumeister, 1982; Leary & Kowalski, 1990; Schlenker & Weigold, 1992; Schlenker, 2003). Whether adopting a third-person perspective increases impression management needs to be tested.

Still another question that needs further research is whether a third-person perspective offers a realistic view of the impression one makes or has made on the other person. Does a third-person perspective lead to more insight in the way one comes

across to other people? This question may be answered affirmative, as it would be logical to predict that attention to public self-aspects renders a better impression of the image one will transfer or has transferred. However, it could also be the case that adopting a third-person perspective directs attention to ourselves at the expense of attention to the person watching. It could be argued that we need to monitor the other person's reactions in order to asses the impression we are making (e.g., Argyle & Williams, 1969). Probably the answer lies somewhere in between: To be able to know what image we transfer, we need to be attentive to both ourselves, and to the person watching.

In Conclusion

In our opinion, the current results give us an impression of what may happen when people are being evaluated. In response to being evaluated, they may adopt a third-person perspective and pay relatively much attention to public self-aspects. More research is needed to establish the generalizability of these results and to determine the boundary conditions. Above all, we believe that the current results offer inspiration and specific directions for future research. It is our hope that with additional research, more will be known about the influence of evaluative audiences.

CHAPTER 4

Being Watched by the Other Gender

Antecedents and consequences of adopting different perspectives

In four studies we demonstrated that men and women react differently when being watched by the other gender. In Study 1, we provided a baseline of self-awareness and showed that adopting a third-person (observer's) perspective is positively related to public self-awareness, and negatively related to private self-awareness. In Study 2, we examined what happened when men and women remember being watched by someone of the other gender and demonstrate that women, as compared to a control condition, are prone to adopt a third-person perspective, and that they are relatively aware of themselves instead of the person watching. In contrary, men adopt their own perspective and are relatively aware of the woman who was watching them. Also, women, presumably as a consequence of this focus of attention, remembered relatively few details of the person who was watching them compared to men. In Study 3 we exclude two alternative interpretations of our results (self-esteem and the hypothesis that women always adopt a third-person perspective in response to being watched). In Study 4, we showed that adopting a third-person perspective is related to self-regulative efforts directed at one's public appearance. People who predominantly adopted a third-person perspective, as compared to people who predominantly adopted a first-person perspective, chose healthy, low-caloric, food over unhealthy, high-caloric, food. Together, these results provide insight in what happens when being observed by the other gender.

Being Watched by the Other Gender: Antecedents
and consequences of adopting different perspectives

"In the animal kingdom it is usually the male who has the fine feathers and puts on a display for the females. In the human kingdom it is the females who put on the performance for the benefit of males —at least inasmuch as visible personal appearance is concerned. In other words females are the performers, males the audience."

(Argyle & Williams, 1969)

What happens when you are being watched by someone of the other gender? Will you look back in order to see who the other is and what he or she looks like? Or will you become predominantly self-focused, trying to figure out what it is the other sees when looking at you? Suppose that you become self-focused, what does this self-focused attention involve? And if you are self-focused, if asked afterwards, could you describe the person who was watching? The current research was designed to answer these questions. More specifically, we set out to examine the consequences of being observed (scrutinized, or simply being watched) by someone of the other gender. We will argue and demonstrate that men and women react in different, though predictable ways, and we will explore the consequences of each reaction.

What Happens When Being Watched?
Several authors have argued that in response to being observed, people become self-aware (e.g., Duval & Wicklund, 1972; Carver & Scheier, 1978, 1981; Scheier & Carver, 1983; Leary & Kowalski, 1990; Schlenker & Weigold, 1992). Empirical demonstrations, however, are scarce. In one of the few studies designed to test the relation between the presence of an observer and self-focused attention, Carver & Scheier (1978) showed that when being observed, compared to a control condition, participants completed more sentences with reference to the self instead of to the external world. Being watched, thus, seems to initiate self-focused attention.

In subsequent theorizing, some authors have offered a more detailed account of what it means to be self-focused. They posit that in response to being watched, people become aware of aspects of the self that are publicly observable (e.g., Fenigstein, Scheier, & Buss, 1975; Miller, Murphy, & Buss, 1981; Carver & Scheier, 1981, Baumeister, 1982; Leary & Kowalski, 1990). Although this position is voiced by various authors, and numerous studies have been conducted to study the behavioral consequences of being

watched (for example, on conformity, self-presentation, performance facilitation or choking; for reviews, see Baumeister, 1982; Schlenker & Weigold, 1992; Leary, 1995), empirical demonstrations of the relation between being watched and awareness of public self-aspects remain, to our knowledge, forthcoming. Therefore, in the current experiments, we will test the hypothesis that in response to (remembering) being watched, people will become aware of public self-aspects.

Awareness of Public Self-Aspects: Adopting a first- or a third-person perspective

What does "awareness of public self-aspects" mean? Does it involve, for example, a quick glance at one's clothes in order rest assured that everything is in the right position? In this case, people may see through their own eyes whether their zipper is up and their clothes are straight. In other words, in this case, they adopt a *first*-person perspective. But awareness of public self-aspects may also involve the construction of an image of oneself as an observer sees it. In this case, people construe an image of themselves as they think others see them, or, in other words, they adopt a *third*-person (observer's) perspective.

Consistent with earlier theorizing of, for example, Mead (1934), some social psychologists have suggested that in response to being watched, people may indeed adopt a third-person perspective in order to know what image they are transferring (e.g., Duval & Wicklund, 1972). Fredrickson and Roberts (1997), for example, have argued that when emphasis is placed on physical appearances, people adopt a third-person perspective to assess what they look like. According to these authors, women should be particularly prone to adopt a third-person perspective, because they are frequently evaluated by their appearances (see also Miller et al., 1981). Fredrickson and colleagues (1998) demonstrated that when remembering a potentially self-objectifying situation (e.g., trying a swimsuit), women indeed adopted a third-person perspective more frequently than men did. This suggests that women and men differ in the tendency to adopt a first- or a third-person perspective. But what would happen when men and women remember a situation in which they were actually being watched by someone of the other gender? Do men, in this case, also adopt a third-person perspective?

We have reason to doubt that men also adopt a third-person perspective when being watched by a woman. Argyle and Williams (1969) showed that in a dyadic interaction with someone of the other gender, women felt more observed than men (even though they were both observed to the same degree). Moreover, feeling observed was not related to the actual amount of time participants were being observed. Argyle and Williams (1969) therefore concluded that women react as though being the

performers (because they had the feeling that they were being watched), whereas men react as though being the audience (because they felt less watched).

Based on this research, we expect that women will be more aware of public self-aspects than men, especially when being watched by someone of the other gender. Furthermore, we expect that this awareness of public self-aspects involves adopting a third-person perspective, which means that we expect that women predominantly adopt a third-person perspective and that men predominantly adopt a first-person perspective when being watched. Before we give an overview of the current studies, we will briefly discuss some of the possible consequences of adopting these different perspectives.

Self-Awareness and Self-Regulation

In the literature on self-awareness, attention to the self has often been related to self-regulation (see, for example, Duval & Wicklund, 1972; Scheier & Carver, 1983; Baumeister, 1998). Self-awareness seems to interrupt ongoing behavior, and gives people time to think about what they are doing and, importantly, how to proceed. In other words, self-awareness may offer a "critical" perspective on the self, and the outcome of this evaluative process will guide subsequent actions.

Leary and Kowalski (1990) posited that when under the scrutiny of others, people think about the impression they are making. More than that, "people find it difficult *not* to think about the impression others are forming" (Leary & Kowalski, 1990; see also, Duval & Wicklund, 1972; Baumeister, 1982; Schlenker & Weigold, 1992). As a result, people search for cues regarding the impression the other is creating of them, and attend to information that is relevant to making the desired impression. This suggests that people closely monitor themselves as well as the others' reaction to them, which may be crucial when one has the desire to make a favorable impression.

However, as various researchers have argued (e.g., Tononi & Edelman, 1998; Naghavi & Nijberg, 2004) conscious attention may operate sequentially, which implies that it may only be directed at one thing at the time. Although it is possible that attention alternates quickly between the self and the person watching, it may also imply that attention to the self will go at the expense of attention to the person watching. As Argyle and Williams' (1969) data show, women were not particularly good at predicting how much of the time their interaction partner actually looked at them. This offers support for the hypothesis that self-awareness may go at the expense of awareness of the person watching. In the current research we will test whether this is the case. We expect a negative correlation between attention to the person watching and attention to the self. Because we expect that women, compared to men, will be more self-aware, if asked

afterwards, we also expect them to remember less details of the person who was watching.

Furthermore, we expect that adopting a third-person perspective indeed offers a "critical" perspective on public self-aspects. As a consequence, we expect that self-regulation and impression management tactics will be directed at one's (public) appearances. Although self-regulation may be operationalized in many different ways (e.g., straightening one's clothes, hair, or oneself), in the current research we will test whether adopting a third-person perspective may involve regulating one's weight. More specifically, we expect that people who predominantly adopt a third-person perspective, choose healthy (low-caloric) food over unhealthy (high-caloric) food. By testing this idea, we may offer support for the position that self-awareness is related to self-regulative efforts.

Overview of Current Studies and Hypotheses

In conclusion, the current studies were designed as an empirical demonstration and extension of earlier theorizing concerning the consequences of being observed. In Study 1, we will test the hypothesis that, under neutral circumstances, women adopt a third-person perspective more frequently than men. Furthermore, we expect that adopting a third-person perspective is positively related to awareness of public self-aspects.

In Study 2, we will test the hypothesis that when remembering being scrutinized, as compared to a control condition, women will be even more prone to adopt a third-person perspective, whereas men will predominantly adopt their own (first-person) perspective. We also expect that attention to the self will go at the expense of attention to the person who was watching. As a consequence, women, compared to men, will remember relatively little details of the person who was watching.

In Study 3 we will exclude some alternative interpretations of the gathered results, and in Study 4, in closing, we will examine the consequences of adopting a third-person perspective on self-regulative efforts. More specifically, we expect that when adopting a (critical) third-person perspective, participants will be prone to choose healthy (low-caloric) food over unhealthy (high-caloric) food. Together these experiments will contribute to our understanding of the consequences of being watched, and the relation between self-awareness and self-regulation.

Study 4.1

The Relation between Public and Private Self-Awareness, and Adopting a First- or a Third-Person Perspective

In this first study, we will examine whether gender differences in self-awareness under neutral circumstances occur, and assess the relationship between adopting different perspectives and public and private self-awareness.

Method

Participants. A total of 116 undergraduate students (63 women, 53 men) participated in a mass-testing session in return for partial course credit.

Materials and procedure. Instructions were delivered in written form. The instructions encouraged participants to answer the questions honestly and openly, and assured them that their responses would be kept confidential.

Public and Private Self-Awareness. All participants completed a modified version of the Fenigstein, Scheier, and Buss (1975) private versus public self-consciousness scale (see also Sedikides, 1992). The items measuring private self-consciousness (Cronbach's α = .86), were rephrased to measure state instead of trait self-consciousness, (for example, "I'm generally attentive to my inner feelings", became "I am currently attentive to my inner feelings"). The items measuring public self-consciousness (Cronbach's α = .68) were rephrased in the same way (for example., "I'm usually aware of my appearance" became "At this moment I am aware of my appearance"). The instructions stressed the importance of answering the questions in accordance with the situation at that particular moment and asked the participants to indicate on 7-point scales (1 = strongly disagree, 7 = strongly agree) which answer reflected their current state best.

Perspectives. To be able to measure which perspective participants adopt, we devised a method in which we asked the participants to imagine going to a (specific) supermarket. Participants were asked to imagine going inside and doing some shopping. When they had a clear picture of the situation, they were asked to turn the page and answer a question about the imagined situation. On the next page, a description of the different perspectives followed (see, Huebner & Fredrickson, 1999; Nigro & Neisser, 1983). The specific description read as follows:

> "In your imagined visit to the supermarket, you may have looked at yourself in one of two ways. You may have imagined the situation from a "first-person perspective" or from a "third-person perspective" (or from a combination of both). Below is a brief description of the two perspectives, after which you are

asked to indicate from what perspective you predominantly imagined the situation.

First person perspective: While imagining the situation you experienced it through your own eyes; you saw what was happening around you. You saw, for example, the shelves, the shopping basket or cart, or the customers around you from your own perspective.

Third person perspective: While imagining the situation you experienced everything as if you were an observer; you overlooked the whole scene, with you in it. You saw yourself doing the shopping in the supermarket."

Next, the participants were to indicate on a 6-pointscale the perspective from which they had seen themselves predominantly (0 = *entirely from a first-person perspective*, and 5 = *entirely from a third-person perspective*).

Results and Discussion

Private self-awareness, public self-awareness. Consistent with past research (Carver, Antoni, & Scheier, 1985; Fenigstein et al., 1975), we found that public and private self-awareness were correlated ($r = .29$, $p < .01$). This positive correlation means that participants who were aware of their private thoughts and feelings were also somewhat aware of public aspects of themselves. Also consistent with prior research (see for an explanation, Miller et al., 1981), there was no significant effect of gender in private and public self-awareness, $Fs < 1$.

Perspectives. We conducted a 2 (Gender) factor analysis (ANOVA) on the variable Perspectives. As expected, women saw themselves more from a third-person perspective ($M = 3.1$, $SD = 1.45$) than men did ($M = 1.5$, $SD = 1.14$), $F(1, 114) = 45.72$, $p < .0001$. Because of this gender difference, we calculated the correlations between Perspectives, Public and Private self-awareness for women and men separately.

Perspectives, Public- and Private Self-Awareness Consistent with hypotheses, a significant positive correlation between Public Self-Awareness and Perspectives ($r = .25$, $p < .05$, in women; $r = .39$, $p < .01$, in men) indicated that participants who saw themselves predominantly from a third-person perspective, also tended to be highly aware of public aspects of themselves, and, the other way around, participants who saw themselves predominantly from a first-person perspective, tended to be less aware of public aspects of themselves. Moreover, the correlation between Perspectives and Private Self-awareness was significantly negative for both sexes ($r = -.26$, $p < .05$, in women; $r = -.29$, $p < .05$, in men), which indicated that adopting a third-person perspective was

related to less awareness of private thoughts and feelings compared to adopting a first-person perspective.

To summarize our findings, as predicted, we found that women were indeed more likely to adopt a third-person perspective than men under neutral circumstances. Also consistent with predictions, we found that adopting a third-person perspective is associated with an increase in awareness of public self-aspects and a decrease of awareness of inner self-aspects. In the next study, we will examine whether men and women differ in their reactions to being watched by someone of the other gender.

Study 4.2

Being Scrutinized by the Other Gender:

Adopting different perspectives, attention to the self, and attention to the person watching

To test the hypothesis that women are prone to adopt the role of a performer (e.g., to adopt a third-person perspective, and to have relatively little attention to the man who was watching), whereas men behave as though being a member of the audience (e.g., adopt their own, first-person, perspective, and pay relatively much attention to the woman who was watching), we asked men and women to remember a concrete situation in which they were being "scrutinized" by someone of the other gender. We measured the extent to which participants remembered the situation from a first- or a third-person perspective and for whom they had most attention (themselves or the person watching). We also asked details about the person who was scrutinizing them (clothes, eye- and hair-color) in order to gain insight into the consequences of their specific focus of attention.

To be able to determine whether men and women adopt, respectively, a first-person perspective or a third-person perspective in response to being scrutinized by someone of the other gender and not because they always adopt a first- or a third-person perspective, we added a control condition. Participants who were assigned to this control condition were asked to *remember* a specific neutral situation (going to a supermarket and doing some shopping). This condition offered a base-line with which we could compare the specific effects of remembering being scrutinized.

We expect that women, compared to a control condition, are prone to adopt a third-person perspective when remembering being scrutinized. Men, on the other hand, adopt a first-person perspective in response to being scrutinized. Furthermore, when being scrutinized, we expect that men, compared to women, pay relatively much attention

to the person watching and, therefore, remember more details. Conversely, we expect that women are relatively attentive to themselves, and therefore remember little details of the man who was scrutinizing them.

In research on perspective-taking in memories, Nigro and Neisser (1983) have shown that situations that took place in a distant past were remembered more frequently from a third-person perspective than situations that had taken place recently. To exclude this alternative hypothesis, we asked participants to report when the situation had taken place. Similarly, Libby, Eibach, and Gilovich (2005) showed that negative situations are remembered more frequently from a third-person perspective than positive situations, because taking a third-person perspective enables people to "distance" their current self from that past, negative situation. To exclude this alternative hypothesis, we asked participants to report the valence of the remembered situation. We expected no differences between men and women in the time passed and in the valence of the remembered situation.

Method

Participants. A total of 74 heterosexual students (33 men, 41 women) volunteered to participate in a mass-testing session. Participants were randomly assigned to one of two conditions (either being scrutinized by someone of the other gender, or a neutral, supermarket condition).

Materials and procedure. All instructions were delivered in written form. Participants were encouraged to either remember experiencing a situation in which they were being scrutinized by someone of the other gender (but of approximately the same age), or remember a neutral situation (going to a supermarket). In both conditions participants were encouraged to remember the situation vividly and to turn the page only after they had a clear picture of the situation.

On the next page, participants first answered two questions concerning the valence of the situation (1 = *positive*, 7 = *negative*) and when the situation had taken place. Then, the same description of the different perspectives as was used in Study 1 followed. Participants were asked to indicate on a 6-pointscale the perspective from which they had seen themselves predominantly (0 = *entirely from a first-person perspective*, and 5 = *entirely from a third-person perspective*).

Next, participants who remembered a situation in which they were scrutinized by someone of the other gender, were asked to report whether they had paid more attention to their "inner self" or to their "public self" (0 = *entirely attentive to my inner thoughts and feelings*; 5 = *entirely attentive to aspects of myself which others can see*), and to whom they had paid

most attention (0 = *to myself*, and 5 = *to the other*). Subsequently, participants were asked to write down as many details as they could remember of the person who was scrutinizing them.

Results and Discussion

Perspectives. An analysis of variance (ANOVA) on the perspectives measure showed a main effect of Gender, $F(1, 70) = 52,07$ $p < .001$. As expected, women were more prone to adopt a third-person perspective ($M = 3.1$, $SD = 1.35$), than men ($M = 1.0$, $SD = 1.20$). Also as expected, we did not find a main effect of Situation, $F < 1$, *ns,* but we did find the expected the interaction effect between Gender and Situation, $F(1, 70) = 12.82$, $p < .01$. Consistent with hypotheses, women were more prone to adopt a third-person perspective in a situation in which they were being watched ($M = 3.5$, $SD = 1.03$) compared to a neutral situation ($M = 2.7$, $SD = 1.53$), $F(1, 39) = 4.15$, $p < .05$. Men, in contrary, were less prone to adopt a third-person perspective when being watched ($M = 0.6$, $SD = .73$) as compared to a neutral situation ($M = 1.4$, $SD = 1.42$), $F(1, 31) = 4.60$, $p < .05$ (see Table 1 for an overview of these results).

Alternative hypotheses: Valence and time. To test whether the effects of Situation on adopting different perspectives was due to differences in the valence or time of the remembered situations, we conducted two ANOVAs to exclude these alternative hypotheses. As expected, these analyses did not render significant results, $Fs < 1$, *ns.*

Being watched and attention to the "inner self", and to the "public self". An ANOVA on Attention to Inner or Public self-aspects (0 = *entirely attentive to my inner thoughts and feelings*; 5 = *entirely attentive to aspects of myself which others can see*), showed a significant effect, $F(1, 35) = 73.96$, $p < .001$. As expected, women paid less attention to inner self-aspects (hence, they paid more attention to public self-aspects), ($M = 3.6$, $SD = 1.02$) than men ($M = 1.1$, $SD = 1.00$).

Attention to the Self or to the Other. An ANOVA on the attention to self or other (0 = *entirely attentive to myself*, 5 = *entirely attentive to the other*) also showed a significant effect, $F(1,$

Table 1. Perspectives

	Supermarket		Being watched		Total	
	M	*SD*	*M*	*SD*	*M*	*SD*
Men	1.4	1.42	0.6	0.73	1.0	1.20
Women	2.7	1.53	3.5	1.03	3.1	1.35

Adopted Perspective (0 = entirely first-person perspective, 5 = entirely a third-person perspective)

Table 2. Mediation of Perspective on the relation between Gender and Details

Steps in the mediation analysis:	r	Tests
	-.77	$F(1, 35) = 52.32, p < .001$
1: Gender and Amount of Details		
	.85	$F(1, 35) = 92.49, p < .001$
2: Predictor (Gender) on Mediator (Perspective)		
	-.85	$F(1,35) = 90.35, p < .001$
3: Mediator (Perspective) on Dependent Variable (Amount of Details)		
		$F(2, 34) = 46.02, p < .001$
4. Regression model is significant.	$ß = -.18$	*ns*
Adding the mediator (Perspectives) to the model, leaves the relation between Gender and Amount of Details non-significant.		Sobel's test: (3.02, $p < .01$)
		Aroian test: (2.96, $p < .01$)

Conclusion: The relation between Gender and Amount of reported Details is fully mediated by Perspectives.
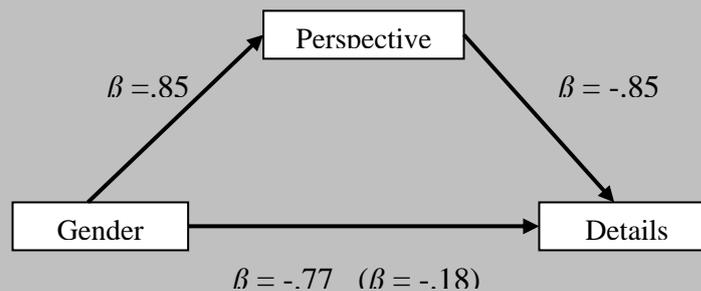
Figure 1. **Perspective as a mediator between Gender and Amount of Details**

Amount of reported details of the person watching. We expected that women, because of adopting predominantly a third-person perspective, would remember relatively few details of the man who was scrutinizing them, whereas men, because of adopting predominantly a first-person perspective, would remember more details of the woman who was scrutinizing them. In other words, we expected that the relation between Gender and the amount of remembered details would be mediated by Perspectives. To test this hypothesis, we conducted a mediation analysis (Baron & Kenny, 1986).

As can be seen in Table 2 and Figure 1, the relation between Gender and Remembered Details was fully mediated by Perspectives. This means that, as expected, because women were prone to adopt a third-person perspective, they reported relatively few details, and, the other way around, because men were prone to adopt a first-person perspective, they remembered relatively many details.

In summary, in this study we found support for our hypotheses that when being watched, women, as compared to men, are relatively self-aware and pay relatively little attention to the person watching. Also, women, as compared to a control condition and as compared to men, are more prone to adopt a third-person perspective, which led to remembering few features of the person who was watching.

Study 4.3

Alternative Explanations: Do women always adopt a third-person perspective in response to being scrutinized?

According to our theory, people may adopt a third-person perspective when they want to know how they come across to other people. Applied to the current context, because we predict that women may be regarded as "the performers", it should be more important for them to monitor the impression they convey than for men. To determine what image they are transferring, they will adopt a third-person perspective.

There is, however, an alternative interpretation of our findings. It could be that women, for whatever reason, always adopt a third-person perspective when they are being scrutinized (thus, even when it is less important for them to know what impression they are conveying). To rule out this alternative interpretation, we will examine what happens when women are scrutinized by other women. We expect that women, in this case, adopt a first-person perspective. Although we do not have solid theoretical support of this hypothesis, it could be argued that as part of intra-sexual mate competition (e.g., Buss, 1988), women have a tendency to monitor their competition. If women indeed

adopt a first-person perspective in this situation, this would argue against the hypothesis that they always adopt a third-person perspective, irrespective of the person watching.

In this study we will also measure participants' self-esteem. In sociometer theory, Leary (2004; Leary, Tambor, Terdal, & Downs, 1995) has argued that state self-esteem functions as a "sociometer", which monitors the interpersonal surroundings for cues that are "relevant to a persons' relational value in the eyes of other people" (Leary, 2004). As a result of imagined or real evaluations of others, people feel good or bad about themselves. In applying sociometer theory to the current context, it could be argued that women, as a consequence of remembering being scrutinized, experience a decrease in their self-esteem, and in response to this negative feeling, they adopt a third-person perspective (see also Fredrickson et al., 1998, for the relation between negative feelings – body shame- and objectification, and see Libby et al., 2005, for the relation between negative affect and adopting a third-person perspective). Notwithstanding the idea that fluctuations in self-esteem may be a consequence of being watched, we do not expect that our results, and, more specifically, adopting a third-person perspective is *caused* by a decrease in self-esteem. As we have argued, we expect that women adopt a third-person because they want to know what image they convey to the person watching and not because they feel badly about themselves. Therefore, in this study, we will test whether or not fluctuations in state self-esteem are the driving forces behind our findings.

Method

Participants. A total of 94 heterosexual students (47 men, 47 women) participated in this study. Participants were randomly assigned to one of three conditions (either being watched by someone of the other gender, a neutral condition, or being watched by someone of the same gender).

Materials and procedure. The instructions of the different situations were the same as in Study 2, with the following additions: A third of the participants were asked to remember a situation in which they were being scrutinized by someone of the same gender. The other two conditions (remember being scrutinized by someone of the other gender and the supermarket condition) were the same as in Study 2.

After remembering one of the situations as vividly as possible, all participants completed a state self-esteem scale. Participants were asked to indicate on 6-points unipolar scales how they felt (e.g., good, adequate, attractive, inferior, ashamed, bad, socially desirable, popular, proud) when being watched (see Leary et al., 1995). Next, participants reported at the same 6-point scale as was used in Study 1 and Study 2, which perspective they predominantly adopted. Also, we asked participants to remember

whether, in the original situation, they were self-aware (0 = *not at all self-aware*; 5 = *entirely self-aware*). Furthermore, in the condition in which participants remembered being scrutinized, we asked participants to report the amount of attention they paid to the person watching (0 = *not at all attentive to the person watching*; 5 = *very much attentive to the person watching*).

Results and Discussion

Perspectives. A 3 (Situation: being scrutinized by other gender, supermarket, being scrutinized by same gender) x 2 (Gender) ANOVA on the variable Perspectives (0 = *entirely from a first-person perspective*, and 5 = *entirely from a third-person perspective*) showed a main effect of Gender, $F(1, 88) = 7,02$ $p < .01$. This main effect indicated that women were more prone to adopt a third-person perspective ($M = 2.4$, $SD = 1.44$), than men ($M = 1.8$, $SD = 1.42$). The main effect of Situation was not significant, $F < 1$, *ns*. We did find a significant interaction effect between Gender and Situation, $F(2, 88) = 18.64$, $p < .001$. As can inferred from Figure 2, consistent with hypotheses, women were *more* prone to adopt a third-person perspective when being scrutinized by someone of the other gender ($M = 3.5$, $SD = 1.13$) compared to the control condition ($M = 2.4$, $SD = 1.18$), $t(44) = 2.62$, $p < .01$. Also consistent with hypotheses, women who were being scrutinized by someone of the same gender were *less* prone to adopt a third-person perspective ($M = 1.5$, $SD = 1.23$), as compared to women in the control condition ($M = 2.4$, $SD = 1.18$), $t(44) = 2.22$, $p < .05$. In other words, when being scrutinized by someone of the other gender, compared to a control condition, women predominantly adopted a third-person perspective, whereas when being scrutinized by someone of the same gender, they predominantly adopted a first-person perspective.

For men, the pattern of results differed. As expected, when being scrutinized by someone of the other gender, men were less prone to adopt a third-person perspective ($M = 0.9$, $SD = 1.06$) compared to the control condition ($M = 2.0$, $SD = 1.13$), $t(44) = -2.46$, $p < .05$, and compared to the condition in which they remembered being scrutinized by someone of the same gender ($M = 2.5$, $SD = 1.51$), $t(44) = -3.72$, $p < .001$. The difference between being scrutinized by someone of the same gender ($M = 2.5$, $SD = 1.51$) and the control condition ($M = 2.0$, $SD = 1.13$) was not significant, $t(44) = -1.19$, *ns*.

Self-Esteem. An ANOVA on the aggregated score (Cronbach $a = .77$) of the state self-esteem scale, as expected, rendered no significant main or interaction effects of Gender and Situation, $Fs < 1$.
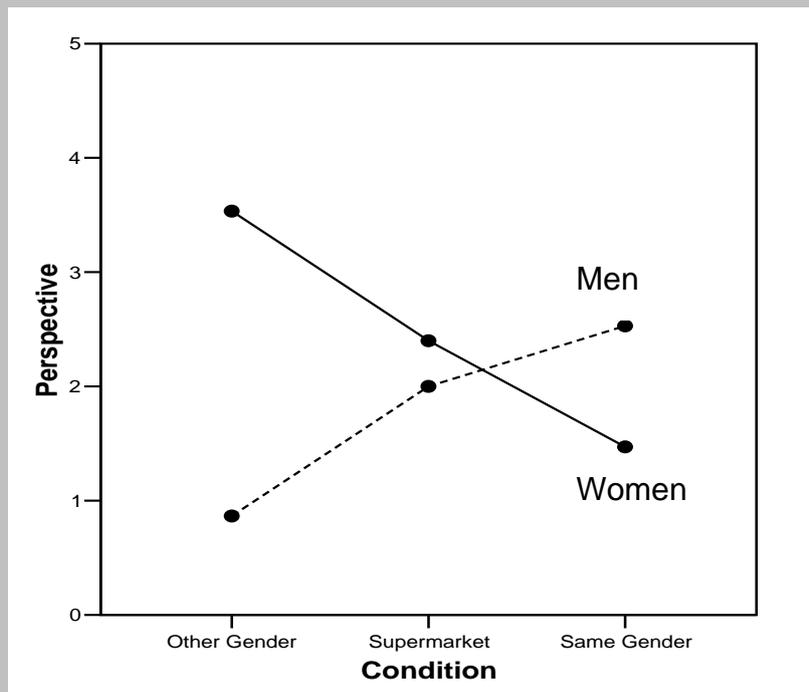
Figure 2. Adopting Perspective in different situations

Attention to the Self. A 3 (Situation: being scrutinized by other gender, supermarket, being scrutinized by same gender) x 2 (Gender) ANOVA showed a main effect of Gender, which indicated that women paid more attention to themselves ($M = 3.1$, $SD = 1.13$) than men did ($M = 1.8$, $SD = 1.35$), $F(1, 88) = 34.82$, $p < .001$. We did not find a main effect of Situation, $F(2, 88) = 2.20$, *ns*. As expected, the main effect of Gender was qualified by a significant interaction effect between Gender and Situation, $F(2, 88) = 14.12$, $p < .001$. As can be inferred from Figure 3, women paid more attention to themselves when being scrutinized by a man ($M = 3.9$, $SD = 0.80$) than when being scrutinized by another woman ($M = 3.1$, $SD = 0.99$), $t(44) = -2.49$, $p < . 05$, and these women, in turn, paid more attention to themselves compared to women in the control condition ($M = 2.3$, $SD = 0.96$), $t(44) = -2.60$, $p < .01$.

In other words, consistent with predictions, women who remembered being scrutinized by a man paid relatively more attention to themselves as compared to women who remembered being scrutinized by another woman. However, women who remembered being scrutinized by someone of the same gender were also more aware of themselves than women in the control condition. This latter finding was not predicted (we predicted that self-awareness would not differ between women in the control condition and women who were being scrutinized by another woman) and will be discussed below.
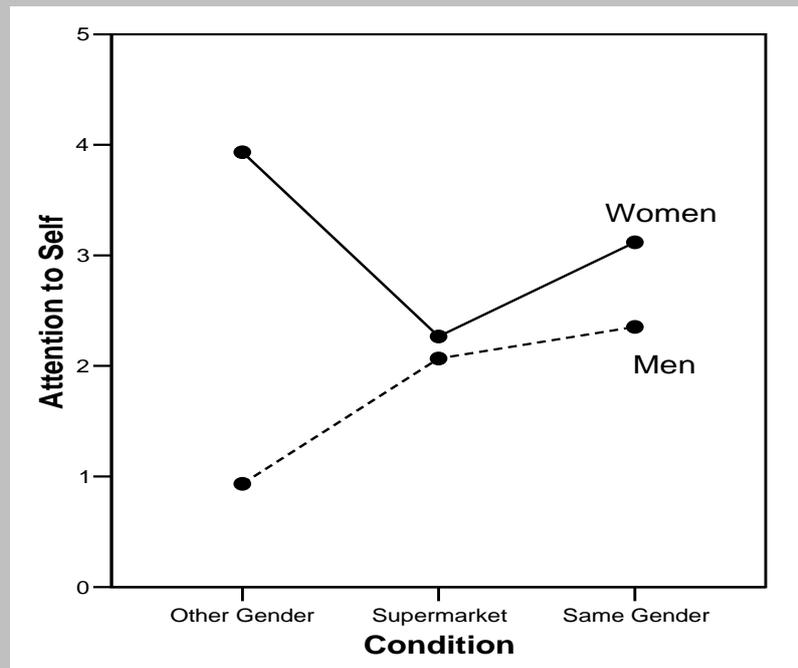
Figure 3. Attention to Self

In contrary, men paid less attention to themselves when being scrutinized by a woman ($M = 0.9$, $SD = 0.88$) compared to the control condition ($M = 2.1$, $SD = 1.39$), $t(44) = -2.54$, $p < .05$, and compared to being scrutinized by another man ($M = 2.4$, $SD = 1.32$), $t(44) = -3.28$, $p < .01$. There was no significant difference between being scrutinized by another man ($M = 2.4$, $SD = 1.32$) and the control condition ($M = 2.1$, $SD = 1.39$), $t(44) = -0.66$, *ns* (see Figure 3).

Attention to the Other. A 2 (Situation: Same versus Other Gender) x 2 (Gender) UNIANOVA showed a main effect of Gender, as men paid more attention to the person watching ($M = 3.8$, $SD = 1.26$) than women ($M = 2.6$, $SD = 1.56$), $F(1, 60) = 23.04$, $p < .001$, and a significant main effect of Situation, as participants paid relatively more attention to the person watching when that person was of the same gender ($M = 3.5$, $SD = 1.19$) compared to the other gender ($M = 2.9$, $SD = 1.82$), $F(1, 60) = 3.95$, $p < .05$. However, these main effects were qualified by a highly significant interaction effect of Gender and Condition, $F(1, 60) = 42.78$, $p < .001$. Whereas men paid *less* attention to the person watching when it concerned another man ($M = 3.2$, $SD = 1.20$) compared to a woman ($M = 4.5$, $SD = 0.99$), $F(1, 30) = 9.85$, $p < .01$, women paid *more* attention to the person watching when it concerned another woman ($M = 3.7$, $SD = 1.16$) compared to a man ($M = 1.4$, $SD = 0.91$), $F(1, 30) = 38.37$, $p < .001$ (see Table 3).

Table 3. Attention to Other

	Same Gender		Other Gender		Total	
	M	SD	M	SD	M	SD
Men	3.2[a]	1.20	4.2[b]	0.99	3.8	1.26
Women	3.7[a]	1.16	1.4[b]	0.91	2.6	1.56
Total	3.5[a]	1.18	2.9[b]	1.82	3.2	1.53

Attention to Other (0 = not at all attentive to the person watching; 5 = very much attentive to the person watching). Means that do not share a superscript differ at p < .05

In summary, as predicted and consistent with the results of Study 2, we found that men, when being scrutinized by a woman predominantly adopted a first-person perspective and paid relatively much attention to the woman and little attention to themselves. Also as expected, compared to a control condition or compared to women, men did not differ in their reaction to being scrutinized by another man.

This pattern of results differed from the results we found for women. Conform expectancies, we found that women predominantly adopted a third-person perspective when remembering being scrutinized by a man. Also as predicted, women in this condition were relatively aware of themselves, and this attention to the self seems to have gone at the expense of the attention they paid to the person watching. In other words, when being scrutinized by a man, women seem to be mainly preoccupied with themselves. We also showed that women are not self-aware because they experience a drop in self-esteem in this situation: Self-esteem did not differ between conditions and it did not differ from the self-esteem of our male participants. This result is consistent with our hypothesis that women are aware of themselves instead of the person watching, because they want to know what image they are transferring to their "audience."

In this study, we also showed that adopting a third-person perspective is not a woman's default reaction to being scrutinized. When women remembered being scrutinized by another woman, they predominantly adopted a first-person perspective. Furthermore, when being watched by another woman, as compared to the control condition or to men, women were relatively self-aware *and* paid relatively much attention to the other woman. Although we did not foresee this result, it is perfectly consistent with the idea of social comparison processes in a context of intra-sexual competition.

As a woman's physical appearance is associated with her social status and how attractive she is to men (e.g., Dion, Bescheid, & Walster, 1972; Buss, 1988), it may be important for her to know how attractive she is compared to her competition (e.g., other women). When another woman is scrutinizing her (which may be interpreted as driven by

a desire to know what her competition looks like as well), she may look back in order to determine her position. In other words, women may assess their social status by comparing themselves to their competition. Our results are indeed consistent with a social comparison interpretation. As Stapel and Tesser (2001; see also Stapel & Koomen, 2001) demonstrated, self-activation increases social comparison. Our results suggest that women paid relatively much attention to themselves (self-activation) and to the other woman (activation of a comparison standard), which is consistent with what happens when people are comparing themselves to others. Although causality is yet unclear (did the other woman's look increase self-awareness, and did this self-activation, subsequently, engender a social comparison process, or did the sight of the other woman engender a social comparison process, which induced self- and other awareness?), these results are interesting and invite further research.

For now, we may conclude that the alternative hypotheses (self-esteem and adopting a third-person perspective as a default reaction to being scrutinized) do not explain our results. Women adopted a first-person perspective when being scrutinized by someone of the same gender and did not experience a drop in self-esteem in response to being scrutinized by a man. Therefore, this study was successful in corroborating the results of the first two studies, excluding these alternative interpretations, and, therefore, strengthening our argument.

Study 4.4

Consequences of Predominantly Adopting a First- or Third-Person Perspective

In the fourth and final study, we will test the idea that self-awareness initiates self-regulation. More specifically, we expect that adopting a third-person perspective will offer a critical perspective on participants' public self-aspects, and that self-regulative efforts will therefore be directed towards those aspects. Although, as already mentioned, there may be many ways to operationalize the regulation of public self-aspects, we will focus on the regulation of one's weight.

In their research, Fredrickson and colleagues (1998) have demonstrated a relation between being in a self-objectifying situation and eating. More specifically, when trying on a swimsuit, women ate less of a cookie than women in a neutral condition did. These authors concluded that self-objectification leads to "disordered eating" (see also Fredrickson & Roberts, 1997; Noll & Fredrickson, 1998). However, Fredrickson and colleagues did not offer women a choice between healthy food and unhealthy food; they

only gave them a choice in how much they would eat of the (unhealthy) cookie. We expect that, when given the choice, women will not engage in "disordered" eating, but will choose healthy (e.g., low caloric) food over unhealthy (e.g. high caloric) food. Thus, in the current study we will test the hypothesis that self-objectification (adopting a third-person perspective) promotes healthy self-regulation.

With the current experiment we will also test a somewhat less explicit manipulation. In this study, we ask participants to remember the last time that they were being "watched" by someone of the other gender. We expect that this manipulation renders the same results as were found in the previous studies. More specifically, we expect that compared to men, women will adopt a third-person perspective in response to being watched and that they will be relatively aware of themselves at the expense of the person watching. Furthermore, we expect that adopting a (critical) third-person perspective will lead to self-regulative efforts that are directed to public self-aspects (in this case one's weight). We expect that, compared to predominantly adopting a first-person perspective, a third-person perspective will increase the choice for healthy food over unhealthy food.

Method

Participants. A total of 68 heterosexual students (31 men, 37 women) participated in this study. Participants were randomly assigned to one of two conditions (being watched by other gender, control condition).

Materials and procedure. The materials were the same as used in Study 2, with the following adjustment: Instead of asking participants to remember the last time they were "scrutinized" by someone of the other gender, we asked them to remember the last time they were being "watched" by someone of the other gender. Next, all participants read the same description of the different perspectives as was used in Study 2 and 3, and participants were asked to indicate on a 6-pointscale from which perspective they had seen themselves predominantly (0 = *entirely from a first-person perspective*, and 5 = *entirely from a third-person perspective*). The next questions asked participants to indicate for whom they had most attention in the original situation (0 = *myself*, 5 = *others*), and whether the situation was experienced as positive or negative (1 = *positive*, and 7 = *negative*).

After completing these measures, we thanked participants for their cooperation and explained to them that, as a token of appreciation for participating in this research, they may choose between a chocolate bar (mars, snickers, milky-way, twix, or bounty), or an apple. The experimenter wrote the choice of the participant down on their

Table 4. Perspectives

	Supermarket		Being watched		Total	
	M	*SD*	*M*	*SD*	*M*	*SD*
Men	2.1	1.64	0.8	1.56	1.5	1.71
Women	2.3	1.89	3.5	1.69	2.9	1.87

Adopted Perspective (0 = entirely first-person perspective, 5 = entirely a third-person perspective)

questionnaire, gave the participant the chosen chocolate bar or apple, and then fully debriefed the participant.

Results and Discussion

Perspectives. A univariate analysis of variance showed no main effect of Situation, $F < 1$, *ns.*, a main effect of Gender, $F(1, 64) = 11.89$, $p < .001$, which indicated that women ($M = 2.9$, $SD = 1.87$) were more prone to adopt a third-person perspective than men ($M = 1.5$, $SD = 1.71$), and an expected interaction effect between Gender and Situation, $F(1, 64) = 9.06$, $p < .01$. As can be inferred from Table 4, this interaction effect indicated that women were *more* prone to adopt a third-person perspective when being watched ($M = 3.5$, $SD = 1.69$) as compared to the control condition ($M = 2.3$, $SD = 1.89$), $F(1, 35) = 1.03$, $p < .05$, whereas the opposite was true of men, who were *less* prone to adopt a third-person perspective when being watched ($M = .81$, $SD = 1.56$) compared to the control condition ($M = 2.1$, $SD = 1.64$), $F(1, 30) = 5.28$, $p < .05$. In other words, consistent with hypotheses, women were more prone to adopt a third-person perspective when being watched, whereas men were more prone to adopt a first-person perspective when being watched.

Attention to Self or Others. Conform expectancies, a univariate analysis of variance showed no main effect of Situation, $F < 1$, *ns.*, a main effect of Gender, $F(1, 64) = 36.97$, $p < .001$, which indicated that women ($M = 2.2$, $SD = 1.40$) were more attentive to themselves (and, hence, less attentive to the surroundings) than men ($M = 4.0$, $SD = 1.17$). This later effect was qualified by the expected interaction effect between Gender and Situation, $F(1, 64) = 12.92$, $p < .001$. As can be inferred from Table 5, this interaction effect indicated that women were *more* attentive to themselves in the "being watched condition" ($M = 1.7$, $SD = 1.07$) than in the neutral condition ($M = 2.7$, $SD = 1.52$), $F(1, 35) = 5.43$, $p < .05$, whereas the opposite was true of men, who were *less* attentive to themselves in the "being watched condition" ($M = 4.7$, $SD = 1.01$) than in the neutral condition ($M = 3.5$, $SD = 1.24$), $F(1, 30) = 9.30$, $p < .01$.

Table 5. Attention to Self or Others

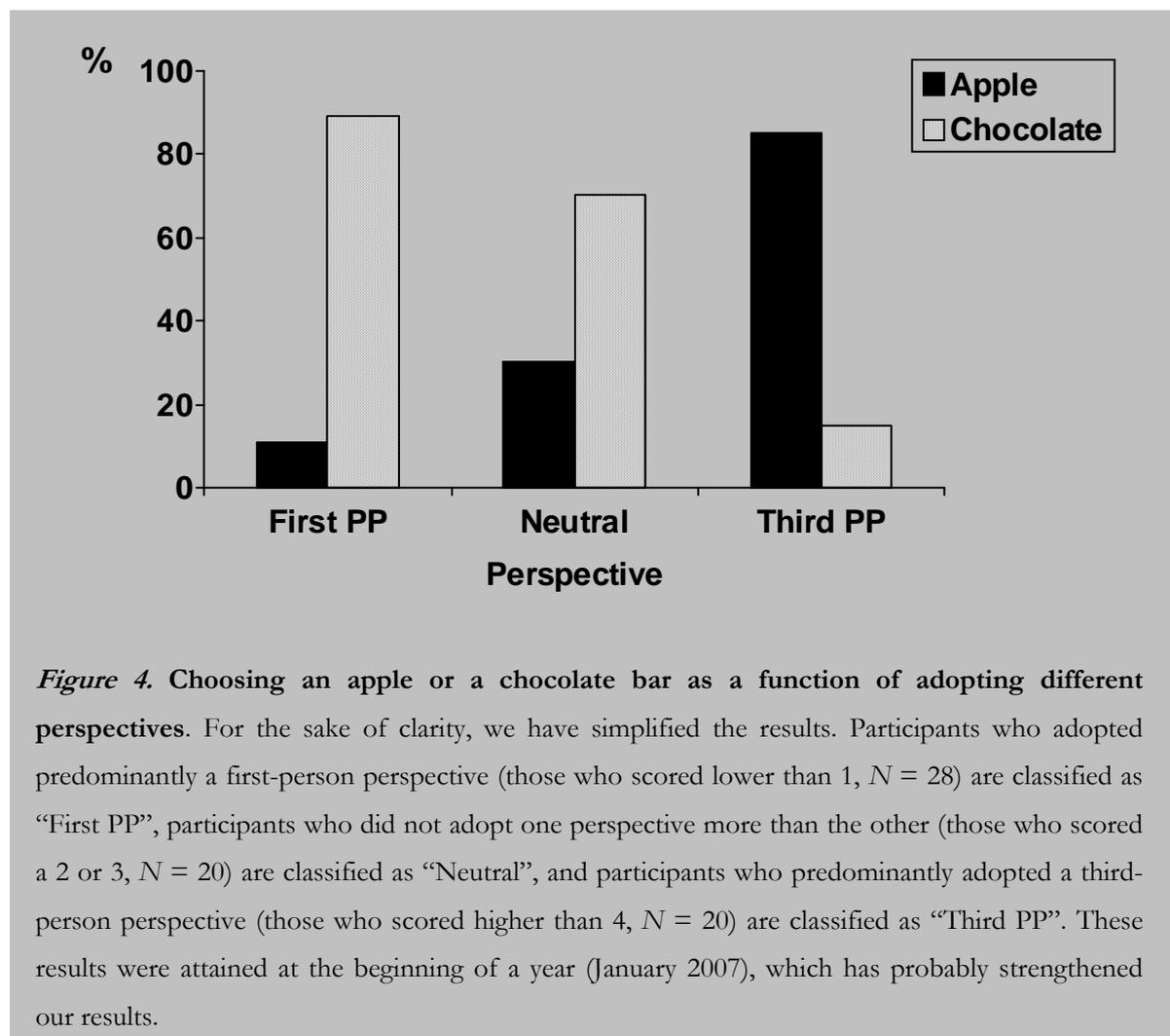|	Supermarket		Being watched		Total	
	M	*SD*	*M*	*SD*	*M*	*SD*
Men	3.5	1.24	4.7	1.01	4.0	1.17
Women	2.7	1.52	1.7	1.07	2.2	1.40

Attention to Self or Others (0 = myself, 5 = others)

In other words, consistent with hypotheses, women paid more attention to themselves (and less attention to the surroundings) when remembering a situation in which they were being watched compared to a control condition, whereas men paid less attention to themselves when remembering a situation in which they were being watched.

Alternative hypotheses: Valence and time passed. To explore whether these effects could be explained in terms of the valence of the remembered situation, we conducted a univariate analysis of variance on Valence (1 = *positive*, 7 = *negative*). This analysis showed no significant effects, all *Fs* < 1. To explore whether the results could be explained in terms of time passed, we conducted the same analysis on the time past (in weeks). In both conditions, the mean time that had passed was less than a week (respectively 4 days since the last time being watched and 2 days since the last visit to the supermarket). Both situations, thus, had taken place in the recent past and are therefore unlikely to explain our results. Also, this difference did not approach significance, $F(1, 64) = 1.44$, *ns.* In summary, our results cannot be explained by the alternative hypotheses that the time passed between conditions, or the valence of the remembered situations induces the adoption of a third- or first-person perspective.

Perspectives and self-awareness. The hypothesis that adopting a first-person perspective goes at the expense of attention to the self, whereas adopting a third-person perspective increases attention to the self, is confirmed by the significant negative correlation between Perspectives and Attention to Self (0) or Others (5), ($r = -.63$, $p < .001$). This result, again, offers support for the hypothesis that adopting a first-person perspective involves relatively little self-awareness, whereas adopting a third-person perspective involves relatively much self-awareness.

Self-regulation: Choosing an apple or chocolate. We expected that adopting a (critical) third-person perspective would increase self-regulation, which, in this case, means choosing healthy food (an apple) over unhealthy food (chocolate). To test this hypothesis, we tested whether Perspectives determined Self-Regulation using binary

Figure 4. **Choosing an apple or a chocolate bar as a function of adopting different perspectives**. For the sake of clarity, we have simplified the results. Participants who adopted predominantly a first-person perspective (those who scored lower than 1, $N = 28$) are classified as "First PP", participants who did not adopt one perspective more than the other (those who scored a 2 or 3, $N = 20$) are classified as "Neutral", and participants who predominantly adopted a third-person perspective (those who scored higher than 4, $N = 20$) are classified as "Third PP". These results were attained at the beginning of a year (January 2007), which has probably strengthened our results.

logistic regression. This analysis produced a significant effect, χ^2 $(1, N = 68) = 27.41$, $p < .001$. The model accounted for between 33.5% and 45.1% of the variance in self-regulation, with 65.4% of the choices for an apple successfully predicted and 92.9% of the choices for chocolate. Overall 82.4 of predictions were accurate. The model-predicted odds ratios suggest that, consistent with our hypothesis, an increase in the tendency to adopt a third-person perspective by 1 is associated with a *decrease* in the odds of choosing a chocolate bar by a factor of 0.43. In other words, predominantly adopting a first-person perspective hindered self-regulation, whereas, the other way around, predominantly adopting a third-person perspective improved self-regulation (see also figure 4).

In conclusion, the results of this study show that predominantly adopting a third-person perspective promotes self-regulation. Participants who predominantly adopted a third-person perspective, were inclined to choose healthy, low-caloric food over unhealthy, high-caloric food. In contrary, participants who adopted predominantly a first-

person perspective were inclined to choose unhealthy, high-caloric food over healthy, low-caloric food.

General Discussion

What happens when you are being observed by someone of the other gender? Will you look back in order to see who the other is and what he or she looks like? Or will you become predominantly self-focused, trying to figure out what it is the other sees when looking at you? In four studies we found support for the contention that this depends on whether you are a woman or a man. Whereas men predominantly looked back in order to see what she looks like, women predominantly became self-focused. More specifically, men predominantly adopted their own, first-person perspective when being watched by a woman. Furthermore, they had relatively little attention for themselves and much attention for the woman watching. Women, in contrary, adopted predominantly a third-person perspective, paid relatively much attention to themselves and little attention to the man who was watching. These results offer support for Argyle and Williams' (1969) suggestion that women may be regarded as the performers, whereas men may be regarded as the audience.

As a consequence of predominantly being self-focused, women remembered relatively few details of the man who was watching them. In contrary, men reported to be focused predominantly on the woman who was watching, and consistent with this result, they remembered relatively much details of the woman who was watching them. Although these results are somewhat preliminary (e.g., we cannot check whether the remembered details were correct, and it may be –although we think that this is quite unlikely- that other variables than a focus of attention influenced the amount of reported details, for example, because women are more hesitant than men to report details they are not entirely sure of), they provide an interesting view.

Several authors have argued that in order to be successful at impression-management (or self-presentation), it is important to monitor the self *and* the other person's reaction to the self (Doherty & Schlenker, 1991; Schlenker & Weigold, 1992; Leary, 1995; but see DePaulo, Kenny, Hoover, Webb, & Oliver, 1987). Our result that women paid more attention to themselves than to the man who was watching them, together with the results of Argyle and Williams (1969), who demonstrated that the feeling of being watched is unrelated to the actual amount an observer is watching, suggest that they may not be particularly successful in predicting the impression the other is creating of them. When attention is predominantly focused on the self (e.g., when feeling evaluated), people may be successful in reporting what they did in that particular

situation, but they may not be very successful in reporting how the other reacted to them (hence, they may not be successful in knowing the impression they conveyed on the person watching). Similarly, when attention is predominantly focused on the person watching (e.g., when being the one evaluating) instead of on the self, people may also not be successful at predicting how they came across to the person watching. Thus, it may be that people are only successful in knowing the impression the other has created when they are both focused on themselves and on the other person. Of course, this suggestion remains highly speculative at this point. Further research is needed to clarify the relation between focus of attention and the ability to predict the image one has transferred to an observer.

Besides demonstrating that men and women differ in their focus of attention when being watched by someone of the other gender, the current studies offer support for the suggestion that self-awareness promotes self-regulation. Whereas adopting a third-person perspective increased choosing healthy (low caloric) food, adopting a first-person perspective increased choosing unhealthy (high caloric) food. These results give more insight in the relation between adopting a third-person perspective and self-regulation. Whereas the adoption of a third-person perspective was positively related to awareness of public self-aspects, we expected that self-regulative efforts would be directed at those aspects. We indeed found that adopting a third-person perspective promoted the choice for healthy low-caloric food, which may be interpreted as weight-regulation. As weight is a public self-aspect, these data support our theory.

Importantly, these data contradict the position of Fredrickson and colleagues (Fredrickson & Roberts, 1997; Fredrickson et al., 1998; Noll & Fredrickson, 1998), who argued that self-objectification (adopting a third-person perspective) is related to "disordered eating". In their research, these authors did not give participants a choice between healthy and unhealthy food. They found that participants ate less of a cookie (unhealthy food) when they were in a self-objectifying situation, which they took as evidence for their position that self-objectification leads to disordered eating (which, taken to the extreme, may lead to anorexia or bulimia). We showed that when given the choice between unhealthy and healthy food (a chocolate bar or an apple), participants chose for the healthy, low-caloric option. Thus, at least in a normal student population, self-objectification seems to lead to healthy weight-regulation.

Limitations and Directions for Future Research

One of the findings we more or less stumbled across was the result that women reported being both aware of themselves (from a first-person perspective) and the person

watching when that person concerned another woman. We speculated that this is a result of intra-sexual competition, which may involve determining one's position relative to the other woman. Being both focused on oneself and the person watching seems to be consistent with a social comparison explanation of our findings, as for social comparison to occur, both the self and the "standard" (in this case another woman's physical appearance) has to be activated (e.g., Stapel & Tesser, 2001).

Our results suggest that when women compare themselves with the woman watching, they do not compare "a construed image of themselves at that particular moment" with an image they create from the woman watching. Or, in other words, women in this study did not adopt a third-person perspective (and, therefore, do not create an image of themselves as the other woman sees them). Perhaps, in this case, the self was merely activated, and social comparison ensued in a relatively automatic fashion (e.g., Stapel & Blanton, 2004). Whether women were fully self-aware, or whether the self was merely activated, remains an interesting question for future research.

Another question that remains open for further research is whether adopting a third-person perspective takes place when actually being watched, or whether it only happens when remembering a situation in which another person was watching. Although we think that this is unlikely, it could be that adopting different perspectives only happens in memories and not in the actual situation. We expect that this is not the case, and that women do adopt a third-person perspective when realizing that they are being watched. This, however, remains an important and interesting question for future research.

A real-life encounter may also provide corroboration of our result that people who are relatively self-focused (in this case, women) remember less details of the person watching than people who are relatively focused on the other person (in this case, men). Although this may sound as a logical consequence of the focus of attention, as discussed, other interpretations of our results are possible. A real-life encounter with, for example, a confederate may provide a situation in which the remembered details could be compared to the actual features of the confederate, which provides more insight in the consequences of being watched.

In Conclusion

The current experiments show, with a variety of measures, that women and men react differently to being watched by someone of the other gender. Also, the current experiments demonstrate a relation between adopting a third-person perspective, public self-awareness, and self-regulative efforts directed at those public self-aspects. Although

many questions remain open for further research, it is our contention that these results provide an important and, above all, interesting insight in the question what happens when being watched.

CHAPTER 5

I versus We

The effects of self-construal level on diversity

In two studies it is demonstrated that people's self-construal level may influence the extent to which they spontaneously produce divergent ideas. In Study 1, it is shown that construing the self at a personal level ("I") induces the motivation to be independent, alone, and different, whereas construing the self at a social level ("we") induces the motivation to be accepted, together, and to conform. In Study 2, it is shown that -in the absence of explicit instructions to be different- personal self-construals lead to more diversity (e.g., drawing a golf cart as an example of a motor vehicle), whereas social self-construals lead to less diversity (e.g., drawing a car as an example of a motor vehicle). Possible implications for brainstorm sessions in groups and other group-based ventures in which diversity is desired are discussed.

I versus We: The effects of self-construal level on diversity

Why do individual members of a group often come up with more unique and divergent ideas when working alone than when working together as a group? This question has troubled many researchers, and not in the least those who study the often found productivity losses when people are brainstorming in groups (e.g., Mullen, Johnson, & Salas, 1991; Paulus, Larey, & Ortega, 1995). Since researchers started their search for reasons that individuals in groups seem to produce less divergent ideas, many suggestions have been offered, including "production blocking" (Diehl & Stroebe, 1987; Nijstad, Stroebe, & Lodewijkx, 2003), "social anxiousness" (Camacho & Paulus, 1995), and "conforming to norms" (Adarves-Yorno, Postmes, & Haslam, 2006).

Notwithstanding the idea that social anxiety, production blocking, and conformance to norms may repress the expression of divergent ideas, in the current chapter we will explore an additional mechanism that may explain why people in groups often come up with less unique, divergent ideas than when working alone. More specifically, we will argue that construing the self as an individual ("I") or as part of a group ("we") may determine whether people are prone to, respectively, think "different" (and may therefore come up with unique, divergent ideas) or "similar" (and may therefore come up with common, convergent ideas).

Self-Construal Level Theory

A basic premise of self-construal level theory is that people have distinctive levels of self-representation (e.g., Brewer, & Gardner, 1996; Gardner, Gabriel, & Lee, 1999). Depending on culture and context, people may represent themselves in relationship with others (social self-construals) or as individuals (personal self-construals). Cross-cultural research, for example, has shown that due to socialization processes, people from Western countries construe themselves at a more independent, personal level (in terms of "I" and individual differences) than people from Eastern countries, who construe themselves at a more interdependent, social level (in terms of "we" and inter-individual similarities), (e.g., Gardner, Gabriel, & Lee, 1999; Markus & Kitayama, 1991; 2003). Whereas members of individualistic (Western) countries learn to place emphasis on characteristics that make them unique and separate from others, members of collectivistic (Eastern) countries learn to place emphasis on characteristics that make them similar and well-suited to maintain harmony with others (Lee, Aaker, & Gardner, 2000).

Although substantial inter-cultural differences have been found, Gardner, Gabriel, and Lee (1999) demonstrated that depending on context, individual members of both cultures are able to construe themselves at different levels. More specifically, Gardner and colleagues (1999) have shown that priming a social identity ("we-priming" by means of encircling the words "we", "us", "our" and "ours" in a text) in members of an individualistic country produced a shift towards more social values (e.g., belongingness, friendships, family safety), whereas priming a personal identity ("I-priming" by means of encircling the words "I", "me", "my", and "mine" in a text) in members of a collectivistic country produced a shift towards more individualistic values (e.g., freedom, independence, choosing one's own goals). Thus, depending on context, individuals within each culture seem to be able to construe themselves flexibly, which may subsequently determine which "basic motivation" (autonomy, independence or belonging, interdependence) will guide their behavior (Baumeister & Leary, 1995; Gardner et al., 1999).

Construing the self as an autonomous being or as a social being may exert influence on the way social information is being processed. As Stapel and Koomen (2001) showed, the level at which people represent themselves ("I" versus "we") may influence whether people engage in contrastive or assimilative social comparisons (see also, Kühnen & Hannover, 2000). More specifically, they showed that I-priming activates a *differentiation mindset* ("I am different from others"), whereas we-priming activates an *integration mindset* ("I am similar to others"). When personal self-construals ("I") were accessible, participants emphasized self-distinctiveness and were prone to contrast the self away from others, whereas when social self-construals ("we") were accessible, participants emphasized similarities and were prone to assimilate the self to others. Hence, people's self-construals influence the way social information is being processed.

Likewise, Van Baaren, Horgan, Chartrand, and Dijkmans (2004) have argued that "information processing styles," which they operationalized as a focus on relationships between components (interdependent processing style) versus a focus on individual components (independent processing style), may influence the reaction to social information. They showed that an interdependent processing style fosters mimicry, whereas an independent processing style represses mimicry. Based on these results, Van Baaren and colleagues (2004) concluded that people's cognitive style (either chronically available or temporarily induced) may increase or decrease synchronization of one's behavior with the behavior of an interaction partner, which may increase or decrease interconnectedness.

Interesting for the current argument is that a "state of mind" exerts influence on the way social information is being processed. A similarity mindset (or interdependent cognitive thinking style) may focus attention on similarities and, by doing so, increases interconnectedness, whereas a differentiation mindset (or independent cognitive thinking style) may focus attention on differences and decreases interconnectedness. In the current chapter we will take this research one step further and explore the influence these different self-construal levels have on relatively non-social behaviors. If self-construal levels are indeed related to specific *mindsets*, self-construal effects may not be confined to the processing of social information, but may as well influence the way non-social information is being processed.

More specifically, we expect that personal self-construals will lead not only to differentiating the self from others, but also to more divergent (non-social) behavior. Conversely, we expect that the activation of social self-construals will lead not only to assimilating the self to others, but, more generally, to more convergent behavior.

In summary, in two experiments we will test whether self-construal level affects people's motivation and behavior. Our hypotheses are that I-priming activates the motivation to be "autonomous" and "different," and thus increases divergent behavior, whereas we-priming increases the motivation to be similar, and thus increases convergent behavior.

Study 5.1

I versus We: Motivational consequences

The first study was designed to examine the influence of I-priming and we-priming on motivation. Our hypotheses are that personal self-construals will lead to the motivation to be different, whereas social self-construals will lead to a motivation to be similar.

Method

Participants. A total of 61 undergraduate students were randomly assigned to the conditions of a 3 (priming condition: I, we, neutral) between subjects factorial design.

Materials and procedure. All participants, regardless of condition, received a word search task. This priming task was modeled after Brewer and Gardner (1996; see also Stapel & Koomen, 2001). In the priming conditions, participants were instructed to circle all first-person pronouns that appeared in a text. In the I-priming condition, all of the pronouns referred to *I, me, my,* and *mine.* In the we-priming condition, these pronouns

were replaced by *we, us, our.* In the control condition the pronouns were replaced by the letter combinations *abc* and *xyz.*

Next, participants received a questionnaire entitled "motivation." Participants were asked to indicate to what extent they were motivated to be independent, different, and alone, to be together, accepted and to conform (all items were measured on a scale ranging from *1* = strongly disagree, *7* = strongly agree). Correlation analyses showed that the motivations to be accepted and to conform were highly correlated. Therefore, we calculated a compound score (Cronbach's α = .71). Similarly, we calculated a compound score for the motivations to be independent and to be different (Cronbach's α = .70). After filling out the motivation-questionnaire, participants were thanked and fully debriefed.

Results and Discussion

We conducted a 3 (I-priming, we-priming, neutral) between-subjects analysis of variance on the motivation-questionnaire. This ANOVA yielded a significant effect for the motivation to be independent/different, $F(2, 59) = 13.28$, $p < .001$, to be accepted/conform, $F(2, 59) = 11.26$, $p < .001$, to be together, $F(2, 59) = 13.38$, $p < .001$, and to be alone, $F(2, 59) = 10.02$, $p < .001$.

Planned comparison analyses showed, consistent with hypotheses, that participants whose personal self was activated were more motivated to be independent/different ($M = 5.3$, $SD = .82$) than participants in the control condition ($M = 4.7$, $SD = .87$), $t(59) = 2.80$, $p < .01$. Participants in the control condition ($M = 4.7$, $SD = .87$), in turn, were more motivated to be independent/different than participants whose social self was activated ($M = 3.9$, $SD = .73$), $t(59) = 3.00$, $p < .01$.

Planned comparison analyses on the motivation to be accepted/conform showed, consistent with hypotheses, that participants whose personal self was activated, were *less* motivated to be accepted ($M = 3.2$, $SD = .98$) than participants in the control condition ($M = 3.9$, $SD = .77$), $t(59) = -2.70$, $p < .01$. Participants in the control condition, in turn, were less motivated to be accepted/conform than participants whose social self was activated ($M = 4.7$, $SD = .99$), $t(59) = -2.66$, $p < .01$.

Planned comparison analyses showed, consistent with hypotheses, that participants whose personal self was activated, were *less* motivated to be together ($M = 3.0$, $SD = 1.04$) than participants in the control condition ($M = 4.4$, $SD = 1.57$), $t(59) = -1.37$, $p < .01$. Participants in the control condition, in turn, were less motivated to be together than participants whose social self was activated ($M = 5.3$, $SD = .91$), $t(59) = -.90$, $p < .06$.

Conversely, and consistent with hypotheses, participants whose personal self was activated were *more* motivated to be alone ($M = 5.0$, $SD = .1.15$) than participants in the control condition ($M = 4.2$, $SD = 1.32$), $t(59) = .90$, $p < .05$. Participants in the control condition, in turn, were more motivated to be alone than participants whose social self was activated ($M = 3.0$, $SD = 1.44$), $t(59) = 1.15$, $p < .01$.

In summary, consistent with hypotheses we found that participants whose personal self was activated by I-priming were *more* motivated to be independent/different and to be alone, and *less* motivated to be accepted/to conform and to be together. Conversely, participants whose social self was activated by we-priming were *more* motivated to be accepted/to conform and to be together, and *less* motivated to be independent/different and alone.

These results show that, consistent with previous research (e.g., Gardner et al., 1999), participants whose social self is activated, are motivated to be interconnected with other people, whereas participants whose personal self is activated are motivated to be autonomous and independent. Moreover, this study is the first to demonstrate that activating the personal self increases the motivation to be *different*. In the next study we will measure whether personal or social self-construals are able to influence divergent thinking.

Study 5.2

Effects of I versus We on Diversity

The second study was designed to examine the influence of self-construal level on divergent thinking, and, more specifically, on the spontaneous expression of divergent ideas. We expect participants whose personal self is activated, to produce more divergent ideas and products than participants whose social self is activated.

To measure the degree in which people produce "divergent products," we asked them to draw a "motor vehicle" and to give an example of three categories (furniture, tools, and clothing). We expect participants whose personal self is activated, to draw less common motor vehicles (e.g., less cars), and to come up with more unusual examples of the three categories given, whereas we expect the opposite to happen in participants whose social self is activated.

Method

Participants. A total of 107 undergraduate students were randomly assigned to the conditions of a 3 (priming condition: I, we, neutral) between subjects factorial design.

Materials and procedure. All participants, regardless of condition, received the same priming task as was used in Study 1. Next, participants were asked to draw a motor vehicle on a blank piece of paper. Subsequently, they were asked to name 1 example of the following categories: furniture, tools, and clothing. After each category, one line was left open for a response. After filling out the questionnaire, participants were thanked and debriefed.

Results and Discussion

Results showed that 72% of all drawings depicted a car, and 14% of all drawings a motorcycle. Other drawings depicted (school-)busses, trains, tanks, trucks, golf carts, and agricultural vehicles. These latter examples each constituted less than 3% of the total amount of drawings. To measure the extent to which participants produced divergent products, we coded drawings of a car as 1 *(common),* whereas we coded other drawings as 2 *(unusual).*[1]

We conducted a Chi-square test to examine whether participants in the priming conditions differed in their responses. This test produced a highly significant effect (χ^2 = 12.05, df = 2, p = < .01). In the I-priming condition participants drew relatively more "other vehicles" (N = 16, 46% of total amount of drawings within condition) than participants in the control condition (N = 11, 30%). Participants in the control condition, in turn, drew relatively more other vehicles than participants in the we-priming condition (N = 3, 9%). In other words, in line with our hypotheses, we found that participants whose personal self was activated produced more divergent drawings than participants in the control condition, whereas participants whose social self was activated, produced less divergent drawings.

Examples of furniture. Results showed that the two most often given examples of furniture are a couch (N = 42) and a chair (N = 30), which together constituted 67% of all mentioned examples. Other examples were closets (N = 10), tables (N = 10), sofa's (N = 6), bookcases (N = 3), beds (N = 3), bar stools (N = 2), and a divan (N = 1), which each constituted less than 10% of the total amount of mentioned examples. We coded a couch and a chair as 1 *(common)*, and other examples as 2 *(unusual).* A Chi-square test on the participants' responses showed a significant effect (χ^2 = 7.86, df = 2, p = < .05). Consistent with hypotheses, we found that in the I-priming condition, relatively more participants gave a divergent example of furniture (N = 17, 49% of all given examples within condition) than in the control condition (N = 12, 32%). In the control condition, relatively more participants gave an unusual example (N = 12, 32%) than in the we-priming condition (N = 6, 17%). In other words, participants in the we-priming

condition were least divergent in their responses, whereas participants in the I-priming condition were most divergent.

Examples of tools. Results showed that a hammer was the most often given example ($N = 73$, 68%). Amongst other examples were screw drivers ($N = 11$), axes ($N = 3$), saws ($N = 3$), pincers ($N = 2$), a drill ($N = 1$), and a chisel ($N = 1$), which each constituted less than 10% of the total amount of examples. We coded a hammer as 1 *(common)*, and other examples as 2 *(unusual)*. A Chi-square test indicated a significant effect ($\chi^2 = 11.25$, df $= 2$, $p = < .01$). Consistent with hypotheses, we found that in the I-priming condition, relatively more participants gave an unusual example of a tool ($N = 18$, 51% of all given examples within condition) than in the control condition ($N = 11$, 30%). In the control condition, in turn, relatively more participants gave an unusual example ($N = 11$, 30%) than in the we-priming condition ($N = 5$, 14%).

Examples of clothes. Results showed that the most often mentioned examples were trousers ($N = 39$, 37% of all given examples), skirts ($N = 19$, 18%), and jumpers ($N = 19$, 18%). Amongst other examples were dresses ($N = 9$, 9%), jackets ($N = 5$, 5%), shirts ($N = 2$, 2%), socks ($N = 2$, 2%), pyjamas ($N = 1$, 1%), a suit ($N = 1$, 1%), and a jogging suit ($N = 1$, 1%), which each constituted less than 10% of the total amount of examples. We coded trousers, skirts, and jumpers as 1 *(common)*, and other examples as 2 *(unusual)*. A Chi-square test indicated a significant effect ($\chi^2 = 8.65$, df $= 2$, $p = < .01$). Consistent with hypotheses, we found that in the I-priming condition relatively more participants gave an unusual example of clothes ($N = 15$, 43%) than in the control condition ($N = 11$, 30%). In the control condition, in turn, more participants gave an unusual example ($N = 11$, 30%) than in the we-priming condition ($N = 4$, 11%).

These results show that, consistent with our hypotheses, participants whose personal self was activated, drew relatively more unusual examples of a motor vehicle and gave relatively more unusual examples of a piece of furniture, tools, and a piece of clothing. Conversely, participants whose social self was activated gave relatively more standard examples. Our hypothesis that social self-construals repress divergent thinking, whereas personal self-construals enhance divergent thinking, was thus confirmed.

General Discussion

Why do individual members of a group often come up with more unique and divergent ideas when working alone than when working together as a group? Our results show that social self-construals ("we-ness") increase the motivation to be similar, and decrease the spontaneous report of divergent ideas. Conversely, individual self-construals ("I-ness") increase the motivation to be different, and therefore increase divergent thinking.

More specifically, in Study 1 we demonstrated that personal self-construals increase the motivation to be different, independent, and alone, and decrease the motivation to be together, accepted and to conform. In Study 2 we demonstrated that personal self-construals increase divergent responses: Although not being asked explicitly to be different, people drew for example a golf cart when asked to draw a motor vehicle and answered "pyjamas" when asked to give an example of clothing.

On the contrary, we found that social self-construals increase the motivation to conform, to be accepted, and together, and decrease the motivation to be independent, different, and alone. Personal self-construals also decreased divergent responses: People drew a car when asked to draw a motor vehicle and answered "trousers" when asked to give an example of clothing.

These results show that self-construal level not only influences the way people respond to social information (e.g., Kühnen & Hannover, 2000; Stapel & Koomen, 2001; Van Baaren et al., 2004), but it also influences the way people respond to nonsocial information. The current findings offer further support for the conception that personal and social self-construals involve specific mindsets, which, when activated, determine the way we process information.

Limitations of the Current Experiments

In this research we have argued and showed that self-construal level influences motivation *and* behavior. These results are consistent with previous research establishing the relation between mindsets and motivation (Gardner et al., 1999), and mindsets and behavior (Concalo & Staw, 2006; Stapel & Koomen, 2001; Van Baaren et al., 2004). Based upon current and past results, however, it is not yet clear whether motivation is a prerequisite for behavior. Whereas it has been shown that mindsets may influence behavior relatively automatically (see, for example, Bargh, Chen, & Burrows, 1996; Dijksterhuis & Van Knippenberg, 1998), future research has to determine whether (and, if so, in which degree) motivation mediates the relation between mindset and behavior.

Furthermore, although it may seem plausible to assume that "working in groups" (as opposed to working alone) elicits social self-construals, in the current studies we did not measure self-construals as a function of group-membership. In previous research, however, it has been demonstrated that social self-construals are evoked easily when being in a group (Brewer & Gardner, 1996). Furthermore, research on the minimal group paradigm has shown that random assignment to a group influences the allocation of resources in favor of the newly formed group (e.g., Amichai-Hamburger, 2005; Billig & Tajfel, 1973), which may be interpreted as an indication of a feeling of "we-ness." These

results would argue in favor of the assertion that a feeling of "we-ness" is relatively common in groups. Nevertheless, these results do not provide direct evidence that being in a group elicits social self-construals. In which degree a group may foster feelings of "we-ness" and with which results remains therefore an important question for future research.

Implications of the Current Findings

Following the logic of the current findings, an implication would be that people of collective, Eastern, societies might be less able to come up with new and unique ideas than people of individual, Western, societies. As politically incorrect as this may sound, these findings are consistent with the results of a study conducted by Concalo and Staw (2006), in which they showed that the manipulation of cultural orientation ("standing out from other people" versus "being like other people") influenced group-creativity. Given that "divergent thinking" is an important component of creativity (Amabile, 1983), these results are in correspondence with the assumption that collectivism will indeed hinder divergent thinking.

It is important to note, however, that this does not mean that individualism is "better" than collectivism. As Concalo and Staw (2006) argue, collectivistic values may lead to more interpersonal cooperation, which facilitates mobilizing people's efforts. Even though individualistic societies may indeed be more adept at innovation, collectivistic societies may be more adept at high work performance and efficiency.

Also, as Gardner and colleagues (1999) have shown, depending on context, people in both cultures construe themselves at different levels. Whereas Easterners may be less creative in general, they can construe themselves at a more individualistic level, which may then foster creativity. Whether this is indeed the case has to be established in future research.

Another implication that stems from the current research is that these results may provide a theoretical underpinning of the proverbial wisdom that it is sometimes wise to invite outsiders to "take a fresh look" at things. Although the international electronics company Philips (which drives on being innovative) has eleven locations around the world in which large numbers of professional designers and innovators are employed, when a new idea is needed, people from external design studios are sometimes invited to participate in brainstorm sessions. Based on the current findings, it may be argued that people who do not "belong" to an existing group (i.e., designers from an external design studio) and therefore may not share a feeling of "we-ness," may indeed be evoked to think "differently" and come up with new ideas. Besides not sharing the norms of for

example the "Philips-group," these individual designers may construe themselves at a personal level, which –in itself-- promotes *being* different and may generate divergent, innovative thoughts.

The same logic may of course apply to many environments, including other businesses ("Why are outsiders sometimes better at providing solutions or coming up with new ideas than people who know the business from inside-out?"), science ("Why do outsiders sometimes have the most innovative ideas?"), arts ("Why do many artists and writers create their best work in relative isolation?"), and perhaps even personal relationships ("Why do outsiders sometimes have to indicate what goes wrong and provide solutions, when both partners are intelligent enough to be able to figure out what is happening?"). Whenever people are together and experience a feeling of "we-ness," they may be at risk of not being inventive. This does not only mean that they will conform to social norms and therefore think similarly, but, as we have shown, it may block divergent, new ideas altogether.

Conclusion

In the current research we showed that the subtle activation of social self-construals ("we") instigated being similar, whereas the subtle activation of personal self-construals ("I") instigated being different. These results add to the impressive amount of answers given to the question why people in groups often come up with less unique and divergent ideas than they would have come up with when working alone, a suggestion concerning the underlying process. Simply construing the self in terms of "we" may be enough to decrease divergent thinking, even when no other people are around. Similarly, construing the self in terms of "I" may increase the spontaneous production of divergent ideas. Even though the boundaries of these effects have yet to be explored, the here reported findings offer a new and exciting look on the process of divergent thinking.

Footnote

[1] Considering a drawing of a motorcycle as a common drawing (and therefore creating two categories: *1* = car or motorcycle, and *2* = other motor vehicles) did not change the results.

SUMMARY AND DISCUSSION

What is self-awareness? When do you become self-aware and what happens when you do? These were the central questions posed in this dissertation. Not the easiest questions, as the two individual components that make up self-awareness, the *self* and *awareness*, are complex processes. In social psychology, the self is considered to be an "aggregate of loosely related subtopics" (Baumeister, 1998), and in neurology, awareness is considered to be "the hard problem" (Chalmers, 1995). The combination of both terms, therefore, is barely understood.

In the introduction we explored what self-consciousness is. This appears to be a complicated question, which hinders the construction of a clear and unequivocal definition. In trying to grasp the concept, we described briefly what is known about the individual components, which is not clear in the case of "consciousness". We seem to experience "it" all, and we believe that all of us have it. Moreover, we believe that it influences our behavior. But what is it? Social psychology does not offer us an explanation. On reading the literature on self-consciousness, we may construe images of spotlights, which can be turned towards ourselves or towards the surroundings. But what is "a spotlight" and who operates it? As we have argued, the spotlight-metaphor may not be the most useful metaphor. It may lead to confusion, as some social psychologists seem to equate it with "attention". Because attention and consciousness are different processes (see, for example, Koch & Tsuchiya, 2006), this image is clearly incorrect and therefore not particular helpful when thinking about and describing self-awareness.

If consciousness cannot be compared to a spotlight, then what is it? In the end we have to conclude that we may be able to paint a sketchy image (see the introduction), a hint of what it may be, but that we do not know what it is. More specifically, we do not know how brains produce conscious experiences. We also do not know whether consciousness can be considered as a byproduct (as some researchers have demonstrated that activity can be measured before people indicate that they have a conscious intention, e.g., Libet, Gleason, & Wright, 1983), or as an important mechanism that actively shapes our thoughts and feelings.

This conclusion, strangely enough, did not motivate us to do research on the question "what is self-consciousness?", or "is consciousness the driving force of thoughts and behavior?", nor did it demotivate us to do research on this topic. On the contrary, even though these questions are without any doubt of utmost importance to the understanding of consciousness, we focused on consciousness in everyday life, or, in other words, on what happens on a psychological and behavioral level. Thus, we more or less assume that we have "it".

Will this be a problem, when (some day) it turns out that consciousness is a by-product, nothing but an illusion? We think not. In that case we probably have to change the terms we use, and make some changes concerning the proposed processes, but the gathered results in the empirical chapters remain the same. Some situations evoke "something" (what we will be labeling consciousness until we are confronted with evidence that tells us otherwise), which subsequently influences our thoughts and feelings, and our behavior. Thus, even though we do not quite understand the underlying mechanisms, in this dissertation we focused on the psychological consequences of what we call consciousness. More specifically, in this dissertation we examined the antecedents, the (experienced) process itself, and the consequences of self-awareness.

Self-awareness and Saliency of Behavioral Standards

In the first empirical chapter we explored the relation between awareness of specific self-aspects and saliency of behavioral standards. Numerous experiments have been conducted to study the influence of self-awareness on behavior. It has been demonstrated, for example, that self-awareness may lead to conformity, self-presentation, consistency (between opinions and behavior), and to normative behavior. From these results it is usually inferred that people must have been motivated to conform, or to bring their behavior in line with their beliefs, or to present oneself in a positive way. Whereas these behavioral standards (e.g., to "make a good impression", or to "be consistent") can lead to similar behavior, they may also lead to different behavior. Therefore, in this chapter, we examined the saliency of several behavioral standards as a consequence of self-awareness more directly.

Following Fenigstein, Scheier, and Buss (1975), we distinguished between awareness of private self-aspects and awareness of public self-aspects. We argued and demonstrated that several self-awareness manipulations that were used in previous research, activate different aspects of the self, which, subsequently may activate different standards. More specifically, we showed that a mirror and thinking about giving a presentation activated public self-aspects, whereas self-activation activates private self-aspects. Activating public self-aspects led to relatively social standards as "to get along well with others", and, more specifically "to convey a favorable impression" and "to be accepted". Activating private aspects of the self led to relatively individualistic standards as "to be authentic" and "to be different".

From the research described in this first chapter, it can be concluded that when predicting the effects of self-awareness, it is important to specify which aspects of the self are activated. A mirror activates different self-aspects than self-activation, and leads to

the activation of different standards. These results furthermore imply that different self-awareness manipulations should not be regarded as interchangeable. When increasing self-awareness, researchers should think about which aspects they want to make salient.

Questions for Further Research

An interesting question that remains is which behavioral standard will guide behavior. As inconsistencies could still ensue between the different social and personal standards, it may be interesting to discover which standard can be regarded as the "main standard". For example, when you are aware of your private thoughts and feelings, and you discover that your opinion is shared by a majority, will you change your opinion in order to be different, or will you stick to your opinion in order to be authentic? This probably depends on the context. But then, which context will activate which standard?

Similarly, when will which social standard (e.g., the standard to present oneself favorably or the standard to be accepted) be regarded as being the most important standard? Although the current research does not provide answers, it does yield some interesting hypotheses. The results of the two manipulations that increased awareness of public self-aspects, a mirror and thinking about giving a presentation, show subtle differences in the rankings between the standard to present oneself favorably and the standard to be accepted.

In the study in which we asked participants to imagine a situation in which they had to present themselves in front of their peers, we found that the average score of the standard to be accepted was higher than the average score of the standard to make a good impression. Although this could be a coincidence, it may also be that the standard to be accepted is more important in these kinds of situations. As we know that our respondents (first-year psychology students who began their studies less than a month ago), on average, consider it frightening to give a presentation in front of their peers, this fear could instigate the standard to be accepted. As research on social facilitation and choking points out, when people are afraid that they will not succeed in a task, the presence of others may lead to less confidence and to a poor performance (e.g., Zajonc, 1965). In addition, previous research has demonstrated that when people are anxious about an upcoming event, they have a need to affiliate (e.g., Miller & Zimbardo, 1966). It could be that the anxiety thinking about giving a presentation evokes, activates the standard to be accepted instead of the standard to leave a favorable impression. This, of course, has to be explored in future research.

In the study in which we increased public self-awareness with a mirror, we found that the average scored saliency of the standard to present oneself in a positive way was

higher than the average scored saliency of the standard to be accepted. This, too, can be a coincidence, but it may also be that seeing a reflection of yourself in the mirror indeed increases saliency of the standard to convey a positive image. Because mirrors are not only used to "check" how we appear to others, but also to improve our appearances, seeing a reflection of yourself in the mirror may increase saliency of the standard to make a good impression. Of course, this hypothesis needs to be tested in future research.

Self-awareness and Behavior

In the second empirical chapter we explored whether different self-awareness manipulations, besides influencing the saliency of behavioral standards, also influence behavior. To be able to test this properly, we needed a situation in which private convictions were in conflict with public norms. We expected and found that increasing awareness of public self-aspects led to conformance to public norms, whereas increasing awareness of private self-aspects led to acting on one's private convictions.

We also found that self-activation solely increased private self-awareness, whereas a mirror increased both public and private self-awareness. The finding that participants nevertheless conformed to a social norm when confronted with a reflection of themselves in a mirror, indicates that when both private and public self-awareness is increased, public concerns predominate.

Questions for Further Research

Whether participants actually experienced an internal conflict when confronted with a reflection of themselves in a mirror, cannot be inferred from these data. If they indeed experience an internal conflict, it would be interesting to assess how they come to a decision and what people experience when discovering this discrepancy. Do they feel as though they denied themselves, or do they have "tricks" to their disposal (as, for example, cognitive dissonance reduction) so that it does not reflect badly on themselves? Some authors have argued that when people cannot reach a standard, or feel bad about themselves, that they will try to diminish self-awareness (see, for example, Hull, Young, Jouriles, 1986; Carver & Scheier, 1998; Hull & Slone, 2004; Muraven, 2005). In our experimental setting decreasing self-awareness was not an option (as the mirror would not go away). What happens then? Do participants avoid looking in the mirror? These questions may also be answered in future research.

Adopting Different Perspectives

In the third empirical chapter we examined what happens at the moment people become self-aware. In this research we distinguished first-person perspectives from third-person perspectives. We expected that adopting a third-person (observer's) perspective would ensue when being evaluated by other people, whereas a first-person perspective ensues when being the one evaluating.

In the first study we operationalized "being evaluated" by looking at the consequences of being scrutinized by someone of the other gender. We expected that being scrutinized would lead to awareness of predominantly public self-aspects. We also expected that this awareness of public self-aspects would consist of adopting a third-person perspective, as this allows one to imagine what image one conveys. The results of this study were slightly more complex than we expected.

Whereas women indeed adopted a third-person perspective in response to (remembering) being scrutinized, and indicated that they paid relatively much attention to their public appearance, men indicated that they remembered the situation predominantly from a first-person perspective. Thus, even though men remembered being scrutinized by a woman, they nevertheless adopted their own perspective. The questions that were raised by these findings (e.g., "Why did men adopt a first-person perspective?"), constitute the starting point of the next chapter, but before turning to those results, we will first discuss the results that were obtained from this line of research.

Despite the partly contradicting results, we remained convinced that in situations in which people are evaluated, it should be important for them to know what image they are transferring, and, hence, to adopt a third-person perspective. In the second study, therefore, we examined what would happen when people imagined a job-interview, either from the perspective of the candidate (the one being evaluated), or from the perspective of a member of the selection committee (the one doing the evaluating). Whereas the scenario sketches remained the same except for the adopted roles, this design offered us the opportunity to study the unique influence of adopting these different roles. The results showed that, consistent with expectancies, both men and women adopted a third-person perspective when they imagined being the job applicant, whereas they both adopted a first-person perspective when imagined being a member of the selection committee. These results, thus, provide support for our hypotheses. However, because the results of the first study were not entirely consistent with expectancies, we explored the situation in which people remember being watched by someone of the other gender in the next chapter.

Being Watched by the Other Gender

What happens when a man remembers being watched by a woman? In the fourth empirical chapter we researched this question. Based on the idea that in our society emphasis is placed on women's appearances (e.g., in magazines, the media, films and video clips), we hypothesized, in the footsteps of Argyle and Williams (1969), that women may be regarded as the "performers" who are being scrutinized by men. In four studies we demonstrated that this is indeed the case. When women remember a situation in which they were being watched by a man, they predominantly adopted a third-person perspective, which is consistent with the idea that they feel evaluated. Men, on the contrary, predominantly adopted a first-person perspective when being watched by a woman, which is consistent with the idea that they were the ones doing the evaluating.

Adopting a third-person perspective, again, was related to an increase in public self-awareness and a decrease in private self-awareness, which reinforces our idea that women adopt a third-person perspective in order to assess the image they convey to the person watching. In addition, we also found that women do not always adopt a third-person perspective when being watched, which rules out the possibility that adopting a third-person perspective is some sort of "default-reaction" when being watched. When women remembered a situation in which they were being scrutinized by another woman, they adopted their own, first-person perspective. We also showed that women did not adopt a third-person perspective because they experienced negative feelings in the original situation, or because they felt negative about themselves. Hence, these results make it more likely that they adopted a third-person perspective because they wanted to know what image they had transferred to the person watching.

An interesting result, at least in our opinion, is that when women remembered a situation in which they were being watched by another woman, they indicated that they predominantly adopted a first-person perspective *and* that they paid relatively much attention to themselves. This result shows that adopting a first-person perspective does not result in a lack of self-awareness. In the discussion we elaborated on this finding and argued that it may be a result of a social comparison process. If women indeed compared themselves to the other woman, it is only logical that they paid conscious attention both to themselves and to the woman watching, and that they did this from a first-person perspective. Whether this is indeed the case has to be examined in future research.

Another interesting result is that when being watched by someone of the other gender, women, as compared to men, remembered relatively few details of the person watching. This result is consistent with the result that women were preoccupied with themselves. Men, on the contrary, predominantly adopted their own perspective, which

resulted in paying relatively much attention to the woman who was watching them, which, as a logical consequence, may have been the reason they remembered relatively much details. These results offer further support for the contention that when being watched by someone of the other gender, women can be regarded as the performers and men as the audience.

In the last experiment, we studied the relation between self-awareness and self-regulation. Consistent with previous theorizing, we expected and found that self-awareness is indeed related to self-regulation. More specifically, we hypothesized that adopting a third-person perspective would lead to self-regulative efforts directed at one's appearances. Consistent with this hypothesis, we found that people who adopted a third-person perspective regulated their physical appearance, and, more specifically, their weight. Compared to participants who adopted predominantly a first-person perspective, participants who adopted predominantly a third-person perspective preferred healthy food (an apple) over unhealthy food (chocolate). This result offers support for our hypothesis that adopting a third-person perspective leads to self-regulative efforts directed at one's public self.

This latter result is important in light of the supposed relation between self-objectification (adopting a third-person perspective) and disordered eating. Fredrickson and colleagues (1998), for example, have showed that when women self-objectified themselves, they ate less of a cookie than when they did not self-objectify. Our results show that when given the opportunity to choose healthy food, women who self-objectify do not engage in "disordered eating". On the contrary, they will choose to eat healthy food rather than unhealthy food.

In summary, these studies show what happens when people are being watched by someone of the other gender. More specifically, we showed that men reacted as though being the audience, whereas women reacted as though being the performers. These results corroborate the findings and conclusions of the previous chapter that people adopt a third-person perspective when they are the ones being evaluated, whereas they adopt a first-person perspective when they are the ones doing the evaluating.

Questions for Further Research

An interesting and important question for future research may be what happens at the moment that people are being watched. Do they adopt a third-person perspective at that particular instant, or is adopting a third-person perspective exclusively related to upcoming events and past events? Is it that when people want to impress a particular audience in the future, they "run through their minds" how they will act in this situation?

And that when they want to know whether they succeeded, they adopt a third-person perspective in retrospect, to asses what image they conveyed? Although we demonstrated that women who adopted predominantly a third-person perspective, remembered relatively few details of the man who was watching them, and paid relatively much conscious attention to themselves, we cannot decide upon this question yet. Perhaps, in the original situation, women were relatively attentive to themselves, but from a first-person perspective. Thus, future research has to determine whether people adopt a third-person perspective in the actual situation.

Similarly, it may be interesting to explore whether these effects can also be found in other target groups, or whether these effects are specific to young women, and, perhaps, women who are older and single. As previous research, to our knowledge, has focused on young women, future research may be aimed at the question whether adopting a third-person perspective originates from socialization-processes, or whether it is a characteristic of the specific context and /or stage of life.

I versus We

In the fifth and last empirical chapter, we tested the hypothesis that self-activation may lead to diversity, whereas activating "we" may lead to sameness. Based on the results of the first chapter, in which we showed that self-activation increases saliency of the standard to be different, we developed the hypothesis that activating the self promotes diversity in behavior. Conversely, we hypothesized that when other people are on our minds, this would lead to the motivation to be similar and to conform, and to "sameness". In corroboration of the results of the first chapter, the results of the first experiment showed that self-activation indeed increased the motivation to be independent, different, and alone. Moreover, these results also showed that "we-activation" increased the motivation to be accepted, to be together, and to conform.

The results of the second study demonstrated that self-activation and we-activation may influence behavior. Whereas self-activation, in the absence of specific instructions, led to more diversity in behavior (e.g., drawing a golf cart as an example of a motor vehicle), we-activation led to sameness (e.g., drawing a car as an example of a motor vehicle). These findings show that the subtle activation of words as "I" or "we" leads to profoundly different behaviors. Whereas "I" is associated in our society with individualism and "we" with oneness, the subtle activation of these constructs may lead to corresponding behavior.

Questions for Further Research

An important question for further research is whether the demonstrated processes are "conscious" or "unconscious". Even though we demonstrated in Chapter 1 and Chapter 2 that self-activation increases awareness of private self-aspects (e.g., thoughts and feelings), which argues for the idea that participants are self-conscious, it may be that when participants are not explicitly asked whether they were self-conscious after completing the activation tasks, self-consciousness does not arise. If this were to be the case, only knowledge structures are activated that are associated with either "I" or "we", and the reactions to these activation tasks are likely to be largely, or even completely, unconscious. Whether and to what extent the demonstrated processes are conscious, is an interesting question for future research.

Conclusion

In this dissertation we have studied the antecedents of self-awareness (e.g., mirrors, imagining giving a presentation or being watched, remembering being watched, and self-activation), the process itself (adopting predominantly a first-or third person perspective, and being aware of public and private self-aspects), and the consequences of self-awareness (e.g., on saliency of behavioral standards and behavior itself). We have argued that different methods increase awareness of different aspects of the self, which may have different (behavioral) consequences.

Together, the here reported results shed new light on previous, ostensibly contradicting, results that were obtained in the study of the effects of (global) self-awareness. Whereas previous research predominantly focused on the antecedents and behavioral consequences of self-awareness, the current findings offer more insight in the process itself (e.g., "What happens when people become self-aware?" and "What are they aware of?"). In conclusion, we are convinced that the here reported results contribute to our understanding of the process of self-awareness, and that the described results make the consequences of self-awareness more predictable.

SAMENVATTING EN DISCUSSIE

Summary and discussion in Dutch

Wat is zelfbewustzijn? Wanneer worden we het en wat doet het met ons? Dit zijn de vragen die in deze dissertatie centraal staan. Niet de meest eenvoudige vragen, aangezien de twee componenten waaruit zelfbewustzijn bestaat, het *zelf* en *bewustzijn*, complexe processen zijn. Het *zelf* wordt in de sociale psychologie beschouwd als een "geheel van losjes aan elkaar gerelateerde deelonderwerpen" ("an aggregate of loosely related subtopics", Baumeister, 1998) en *bewustzijn* wordt in de neurowetenschappen ook wel "het moeilijke probleem" genoemd (Chalmers, 1995). Wat de combinatie van deze twee termen precies inhoudt, wordt hierdoor nog nauwelijks begrepen.

In de inleiding van deze dissertatie gaan we in op wat er precies met zelfbewustzijn bedoeld wordt. We trachten inzicht te verkrijgen in wat de losse componenten (zelf en bewustzijn) inhouden, wat vooral in het geval van "bewustzijn" onduidelijk is. We ervaren het allemaal en denken het allemaal te hebben. Sterker nog, we denken dat ons (zelf)bewustzijn ons gedrag beïnvloedt. Maar wat is het? De sociale psychologie heeft hier geen antwoord op.

De literatuur over (zelf)bewustzijn lezende roept beelden op van een schijnwerper die ofwel op onszelf gericht kan worden, of op de omgeving. Maar waar bestaat die schijnwerper uit en wie doet dat "richten" dan? Aangezien er voor het dualisme van Descartes (het maken van een onderscheid tussen materie en geest) geen plaats is in de wetenschap (deze hypothese is niet te toetsen en bovendien denken de meeste wetenschappers dat onze hersenen bewustzijn voortbrengen en dat er dus slechts sprake van materie is), is een schijnwerper geen handige metafoor. Bovendien leidt de schijnwerpermetafoor tot verwarring, aangezien het sommige sociaal psychologen heeft verleid tot het gelijkstellen van aandachtsprocessen aan bewustzijn (zie bijvoorbeeld Scheier & Carver, 1983). Aangezien aandacht en bewustzijn twee verschillende processen zijn (zie bijvoorbeeld, Koch & Tsuchiya, 2006), lijkt dit beeld niet te kloppen.

Wat is het dan wel? Uiteindelijk moeten we concluderen dat we weliswaar een globaal beeld kunnen schetsen, een suggestie van wat het mogelijkerwijs is, maar dat we het eigenlijk niet weten. Meer concreet weten we niet hoe het in onze hersenen precies opgeroepen wordt. Ook weten we niet zeker of het als een "bijproduct" van onze gedachten, gevoelens en gedrag beschouwd kan worden (sommige onderzoekers hebben aangetoond dat er hersenactiviteit te meten is vóórdat mensen aangeven zich bewust te zijn van een "gedragsintentie", zie bijvoorbeeld Libet, Gleason, & Wright, 1983), of dat het een belangrijk mechanisme is dat onze gedachten vorm kan geven en ons gedrag stuurt.

Vreemd genoeg heeft deze conclusie er niet toe geleid dat we het onderzoek in dit proefschrift op de vraag "wat is zelfbewustzijn?" of "bestaat zelfbewustzijn?" hebben

gericht, of dat we het hebben opgegeven. Integendeel, hoewel deze vragen zonder enige twijfel van cruciaal belang zijn voor het kunnen begrijpen van zelfbewustzijn, hebben we ons gericht op datgene wat we elke dag ervaren en gekeken naar wat er precies op psychologisch niveau gebeurt en wat daarvan de consequenties zijn. We zijn er dus min of meer vanuit gegaan dat zelfbewustzijn bestaat.

Geeft dit een probleem, mocht het ooit blijken dat ons bewustzijn een bijproduct, ofwel een illusie is? We denken het niet. Wellicht moeten de termen die we gebruiken aangepast worden en zal met betrekking tot het onderliggende mechanisme het een en ander verduidelijkt moeten worden, maar de verkregen resultaten uit de empirische hoofdstukken zullen blijven staan. Bepaalde situaties roepen "iets" op (wat we zelfbewustzijn zullen noemen totdat het tegendeel bewezen wordt) wat onze gedachten en gevoelens, onze motivatie en ons gedrag beïnvloedt. Alhoewel we de onderliggende processen dus niet precies begrijpen, kijken we in deze dissertatie voornamelijk naar de psychologische (in de breedste zin van het woord) effecten ervan. Meer specifiek kijken we in deze dissertatie naar de antecedenten van zelfbewustzijn, het (ervaren) proces en de consequenties van zelfbewustzijn.

Zelfbewustzijn en de Activatie van Standaarden voor Gedrag

In het eerste hoofdstuk bestuderen we de relatie tussen bewustzijn van verschillende aspecten van het zelf en de activatie van standaarden voor gedrag. Talrijke experimenten zijn in het verleden uitgevoerd naar het effect van zelfbewustzijn op gedrag. Zo is bijvoorbeeld aangetoond dat zelfbewustzijn kan leiden tot conformering aan anderen, zelfpresentatie, het in overeenstemming brengen van onze attituden (opvattingen) met ons gedrag en normatief gedrag (zie bijvoorbeeld Solomon & Schopler, 1982; Schlenker & Weigold, 1990; Kallgren, Reno, & Cialdini, 2000; Silvia & Gendolla, 2001). Vanuit deze (gedrags)resultaten wordt menigmaal door onderzoekers geconcludeerd dat zelfbewustzijn bijvoorbeeld de saillantie van de standaard "conformeren", of "het in overeenstemming brengen van attituden en gedrag", of "zelfpresentatie" vergroot. Als we er vanuit gaan dat dit allemaal zou kloppen, dan is dat op zijn zachtst gezegd merkwaardig. Want wat als deze standaarden inconsistent zijn? Wat gebeurt er bijvoorbeeld als iemand weet dat anderen er een andere opvatting op na houden dan hij of zij zelf heeft en deze persoon zich bewust wordt van zichzelf? De standaarden "conformeren" en "consistentie" sluiten elkaar in dit geval uit. Deze persoon zal zich dus ofwel conformeren aan anderen, of hij of zij handelt naar gelang de eigen opvattingen. Wat geeft de doorslag?

In navolging van Fenigstein, Scheier en Buss (1975) maken we in dit hoofdstuk een onderscheid tussen bewustzijn van privé-aspecten van het zelf (persoonlijke gedachten en gevoelens) en publieke aspecten van het zelf (alles wat door anderen waarneembaar is, bijvoorbeeld het uiterlijk en gedrag). We beargumenteren in dit hoofdstuk dat verschillende manipulaties die in voorgaand onderzoek naar zelfbewustzijn door elkaar gebruikt zijn, verschillende aspecten van het zelf activeren. Specifiek tonen we in dit hoofdstuk aan dat manipulaties als een spiegel en (denken aan) een presentatie het bewustzijn van publieke aspecten vergroot, terwijl een manipulatie als "zelfactivatie" (het omcirkelen van de woorden "ik", "me" en "mijn" in een tekst) bewustzijn van persoonlijke aspecten vergroot. Tevens tonen we aan dat bewustzijn van publieke aspecten de (relatief "sociale") standaard om goed met anderen op te kunnen schieten activeert en, meer specifiek, de standaarden om "een goede indruk te maken" en om "geaccepteerd te worden". Bewustzijn van persoonlijke aspecten blijkt gerelateerd te zijn aan de (relatief individualistische) standaard om "authentiek" en "anders dan anderen" te zijn.

De conclusie die uit deze resultaten getrokken kan worden, is dat in onderzoek naar de effecten van zelfbewustzijn goed gekeken moet worden naar de zelfaspecten die er in het onderzoek saillant gemaakt worden. Een spiegel vergroot het bewustzijn van andere aspecten van het zelf dan zelfactivatie dat doet, wat vervolgens tot de activatie van verschillende standaarden kan leiden. Beide manipulaties zijn dus niet zonder meer uitwisselbaar. Om vervolgens de effecten van zelfbewustzijn te kunnen voorspellen, lijkt het van belang te zijn om te specificeren van welke zelfaspecten iemand zich precies bewust is.

Vragen voor Vervolgonderzoek

Een interessante vraag voor vervolgonderzoek is welke standaard de doorslag zal geven in situaties waarin standaarden elkaar uitsluiten. Aangezien er nog steeds inconsistentie kan ontstaan tussen de verschillende sociale en de verschillende persoonlijke standaarden, kan het interessant zijn te onderzoeken welke standaard als de belangrijkste beschouwd kan worden. Als we ons bijvoorbeeld bewust worden van privé-aspecten van onszelf en we komen erachter dat onze opvattingen overeen komen met de opvattingen van de meerderheid van de bevolking, veranderen we onze mening dan om "anders dan anderen te zijn" (oftewel "uniek" te zijn), of willen we authentiek zijn, wat dan wellicht als consequentie heeft dat we hetzelfde zijn als alle anderen om ons heen? Hoogstwaarschijnlijk zal dit aan de omstandigheden en de persoon zelf liggen, maar dan

kunnen we ons afvragen aan welke omstandigheden en welke persoonskenmerken het precies ligt. En waar zijn we het meest toe geneigd?

Hetzelfde kan men zich afvragen als het gaat om de sociale standaarden om "jezelf positief te presenteren" en "geaccepteerd te worden". Wanneer heeft welke standaard voorrang? Alhoewel we daar op basis van onze huidige resultaten niets over kunnen zeggen, bieden onze resultaten wel interessante hypotheses. Als we namelijk kijken naar de twee manipulaties die, zo bleek, het publieke zelfbewustzijn vergroten (een spiegel en het inbeelden van het geven van een presentatie) dan zien we dat er subtiele verschillen bestaan in de rangorde van de twee standaarden.

In de studie waarin we respondenten vroegen zich voor te stellen zichzelf te moeten presenteren voor een groep, vonden we dat scores voor de standaard "geaccepteerd worden" gemiddeld hoger waren dan de scores voor de standaard "het maken van een goede indruk". Alhoewel dit op toeval kan berusten, kan het ook zijn dat, aangezien we weten dat deze respondenten (eerstejaars psychologiestudenten die minder dan een maand met hun studie bezig waren) het over het algemeen eng vinden om voor hun medestudenten een presentatie te geven, de standaard "geaccepteerd worden" in deze situatie vooral belangrijk is. Ondersteuning voor deze hypothese kunnen we vinden in de literatuur over "sociale facilitatie" (het effect dat een prestatie beter is wanneer er anderen bij aanwezig zijn) en "choking" (een soort dichtklappen als er anderen bij het uitvoeren van een taak aanwezig zijn). Uit onderzoek naar deze processen blijkt dat als mensen verwachten een taak goed uit te voeren, de nabijheid van anderen leidt tot meer zelfvertrouwen en een betere prestatie. Als mensen echter verwachten dat ze een taak wellicht niet goed uit zullen voeren, dan leidt de nabijheid van anderen tot minder zelfvertrouwen en een slechtere prestatie (zie bijvoorbeeld Zajonc, 1965). Tevens blijkt uit voorgaand onderzoek dat als mensen bang zijn (bijvoorbeeld omdat ze iets engs moeten gaan doen), ze een behoefte hebben aan contact met andere mensen (zie bijvoorbeeld Miller & Zimbardo, 1966). Het zou kunnen zijn dat de angst die het geven van een presentatie oproept, ertoe leidt dat respondenten de behoefte hebben om dit contact zeker te stellen, oftewel, meer de behoefte hebben aan acceptatie dan aan het maken van een goede indruk. Of deze hypothese klopt, zou uiteraard uit vervolgonderzoek moeten blijken.

Uit de studie waarin we het publieke zelfbewustzijn hebben vergroot door mensen voor een spiegel te zetten, bleek dat de scores voor "positieve zelfpresentatie" gemiddeld hoger waren dan die voor "acceptatie". Alhoewel dit eveneens op toeval kan berusten, kan het ook zijn dat het zien van je spiegelbeeld er daadwerkelijk toe leidt dat je graag een goede indruk achter wil te laten. Aangezien een spiegel niet alleen vaak gebruikt wordt

om "even te controleren hoe anderen ons zien", maar ook om ons uiterlijk te verfraaien, kan het zien van een reflectie van onszelf ertoe leiden dat we vooral graag een goede indruk achter willen laten. Uiteraard dient ook deze hypothese in vervolgonderzoek getoetst te worden.

Een vraag die deze studies eveneens oproepen is of we deze verschillende standaarden in gedrag terug kunnen zien. Oftewel, leidt het bewustzijn van verschillende aspecten van onszelf tot verschillend gedrag? Deze vraag staat centraal in het tweede hoofdstuk.

Zelfbewustzijn en Gedrag

In het tweede hoofdstuk onderzoeken we of verschillende zelfbewustzijnmanipulaties tot verschillend gedrag kunnen leiden. Om dit te kunnen testen hadden we een situatie nodig waarin persoonlijke aspecten van het zelf in conflict zijn met sociale aspecten van het zelf, zodat het activeren van persoonlijke en sociale aspecten daadwerkelijk tot verschillend gedrag zou leiden. Een situatie waarin dit het geval is treedt op wanneer mensen die hoog bevooroordeeld zijn beseffen dat de sociale norm dicteert dat stereotyperen onacceptabel is.

Onze hypothesen waren dat hoog-bevooroordeelde mensen (jegens Surinamers) hun negatieve stereotypen toepassen als hun "persoonlijke zelf" wordt aangesproken, terwijl ze zich conformeren aan de sociale norm dat stereotyperen verkeerd is als hun "publieke zelf" wordt aangesproken. Dit laatste is exact wat we vonden: Hoog-bevooroordeelde mensen die voor een spiegel zaten stereotypeerden *minder* dan hoog-bevooroordeelde mensen die in de controle groep zaten. Hoog-bevooroordeelde mensen waarbij het "ik" geactiveerd was door zelfactivatie, daarentegen, stereotypeerden *meer* dan de hoog-bevooroordeelde mensen in de controle groep. Onze hypothese dat mensen handelen naar gelang de specifieke aspecten van het zelf die geactiveerd worden, blijkt dus te kloppen.

Tevens vonden we dat zelfactivatie alleen het persoonlijke zelfbewustzijn vergroot, terwijl een spiegel zowel het persoonlijke zelfbewustzijn, alsook het publieke zelfbewustzijn vergroot. Dit resultaat wijst erop dat in het geval dat beide aspecten van het zelf geactiveerd worden, sociale standaarden en gedrag "voorrang" hebben. Hoog-bevooroordeelde mensen die zich bewust waren van hun persoonlijke opvattingen alsmede van aspecten van het zelf die door anderen waarneembaar zijn, stereotypeerden minder, wat erop wijst dat ze de sociale opvatting dat stereotyperen verkeerd is voorrang gaven op hun persoonlijke opvattingen.

Vragen voor Vervolgonderzoek

Of hoog-bevooroordeelde mensen die voor een spiegel zaten ook daadwerkelijk een innerlijke tweestrijd hebben ervaren tussen hun persoonlijke opvattingen en de sociale norm, valt met het huidige onderzoek niet met zekerheid te zeggen, aangezien we niet gemeten hebben wat deze respondenten precies dachten. Alhoewel deze respondenten rapporteerden dat ze zich bewust waren van hun persoonlijke opvattingen en het daarom waarschijnlijk is dat ze zich bewust waren van hun persoonlijke, negatieve stereotypen, hebben we de activatie van deze stereotypen niet gemeten. In vervolgonderzoek zou dit alsnog gemeten kunnen worden. De huidige resultaten doen ons vermoeden dat beide aspecten daadwerkelijk geactiveerd zijn, maar vervolgonderzoek zou uit moeten wijzen waar respondenten zich op een dergelijk moment precies bewust van zijn.

Een interessante discrepantie tussen ons onderzoek en een conclusie uit voorgaand onderzoek is dat "de-individualisatie kan leiden tot anti-normatief gedrag". Mensen die niet als individu aangewezen kunnen worden vertonen soms asociaal gedrag, wat wordt geïnterpreteerd als een gevolg van "de-individualisatie". Wat is de-individualisatie? Als we het opvatten als "geen uniek persoon meer zijn" dan zijn de huidige resultaten hiermee in tegenstrijd. Wij vonden dat mensen waarbij het "ik" geactiveerd was juist *meer* stereotypeerden in plaats van minder. Waarschijnlijk betekenen onze resultaten dat het niet zozeer "de-individualisatie" is, maar dat in een situatie waarin mensen over de schreef gaan (bijvoorbeeld in rellen), ze door *anderen* (die het met hun gedrag niet eens zijn) niet als individu aangewezen kunnen worden (bijvoorbeeld doordat ze zich verschuilen in de massa, of, wat vaak gebeurt, doordat ze een masker dragen). De precieze processen achter deze gedragingen zijn op dit moment niet duidelijk. Ook gaat het hier hoogstwaarschijnlijk om complexe processen die niet met één theorie verklaard kunnen worden. Toch kan het interessant zijn om de "de-individualisatie hypothese" tegen onze hypothese dat mensen in dergelijke situaties hun "publieke identiteit" missen uit te zetten.

Verschillende Perspectieven

In het derde hoofdstuk gaan we nader in op wat er precies gebeurt op het moment dat mensen zich bewust van zichzelf zijn. In dit hoofdstuk maken we een onderscheid tussen het innemen van je eigen, eerste persoonsperspectief en het innemen van het perspectief van een observator (derde persoonsperspectief). Onze hypothese was dat het innemen van een derde persoonsperspectief vooral plaatsvindt in situaties waarin mensen beoordeeld worden en het van belang kan zijn een goede indruk achter te laten.

In de eerste studie hebben we dit geoperationaliseerd door te kijken naar wat er gebeurt als (heteroseksuele) respondenten zich een situatie herinneren waarin ze "bekeken" (als in "geëvalueerd") werden door iemand van de andere sekse. Specifiek verwachtten we dat het beoordeeld worden op je uiterlijk door iemand van de andere sekse ertoe zou leiden dat respondenten zich vooral bewust zijn van hoe ze eruit zien (oftewel, van hun "publieke zelf"). Eveneens verwachtten we dat dit ertoe zou leiden dat respondenten op dat moment een derde persoonsperspectief in zouden nemen. Door een beeld te creëren van jezelf in de situatie waarin je bekeken werd, kun je namelijk "zien" hoe de ander jou op dat moment zag en hoe je dus waarschijnlijk beoordeeld bent.

De resultaten van deze studie lieten een iets complexer beeld zien dan we van tevoren bedacht hadden. Terwijl vrouwen inderdaad een derde persoonsperspectief innamen en aangaven relatief veel aandacht voor publieke aspecten van het zelf te hebben (en weinig voor persoonlijke aspecten van het zelf), gaven mannen aan juist meer een *eerste* persoonsperspectief in te nemen. Alhoewel mannen dus bekeken werden door een vrouw, leken ze vanuit hun eigen perspectief gewoon terug te kijken. De vragen die deze resultaten oproepen ("Waarom nemen vrouwen een derde persoonsperspectief in en mannen een eerste persoonsperspectief?", "Wat gebeurt er dan precies?" en "Wat heeft dit tot gevolg?") vormen het uitgangspunt voor het volgende hoofdstuk. Voordat we verder ingaan op deze vragen, zullen we eerst de rest van de resultaten bespreken die er uit deze onderzoekslijn kwamen.

Ondanks de slechts gedeeltelijke ondersteuning van onze hypothese bleven we van mening dat in situaties waarin het belangrijk is te weten hoe je over komt op je "publiek" (andere mensen), het belangrijk kan zijn een derde persoonsperspectief in te nemen. In de tweede studie keken we daarom naar wat er gebeurt als mensen zich voorstellen een sollicitatiegesprek te voeren. In deze studie lieten we mannen en vrouwen een scenario lezen. We vroegen de respondenten zich voor te stellen ofwel als sollicitant bij een bedrijf aan te komen en een sollicitatiegesprek te gaan voeren, of als lid van de sollicitatiecommissie. Een voordeel van deze methode is dat we slechts de "rol" van de respondent manipuleerden en dat de situaties consistent bleven (waardoor eventuele verschillen zijn toe te schrijven aan de "rol" die de respondenten innamen en niet aan kwalitatieve verschillen tussen de situaties). De resultaten lieten zien dat in deze situatie zowel mannen als vrouwen vooral een derde persoonsperspectief innamen als ze zich inbeeldden de sollicitant te zijn, terwijl ze beiden een eerste persoonsperspectief innamen als ze zich inbeeldden een lid van de sollicitatiecommissie te zijn. Dit resultaat biedt ondersteuning voor onze hypothese dat als het belangrijk is te weten hoe je overkomt (je bent een sollicitant en je wilt de baan heel graag), een derde persoonsperspectief

ingenomen kan worden. Als lid van de sollicitatiecommissie is dit zelfbewustzijn niet belangrijk, omdat niet de sollicitatiecommissie maar de sollicitant centraal staat in een dergelijke situatie.

Met andere woorden, de in dit hoofdstuk gerapporteerde studies bieden ondersteuning voor de hypothese dat je als je beoordeeld wordt en het belangrijk is te weten wat voor indruk je maakt, een derde persoonsperspectief inneemt. Echter, als je degene bent die iemand anders evalueert, dan neem je vooral een eerste persoonsperspectief in. Omdat de resultaten van de eerste studie niet volledig consistent waren met de verwachtingen, gaan we in het vierde hoofdstuk in op wat er precies gebeurt als je bekeken wordt door iemand van de andere sekse.

Bekeken worden door de Andere Sekse

Wat gebeurt er als een man bekeken wordt door een vrouw en een vrouw bekeken wordt door een man? In het vierde hoofdstuk staat deze vraag centraal. Vanuit het idee dat er in onze samenleving veel aandacht is voor het uiterlijk van vrouwen (in reclame, films, videoclips, tijdschriften, etcetera), terwijl dit voor mannen minder het geval is, toetsen we de hypothese dat vrouwen als "de artiest" beschouwd kunnen worden waar mannen als "het publiek" naar kijken. In vier studies laten we zien dat dit inderdaad het geval is. Als vrouwen zich een situatie herinnerden waarin ze bekeken werden door een man, dan namen ze vooral een derde persoonsperspectief in, terwijl mannen, als ze zich herinnerden bekeken te worden door een vrouw, vooral hun eigen perspectief innamen.

Het innemen van een derde persoonsperspectief bleek wederom gerelateerd te zijn aan het hebben van veel aandacht voor het publieke zelf en weinig aandacht voor het persoonlijke zelf, wat het idee versterkt dat vrouwen in deze situatie zich voorstellen wat voor indruk ze op de man maken. Tevens bleek dat vrouwen niet altijd een derde persoonsperspectief innemen als ze bekeken worden (wat de alternatieve verklaring uitsluit dat het innemen van een derde persoonsperspectief bij vrouwen een soort "standaardreactie" is op een situatie waarin ze bekeken worden): Als vrouwen zich een situatie herinnerden waarin ze bekeken werden door een andere vrouw, dan namen ze overwegend een eerste persoonsperspectief in. Hiernaast bleek dat vrouwen niet een derde persoonsperspectief innemen omdat ze zichzelf of de situatie als negatief beoordeelden (er was geen verschil in de valentie van de situatie en in de zelfwaardering), wat dus eveneens onze resultaten niet kan verklaren. Het lijkt dus aannemelijk dat vrouwen dit derde persoonsperspectief in hun herinnering innamen omdat ze wilden weten wat voor indruk ze gemaakt hadden op de man die keek.

Interessant is ook het resultaat dat vrouwen die zich herinnerden door een andere vrouw bekeken te worden, vooral een eerste persoonsperspectief innamen *en* aangaven veel aandacht voor zichzelf te hebben. Dit resultaat laat zien dat het innemen van een eerste persoonsperspectief niet gelijk gesteld kan worden aan de afwezigheid van zelfbewustzijn. Vrouwen gaven aan zich in deze situatie wel degelijk bewust van zichzelf te zijn, maar klaarblijkelijk op een andere manier (vanuit hun eigen perspectief). In de discussie van het hoofdstuk gaan we nader in op dit resultaat en bespreken we dat dit patroon optreedt omdat hier waarschijnlijk sprake is van sociale vergelijking. Als vrouwen zich in een dergelijke situatie daadwerkelijk vergelijken, dan zou het logisch zijn dat ze èn aandacht voor zichzelf hebben èn aandacht voor de ander. Of dit inderdaad in deze situatie het geval is, zou vervolgonderzoek uit moeten wijzen.

In dit hoofdstuk bespreken we eveneens het resultaat dat vrouwen zich in vergelijking met mannen relatief weinig details van hun toeschouwer leken te herinneren. Dit resultaat is in overeenstemming met de gedachte dat als vrouwen vooral met zichzelf bezig zijn, het logisch is dat ze minder oog hebben voor degene die kijkt. Mannen, daarentegen, namen vooral hun eigen perspectief in en hadden dus relatief veel aandacht voor de vrouw, wat waarschijnlijk de reden is dat ze zich meer details herinnerden. Dit idee is consistent met een ander resultaat, namelijk dat vrouwen ook daadwerkelijk aangaven minder aandacht voor de ander en meer aandacht voor zichzelf te hebben dan mannen. Wederom biedt dit ondersteuning voor de gedachte dat vrouwen in deze situatie als de artiesten beschouwd kunnen worden en mannen als het publiek.

Tot slot bestuderen we in dit hoofdstuk de veronderstelde relatie tussen zelfbewustzijn en zelfregulatie. In overeenstemming met theorieën waarin gesteld wordt dat zelfbewustzijn in sterke mate een "evaluerende" functie heeft ("Wat ben ik aan het doen?", "Wat zou ik moeten doen?", "Doe ik het goed?" en "Hoe moet ik verder?"), verwachtten we dat hetzelfde geldt voor het innemen van een derde persoonsperspectief. Omdat uit de voorgaande experimenten bleek dat het innemen van een derde persoonsperspectief gepaard gaat met bewustzijn van vooral publieke aspecten van het zelf, verwachtten we dat zelfregulatie zich op deze aspecten zou richten. Om te toetsen of het innemen van een derde persoonsperspectief inderdaad zou leiden tot regulatie van publieke aspecten van het zelf (en het innemen van een eerste persoonsperspectief niet), hebben we gekeken naar de invloed van het innemen van dit perspectief op gewichtsregulatie (ons gewicht maakt deel uit van het publieke zelf omdat anderen kunnen inschatten hoe zwaar we zijn). In overeenstemming met onze hypothesen vonden we dat mensen die een derde persoonsperspectief innamen, als bedankje voor deelname aan het onderzoek vaker voor een appel kozen dan voor een reep chocolade. De

meerderheid van de mensen die vooral een eerste persoonsperspectief innamen verkoos daarentegen de reep chocolade. Dit resultaat biedt ondersteuning voor de hypothese dat het innemen van een derde persoonsperspectief regulatie van publiek waarneembare aspecten van het zelf bevordert.

Dit laatste resultaat is belangrijk in het licht van het veronderstelde verband tussen zelfobjectificatie (het innemen van een derde persoonsperspectief) en "verstoord eten" (zie bijvoorbeeld, Fredrickson & Roberts, 1997; Fredrickson et al., 1998; Noll & Fredrickson, 1998). Fredrickson en collegae (1998) hebben bijvoorbeeld in hun onderzoek aangetoond dat vrouwen die zichzelf objectificeren minder van een koekje opeten dan vrouwen die zichzelf niet objectificeren. De onderzoekers concluderen dat dit resultaat ondersteuning biedt voor hun hypothese dat zelfobjectificatie leidt tot slecht eten. Onze resultaten laten daarentegen zien dat als respondenten die zichzelf objectificeren de keuze krijgen tussen ongezond en gezond eten, ze kiezen voor de gezonde variant. Zelfobjectificatie leidt in deze doelgroep dus juist tot gezond eten.

Samenvattend laten deze studies zien wat er gebeurt en wat het gevolg kan zijn van herinneringen aan een ontmoeting met iemand van de andere sekse. Mannen lijken vooral degenen te zijn die kijken, terwijl vrouwen zich bekeken voelen, met alle hiervoor beschreven consequenties van dien. Wellicht interessant om hier eens bij stil te staan als je naar iemand van de andere sekse kijkt, of als je juist het doelwit bent van een blik van iemand van de andere sekse.

Vragen voor Vervolgonderzoek

Een interessante en belangrijke vraag voor vervolgonderzoek is wat er gebeurt *op het moment* dat mensen zich bekeken of beoordeeld voelen. Nemen ze op het moment zelf ook een derde persoonsperspectief in? Op basis van onze resultaten valt dit nog niet met zekerheid te zeggen. We hebben weliswaar aangetoond dat vrouwen zich minder details herinnerden van de man die naar hen, maar of dit een gevolg is van het innemen van een derde persoonsperspectief of het gevolg van iets anders (gerichtheid op het zelf zonder een derde persoonsperspectief in te nemen, wegkijken om niet te veel interesse te tonen, of bijvoorbeeld omdat het niet "hoort" om een man vervolgens uitgebreid te gaan bekijken) is vooralsnog niet duidelijk. Vervolgonderzoek zal aan moeten tonen of mensen op het moment zelf ook de neiging hebben een derde persoonsperspectief in te nemen, of dat dit slechts voorafgaand aan een evaluatieve situatie plaatsvindt (je voorstellen hoe je indruk gaat maken op persoon X of Y), of nadat de situatie heeft plaatsgevonden ("Hoe kwam ik over op persoon X of Y?").

Eveneens is het interessant om te kijken of dit effect bij alle vrouwen optreedt, of dat het wellicht vooral iets is voor relatief jonge vrouwen, of, meer algemeen, vrouwen die zich op de "dating-markt" begeven en waarvoor de beoordeling van mannen dus saillant kan zijn. Uit onderzoek onder vrouwen uit andere leeftijdscategorieën (bijvoorbeeld van middelbare leeftijd, of ouderen) zou kunnen blijken dat dit proces (het innemen van een derde persoonsperspectief en "niet terug kijken") vooral iets is voor relatief jonge vrouwen. Aangezien voor zover wij weten al het onderzoek naar zelfobjectificatie is uitgevoerd onder deze doelgroep, valt vooralsnog niet te zeggen of deze resultaten generaliseerbaar zijn. Het kan eveneens zijn dat vooral vrijgezelle vrouwen, vanuit dezelfde "saillantie-hypothese", gevoelig zijn voor het innemen van een derde persoonsperspectief. Onderzoek hiernaar zou licht kunnen laten schijnen op de vraag of dit proces het gevolg is van socialisatieprocessen (vrouwen leren al op jonge leeftijd een derde persoonsperspectief in te nemen en blijven dit hun hele leven doen), of van specifieke contexten of levensfasen.

Ik versus Wij

In het vijfde en laatste empirische hoofdstuk toetsen we de hypothese dat zelfactivatie leidt tot diversiteit, terwijl wij-activatie leidt tot gelijkheid. Op basis van de resultaten uit het eerste hoofdstuk, waarin we vonden dat zelfactivatie de saillantie vergroot van de standaard "anders dan anderen" te zijn, ontwikkelden we de hypothese dat het activeren van het "ik" (door de wederom de woorden "ik", "me" en "mijn" te omcirkelen) tot "divers gedrag" kan leiden. Daarentegen verwachtten we dat het activeren van het "wij" juist spontaan zou leiden tot de behoefte om "geaccepteerd te worden", "samen te zijn" en "te conformeren". In de eerste studie vonden we inderdaad dat het activeren van het ik leidt tot de motivatie om onafhankelijk, alleen en anders te zijn (wat opgevat kan worden als een replicatie van het onderzoek beschreven in hoofdstuk 1), terwijl het activeren van het wij leidt tot de motivatie geaccepteerd te worden, samen te zijn en zich te conformeren.

In de tweede studie laten we bovendien zien dat het activeren van het ik of het wij invloed heeft op gedrag. Meer specifiek laten we zien dat het activeren van het ik –in de afwezigheid van expliciete instructies- leidt tot meer diversiteit in gedrag (bijvoorbeeld het tekenen van een golfkarretje als voorbeeld van een motorvoertuig), terwijl het activeren van het wij tot minder diversiteit in gedrag leidt (bijvoorbeeld het tekenen van een auto als voorbeeld van een motorvoertuig).

Deze resultaten demonstreren dat het op een subtiele manier activeren van het "ik" of het "wij" verschillend gedrag kan veroorzaken. Het "ik" wordt in onze

samenleving geassocieerd met individualisme, terwijl het "wij" geassocieerd wordt met eenheid. Het activeren van een van beide constructen leidt daardoor tot gedrag dat hiermee in overeenstemming is. In de discussie gaan we nader in op wat de implicaties van deze resultaten kunnen zijn voor bijvoorbeeld het brainstormen in groepen.

Vragen voor Vervolgonderzoek

Een belangrijke vraag voor vervolgonderzoek is of er bij deze processen sprake is van zelfbewustzijn en als dit het geval is, waar respondenten zich dan precies bewust van zijn. Alhoewel we zowel in het eerste, alsook in het tweede hoofdstuk laten zien dat zelfactivatie leidt tot bewustzijn van het persoonlijke zelf (persoonlijke gedachten en gevoelens), wat voor het idee pleit dat er sprake is van zelfbewustzijn, kan het zijn dat als hier niet expliciet naar gevraagd wordt en er op een dergelijke activatie direct een taak volgt, er weinig tot geen sprake is van zelfbewustzijn. In dat geval worden er slechts kennisstructuren geactiveerd die ofwel met het "ik" geassocieerd zijn, of met het "wij". In dit geval is er waarschijnlijk grotendeels (of volledig) sprake van een automatisch proces. Of dit ook daadwerkelijk het geval is, zou vervolgonderzoek moeten uitwijzen.

Dit gezegd hebbende, moet direct aangemerkt worden dat het lastig kan zijn om erachter te komen of er sprake is van een bewust proces of niet. Als we achteraf aan een respondent hadden gevraagd waarom hij of zij een graafmachine als voorbeeld van een motorvoertuig heeft getekend en de respondent had geantwoord dat hij of zij graag "iets anders dan standaard is" wilde tekenen, wat moeten we hieruit vervolgens concluderen? Als respondenten zich niet bewust zijn van de oorzaak van hun gedrag, maar wel van het gedrag zelf, is er dan sprake van zelfbewustzijn? Of is er sprake van een (retrospectief) attributie-proces: "Ik heb iets anders dan standaard is getekend, dus wilde ik dit blijkbaar graag"? We vermoeden dat het hier een overwegend automatisch proces betreft waarbij dus weinig sprake is van bewustzijn, maar omdat het hier slechts om een vermoeden gaat, zal dit in vervolgonderzoek getest moeten worden.

Conclusie

In deze dissertatie hebben we gekeken naar de antecedenten van zelfbewustzijn (spiegels, zelfactivatie, het inbeelden van situaties waarin men bekeken of zelfs geëvalueerd werd en het herinneren van situaties waarin men bekeken werd), het proces zelf en de gevolgen van zelfbewustzijn. We hebben beargumenteerd dat verschillende methoden verschillende aspecten van het zelf saillant maken, wat vervolgens verschillende effecten heeft op het gedrag van mensen. Tevens hebben we gekeken naar de aspecten van het

zelf waarvan mensen zich bewust kunnen worden en wat voor effecten dit kan hebben op gedrag.

Alles samengenomen denken we dat dit onderzoek duidelijkheid schept omtrent verschillende, ogenschijnlijk tegenstrijdige resultaten die in voorgaand onderzoek naar de effecten van (globaal) zelfbewustzijn gevonden zijn. Doordat in voorgaand onderzoek vaak de nadruk lag op antecedenten en gedragsmatige consequenties van globaal zelfbewustzijn, levert het huidige onderzoek een meer specifiek beeld op van het proces zelf (waar worden mensen zich precies bewust van en op welke manier worden ze zich hier bewust van?). Samenvattend zijn we van mening dat het huidige onderzoek ervoor zorgt dat de effecten van zelfbewustzijn beter voorspelbaar worden.

NAWOORD

Afterword in Dutch

Promoveren

"Op mijn zestiende wist ik het zeker. Ik had een studiegids psychologie van de Rijksuniversiteit Groningen weten te bemachtigen en was ervan overtuigd dat ik voor de afstudeerrichting functieleer zou kiezen. Wat kon er meer interessant zijn dan het bestuderen van mentale processen als waarnemen, denken, leren, motivatie en emotie? De processen die men iedere dag aan den lijve ondervindt?"

Met deze eerste alinea van mijn sollicitatiebrief is het begonnen. Denk ik. Of is het op mijn dertiende begonnen, toen ik voor het eerst psychologieboeken ging lezen en gehoord had dat je na je studie aan de universiteit iets kon gaan doen wat "promoveren" genoemd werd? Of is het wellicht begonnen op het moment dat ik de tweedejaarscursus Sociale Cognitie in het derde jaar volgde (dit omdat Hans van de Sande –de docent die deze cursus in mijn tweede jaar verzorgde- had gezegd dat ik beter een jaar kon wachten, aangezien er een expert op dit gebied aangenomen werd die mij veel meer zou kunnen leren dan hij dat kon) en meer specifiek, het moment dat prof. dr. Diederik A. Stapel de vraag stelde of je nog een zelf had als je sliep, of in coma zou raken? Of is het wellicht begonnen op het moment dat ik na het volgen van de cursus op uitnodiging van deze hoogleraar (door een stomme fout –die ik nooit meer zal vergeten- had ik een negen in plaats van een tien gehaald, wat desondanks hoog genoeg was voor deze hoogleraar om zich af te vragen of ik interesse had in zijn onderzoeksgebied) in zijn kamer zat en hij mij gedwongen keuzes liet maken tussen "in het lab of in het veld", "experimenteel of toegepast" en "Hermans of Mulisch"? Het is in elk geval niet begonnen dankzij mijn prestaties tijdens het sollicitatiegesprek dat ik voerde om aio te worden bij de onderzoeksgroep van Diederik, Ernestine en Sabine. Ondanks een slecht gesprek (waaraan ik eigenlijk liever nooit meer herinnerd word en waardoor ik niet bepaald zelfverzekerd begon) kreeg ik de kans om te beginnen aan een promotietraject in een groep waarin bijzonder gemotiveerde en getalenteerde mensen zaten en alles leek te kunnen.

Wat helaas niet kon, of, beter gezegd, mij persoonlijk niet lukte, was het opzetten en uitvoeren van succesvol onderzoek. Na twee jaren waarin ik ruim twintig experimenten had uitgevoerd om een eenvoudige negativity-bias (automatische aandacht voor negatieve stimuli) aan te tonen, kwam ik tot de conclusie dat ik op deze manier geen proefschrift zou schrijven. Het nadeel van nul-resultaten is dat onderzoekers de neiging hebben om telkens weer nieuwe oorzaken te bedenken van die resultaten ("ok, als het dan niet aan de

refreshment-rate van de beeldschermen in jullie lab ligt, dan ligt het vast aan het toetsenbord /het licht /de specifieke respondenten /de temperatuur /het jaargetijde"). Uiteraard kun je op nul-resultaten promoveren, maar een boek schrijven over dingen die niet werken is in de wetenschappelijke wereld zoals ik die ervaren heb, alles behalve motiverend. Gelukkig was mijn promotor en dagelijkse begeleider (Diederik) niet aan het onderwerp gehecht (integendeel, ik was gewaarschuwd voordat ik eraan begon), waardoor ik het derde jaar onderzoek gedaan heb naar de effecten van stemming op persoonsbeoordelingen. Helaas (maar een geluk voor de respondenten) lukte het mij niet om mensen een negatieve stemming te bezorgen, waardoor ik na drie jaren nog immer geen "succesvolle" experimenten had uitgevoerd.

Demotiverend? Welnee. Nou ja, licht, soms. Niet genoeg in elk geval om ermee te willen stoppen. Het enige wat het bij tijd en wijle veroorzaakte was een persoonlijke crisis waarin ik mij afvroeg waarom het mij niet lukte en de rest van de onderzoeksgroep wel en of ik misschien niet goed genoeg was. Daarnaast veroorzaakte het weliswaar enige jaloezie gericht op degenen die met succesvolle resultaten een tijd in het buitenland onderzoek mochten doen en bezorgdheid of mijn ("middelbareschool"-) Engels zonder naar het buitenland te gaan wel goed genoeg zou zijn om uiteindelijk mijn proefschrift te kunnen schrijven, maar niet genoeg om het niet meer leuk te vinden om met deze mensen samen te willen werken (daar waren ze stuk voor stuk te leuk voor) of geen onderzoek meer te willen doen (daar was het doen van onderzoek te spannend voor). Na drie jaren wilde ik het daarom nog één keer proberen. Ik had een plan geschreven voor een onderzoekslijn die ik systematisch uit wilde voeren. Wat er ook uit zou komen, ik ging het opschrijven en het zou mijn proefschrift worden. Zelf vond ik het een interessant plan en Diederik stond er gelukkig achter.

Helaas in de letterlijke zin van het woord niet lang. Binnen een maand kondigde mijn begeleider en promotor aan dat hij zou vertrekken. Diederik had een nieuwe baan aangenomen in Tilburg en zou met TIBER een nieuwe uitdaging aangaan. De zoveelste crisis diende zich aan. En nu? Ik had nog een jaar, op dat moment geen resultaten en mijn begeleider stond op het punt naar het zuiden te vertrekken. Opgeven, alsnog? Aangezien dit geen optie voor mij was en ik het niet zag zitten om aan dit laatste (zware) jaar te beginnen met zo'n 260 km afstand tussen mijn begeleider en mij, heb ik gevraagd of ik mee kon naar Tilburg. Dat kon, waarna de wereld veranderde.

Het jaar dat ik half in Tilburg, half in Groningen doorbracht was in meerdere opzichten succesvol. Het plan dat ik uit ging voeren bleek te werken en bracht telkens weer nieuwe ideeën met zich mee. Ondanks dat ik mijn collegae in Groningen zeer waardeerde, deed de verandering van werkomgeving mij goed en daarnaast vond ik de nieuwe omgeving inspirerend. Alhoewel sommige perioden van mijn aio-tijd er wat mij betreft best uitgeknipt mogen worden, had ik dat jaar absoluut niet willen missen. Helaas lukte het mij net niet om mijn proefschrift ook daadwerkelijk in dat jaar af te ronden, maar de basis is in Tilburg gelegd.

Omdat het mij net niet lukte om alles binnen een jaar af te ronden, heeft het alsnog een stressvol jaar geduurd (waarin ik een nieuwe baan probeerde te combineren met het afronden van mijn proefschrift) eer mijn proefschrift er in deze vorm was. Nu, aan het einde gekomen van mijn proefschrift, kan ik het gezegde "de aanhouder wint" onderstrepen. Het is waar, Ernestine, ik heb het goede antwoord tijdens het sollicitatiegesprek op jouw vraag "wat doe je als er niets uit je onderzoek komt?" gegeven: "Dan probeer je het nog een keer" (en nog een keer en nog een keer...).

Was het het waard? Ja! Hoe stressvol ook, de ervaring en hetgeen ik geleerd heb, had ik niet willen missen. Zou ik het allemaal nog eens over willen doen? Neen.

Gelukkig hoefde ik het een en ander niet alleen te doen. Een aantal mensen heeft mij hierbij (enorm) geholpen en wil ik aan het einde van dit proefschrift gekomen, graag bedanken. Heel graag wil ik mijn ouders bedanken, die menig crisis mee hebben gemaakt en mij erdoor geholpen /gesleept hebben. Zonder jullie steun had ik het niet gered. Ook de rest van mijn familie wil ik bedanken voor het meeleven met mijn avonturen. Uiteraard wil ik Diederik bedanken, nog steeds (net als op het moment dat ik het dankwoord van mijn afstudeerscriptie schreef) één van de meest inspirerende personen die ik ken. Doordat je zo verschrikkelijk anders bent dan ik, maar ergens ook wel weer hetzelfde, kan het soms enorm botsen. Te allen tijde heb ik echter een groot respect voor je als persoon en als wetenschapper, waardoor ik van deze botsingen veel geleerd heb. Zo heb ik gek genoeg niet altijd gelijk en zou ik me hier en daar toch echt meer bewust moeten zijn van de manier waarop ik reageer. Eerst denken, dan roepen. Minder defensief zijn. Ooit leer ik het, echt waar.

Mijn schoonvader, Hans Glas, wil ik graag bedanken voor het bedenken en het maken van het schilderij "Il pensiero sognato" dat op de voorkant van mijn proefschrift staat.

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